

Phase I Report: Roadway Safety Conditions in the Montachusett Region



**The Exit 31 Interchange & Rte 12 at Hamilton/Lindell Intersection & Rte 12 at Nelson/Water Tower Plaza Intersection
In Leominster Combine for an EPDO Total of 721, Read Details in Report**

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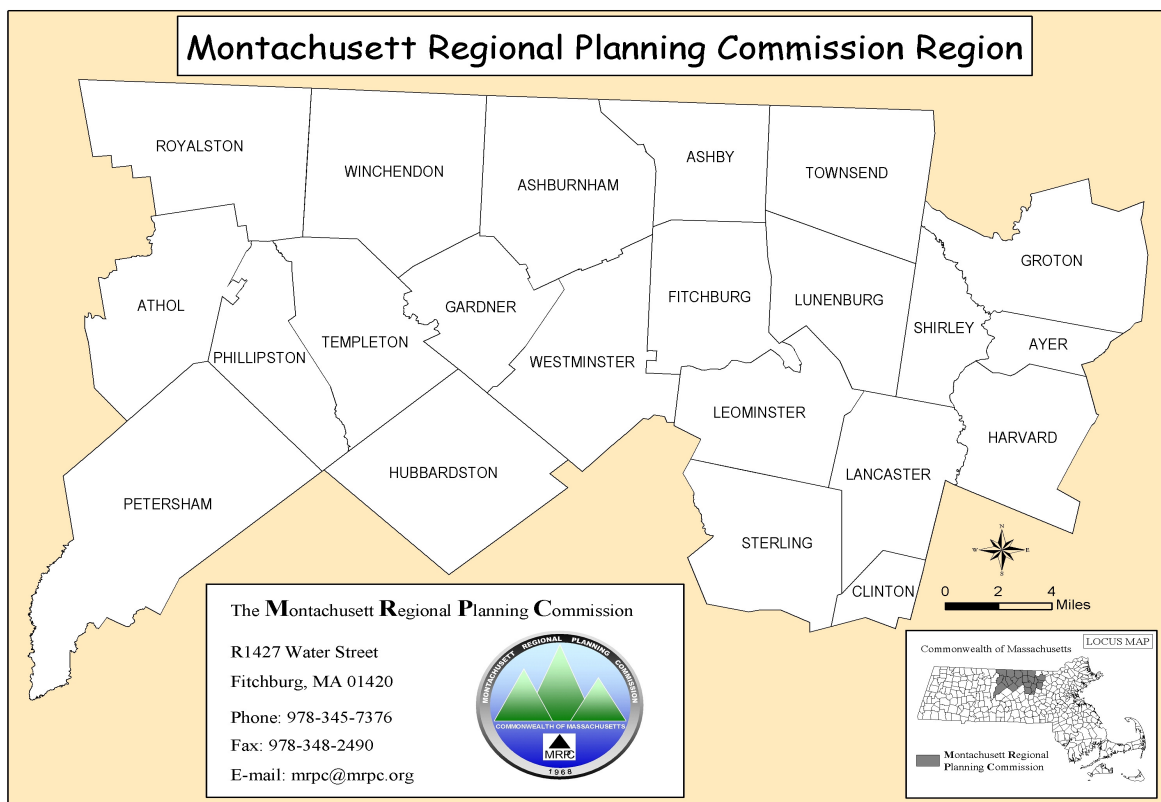
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INTRODUCTION

The Montachusett Regional Planning Commission (MRPC) is the regional planning agency and staff for the Montachusett region (Region) serving 22 communities in North Central Massachusetts (see **Figure 1**). These communities fall within Worcester and Middlesex Counties.

Figure 1: The Communities Served by the MRPC



The MRPC carries out comprehensive regional planning in the Region. Staff of the MRPC Transportation Department develops the Transportation Improvement Plan (TIP) and the Regional Transportation Plan (RTP) and regularly conducts Region wide and community level transportation studies. This report provides a thorough overview of the roadway safety conditions within every community in the Region utilizing Region and community wide crash statistics and dangerous intersection and interchange locations that the Transportation Department has developed from a regional crash database. The database contains crash data compiled from MassHighway crash tables.

This is a first phase report that will serve as one of several planning tools¹ that can be used to develop safety improvement projects that work towards meeting the goals of the Massachusetts Strategic Highway Safety Plan in our Region. Although individual location information is provided in this report it is not intended to replace the need to conduct a traffic safety study of the location. Instead the information should be used as a screening tool to draw attention to the real or potential safety problem at the location.

¹ Some planning tools are described in this report.

I: THE MRPC & THE MASSACHUSETTS STRATEGIC HIGHWAY SAFETY PLAN

The MRPC is working cooperatively and in coordination with MassHighway to implement the Massachusetts Strategic Highway Safety Plan (SHSP). The MRPC is committed to the goal of improving roadway safety in the communities of the MRPC Region. The following is a brief summary of the SHSP.

After much planning and discussion, the official SHSP was formally approved and signed by the MassHighway Commissioner, on behalf of the Governor in September of 2006. Shortly after, the Federal Highway Administration (FHWA) approved the SHSP. The SHSP was prepared so that Massachusetts would be in compliance with the requirements of the federal transportation legislation known as the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The SHSP mission, vision, and goal are:

Mission

Develop, promote, implement, and evaluate data-driven, multidisciplinary strategies to maximize safety for users of the roadway system.

Vision

Provide the safest roadway system in the country and promote its safe use.

Goal

Reverse the increasing trend of traffic-related fatalities and injuries upon implementation of the Massachusetts SHSP (towards zero fatalities and injuries).

The SHSP is data driven and involves all roadways throughout our state. The two main goals of the plan are: a 20% reduction from 476 (2004) in fatal injuries and a 20% reduction from 5,554 (2004) in non-fatal injuries requiring a hospital visit due to traffic related crashes by the year 2010.

SAFETEA-LU establishes the processes and content requirements for the SHSP which among other guidelines include:

- The use of different types of crash data from different sources;
- The establishment of a crash data system with the ability to perform problem identification and countermeasure analysis;
- To identify hazardous locations, sections, and elements and establish criteria that indicate relative crash severity of these locations;
- The advancement of the State's capabilities for traffic records data collection, analysis, and integration with other sources of safety data which include information on all public roads;
- The consideration of the results of state, regional, and local transportation and highway safety processes;
- Providing a program of projects that is consistent with the Statewide Transportation Improvement Program (STIP).

SHSP Update

Since the approval of the SHSP, many of its goals are well underway towards being met. This report contributes to those goals in our Region by drawing attention to the most dangerous intersections and interchanges. Program updates include the following:

Road Safety Audit Program

The FHWA defines a Road Safety Audit (RSA) as a formal safety examination of an existing or future traffic facility by an independent and multidisciplinary team. The purpose of an RSA is to identify existing and potential safety issues and opportunities for implementing comprehensive countermeasures that consider all roadway users. Many RSA's have been completed across the State which includes two for locations in our Region - the Route 2A / John Fitch Highway Intersection in Fitchburg and Route 140 in Gardner from the Westminster Town Line to the Winchendon Town Line. Please contact the MRPC for further details.

The MassHighway Traffic Safety Toolbox (website)

This is basically a traffic safety and engineering informational resource for municipal practitioners. It provides the information through a series of fact sheets and includes links to various web pages. Website: <http://www.mhd.state.ma.us/safetytoolbox/>

Geocoded Crash Data (GIS point data)

The precise location of a crash is high priority data when investigating safety conditions at a location such as an intersection. Since the inception of the new Crash Data System (CDS) of the Registry of Motor Vehicles, crash location data has improved. Nearly 75% of crashes in the CDS now have accurate location data. This GIS crash point data was, and is, utilized in the three activities described below and can be used by safety analysts for investigating a location. Please contact the MRPC or MassHighway for further details.

The MassHighway Top 200 High Crash Intersection Location Report

According to MassHighway this report functions as a planning tool for "... developing safety improvements projects." The report uses a new methodology to determine dangerous intersections but still relies on the commonly used *Equivalent Property Damage Only* (EPDO) crash severity rating system to rank the intersections. There are 5 intersections listed in this report in our Region. See **Sections V** and **VI** below for more on this report. Please contact the MRPC or MassHighway for the full report.

Non Top 200 Intersection Crash Cluster Locations

These locations were developed using the same methodology used to develop the crash clusters found in the *Top 200 High Crash Intersection Location Report*. Some of the locations that are in our Region can be seen on **Figure 6**. Please contact the MRPC or MassHighway for further details.

MassHighway Web Based Crash Data Query and Analysis Program

This web based program is currently being beta-tested by safety stakeholders throughout the State. When fully operational², this program will allow safety analysts to query and analyze crash data on line for the purpose of identifying and evaluating safety conditions on roadway facilities.

² Date unknown at time this report was prepared.

II: MASSHIGHWAY CRASH TABLES & MRPC CRASH DATABASE & STATISTICS

MassHighway obtains crash data from the Massachusetts Registry of Motor Vehicles (RMV) to create crash tables for each community in Massachusetts for use in traffic engineering studies, safety planning activities, and distribution to government agencies and the public. The MRPC Transportation Department has been developing a crash database for the purpose of gathering crash statistics on the Region using historical and the most recent MassHighway crash tables available that currently exist through 2005. To develop crash statistics from the database, MRPC staff has analyzed information such as number of crashes, crash location, and crash severity. Crash severity states the types of harm or the most serious outcome of a crash. There are essentially three possible outcomes:

1. Fatal Injury crash: Is the worst type of harm that involves at least one fatality or death of a person.
2. Non-fatal Injury crash: Is the second worst type of harm that involves at least one injury to a person.
3. Property Damage Only (PDO) crash: Is the third worst type of harm that involves damage to property of any type.

This report presents compiled crash statistics and identifies the most dangerous intersections and interchanges³ within the communities of our Region for years 2002-2005. By identifying and eventually studying these problem locations we hope to determine solutions to reduce the number and severity of crashes in the communities of our Region.

III: REGIONAL & COMMUNITY CRASH STATISTICS

Regional Crash Statistics

Table 1 provides regional crash statistics. The Region saw a total of 21,641 crashes occur during this four-year period in which 10,731 (49.6%) were *intersection and interchange crashes* and 10,910 (50.4%) were *non-intersection/location unknown crashes*. The method used to derive these crash classifications is based on the eight fields in the crash tables that address crash location. *Location unknown crashes* lack adequate data in the fields to determine the crash location. Crashes that occur within a 200 foot radius⁴ of each leg, or approach, to an intersection are classified as *intersection crashes*. *Interchange crashes* are also classified as *intersection crashes* but will analyzed separately as noted (see footnote 1). Due to high speeds and the various lengths of acceleration and deceleration lanes at interchange ramps, crashes that occur within a 1,000 foot radius of an interchange are considered to be related to the interchange. The remaining crashes are classified as *non-intersection crashes* which are combined with the *location unknown crashes* and together they are reclassified as ***need to locate crashes*** for

³ Interchanges and interchange crash data are grouped with intersections and intersection crash data until the section IV: *The Most Dangerous Intersections and Interchanges in the Montachusett Region 2002-2005* below where they will be separated.

⁴ A commonly used radius for determining intersection crashes.

the remainder of this report. These crashes will be grouped by location and attempts will be made to locate the *location unknown crashes* which will be completed in the next phase of this program.

Table 1: Regional Crash Statistics

Four-Year Crash Totals																
Yr	Year Total	% Change	Intersection & Interchange Crashes & Percent of Total		Need to Locate Crashes & Percent of Total		Crash Severity Categories									
05	5,813	14.25%					Total Fatal Injury	Total Non-Fatal Injury	Total PDO							
04	5,088	-11.11%														
03	5,724	14.11%														
02	5,016		10,731	49.6%	10,910	50.4%	66	5,974	15,601							
	Total: 21,641															
Intersection & Interchange Crashes & Crash Severity by Year																
Yr	Year Sub Total	Percent of Year Total	Percent Change from Previous Year		# of Fatal Injury	Percent of Year Sub Total	Percent Change from Previous Year		# of Non Fatal Injury	Percent of Year Sub Total	Percent Change from Previous Year		# of PDO	Percent of Year Sub Total	Percent Change from Previous Year	
05	2,630	45.24%	3.42%		6	0.23%	0.00%		693	26.35%	-10.70%		1,931	73.42%	9.65%	
04	2,543	49.98%	-12.91%		6	0.24%	-14.29%		776	30.52%	-7.29%		1,761	69.25%	-15.17%	
03	2,920	51.01%	10.69%		7	0.24%	16.67%		837	28.66%	5.82%		2,076	71.10%	12.76%	
02	2,638	52.59%			6	0.23%			791	29.98%			1,841	69.79%		
Intersection & Interchange Crash Severity Totals																
# of Fatal Injury & % of Total			# of Non-Fatal Injury & % of Total				# of PDO & % of Total									
25			0.23%		3,097			28.9%		7,609				70.9%		
Need to Locate Crashes & Crash Severity by Year																
Yr	Year Sub Total	Percent of Year Total	Percent Change from Previous Year		# of Fatal Injury	Percent of Year Sub Total	Percent Change from Previous Year		# of Non Fatal Injury	Percent of Year Sub Total	Percent Change from Previous Year		# of PDO	Percent of Year Sub Total	Percent Change from Previous Year	
05	3,183	54.76%	25.07%		9	0.28%	12.50%		765	24.03%	6.10%		2,409	75.68%	32.65%	
04	2,545	50.02%	-9.24%		8	0.31%	-42.86%		721	28.33%	-2.83%		1,816	71.36%	-11.33%	
03	2,804	48.99%	17.91%		14	0.50%	40.00%		742	26.46%	14.33%		2,048	73.04%	19.14%	
02	2,378	47.41%			10	0.42%			649	27.29%			1,719	72.29%		
Need to Locate Crash Severity Totals																
# of Fatal Injury & % of Total			# of Non-Fatal Injury & % of Total				# of PDO & % of Total									
41			0.38%		2,877			26.4%		7,992				73.3%		

- On average, yearly crash totals fluctuated by approximately 689 (13%) crashes from year to year. Reasons for these fluctuations may likely be due to a combination of events such as changes in the occurrence of crashes, changes in

the way crashes were reported to the RMV, and changes in public safety personnel who do the reporting to the RMV.

- Of the *need to locate crashes*, *non-intersection crashes* accounted for 8,352 (38.6%) and the *location unknown crashes* accounted for 2,559 (11.8%).
- *Need to locate crashes* saw their share of the yearly total increase each year. In 2002 *need to locate crashes* accounted for 47.4% versus 52.6% for *intersection crashes*. By 2005 they accounted for 54.8% versus 45.2% for *intersection crashes*. By 2005 they outnumbered *intersection crashes* by 553 crashes.
- Of the total number of crashes in the Region, 66 (0.30%) were Fatal Injury crashes, 5,974 (27.6%) were Non-fatal Injury crashes, and the remaining 15,601 crashes (72.1%) were PDO crashes.
- Of the *intersection crashes* in these years 25 (0.23%) were Fatal Injury crashes; 3,097 (28.9%) were Non-fatal Injury crashes; and 7,609 (70.9%) were PDO crashes.
- Of the *need to locate crashes* in these years 41 (0.38%) were Fatal Injury crashes; 2,877 (26.4%) Non-fatal Injury crashes; and 7,992 (73.3%) were PDO crashes.
- Fatal Injury crashes that occurred at *need to locate crash* locations outnumbered those occurring at intersections by 16 crashes (39%).
- Non-fatal Injury crashes that occurred at intersections outnumbered those occurring at *need to locate crash* locations by 220 crashes (7%).
- PDO crashes that occurred at *need to locate crash* locations outnumbered those occurring at intersections by 383 crashes (4.8%).

