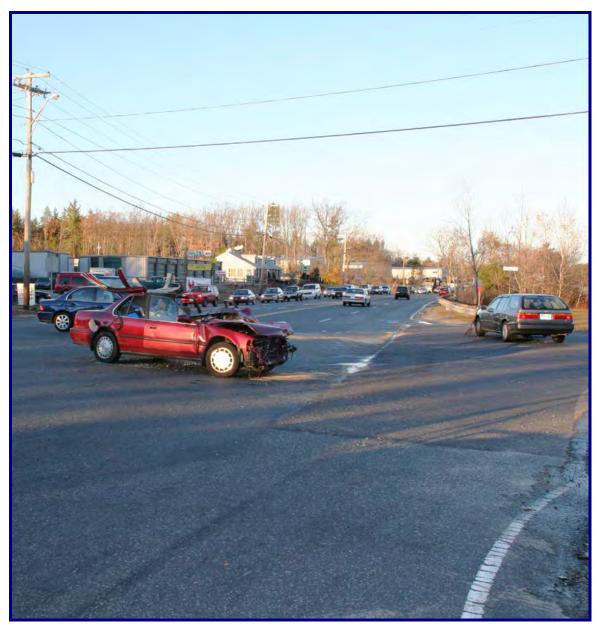
2006 TOP CRASH LOCATIONS REPORT



JULY 2008







THE COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF TRANSPORTATION MASSACHUSETTS HIGHWAY DEPARTMENT



BERNARD COHEN SHOREYARY LUISA PAIEWONERY

Dear Reader:

Enclosed is MassHighway's edition of the 2006 Top Crash Locations Report, which may be used to evaluate top crash intersection locations and top crash pedestrian and bicycle locations in order to improve the safety of our roadway system. This report, like last year's report, is a change from previous editions of the top crash locations report in that the focus is on intersection locations and is based on crashes entered into the new Crash Data System (CDS). New for this year, reflecting MassHighway's commitment to a safe multi-modal transportation system, is the identification of top bicycle-motor vehicle and pedestrian-motor vehicle crash locations. This information is also available by contacting your Regional Planning Agencies. In the near future, a report will be published identifying the top interchange locations.

In an effort to reduce injury and fatal crashes, the Massachusetts Highway Department, in cooperation with a wide variety of public and private safety stakeholders, has prepared the Massachusetts Strategic Highway Safety Plan (SHSP). To view the SHSP, download a copy of the Plan or to learn more about it, go to the MassHighway website: http://www.mhd.state.ma.us/default.asp?pgid=content/traffic/shsp&sid=level2. The SHSP identified the State's key safety needs and the Plan can be used to guide investment decisions to achieve significant reductions in highway fatalities and serious injuries on all public roads based upon a data-driven process.

I am pleased to present this dataset which may be used as a screening tool to evaluate locations and make changes to improve the safety of our roadway system. The 2006 *Top Crash Locations Report* is one of the tools for the statewide Highway Safety Improvement Program (HSIP) to identify safety projects using a data-driven process.

Please note that this report is based only on crash records that have been entered into the statewide crash system and have been geocoded to a specific location. Although Massachusetts General Laws Chapter 90 § 26 and 29 require drivers and police departments to file crash reports that exceed specific thresholds, this is not always the case. Improving the crash reporting system and the quality of the data will help to focus resources where they are most needed.

I am convinced that we can make great strides in improving safety on Massachusetts roadways for all users. If you have questions, please contact Neil Boudreau, State Traffic Engineer at (617) 973-8211.

Sincorely,

Luisa Paiewonsky Commissioner

TOP HIGH CRASH LOCATIONS REPORT

Top 200 Intersection Locations 2004-2006 Top Pedestrian Locations 2002-2006 Top Bicycle Locations 2002-2006

Introduction

MassHighway obtains crash data from the Massachusetts Registry of Motor Vehicles (RMV) and uses it for a number of purposes. The primary function, however, is that it provides the foundation for developing safety improvement projects. The Top High Crash Locations Report is one of the tools used in this process. Previously, MassHighway, with the assistance from Central Transportation Planning Staff (CTPS), produced a Top 1000 Highway Crash Locations Report which included all types of locations (interchanges, intersections and rotaries). Last year, MassHighway developed a new report type where the locations identified were crash clusters at intersections (no grade separated locations and no locations with weaving sections). In the report it was noted that in the near future the top bicycle and pedestrian clusters would be identified and reported as well. This year, MassHighway is again preparing a Top High Crash Locations Report which includes the top 200 high crash intersection locations using crash data from 2004-2006 and also includes the highest frequency bicycle-motor vehicle and pedestrian-motor vehicle crash locations for 2002-2006.

The Registry of Motor Vehicles (RMV) obtains crash data from State and local police reports and from motor vehicle operators (motorists) who are involved in crashes. The RMV Crash Records Section collects, enters and maintains crash data records, which are the source of the MassHighway crash data.

To produce this high crash locations listing, MassHighway, with the assistance of Geonetics, has developed an automated procedure for processing, standardizing, matching and aggregating the crash data by geographical location using Geographic Information System (GIS) tools and procedures. This automated process replaced the previous largely-manual process used by CTPS in developing the integrated Top 1000 High Crash Locations Report.

This report, like last year's report, is based on the new Registry of Motor Vehicles crash system which has been operational since 2002 and collects crash information in a different format. The new Crash Data System (CDS) was designed, built and tested over a period of several years involving assistance and input from a number of State, Federal and local agencies, including MassHighway and the Federal Highway Administration. Due to the difficulty of obtaining complete and accurate information on crash locations, one of the key parts of the CDS project was working with the police and the RMV to attempt to obtain more accurate crash location data. New crash data forms for both police and operator reports were designed to correspond to the new data entry system at the RMV. The CDS includes new data entry tools to assist analysts attempting to validate the crash location data. Improved accuracy of the crash data along with the standardization of street names is allowing MassHighway to do a better job of evaluating crash locations. Generally, the geocoding rate (the rate at which crashes can be located to a specific geographical point) has jumped from 62% to nearly 80% of crashes in the statewide system. However, the geocoding rate is not uniform for all crashes nor for all types of crash locations. Some crashes may be more difficult to geocode because of multiple intersections between the same roadway names within a community, inconsistencies in roadway names between E911 files and the Road Inventory File or a host of other reasons.

Furthermore, the reporting levels of some communities have changed dramatically between the old reporting format (pre-2002) and the new format. As an example, one community has dropped reporting levels by nearly a factor of 10, while another community has dramatically increased their reporting levels

so that they are now reporting nearly 10 times the number of crashes. Obviously, these reporting changes significantly impact the results of the Top High Crash Locations Report.

Due to the many difficulties in obtaining precise, useable crash location data and many issues involved in variations in crash reporting rates by some jurisdictions, this report should be used as a general purpose screening tool rather than as a precise listing of crash frequencies by individual locations.

Methodology – Intersection Locations

The intersection crash cluster analysis method, developed by Geonetics, is a comprehensive method designed to locate crash clusters. 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. If two distinct clusters are found to share a common crash, the two clusters are merged into a single cluster. This method of search-and-merge results in a set of many distinct clusters of different sizes. The application then stores these clusters to the GIS output file, along with the count of crashes within the cluster. The clusters were then ranked by the number of Equivalent Property Damage Only (EPDO) crashes contained within their boundaries. As in previous Top Crash Lists, fatal crashes are weighted by 10, injury crashes are weighted by 5 and property damage only or non-reported is weighted by 1. These are the same weights that were used to generate the previous Top 1000 High Crash Locations Report.

The crashes were then named based on the highest functional classification roadway within the cluster, followed by the roadway with the second highest functional classification. In instances where there were two roadways with the identical classification, the first street name selected was the street with the longest segment contained within the cluster. Some cluster naming was modified to insert the name of a private way or site drive, rather than leaving it as unnamed (such as at an intersection of a roadway with a site drive). Note that the area encompassing the crash cluster may be more broad than just the intersection.

The module to automatically determine whether the location was an intersection, rotary, interchange or other, has not yet been developed. Therefore, a review of each location was required to make that determination. Generally, a location was determined to be an "intersection" if the cluster did not contain roadways with grade separation (interchange) nor weaving sections (rotaries or ramps). The clusters were reviewed in descending EPDO order until 200 locations were obtained. A sample of the top 2 ranked intersection locations is included in this report to illustrate the concept of the intersection clustering. The actual crash clusters can be viewed on the interactive maps at mass.gov/mhd/topcrashclusters. Furthermore, a shape file of the top crash intersection locations is available upon request.

The above method was used to develop the top 200 intersection crash locations for crashes occurring during the three year period from 2004 to 2006. As with previous editions, the crash location analysis has been scored over a three-year period. By using crash experience over the three-year period, anomalies in the individual years of data tend to be reduced.

Methodology – Pedestrian and Bicycle Locations

New for this year, the top locations where reported collisions occurred between pedestrians and motor vehicles and bicycles and motor vehicles have been identified. The crash cluster analysis methodology for both the top pedestrian and the top bicycle crashes is similar to the top intersection location methodology in that it uses a fixed meter search distance (for both pedestrian and bicycle crashes it is 100 meters compared to 25 meters for intersection locations) to merge crash clusters together. Crashes involving collisions between motor vehicles and pedestrians or bicycles were identified by using the non-motorist type code within the CDS database (which may yield different results from using most harmful event, first harmful event, or sequence of events data fields). Furthermore, the methodology uses the

Equivalent Property Damage Only (EPDO) weighting to rank the clusters. However, because of the relatively small number of reported pedestrian and bicycle crashes in the crash data file, the clustering analysis used crashes from the <u>five year</u> period from 2002-2006, instead of the three year analysis for intersection locations. Additionally, due to the larger geographic area encompassed by both the pedestrian and the bicycle crash clusters, it was difficult to name them so they were left unnamed but can be viewed spatially. The top 10 ranked pedestrian crash locations and the top 10 bicycle crash locations are included in this report. The actual crash clusters can be viewed on the interactive maps <u>mass.gov/mhd/topcrashclusters</u>.

