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A Look at the Massachusetts Industries That Are Most Vulnerable due to COVID-19

A MassEconomix Report

Rebekah Paxton & Greg Sullivan

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Unemployment in Massachusetts

On March 17, the Brookings Institute cited a "quite dire" research note from Mark Zandi, chief economist at Moody's Analytics, identifying the leisure and hospitality industry as the sector most vulnerable to disruption by demand declines, shutdowns, and layoffs related to the coronavirus pandemic.

On March 18, the leading U.S. labor union for hospitality workers said that it expects 80% to 90% of its 300,000 members to be out of work due to the outbreak.

In addition, Massachusetts saw a record number of job-holders file for unemployment insurance in the final two weeks in March 2020, continued in the first two weeks of April. During this period, over 500,000 people submitted claims. The following chart displays the number of claims by sector, which reveals how each sector in Massachusetts may be vulnerable and impacted due to the COVID-19 pandemic.

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Table 1: MA sectors by latest number of related jobs and number of unemployment claims.

Industry	Number of Jobs in MA, 2018	Unemployment Claims, March-April 2020[1]	Percentage of Total Claims
Food & Accommodation[2]	313,919	100,083	17.52%
Retail Trade	465,972	70,751	12.39%
Health & Social Assistance	721,227	67,742	11.86%
Construction	167,413	49,107	8.60%
Other Services	22,039	44,320	7.76%
Manufacturing	273,189	26,980	4.72%
Professional and Technical Services	335,052	26,482	4.64%
Administrative & Waste Services	111,438	26,297	4.60%
Transportation & Warehouse	81,258	20,116	3.52%
Wholesale Trade	146,608	17,113	3.00%
Arts, Entertainment & Recreation[3]	86,896	15,153	2.65%
Education	309,510	11,678	2.04%
Real Estate	104,287	7,673	1.34%
Information	130,094	7,081	1.24%
Public Administration	166,337	6,485	1.14%
Management of Companies	10,397	4,442	0.78%
Finance & Insurance	196,543	3,344	0.59%
Agriculture, Forestry, Fishing and Hunting	4,952	1,462	0.26%
Utilities	15,273	338	0.06%
Mining	2,407	141	0.02%

If the two observers mentioned earlier are correct, many Massachusetts cities and towns may be facing a severe threat. Data from Pioneer Institute's MassEconomix web portal details each sector's employment by Massachusetts municipality in 2018.

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[1] To view a complete table of Massachusetts unemployment claims data from the Massachusetts Executive Office of Labor and Workforce Development, see Table A1 in the Appendix following this report.

[2] Hospitality for the purpose of this blog has been characterized as a "super sector" containing two NAICS codes (71, 72). The rest of this blog discusses the Hospitality sector as including both "Food & Accommodation" and "Arts, Entertainment, and Recreation".

[3] See Footnote #2.

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Analysis of Vulnerable Sectors

According to the data from MassEconomix.org, jobs in the hospitality "super sector"—which represents accommodation and food services, as well as arts, entertainment and recreation—make up significant proportions of the total job count in municipalities across the state, but the highest proportions of hospitality jobs fall in Western Massachusetts and in Cape Cod and the Islands.

Chart 1: Hospitality Jobs as Percent of Total Jobs by Municipality (2018).
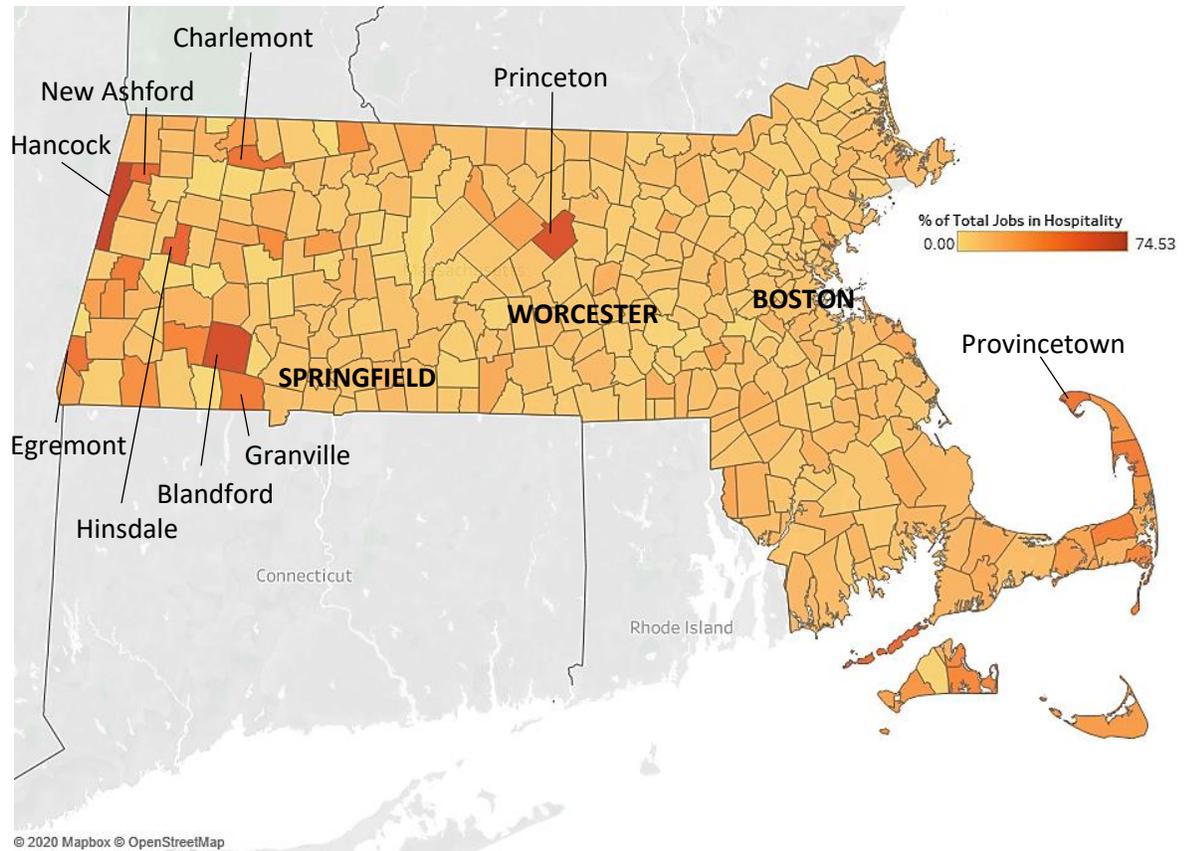
The map and the data found below indicate that while the total number of jobs in hospitality varies across the state, municipalities grouped by workforce development areas (WDAs) in Western Massachusetts as well as Cape Cod see high proportions of their workforce in this sector, which is already impacted by the COVID-19 pandemic, and may see lasting economic effects in the summer of 2020, a peak tourism season for these areas, and beyond. The table below displays the ten municipalities in Massachusetts with the highest densities of hospitality sector jobs that are performed within the bounds of each municipality. For example, 75 percent of the jobs performed in Hancock, MA are in the hospitality super sector. If the COVID-19 pandemic severely

impacts travel, tourism, and accommodations industries, the local economy in Hancock will be seriously crippled, and the bulk of employees in this town may be vulnerable to layoffs, pay reductions, and business closures. With the exception of the town of Princeton, seven of these top ten municipalities are found in Western Massachusetts, and two are in Cape Cod and surrounding islands.