Community Crash Statistics

For each community in the Region, **Figure 2** below provides the total number of crashes, total number of crashes rank, and divides the crash total into intersection or need to locate crash categories. The statistics clearly show that communities with densely populated urban areas and/or heavily traveled roads such as Route 2 or Interstate 190 rank higher in crash rank.

Crashes by urban/rural area type and rank:

- Accounting for about 12,965 (or 60%) of the total number of crashes are the urban area communities of Leominster (1st), Fitchburg (2nd), Gardner (3rd), Ayer (11th), and Clinton (15th).
- Accounting for about 7,639 (or 35%) of the total number of crashes are the urban and rural area communities of Athol (4th), Groton (5th), Lancaster (6th), Winchendon (6th), Westminster (8th), Townsend (9th), Lunenburg (10th), Harvard (12th), Templeton (13th), Sterling (14th), and Shirley (17th).
- Accounting for about 1,038 (or 5%) of the total number of crashes are the rural area communities of Ashburnham (16th), Hubbardston (18th), Ashby (19th), Phillipston (20th), Petersham (21st), and Royalston (22nd).

Figure 2: Four-Year Crash Totals for Communities

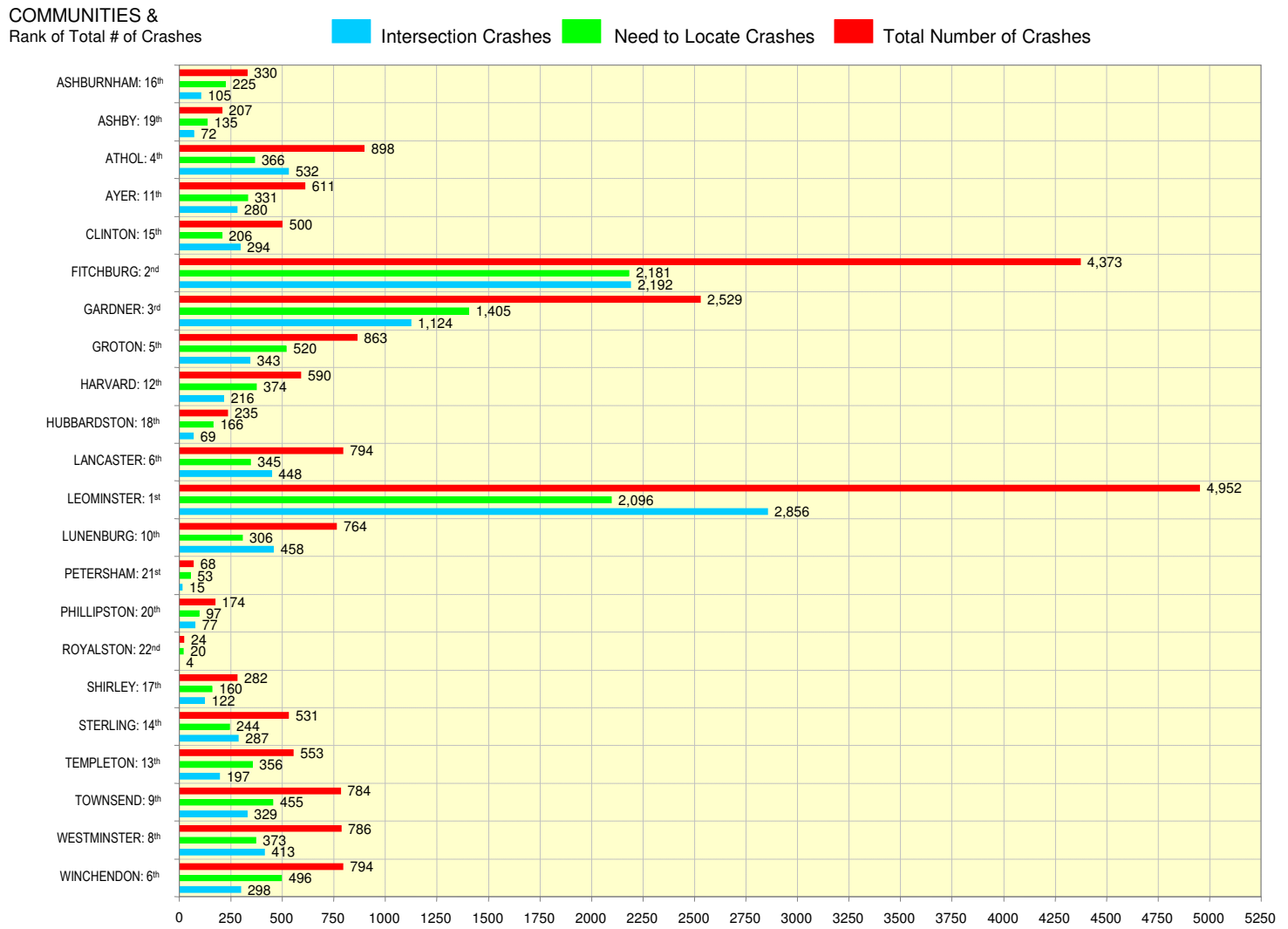


Figure 3 below provides crash severity percentages for each community and provides their rank within each severity type⁵. Again the statistics clearly show that communities with densely populated urban areas and/or heavily traveled roads such as Route 2 or Interstate 190 rank higher in crash severity rank.

The most significant crash severity rankings among the communities are:

Fatal Injury crashes (with a minimum of 3 fatal injury crashes): Tied for 1st are Leominster and Gardner (11 crashes each) followed by Townsend at 3rd (6 crashes), and Westminster at 4th (5 crashes). Fitchburg, Lancaster, Lunenburg,

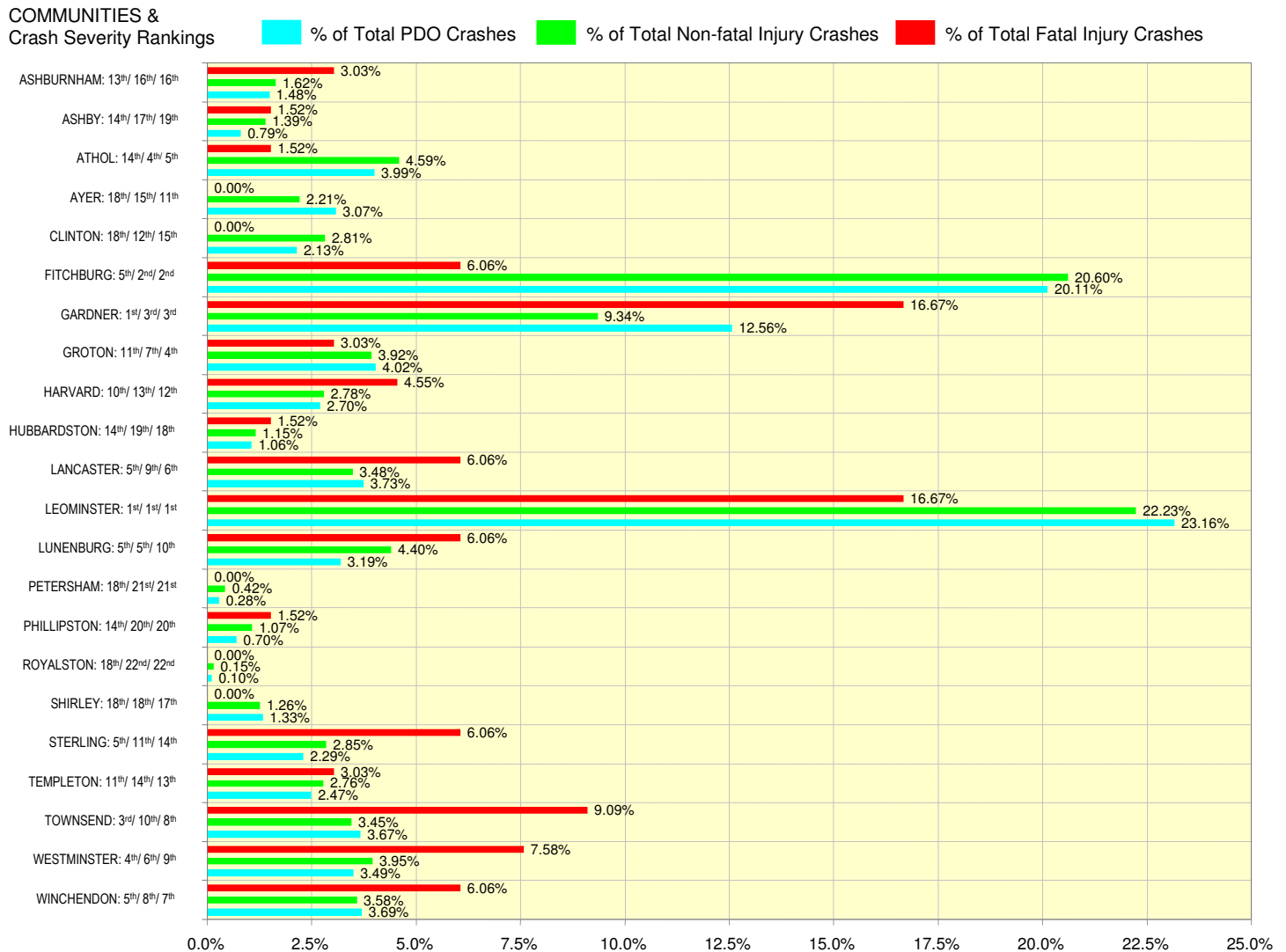
⁵ The first number after community name equals the Fatal Injury Crash rank, the second number equals the Non-fatal Injury rank, and the third number equals the PDO rank among the Montachusett region communities. For example Ashburnham is ranked 13th in Fatal Injury crashes, 16th in Non-fatal Injury crashes, and 16th in PDO crashes among the Montachusett region communities.

Sterling, and Winchendon are tied for 5th (4 crashes each) and Harvard is ranked 10th (3 crashes).

Non-fatal Injury crashes (with a minimum of 200 non-fatal injury crashes): 1st is Leominster (1,328 crashes); 2nd is Fitchburg (1,231 crashes); 3rd is Gardner (558 crashes); 4th is Athol (274 crashes); 5th is Lunenburg (263 crashes); 6th is Westminster (236 crashes); 7th is Groton (234 crashes); 8th is Winchendon (214 crashes); 9th is Lancaster (208 crashes); 10th is Townsend (206 crashes).

PDO crashes (with a minimum of 500 PDO crashes): 1st is Leominster (3,613 crashes); 2nd is Fitchburg (3,138 crashes); 3rd is Gardner (1,960 crashes); 4th is Groton (627 crashes); 5th is Athol (623 crashes); 6th is Lancaster (582 crashes); 7th is Winchendon (576 crashes); 8th is Townsend (572 crashes); 9th is Westminster (545 crashes).

Figure 3: Four-Year Crash Severity Percentages for Communities



IV: THE MOST DANGEROUS INTERSECTIONS & INTERCHANGES IN THE REGION

The *Equivalent Property Damage Only* (EPDO) crash severity rating system was used to determine which intersections and interchanges should be in this list. EPDO rates a crash based on crash severity that gives one (1) point to a *PDO* crash; five (5) points for a crash involving at least one *Non-fatal Injury*; and ten (10) points to a crash that involves at least one *Fatal Injury*. In other words, one *Fatal Injury* crash equals two *Non-fatal Injury* crashes and ten *Property Damage Only* crashes. After determining each crash EPDO rate, the ratings of the crashes for each location are totaled. A high EPDO total indicates a dangerous location where crashes have the most severe consequences.

Table 2 ranks dangerous intersections and interchanges (**bold letters**) in the Region. The locations are sorted in descending order first by their EPDO total and second by total crashes and given a competitive regional rank. It includes all locations that have a cumulative EPDO total of at least a 39⁶ for the four year period. If there are multiple locations with the same EPDO total but different total number of crashes, locations with the lower total number of crashes are ranked higher because the crashes are more severe.

Table 2: The Most Dangerous Intersections & Interchanges in the Region

City/Town	Community Rank	Region Rank	Intersections and Interchanges	EPDO Total	Total Crashes	Comments
Leominster	1	1	Rte. 2 (Exit 31)/N Main St. (Rte. 12)	384	192	Needs study
Leominster	2	2	Rte. 2 (Exit 32)/Main St. (Rte. 13)	240	120	Study completed, further study needed
Lancaster	1	3	Rte. 2 (Exit 35)/Lunenburg Rd. (Rte. 70)/Old Union Tnpk./Fort Pond Rd.	234	106	Study completed, further study needed
Harvard	1	4	Rte. 2 (Exit 38)/Ayer Rd. (Rte. 110;Rte. 111)	231	111	Needs study
Leominster	3	5	Main St (Rt 13)/Nashua St/Hamilton St	208	108	Needs study
Leominster	4	6	Rte 2/Rte 190	206	74	Needs study
Leominster	5	7	Monument Square (Main St/Mechanic St)	198	98	Needs study
Leominster	6	8	N Main St. (Rte 12)/Nelson St./Water Tower Pl./Fruit St.	188	96	Study completed, improvements recommended
Westminster	1	9	Rte. 2/140 (Exit 25)/State Rd. East (Rte 2A)/Hagar Park Rd.	180	70	Needs study
Sterling	1	10	Rte. 190 (Exit 6)/Leominster Rd. (Rte. 12)	167	70	Needs study
Fitchburg	1	11	Bemis Rd./John Fitch HWY./Summer St.	166	82	Improvements completed, needs follow up
Fitchburg	2	12	John Fitch HWY/Lunenburg St. (Rte.2A)	165	81	Safety audit completed
Westminster	2	13	Rte. 2 (Exit 24)/W Main St. (Rte. 140)	163	82	Improvements completed, needs follow up
Leominster	7	14	Leominster Connector/Nashua St.	161	73	Improvements completed, needs follow up
Leominster	8	15	N Main St (Rte 12)/Lindell Ave./Hamilton St	155	75	Study completed, improvements recommended
Lancaster	2	16	Rte. 2 (Exit 36)/Shirley Rd/Fort Pond Rd./Old Union Tnpk	133	61	Needs study
Fitchburg	3	17	Rte. 2/Mount Elam Rd.	119	51	Study completed, improvements recommended
Fitchburg	4	18	Water St. (Rte. 12)/Wanoosnoc Rd./Bemis Rd.	113	57	Construction
Gardner	1	19	Pearl St. (Rte. 101)/Rte. 140	110	42	Improvements completed, needs follow up
Fitchburg	5	20	South St./Electric Ave./ Old South St.	105	41	Needs study
Leominster	9	21	Merriam Ave./Lindell Ave.	97	45	Study completed, improvements recommended
Lunenburg	1	22	Massachusetts Ave. (Rte. 2A;Rte. 13)/Electric Ave. (Rte. 13)	96	40	Needs study
Westminster	3	22	Rte. 2 (Exit 27)/Depot Rd./Narrows Rd. (Exit also in Fitchburg)	96	40	Needs study
Fitchburg	6	24	South St./Wanoosnoc Rd./Whalon St.	96	52	Needs study
Fitchburg	7	25	Rte. 2 (Exit 28)/Princeton Rd. (Rte. 31)	93	53	Needs study

⁶ This is not a State threshold that identifies a location as being dangerous. It was chosen to identify potential safety problem locations for communities in our Region and may indicate the need for further investigation.