For further information, please contact Neil Boudreau, State Traffic Engineer, Traffic Engineering Section, Massachusetts Highway Department, 10 Park Plaza, Room 7210, Boston, MA 02116, phone (617) 973-8211.

NOTICE

It should be noted that the Top 200 High Crash Intersection Locations Report was compiled under the authority of United States Code Title 23, Section 148, Highway Safety Improvement Program, sponsored by the Federal Highway Administration. The compilation of such information is, therefore, subject to the limitations of Section 148 (g) (4) which states:

"Discovery and admission into evidence of certain reports, surveys, and information - Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose directly relating to paragraph (1) or subsection (c)(1)(D), or published by the Secretary in accordance with paragraph (3), shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in such reports, surveys, schedules, lists, or other data."

				2004-2006 STATEWIDE TOP 200	INTERS	ECTION CRASH LIST						
			ict					hes	Crashes	hes	Crashes	on Reported Crashes
¥	Ę	<	ID District	reet 1	Route 1	reet 2	Route 2	al Crashes	8	al Crashes	ıry Cras	O & Non
Rar	Town	RPA	MHD	Str	- S	Ş.	8	Total	핍	Fatal	Injury	PDO
1	LOWELL	NMCOG	4	BRIDGE STREET	38	VETERANS OF FOREIGN WARS HIGHWAY		154	384	2	53	99
2	FALL RIVER	SRPEDD	5	PLYMOUTH AVENUE	81	RODMAN STREET		158	310	0	38	120
3	LOWELL SHREWSBURY	NMCOG CMRPC	3	MIDDLESEX STREET BOSTON TURNPIKE	9	WOOD STREET SOUTH QUINSIGAMOND AVENUE	+	139 148	267 260	0	32 28	107 120
5	WEYMOUTH	MAPC	4	MAIN STREET	18	MIDDLE STREET		152	256	0	26	126
6	FRAMINGHAM	MAPC	3	HOLLIS STREET	126	WAVERLEY STREET	135	138	243	1	24	113
7	BROCKTON FRAMINGHAM	OCPC MAPC	5	WEST ELM STREET WORCESTER ROAD	9	NEWBURY STREET TEMPLE STREET	-	63 105	223 222	1	40 27	23 77
9	STOUGHTON	MAPC & OCPC	5	WASHINGTON STREET	138	CENTRAL STREET		127	219	0	23	104
10	CHICOPEE	PVPC	2	BROADWAY		CHURCH STREET		86	218	0	33	53
11	WOBURN	MAPC	4	MONTVALE AVENUE		WASHINGTON STREET		115	215	0	25	90
12	WORCESTER BROCKTON	CMRPC OCPC	3 5	PARK AVENUE ASH STREET	9	MAY STREET WEST ELM STREET	+	98 70	214 214	0	29 36	69 34
14	CHELSEA	MAPC	4	BROADWAY		CONGRESS AVENUE		78	210	0	33	45
15	BROCKTON	OCPC	5	PLEASANT STREET	27	WEST STREET		91	208	1	27	63
15	FALL RIVER	SRPEDD	5	PRESIDENT AVENUE	6	NORTH MAIN STREET	440	104	208	0	26	78
17 18	LOWELL FRAMINGHAM	NMCOG MAPC	3	PLAIN STREET WORCESTER ROAD	9	CHELMSFORD STREET CALIFORNIA AVENUE	110	97 87	205 204	0	27 27	70 59
19	LOWELL	NMCOG	4	CHURCH STREET	110	APPLETON STREET		95	203	0	27	68
19	BOSTON	MAPC	4	MASSACHUSETTS AVENUE		MELNEA CASS BOULEVARD		90	203	1	26	63
21	LEOMINSTER	MRPC	3	NORTH MAIN STREET	12	NELSON STREET		97	201	0	26	71
22	FRAMINGHAM QUINCY	MAPC MAPC	3	WAVERLEY STREET HONORABLE THOMAS S BURGIN PARKWAY	135	BEAVER STREET GRANITE STREET	-	114 104	198 196	0	21 23	93 81
23	WORCESTER	CMRPC	3	BELMONT STREET	9	OAK AVENUE		104	196	0	23	79
25	BRAINTREE	MAPC	4	GRANITE STREET	37	COMMON STREET		77	193	0	29	48
26	LYNN	MAPC	4	WESTERN AVENUE	107	CENTRE STREET		84	192	0	27	57
27	LYNN	MAPC	4	WESTERN AVENUE	107	FRANKLIN STREET	400	91	191	0	25	66
27 29	LYNN PLAINVILLE	MAPC SRPEDD	4 5	WESTERN AVENUE WASHINGTON STREET	107	WASHINGTON STREET TAUNTON STREET	129 152	87 70	191 190	0	26 30	61 40
30	WILMINGTON	MAPC	4	LOWELL STREET	129	WOBURN STREET	102	63	187	0	31	32
31	BROCKTON	OCPC	5	NORTH MAIN STREET		HOWARD STREET		66	186	0	30	36
32	ABINGTON	OCPC	5	BEDFORD STREET	18	RANDOLPH STREET	139	89	185	0	24	65
33 34	PEMBROKE MALDEN	MAPC & OCPC MAPC	5 4	SCHOOSETT STREET EASTERN AVENUE	139 60	COLUMBIA ROAD BROADWAY	53 99	63 86	183 182	0	30 24	33 62
35	LEOMINSTER	MRPC	3	MAIN STREET	13	PROSPECT STREET	99	113	181	0	17	96
35	WORCESTER	CMRPC	3	BELMONT STREET	9	PLANTATION STREET		77	181	0	26	51
37	LYNN	MAPC	4	LYNNFIELD STREET	129	BROADWAY		94	178	0	21	73
37 39	CONCORD WALTHAM	MAPC MAPC	4	CONCORD TURNPIKE MAIN STREET	20	MAIN STREET LEXINGTON STREET	62	66 101	178 177	0	28 19	38 82
40	BROCKTON	OCPC	5	BELMONT STREET	123	MANLEY STREET	+	64	176	0	28	36
41	WORCESTER	CMRPC	3	BELMONT STREET	9	GOLDSBERRY STREET		82	174	0	23	59
42	CHELSEA	MAPC	4	REVERE BEACH PARKWAY	16	WASHINGTON AVENUE		70	170	0	25	45
43	WALTHAM TAUNTON	MAPC SRPEDD	4 5	LEXINGTON STREET COUNTY STREET	140	TRAPELO ROAD HART STREET	1	81 67	169 168	0	22	59 43
44	NEW BEDFORD	SRPEDD	5	ALFRED BESSETTE MEMORIAL HIGHWAY	140	KEMPTON STREET	6	65	168	2	23	43
46	WORCESTER	CMRPC	3	PARK AVENUE	9	PLEASANT STREET		70	166	0	24	46
47	SWANSEA	SRPEDD	5	MARKET STREET	136	GRAND ARMY OF THE REPUBLIC HIGHWAY	6	79	163	0	21	58
48 48	LOWELL BROCKTON	NMCOG OCPC	4 5	VETERANS OF FOREIGN WARS HIGHWAY BELMONT AVENUE	113	VARNUM AVENUE WEST ELM STREET	+	94 44	162	0	17	77 17
50	HAVERHILL	MVPC	4	MAIN STREET	97	BAILEY BOULEVARD	1	73	162 161	0	25 22	51
51	MARLBOROUGH	MAPC	3	EAST MAIN STREET	20	CURTIS AVENUE	1	92	160	0	17	75
51	WESTFIELD	PVPC	2	FRANKLIN STREET	20	WASHINGTON STREET		68	160	0	23	45
53	NATICK	MAPC	3	WEST CENTRAL STREET	135	SPEEN STREET		95	159	0	16	79
53 55	BROCKTON ATTLEBORO	OCPC SRPEDD	5 5	PLEASANT STREET WASHINGTON STREET	27	WARREN AVENUE MAY ST	+	67 74	159 158	0	23 21	44 53
55	HAVERHILL	MVPC	4	SOUTH MAIN STREET	125	SOUTH PLEASANT STREET	1	74	158	0	21	53
57	WORCESTER	CMRPC	3	CAMBRIDGE STREET		SOUTHBRIDGE STREET		61	157	0	24	37
57	BROCKTON	OCPC	5	CRESCENT STREET	27	LYMAN STREET		52	157	1	24	27
59 60	FALL RIVER LOWELL	SRPEDD NMCOG	5 4	SOUTH MAIN STREET SCHOOL STREET	138	GLOBE STREET BRANCH STREET	1	79 66	155 154	0	19 22	60 44
60	WORCESTER	CMRPC	3	LINCOLN STREET	70	MARSH AVENUE	1	62	154	0	23	39
62	MALDEN	MAPC	4	BROADWAY	99	SALEM STREET	1	57	153	0	24	33
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				2004-2006 STATEWIDE TOP 20	0 INTERS	ECTION CRASH LIST						
												Reported Crashes
			District	-	-	8	2	Crashes) Crashes	Crashes	Crashes	& Non Re
Rank	Town	RPA	MHD	Street 1	Route	Street	Route	Total	EPDO	Fatal	Injury	PDO
62	FALL RIVER	SRPEDD	5	BROADWAY	138	BRADFORD AVENUE		73	153	0	20	53
64	LOWELL	NMCOG	4	NESMITH STREET	38	ANDOVER STREET	110	76	152	0	19	57
64	WORCESTER	CMRPC	3	HIGHLAND STREET	9	LANCASTER STREET		64	152	0	22	42
64 64	LOWELL NORTH ANDOVER	NMCOG MVPC	4	THORNDIKE STREET CHICKERING ROAD	3A	HIGHLAND STREET		59	152	0	21	37 42
64	NORTH ANDOVER WEYMOUTH	MAPC	4	MAIN STREET	125 18	MASSACHUSETTS AVENUE COLUMBIAN STREET		64 76	152 152	0	22 19	57
64	WORCESTER	CMRPC	3	CHANDLER STREET	122	MURRAY AVENUE		72	152	0	20	52
70	WEYMOUTH	MAPC	4	PLEASANT STREET		WASHINGTON STREET	53	79	151	0	18	61
71	LOWELL	NMCOG	4	VETERANS OF FOREIGN WARS HIGHWAY		AIKEN STREET		66	150	0	21	45
71	HAVERHILL	MVPC	4	WINTER STREET	97	WHITE STREET	110	82	150	0	17	65
73 74	WORCESTER WESTFORD	CMRPC NMCOG	3	BELMONT STREET LITTLETON ROAD	9 110	LAKE AVENUE NORTH BOSTON ROAD		61 96	149 148	0	22 13	39 83
74	CAMBRIDGE	MAPC	4	MASSACHUSETTS AVENUE	2A	BROOKLINE STREET		72	148	0	19	53
76	WEST BRIDGEWATER	OCPC	5	WEST CENTER STREET	106	NORTH MAIN STREET	28	75	147	0	18	57
76	BROCKTON	OCPC	5	MAIN STREET		LEGION PARKWAY	123	55	147	0	23	32
76	TAUNTON	SRPEDD	5	BROADWAY	138	WASHINGTON STREET		63	147	0	21	42
79 79	HAVERHILL	MVPC PVPC	4	BRIDGE STREET	125	WATER STREET RESNIC BOULEVARD	113	74	146	0	18	56
81	HOLYOKE WELLESLEY	MAPC	2	MAPLE STREET WORCESTER STREET	9	WELLESLEY FIRE STATION HEADQUARTERS (BY PROXIMITY)		70 93	146 145	0	19 13	51 80
81	ABINGTON	OCPC	5	BROCKTON AVENUE	123	BEDFORD STREET	18	65	145	0	20	45
81	OXFORD	CMRPC	3	SOUTHBRIDGE ROAD	20	LEICESTER ROAD	56	64	145	1	18	45
84	BROCKTON	OCPC	5	BELMONT STREET	123	LINWOOD STREET		56	144	0	22	34
84	BROOKLINE	MAPC	4	BOYLSTON STREET	9	CHESTNUT HILL AVENUE		52	144	0	23	29
84	WORCESTER	CMRPC	3	LINCOLN STREET	70	COUNTRY CLUB BOULEVARD		56	144	0	22	34
84 88	BROCKTON CAMBRIDGE	OCPC MAPC	5 4	NORTH MAIN STREET MEMORIAL DRIVE	3	EAST ASHLAND STREET RIVER STREET		56 63	144 143	0	22 20	34 43
88	MALDEN	MAPC	4	CENTRE STREET	60	COMMERCIAL STREET		51	143	0	23	28
88	NORWOOD	MAPC	5	BLUE STAR MEMORIAL HIGHWAY	1	DEAN STREET		67	143	0	19	48
88	LOWELL	NMCOG	4	CHELMSFORD STREET	110	INDUSTRIAL AVENUE		71	143	0	18	53
88	WORCESTER	CMRPC	3	MAIN STREET		MILL STREET	12	62	143	1	18	43
88 94	QUINCY LOWELL	MAPC NMCOG	4	SCHOOL STREET	3A	HANCOCK STREET		71	143	0	18	53
94	BROCKTON	OCPC	5	WESTFORD STREET NORTH MONTELLO STREET	28	WILDER STREET HOWARD STREET	37	62 62	142 142	0	20 20	42 42
96	PITTSFIELD	BRPC	1	LINDEN STREET		SEYMOUR STREET	0.	45	141	0	24	21
96	SOMERSET	SRPEDD	5	GRAND ARMY OF THE REPUBLIC HIGHWAY	6	LEES RIVER AVENUE		45	141	0	24	21
96	RAYNHAM	SRPEDD	5	ROUTE 44	44	ORCHARD STREET		53	141	0	22	31
99	WALPOLE	MAPC	5	PROVIDENCE TURNPIKE	1	HIGH PLAIN STREET	27	72	140	0	17	55
99	NEW BEDFORD NATICK	SRPEDD MAPC	5	ASHLEY BOULEVARD SPEEN STREET	18	COGGESHALL STREET FLUTIE PASS		64 87	140 139	0	19 13	45 74
101	CAMBRIDGE	MAPC	4	MASSACHUSETTS AVENUE	2A	ALEWIFE BROOK PARKWAY	3	59	139	0	20	39
103	WEYMOUTH	MAPC	4	MAIN STREET	18	POND STREET		82	138	0	14	68
103	HOLBROOK	MAPC	5	SOUTH FRANKLIN STREET	37	UNION STREET	139	62	138	0	19	43
103	QUINCY	MAPC	4	WASHINGTON STREET	3A	SOUTHERN ARTERY	53	78	138	0	15	63
103	FITCHBURG LYNN	MRPC MAPC	3 4	LUNENBURG STREET ESSEX STREET	2A	JOHN FITCH HIGHWAY JOYCE STREET		66 62	138 138	0	18 19	48 43
103	WATERTOWN	MAPC	4	GALEN STREET	16	WATERTOWN STREET		52	137	1	19	32
108	WOBURN	MAPC	4	MAIN STREET	38	PLEASANT STREET		77	137	0	15	62
110	LYNN	MAPC	4	BROADWAY		EUCLID AVENUE		56	136	0	20	36
111	CHICOPEE	PVPC	2	MEMORIAL DRIVE	33	PENDLETON AVENUE		51	135	0	21	30
111	WALTHAM BOSTON	MAPC MAPC	4	MOODY STREET WASHINGTON STREET	-	CRESCENT STREET WEST ROXBURY PARKWAY		74 43	135 135	0	13 23	60 20
111	BROCKTON	OCPC	5	COURT STREET	27	MONTELLO STREET	28	43 55	135	0	20	35
111	CHELSEA	MAPC	4	REVERE BEACH PARKWAY	16	GARFIELD AVENUE		55	135	0	20	35
116	WEYMOUTH	MAPC	4	WASHINGTON STREET	53	MAIN STREET	18	82	134	0	13	69
117	SHREWSBURY	CMRPC	3	BOSTON TURNPIKE	9	SOUTH STREET		85	133	0	12	73
117	BURLINGTON	MAPC	4	CAMBRIDGE STREET	3A	WINN STREET	00	77	133	0	14	63
119 120	BRIDGEWATER AUBURN	OCPC CMRPC	5	BROAD STREET SOUTHBRIDGE STREET	18 20	MAIN STREET HILL STREET	28	75 46	131 130	0	14 21	61 25
120	MIDDLEBOROUGH	SRPEDD	5	ROUTE 44	44	PLYMPTON STREET	105	54	130	0	19	35
120	LOWELL	NMCOG	4	RIVERSIDE STREET	113	UNIVERSITY AVENUE		54	130	0	19	35
120	EASTON	OCPC	5	DEPOT STREET	123	FOUNDRY STREET	106	54	130	0	19	35
124	FALL RIVER	SRPEDD	5	PLEASANT STREET		QUEQUECHAN STREET		73	129	0	14	59

