City of Allentown
Re-Industrialization Strategy
Appendix

April 2014

Allentown
City without limits.

AEDC

envision
Lehigh Valley

Funding Source:
The City of Allentown Re-Industrialization Strategy is one of three catalytic demonstration projects part of Envision Lehigh Valley, a public outreach effort designed to engage the citizens of Northampton and Lehigh Counties to create a truly sustainable Lehigh Valley. The region received a three year, $3.4 million Sustainable Communities grant from the U.S. Department of Housing and Urban Development (HUD).

Camoin Associates | Bergmann Associates | Thomas P. Miller & Associates | Innovation Policyworks

APPENDIX

APPENDIX A: INDUSTRIAL MARKET ANALYSIS

A.1: Industry Data Analysis - Economic Base

To analyze the industrial makeup of the City, County, and region, industry data organized by the North American Industrial Classification System (NAICS) is assessed. Camoin Associates subscribes to Economic Modeling Specialists Intl. (EMSI), a proprietary data provider which aggregates economic data from approximately 90 sources. EMSI industry data, in our experience, is more complete than most or perhaps all local data sources (for more information on EMSI, please see www.economicmodeling.com). This is because local data sources typically miss significant employment counts by industry because data on sole proprietorships and contractual employment (i.e. 1099 contractor positions) is not included and because certain employment counts are suppressed from BLS/BEA figures for confidentiality reasons when too few establishments exist within a single NAICS code.

NAICS codes are maintained by the U.S. Census Bureau and are the standard used by Federal statistical agencies in classifying business establishments. 2-digit codes are the highest aggregate NAICS code level and represent broad categories such as “retail”, whereas 4-digit industry codes present a finer level of detail such as “grocery stores”. For those interested in understanding the composition of the NAICS and for more detail about what is included in each industry, we direct the reader to http://www.census.gov/eos/www/naics/.

This *Industry Analysis* organizes data in several ways: Largest Industries, Fastest Growing Industries (2003-2013 and 2013-2023), and Concentrated Industries. This section first presents all industries in the City of Allentown ZIP Codes and the Lehigh Valley at the 2-digit level to get an overview of how the city and Lehigh Valley region are performing as a whole. This is followed by a detailed analysis of the top 25 performing industries at the 4-digit NAICS code level. To assess the degree to which the City’s economy aligns with the regional and national economy, 4-digit NAICS code data are also analyzed for the benchmark geographies: Lehigh Valley and the Allentown-Bethlehem-Easton metropolitan area (MSA).

Considering the focus of this analysis - re-industrialization of Allentown’s urban core - manufacturing industry sectors are highlighted in orange in the following tables. A detailed look at the manufacturing sector in Allentown and the benchmark geographies is provided in Section A.2.

Largest Industries

By looking at industry employment data for 2-digit and 4-digit industry sectors, the relative size of each industry is determined. In the following tables, each industry is ranked from largest to smallest by the number of jobs in 2013. This data is used to identify the largest industries and industry sectors, based on the number of jobs in that sector. It is also used to evaluate the distribution of employment by industry.

We note the following from this data:

- The largest 2-digit industry sector in the Allentown ZIP codes is Health Care and Social Assistance, with almost 27,000 jobs (over 30% of the workforce).
- Manufacturing is the third largest 2-digit sector in the Allentown ZIP code geography, with 6,450 jobs (7.4% of the total workforce), and fourth largest in the Leigh Valley with over 30,800 jobs (10% of the total workforce).

- Average earnings per manufacturing job in the City of Allentown is $66,150, which is about $7,550 less per job than then average in the Lehigh Valley, which is $73,700.
- At the 4-digit level, only one manufacturing sector makes the top 25 largest industries in Allentown ZIP codes - Medical Equipment and Supplies Manufacturing - and no manufacturing sectors make the top 25 largest in the Lehigh Valley or in the MSA.
- In all three geographies, top 4-digit industry sectors include health-related sectors (General Medical and Surgical Hospitals and Offices of Physicians) as well as government jobs and full service restaurants. Warehousing and Storage industries also make the top in the Valley and MSA.
- In the Allentown ZIP codes, Employment Services is the fourth largest 4-digit industry sector with over 2,600 jobs in 2013.

Largest 2-digit Industries: Allentown Zip Codes			
NAICS	Industry	2013 Jobs	2013 Earnings
62	Health Care and Social Assistance	26,990	$64,326
44	Retail Trade	7,584	$31,193
31	Manufacturing	6,450	$66,150
90	Government	6,379	$58,479
72	Accommodation and Food Services	5,695	$18,102
56	Administrative and Support and Waste Management and Remediation Services	5,448	$33,068
81	Other Services (except Public Administration)	4,230	$27,668
42	Wholesale Trade	3,865	$68,821
54	Professional, Scientific, and Technical Services	3,539	$66,547
52	Finance and Insurance	3,310	$62,621
23	Construction	3,060	$56,349
71	Arts, Entertainment, and Recreation	2,414	$18,586
61	Educational Services (Private)	2,140	$37,068
48	Transportation and Warehousing	2,041	$48,774
55	Management of Companies and Enterprises	1,397	$160,525
53	Real Estate and Rental and Leasing	1,103	$42,921
51	Information	927	$93,266
22	Utilities	525	$152,500
21	Mining, Quarrying, and Oil and Gas Extraction	50	$58,275
11	Agriculture, Forestry, Fishing and Hunting	26	$26,540
99	Unclassified Industry	0	$0
	Total	87,173	$52,789