City/Town	Community Rank	Region Rank	Intersections and Interchanges	EPDO Total	Total Crashes	Comments
Phillipston	1	26	Rte. 2 (Exit 19)/Rte. 2A/Rte. 202 (Exit also in Templeton)	91	31	Needs study
Leominster	10	27	Hamilton St./Crawford St./River St.	90	43	Improvements completed, needs follow up
Lunenburg	2	28	Massachusetts Ave. (Rte. 2A;Rte. 13)/Chase Rd. (Rte. 13)	89	33	Needs study
Gardner	2	29	Rte. 2 (Exit 22)/Pearson BLVD.	89	49	Improvements completed, needs follow up
Gardner	3	30	Elm St./Central St.(Rte.101)/Pearl St.(Rte.101)/Green St.	88	40	Needs study
Leominster	11	31	Central St. (Rte 12)/Litchfield St.	87	39	Needs study
Lancaster	3	32	Rte. 2 (Exit 37)/Jackson Rd.	87	43	Improvements completed, needs follow up
Gardner	4	33	West Broadway (Rte.2A)/Timpany BLVD. (Rte.68)	84	40	Needs study
Fitchburg	8	34	Bemis Rd./Airport Rd.	82	30	Needs study
Sterling	2	34	Leominster Rd. (Rte. 12)/Chocksett Rd.	82	30	Design
Leominster	12	36	Rte. 2 (Exit 30)/Merriam Ave./Whalon St. (exit also in Fitchburg)	80	36	Needs study
Fitchburg	9	37	Rte.2 (Exit 30)/Whalon St./Merriam Ave. (Exit also in Leominster)	80	40	Study completed, further study needed
Lancaster	4	38	Rte. 190 (Exit 7)/N Main St (Rte. 117)	79	30	Improvements completed, needs follow up
Templeton	1	39	Rte. 2 (Exit 21)/Patriots Rd. (Rte. 2A)	79	31	Needs study
Fitchburg	10	40	Kimble St. (Rte.12)/Laurel St./Cross St./Putnam St.	78	38	Needs study
Townsend	1	41	Main St. (Rte. 119)/Elm St. (Rte. 13)	78	46	Needs study
Leominster	13	42	Mechanic St./ Water St. (Depot Sq.)	77	37	Needs study
Fitchburg	11	43	Mechanic St. (Rte.31)/John Fitch Hwy/ Rindge Rd./Ashby State. Rd.	76	36	Design
Fitchburg	12	44	Main St. (Rte. 2A)/Rollstone St./Academy St.	75	32	Needs study
Leominster	14	45	N Main St (Rte 12)/Erdman Way	74	38	Improvements in progress
Gardner	5	46	Rte. 2 (Exit 23)/Timpany BLVD.	73	28	Improvements completed, needs follow up
Fitchburg	13	47	Water St. (Rte. 12)/Main St. (Rte. 2A)/Day St.	70	34	Needs study
Leominster	15	48	Main St (Rte 13)/River St	70	42	Improvements completed, needs follow up
Gardner	6	49	Elm St./Temple St.	69	28	Needs study
Sterling	3	50	Rte. 190 (Exit 5)/Redemption Rock Tr (Rte. 140) (also in Holdon)	69	29	Needs study
Leominster	16	51	Main St. (Rte 13)/North St.	67	31	Improvements completed, needs follow up
Clinton	1	52	Main St. (Rte.70)/Brook St. (Rte.62)	66	26	Improvements completed, needs follow up
Gardner	7	53	Parker St. (Rte. 101)/Nichols St.	63	35	Needs study
Fitchburg	14	54	Main St. (Rte 2A)/North St.	62	22	Construction
Lunenburg	3	54	Massachusetts Ave. (Rte. 2A)/White St.	62	22	Needs study
Leominster	17	56	N Main St. (Rte 12)/State St./Holman Ave.	61	25	Improvements in progress
Leominster	18	57	Central St. (Rte 12)/Grant St./Beth Ave.	60	20	Needs study
Townsend	2	58	Main St. (Rte. 119)/West Elm St./Canal St.	60	28	Needs study
Fitchburg	15	59	Summer St./Harvard St.	59	27	Needs study
Leominster	19	59	Central St (Rte 12)/Willard St.	59	27	Design
Leominster	20	61	Mill St./Haws St./Sack Blvd	57	33	Needs study
Winchendon	1	62	Spring St. (Rte 12)/ Glenallan St. (Rte 202)/ Hall Rd.	56	20	Needs study
Leominster	21	63	Rte. 2 (Exit 34)/Mechanic St./Harvard St.	56	24	Improvements completed, needs follow up
Leominster	22	64	Merriam Ave./Washington St.	55	23	Needs study
Leominster	23	65	Main St (Rt 13)/Prospect St.	55	31	Needs study
Fitchburg	16	66	Westminster St. (Rte. 2A)/Princeton Rd. (Rte. 12)	54	26	Needs study
Leominster	24	67	Main St. (Rte 13)/N Main St. (Rte 12)/High St./Mill St.	54	30	Needs study
Athol	1	68	South Main St.(Rte 2A)/Daniel Shays HWY	53	21	Needs study
Groton	1	68	Main St. (Rte. 119;Rte. 225)/Lowell Rd. (Rte. 40)/Broadmeadow Rd.	53	21	Needs study
Leominster	25	70	N Main St (Rte 12)/Nichols St./Battles St.	53	25	Improvements in progress
Leominster	26	71	Main St. (Rte 13)/Haws St.	53	33	Needs study
Fitchburg	17	72	Bemis Rd./Intervale Rd.	52	28	Needs study
Leominster	27	73	Main St. (Rte 12)/Merriam Ave./Columbia St.	52	32	Needs study

City/Town	Town Rank	Region Rank	Intersections and Interchanges	EPDO Total	Total Crashes	Comments
Fitchburg	18	74	Water St. (Rte. 12)/Benson St.	51	23	Construction
Leominster	28	75	Lancaster St. (Rte 117)/Elm Hill Ave.	50	18	Needs study
Leominster	28	75	Merriam Ave./Blossom St.	50	18	Needs study
Gardner	8	77	Timpany BLVD. (Rte. 68)/American Legion Circle	50	22	Needs study
Lancaster	5	78	High St. (Rte.110)/Bolton Rd.(Rte.110)/Center Bridge Rd./Old Common Rd.	50	30	Study completed, improvements recommended
Sterling	4	79	Redemption Rock Trail (Rte. 140)/Princeton Rd. (Rte. 62)	49	21	Needs study
Ayer	1	80	Carlton Circle	49	29	Needs study
Fitchburg	19	81	Lunenburg St. (Rte. 2A)/Klondike Ave.	48	16	Needs study
Phillipston	2	81	Rte. 2 (Exit 18)/Templeton Rd. (Exit also in Athol)	48	16	Needs study
Leominster	30	83	Mechanic St./3RD St./Walker St.	48	20	Design
Westminster	4	83	W Main St. (Rte. 140)/Simplex Dr. (opposite Exit 24 ramp)	48	20	Improvements completed, needs follow up
Fitchburg	20	85	Main St. (Rte. 2A)/Central St./Boulder Dr.	48	24	Needs study
Lancaster	6	85	Main St. (Rte.117)/Lunenburg Rd. (Rte. 70)	48	24	Study completed, improvements recommended
Fitchburg	21	86	Main St. (Rte. 2A)/Oliver St.	47	19	Needs study
Groton	2	86	Town Line Rd. (Rte. 119)/Proctor Rd./Townsend Rd.	47	19	Needs study
Leominster	31	86	N Main St (Rte 12)/Washington St./Grove Ave.	47	19	Study completed, improvements recommended
Harvard	2	89	Ayer Rd. (Rte. 110;Rte. 111)/Poor Farm Rd./Lancaster County Rd.	46	14	Needs study
Athol	2	91	Main St. (Rte.2A)/Exchange St.	46	18	Needs study
Fitchburg	22	92	Main St. (Rte.2A)/Summer St./ Lunenburg St. (Rte. 2A)	45	13	Needs study
Leominster	32	93	Mechanic St./Fifth St.	45	17	Needs study
Leominster	33	94	Main St (Rte 13)/Day St	45	21	Needs study
Athol	3	95	Rte. 2 (Exit 17)/Rte. 2/Rte. 31	44	20	Needs study
Fitchburg	23	95	Lunenburg St. (Rte.2A)/Townsend St./Boutelle St.	44	20	Needs study
Templeton	2	95	Gardner Rd. (Rte. 101)/Patriots Rd. (Rte. 2A)/N Main St./S Main St.	44	20	Study completed, improvements recommended
Leominster	34	98	Mechanic St./Leominster Connector/Commercial Rd	44	28	Design
Athol	4	99	Main St. (Rte. 32)/Chestnut St.	42	14	Study completed, further study needed
Fitchburg	24	99	River St.(Rte. 2A;Rte. 31)/Main St. (Rte. 2A)	42	14	Needs study
Fitchburg	25	101	Electric Ave./Rollston Rd.	42	18	Needs study
Leominster	35	101	Central St. (Rte 12)/Union St./Adams St.	42	18	Needs study
Westminster	5	101	Rte. 2 (Exit 26)/Village Inn Rd.	42	18	Needs study
Ashburnham	1	104	Center St. (Rte. 101)/Corey Hill Rd./ Williams Rd.	40	12	Study completed, improvements recommended
Clinton	2	105	Main St. (Rte.70;Rte.62;Rte110)/Union St. (Rte.70;Rte.62)	40	16	Needs study
Fitchburg	26	105	Electric Ave./Mount Elam Rd.	40	16	Needs study
Leominster	36	105	Lancaster St. (Rte 117)/Willard St.	40	16	Improvements completed, needs follow up
Lunenburg	4	105	Chase Rd. (Rte. 13)/West Townsend Rd.	40	16	Needs study
Westminster	6	105	State Rd. East (Rte. 2A)/Depot Rd./Bartherick Rd.	40	16	Study completed, improvements recommended
Winchendon	2	110	Front St. (Rte 12 & 202)/ School St. (Rte 12)/ River St. (Rte 202)	40	20	Study completed, improvements recommended
Groton	3	111	Main St. (Rte. 119;Rte. 111)/Fitchs Bridge Rd.	39	10	Needs study
Fitchburg	27	112	Clarendon St./Pratt St.	39	11	Needs study
Leominster	37	113	N Main St (Rte 12)/Hospital Rd	39	15	Needs study
Clinton	3	114	Water St. (Rte.110)/Main St. (Rte.70)	39	19	Improvements completed, needs follow up

Altogether there are 114 intersection and interchange locations in the table. Of that total twenty-three (or 20%) are interchange locations but nineteen of these are in the top fifty (38% of top fifty). The top four most dangerous locations are Route 2 interchanges and six interchanges are ranked in the top ten. Of the nineteen in the top fifty, sixteen are Route 2 and three are Interstate 190 interchanges. Although interchanges account for 38% of the locations in the top fifty, they account for an even greater percentage (or

share) of the **EPDO Total** at 43% (2,684 of 6,100 EPDO points) and 43% of the **Total Crashes** (1,122 of 2,823 total crashes).

Figure 4 shows the Route 2 and Route 12 Interchange (Exit 31) which is currently ranked as the most dangerous intersection and interchange location in the Region and in the City of Leominster. This interchange is a vital transportation link to Route 2 for both the Cities of Leominster and Fitchburg and historically has been consistently listed in the *MassHighway Top 1000 High Crash Locations Report*. Also, the bridge over Route 2 is a potential safety hazard as it is rated a high priority structurally deficient bridge by MassHighway. The pavement throughout this interchange is beginning to fail as well. This location acquired an EPDO total of 384 points which is 60% (144 points) higher than the number two location. Based on a total of 192 crashes there were no Fatal Injury crashes, but 48 (25%) were Non-fatal Injury and 144 (75%) were PDO crashes.

Figure 4: The Route 2 & Route 12 Interchange (Exit 31), the Most Dangerous Location among Intersections & Interchanges in the Region



Figure 5 shows the Main Street at Nashua Street and Hamilton Street intersection in the City of Leominster. It is currently ranked as the 5th most dangerous location in the Region but it is the highest ranked intersection in both the Region and in the City of Leominster. This intersection acquired an EPDO total of 208 points over the four year period. Based on a total of 108 crashes there were no Fatal Injury crashes but 25 (23%) were Non-fatal Injury crashes and 83 (77%) were PDO crashes. This intersection can also be found in the new *MassHighway Top 200 High Crash Intersection Location Report* which is discussed below.

Figure 5: The Main Street (Route 13) at Nashua and Hamilton Street Intersection



Table 3 contains the same dangerous locations as in **Table 2**, but instead they are listed by the community where they are located. This allows an interested person or entity to quickly find the locations in a community context. The locations are sorted in descending order by their EPDO total and given their rank within the community.