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				2004-2006 STATEWIDE TOP 200	INTERS	ECTION CRASH LIST						
												Crashes
			ict					Crashes	Crashes	Crashes	Crashes	on Reported
			District	-	-	0	2	ras	Cra	ras	Cras	Non
논	Pown	∢	무	reet 1	Route	reet	Route	<u>a</u>	EPDO	<u>ra</u>	Injury	⊗ ⊘
Rank	Ó	RPA	MHD	<u> </u>	&	ະັັ້	8	Total	日	Fatal	ij	PDO
124	WEYMOUTH	MAPC	4	WASHINGTON STREET	53	MIDDLE STREET		77	129	0	13	64
124 124	SWANSEA FRAMINGHAM	SRPEDD MAPC	5	GRAND ARMY OF THE REPUBLIC HIGHWAY WORCESTER ROAD	6 9	SWANSEA MALL DRIVE DINSMORE AVENUE		53 57	129 129	0	19 18	34 39
128	QUINCY	MAPC	4	SOUTHERN ARTERY	3A	CODDINGTON STREET		72	128	0	14	58
128	WORCESTER	CMRPC	3	PARK AVENUE	9	HIGHLAND STREET		68	128	0	15	53
128 128	HAVERHILL BOSTON	MVPC MAPC	4	LAFAYETTE SQUARE COLUMBIA ROAD	97	BROADWAY DORCHESTER AVENUE		72 47	128 128	1	14 18	58 28
128	WHITMAN	OCPC	5	BEDFORD STREET	18	AUBURN STREET	14	63	128	- i -	14	48
128	HAVERHILL	MVPC	4	MAIN STREET	125	WINTER STREET	97	76	128	0	13	63
134 134	EASTON BROCKTON	OCPC OCPC	5 5	FOUNDRY STREET PLEASANT STREET	106 27	TURNPIKE STREET MAIN STREET	138	47 43	127 127	0	20	27 22
134	CHELSEA	MAPC	4	BROADWAY	21	FIFTH STREET		59	127	0	17	42
134	WORCESTER	CMRPC	3	HIGHLAND STREET	9	HARVARD STREET		59	127	0	17	42
134	HOLYOKE WORCESTER	PVPC	2	MAIN STREET	9	JACKSON STREET	40	51	127	0	19	32 46
139 139	BOSTON	CMRPC MAPC	3 4	PARK AVENUE COLUMBIA ROAD	9	MILL STREET MASSACHUSETTS AVENUE	12	62 54	126 126	0	16 18	36
139	WORCESTER	CMRPC	3	PARK AVENUE	9	CHANDLER STREET	122	66	126	0	15	51
142	PLAINVILLE	SRPEDD	5	MESSENGER STREET	106	TAUNTON STREET	152	61	125	0	16	45
142 142	FALL RIVER BOSTON	SRPEDD MAPC	5 4	BEDFORD STREET MORTON STREET	203	TROY STREET HARVARD STREET		45 49	125 125	0	20 19	25 30
142	ATTLEBORO	SRPEDD	5	HIGHLAND AVENUE	123	WASHINGTON STREET	1	69	125	0	14	55
146	LYNN	MAPC	4	ESSEX STREET		FAYETTE STREET		56	124	0	17	39
146	NORTH ATTLEBOROUGH	SRPEDD	5	EAST WASHINGTON STREET	1	CHESTNUT STREET		55	124	1	15	39
146 146	MIDDLEBOROUGH WESTBOROUGH	SRPEDD CMRPC	5 3	SOUTH MAIN STREET BOSTON WORCESTER TURNPIKE	105 9	EAST GROVE STREET LYMAN STREET	28	64 68	124 124	0	15 14	49 54
146	LYNN	MAPC	4	ESSEX STREET		CHATHAM STREET		60	124	0	16	44
151	NATICK	MAPC	3	WORCESTER STREET	9	OAK STREET		74	123	1	10	63
151 153	BROCKTON FITCHBURG	OCPC MRPC	5 3	CENTRE STREET JOHN FITCH HIGHWAY	123	PLYMOUTH STREET SUMMER STREET		39 50	123 122	0	21 18	18 32
153	LYNN	MAPC	4	UNION STREET		WEST GREEN STREET		58	122	0	16	42
153	EVERETT	MAPC	4	REVERE BEACH PARKWAY	16	VINE STREET		34	122	0	22	12
153 153	WESTFIELD WORCESTER	PVPC CMRPC	3	EAST MAIN STREET HIGHLAND STREET	20 9	LITTLE RIVER ROAD MAIN STREET	187	42 66	122 122	0	20 14	22 52
158	RANDOLPH	MAPC	4	NORTH MAIN STREET	28	UNION STREET	139	64	120	0	14	50
158	FALL RIVER	SRPEDD	5	PRESIDENT AVENUE	6	DAVOL STREET		60	120	0	15	45
158	BROOKLINE	MAPC MAPC	4	BEACON STREET		SAINT PAUL STREET	40	56	120	0	16	40 45
158 162	SOMERVILLE SWAMPSCOTT	MAPC	4	BROADWAY PARADISE ROAD	1A	ALEWIFE BROOK PARKWAY SWAMPSCOTT MALL	16	60 46	120 119	1	15 16	29
162	WORCESTER	CMRPC	3	MAIN STREET		MAPLE STREET		51	119	0	17	34
162	LYNN	MAPC	4	CHESTNUT STREET		UNION STREET		59 55	119	0	15	44
162 162	WALPOLE HADLEY	MAPC PVPC	5 2	PROVIDENCE TURNPIKE RUSSELL STREET	9	CONEY STREET MIDDLE STREET	47	55 47	119 119	0	16 18	39 29
167	NORTH ANDOVER	MVPC	4	TURNPIKE STREET	114	PETERS STREET	133	50	118	0	17	33
167	BROCKTON	OCPC	5	CENTRE STREET	123	QUINCY STREET		54	118	0	16	38
167 167	BROOKLINE FRAMINGHAM	MAPC MAPC	3	BOYLSTON STREET CONCORD STREET	9 126	RESERVOIR ROAD LINCOLN STREET	1	54 46	118 118	0	16 18	38 28
167	DARTMOUTH	SRPEDD	5	STATE ROAD	6	HATHAWAY ROAD	1	50	118	0	17	33
167	BROCKTON	OCPC	5	REYNOLDS HIGHWAY	27	WESTGATE DRIVE		38	118	0	20	18
167 174	TEWKSBURY HOLYOKE	NMCOG PVPC	2	MAIN STREET HOLYOKE STREET	38	SHAWSHEEN STREET MALL DRIVE	1	50 73	118 117	0	17 11	33 62
174	NORTH ANDOVER	MVPC	4	TURNPIKE STREET	114	ANDOVER STREET	125	49	117	0	17	32
174	WEYMOUTH	MAPC	4	UNION STREET		PLEASANT STREET		69	117	0	12	57
174	LINCOLN	MAPC	4	CAMBRIDGE TURNPIKE	2	BEDFORD ROAD GALLIVAN BOULEVARD		41	117	0	19	22
178 178	BOSTON MALDEN	MAPC MAPC	4	MORTON STREET CENTRE STREET	203 60	MAIN STREET	 	36 48	116 116	0	20 17	16 31
178	WEYMOUTH	MAPC	4	MAIN STREET	18	PARK AVENUE		64	116	0	13	51
181	WELLESLEY	MAPC	4	WORCESTER STREET	9	OAKLAND STREET		55	115	0	15	40
181 181	LYNN PEABODY	MAPC MAPC	4	WESTERN AVENUE MAIN STREET	107	BURNS STREET CALLER STREET	1	47 43	115 115	0	17 18	30 25
181	WORCESTER	CMRPC	3	MADISON STREET	122	SOUTHBRIDGE STREET		46	115	1	15	30
181	EVERETT	MAPC	4	REVERE BEACH PARKWAY	16	SECOND STREET		38	115	1	17	20
181	LOWELL	NMCOG	4	WESTFORD STREET	3A	SCHOOL STREET		43	115	0	18	25