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Largest 2-digit Industries: Lehigh Valley			
NAICS	Industry	2013 Jobs	2013 Earnings
62	Health Care and Social Assistance	51,175	$57,500
44	Retail Trade	33,394	$30,104
90	Government	33,328	$56,838
31	Manufacturing	30,836	$73,702
72	Accommodation and Food Services	21,880	$18,224
56	Administrative and Support and Waste Management and Remediation Services	19,829	$33,863
48	Transportation and Warehousing	17,003	$51,742
81	Other Services (except Public Administration)	14,174	$25,958
23	Construction	13,440	$54,935
54	Professional, Scientific, and Technical Services	12,875	$67,746
42	Wholesale Trade	11,740	$77,763
52	Finance and Insurance	11,459	$68,619
61	Educational Services (Private)	11,015	$41,739
55	Management of Companies and Enterprises	10,071	$148,930
71	Arts, Entertainment, and Recreation	8,413	$28,713
51	Information	4,345	$73,534
53	Real Estate and Rental and Leasing	3,133	$42,504
11	Agriculture, Forestry, Fishing and Hunting	1,131	$26,476
22	Utilities	979	$154,680
21	Mining, Quarrying, and Oil and Gas Extraction	388	$50,837
99	Unclassified Industry	0	$0
	Total	310,608	$53,408

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Largest 4-digit Industries: Allentown Zip Codes			
NAICS	Industry	2013 Jobs	2013 Earnings
6221	General Medical and Surgical Hospitals (Private)	12,550	$63,111
6211	Offices of Physicians	4,870	$109,753
9039	Local Government, Excluding Education and Hospitals	3,727	$59,581
5613	Employment Services	2,612	$25,818
7221	Full-Service Restaurants	2,304	$18,747
7222	Limited-Service Eating Places	2,177	$15,384
4451	Grocery Stores	1,880	$24,533
5617	Services to Buildings and Dwellings	1,430	$26,959
5511	Management of Companies and Enterprises	1,397	$160,525
3391	Medical Equipment and Supplies Manufacturing	1,158	$75,104
2382	Building Equipment Contractors	1,118	$71,419
6214	Outpatient Care Centers	1,044	$40,214
7131	Amusement Parks and Arcades	1,042	$8,697
6215	Medical and Diagnostic Laboratories	1,031	$76,491
5241	Insurance Carriers	1,010	$65,192
6216	Home Health Care Services	994	$32,257
6231	Nursing Care Facilities	986	$45,698
4411	Automobile Dealers	986	$52,479
9029	State Government, Excluding Education and Hospitals	971	$64,753
6113	Colleges, Universities, and Professional Schools (Private)	956	$42,353
6241	Individual and Family Services	928	$28,980
7139	Other Amusement and Recreation Industries	919	$21,715
8121	Personal Care Services	905	$18,914
8131	Religious Organizations	903	$20,621
9036	Education and Hospitals (Local Government)	829	$47,257

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Largest 4-digit Industries: Lehigh Valley			
NAICS	Industry	2013 Jobs	2013 Earnings
9036	Education and Hospitals (Local Government)	17,393	$56,030
6221	General Medical and Surgical Hospitals (Private)	15,271	$62,569
9039	Local Government, Excluding Education and Hospitals	10,310	$57,121
5511	Management of Companies and Enterprises	10,071	$148,930
7221	Full-Service Restaurants	9,200	$18,646
4931	Warehousing and Storage	8,497	$48,007
6211	Offices of Physicians	8,376	$106,255
5613	Employment Services	7,727	$25,504
6113	Colleges, Universities, and Professional Schools (Private)	7,695	$46,186
7222	Limited-Service Eating Places	7,556	$15,021
4451	Grocery Stores	6,807	$24,188
5617	Services to Buildings and Dwellings	5,654	$25,179
5241	Insurance Carriers	4,610	$74,953
2382	Building Equipment Contractors	3,762	$64,545
8131	Religious Organizations	3,760	$19,396
6231	Nursing Care Facilities	3,633	$44,794
6233	Community Care Facilities for the Elderly	3,579	$28,545
4841	General Freight Trucking	3,373	$58,283
4411	Automobile Dealers	3,333	$53,556
4521	Department Stores	3,254	$21,719
8121	Personal Care Services	3,144	$19,762
6241	Individual and Family Services	3,127	$26,206
7139	Other Amusement and Recreation Industries	2,992	$19,359
7223	Special Food Services	2,945	$23,067
6244	Child Day Care Services	2,875	$20,563