Table 3: Community List of Dangerous Intersections & Interchanges

City/Town	Community Rank	Region Rank	Intersections and Interchanges	EPDO Total	Total Crashes	Comments
Ashburnham	1	104	Center St. (Rte. 101)/Corey Hill Rd./ Williams Rd.	40	12	Study completed, improvements recommended
Athol	1	68	South Main St.(Rte 2A)/Daniel Shays HWY	53	21	Needs study
Athol	2	91	Main St. (Rte.2A)/Exchange St.	46	18	Needs study
Athol	3	95	Rte. 2 (Exit 17)/Rte. 2/Rte. 31	44	20	Needs study
Athol	4	99	Main St. (Rte. 32)/Chestnut St.	42	14	Study completed, further study needed
Ayer	1	80	Carlton Circle	49	29	Needs study
Clinton	1	52	Main St. (Rte.70)/Brook St. (Rte.62)	66	26	Improvements completed, needs follow up
Clinton	2	105	Main St. (Rte.70;Rte.62;Rte110)/Union St. (Rte.70;Rte.62)	40	16	Needs study
Clinton	3	114	Water St. (Rte.110)/Main St. (Rte.70)	39	19	Improvements completed, needs follow up
Fitchburg	1	11	Bemis Rd./John Fitch HWY./Summer St.	166	82	Improvements completed, needs follow up
Fitchburg	2	12	John Fitch HWY/Lunenburg St. (Rte.2A)	165	81	Safety audit completed
Fitchburg	3	17	Rte. 2/Mount Elam Rd.	119	51	Study completed, improvements recommended
Fitchburg	4	18	Water St. (Rte. 12)/Wanoosnoc Rd./Bemis Rd.	113	57	Construction
Fitchburg	5	20	South St./Electric Ave./ Old South St.	105	41	Needs study

City/Town	Community Rank	Region Rank	Intersections and Interchanges	EPDO Total	Total Crashes	Comments
Fitchburg	6	24	South St./Wanoosnoc Rd./Whalon St.	96	52	Needs study
Fitchburg	7	25	Rte. 2 (Exit 28)/Princeton Rd. (Rte. 31)	93	53	Needs study
Fitchburg	8	34	Bemis Rd./Airport Rd.	82	30	Needs study
Fitchburg	9	37	Rte.2 (Exit 30)/Whalon St./Merriam Ave. (also in Leominster)	80	40	Study completed, further study needed
Fitchburg	10	40	Kimble St. (Rte.12)/Laurel St./Cross St./Putnam St.	78	38	Needs study
Fitchburg	11	43	Mechanic St. (Rte.31)/John Fitch Hwy/ Rindge Rd./Ashby State. Rd.	76	36	Design
Fitchburg	12	44	Main St. (Rte. 2A)/Rollstone St./Academy St.	75	32	Needs study
Fitchburg	13	47	Water St. (Rte. 12)/Main St. (Rte. 2A)/Day St.	70	34	Needs study
Fitchburg	14	54	Main St. (Rte 2A)/North St.	62	22	Construction
Fitchburg	15	59	Summer St./Harvard St.	59	27	Needs study
Fitchburg	16	66	Westminster St. (Rte. 2A)/Princeton Rd. (Rte. 12)	54	26	Needs study
Fitchburg	17	72	Bemis Rd./Intervale Rd.	52	28	Needs study
Fitchburg	18	74	Water St. (Rte. 12)/Benson St.	51	23	Construction
Fitchburg	19	81	Lunenburg St. (Rte. 2A)/Klondike Ave.	48	16	Needs study
Fitchburg	20	85	Main St. (Rte. 2A)/Central St./Boulder Dr.	48	24	Needs study
Fitchburg	21	86	Main St. (Rte. 2A)/Oliver St.	47	19	Needs study
Fitchburg	22	92	Main St. (Rte.2A)/Summer St./ Lunenburg St. (Rte. 2A)	45	13	Needs study
Fitchburg	23	95	Lunenburg St. (Rte.2A)/Townsend St./Boutelle St.	44	20	Needs study
Fitchburg	24	99	River St.(Rte. 2A;Rte. 31)/Main St. (Rte. 2A)	42	14	Needs study
Fitchburg	25	101	Electric Ave./Rollston Rd.	42	18	Needs study
Fitchburg	26	105	Electric Ave./Mount Elam Rd.	40	16	Needs study
Fitchburg	27	112	Clarendon St./Pratt St.	39	11	Needs study
Gardner	1	19	Pearl St. (Rte. 101)/Rte. 140	110	42	Improvements completed, needs follow up
Gardner	2	29	Rte. 2 (Exit 22)/Pearson BLVD.	89	49	Improvements completed, needs follow up
Gardner	3	30	Elm St./Central St.(Rte.101)/Pearl St.(Rte.101)/Green St.	88	40	Needs study
Gardner	4	33	West Broadway (Rte.2A)/Timpany BLVD. (Rte.68)	84	40	Needs study
Gardner	5	46	Rte. 2 (Exit 23)/Timpany BLVD.	73	28	Improvements completed, needs follow up
Gardner	6	49	Elm St./Temple St.	69	28	Needs study
Gardner	7	53	Parker St. (Rte. 101)/Nichols St.	63	35	Needs study
Gardner	8	77	Timpany BLVD. (Rte. 68)/American Legion Circle	50	22	Needs study
Groton	1	68	Main St. (Rte. 119;Rte. 225)/Lowell Rd. (Rte. 40)/Broadmeadow Rd.	53	21	Needs study
Groton	2	86	Town Line Rd. (Rte. 119)/Proctor Rd./Townsend Rd.	47	19	Needs study
Groton	3	111	Main St. (Rte. 119;Rte. 111)/Fitchs Bridge Rd.	39	10	Needs study
Harvard	1	4	Rte. 2 (Exit 38)/Ayer Rd. (Rte. 110;Rte. 111)	231	111	Needs study
Harvard	2	89	Ayer Rd. (Rte. 110;Rte. 111)/Poor Farm Rd./Lancaster County Rd.	46	14	Needs study
Lancaster	1	3	Rte. 2 (E 35)/Lunenburg (Rte. 70)/Old Union Tnpk./Ft Pnd Rd.	234	106	Study completed, further study needed
Lancaster	2	16	Rte. 2 (Exit 36)/Shirley Rd/Fort Pond Rd./Old Union Tnpk	133	61	Needs study
Lancaster	3	32	Rte. 2 (Exit 37)/Jackson Rd.	87	43	Improvements completed, needs follow up
Lancaster	4	38	Rte. 190 (Exit 7)/N Main St (Rte. 117)	79	30	Improvements completed, needs follow up
Lancaster	5	78	High St. (Rte.110)/Bolton Rd.(Rte.110)/Center Bridge Rd./Old Common Rd.	50	30	Study completed, improvements recommended
Lancaster	6	85	Main St. (Rte.117)/Lunenburg Rd. (Rte. 70)	48	24	Study completed, improvements recommended

City/Town	Community Rank	Region Rank	Intersections and Interchanges	EPDO Total	Total Crashes	Comments
Leominster	1	1	Rte. 2 (Exit 31)/N Main St. (Rte. 12)	384	192	Needs study
Leominster	2	2	Rte. 2 (Exit 32)/Main St. (Rte. 13)	240	120	Study completed, further study needed
Leominster	3	5	Main St (Rt 13)/Nashua St/Hamilton St	208	108	Study completed, improvements recommended
Leominster	4	6	Rte 2/Rte 190	206	74	Needs study
Leominster	5	7	Monument Square (Main St/Mechanic St)	198	98	Needs study
Leominster	6	8	N Main St. (Rte 12)/Nelson St./Water Tower Pl./Fruit St.	188	96	Study completed, improvements recommended
Leominster	7	14	Leominster Connector/Nashua St.	161	73	Improvements completed, needs follow up
Leominster	8	15	N Main St (Rte 12)/Lindell Ave./Hamilton St	155	75	Study completed, improvements recommended
Leominster	9	21	Merriam Ave./Lindell Ave.	97	45	Study completed, improvements recommended
Leominster	10	27	Hamilton St./Crawford St./River St.	90	43	Improvements completed, needs follow up
Leominster	11	31	Central St. (Rte 12)/Litchfield St.	87	39	Needs study
Leominster	12	36	Rte. 2 (Exit 30)/Merriam Ave./Whalon St. (also in Fitchburg)	80	36	Needs study
Leominster	13	42	Mechanic St./ Water St. (Depot Sq.)	77	37	Needs study
Leominster	14	45	N Main St (Rte 12)/Erdman Way	74	38	Improvements in progress
Leominster	15	48	Main St (Rte 13)/River St	70	42	Needs study
Leominster	16	51	Main St. (Rte 13)/North St.	67	31	Improvements completed, needs follow up
Leominster	17	56	N Main St. (Rte 12)/State St./Holman Ave.	61	25	Improvements in progress
Leominster	18	57	Central St. (Rte 12)/Grant St./Beth Ave.	60	20	Needs study
Leominster	19	59	Central St (Rte 12)/Willard St.	59	27	Design
Leominster	20	61	Mill St./Haws St./Sack Blvd	57	33	Needs study
Leominster	21	63	Rte. 2 (Exit 34)/Mechanic St./Harvard St.	56	24	Improvements completed, needs follow up
Leominster	22	64	Merriam Ave./Washington St.	55	23	Needs study
Leominster	23	65	Main St (Rt 13)/Prospect St.	55	31	Needs study
Leominster	24	67	Main St. (Rte 13)/N Main St. (Rte 12)/High St./Mill St.	54	30	Needs study
Leominster	25	70	N Main St (Rte 12)/Nichols St./Battles St.	53	25	Improvements in progress
Leominster	26	71	Main St. (Rte 13)/Haws St.	53	33	Needs study
Leominster	27	73	Main St. (Rte 12)/Merriam Ave./Columbia St.	52	32	Needs study
Leominster	28	75	Lancaster St. (Rte 117)/Elm Hill Ave.	50	18	Needs study
Leominster	28	75	Merriam Ave./Blossom St.	50	18	Needs study
Leominster	30	83	Mechanic St./3RD St./Walker St.	48	20	Design
Leominster	31	86	N Main St (Rte 12)/Washington St./Grove Ave.	47	19	Study completed, improvements recommended
Leominster	32	93	Mechanic St./Fifth St.	45	17	Needs study
Leominster	33	94	Main St (Rte 13)/Day St	45	21	Needs study
Leominster	34	98	Mechanic St./Leominster Connector/Commercial Rd	44	28	Design
Leominster	35	101	Central St. (Rte 12)/Union St./Adams St.	42	18	Needs study
Leominster	36	105	Lancaster St. (Rte 117)/Willard St.	40	16	Improvements completed, needs follow up
Leominster	37	113	N Main St (Rte 12)/Hospital Rd	39	15	Needs study
Lunenburg	1	22	Massachusetts Ave. (Rte. 2A;Rte. 13)/Electric Ave. (Rte. 13)	96	40	Needs study
Lunenburg	2	28	Massachusetts Ave. (Rte. 2A;Rte. 13)/Chase Rd. (Rte. 13)	89	33	Needs study
Lunenburg	3	54	Massachusetts Ave. (Rte. 2A)/White St.	62	22	Needs study
Lunenburg	4	105	Chase Rd. (Rte. 13)/West Townsend Rd.	40	16	Needs study
Phillipston	1	26	Rte. 2 (Exit 19)/Rte. 2A/Rte. 202 (also in Templeton)	91	31	Needs study
Phillipston	2	81	Rte. 2 (Exit 18)/Templeton Rd. (also in Athol)	48	16	Needs study

City/Town	Community Rank	Region Rank	Intersections and Interchanges	EPDO Total	Total Crashes	Comments
Sterling	1	10	Rte. 190 (Exit 6)/Leominster Rd. (Rte. 12)	167	70	Needs study
Sterling	2	34	Leominster Rd. (Rte. 12)/Chocksett Rd.	82	30	Design
Sterling	3	50	Rte. 190 (Exit 5)/Redemption Rock Tr (Rte. 140) (also in Holdon)	69	29	Needs study
Sterling	4	79	Redemption Rock Trail (Rte. 140)/Princeton Rd. (Rte. 62)	49	21	Needs study
Templeton	1	39	Rte. 2 (Exit 21)/Patriots Rd. (Rte. 2A)	79	31	Needs study
Templeton	2	95	Gardner Rd. (Rte. 101)/Patriots Rd. (Rte. 2A)/N Main St./S Main St.	44	20	Study completed, improvements recommended
Townsend	1	41	Main St. (Rte. 119)/Elm St. (Rte. 13)	78	46	Needs study
Townsend	2	58	Main St. (Rte. 119)/West Elm St./Canal St.	60	28	Needs study
Westminster	1	9	Rte. 2/140 (Exit 25)/State Rd. East (Rte 2A)/Hagar Park Rd.	180	70	Needs study
Westminster	2	13	Rte. 2 (Exit 24)/W Main St. (Rte. 140)	163	82	Improvements completed, needs follow up
Westminster	3	22	Rte. 2 (Exit 27)/Depot Rd./Narrows Rd. (also in Fitchburg)	96	40	Needs study
Westminster	4	83	W Main St. (Rte. 140)/Simplex Dr. (opposite Exit 24 ramp)	48	20	Improvements completed, needs follow up
Westminster	5	101	Rte. 2 (Exit 26)/Village Inn Rd.	42	18	Needs study
Westminster	6	105	State Rd. East (Rte. 2A)/Depot Rd./Bartherick Rd.	40	16	Study completed, improvements recommended
Winchendon	1	62	Spring St. (Rte 12)/ Glenallan St. (Rte 202)/ Hall Rd.	56	20	Needs study
Winchendon	2	110	Front St. (Rte 12 & 202)/ School St. (Rte 12)/ River St. (Rte 202)	40	20	Study completed, improvements recommended

V: MASSHIGHWAY TOP 200 HIGH CRASH INTERSECTION LOCATION REPORT

This first edition report identifies the top 200 most unsafe intersection locations in the State from 2003-2005 by using a new method. The methodology still relies on RMV crash data but locates crash clusters at an intersection by aggregating the crash data that occurs at the intersection through the use of Geographic Information System (GIS) processes. The method places a high priority on the geographic location of each crash which will allow analysts to better evaluate the total crash experience at an intersection location. According to the MassHighway description of this report, the method is based on the following:

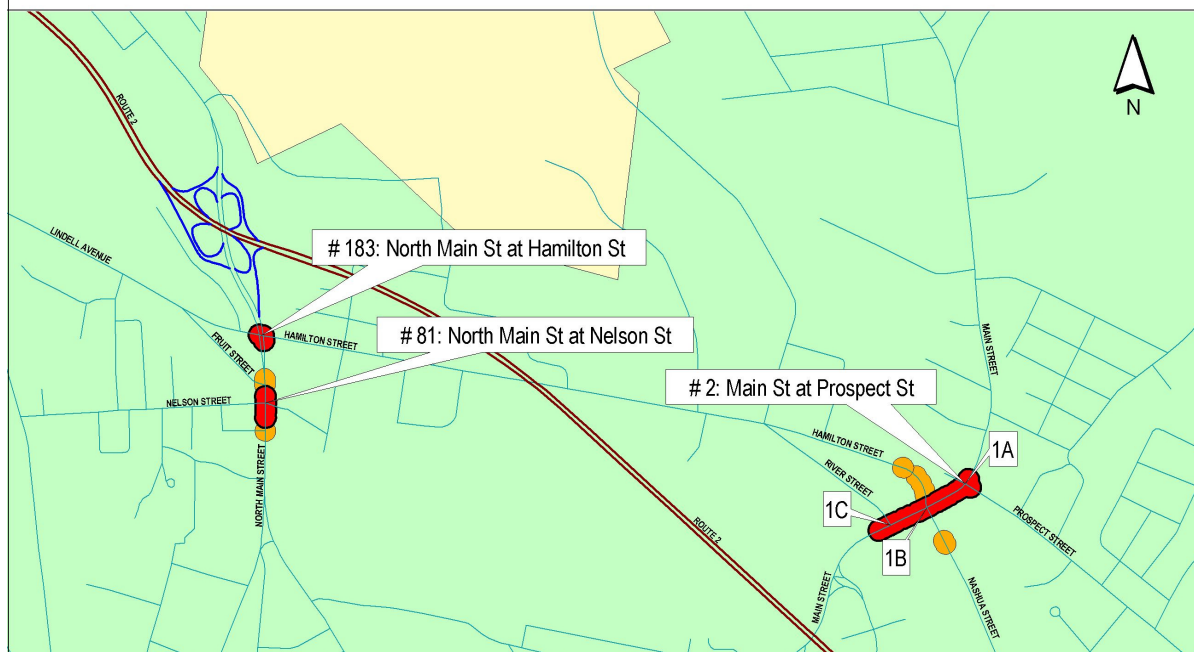
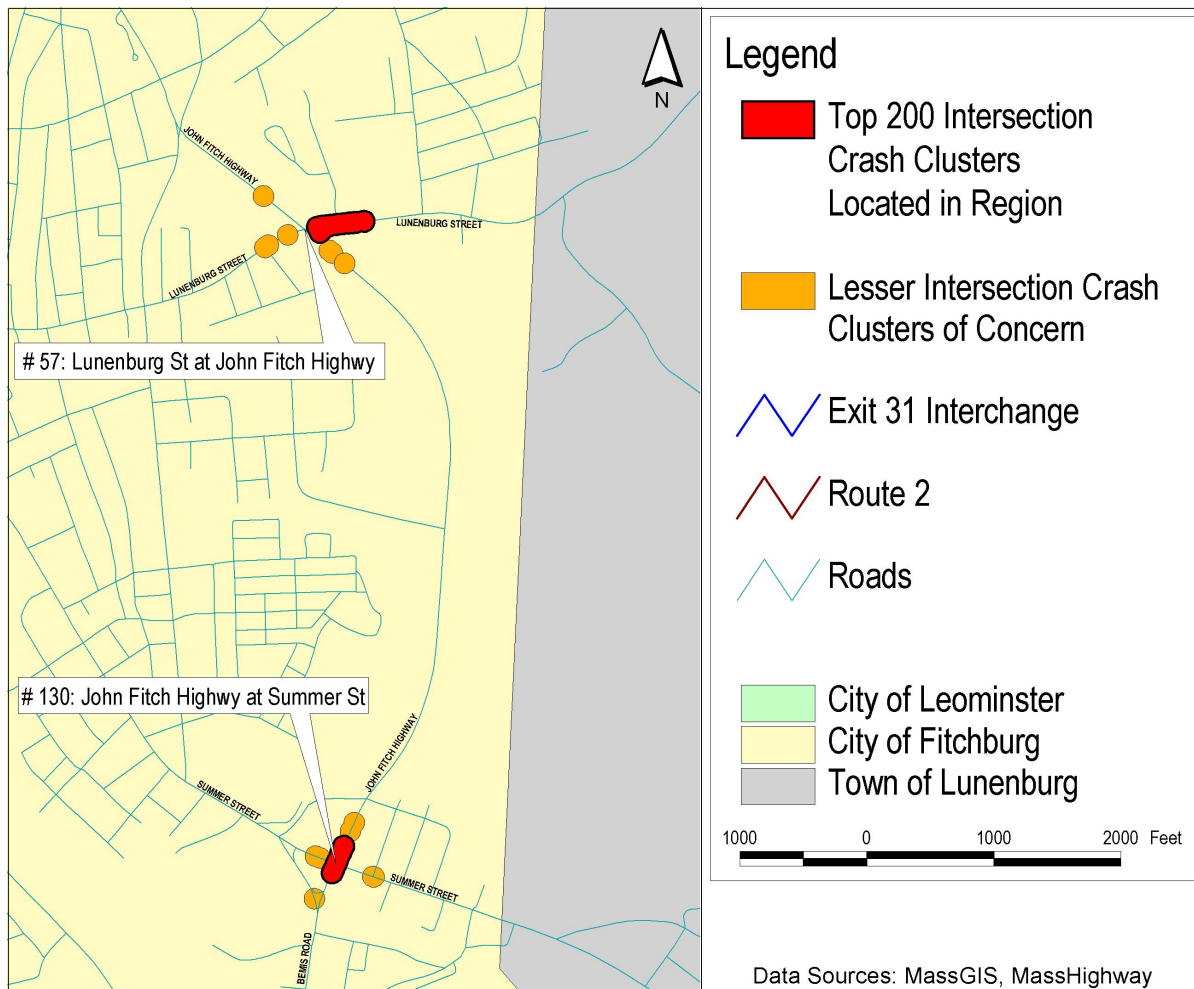
“At the heart of the method ... is a 25 meter fixed search distance around each crash. In basic terms, this radius controls how far the application will search for adjacent crashes. Using a 25 meter radius, the analysis method found nearby crashes and merged their areas together, thus creating clusters. ... The clusters were then ranked by the number of Equivalent Property Damage Only (EPDO) crashes contained within their boundaries.”

Within the Region there are 5 intersections in the list. **Table 4** lists the intersection locations and **Figure 6** shows the geographic extent of the crash clusters.

Table 4: Region Top 200 High Crash Intersection Locations for 2003-2005

State Rank	City/Town	First Street	Route Number	Second Street	Total Crashes	Injury Crashes	PDO & Non Reported Crashes	EPDO
2	Leominster	Main Street	13	Prospect Street	169	30	139	289
57	Fitchburg	Lunenburg Street	2A	John Fitch Hwy	71	19	52	147
81	Leominster	North Main Street	12	Nelson Street	59	19	40	135
130	Fitchburg	John Fitch Hwy		Summer Street	59	15	44	119
183	Leominster	North Main Street	12	Hamilton Street	60	12	48	108

Figure 6: Top 200 High Crash Intersection Crash Clusters in our Region



VI: COMPARING MRPC & MASSHIGHWAY UNSAFE INTERSECTION RANKINGS

Table 5 compares the rankings of the intersections listed in **Table 4** of **Section V** to the rankings of the same intersections found in **Table 2** of **Section IV**.

The MassHighway list ranks the Main Street (Rte 13) at Prospect Street intersection crash cluster as the second highest high crash intersection location in the State. The length of the cluster is about 990 feet and covers 2 other intersections - the Main Street at Hamilton/Nashua Street and Main Street at River Street intersections. In the MRPC list, the same 3 intersections are listed singly (see intersection ID #s 1A-C in **Table 5** and shown in **Figure 6**). Concurrent to the MassHighway rank, the Main St (Rt 13)/Nashua St/Hamilton St intersection (ID # 1B) is ranked as the single most dangerous intersection in the Region in the MRPC list as described in **Section IV**. However, assuming the same 3 intersections were to be combined in a similar fashion as in the MassHighway method, the resulting EPDO total would be 333 points thus raising its current rank to the second most dangerous location in the Region.

The remaining 4 intersection crash clusters (ID #s 2-5) in the MassHighway list are located at single intersections. In the MRPC list, the intersections are currently ranked in the top 15 most dangerous locations. But when ranking **only** intersections, they would be ranked in the top 7 most dangerous intersections in the Region.

Table 5: Ranking Comparison⁷

MassHighway 2003-2005 Top 200 Intersection Crash List for the MRPC								
ID#	State Rank	First Street	Route	Second Street	EPDO Total	Total Crashes	Average EPDO Per Year	Average Total Crashes Per Year
1	2	Main Street	13	Prospect Street	289	169	96.3	56.3
2	57	Lunenburg Street	2A	John Fitch Highway	147	71	49.0	23.7
3	81	North Main Street	12	Nelson Street	135	59	45.0	19.7
4	130	John Fitch Highway		Summer Street	119	59	39.7	19.7
5	183	North Main Street	12	Hamilton Street	108	60	36.0	20.0
MRPC 2002-2005 Most Dangerous Intersections								
ID#	Region Intersections Only Rank / Overall Rank	MRPC Intersection Name		EPDO Total	Total Crashes	Average EPDO Per Year	Average Total Crashes Per Year	
1B	1 / 5	Main St (Rt 13)/Nashua St/Hamilton St		208	108			
1C	-	Main St (Rte 13)/River St		70	42			
1A	-	Main St (Rt 13)/Prospect St.		55	31			
		3 Intersection Total		333	181	83.3	45.3	
3	3 / 8	N Main St. (Rte 12)/Nelson St./Water Tower Pl./Fruit St.		188	96	47.0	24.0	
4	4 / 11	Bemis Rd./John Fitch HWY./Summer St.		166	82	41.5	20.5	
2	5 / 12	John Fitch HWY./Lunenburg St. (Rte.2A)		165	81	41.3	20.3	
5	7 / 15	N Main St (Rte 12)/Lindell Ave./Hamilton St		155	75	38.8	18.8	

⁷ In **Table 5** the intersections are given an ID number within a cell that is color coded to easily identify the identical intersection in each list and also shows the EPDO results obtained by the two methods used to determine dangerous intersections.

Intersection Naming Differences

Table 5 also shows the different intersection naming methods used by each agency. The MRPC intersection names use the road names of all the approaches to an intersection and combines them into one column while the MassHighway name basically uses the road names of highest and second highest functionally classified roads and the route number (if any) and puts them into separate columns. As soon as feasible, the MRPC will convert to the MassHighway method.

Study & Project Development Status for these Locations

The Main Street at Prospect Street intersection (ID #1) needs further investigation. MassHighway is evaluating the Exit 31 interchange (see analysis above) for possible improvement while the City of Leominster is seeking improvements for a section of North Main Street that includes its intersections with Hamilton Street (ID #5) and Nelson Street (ID #3). These three locations are within ½ mile of each other with a combined EPDO total of 721 and consideration should be given to combining these proposed projects to improve safety conditions. A safety audit was completed in 2006 for the John Fitch Highway at Lunenburg Street intersection (ID #2) in Fitchburg. A project was completed in 2006 at the John Fitch Highway at Summer Street intersection (ID #4) in Fitchburg and a follow up study is needed to evaluate the improvements.

VII: MOTOR VEHICLE & BICYCLE / PEDESTRIAN CRASHES IN THE REGION

As part of the SHSP, an emphasis area was provided to address the number of crashes involving bicycles/pedestrians and motor vehicles. A goal was set to begin to design and manage the roadway system to reduce the risk to pedestrians and bicyclists by reducing their fatal injury and non-fatal injury crashes that require hospitalization. Two annual performance measures were created to address this:

- A reduction in the number of fatal injury crashes involving pedestrians and bicyclists
- A reduction in the number of nonfatal motor vehicle-traffic injury hospital stays involving pedestrians and bicyclists

In Massachusetts there is a noticeable difference in the amount of fatal injury and non-fatal injury crashes resulting from these particular crash types.

- Massachusetts far exceeds the U.S. average in pedestrian related fatal injury crashes, 17% of all fatal injury crashes versus 11% nationally in 2004 and 2005
- Over the past five years, the percentage of bicyclists involved in fatal injury crashes was higher in Massachusetts (2.2%) than the national average

Table 6 contains bicycle/pedestrian and motor vehicle crash information for the Region. There were a total of 297 confirmed motor vehicle crashes with a pedestrian or bicycle in the years 2002-2005 (1.37% of all crashes) which averages out to 74.25 per year. Of all these 6 crashes resulted in 6 (1.5 per year) fatal injuries, 186 crashes (46.5 per year) resulted in 206 non-fatal injuries and 105 (26.25 per year) resulted in PDO crashes.

- From 2002-2005 pedestrian/bicyclist fatal injury crashes accounted for 9.1% of all fatal injury crashes in the Region

- Pedestrian fatal injury crashes accounted for 7.6%
- Bicycle fatal injury crashes accounted for 1.5%
- From 2004-2005 pedestrian/bicyclist fatal injury crashes accounted for 10.3% of all fatal injury crashes (3 of 29). This combined percentage is 6.7% lower than the Massachusetts pedestrian fatality percentage which is 17%

Table 6: Bicycle and Pedestrian Crashes with Motor Vehicles

Years	# of Pedestrian & Bicycle Crashes	% of Region Total Crashes	# of Fatal Injuries	% Fatal Injuries	# of Non-Fatal Injuries	% Non-fatal Injuries	# of PDO	% PDO	EPDO Total
2005	57	0.98%	2	3.51%	39	68.42%	21	36.84%	211
2004	69	1.36%	1	1.45%	49	71.01%	23	33.33%	258
2003	102	1.78%	3	2.94%	63	61.76%	42	41.18%	357
2002	69	1.38%	0	0.00%	55	79.71%	19	27.54%	274
Four Year Total	297		6		206		105		1,100
Average Per Year	74.25	1.37%	1.5	1.98%	51.5	70.23%	26.3	34.72%	275

In a study done by MassHighway using 2003-2005 crash data, top motor vehicle with pedestrian and bicycle crash “hotspots” locations across the State were highlighted. MassHighway considered the locations to be hotspots if they had an EPDO total greater than or equal to 11. Within the Region two hotspots were confirmed. **Table 7** lists the hotspot locations and **Figure 7** shows them.

Table 7: Top Pedestrian and Bicycle Hotspot Locations

City/Town	Location	Crashes	Fatal Injury Crashes	Non-Fatal Injury Crashes	PDO Crashes	EPDO Total
Fitchburg	Main St./Boulder Dr.	5	3	0	2	17
Athol	Main St./Exchange St.	3	2	0	1	11

Figure 7: Top Pedestrian and Bicycle Hotspot Locations

Main St at Exchange St, Athol



*Main St at Boulder Drive,
Fitchburg*

VIII: MOTOR VEHICLE & WILDLIFE CRASHES IN THE REGION

Table 7 contains wildlife and motor vehicle crash information for the Region. Annually, non-fatal wildlife crash related injuries account for less than 1% of the nearly three million motor vehicle crash victims nationally. Likewise only about 4% of all motor vehicle crashes are with wildlife. However, in rural areas with large deer and other wildlife populations, motor vehicle wildlife crashes and associated occupant deaths and injuries, wildlife loss, and property damage are important concerns. Since the Region contains approximately 923 miles (44.3% of total roads) of rural roadways it is important to examine this type of crash.

In the Region there were 353 confirmed crashes with wildlife (1.6% of all crashes), for a yearly average of 88.3. Of all these crashes there were no fatal injuries, 35 crashes (8.75 per year) resulted in a total of 39 non-fatal injuries and 318 (79.5 per year) resulted in PDO crashes. Their locations will be examined in greater detail in the next phase of this project.

Table 8: Crashes with Wildlife

Years	# of Crashes With Wildlife	% of Region Total Crashes	# of Fatal Injuries	% Fatal Injuries	# of Non-Fatal Injuries	% Non-fatal Injuries	PDO	% PDO	EPDO Total
2005	77	1.32%	0	0.0%	10	12.99%	68	88.31%	105
2004	78	1.53%	0	0.0%	9	11.54%	71	91.03%	107
2003	115	2.01%	0	0.0%	12	10.43%	103	89.57%	159
2002	83	1.65%	0	0.0%	8	9.64%	76	91.57%	111
Four Year Total	353				39		318		482
Average Per Year	88.25	1.63%	-	-	9.75	11.05%	79.5	90.08%	120.5

IX: COMMUNITY SUMMARIES

For each community in the Region, this section provides a synopsis of the preceding sections and additional data tabulated from the crash database. Also, see *Appendix: List of Other Locations of Concern in each Community* for a complete listing of locations that were not included in the preceding sections.