Table 2: Top Ten Municipalities with Highest Percent of Total Jobs in Hospitality (2018).

Municipality	Workforce Development Area	Percent of Jobs In Hospitality
Hancock	Berkshire County WDA	74.53%
Blandford	Hampden County WDA	68.02%
Princeton	North Central WDA	64.28%
Hinsdale	Berkshire County WDA	52.57%
New Ashford	Berkshire County WDA	50.68%
Gosnold	Cape & Islands WDA	50.00%
Charlemont	Franklin-Hampshire WDA	45.89%
Egremont	Berkshire County WDA	45.59%
Provincetown	Cape & Islands WDA	44.95%
Granville	Hampden County WDA	42.97%

Table 3: Top Ten Municipalities with the Highest Numbers of Jobs in Hospitality (2018).

Municipality	Number of Jobs in Hospitality[4]
STATE	400,815
Boston	71,159
Cambridge	11,482
Springfield	9,617
Worcester	8,179
Barnstable	5,799
Newton	5,689
Waltham	4,552
Quincy	4,410
Plymouth	4,063
Framingham	3,998
Burlington	3,839
Yarmouth	3,721
Fall River	3,670
Brockton	3,453
Marlborough	3,348

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[4] To view a full list of all Massachusetts municipalities with 1 or more Hospitality jobs listed for 2018, see Table A2 at the end of this report.

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Retail was identified as a potentially highly vulnerable sector due to shutdowns related to the COVID-19 pandemic, but in March did not at first experience the same levels of unemployment claims as Hospitality, Health Care and Social Assistance, and Construction. However, based on the latest data released April 16, Retail Trade now has the second highest number of claims in Massachusetts. The following map displays the employment situation by municipality as it relates to the Retail Sector, which is identified as being vulnerable to economic impacts from the COVID-19 pandemic. When looking at Retail, the municipalities with the highest proportions of Retail jobs in their economies are more spread out across the state of Massachusetts. Alford, MA has the highest percentage in Retail, with 77 percent of total jobs in the town attributed to Retail industries.

Chart 2: Retail Jobs as a Percentage of Total Jobs by Municipality (2018).
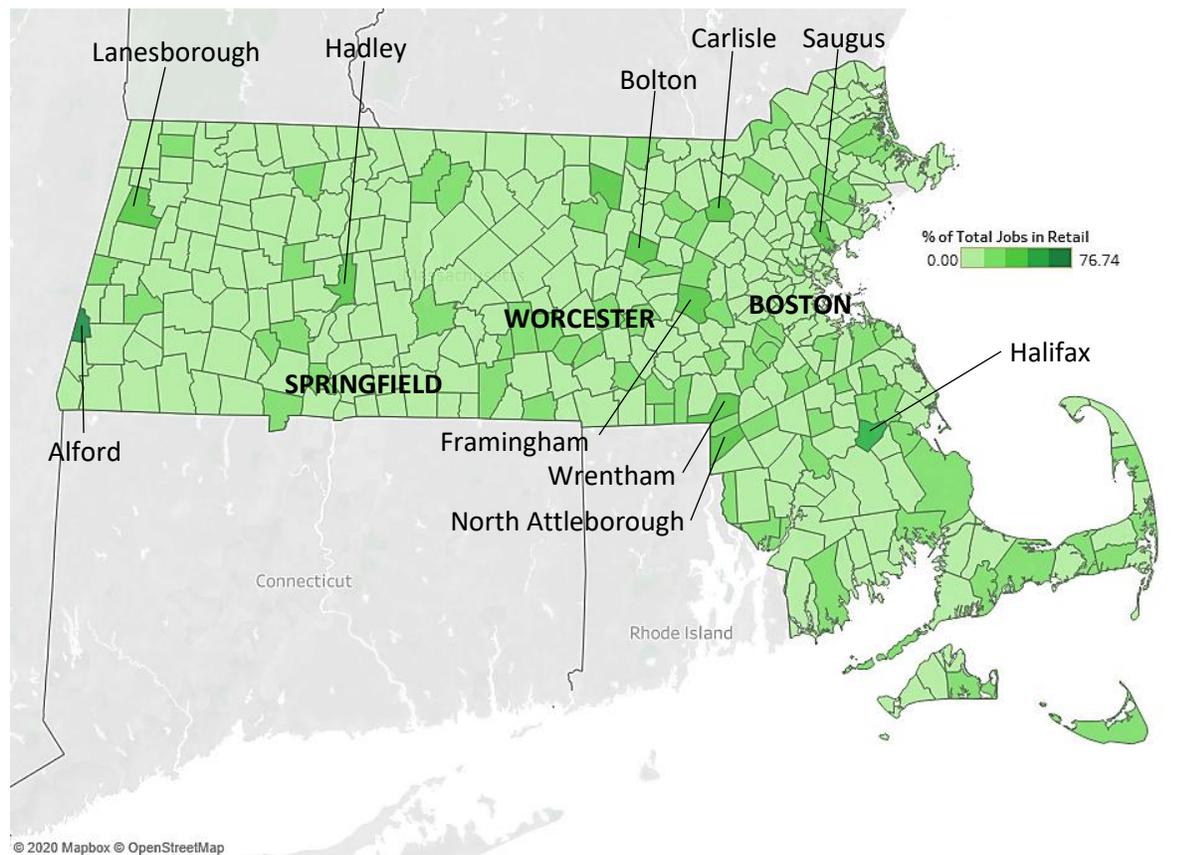
The following table shows municipality-level data for the ten municipalities with the highest percentage of workers in the Retail super sector as compared with total jobs in each city or town. While these municipalities are not necessarily grouped by geographic region, there are some patterns related to the types of communities they fall

under. According to the Metropolitan Area Planning Council (MAPC) designations labelled "community sub-types" (CSTs), eight out of ten fall under the categories with lower populations and slower town growth (Rural Towns, Country Suburbs, and Maturing New England Towns). The remaining two, Framingham and Saugus, have slightly higher population density and are mostly built out, but not enough to be considered more "urban" or "core". These ten municipalities range from 30 to 77 percent of their total jobs attributed to the Retail industry, which has been identified as being vulnerable to suffering negative impacts due to the COVID-19 pandemic. These numbers represent relatively high numbers of workers being potentially subject to lack of work.

Table 4: Top Ten Municipalities with Highest Percent of Total Jobs in Retail Trade (2018).

Municipality	Community Sub-Type	Percent of Jobs in Retail
Alford	Rural Towns	76.74%
Halifax	Maturing New England Towns	49.15%
Carlisle	Country Suburbs	43.70%
Hadley	Maturing New England Towns	37.78%
Wrentham	Country Suburbs	37.35%
Framingham	Sub-Regional Urban Centers	34.70%
Bolton	Country Suburbs	34.07%
Lanesborough	Rural Towns	33.44%
Saugus	Mature Suburb	32.89%
North Attleborough	Maturing New England Towns	32.87%

Table 5: Top Ten Municipalities with Highest Number of Jobs in Retail Trade (2018).