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Largest 4-digit Industries: MSA			
NAICS	Industry	2013 Jobs	2013 Earnings
9036	Education and Hospitals (Local Government)	22,335	$56,637
6221	General Medical and Surgical Hospitals (Private)	18,188	$61,270
9039	Local Government, Excluding Education and Hospitals	12,949	$55,776
7221	Full-Service Restaurants	10,811	$18,379
5511	Management of Companies and Enterprises	10,244	$147,518
6211	Offices of Physicians	9,346	$105,533
7222	Limited-Service Eating Places	9,190	$15,120
4931	Warehousing and Storage	8,803	$50,016
4451	Grocery Stores	8,762	$25,203
6113	Colleges, Universities, and Professional Schools (Private)	8,747	$44,121
5613	Employment Services	8,144	$25,556
5617	Services to Buildings and Dwellings	6,562	$25,996
6231	Nursing Care Facilities	4,840	$43,057
5241	Insurance Carriers	4,689	$74,703
7139	Other Amusement and Recreation Industries	4,664	$18,817
2382	Building Equipment Contractors	4,556	$62,552
4521	Department Stores	4,520	$22,191
8131	Religious Organizations	4,480	$18,816
6233	Community Care Facilities for the Elderly	4,032	$29,116
4841	General Freight Trucking	4,027	$58,148
6241	Individual and Family Services	3,999	$26,078
4411	Automobile Dealers	3,824	$54,443
8121	Personal Care Services	3,599	$19,601
6244	Child Day Care Services	3,488	$20,747
5221	Depository Credit Intermediation	3,443	$51,458

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing Industries 2003-2013

Looking at past changes in employment by industry helps to identify which industries have experienced rapid growth/decline. This information can be used to detect industries that might be struggling or, on the other hand, those that are thriving. To identify the fastest growing industries, the historic change in employment is presented by the number of jobs lost or gained and the percent change within each industry over the last ten years (2003-2013).

Key findings from the fastest growing industry data analysis are as follows:

- At the 2-digit level, Health Care and Social Assistance is the fastest growing industry in the Allentown ZIP codes and the Lehigh Valley, with about 30% growth from 2003 to 2013.
- The second fastest growing 2-digit industry sector in the Allentown ZIP codes is Administrative and Support and Waste Management and Remediation Services, which added about 1,500 employees from 2003-13. This growth was largely driven by the subsector Employment Services, which is shown as the third fastest growing industry in this geography at the 4-digit level. We note that many of the manufacturing firms interviewed for this analysis mentioned using temporary help services for hiring. Please refer to the Labor Market Analysis in Appendix B for additional information on temporary workers.
- From 2003-13, the Manufacturing sector lost over 2,500 jobs in the Allentown ZIP codes and over 9,000 jobs in Lehigh Valley.
- The health-related industry sectors noted above as being some of the largest industries by employment also grew the fastest at the 4-digit level in all three geographies.
- Management of Companies and Enterprises was a top growth industry sector in all three geographies adding over 900 jobs in the Allentown ZIP code region. The sub-sector driving this growth was Corporate, Subsidiary, and Regional Managing Offices.[1] The strong presence of this industry sector is a result of several companies that have their headquarters, corporate offices, or subsidiary management offices in the region.
- Plastics Product Manufacturing was the only 4-digit manufacturing industry to make the top 25 fastest growing in the Allentown ZIP code region. This industry sector added almost 230 jobs and grew by 94% in the past 10-years.
- In the Lehigh Valley, two manufacturing sectors made the top 25 fastest growing:
  - Other Electrical Equipment & Component Manufacturing - 760 jobs added, 240% growth
  - Beverage Manufacturing - 850 jobs added, 92% growth
- Warehousing and Storage is the second fastest growing industry sector in both the Lehigh Valley and the MSA, growing by over 100% in both geographies.

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[1] NAICS Definition: **551114 Corporate, Subsidiary, and Regional Managing Offices**
This U.S. industry comprises establishments (except government establishments) primarily engaged in administering, overseeing, and managing other establishments of the company or enterprise. These establishments normally undertake the strategic or organizational planning and decision making role of the company or enterprise. Establishments in this industry may hold the securities of the company or enterprise. Examples include Centralized administrative offices, Head offices, Corporate offices, Holding companies that manage, District and regional offices, Subsidiary management offices.