				2004-2006 STATEWIDE TOP 200	IIVILLIVOL	ECTION CINACITED						
Rank	Town	RPA	MHD District	Street 1	Route 1	Street 2	Route 2	Total Crashes	EPDO Crashes	Fatal Crashes	Injury Crashes	PDO & Non Reported Crashes
181	SOMERSET	SRPEDD	5	GRAND ARMY OF THE REPUBLIC HIGHWAY	6	RIVERSIDE AVENUE	103	63	115	0	13	50
188	OXFORD	CMRPC	3	MAIN STREET	12	SUTTON AVENUE		62	114	0	13	49
188	SOMERSET	SRPEDD	5	GRAND ARMY OF THE REPUBLIC HIGHWAY	6	BRAYTON POINT ROAD		54	114	0	15	39
188	HINGHAM	MAPC	5	WHITING STREET	53	MAIN STREET	228	70	114	0	11	59
188	FALL RIVER	SRPEDD	5	BROADWAY	138	MIDDLE STREET		45	114	1	15	29
192	BROCKTON	OCPC	5	BELMONT STREET	123	PEARL STREET		45	113	0	17	28
192	LOWELL	NMCOG	4	PAWTUCKET STREET		SCHOOL STREET		57	113	0	14	43
192	CAMBRIDGE	MAPC	4	MASSACHUSETTS AVENUE	2A	VASSAR STREET		41	113	0	18	23
192	BOSTON	MAPC	4	DORCHESTER AVENUE		GALLIVAN BOULEVARD	203	41	113	0	18	23
192	BROCKTON	OCPC	5	FOREST AVENUE		BOUVE AVENUE		37	113	0	19	18
192	WEYMOUTH	MAPC	4	WASHINGTON STREET	53	COMMERCIAL STREET		69	113	0	11	58
198	FRAMINGHAM	MAPC	3	CONCORD STREET	126	UNION AVENUE		60	112	0	13	47
198	WORCESTER	CMRPC	3	CHANDLER STREET	122	MILL STREET		40	112	0	18	22
198	WELLESLEY	MAPC	4	WORCESTER STREET	9	WELLESLEY FIRE STATION HEADQUARTERS (BY ADDRESS)		60	112	0	13	47
198	BROCKTON	OCPC	5	MONTELLO STREET	28	GROVE STREET		32	112	0	20	12
198	WORCESTER	CMRPC	3	LINCOLN STREET	70	GOLDTHWAITE ROAD		40	112	0	18	22
203	FAIRHAVEN	SRPEDD	5	ALDEN ROAD		BRIDGE STREET		51	111	0	15	36
203	NORTH ATTLEBOROUGH	SRPEDD	5	SOUTH WASHINGTON STREET	1	EAST WASHINGTON STREET		55	111	0	14	41
203	BOSTON	MAPC	4	BLUE HILL AVENUE	28	MORTON STREET	203	47	111	0	16	31
203	LYNN	MAPC	4	FRANKLIN STREET		BOSTON STREET		75	111	0	9	66
203	QUINCY	MAPC	4	NEWPORT AVENUE		BEALE STREET		67	111	0	11	56
203	CAMBRIDGE	MAPC	4	MASSACHUSETTS AVENUE	2A	ESSEX STREET		47	111	0	16	31

4/7/2008 Page 4 of 4

Top Crash Intersections 2004-2006



LOWELL

BRIDGE STREET ROUTE 38
VETERANS OF FOREIGN WARS HIGHWAY

MHD District 4
RPA NMCOG
EPDO 384
Number of Fatal Crashes 2
Number of Injury Crashes 53
Number of Non-Injury Crashes 99
Total Crashes 154

RANK

1

Legend

Crash Locations 2004-2006

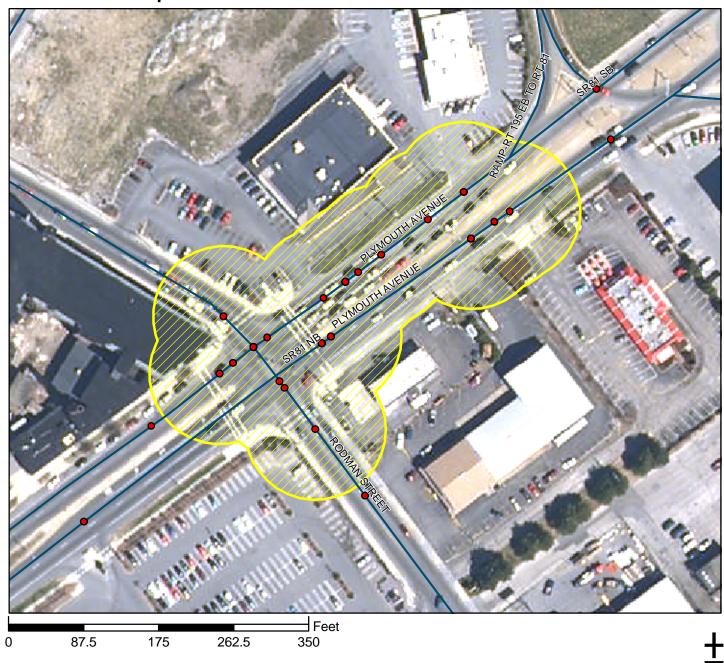
// Local Roads

✓ All Functional Classification Except Local Roads

Top Crash Intersections



Top Crash Intersections 2004-2006



FALL RIVER

PLYMOUTH AVENUE ROUTE 81 RODMAN STREET

MHD District 5
RPA SRPEDD
EPDO 310
Number of Fatal Crashes 0
Number of Injury Crashes 38
Number of Non-Injury Crashes 120
Total Crashes 158