Municipality	Number of Jobs in Retail Trade[5]
STATE	*465,972*
Boston	46,131
Framingham	20,275
Worcester	10,218
Cambridge	8,054
Springfield	7,725
Barnstable	7,404
Natick	7,051
Braintree	6,942
Newton	6,251
Woburn	5,882
Burlington	5,713
Peabody	5,549
Danvers	5,308
Quincy	5,018
Dartmouth	4,778

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[5] To view a full list of all Massachusetts municipalities with 1 or more Retail Trade jobs listed for 2018, see Table A3 at the end of this report.

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The Health Care and Social Assistance sector has experienced the third-highest number of unemployment claims since March. The following map shows the municipalities that have the largest densities of Health Care and Social Assistance workers as a proportion of total jobs in each local economy. The municipality with the highest percentage of Health Care and Social Assistance jobs in 2018 was Sandisfield, MA, followed closely by Melrose and Brookline.

Chart 3: Health Care & Social Assistance Jobs as Percent of Total Jobs by Municipality (2018).
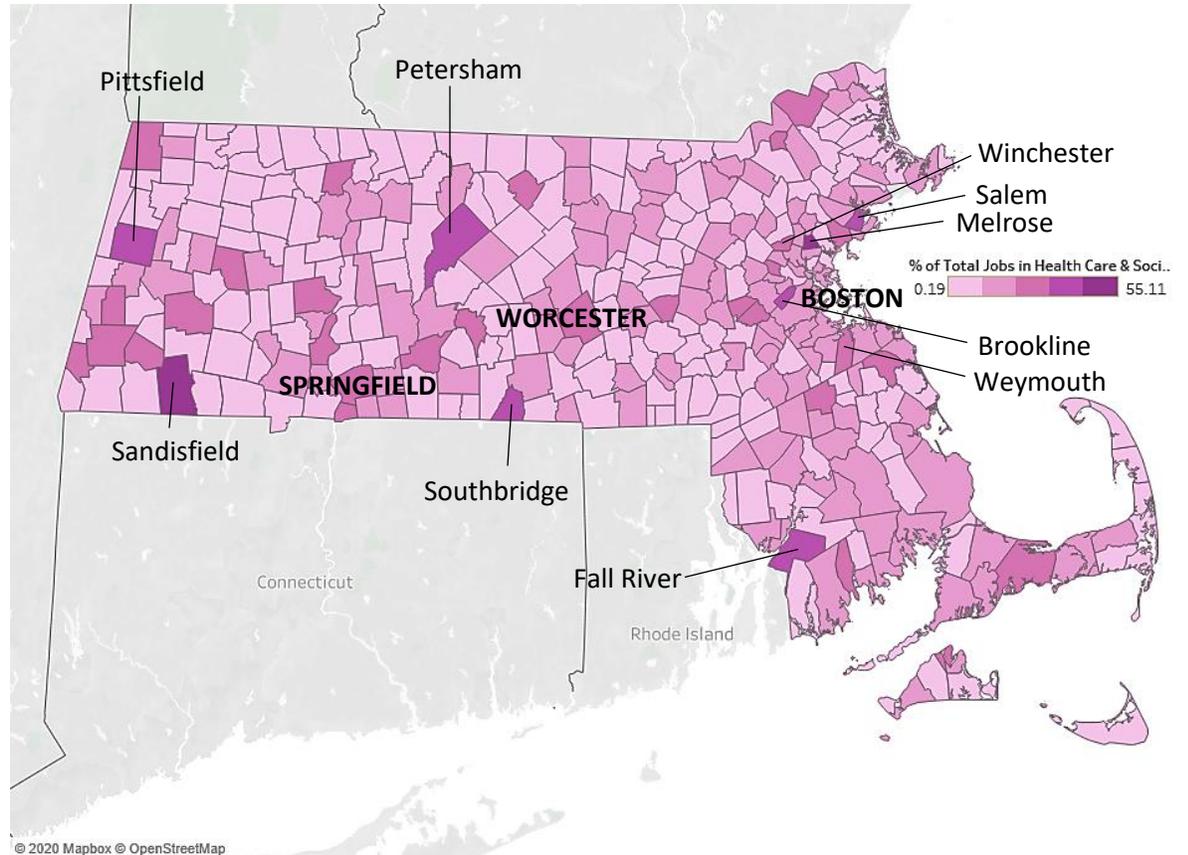
While Boston is normally considered a powerhouse of the health care industry, the number of Health Care and Social Assistance jobs only made up about 20 percent of total jobs in Boston in 2018. For cities and municipalities with a diverse industrial makeup, unemployment impacts in the health care and related industries on these local economies may be lessened. However, for cities and towns with larger shares of total jobs dedicated to the Health Care and Social Assistance sector, like Sandisfield, Melrose, Brookline, and Salem whose local economies are dependent on this sector for nearly half of their local jobs, the impact of unemployment due to COVID-19 may be more crippling. The following table displays the top ten municipalities that

experienced the highest proportions of jobs in Health Care and Social Assistance in 2018. This list features some communities that are more rural, some more established suburbs, and also more urban communities.

Table 6: Municipalities with Highest Percent of Total Jobs in Health Care & Social Assistance (2018).

Municipality	Community Sub-Type	Percent Jobs in Health Care & Social Assistance
Sandisfield	Rural Towns	55.11%
Melrose	Streetcar Suburbs	48.66%
Brookline	Streetcar Suburbs	40.78%
Salem	Sub-Regional Urban Centers	40.69%
Southbridge	Sub-Regional Urban Centers	37.77%
Petersham	Rural Towns	37.45%
Fall River	Major Regional Urban Centers	37.30%
Pittsfield	Sub-Regional Urban Centers	37.26%
Weymouth	Mature Suburban Towns	32.74%
Winchester	Mature Suburban Towns	32.65%

Table 7: Municipalities with Highest Number of Jobs in Health Care & Social Assistance (2018).

Municipality	Number of Jobs in Health Care & Social Assistance[6]
STATE	721,227
Boston	150,953
Springfield	34,006
Worcester	27,962
Fall River	16,638
Barnstable	14,658
Brockton	13,860
Pittsfield	13,556
Newton	12,979
Brookline	12,742
Salem	12,287
Cambridge	10,210
New Bedford	10,115
Lowell	9,786
Framingham	9,012
Burlington	8,579

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[6] To view a full list of all Massachusetts municipalities with 1 or more Health Care and Social Assistance jobs listed for 2018, see Table A4 at the end of this report.

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The fourth largest sector in March unemployment claims was Construction. While select jobs under Construction may be considered essential, many municipalities have halted a significant amount of construction projects due to social distancing guidelines. The next map shows the proportion of local economies that were made up by jobs in the Construction sector in 2018. The municipality that may be most heavily impacted by slowdowns in this sector is Acushnet, MA, with 22 percent of total jobs dedicated to Construction in 2018.