Fastest Growing 2-digit Industries 2003-13: Allentown Zip Codes					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
62	Health Care and Social Assistance	20,394	26,990	6,596	32.3%
56	Administrative and Support and Waste Management and Remediation Services	3,974	5,448	1,474	37.1%
55	Management of Companies and Enterprises	668	1,397	729	109.1%
72	Accommodation and Food Services	5,033	5,695	662	13.2%
71	Arts, Entertainment, and Recreation	1,815	2,414	599	33.0%
42	Wholesale Trade	3,497	3,865	368	10.5%
54	Professional, Scientific, and Technical Services	3,204	3,539	335	10.5%
48	Transportation and Warehousing	1,990	2,041	51	2.6%
61	Educational Services (Private)	2,103	2,140	37	1.8%
11	Agriculture, Forestry, Fishing and Hunting	21	26	5	23.8%
21	Mining, Quarrying, and Oil and Gas Extraction	55	50	(5)	-9.1%
81	Other Services (except Public Administration)	4,385	4,230	(155)	-3.5%
23	Construction	3,278	3,060	(218)	-6.7%
90	Government	6,733	6,379	(354)	-5.3%
53	Real Estate and Rental and Leasing	1,497	1,103	(394)	-26.3%
52	Finance and Insurance	3,926	3,310	(616)	-15.7%
44	Retail Trade	8,287	7,584	(703)	-8.5%
51	Information	1,880	927	(953)	-50.7%
22	Utilities	2,303	525	(1,778)	-77.2%
31	Manufacturing	8,963	6,450	(2,513)	-28.0%
	Total	84,006	87,173	3,167	3.8%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 2-digit Industries 2003-13: Lehigh Valley					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
62	Health Care and Social Assistance	39,093	51,175	12,082	30.9%
48	Transportation and Warehousing	10,673	17,003	6,330	59.3%
55	Management of Companies and Enterprises	4,808	10,071	5,263	109.5%
56	Administrative and Support and Waste Management and Remediation Services	15,377	19,829	4,452	29.0%
71	Arts, Entertainment, and Recreation	4,312	8,413	4,101	95.1%
72	Accommodation and Food Services	18,935	21,880	2,945	15.6%
54	Professional, Scientific, and Technical Services	10,530	12,875	2,345	22.3%
42	Wholesale Trade	9,712	11,740	2,028	20.9%
61	Educational Services (Private)	9,953	11,015	1,062	10.7%
90	Government	32,893	33,328	435	1.3%
11	Agriculture, Forestry, Fishing and Hunting	1,045	1,131	86	8.2%
21	Mining, Quarrying, and Oil and Gas Extraction	386	388	2	0.5%
44	Retail Trade	33,480	33,394	(86)	-0.3%
81	Other Services (except Public Administration)	14,961	14,174	(787)	-5.3%
53	Real Estate and Rental and Leasing	3,927	3,133	(794)	-20.2%
52	Finance and Insurance	12,493	11,459	(1,034)	-8.3%
23	Construction	15,525	13,440	(2,085)	-13.4%
22	Utilities	3,124	979	(2,145)	-68.7%
51	Information	6,731	4,345	(2,386)	-35.4%
31	Manufacturing	39,948	30,836	(9,112)	-22.8%
	Total	287,906	310,608	22,702	7.9%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 4-digit Industries 2003-13: Allentown Zip Codes					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
6211	Offices of Physicians	3,899	4,870	971	24.9%
5511	Management of Companies and Enterprises	668	1,397	729	109.1%
5613	Employment Services	1,913	2,612	699	36.5%
6214	Outpatient Care Centers	429	1,044	615	143.4%
7222	Limited-Service Eating Places	1,609	2,177	568	35.3%
6216	Home Health Care Services	490	994	504	102.9%
6222	Psychiatric and Substance Abuse Hospitals (Private)	0	468	468	#DIV/0!
4241	Paper and Paper Product Merchant Wholesalers	143	483	340	237.8%
5617	Services to Buildings and Dwellings	1,120	1,430	310	27.7%
5614	Business Support Services	361	650	289	80.1%
7139	Other Amusement and Recreation Industries	633	919	286	45.2%
6241	Individual and Family Services	675	928	253	37.5%
7221	Full-Service Restaurants	2,056	2,304	248	12.1%
5417	Scientific Research and Development Services	34	275	241	708.8%
3261	Plastics Product Manufacturing	241	468	227	94.2%
5242	Agencies, Brokerages, and Other Insurance Related Activities	485	708	223	46.0%
6219	Other Ambulatory Health Care Services	132	355	223	168.9%
4841	General Freight Trucking	334	543	209	62.6%
6233	Community Care Facilities for the Elderly	448	651	203	45.3%
7112	Spectator Sports	31	227	196	632.3%
6215	Medical and Diagnostic Laboratories	848	1,031	183	21.6%
5222	Nondepository Credit Intermediation	304	478	174	57.2%
6244	Child Day Care Services	634	800	166	26.2%
4236	Electrical and Electronic Goods Merchant Wholesalers	229	382	153	66.8%
2382	Building Equipment Contractors	968	1,118	150	15.5%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 4-digit Industries 2003-13: Lehigh Valley					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
5511	Management of Companies and Enterprises	4,808	10,071	5,263	109.5%
4931	Warehousing and Storage	3,808	8,497	4,689	123.1%
6221	General Medical and Surgical Hospitals (Private)	11,359	15,271	3,912	34.4%
7132	Gambling Industries	103	2,769	2,666	2588.3%
5613	Employment Services	5,423	7,727	2,304	42.5%
6211	Offices of Physicians	6,359	8,376	2,017	31.7%
7222	Limited-Service Eating Places	5,547	7,556	2,009	36.2%
5617	Services to Buildings and Dwellings	4,098	5,654	1,556	38.0%
6241	Individual and Family Services	1,678	3,127	1,449	86.4%
9036	Education and Hospitals (Local Government)	15,979	17,393	1,414	8.8%
6233	Community Care Facilities for the Elderly	2,321	3,579	1,258	54.2%
4841	General Freight Trucking	2,219	3,373	1,154	52.0%
7221	Full-Service Restaurants	8,143	9,200	1,057	13.0%
5417	Scientific Research and Development Services	193	1,192	999	517.6%
5616	Investigation and Security Services	696	1,591	895	128.6%
4481	Clothing Stores	1,674	2,536	862	51.5%
3121	Beverage Manufacturing	923	1,772	849	92.0%
6216	Home Health Care Services	1,301	2,146	845	65.0%
7139	Other Amusement and Recreation Industries	2,158	2,992	834	38.6%
6213	Offices of Other Health Practitioners	1,330	2,130	800	60.2%
6214	Outpatient Care Centers	754	1,547	793	105.2%
3359	Other Electrical Equipment and Component Manufacturing	317	1,079	762	240.4%
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,161	1,790	629	54.2%
5419	Other Professional, Scientific, and Technical Services	888	1,500	612	68.9%
5416	Management, Scientific, and Technical Consulting Services	1,488	2,071	583	