RANK

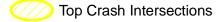
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Legend

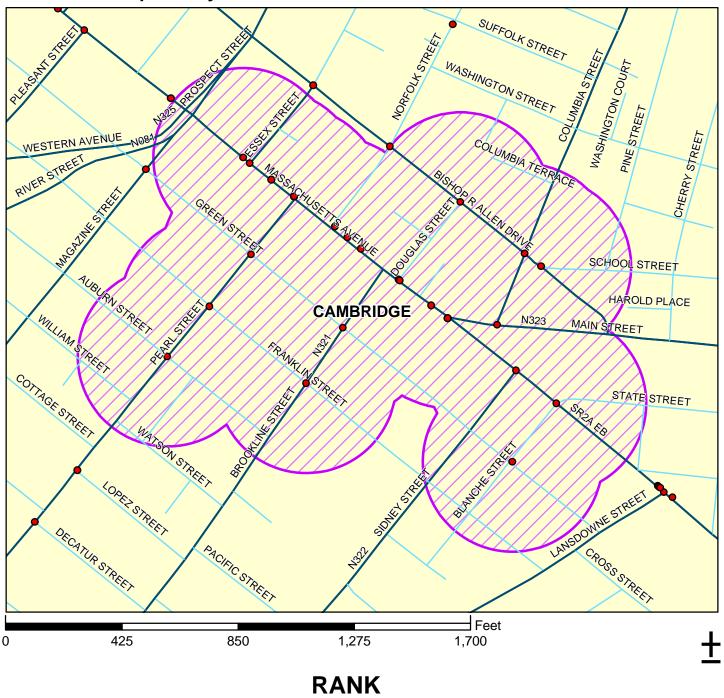
Crash Locations 2004-2006



All Functional Classification Except Local Roads





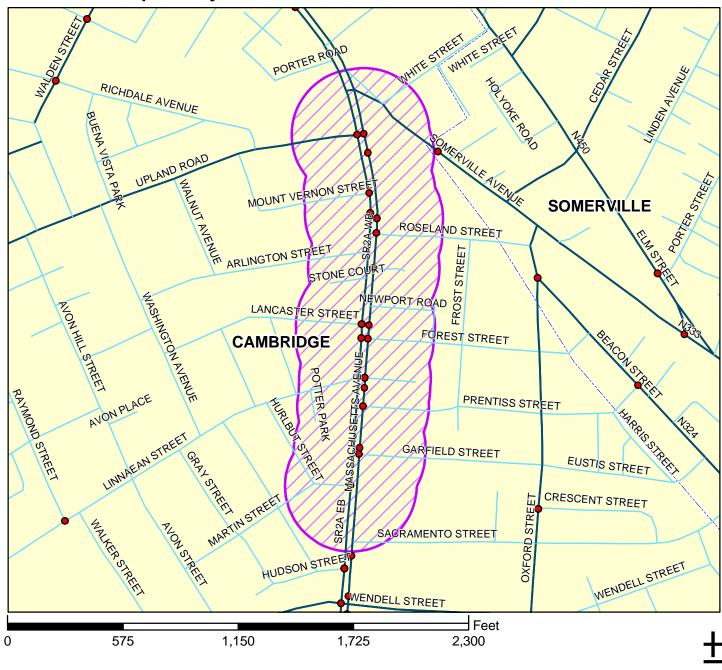


CAMBRIDGE

RPA MAPC EPDO 137 Number of Fatal Bicycle Crashes 1 Number of Injury Bicycle Crashes 23 Number of Non-Injury Bicycle Crashes 12 Total Bicycle Crashes 36

- Bicycle Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary





CAMBRIDGE

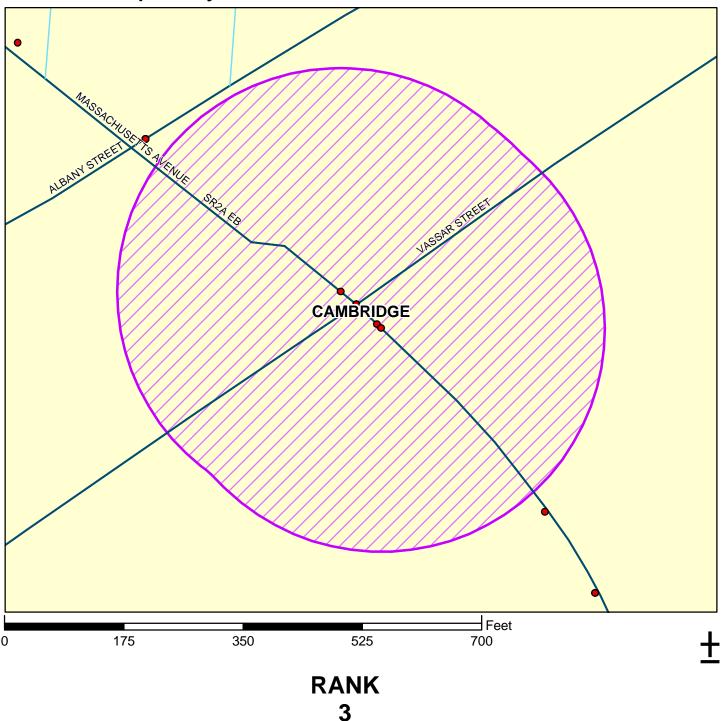
RPA MAPC EPDO 92 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 17 Number of Non-Injury Bicycle Crashes 7 Total Bicycle Crashes 24

Legend

RANK

- Bicycle Crash Locations 2002-2006
- // Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
 - Municipal Boundary



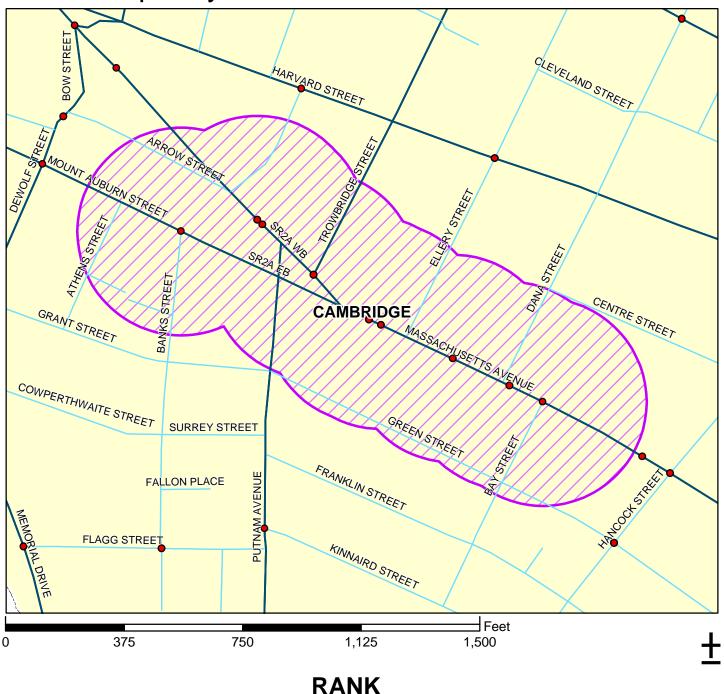


CAMBRIDGE

RPA MAPC EPDO 52 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 10 Number of Non-Injury Bicycle Crashes 2 Total Bicycle Crashes 12

- Bicycle Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary





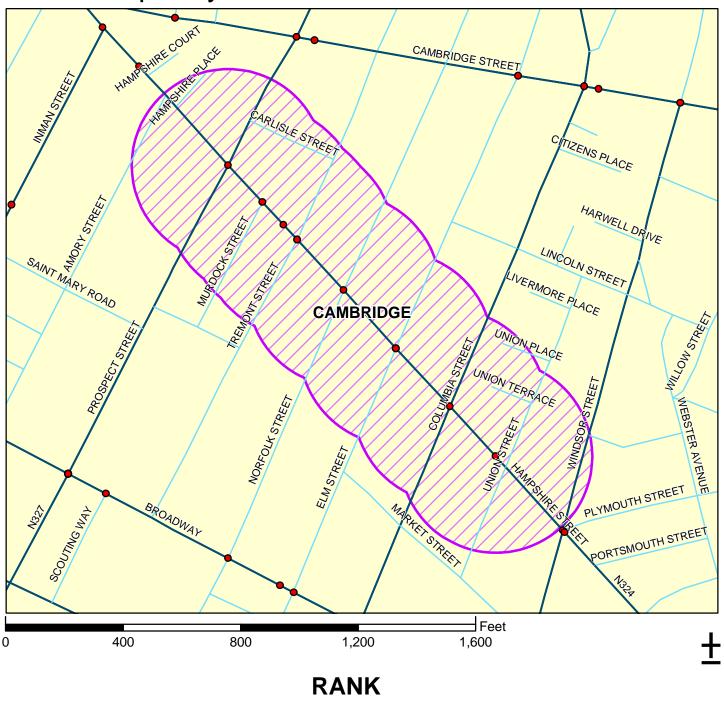
CAMBRIDGE

RPA MAPC EPDO 48 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 9 Number of Non-Injury Bicycle Crashes 3 Total Bicycle Crashes 12

Legend

- Bicycle Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary





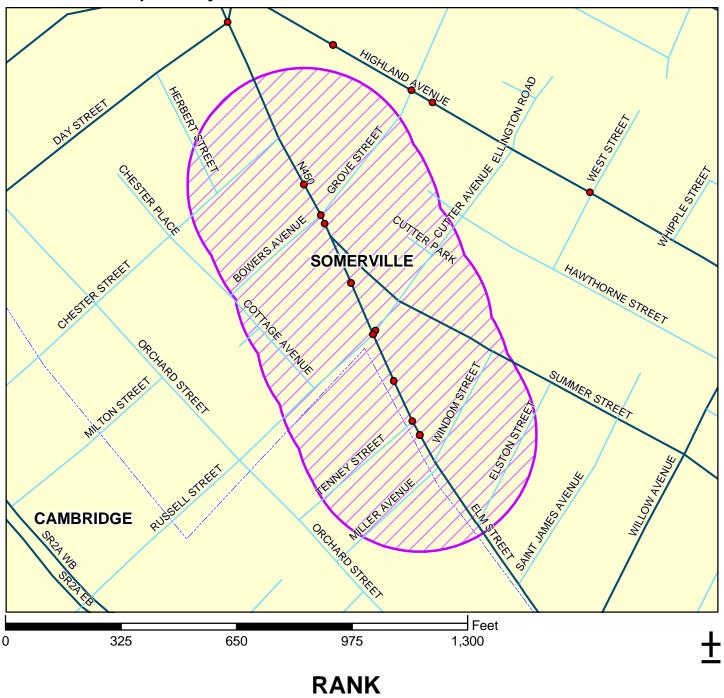
CAMBRIDGE

RPA MAPC EPDO 43 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 8 Number of Non-Injury Bicycle Crashes 3 Total Bicycle Crashes 11