Chart 4: Construction Jobs as Percent of Total Jobs by Municipality (2018).
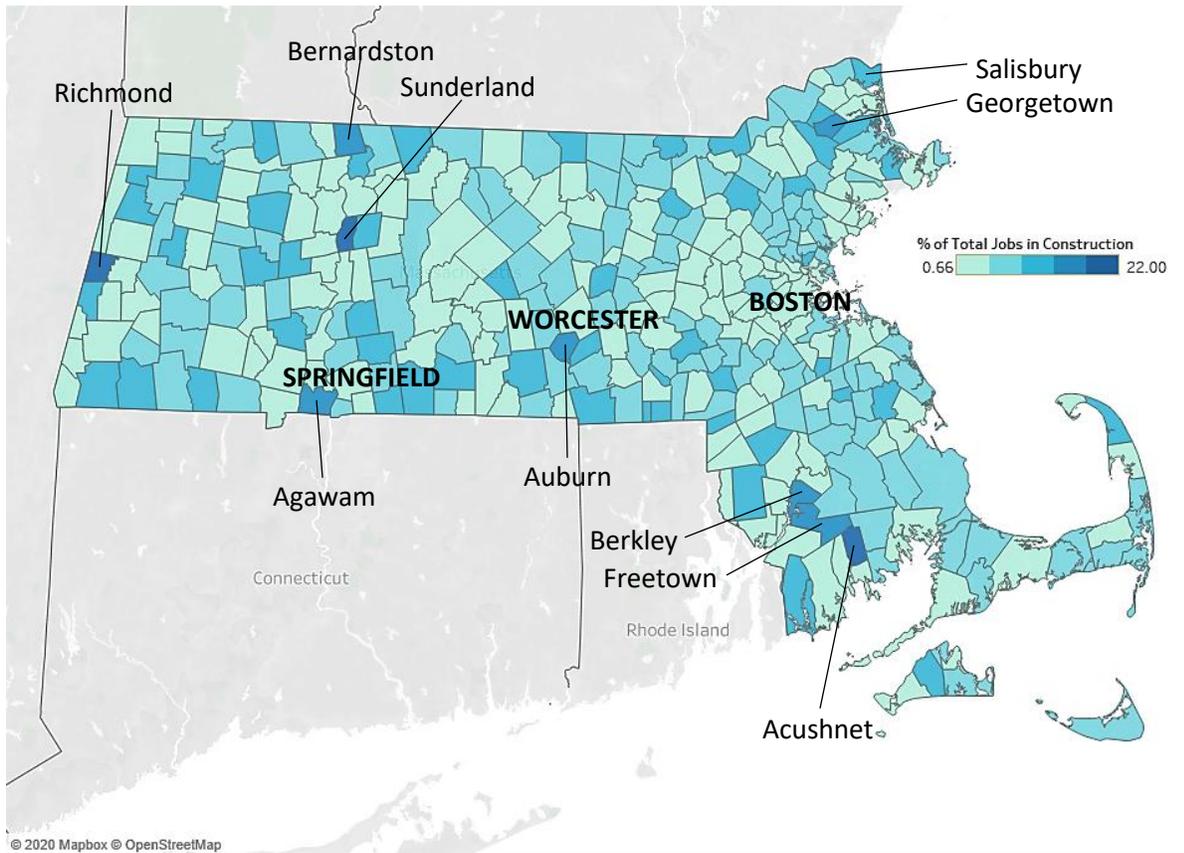
Acushnet is followed by Richmond, Sunderland, and Freetown, all with nearly 20 percent of total local jobs in Construction. The following table represents the towns with the highest densities of Construction jobs as of 2018. These municipalities fall in the more rural categories of Community Sub-types, and there is no representation in the top ten list by communities in the more urban part of the state.

Table 8: Top Ten Municipalities with Highest Percent of Total Jobs in Construction (2018).

Municipality	Community Sub-Type	Percent Jobs in Construction
Acushnet	Maturing New England Towns	22.00%
Richmond	Rural Towns	18.47%
Sunderland	Maturing New England Towns	18.24%
Freetown	Country Suburbs	17.15%
Bernardston	Rural Towns	16.47%
Agawam	Maturing New England Towns	15.66%
Berkley	Country Suburbs	15.58%
Auburn	Maturing New England Towns	14.25%
Georgetown	Country Suburbs	13.91%
Salisbury	Maturing New England Towns	13.30%

Table 9: Top Ten Municipalities with Highest Number of Jobs in Construction (2018).

Municipality	Number of Jobs in Construction[7]
STATE	167,413
Boston	14,427
Worcester	3,500
Newton	3,183
Woburn	3,016
Cambridge	2,576
Burlington	2,461
Billerica	2,435
Agawam	2,264
Framingham	2,199
Springfield	2,155
Quincy	2,057
Waltham	1,973
Auburn	1,814
Barnstable	1,775
Wilmington	1,733

While many areas and industries will be affected by slowing and stoppage of normal business activity due to the COVID-19 crisis, there are some industries that will be directly affected more than others. Municipalities with high densities of jobs in seriously vulnerable industries, like those in Hospitality and Retail, may face upwards of one-third of their employees being subject to loss of income and unemployment. For some, it could be as high as three-quarters of the jobs in that town that are affected.

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[7] To view a full list of all Massachusetts municipalities with 1 or more Construction jobs listed for 2018, see Table A5 at the end of this report.

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MassEconomix provides time-series data on job and business growth for all of Massachusetts. Pioneer has partnered with the Business Dynamics Research Consortium (BDRC), which is housed at the University of Wisconsin's Institute for Business and Entrepreneurship, to acquire an employment database known as "Your-economy Time Series," or YTS.

This Your-economy Time Series data is made up of firm-level information for every business establishment across the United States, and MassEconomix employs this data for the entire state of Massachusetts.

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Pioneer Institute is an independent, non-partisan, privately funded research organization that seeks to improve the quality of life in Massachusetts through civic discourse and intellectually rigorous, data-driven public policy solutions based on free market principles, individual liberty and responsibility, and the ideal of effective, limited and accountable government. *Pioneer Institute is a tax-exempt 501(c)3 organization funded through the donations of individuals, foundations and businesses committed to the principles Pioneer espouses. To ensure its independence, Pioneer does not accept government grants.*

This report is a publication of PioneerOpportunity, which seeks to keep Massachusetts competitive by promoting a healthy business climate, transparent regulation, small business creation in urban areas and sound environmental and development policy. Current initiatives promote market reforms to increase the supply of affordable housing, reduce the cost of doing business, and revitalize urban areas.

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Infogroup is the provider of the Licensed Database used to create the Your-economy Time Series (YTS). This work/research was authorized to use YTS through the Business Dynamics Research Consortium (BDRC) by the University of Wisconsin-System's Institute for Business and Entrepreneurship. The contents of this publication are solely the responsibility of the authors.

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Business Dynamics Research Consortium

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Methodology

To learn more about the data used in this report, please visit masseconomix.org/about/what-is-yts.

Authors

Gregory Sullivan is Pioneer's Research Director, and oversees PioneerPublic and PioneerOpportunity. Prior to joining Pioneer, Sullivan served two five-year terms as Inspector General of the Commonwealth of Massachusetts by appointment of the Governor, Attorney General, and Auditor. Prior to serving as Inspector General, Greg held several positions within the state Office of Inspector General. Sullivan was a 17-year member of the Massachusetts House of Representatives, serving on the committees of Ways and Means, Human Services, and Post-Audit and Oversight. Greg holds a bachelor's degree from Harvard College, a master's degree in public administration from The Kennedy School of Public Administration at Harvard, and a master's degree from the Sloan School at M.I.T., with a concentration in finance.

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Appendix

Table A1. Weekly Unemployment Claims Data in Massachusetts, by NAICS Sector (provided by the Massachusetts Executive Office of Labor and Workforce Development).