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 4-digit Industries 2003-13: MSA					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
5511	Management of Companies and Enterprises	5,064	10,244	5,180	102.3%
4931	Warehousing and Storage	4,311	8,803	4,492	104.2%
6221	General Medical and Surgical Hospitals (Private)	13,957	18,188	4,231	30.3%
7132	Gambling Industries	104	2,769	2,665	2562.5%
5613	Employment Services	5,656	8,144	2,488	44.0%
6211	Offices of Physicians	7,150	9,346	2,196	30.7%
7222	Limited-Service Eating Places	7,145	9,190	2,045	28.6%
6241	Individual and Family Services	2,021	3,999	1,978	97.9%
6233	Community Care Facilities for the Elderly	2,506	4,032	1,526	60.9%
7221	Full-Service Restaurants	9,289	10,811	1,522	16.4%
9036	Education and Hospitals (Local Government)	21,025	22,335	1,310	6.2%
4841	General Freight Trucking	2,849	4,027	1,178	41.3%
5617	Services to Buildings and Dwellings	5,406	6,562	1,156	21.4%
6214	Outpatient Care Centers	944	2,010	1,066	112.9%
5417	Scientific Research and Development Services	208	1,242	1,034	497.1%
7139	Other Amusement and Recreation Industries	3,743	4,664	921	24.6%
5616	Investigation and Security Services	741	1,661	920	124.2%
6216	Home Health Care Services	1,440	2,339	899	62.4%
6213	Offices of Other Health Practitioners	1,622	2,477	855	52.7%
3121	Beverage Manufacturing	959	1,780	821	85.6%
3359	Other Electrical Equipment and Component Manufacturing	601	1,421	820	136.4%
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,227	2,015	788	64.2%
4481	Clothing Stores	1,988	2,761	773	38.9%
4529	Other General Merchandise Stores	1,642	2,340	698	42.5%
5419	Other Professional, Scientific, and Technical Services	1,069	1,733	664	62.1%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Projected Industry Growth 2013-2023

Projected changes in employment from 2013 to 2023 are presented in the following tables. Information about how EMSI makes its projections can be found in the Section A.5.

Notable observations from the projected industry data include:

- The Manufacturing industry in Allentown ZIP codes region is projected to continue to decline over the next ten years.
- Health Care industries will likely continue to be lead growth sectors in local and regional geographies.
- At the 4-digit level, two manufacturing sectors make the top 25 projected fastest growing industries in the Allentown ZIP codes:
    - Pharmaceutical and Medicine Manufacturing: 160 new jobs, 76% projected growth
    - Printing and Related Support Activities: 140 new jobs, 81% projected growth
- In the Lehigh Valley and MSA, several of the fastest growing sectors are projected to be transportation, distribution, and warehouse related.