Ashburnham:

- Total Crashes: 330 (1.52% of Region total)
 - Intersection Crashes: 105 (0.98% of intersection crashes in Region)
 - Need to Locate Crashes: 225 (2.06% of need to locate crashes in Region)
 - Fatal Injury Crashes: 2 (3.03% of fatal injury crashes in Region)
 - # of fatalities: 2
 - Non-fatal Injury Crashes: 97 (1.62% of non-fatal injury crashes in Region)
 - # of injuries: 129
 - PDO Crashes: 231 (1.48% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 1
 - Vehicles involved: 474

Ashby:

- Total Crashes: 207 (0.96% of Region total)
 - Intersection Crashes: 72 (0.67% of intersection crashes in Region)
 - Need to Locate Crashes: 135 (1.24% of need to locate crashes in Region)
 - Fatal Injury Crashes: 1 (1.52% of fatal injury crashes in Region)
 - # of fatalities: 1
 - Non-fatal Injury Crashes: 83 (1.39% of non-fatal injury crashes in Region)
 - # of injuries: 102
 - PDO Crashes: 123 (0.79% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 0
 - Vehicles involved: 275

Athol:

- Total Crashes: 898 (4.15% of Region total)
 - Intersection Crashes: 532 (4.96% of intersection crashes in Region)
 - Need to Locate Crashes: 366 (3.35% of need to locate crashes in Region)
 - Fatal Injury Crashes: 1 (1.52% of fatal injury crashes in Region)
 - # of fatalities: 1
 - Non-fatal Injury Crashes: 274 (4.59% of non-fatal injury crashes in Region)
 - # of injuries: 382
 - PDO Crashes: 623 (3.99% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 4
 - Vehicles involved: 1,551

Ayer:

- Total Crashes: 611 (2.82% of Region total).
 - Intersection Crashes: 280 (2.61% of intersection crashes in Region)
 - Need to Locate Crashes: 331 (3.03% of need to locate crashes in Region)
 - Fatal Injury Crashes: 0
 - Non-fatal Injury Crashes: 132 (2.21% of non-fatal injury crashes in Region)
 - # of injuries: 179
 - PDO Crashes: 479 (3.07% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 1
 - Vehicles involved: 1,122

Clinton:

- Total Crashes: 500 (2.31% of Region total)
 - Intersection Crashes: 294 (2.74% of intersection crashes in Region)
 - Need to Locate Crashes: 206 (1.89% of need to locate crashes in Region)
 - Fatal Injury Crashes: 0
 - Non-fatal Injury Crashes: 168 (2.81% of non-fatal injury crashes in Region)
 - # of injuries: 262
 - PDO Crashes: 332 (2.13% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 3
 - Vehicles involved: 946

Fitchburg:

- Total Crashes: 4,373 (20.21% of Region total)
 - Intersection Crashes: 2,192 (20.43% of intersection crashes in Region)
 - Need to Locate Crashes: 2,181 (19.99% of need to locate crashes in Region)
 - Fatal Injury Crashes: 4 (6.06% of fatal injury crashes in Region)
 - # of fatalities: 4
 - Non-fatal Injury Crashes: 1,231 (20.6% of non-fatal injury crashes in Region)
 - # of injuries: 1,753
 - PDO Crashes: 3,138 (20.11% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 27
 - Vehicles involved: 8,136
 - # of intersections in the MassHighway *Top 200 High Crash Intersection Location Report*: 2

Gardner:

- Total Crashes: 2,529 (11.69% of Region total)
 - Intersection Crashes: 1,124 (10.47% of intersection crashes in Region)
 - Need to Locate Crashes: 1,405 (12.88% of need to locate crashes in Region)
 - Fatal Injury Crashes: 11 (16.67% of fatal injury crashes in Region)
 - # of fatalities: 12
 - Non-fatal Injury Crashes: 558 (9.34% of non-fatal injury crashes in Region)
 - # of injuries: 784
 - PDO Crashes: 1,960 (12.56% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 8
 - Vehicles involved: 4,620

Groton:

- Total Crashes: 863 (3.99% of Region total)
 - Intersection Crashes: 343 (3.20% of intersection crashes in Region)
 - Need to Locate Crashes: 520 (4.77% of need to locate crashes in Region)
 - Fatal Injury Crashes: 2 (3.03% of fatal injury crashes in Region)
 - # of fatalities: 2
 - Non-fatal Injury Crashes: 234 (3.62% of non-fatal injury crashes in Region)
 - # of injuries: 297
 - PDO Crashes: 627 (4.02% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 3
 - Vehicles involved: 1,416

Harvard:

- Total Crashes: 590 (2.73% of Region total)
 - Intersection Crashes: 216 (2.01% of intersection crashes in Region)
 - Need to Locate Crashes: 374 (3.43% of need to locate crashes in Region)
 - Fatal Injury Crashes: 3 (4.55% of fatal injury crashes in Region)
 - # of fatalities: 3
 - Non-fatal Injury Crashes: 166 (2.78% of non-fatal injury crashes in Region)
 - # of injuries: 236

- PDO Crashes: 421 (2.70% of PDO crashes in Region)
- Locations in *Most Dangerous Intersections and Interchanges* list: 2
- Vehicles involved: 907

Hubbardston:

- Total Crashes: 235 (1.09% of Region total)
 - Intersection Crashes: 69 were (0.64% of intersection crashes in Region)
 - Need to Locate Crashes: 166 (1.52% of need to locate crashes in Region)
 - Fatal Injury Crashes: 1 (1.52% of fatal injury crashes in Region)
 - # of fatalities: 1
 - Non-fatal Injury Crashes: 69 (1.15% of non-fatal injury crashes in Region)
 - # of injuries: 96
 - PDO Crashes: 165 (1.06% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 0
 - Vehicles involved: 329

Lancaster:

- Total Crashes: 794 (3.67% of Region total)
 - Intersection Crashes: 448 (4.17% of intersection crashes in Region)
 - Need to Locate Crashes: 345 (3.16% of need to locate crashes in Region)
 - Fatal Injury Crashes: 4 (6.06% of fatal injury crashes in Region)
 - # of fatalities: 7
 - Non-fatal Injury Crashes: 208 (3.48% of non-fatal injury crashes in Region)
 - # of injuries: 310
 - PDO Crashes: 582 (3.37% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 6
 - Vehicles involved: 1,391

Leominster:

- Total Crashes: 4,952 (22.88% of Region total)
 - Intersection Crashes: 2,856 (26.61% of intersection crashes in Region)
 - Need to Locate Crashes: 2,096 (19.21% of need to locate crashes in Region)
 - Fatal Injury Crashes: 11 (16.67% of fatal injury crashes in Region)
 - # of fatalities: 12
 - Non-fatal Injury Crashes: 1,328 (22.23% of non-fatal injury crashes in Region)
 - # of injuries: 1,955
 - PDO Crashes: 3,613 (23.16% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 37
 - Vehicles involved: 9,509
 - Intersections in the *MassHighway Top 200 High Crash Intersection Location Report*: 3

Lunenburg:

- Total Crashes: 764 (3.53% of Region total)
 - Intersection Crashes: 458 (4.27% of intersection crashes in Region)

- Need to Locate Crashes: 306 (2.80% of need to locate crashes in Region)
- Fatal Injury Crashes: 4 (6.06% of fatal injury crashes in Region)
 - # of fatalities: 5
- Non-fatal Injury Crashes: 263 (4.40% of non-fatal injury crashes in Region)
 - # of injuries: 375
- PDO Crashes: 497 (3.19% of PDO crashes in Region)
- Locations in *Most Dangerous Intersections and Interchanges* list: 4
- Vehicles involved: 1,317

Petersham:

- Total Crashes: 68 (0.31% of Region total)
 - Intersection Crashes: 15 (0.14% of intersection crashes in Region)
 - Need to Locate Crashes: 53 (0.49% of need to locate crashes in Region)
 - Fatal Injury Crashes: 0
 - Non-fatal Injury Crashes: 25 (0.42% of non-fatal injury crashes in Region)
 - # of injuries: 31
 - PDO Crashes: 43 (0.28% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 0
 - Vehicles involved: 77

Phillipston:

- Total Crashes: 174 (0.80% of Region total)
 - Intersection Crashes: 77 (0.72% of intersection crashes in Region)
 - Need to Locate Crashes: 97 (0.89% of need to locate crashes in Region)
 - Fatal Injury Crashes: 1 (1.52% of fatal injury crashes in Region)
 - # of fatalities: 1
 - Non-fatal Injury Crashes: 64 (1.07% of non-fatal injury crashes in Region)
 - # of injuries: 100
 - PDO Crashes: 109 (0.70% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 2
 - Vehicles involved: 261

Royalston:

- Total Crashes: 24 (0.11% of Region total)
 - Intersection Crashes: 4 (0.04% of intersection crashes in Region)
 - Need to Locate Crashes: 20 (0.18% of need to locate crashes in Region)
 - Fatal Injury Crashes: 0
 - Non-fatal Injury Crashes: 9 (0.15% of non-fatal injury crashes in Region)
 - # of injuries: 10
 - PDO Crashes: 15 (0.10% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 0
 - Vehicles involved: 26

Shirley:

- Total Crashes: 282 (1.30% of Region total)
 - Intersection Crashes: 122 (1.14% of intersection crashes in Region)

- Need to Locate Crashes: 160 (1.47% of need to locate crashes in Region)
- Fatal Injury Crashes: 0
- Non-fatal Injury Crashes: 75 (1.26% of non-fatal injury crashes in Region)
 - # of injuries: 89
- PDO Crashes: 207 (1.33% of PDO crashes in Region)
- Locations in *Most Dangerous Intersections and Interchanges* list: 0
- Vehicles involved: 433

Sterling:

- Total Crashes: 531 (2.45% of Region total)
 - Intersection Crashes: 287 (2.67% of intersection crashes in Region)
 - Need to Locate Crashes: 244 (2.24% of need to locate crashes in Region)
 - Fatal Injury Crashes: 4 (6.06% of fatal injury crashes in Region)
 - # of fatalities: 6
 - Non-fatal Injury Crashes: 170 (2.85% of non-fatal injury crashes in Region)
 - # of injuries: 248
 - PDO Crashes: 357 (2.29% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 3
 - Vehicles involved: 859

Templeton:

- Total Crashes: 553 (2.56% of Region total)
 - Intersection Crashes: 197 (1.84% of intersection crashes in Region)
 - Need to Locate Crashes: 356 (3.26% of need to locate crashes in Region)
 - Fatal Injury Crashes: 2 (3.03% of fatal injury crashes in Region)
 - # of fatalities: 2
 - Non-fatal Injury Crashes: 165 (2.76% of non-fatal injury crashes in Region)
 - # of injuries: 245
 - PDO Crashes: 386 (2.47% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 2
 - Vehicles involved: 825

Townsend:

- Total Crashes: 784 (3.62% of Region total)
 - Intersection Crashes: 329 (3.07% of intersection crashes in Region)
 - Need to Locate Crashes: 455 (4.17% of need to locate crashes in Region)
 - Fatal Injury Crashes: 6 (9.09% of fatal injury crashes in Region)
 - # of fatalities: 7
 - Non-fatal Injury Crashes: 206 (3.45% of non-fatal injury crashes in Region)
 - # of injuries: 273
 - PDO Crashes: 572 (3.67% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 2
 - Vehicles involved: 1,275

Westminster:

- Total Crashes: 786 (3.63% of Region total)

- Intersection Crashes: 413 (3.85% of intersection crashes in Region)
- Need to Locate Crashes: 373 (3.42% of need to locate crashes in Region)
- Fatal Injury Crashes: 5 (7.58% of fatal injury crashes in Region)
 - # of fatalities: 5
- Non-fatal Injury Crashes: 236 (3.95% of non-fatal injury crashes in Region)
 - # of injuries: 336
- PDO Crashes: 545 (3.49% of PDO crashes in Region)
- Locations in *Most Dangerous Intersections and Interchanges* list: 6
- Vehicles involved: 1,193

Winchendon:

- Total Crashes: 794 (3.67% of Region total)
 - Intersection Crashes: 298 (2.78% of intersection crashes in Region)
 - Need to Locate Crashes: 496 (4.55% of need to locate crashes in Region)
 - Fatal Injury Crashes: 4 (6.06% of fatal injury crashes in Region)
 - # of fatalities: 4
 - Non-fatal Injury Crashes: 214 (3.58% of non-fatal injury crashes in Region)
 - # of injuries: 300
 - PDO Crashes: 576 (3.69% of PDO crashes in Region)
 - Locations in *Most Dangerous Intersections and Interchanges* list: 2
 - Vehicles involved: 1,282

X: NEXT STEPS

As mentioned in the **Introduction**, the information in this report will be used to develop future safety improvement projects in the Region. Due to the high rankings of many of the Route 2 interchanges in the Region (**Section IV**), the MRPC will begin a more detailed investigation of the crash data for these locations to further analyze their safety conditions. Furthermore, the MRPC is also available to assist communities in the Region to investigate any locations found in this report or other locations communities may consider dangerous.

Steps to be undertaken in the near future:

- Complete Phase II by evaluating the *need to locate crashes* applying the same methods used to develop locations in Phase I
- Update the crash database with the 2006 MassHighway crash data
- Rename intersections using the MassHighway naming method

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APPENDIX:

LIST OF OTHER LOCATIONS OF CONCERN IN EACH COMMUNITY

Ashburnham			
Town Rank	Location Name	EPDO Total	Total Crashes
2	Winchendon Rd. (Rte.12)/ Lashua Rd./ Corey Hill Rd./Main St.	24	8
3	Main St. (Rte 12)/Central St. (Rte. 101)	21	9
4	Rindge State Rd.(Rte.119)/ Ashby Rd. (Rte. 101)	17	4
5	Mele Ave./ Center St. (Rte.101)	13	5
6	Main St. (Rte 12)/High St.	11	3
7	Winchendon Rd. (Rte. 12)/Hunter Ave	10	2

Ashby			
Town Rank	Location Name	EPDO Total	Total Crashes
1	Greenville Rd. (Rte. 31)/Turnpike Rd.	22	6
2	Greenville Rd. (Rte.31)/Townsend Rd. (Rte. 119)/Damon Rd.	19	7
3	West Rd./Jewett Hill Rd.	15	3
4	Fitchburg State Rd. (Rte. 31)/ Old Northfield Rd.	12	4
5	West State Rd. (Rte. 119)/Flint Rd.	10	2
5	Rindge Rd./Piper Rd./Crocker Rd.	10	2
5	Greenville Rd. (Rte. 31)/Foster Rd.	10	2

Athol			
Town Rank	Location Name	EPDO Total	Total Crashes
5	Main St. (Rte. 2A)/School St./South St.	37	17
6	South Main St. (Rte.2A)/D St.	32	12
7	Main St. (Rte 2A;Rte 32)/Spring St./Summer St.	31	11
8	Main St. (Rte. 2A)/Crescent St. (Rte. 32)	28	12
8	Exchange St./Pequoig Ave.	28	12
10	Rte. 2 (Exit 18)/Templeton Rd. (Exit also in Philipston)	27	11
11	Partridgeville Rd./Daniel Shays HWY.	27	15
12	Main St. (Rte 2A)/Canal St./Walnut St.	26	14
13	South Athol Rd./Morton St.	25	5
14	Main St. (Rte. 2A;Rte.32)/Pleasant St.	25	17
15	South Main St. (Rte.2A)/Mt. Pleasant St.	24	8
16	Main St. (Rte.2A;Rte.32)/Lake Ellis Rd.	24	12
17	Main St. (Rte. 2A;Rte.32)/Grove St./Common St.	22	10
17	Exchange St./South St.	22	10
17	Main St. (Rte. 2A)/Freedom St.	22	10
20	South Athol Rd./Hapgood St./Sanders St.	18	6
21	Chestnut St./Morton St./Fairview Ave.	17	5
22	Main St. (Rte 2A)/Church St.	16	4
23	Main St. (Rte 2A;Rte 32)/Bearsden Rd.	15	7
24	Silver Lake St./ Lenox St.	13	5
25	South Athol Rd./Carpenter Rd./Murray La.	12	3
26	Main St. (Rte 2A;Rte 32)/Bridge St.	12	8