Industry	Week Ending 3/21	Week Ending 3/28	Week Ending 4/04	Week Ending 4/11	Total Claims
Food & Accommodation	44,353	25,933	17,163	12,634	100,083
Retail Trade	9,622	25,066	20,529	15,534	70,751
Health & Social Assistance	18,192	20,677	16,276	12,597	67,742
Construction	13,522	17,328	10,376	7,881	49,107
Other Services	11,047	15,419	10,883	6,971	44,320
Manufacturing	2,919	10,593	7,572	5,896	26,980
Professional and Technical Services	5,175	8,853	6,887	5,567	26,482
Administrative & Waste Services	4,422	8,883	7,129	5,863	26,297
Transportation & Warehouse	6,772	5,242	4,740	3,362	20,116
Wholesale Trade	2,279	5,618	4,598	4,618	17,113
Arts, Entertainment & Recreation	5,137	4,580	3,230	2,206	15,153
Education	2,914	3,792	2,689	2,283	11,678
Real Estate	1,676	2,649	1,978	1,370	7,673
Information	1,268	2,025	2,308	1,480	7,081
Public Administration	1,679	1,913	1,468	1,425	6,485
Management of Companies	1,703	1,162	862	715	4,442
Finance & Insurance	646	973	990	735	3,344
Agriculture, Forestry, Fishing and Hunting	237	445	387	393	1,462
Utilities	47	124	82	85	338
Mining	30	52	34	25	141

Table A2. List of municipalities by number of jobs in the Hospitality super sector (NAICS 71-72).

Municipality	Number of Jobs, 2018		
Boston	71,159	Chicopee	2,100
Cambridge	11,482	Raynham	2,098
Springfield	9,617	Taunton	2,089
Worcester	8,179	Seekonk	2,085
Barnstable	5,799	Chatham	2,029
Newton	5,689	Lynn	2,027
Waltham	4,552	Provincetown	2,020
Quincy	4,410	Watertown	1,987
Plymouth	4,063	Beverly	1,946
Framingham	3,998	Revere	1,918
Burlington	3,839	Gloucester	1,914
Yarmouth	3,721	Dennis	1,907
Fall River	3,670	Brewster	1,893
Brockton	3,453	Westford	1,869
Marlborough	3,348	Franklin	1,851
Braintree	3,323	Needham	1,829
Falmouth	3,322	Westfield	1,819
Danvers	3,255	Sandwich	1,818
Somerville	3,238	Westborough	1,794
Lowell	3,131	Wellesley	1,791
Salem	3,086	Tewksbury	1,774
Nantucket	3,068	Wareham	1,773
Holyoke	2,985	Hingham	1,766
New Bedford	2,965	Stoughton	1,744
Peabody	2,923	Mashpee	1,740
Woburn	2,821	Canton	1,715
Pittsfield	2,712	Mansfield	1,713
Dedham	2,647	Weymouth	1,671
Saugus	2,622	Chelsea	1,619
Leominster	2,595	Edgartown	1,614
Foxborough	2,568	Billerica	1,581
Northampton	2,538	Lawrence	1,556
Brookline	2,532	Randolph	1,554
Haverhill	2,506	Agawam	1,553
Natick	2,387	Bourne	1,542
Lenox	2,374	Chelmsford	1,537
West Springfield	2,372	Concord	1,518
Dartmouth	2,259	Milford	1,513
Andover	2,255	Lexington	1,490
Attleboro	2,246	Walpole	1,394
Norwood	2,240	Shrewsbury	1,372
Medford	2,233	North Andover	1,351
Methuen	2,182	Auburn	1,335
Amherst	2,145	Rockland	1,319
		Great Barrington	1,306

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Fitchburg	1,291		Carver	743
Everett	1,291		Palmer	738
Bridgewater	1,262		Norton	731
North Attleborough	1,208		Amesbury	727
Orleans	1,186		Norwell	722
Sturbridge	1,162		North Adams	712
Acton	1,161		Swansea	705
Harwich	1,160		Abington	698
Tisbury	1,150		Tyngsborough	696
Marshfield	1,147		Salisbury	694
Greenfield	1,143		Wrentham	694
Newburyport	1,141		Westport	670
Malden	1,125		Webster	665
Wellfleet	1,088		Plainville	660
Fairhaven	1,083		Millis	649
Hadley	1,072		North Reading	643
Scituate	1,067		South Hadley	638
Princeton	1,058		Cohasset	623
Hanover	1,052		Millbury	620
Wakefield	1,031		East Longmeadow	618
Easton	992		Westwood	605
Swampscott	987		Easthampton	604
Pembroke	980		West Bridgewater	594
Somerset	964		Middleton	588
Milton	946		Eastham	583
Dracut	931		Winchester	568
Kingston	915		Sharon	559
Middleborough	902		East Bridgewater	555
Oak Bluffs	901		Melrose	550
Bedford	883		Groton	545
Ipswich	879		Deerfield	520
Reading	879		West Boylston	507
Bellingham	867		Weston	497
Northborough	865		Belmont	493
Arlington	857		Medfield	484
Sudbury	844		Hinsdale	480
Gardner	843		Topsfield	457
Williamstown	840		Charlton	451
Wilmington	834		Sutton	450
Lynnfield	828		Stockbridge	447
Hudson	802		Hull	440
Stoneham	799		Ashland	434
Marblehead	792		Boxborough	430
Ludlow	780		Essex	428
Wayland	773		Maynard	418
Lee	770		Longmeadow	418
Wilbraham	769		Northbridge	407

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Winthrop	406		Bolton	239
Rehoboth	405		Stow	236
Rockport	404		Blandford	234
Holden	401		Lincoln	229
Freetown	396		Granville	223
Duxbury	395		Otis	219
Southbridge	393		Lanesborough	216
Spencer	380		Hamilton	215
Ayer	372		Sterling	211
Whitman	371		Templeton	210
Rowley	365		Georgetown	208
Hancock	357		Dudley	205
Shirley	355		Newbury	204
Oxford	354		Lunenburg	193
Ware	352		Hubbardston	189
Medway	352		Bernardston	186
Manchester-by-the-Sea	351		West Stockbridge	183
Belchertown	351		Chilmark	181
Southwick	344		Holliston	181
Uxbridge	344		Monson	173
Mendon	337		Shelburne	172
Hanson	337		Montague	171
Littleton	333		Rutland	165
Westminster	332		Hampden	157
Winchendon	331		Southampton	156
Southborough	330		Northfield	155
Leicester	329		Orange	154
Egremont	315		Dalton	150
Grafton	313		Lancaster	148
Hopkinton	312		New Marlborough	144
Marion	301		Barre	144
Boylston	297		Sunderland	142
Athol	296		Wenham	135
Townsend	291		Ashburnham	121
Charlemont	290		Merrimac	118
Truro	289		West Brookfield	118
Adams	285		Blackstone	118
Acushnet	273		Sherborn	111
Norfolk	273		Pepperell	111
Mattapoisett	270		Carlisle	105
Lakeville	259		Nahant	100
Avon	259		Sheffield	99
Halifax	255		Paxton	97
Dighton	255		Becket	92
Clinton	250		Harvard	92
Holbrook	247		Williamsburg	90
			Groveland	88