Fastest Growing 2-digit Industries 2013-23: Allentown Zip Codes

NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
62	Health Care and Social Assistance	26,990	31,427	4,437	16.4%
56	Administrative and Support and Waste Management and Remediation Services	5,448	6,446	998	18.3%
23	Construction	3,060	3,472	412	13.5%
72	Accommodation and Food Services	5,695	6,103	408	7.2%
54	Professional, Scientific, and Technical Services	3,539	3,828	289	8.2%
55	Management of Companies and Enterprises	1,397	1,664	267	19.1%
42	Wholesale Trade	3,865	4,110	245	6.3%
81	Other Services (except Public Administration)	4,230	4,453	223	5.3%
48	Transportation and Warehousing	2,041	2,207	166	8.1%
44	Retail Trade	7,584	7,720	136	1.8%
71	Arts, Entertainment, and Recreation	2,414	2,495	81	3.4%
21	Mining, Quarrying, and Oil and Gas Extraction	50	70	20	40.0%
11	Agriculture, Forestry, Fishing and Hunting	26	28	2	7.7%
31	Manufacturing	6,450	6,405	(45)	-0.7%
61	Educational Services (Private)	2,140	2,095	(45)	-2.1%
22	Utilities	525	450	(75)	-14.3%
51	Information	927	818	(109)	-11.8%
53	Real Estate and Rental and Leasing	1,103	979	(124)	-11.2%
90	Government	6,379	6,223	(156)	-2.4%
52	Finance and Insurance	3,310	2,961	(349)	-10.5%
	Total	87,173	93,954	6,781	7.8%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 2-digit Industries 2013-23: Lehigh Valley					
NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
62	Health Care and Social Assistance	51,175	59,750	8,575	16.8%
56	Administrative and Support and Waste Management and Remediation Services	19,829	23,123	3,294	16.6%
48	Transportation and Warehousing	17,003	20,014	3,011	17.7%
55	Management of Companies and Enterprises	10,071	12,264	2,193	21.8%
72	Accommodation and Food Services	21,880	24,050	2,170	9.9%
44	Retail Trade	33,394	35,277	1,883	5.6%
71	Arts, Entertainment, and Recreation	8,413	10,285	1,872	22.3%
54	Professional, Scientific, and Technical Services	12,875	14,480	1,605	12.5%
42	Wholesale Trade	11,740	13,152	1,412	12.0%
23	Construction	13,440	14,652	1,212	9.0%
61	Educational Services (Private)	11,015	11,781	766	7.0%
81	Other Services (except Public Administration)	14,174	14,854	680	4.8%
31	Manufacturing	30,836	31,042	206	0.7%
21	Mining, Quarrying, and Oil and Gas Extraction	388	490	102	26.3%
52	Finance and Insurance	11,459	11,527	68	0.6%
11	Agriculture, Forestry, Fishing and Hunting	1,131	1,192	61	5.4%
51	Information	4,345	4,285	(60)	-1.4%
22	Utilities	979	822	(157)	-16.0%
53	Real Estate and Rental and Leasing	3,133	2,871	(262)	-8.4%
90	Government	33,328	33,024	(304)	-0.9%
	Total	310,608	338,935	28,327	9.1%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 4-digit Industries 2013-23: Allentown Zip Codes					
NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
6221	General Medical and Surgical Hospitals (Private)	12,550	14,831	2,281	18.2%
5613	Employment Services	2,612	3,231	619	23.7%
6211	Offices of Physicians	4,870	5,438	568	11.7%
6214	Outpatient Care Centers	1,044	1,457	413	39.6%
6216	Home Health Care Services	994	1,347	353	35.5%
5511	Management of Companies and Enterprises	1,397	1,664	267	19.1%
7222	Limited-Service Eating Places	2,177	2,435	258	11.9%
2382	Building Equipment Contractors	1,118	1,351	233	20.8%
4841	General Freight Trucking	543	770	227	41.8%
5617	Services to Buildings and Dwellings	1,430	1,638	208	14.5%
6215	Medical and Diagnostic Laboratories	1,031	1,221	190	18.4%
5222	Nondepository Credit Intermediation	478	664	186	38.9%
2381	Foundation, Structure, and Building Exterior Contractors	399	581	182	45.6%
5242	Agencies, Brokerages, and Other Insurance Related Activities	708	887	179	25.3%
3254	Pharmaceutical and Medicine Manufacturing	208	366	158	76.0%
7139	Other Amusement and Recreation Industries	919	1,065	146	15.9%
6231	Nursing Care Facilities	986	1,130	144	14.6%
3231	Printing and Related Support Activities	175	317	142	81.1%
7221	Full-Service Restaurants	2,304	2,444	140	6.1%
4529	Other General Merchandise Stores	574	709	135	23.5%
4241	Paper and Paper Product Merchant Wholesalers	483	616	133	27.5%
6222	Psychiatric and Substance Abuse Hospitals (Private)	468	601	133	28.4%
6233	Community Care Facilities for the Elderly	651	780	129	19.8%
5413	Architectural, Engineering, and Related Services	633	758	125	19.7%
5621	Waste Collection	186	309	123	66.1%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 4-digit Industries 2013-23: Lehigh Valley					
NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
6221	General Medical and Surgical Hospitals (Private)	15,271	17,960	2,689	17.6%
5511	Management of Companies and Enterprises	10,071	12,264	2,193	21.8%
5613	Employment Services	7,727	9,542	1,815	23.5%
4931	Warehousing and Storage	8,497	9,903	1,406	16.5%
7132	Gambling Industries	2,769	4,137	1,368	49.4%
5617	Services to Buildings and Dwellings	5,654	6,785	1,131	20.0%
6211	Offices of Physicians	8,376	9,467	1,091	13.0%
4841	General Freight Trucking	3,373	4,401	1,028	30.5%
7221	Full-Service Restaurants	9,200	10,186	986	10.7%
7222	Limited-Service Eating Places	7,556	8,464	908	12.0%
6216	Home Health Care Services	2,146	2,906	760	35.4%
6233	Community Care Facilities for the Elderly	3,579	4,280	701	19.6%
6231	Nursing Care Facilities	3,633	4,262	629	17.3%
4451	Grocery Stores	6,807	7,368	561	8.2%
6113	Colleges, Universities, and Professional Schools (Private)	7,695	8,252	557	7.2%
4481	Clothing Stores	2,536	3,056	520	20.5%
6241	Individual and Family Services	3,127	3,638	511	16.3%
4411	Automobile Dealers	3,333	3,842	509	15.3%
2382	Building Equipment Contractors	3,762	4,270	508	13.5%
6214	Outpatient Care Centers	1,547	2,021	474	30.6%
7139	Other Amusement and Recreation Industries	2,992	3,454	462	15.4%
4529	Other General Merchandise Stores	1,863	2,311	448	24.0%
5419	Other Professional, Scientific, and Technical Services	1,500	1,936	436	29.1%
5416	Management, Scientific, and Technical Consulting Services	2,071	2,499	428	20.7%
4921	Couriers and Express Delivery Services	1,512	1,933	421	27.8%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 4-digit Industries 2013-23: MSA					
NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
6221	General Medical and Surgical Hospitals (Private)	18,188	21,204	3,016	24.0%
5511	Management of Companies and Enterprises	10,244	12,418	2,174	83.2%
5613	Employment Services	8,144	10,238	2,094	43.0%
7132	Gambling Industries	2,769	4,137	1,368	131.0%
4841	General Freight Trucking	4,027	5,322	1,295	130.3%
4931	Warehousing and Storage	8,803	10,056	1,253	89.7%
7221	Full-Service Restaurants	10,811	12,037	1,226	56.3%
6211	Offices of Physicians	9,346	10,553	1,207	108.0%
6231	Nursing Care Facilities	4,840	5,848	1,008	185.6%
5617	Services to Buildings and Dwellings	6,562	7,544	982	68.7%
6233	Community Care Facilities for the Elderly	4,032	5,013	981	95.2%
4451	Grocery Stores	8,762	9,647	885	185.1%
6241	Individual and Family Services	3,999	4,852	853	213.8%
6216	Home Health Care Services	2,339	3,187	848	119.8%
2382	Building Equipment Contractors	4,556	5,367	811	389.9%
7222	Limited-Service Eating Places	9,190	9,987	797	86.7%
4529	Other General Merchandise Stores	2,340	3,085	745	75.6%
6113	Colleges, Universities, and Professional Schools (Private)	8,747	9,439	692	395.4%
6214	Outpatient Care Centers	2,010	2,630	620	26.9%
5416	Management, Scientific, and Technical Consulting Services	2,433	2,980	547	95.3%
4411	Automobile Dealers	3,824	4,365	541	112.0%
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	2,015	2,535	520	111.1%
5419	Other Professional, Scientific, and Technical Services	1,733	2,247	514	79.0%
4481	Clothing Stores	2,761	3,266	505	79.8%
8111	Automotive Repair and Maintenance	2,833	3,335	502	269.9%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Concentrated Industries: Location Quotient