Legend

- Bicycle Crash Locations 2002-2006
- / Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary





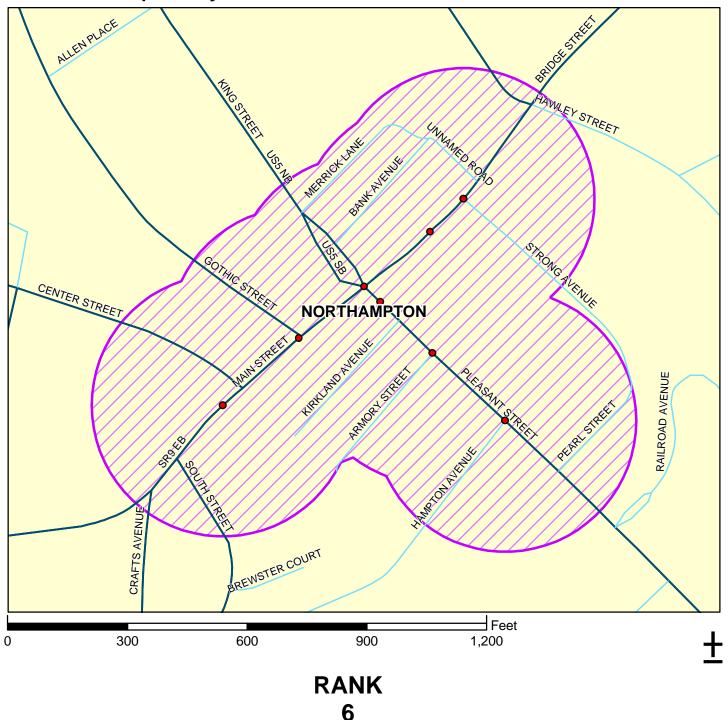
SOMERVILLE

RPA MAPC EPDO 41 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 8 Number of Non-Injury Bicycle Crashes 1 Total Bicycle Crashes 9

Legend

- Bicycle Crash Locations 2002-2006
- // Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary



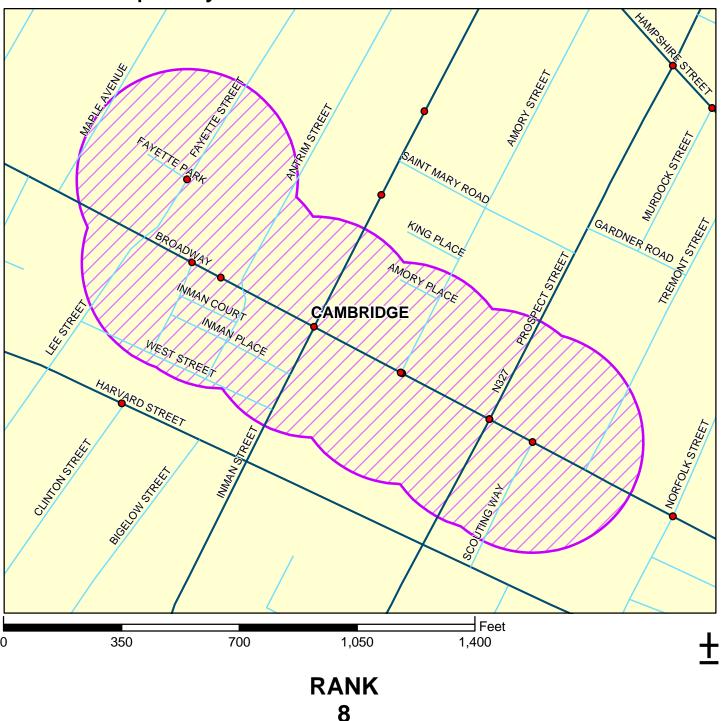


NORTHAMPTON

RPA PVPC EPDO 41 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 8 Number of Non-Injury Bicycle Crashes 1 Total Bicycle Crashes 9

- Bicycle Crash Locations 2002-2006
- / Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary



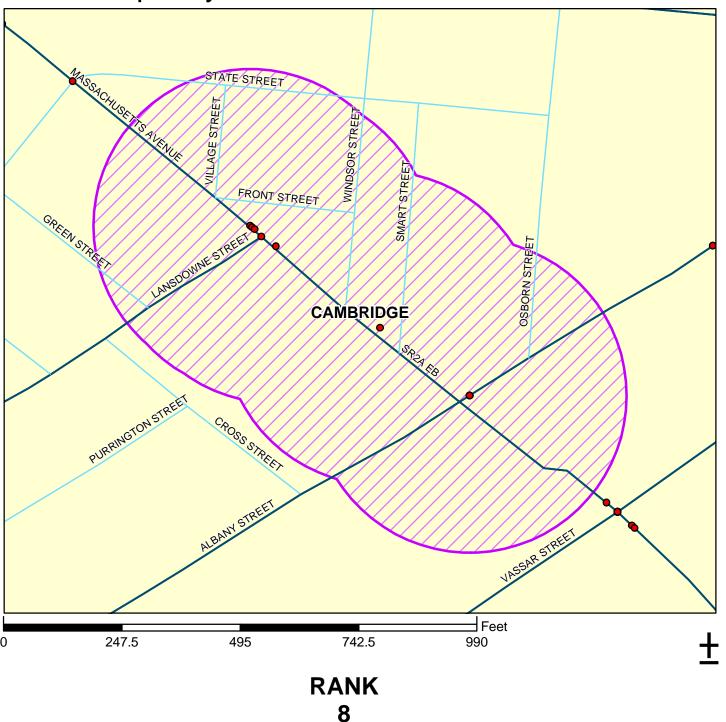


CAMBRIDGE

RPA MAPC EPDO 40 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 6 Number of Non-Injury Bicycle Crashes 10 Total Bicycle Crashes 16

- Bicycle Crash Locations 2002-2006
- / Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary



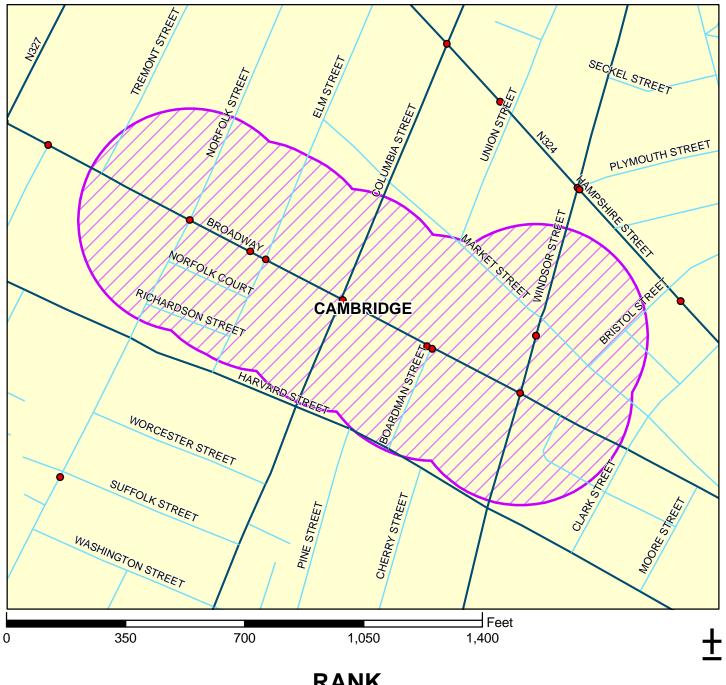


CAMBRIDGE

RPA MAPC EPDO 40 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 7 Number of Non-Injury Bicycle Crashes 5 Total Bicycle Crashes 12

- Bicycle Crash Locations 2002-2006
- / Local Roads
- All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary





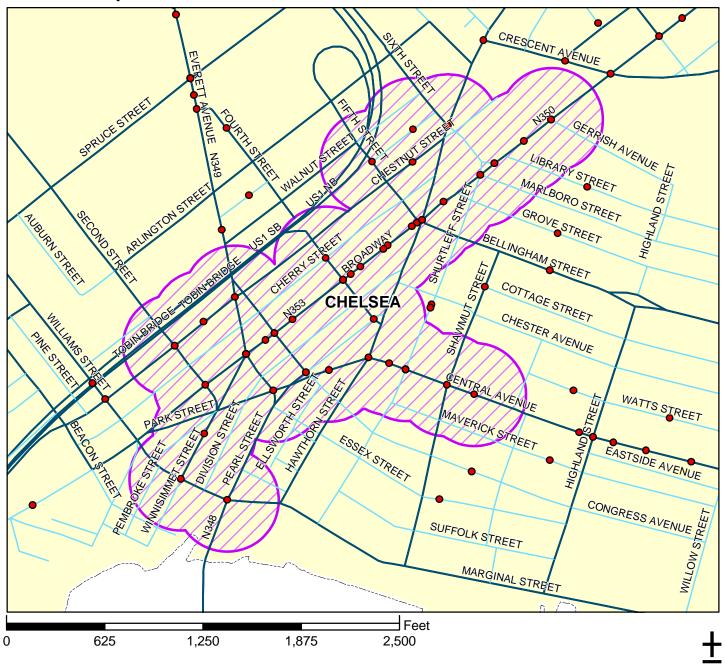
RANK 10

CAMBRIDGE

RPA MAPC EPDO 37 Number of Fatal Bicycle Crashes 0 Number of Injury Bicycle Crashes 7 Number of Non-Injury Bicycle Crashes 2 Total Bicycle Crashes 9