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Hatfield	81		Holland	26
Upton	80		Brimfield	26
Phillipston	78		Hardwick	24
Douglas	78		Dunstable	23
Goshen	77		Warwick	22
East Brookfield	74		Royalston	22
West Tisbury	74		Montgomery	22
Granby	74		Conway	22
Whately	72		Florida	21
Rochester	70		Colrain	20
Ashfield	69		Sandisfield	19
Ashby	61		Oakham	17
North Brookfield	61		Pelham	17
Aquinnah	56		Wendell	16
Clarksburg	56		Wales	16
Huntington	56		Monterey	15
Boxford	56		Millville	14
Hopedale	56		Richmond	13
Cummington	55		Westhampton	12
Berkley	51		Windsor	11
Chester	46		Shutesbury	9
Worthington	45		Russell	8
Gill	44		Plympton	7
Erving	44		Gosnold	6
Berlin	43		Leverett	6
Brookfield	40		Washington	6
Petersham	39		Plainfield	5
Warren	39		Mount Washington	3
Rowe	38		Buckland	3
Dover	38		Peru	2
New Ashford	37		Heath	2
West Newbury	31		Tyringham	2
Cheshire	29		New Salem	2
New Braintree	28		Chesterfield	1

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Table A3. List of municipalities by number of jobs in the Retail Trade sector (NAICS 44-45).

Municipality	Number of Jobs, 2018		
Boston	46,131	Canton	3,045
Framingham	20,275	Medford	3,014
Worcester	10,218	Lawrence	2,989
Cambridge	8,054	Methuen	2,933
Springfield	7,725	Dedham	2,894
Barnstable	7,404	Mansfield	2,814
Natick	7,051	Weymouth	2,804
Braintree	6,942	Seekonk	2,800
Newton	6,251	Chicopee	2,797
Woburn	5,882	Falmouth	2,746
Burlington	5,713	Watertown	2,713
Peabody	5,549	Hanover	2,706
Danvers	5,308	Haverhill	2,665
Quincy	5,018	Salem	2,645
Dartmouth	4,778	Milford	2,567
Andover	4,774	Westfield	2,559
Waltham	4,667	Hingham	2,540
North Attleborough	4,657	Hadley	2,528
Brockton	4,656	Wareham	2,463
Somerville	4,590	Northampton	2,409
Plymouth	4,537	Attleboro	2,408
Norwood	4,322	Stoughton	2,374
Holyoke	4,294	Hudson	2,363
Leominster	4,269	Beverly	2,296
Saugus	4,217	Wrentham	2,266
Fall River	3,996	Everett	2,264
Pittsfield	3,872	Shrewsbury	2,215
Marlborough	3,763	Walpole	2,109
West Springfield	3,739	Westwood	2,109
Lowell	3,736	Acton	2,094
Taunton	3,706	Gloucester	2,041
New Bedford	3,652	West Bridgewater	1,946
Brookline	3,591	Ipswich	1,865
Westborough	3,580	Bellingham	1,863
Raynham	3,510	Fitchburg	1,833
Billerica	3,419	Kingston	1,827
Auburn	3,255	Franklin	1,792
Tewksbury	3,229	Chelsea	1,771
Lynn	3,165	North Andover	1,738
		Greenfield	1,731

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Wilmington	1,706		Bedford	1,116
Lynnfield	1,701		Fairhaven	1,113
Nantucket	1,698		Reading	1,077
Wellesley	1,698		Sturbridge	1,069
Chelmsford	1,693		Bolton	1,066
Easton	1,652		Carlisle	1,048
Abington	1,626		Middleborough	1,043
Millbury	1,597		Ware	1,012
Foxborough	1,578		Deerfield	989
Swansea	1,558		North Reading	986
Agawam	1,557		Halifax	957
Somerset	1,540		Easthampton	934
Revere	1,500		Marshfield	924
Lexington	1,473		Concord	921
Norwell	1,465		Middleton	919
Gardner	1,459		Plainville	899
Needham	1,441		Amherst	893
Newburyport	1,432		Oxford	890
Orleans	1,429		Lunenburg	853
Littleton	1,390		Melrose	851
Yarmouth	1,387		Tisbury	828
Sudbury	1,381		Athol	823
Mashpee	1,363		Swampscott	800
Bourne	1,334		Ashland	776
Pembroke	1,332		Spencer	771
Northborough	1,312		Winchester	757
Lee	1,305		Edgartown	756
Stoneham	1,305		Palmer	714
Avon	1,304		Amesbury	700
Harwich	1,262		Sharon	694
Great Barrington	1,261		Webster	691
Dennis	1,248		East Longmeadow	681
Bridgewater	1,242		Marblehead	678
Arlington	1,231		Sandwich	675
North Adams	1,225		Holliston	667
Rockland	1,205		Provincetown	660
Westford	1,180		Millis	654
Wakefield	1,153		Belmont	652
Malden	1,140		Holden	648
Northbridge	1,133		Ludlow	627
Randolph	1,130		Southbridge	623

MASSECONOMIX
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Cohasset	599		Brewster	300
Clinton	598		Newbury	296
Wellfleet	591		Sutton	294
Westport	585		Blackstone	275
Southwick	575		Holbrook	275
Rowley	573		Shelburne	272
Uxbridge	572		Grafton	261
Lenox	568		Townsend	260
Dracut	562		Ayer	251
Chatham	555		Rehoboth	245
Wilbraham	555		Lancaster	244
Wayland	550		South Hadley	242
Dudley	548		East Bridgewater	240
West Boylston	542		Lakeville	239
Leicester	539		Georgetown	236
Orange	526		Stow	236
Medway	503		Duxbury	235
Norton	496		Winchendon	229
Hopkinton	484		Manchester-by-the-Sea	219
Southborough	473		Belchertown	211
Medfield	457		Hopedale	211
Maynard	429		Montague	210
Charlton	424		Sheffield	205
Pepperell	422		Carver	196
Hanson	417		Adams	194
Scituate	415		Eastham	182
Lanesborough	400		Norfolk	181
Winthrop	388		East Brookfield	180
Salisbury	383		Dalton	179
Mattapoisett	357		Hull	170
Longmeadow	336		Hamilton	167
Rockport	336		Topsfield	166
Tyngsborough	331		Monson	165
Marion	329		Freetown	159
Groton	316		Williamstown	159
Mendon	312		Sterling	154
Whitman	310		Lincoln	153
Westminster	307		North Brookfield	150
Milton	306		Williamsburg	143
Southampton	302		Hatfield	142
Oak Bluffs	301		Acushnet	137

MASSECONOMIX
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Ashburnham	136	Montgomery	43
Dighton	136	Ashfield	41
Weston	135	Chilmark	40
Templeton	132	Gill	40
West Tisbury	132	Otis	40
Essex	129	Erving	39
Shirley	129	Richmond	39
Barre	128	Hubbardston	38
Granby	123	Huntington	37
Hampden	122	Leverett	37
Stockbridge	121	Wenham	36
Rutland	114	New Marlborough	35
West Stockbridge	107	Oakham	34
Boxborough	98	Russell	34
Harvard	98	Alford	33
Merrimac	97	Nahant	33
Dover	93	Cummington	32
Brimfield	85	Northfield	32
Upton	83	Worthington	31
Sunderland	76	Colrain	30
Truro	76	Warren	29
West Brookfield	76	Westhampton	28
Berlin	73	Whately	26
Rochester	70	Becket	24
Plympton	69	Ashby	23
Hardwick	67	Goshen	22
Berkley	65	Granville	22
Princeton	65	Holland	19
Brookfield	56	West Newbury	19
Douglas	54	Chester	17
Boylston	52	New Salem	17
Groveland	52	Conway	16
Cheshire	50	Dunstable	15
Petersham	50	Hancock	15
Bernardston	48	Middlefield	15
Charlemont	47	Buckland	13
Egremont	47	Millville	13
Phillipston	47	Wales	12
Boxford	46	Blandford	11
Paxton	46	Sandisfield	11
Sherborn	46	Warwick	11

Aquinnah	10		Windsor	5
Pelham	10		Chesterfield	4
Plainfield	10		Hinsdale	4
Savoy	9		Shutesbury	4
New Braintree	8		Royalston	3
Monterey	7		Gosnold	2
Leyden	6		Florida	1
Wendell	6			

Table A4. List of municipalities by number of jobs in the Health Care and Social Assistance sector (NAICS 62).