Location Quotient (LQ) analysis compares a specific geographic region to a larger reference area by quantifying how concentrated a particular industry, demographic group, or other variable is as compared to the larger geography. In this section, employment by industry in the Allentown ZIP Codes and Lehigh Valley is compared to the U.S. to identify which industries are more highly concentrated in the region than at the national level.

LQ is calculated by dividing the percent of jobs within each industry locally by the percent of jobs in the same industry at the national level. For example, if the finance and insurance industry accounts for 2% of jobs in a community and at the national level this industry has 1% of the total jobs, the community has an LQ of 2.0 (0.02 ÷ 0.01 = 2). In this example, the local community employs twice as many individuals in the industry as expected based on national employment patterns. Typically, only values above 1.20 or below 0.80 are considered "significant" findings in LQ analysis. Industries with a high LQ and high employment numbers are assumed to produce more than what is needed locally (i.e. a surplus) and export their products and services.

The following tables contain the results of the national LQ analysis for Allentown ZIP Code and Lehigh Valley industries at the 2-digit and 4-digit NAICS code levels.

From the LQ analysis, we note the following:

- At the 2-digit industry level, the Allentown ZIP code region has three industry sectors that are considered significant:
    - Health Care and Social Assistance
    - Utilities
    - Arts, Entertainment, and Recreation
- Manufacturing is not highly concentrated at the 2-digit level in the Allentown ZIP code region, but it is in the Lehigh Valley.
- The Allentown ZIP code region has 66 4-digit industry sectors with a significant concentration. There are 18 4-digit manufacturing sectors with LQ's over 1.2.