- Bicycle Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Bicycle Crash Cluster
- Municipal Boundary





CHELSEA

RPA MAPC EPDO 235

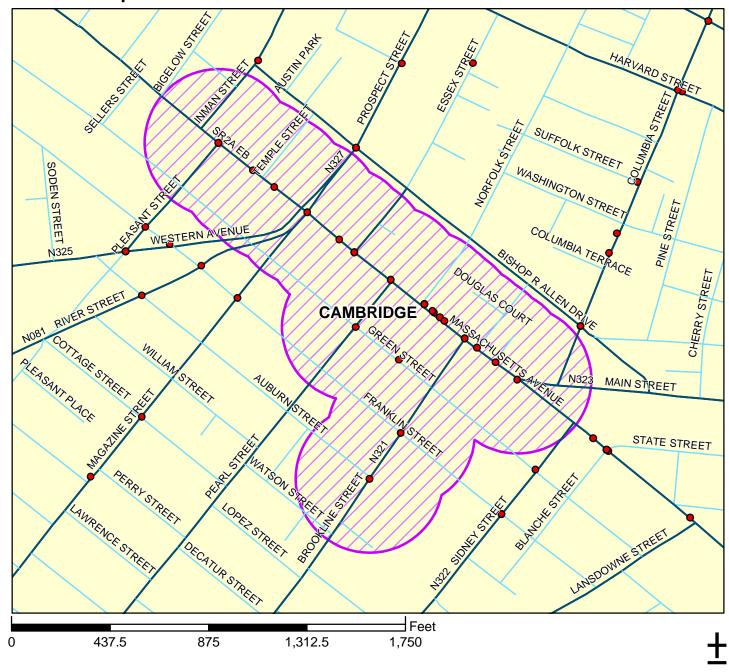
Number of Fatal Pedestrian Crashes 1 Number of Injury Pedestrian Crashes 42 Number of Non-Injury Pedestrian Crashes 15 Total Pedestrian Crashes 58

Legend

RANK

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary





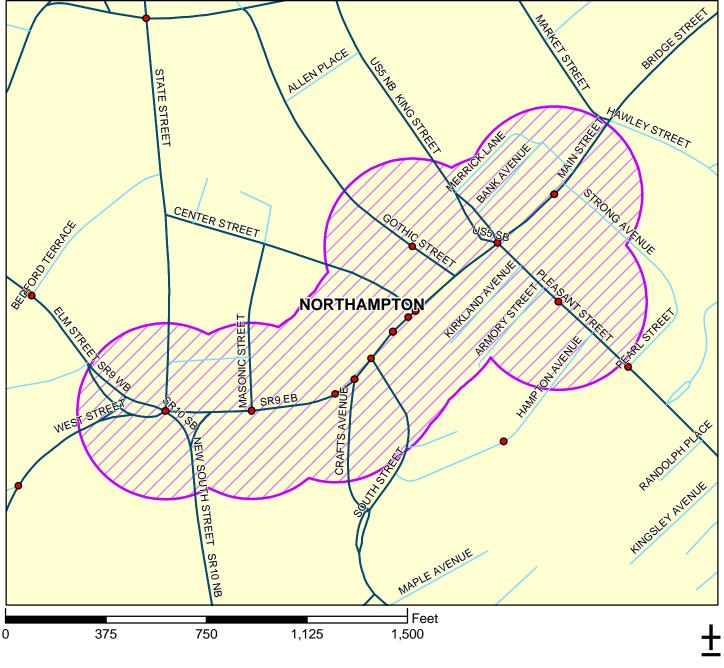
RANK

CAMBRIDGE

RPA MAPC
EPDO 113
Number of Fatal Pedestrian Crashes 0
Number of Injury Pedestrian Crashes 19
Number of Non-Injury Pedestrian Crashes 18
Total Pedestrian Crashes 37

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary





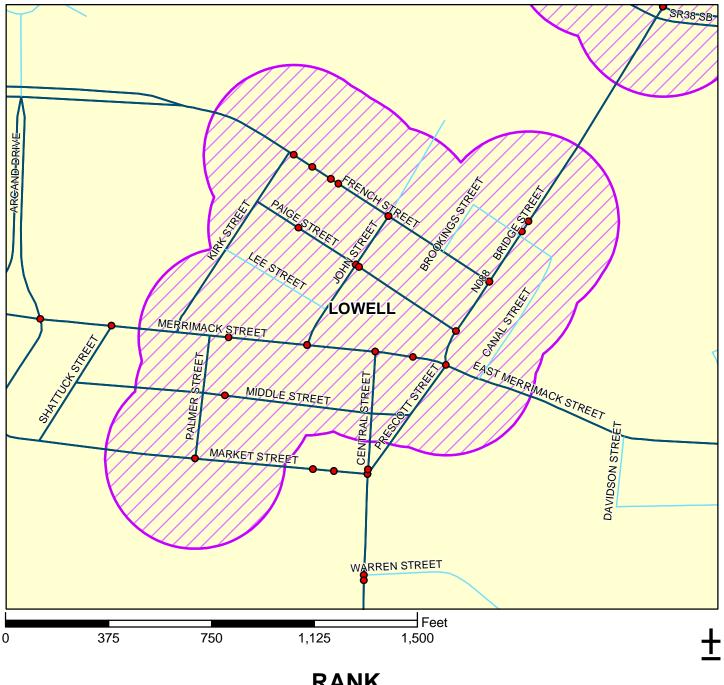
RANK 3

NORTHAMPTON

RPA PVPC EPDO 105 Number of Fatal Pedestrian Crashes 1 Number of Injury Pedestrian Crashes 19 Number of Non-Injury Pedestrian Crashes 0 Total Pedestrian Crashes 20

- Pedestrian Crash Locations 2002-2006
- / Local Roads
 - ✓ All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary





RANK

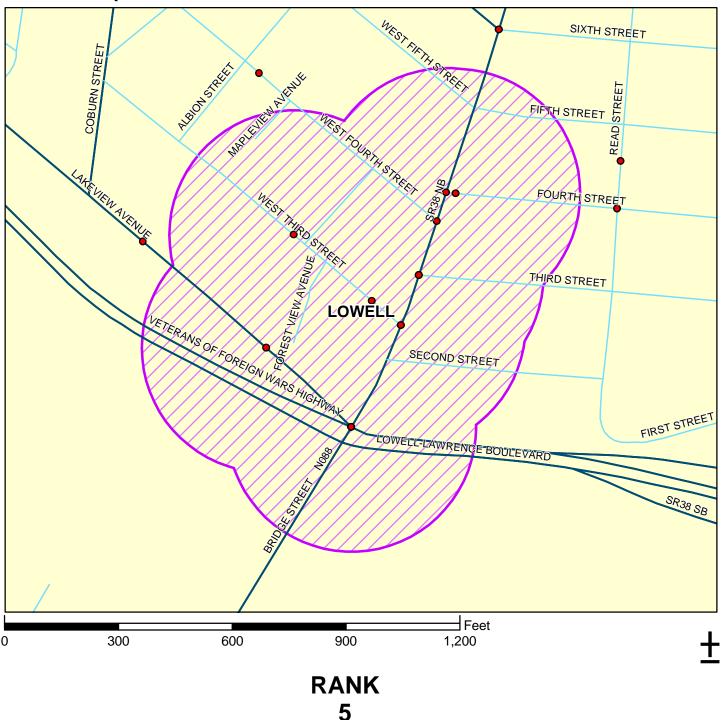
LOWELL

RPA NMCOG
EPDO 104
Number of Fatal Pedestrian Crashes 0

Number of Injury Pedestrian Crashes 19 Number of Non-Injury Pedestrian Crashes 9 Total Pedestrian Crashes 28

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary



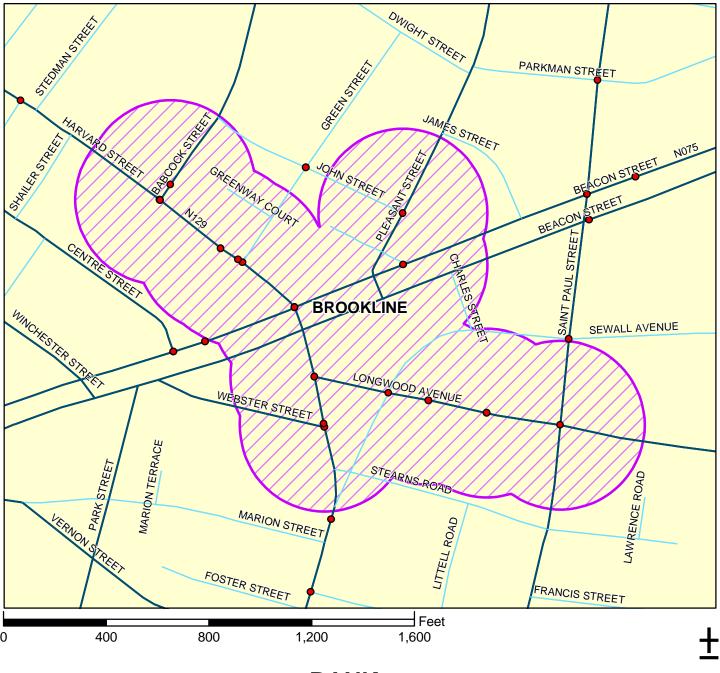


LOWELL

RPA NMCOG EPDO 93 Number of Fatal Pedestrian Crashes 2 Number of Injury Pedestrian Crashes 14 Number of Non-Injury Pedestrian Crashes 3 Total Pedestrian Crashes 19