Municipality	Number of Jobs, 2018	Dartmouth	3,960
Boston	150,953	Watertown	3,926
Springfield	34,006	West Springfield	3,834
Worcester	27,962	Falmouth	3,788
Fall River	16,638	Dedham	3,709
Barnstable	14,658	Braintree	3,566
Brockton	13,860	Marlborough	3,524
Pittsfield	13,556	Westfield	3,471
Newton	12,979	Somerville	3,457
Brookline	12,742	Concord	3,435
Salem	12,287	Winchester	3,245
Cambridge	10,210	Newburyport	3,157
New Bedford	10,115	Greenfield	3,124
Lowell	9,786	Fitchburg	3,112
Framingham	9,012	Norwell	3,096
Burlington	8,579	Medford	3,076
Lawrence	8,307	Tewksbury	3,064
Weymouth	7,617	Chelsea	3,048
Lynn	7,505	Bedford	3,041
Holyoke	7,445	Chelmsford	3,027
Waltham	7,423	Westborough	2,895
Quincy	7,168	Great Barrington	2,841
Beverly	6,708	North Andover	2,792
Needham	6,685	Malden	2,773
Wellesley	6,303	Southbridge	2,768
Haverhill	6,050	Lexington	2,717
Northampton	5,918	Gardner	2,628
Plymouth	5,764	Belmont	2,511
Natick	5,315	Stoughton	2,480
Peabody	5,109	Andover	2,327
Taunton	4,923	Canton	2,273
Norwood	4,886	Wareham	2,261
Attleboro	4,834	Arlington	2,252
Melrose	4,584	Gloucester	2,239
Milford	4,555	Chicopee	2,216
Danvers	4,362	Amherst	1,995
Woburn	4,278	Wakefield	1,955
Leominster	4,097	Stoneham	1,934
Methuen	4,063	Hingham	1,882

Westwood	1,860		Athol	1,012
East Longmeadow	1,837		Acton	1,012
Yarmouth	1,815		Ayer	960
Middleborough	1,681		Kingston	948
Webster	1,669		Duxbury	913
Palmer	1,660		Brewster	907
Tisbury	1,646		Wayland	891
Foxborough	1,612		Hanover	882
Milton	1,611		Amesbury	880
Southborough	1,573		Pembroke	875
Auburn	1,559		Groton	866
Rockland	1,535		Mansfield	851
Fairhaven	1,534		Deerfield	842
Sandwich	1,504		Saugus	833
Shrewsbury	1,488		Marshfield	828
Longmeadow	1,487		Lenox	826
Easton	1,484		Somerset	810
Randolph	1,449		East Bridgewater	796
Reading	1,448		South Hadley	796
Bridgewater	1,405		Swansea	794
Williamstown	1,403		Sharon	776
Revere	1,393		Holden	766
Billerica	1,378		Ludlow	748
Mashpee	1,373		Dracut	743
Agawam	1,347		Norton	733
Walpole	1,345		Hopkinton	733
Westford	1,331		Swampscott	721
Wilmington	1,301		Raynham	701
Franklin	1,275		Hadley	672
Easthampton	1,170		Nantucket	651
North Adams	1,162		Harwich	636
Everett	1,151		Scituate	625
Wilbraham	1,140		Charlton	623
North Attleborough	1,137		Weston	607
Sudbury	1,134		West Boylston	555
Bourne	1,097		Clinton	553
Dennis	1,091		Seekonk	548
Northbridge	1,083		Uxbridge	548
Northborough	1,074		Plainville	548
West Bridgewater	1,068		Cohasset	538
Marblehead	1,018		Orleans	538

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Wrentham	527	Bellingham	255
NULL	522	Georgetown	253
Sterling	515	Templeton	250
Belchertown	509	Hamilton	248
Lee	507	Whitman	239
Millbury	505	Winchendon	236
North Reading	502	Southwick	236
Medfield	496	Oxford	234
Lakeville	495	Tyngsborough	224
Chatham	479	Norfolk	220
Grafton	473	Carver	219
Winthrop	468	Lincoln	218
Ashland	458	Spencer	212
Hudson	455	Petersham	206
Montague	451	Rehoboth	204
Littleton	451	Westminster	203
Medway	450	Provincetown	194
Middleton	435	Pepperell	180
Abington	431	West Newbury	179
Leicester	424	Manchester-by-the-Sea	178
Ware	415	Sandisfield	178
Lynnfield	406	Sheffield	177
Mattapoisett	402	Rochester	176
Harvard	398	Egremont	175
Marion	386	Dighton	174
Holliston	368	Maynard	174
Sturbridge	364	Millis	174
Stockbridge	348	Rutland	172
Topsfield	345	Salisbury	161
Ipswich	327	West Stockbridge	155
Rowley	322	Becket	154
Holbrook	313	Wellfleet	154
Dalton	311	Orange	153
Barre	307	Rockport	150
Lancaster	305	Freetown	150
Oak Bluffs	301	Hampden	149
Westport	298	Eastham	144
Shirley	294	Lunenburg	143
Hopedale	283	Hanson	143
Avon	277	Boxford	140
West Brookfield	270	Dudley	135

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Shelburne	133		Douglas	55
Sutton	128		Washington	53
Upton	127		Huntington	50
Sunderland	126		Hardwick	50
Paxton	123		Montgomery	48
Blackstone	121		Berkley	38
Carlisle	120		Chesterfield	38
Dover	119		Truro	36
Edgartown	117		Northfield	33
Adams	111		Warren	30
Brimfield	110		Shutesbury	27
Townsend	108		New Marlborough	25
Southampton	98		Cummington	24
Stow	96		Wendell	23
Bolton	96		Lanesborough	22
Essex	92		Brookfield	21
Newbury	91		Williamsburg	20
Groveland	86		Gill	20
Hatfield	84		Plympton	15
Monson	83		Leverett	15
Merrimac	81		Pelham	13
Hull	80		Cheshire	13
Chilmark	79		Holland	12
Berlin	79		Bernardston	10
Mendon	79		Hinsdale	10
West Tisbury	79		Clarksburg	9
Acushnet	71		Otis	8
Sherborn	71		Savoy	8
Nahant	69		Peru	8
Worthington	68		Ashfield	8
Wenham	67		Whately	8
Ashby	66		Conway	8
Hubbardston	63		Aquinnah	7
Granby	63		Millville	7
North Brookfield	59		Erving	7
Princeton	59		Westhampton	7
Halifax	58		Oakham	6
Boylston	58		Charlemont	6
Ashburnham	57		Heath	6
Monterey	57		Wales	6
Boxborough	55		Florida	5

MASSECONOMIX
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Richmond	5
East Brookfield	5
Phillipston	4
Colrain	4
Goshen	3

Buckland	3
Middlefield	2
Russell	1
Hancock	1

Table A5. List of municipalities by number of jobs in the Construction sector (NAICS 23).