Town Rank	(Athol continued) Location Name	EPDO Total	Total Crashes
27	Daniel Shays HWY/Coolidge PKWY	11	3
27	Marble St./Exchange St.	11	3
27	South St./Freedom St.	11	3
27	Main St. (Rte. 2A)/Union St.	11	3
27	Wendell St./ Sanders St.	11	3
27	Petersham Rd. (Rte. 32)/Lyons Hill Rd./Woodlawn Rd	11	3
33	White Pond Rd./Partridgeville Rd.	10	2
33	Pleasant St./Dorset Rd.	10	2
33	Main St. (Rte.2A;Rte.32)/Riverbend St.	10	2
36	Templeton Rd. (Rte.2A)/Petersham Rd. (Rte. 32)	10	6
36	South Athol Rd./Partridgevill Rd.	10	6

Ayer			
Town Rank	Location Name	EPDO Total	Total Crashes
2	Park St. (Rte 2A, 111)/ Main St. (Rte 2A, 111)/ Mill St.	34	18
3	West Main St./ MacPherson Rd.	25	9
4	Fitchburg Rd (Rte 2A)/ Park St (Rte 2A,111)/ Groton Schl Rd	24	12
5	East Main St. (Rte 2A, 111)/ Groton Harvard Rd.	24	20
6	Park St. (Rte 2A, 111)/ Groton St.	23	11
7	Littleton Rd (Rte 2A, 110)/ Willard St	21	9
8	Main St (Rte 2A, 111)/ Columbia St	21	10
9	Central Ave./ Groton Harvard Rd.	20	8
10	Washington St./ Cambridge St.	16	8
11	Washington St./ Groton Harvard Rd.	13	5
12	Main St (Rte 2A, 111)/ Washington St	13	9
13	Littleton Rd (Rte 2A, 110)/ Copeland Dr.	12	4
14	Main St (Rte 2A, 111)/ Elm St?	11	3
15	Washington St/ Newton St	9	5

Clinton			
Town Rank	Location Name	EPDO Total	Total Crashes
4	High St.(Rte.110)/Brook St.	38	10
5	High St.(Rte.110)/Water St.(Rte.110)	33	17
6	Chestnut St./Church St.	29	9
7	Chestnut St./Water St.	27	11
8	Chestnut St. (Rte.70)/Cameron St.	22	10
9	Main St. (Rte.110)/Franklin St.	21	9
10	Brook St. (Rte.62)/Greeley St.	20	8
11	Union St. (Rte.70;Rte.62)/Mechanic St. (Rte.70;Rte.62)	19	7
12	Oak St./Cameron St.	17	5
13	Chestnut St. (Rte.70&62)/Grove St./Mechanic St.(Rte.70&62)	16	8
14	Pleasant St./School St.	12	4

Town Rank	(Clinton continued) Location Name	EPDO Total	Total Crashes
15	Chestnut St. (Rte.70)/Green St./Nashua St.	12	9
16	Main St.(Rte. 110)/Beacon St.	11	3
16	Park St./Beacon St.	11	3
16	Brook St. (Rte.62)/Parker St.	11	3
19	Sterling St./Greeley St.	11	7
20	Water St./Prescott St.	10	2

Fitchburg			
City Rank	Location Name	EPDO Total	Total Crashes
28	Pearl St./John Fitch HWY./Coolidge Ave.	35	15
29	Main St. (Rte.2A)/Sawyer Passway	34	14
29	John Fitch HWY/Pearl Hill Rd./North St.	34	14
31	Main St. (Rte. 2A)/Blossom St./Cushing St.	33	21
32	Highland Ave./Congress St.	32	12
32	Boulder Dr./Putnam St.	32	12
35	Clarendon St./Franklin Rd.	31	11
36	Main St. (Rte. 2A)/Snow St./Boulder Dr.	30	10
36	Water St. (Rte. 12)/Abbott Ave.	30	10
38	Beech St./Pratt Rd.	28	8
39	North St./Pearl St.	28	12
39	Airport Rd./Benson St.	28	12
41	Ashburnham St. (Rte. 12)/Westminster St. (Rte. 2A&31)/River St. (Rte.2A&31&12)	28	16
42	Bemis Rd./Duck Mill Rd.	27	15
43	Green St./Day St.	26	10
44	Main St.(Rte.2A)/Willow St.	25	9
45	Boulder Dr./Cushing St./Commercial St.	24	8
46	Elm St./Wallace Ave.	24	12
47	Franklin Rd./Oak Hill Rd.	22	6
48	Benson St./Falulah St.	21	5
48	Bemis Rd./Falulah St.	21	5
50	South St./Nashua St./Allston Pl.	20	4
51	Mechanic St. (Rte.31)/Blossom St.	20	8
51	River St. (Rte. 2A;Rte.31;Rte.12)/Oak Hill Rd.	20	8
53	Mechanic St. (Rte. 31)/Main St. (Rte. 2A)	20	12
54	Myrtle Ave./Green St.	19	7
54	Pratt Rd./Woodland St.	19	7
54	Daniels St./Clarendon St.	19	7
54	River St. (Rte. 31;Rte. 12)/Sheldon St.	19	7
54	Water St. (Rte. 12)/Walnut St.	19	7
59	Water St. (Rte. 12)/Birch St.	19	11
60	Myrtle Ave./Congress St.	18	6
60	Oak Hill Rd./Fifth Massachusetts TPK	18	6
62	Kimball St. (Rte. 12)/Rollstone St./Foster St.	18	10
63	Summer St./Boutelle St.	17	5
63	Marshall St./Davis St./Mount Globe St.	17	5

City Rank	(Fitchburg continued) Location Name	EPDO Total	Total Crashes
63	Walton St./Pine St.	17	5
66	Pratt Rd./St.Josephs St.	17	9
67	Main St. (Rte. 2A)/Prichard St.	17	13
68	South St./Charles St.	16	4
69	Rte.2/Oak Hill Rd.	16	8
69	Wanoosnoc Rd./Canton St.	16	8
69	River St. (Rte. 2A;Rte.31)/Kimball St. (Rte.12)	16	8
69	Charles St./Milk St.	16	8
73	Elm St./Oliver St.	15	3
73	Charles St./Forest St.	15	3
73	High St./Elm St.	15	3
76	Rollstone St./Charles St./Franklin St.	15	7
76	Canton St./Romano Ave.	15	7
78	Water St. (Rte. 12)/Duck Mill Rd./Normandy Rd.	15	11
79	Lunenburg St. (Rte.2A)/Garland St.	14	6
79	Main St. (Rte.2A)/Newton Pl.	14	6
79	Wanoosnoc Rd./Normandy Rd.	14	6
79	Salem St./Spruce St.	14	6
79	Pearl St./Townsend St.	14	6
79	Wanoosnoc Rd./Meadowbrook Ln.	14	6
79	Academy St./Elm St.	14	6
86	Ashburnham St. (Rte. 12)/Westminster Hill Rd.	14	10
87	Water St. (Rte. 12)/Krysiak Ave.	13	5
87	Pearl St./East St.	13	5
87	Summer St./Poplar St.	13	5
90	South St./Romano Ave.	13	9
91	Ashby State Rd.(Rte.31)/Richardson Rd.	12	4
91	Airport Rd./Melrose St.	12	4
91	Ashburnham Hill Rd./Williams Rd.	12	4
91	Summer St./Margerie St.	12	4
95	Milk St./Ellis St.	11	3
95	South St./Payson St.	11	3
95	Electric Ave./Old Deerfield Rd.	11	3
95	Water St. (Rte. 12)/Nichols St./Battle St.	11	3
95	North St./Rindge Rd.	11	3
95	Wanoosnoc Rd./Connors St.	11	3
95	Mechanic St. (Rte. 31)/Bigelow Rd.	11	3
95	Franklin Rd./Exeter St.	11	3
95	Wanoosnoc Rd./Rodiman Ave.	11	3
104	Harvard St./Boutelle St.	11	7
104	Summer St./Maverick St.	11	7
104	Water St. (Rte. 12)/First St.	11	7
104	Winter St./Lawrence St.	11	7
108	Westminster St. (Rte.31;Rte.2A)/Ward St.	10	2
108	Rte. 2/Palmer Rd.	10	2
108	Highland Ave./Orange St.	10	2

City Rank	(Fitchburg continued) Location Name	EPDO Total	Total Crashes
108	St. Carmill St./Deslile St.	10	2
108	Cottage St./Institute St.	10	2
108	Pearl St./Highland Ave.	10	2
114	Rollstone St./Pine St.	10	6
114	Westminster St. (Rte. 2A;Rte.31)/Temple St.	10	6
114	South St./Rockdale Ave.	10	6
114	Bemis Rd./Robert St.	10	6
114	Goodrich St./Boutelle St.	10	6

Gardner			
City Rank	Location Name	EPDO Total	Total Crashes
9	Timpany BLVD. (Rte.68)/ Dyer St.	36	24
10	Elm St./Pearson BLVD.	34	18
11	Chestnut St./Central St. (Rte.101)	32	16
12	Central St. (Rte.101)/Main St.(Rte.68)/Vernon St./Pleasant St./Parker St.(Rte.101)	31	27
13	Timpany BLVD. (Rte.68)/Crawford St.	30	14
14	East Broadway (Rte. 2A)/Union St./South Main St.	30	22
15	Baker St./Greenwood St.	29	12
16	Green St./Eaton St.	29	13
17	Cross St./Chestnut St.	29	17
18	Timpany BLVD. (Rte.68)/ Donlan St.	28	12
19	Pearl St. (Rte. 101)/Betty Spring Rd.	27	11
19	Donlan St./Main St. (Rte.68)/Timpany BLVD. (Rte.68)	27	11
21	Elm St./Cross St.	25	9
22	Conant St./West Broadway (Rte.2A)	24	8
22	Matthews St./Green St.	24	8
24	Greenwood Place/Pleasant St.	23	6
25	West St. (Rte.68)/Oak St.	23	11
26	Parker St. (Rte. 101)/Jean St.	22	6
26	West Broadway (Rte.2A)/Kraft St.	22	6
28	Timpany BLVD. (Rte.68)/Conant St.	22	10
28	Main St./Pine St.	22	10
28	Elm St./Howe St.	22	10
31	Sherman St./Main St.	21	5
32	Timpany BLVD. (Rte.68)/Mill St.	20	8
32	Connors St./City Hall Ave.	20	8
34	Saunders St./Betty Spring Rd.	19	7
35	West St. (Rte.68)/Monadnock St./Ash St.	19	11
36	Pearson BLVD./Olne St./Victoria St.	18	10
36	Main St. (Rte.68)/City Hall Ave.	18	10
38	Pearl St. (Rte. 101)/Reservoir St.	17	5
39	Matthews St./Rte.140	17	9
40	Pleasant St./Willow St./Baker St.	17	13
41	Central St. (Rte. 101)/Pine St.	17	17

City Rank	(Gardner continued) Location Name	EPDO Total	Total Crashes
42	Pearl St. (Rte. 101)/Pearly Lane	16	3
43	Park St./Graham St./Chrystal Lake Ave.	16	4
44	Green St./Rte. 140	16	8
45	Central St.(Rte.101)/Park St.	16	12
46	Central St. (Rte. 101)/Cottage St.	15	3
47	West Broadway (Rte.2A)/Manca Dr./Risely St.	13	4
48	Pearson BLVD./Veterans on Foreign Wars Circle	13	5
48	Pearl St. (Rte. 101)/ Lawrence St.	13	5
48	Pleasant St./West Broadway (Rte.2A)	13	5
51	West Broadway (Rte. 2A)/Industrial Rowe	12	3
52	Green St./Bertha Ave.	12	4
53	Parker St. (Rte. 101)/Connors St./Graham St.	12	8
54	Green St. (Rte.140)/Stone St.	11	2
55	Minott St./Banner Rd.	11	3
55	East Broadway (Rte. 2A)/Newton St.	11	3
57	Main St. (Rte.68)/Timpany BLVD.(Rte.68)	11	7
58	Main St.(Rte.68)/Willow St.	11	11
58	City Hall Ave./Pleasant St.	11	11
60	Parker St. (Rte.101)/West St. (Rte. 68)	10	2
60	Otter River Rd./Happy Hollow Rd.	10	2
60	Graham St./Richmond St.	10	2
63	West St. (Rte.68)/Keyes Rd.	10	6
63	Sherman St./Logan St.	10	6
63	Timpany BLVD (Rte.68)/Union St.	10	6

Groton			
Town Rank	Location Name	EPDO Total	Total Crashes
4	Hollis St./Main St. (Rte. 119;Rte. 225)	35	14
5	Sandy Pond Rd./Boston Rd. (Rte. 119)/Forge Village Rd. (Rte. 225)	35	19
6	Mill St./Pleasant St. (Rte. 111;Rte. 225)	28	8
7	Main St. (Rte. 119&111)/Pleasant St. (Rte. 225)/Willowdale Rd.	26	14
8	Boston Rd. (Rte. 119;Rte. 225)/Whiley Rd.	25	9
9	Longley Rd./Hollis St./Chicopee Rd./Blossom Ln.	21	9
9	Station Ave./Main St. (Rte. 119;Rte. 225)	21	9
11	Mill St./Main St. (Rte. 119;Rte. 111)	20	8
12	Lowell Rd. (Rte. 40)/Gay Rd.	19	7
13	Old Ayer Rd./Worthen Dr.	19	15
14	Farmers Row (Rte. 111)/Long Hill Rd. (Rte. 225)	14	6
15	Boston Rd. (Rte. 119;Rte. 225)/Skyfields Dr.	13	5
15	Main St. (Rte. 119;Rte. 111)/Arlington Rd.	13	5
15	Boston Rd. (Rte. 119;Rte. 225)/Lovers Ln.	13	5
18	Farmers Row (Rte. 111)/Higley St.	12	4
18	Champney St./Main St. (Rte. 119;Rte. 111)	12	4
20	Boston Rd. (Rte. 119)/Sunset Rd.	11	3
20	Pepperell Rd./Kemp St./Hill Rd.	11	3

Town Rank	(Groton continued) Location Name	EPDO Total	Total Crashes
22	Longley Rd./Breakneck Rd.	10	2
23	Hollis St./Willowdale Rd.	10	6

Harvard			
Town Rank	Location Name	EPDO Total	Total Crashes
3	Stow Rd./Murray Ln.	19	7
4	Ayer Rd. (Rte. 110;Rte. 111)/Myrick Ln.	17	5
5	Stow Rd./Westcott Rd.	13	5
6	Warren Ave./Tahanto Trail	11	3
7	Massachusetts Ave. (Rte. 111)/Stow Rd./Slough Rd.	11	7

Hubbardston			
Town Rank	Location Name	EPDO Total	Total Crashes
1	Worcester Rd. (Rte. 68)/Old Boston TPK. Rd. (Rte. 62)	32	11
2	Williamsville Rd./Mt. Jefferson Rd.	15	3
3	Gardner Rd. (Rte. 68)/New Templeton Rd.	14	6
4	Main St. (Rte. 68)/Elm St./Brigham St./Worcester Rd. (Rte. 68)	13	9