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary





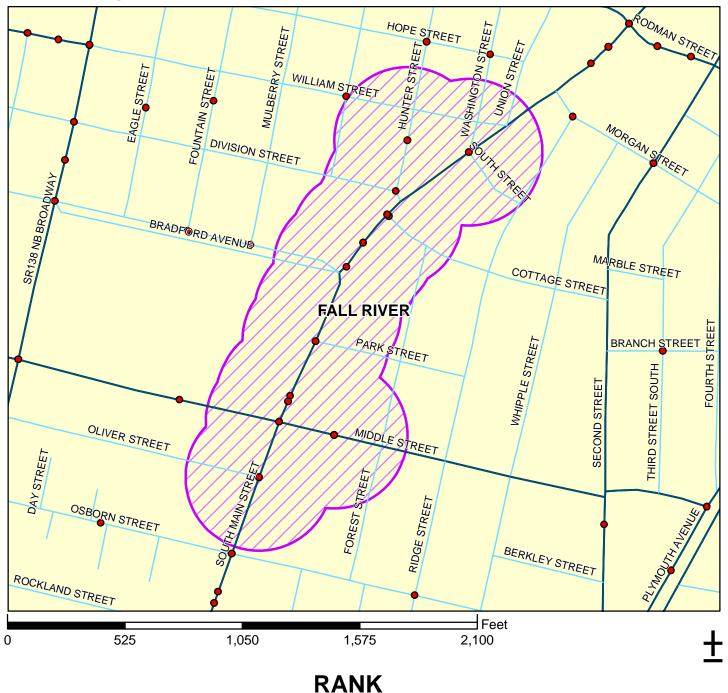
RANK 6

BROOKLINE

RPA MAPC
EPDO 75
Number of Fatal Pedestrian Crashes 0
Number of Injury Pedestrian Crashes 13
Number of Non-Injury Pedestrian Crashes 10
Total Pedestrian Crashes 23

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary





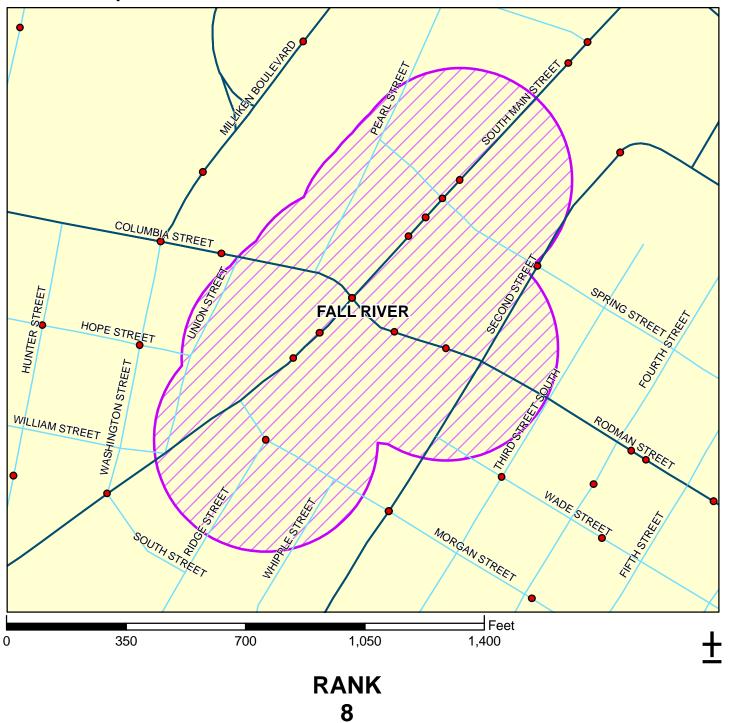
FALL RIVER

RPA SRPEDD
EPDO 71
Number of Fatal Pedestrian Crashes 0
Number of Injury Pedestrian Crashes 13
Number of Non-Injury Pedestrian Crashes 6
Total Pedestrian Crashes 19

Legend

- Pedestrian Crash Locations 2002-2006
- // Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary



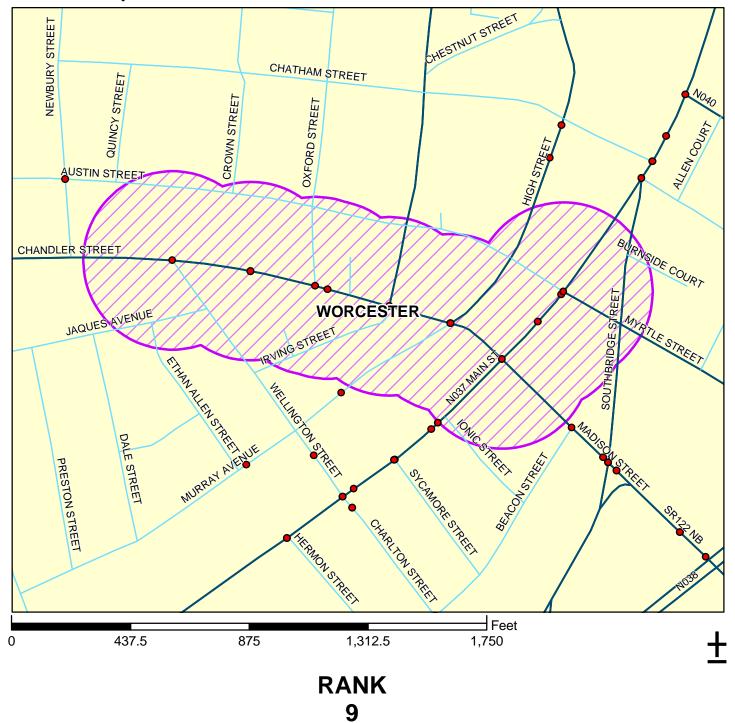


FALL RIVER

RPA SRPEDD
EPDO 70
Number of Fatal Pedestrian Crashes 0
Number of Injury Pedestrian Crashes 14
Number of Non-Injury Pedestrian Crashes 0
Total Pedestrian Crashes 14

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary



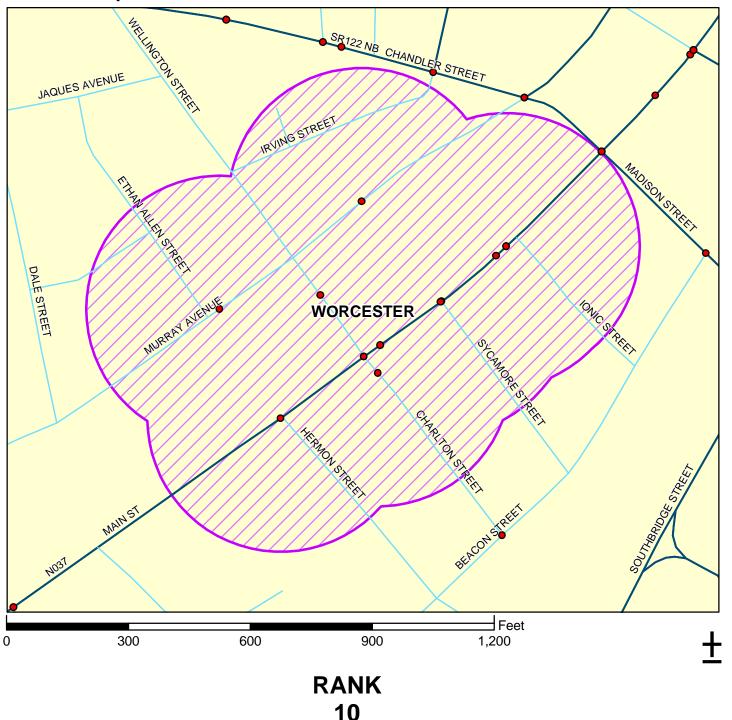


WORCESTER

RPA CMRPC EPDO 68 Number of Fatal Pedestrian Crashes 0 Number of Injury Pedestrian Crashes 13 Number of Non-Injury Pedestrian Crashes 3 Total Pedestrian Crashes 16

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
- Municipal Boundary





WORCESTER

RPA CMRPC EPDO 62 Number of Fatal Pedestrian Crashes 0 Number of Injury Pedestrian Crashes 12 Number of Non-Injury Pedestrian Crashes 2 Total Pedestrian Crashes 14

- Pedestrian Crash Locations 2002-2006
- / Local Roads
- ✓ All Functional Classification Except Local Roads
- Top Pedestrian Crash Cluster
 - Municipal Boundary



2002-2006 STATEWIDE TOP 10 PEDESTRIAN CRASH LIST

	2002 20	DOO STATEWIDE	- 101 101	LDLSIN	,			
Rank	Town	RPA	MHD District	Total Pedestrian Crashes	EPDO Pedestrian Crashes	Fatal Pedestrian Crashes	Injury Pedestrian Crashes	PDO & Non Reported Pedestrian Crashes
1	CHELSEA	MAPC	4	58	235	1	42	15
2	CAMBRIDGE	MAPC	4	37	113	0	19	18
3	NORTHAMPTON	PVPC	2	20	105	1	19	0
4	LOWELL	NMCOG	4	28	104	0	19	9
5	LOWELL	NMCOG	4	19	93	2	14	3
6	BROOKLINE	MAPC	2	23	75	0	13	10
7	FALL RIVER	SRPEDD	5	19	71	0	13	6
8	FALL RIVER	SRPEDD	5	14	70	0	14	0
9	WORCESTER	CMRPC	3	16	68	0	13	3
10	WORCESTER	CMRPC	3	14	62	0	12	2

2002-2006 STATEWIDE TOP 10 BICYCLE CRASH LIST

		2000 017(12/01			_ 017,0111		1	
Rank	Town	RPA	MHD District	Total Bicycle Crashes	EPDO Bicycle Crashes	Fatal Bicycle Crashes	Injury Bicycle Crashes	PDO & Non Reported Bicycle Crashes
1	CAMBRIDGE	MAPC	4	36	137	1	23	12
2	CAMBRIDGE	MAPC	4	24	92	0	17	7
3	CAMBRIDGE	MAPC	4	12	52	0	10	2
4	CAMBRIDGE	MAPC	4	12	48	0	9	3
5	CAMBRIDGE	MAPC	4	11	43	0	8	3
6	SOMERVILLE	MAPC	4	9	41	0	8	1
6	NORTHAMPTON	PVPC	2	9	41	0	8	1
8	CAMBRIDGE	MAPC	4	16	40	0	6	10
8	CAMBRIDGE	MAPC	4	12	40	0	7	5
10	CAMBRIDGE	MAPC	4	9	37	0	7	2