Municipality	Number of Jobs, 2018		
Boston	14,427	Wakefield	1,046
Worcester	3,500	Salem	1,037
Newton	3,183	Walpole	1,030
Woburn	3,016	Methuen	1,019
Cambridge	2,576	Stoughton	1,010
Burlington	2,461	Somerville	967
Billerica	2,435	Revere	958
Agawam	2,264	Beverly	912
Framingham	2,199	Rockland	902
Springfield	2,155	Watertown	892
Quincy	2,057	Tewksbury	877
Waltham	1,973	Leominster	874
Auburn	1,814	Ludlow	865
Barnstable	1,775	Dracut	857
Wilmington	1,733	Natick	850
Weymouth	1,730	Yarmouth	840
Marlborough	1,663	Attleboro	828
Everett	1,640	Bridgewater	827
Plymouth	1,629	Westfield	824
Pittsfield	1,610	Hudson	812
Lowell	1,588	Winchester	812
Milford	1,538	Pembroke	796
Canton	1,484	Stoneham	791
Andover	1,480	Falmouth	782
Medford	1,442	Lawrence	779
Chicopee	1,374	Mashpee	777
Chelmsford	1,361	Nantucket	763
Haverhill	1,356	Chelsea	753
Fall River	1,346	Arlington	750
Taunton	1,343	Acton	746
Peabody	1,339	Holliston	746
Norwood	1,333	Dartmouth	744
New Bedford	1,231	North Reading	739
Braintree	1,209	Franklin	721
Brockton	1,110	Shrewsbury	712
Danvers	1,087	Needham	704
West Springfield	1,076	Gloucester	701
Lynn	1,067	Northborough	694
Malden	1,062	Saugus	693
		Easton	668

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Bourne	664		Norfolk	419
Foxborough	662		Melrose	419
Fitchburg	659		Newburyport	418
Hanover	641		Holbrook	408
Littleton	636		Ipswich	407
Hingham	625		Acushnet	402
Sandwich	607		Charlton	395
Plainville	607		Bedford	392
West Bridgewater	600		Randolph	387
Middleborough	587		South Hadley	385
Millbury	575		Georgetown	385
Norton	572		Amesbury	374
Bellingham	559		Hopkinton	367
Dennis	547		Brookline	367
Dedham	532		Westwood	363
Northampton	509		Gardner	361
Holyoke	505		East Longmeadow	360
Salisbury	499		Easthampton	356
North Attleborough	496		Marblehead	347
Wareham	490		Southbridge	344
Marshfield	481		Winthrop	339
Harwich	463		Raynham	339
Ashland	461		Tisbury	337
Tyngsborough	460		Wrentham	335
North Andover	459		Orleans	323
Westport	454		Scituate	318
Westborough	452		Longmeadow	316
Seekonk	448		Wellesley	313
Reading	447		Rowley	312
Oxford	444		Mansfield	311
Whitman	444		Shirley	298
Avon	437		Greenfield	296
Concord	436		Sterling	294
Lexington	436		Fairhaven	294
Abington	435		Edgartown	290
Freetown	435		Groton	289
Westford	434		Sudbury	287
Norwell	434		Hopedale	286
Wilbraham	431		Palmer	285
Lynnfield	431		Chatham	285
Middleton	422		Swansea	276

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Medfield	274		Millis	172
Milton	274		Eastham	171
Kingston	274		Sheffield	169
Lakeville	273		Lunenburg	168
Uxbridge	273		Topsfield	167
Amherst	272		Templeton	162
Holden	271		Blackstone	156
Belmont	262		Dalton	154
Essex	261		North Adams	154
Great Barrington	259		Lanesborough	152
Rehoboth	255		Douglas	152
Carver	253		Townsend	151
East Bridgewater	252		Cohasset	150
Webster	238		Hampden	149
Swampscott	237		Boxborough	148
Sutton	233		Westminster	145
Pepperell	229		Lenox	143
Leicester	227		Weston	140
Monson	226		Boxford	136
Medway	224		Granby	134
Boylston	218		Somerset	134
Sharon	213		Berkley	131
Lancaster	210		Northbridge	130
Southborough	210		Deerfield	129
Maynard	210		Southampton	126
Belchertown	205		Rockport	121
Brewster	200		Southwick	120
Grafton	199		Upton	120
West Boylston	196		Mattapoisett	118
Wayland	196		Manchester-by-the-Sea	117
Clinton	195		Halifax	115
Dudley	195		Groveland	114
Stow	194		Oak Bluffs	110
Spencer	193		Dighton	109
Hadley	182		West Tisbury	107
Lee	182		Hull	106
Adams	177		Newbury	105
Hanson	176		Ware	103
Sunderland	176		Sturbridge	103
Ayer	175		Truro	103
Duxbury	173		Bolton	99

Wellfleet	99		Dunstable	40
Rutland	97		Otis	38
Bernardston	97		Hardwick	38
Montague	95		West Brookfield	35
Athol	91		Becket	35
Mendon	91		Pelham	35
Hinsdale	91		Stockbridge	34
West Stockbridge	91		Plympton	34
Brimfield	89		East Brookfield	34
Hamilton	88		Gill	33
Rochester	87		Granville	33
Hatfield	86		Oakham	30
Williamsburg	85		Westhampton	30
Carlisle	82		Chilmark	29
Ashburnham	80		Leverett	29
Provincetown	79		Millville	29
Barre	78		Washington	28
Shelburne	77		Phillipston	28
Winchendon	77		Nahant	24
Williamstown	75		Colrain	23
Marion	74		Chesterfield	23
Hubbardston	74		Sandisfield	22
Dover	72		Chester	22
Ashby	69		Wales	19
Wenham	69		Cummington	17
Sherborn	67		Worthington	15
Berlin	66		Clarksburg	15
Paxton	64		Charlemont	13
North Brookfield	63		Monterey	13
Cheshire	63		Huntington	13
Northfield	61		Goshen	13
Merrimac	60		Shutesbury	12
Orange	57		Blandford	12
Warren	51		Rowe	12
Lincoln	50		Petersham	12
New Marlborough	48		Royalston	12
Harvard	47		Hancock	12
Princeton	47		Brookfield	10
West Newbury	46		Russell	10
Ashfield	44		Holland	10
Richmond	41		Egremont	10

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Warwick	10
New Braintree	9
Montgomery	9
New Salem	9
Savoy	9
Buckland	8
New Ashford	8
Erving	7
Florida	7
Middlefield	7

Aquinnah	7
Heath	6
Wendell	5
Whately	5
Windsor	4
Peru	3
Tolland	2
Conway	2
Alford	2

MASSECONOMIX
Knowledge is Opportunity