Lancaster			
Town Rank	Location Name	EPDO Total	Total Crashes
7	Rte. 2 (Exit 34)/Old Union Tnpk/Mechanic St./Harvard St.	28	7
8	High St. Ext.(Rte.110)/Mill St. Ext.	24	12
9	Seven Bridge Rd.(Rte.117)/Creamery Rd.	20	8
10	Seven Bridge Rd.(Rte.117)/Harvard Rd.	17	5
11	Main St.(Rte.70)/Center Bridge Rd.	15	7
12	Main St.(Rte.70) Mill St.	14	10
13	Sterling Rd.(Rte.62)/Chace Hill Rd.	13	9
14	North Main St. (Rte.70)/Langen Rd.	12	8
15	Goss Lane/Langen Rd./George Hill Rd.	11	3
16	Old Union TPK./Fire Road 7	10	1
17	Sterling Rd./Parker Rd.	10	2
18	Sterling St.(Rte.62)/South Meadow Rd.	10	6
19	Main St. (Rte.70)/Seven Bridge Rd.	8	8

Leominster			
City Rank	Location Name	EPDO Total	Total Crashes
39	N Main St (Rte 12)/ Moore St.	36	12
40	West St./ Granite St.	35	11
41	Lancaster St. (Rte 117)/ Viscoloid Ave.	35	15
42	Main St. (Rte 13)/ Marcello Ave.	34	10
43	Lindell Ave./ Maple Ave.	33	13
44	Abbott Ave./ Chalmers St.	32	16

City Rank	(Leominster continued) Location Name	EPDO Total	Total Crashes
44	West St./ Washington St.	32	16
46	Pleasant St./ Pond St./ Colburn St.	31	11
47	Lancaster St. (Rte 117)/ Jungle Rd.	31	15
48	Lancaster St. (Rt 117)/ Cedar St.	30	10
49	Hamilton St./ Fairmount Pl.	30	14
50	Nashua St./ Lawrence St.	30	18
51	Whitney St./ Water St.	29	13
51	Day St./ Joslin St.	29	13
51	Rte 190 #7 Ramp	29	13
54	Mechanic St./ Viscoloid Ave./ 8th St.	28	12
54	N Main St. (Rte 12)/ Priest St.	28	12
54	West St./ Blossom St./ Exchange St.	28	12
57	N Main St. (Rte 12)/ Westland Ave.	26	10
58	Mechanic St./ Sixth St.	24	8
58	Hamilton St./ Nile St.	24	8
60	Mill St./ Whitney St.	23	7
60	Abbott Ave./ Lindell Ave.	23	7
62	Central St. (Rt 12)/ Cheryl Dr./ Litchfield St.	23	11
63	Cedar St./ Middle St	22	6
64	Merriam Ave./ Roche Ave.	22	10
64	Pleasant St./ Adams St.	22	10
66	Main St (Rte 12)/ Columbia St.	26	14
67	Central St. (Rte 12)/ Graham St.	22	13
68	Main St. (Rte 13)/ Monoosnock Ave.	25	8
69	Lancaster St. (Rte 117)/ Johnson St.	22	18
70	Carter St./ 5th St.	21	5
71	West St./ Cotton St./ Gardner Pl	21	9
71	N Main St (Rte 12)/ Holman Ave.	21	9
73	Mechanic St./ Whitney St.	21	13
73	Litchfield St./ Elm Hill Ave.	21	13
75	West St./ Pond St.	21	17
76	Central St (Rte 12)/ Manning Ave.	20	8
77	Union St./ Tisdale St	19	7
77	Merriam Ave./ Walcott St./ Shadow Lawn Dr.	19	7
77	Lancaster St. (Rte 117)/ 6th St.	19	7
80	Washington St./ Walnut St.	18	6
80	Spruce St./ 8th St.	18	6
82	Mechanic St./ Johnson St.	18	10
82	Viscoloid Ave./ Johnson St.	18	10
82	N Main St.(Rte 12)/ Priest St.	18	10
85	Lancaster St. (Rte 117)/ Graham St	18	14
85	Central St. (Rte 12)/ Lancaster St. (Rte 117)	18	14
87	Lancaster St. (Rte 117)/ Derwin St.	17	5
87	Whitney St./ Spruce St.	17	5
89	Main St. (Rte 13)/Burrage Ave./Mooreland Ave.	17	13
90	Lancaster St. (Rt 117)/ (Old) Lancaster St.	16	4

City Rank	(Leominster continued) Location Name	EPDO Total	Total Crashes
90	Water St./ 3rd St.	16	4
90	Spruce St./ 4th St.	16	4
90	Merriam Ave./ Vine St.	16	4
94	Grove Ave./ Walnut St.	16	8
94	Main St (Rt 13)/ Tolman Ave.	16	8
96	Prospect St./ Lawrence St.	16	12
97	Main St./ Wilder Rd.	15	3
98	Union St./ Franklin St.	15	7
99	Mechanic St./ 4th St.	14	6
99	Main St. (Rte 12)/ Summer St.	14	6
99	West St./ Exchange St.	14	6
102	Commercial Rd./ Haws St.	14	10
103	Nashua St./ Mohawk Dr.	13	5
103	Central St. (Rte 12)/ Chapman Pl	13	5
103	Main St. (Rte 13)/ Keystone Dr.	13	5
103	Industrial Rd./ Tolman Ave.	13	5
103	Merriam Ave./ Hall St.	13	5
103	Litchfield St./ Meadowpond Dr.	13	5
103	Main St. (Rte 13)/ Bernice Ave.	13	5
110	Main St. (Rte 13)/ Starr St./ Forsythia Dr.	12	4
110	Main St. (Rte 13)/ Lincoln St.	12	4
110	Main St. (Rte13)/ Heritage Ln.	12	4
110	Rte 2/ Abbott Ave.	12	4
114	Commercial Rd./ Mill St.	12	8
115	Pleasant St./ Peach Tree Ln./ Anthony Rd.	11	3
115	Mechanic St./ Vinton St.	11	3
115	Prospect St./ Sierra Way	11	3
115	Pleasant St./ Chestnut St.	11	3
115	Washington St./ McCay St.	11	3
115	Pleasant St./ Cottage St.	11	3
121	West St./ Hall St.	11	7
121	Main St. (Rte 13)/ Walnut St.	11	7
123	Litchfield St./ Dogwood Rd.	10	2
123	Central St. (Rte 12)/ Legate Hill Rd.	10	2
123	Elm St./ Washusett St.	10	2
126	Exchange St./ Kingman Dr.	10	6
126	Central St. (Rte 12)/ Tisdale St.	10	6
128	Main St (Rte 13)/ Marshall St.	10	10
129	Mechanic St./ 6th St.	6	2

Lunenburg			
Town Rank	Location Name	EPDO Total	Total Crashes
5	Massachusetts Ave. (Rte 2A)/Chestnut St.	29	9
6	Northfield Rd./Chase Rd. (Rte. 13)	29	13
7	Massachusetts Ave. (Rte. 2A)/Pleasant St.	28	12
8	Electric Ave. (Rte. 13)/Prospect St./Whalom Rd.	27	11
9	Lancaster Ave./Kilburn St.	26	6
10	Fort Pond Rd./Leominster-Shirley Rd.	26	10
11	Electric Ave. (Rte. 13)/West St.	24	12
12	Massachusetts Ave. (Rte. 2A)/Richards Way	23	7
12	Lancaster Ave./Goodrich St.	23	7
14	Leominster-Shirley Rd./Reservoir Rd.	22	6
15	Summer St./Youngs Rd.	18	6
16	Massachusetts Ave. (Rte. 2A)/Main St./Lancaster Ave.	18	10
17	West Groton Rd. (Rte. 225)/Massachusetts Ave. (Rte. 2A)	16	8
18	South Row Rd./Townsend Harbor Rd.	15	3
18	Massachusetts Ave. (Rte. 2A)/Arbor St.	15	3
20	Northfield Rd./New West Townsend Rd.	14	6
21	Massachusetts Ave. (Rte. 2A)/Whiting St.	12	8
22	Massachusetts Ave. (Rte. 2A)/Elmwood Rd.	11	3
23	Massachusetts Ave. (Rte. 2A)/Northfield Rd.	10	2
23	Flatt Hill Rd./Watt St.	10	2
23	Goodrich St./Kilburn St.	10	2

Petersham			
Town Rank	Location Name	EPDO Total	Total Crashes
1	Barre Rd. (Rte. 122)/South Main St. (Rte. 32)	11	3

Phillipston			
Town Rank	Location Name	EPDO Total	Total Crashes
3	Queen Lake Rd. (Rte. 101)/Burnshirt Rd.	18	6
4	State Rd. (Rte. 2A)/Baldwin Hill Rd.	16	4
5	Rte. 2/Rte. 2A	11	3
5	State Rd. (Rte. 2A)/Highland Ave./Athol Rd.	11	3

Royalston			
Town Rank	Location Name	EPDO Total	Total Crashes
	NO LOCATIONS FOUND		

Shirley			
Town Rank	Location Name	EPDO Total	Total Crashes
1	Townsend Rd./Groton Rd. (Rte. 225)	33	13
2	Groton Rd. (Rte. 225)/Mulpus Rd./Kara Ln.	19	7
3	Great Rd. (Rte. 2A)/Townsend Rd.	17	5
4	Main St./Lancaster Rd./Leominster Rd.	11	7
4	Main St./Center Rd.	11	7
6	Groton Rd. (Rte. 225)/Lawton Rd.	10	2

Sterling			
Town Rank	Location Name	EPDO Total	Total Crashes
5	Redemption Rock Trail (Rte. 140)/Legg Rd./Dana Hill Rd.	22	10
6	Leominster Rd. (Rte. 12)/Pratts Junction Rd./North Row Rd.	21	9
7	Chocksett Rd./Pratts Junction Rd.	18	6
8	Worcester Rd. (Rte. 12)/Boutelle Rd.	16	3
9	Hastings Rd./Justice Hill Rd./Lucas Rd.	15	7
10	Redemption Rock Tr (Rte. 140)/N Oakdale Cut Off/Houghton Rd.	12	4
11	Clinton Rd. (Rte. 62)/Sterling St.	10	2

Templeton			
Town Rank	Location Name	EPDO Total	Total Crashes
3	Rte. 2 (Exit 20)/Baldwinville Rd.	33	21
4	Dudley Rd. (Rte. 101)/Barre Rd.	24	8
4	State Rd. (Rte. 68)/Old Winchendon Rd./Main St.	24	8
6	King Phillip Tr (Rte. 202)/Patriots Rd. (Rte. 2A)/Freight St./Rice Rd.	17	5
6	State Rd. (Rte. 68)/Highland Ave.	17	5
8	Winchendon Rd. (Rte. 202)/Winchester St.	16	4
9	Patriots Rd. (Rte. 2A;Rte. 101)/Partridgeville Rd.	11	3
9	Baldwinville Rd./Maple St. (Rte. 202;Rte. 68)	11	3
11	State Rd. (Rte. 68)/Crotty Ave.	10	2
12	Rte. 2 (Exit 19)/Patriots Rd.	9	5

Townsend			
Town Rank	Location Name	EPDO Total	Total Crashes
3	Fitchburg Rd. (Rte. 13)/Emery Rd.	36	12
4	Main St. (Rte. 119)/South St./Spaulding St.	35	23
5	Main St. (Rte. 119)/Brookline St. (Rte. 13)	23	16
6	Main St. (Rte. 119)/Mill St.	21	9
7	North End Rd./Townsend Hill Rd.	19	6
8	Main St. (Rte. 119)/Bow St.	18	10
9	Fitchburg Rd. (Rte. 13)/Worcester Rd.	17	5
9	Brookline Rd. (Rte. 13)/Dudley Rd.	17	5
11	Main St. (Rte. 119)/West Meadow Rd.	16	4
11	Main St. (Rte. 119)/Wheeler Rd.	16	4
13	Brookline Rd. (Rte. 13)/Meadow Rd./Cross St.	15	7

Town Rank	(Townsend continued) Location Name	EPDO Total	Total Crashes
14	Fitchburg Rd. (Rte. 13)/Bayberry Hill Rd.	14	6
15	Elm St. (Rte. 13)/Depot St.	13	5
16	Pierce Rd./Turner Rd.	12	4
17	Main St. (Rte. 119)/Harbor Ln.	11	3
17	West Elm St./Wyman Rd./Lunenburg Rd.	11	3
17	Shirley Rd./Warren Rd.	11	3
20	Main St. (Rte. 119)/Edward Rd.	11	7
21	Main St. (Rte. 119)/Reagan Dr.	10	2
21	Spaulding St./Wallace Rd./Proctor Rd./Haynes Rd.	10	2
23	Main St. (Rte. 119)/Scales Ln.	10	6

Westminster			
Town Rank	Location Name	EPDO Total	Total Crashes
7	State Rd. East (Rte. 2A)/S Ashburnham Rd.	37	17
8	Dawley Rd./South St./Carter Rd.	31	11
9	Oakmont Ave./S Ashburnham Rd./Bragg Hill Rd./Whitmanville Rd.	20	4
10	W Main St. (Rte. 140)/Sargent Rd.	18	6
11	Oakmont Ave./E Gardner Rd.	16	4
12	South St./Leominster St./E Main St. (Rte. 2A)/Academy Hill Rd./Main St. (Rte. 2A)	14	10
13	W Main St. (Rte. 140)/Betty Spring Rd.	12	4
14	Nichols St./Main St. (Rte. 2A;Rte. 140)	12	8
15	Worcester Rd. (Rte. 140)/Gatehouse Rd.	11	11
16	Narrows Rd./East Rd.	10	1
17	Oakmont Ave./N Common Rd.	10	2

Winchendon			
Town Rank	Intersection Name	EPDO Total	Total Crashes
3	Baldwinville State Rd. (Rte 202)/ Main St.	22	5
4	Front St. (Rte 12)/ Pleasant St.	21	9
5	Central St. (Rte 202)/ Front/Spring Sts. (Rte 12) (Blair Square)	18	14
6	School St. (Rte 12)/ Park St.	16	3
7	Lincoln Ave./ Grove St.	15	7
8	Gardner Rd. (Rte 12)/ Raymond Rd.	15	3
9	Maple St. (Rte 202)/ Glenallan St. (Rte 202)	13	5
9	Spring St. (Rte 12)/ Ash St.	13	5
11	Spring St. (Rte 12)/ Emerald St.	12	4
11	Central St. (Rte 202)/ Grove St.	12	4
11	Main/Baldwinville Rd. (Rte 202)/ Alger Rd.	12	4
14	Spring St. (Rte 12)/ Lake St./ Beech St.	11	7
15	North St./ Highland St.	11	3
15	West St./ Pearl St.	11	3
17	Glenallan St. (Rte 202)/ Monomonac Dr. West	10	6
17	River St. (Rte 202)/ Main St. (Rte 202)/ Benjamin St. & Brown St.	10	6
17	Baldwinville State Rd. (Rte 202)/ Mill Glen Rd.	10	6
20	Ash St./ Myrtle St./ Water St.	10	2