National LQ 2-digit Industries: Allentown Zip Codes				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
62	Health Care and Social Assistance	26,990	2.37	2.57
71	Arts, Entertainment, and Recreation	2,414	1.42	1.70
22	Utilities	525	6.87	1.64
55	Management of Companies and Enterprises	1,397	0.69	1.19
42	Wholesale Trade	3,865	1.04	1.13
56	Administrative and Support and Waste Management and Remediation Services	5,448	0.82	1.02
61	Educational Services (Private)	2,140	1.20	0.98
81	Other Services (except Public Administration)	4,230	1.05	0.95
52	Finance and Insurance	3,310	1.08	0.93
31	Manufacturing	6,450	1.04	0.92
44	Retail Trade	7,584	0.91	0.83
72	Accommodation and Food Services	5,695	0.82	0.80
53	Real Estate and Rental and Leasing	1,103	0.99	0.76
48	Transportation and Warehousing	2,041	0.75	0.73
23	Construction	3,060	0.64	0.67
54	Professional, Scientific, and Technical Services	3,539	0.70	0.65
51	Information	927	0.97	0.57
90	Government	6379	0.49	0.46
21	Mining, Quarrying, and Oil and Gas Extraction	50	0.18	0.10
11	Agriculture, Forestry, Fishing and Hunting	26	0.02	0.02
99	Unclassified Industry	0	--	0.00

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

National LQ 2-digit Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
55	Management of Companies and Enterprises	10,071	1.45	2.40
48	Transportation and Warehousing	17,003	1.18	1.70
71	Arts, Entertainment, and Recreation	8,413	0.99	1.66
61	Educational Services (Private)	11,015	1.66	1.42
62	Health Care and Social Assistance	51,175	1.32	1.37
31	Manufacturing	30,836	1.36	1.23
56	Administrative and Support and Waste Management and Remediation Services	19,829	0.92	1.04
44	Retail Trade	33,394	1.07	1.03
42	Wholesale Trade	11,740	0.84	0.96
52	Finance and Insurance	11,459	1.00	0.90
81	Other Services (except Public Administration)	14,174	1.05	0.89
72	Accommodation and Food Services	21,880	0.90	0.86
22	Utilities	979	2.72	0.86
23	Construction	13,440	0.88	0.82
51	Information	4,345	1.01	0.75
90	Government	33,328	0.70	0.67
54	Professional, Scientific, and Technical Services	12,875	0.67	0.66
53	Real Estate and Rental and Leasing	3,133	0.76	0.61
11	Agriculture, Forestry, Fishing and Hunting	1,131	0.27	0.29
21	Mining, Quarrying, and Oil and Gas Extraction	388	0.38	0.23

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

National LQ 4-digit Industries: Allentown ZIP Codes				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
3111	Animal Food Manufacturing	428	12.14	13.89
7131	Amusement Parks and Arcades	1,042	11.21	9.50
6222	Psychiatric and Substance Abuse Hospitals (Private)	468	0.00	7.74
6215	Medical and Diagnostic Laboratories	1,031	7.54	6.94
4241	Paper and Paper Product Merchant Wholesalers	483	1.56	6.91
3391	Medical Equipment and Supplies Manufacturing	1,158	9.78	6.22
3352	Household Appliance Manufacturing	189	2.03	5.85
4233	Lumber and Other Construction Materials Merchant Wholesalers	529	3.47	4.92
3359	Other Electrical Equipment and Component Manufacturing	357	--	4.91
6221	General Medical and Surgical Hospitals (Private)	12,550	3.98	4.87
3149	Other Textile Product Mills	191	4.10	4.79
6112	Junior Colleges (Private)	223	6.88	4.52
4812	Nonscheduled Air Transportation	88	2.13	3.75
6211	Offices of Physicians	4,870	3.21	3.36
5152	Cable and Other Subscription Programming	138	0.94	3.17
8123	Drycleaning and Laundry Services	566	1.96	3.11
5321	Automotive Equipment Rental and Leasing	321	2.33	3.09
3113	Sugar and Confectionery Product Manufacturing	118	4.71	3.06
3339	Other General Purpose Machinery Manufacturing	388	2.03	2.62
6214	Outpatient Care Centers	1,044	1.64	2.52
4855	Charter Bus Industry	47	3.45	2.52
3379	Other Furniture Related Product Manufacturing	48	2.27	2.27
2211	Electric Power Generation, Transmission and Distribution	501	9.18	2.20
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	417	1.74	2.14
7112	Spectator Sports	227	0.32	2.09
4236	Electrical and Electronic Goods Merchant Wholesalers	382	1.12	2.03
4531	Florists	91	1.49	2.02
6219	Other Ambulatory Health Care Services	355	0.97	2.01
5621	Waste Collection	186	0.60	1.98
4854	School and Employee Bus Transportation	221	3.78	1.96
4884	Support Activities for Road Transportation	112	1.22	1.94
7223	Special Food Services	797	2.55	1.92
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	199	1.02	1.88
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	254	0.66	1.86
5323	General Rental Centers	39	1.35	1.73
3159	Apparel Accessories and Other Apparel Manufacturing	12	7.31	1.69
3342	Communications Equipment Manufacturing	104	1.31	1.66
3121	Beverage Manufacturing	175	2.40	1.63

National LQ 4-digit Industries: Allentown ZIP Codes				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
3324	Boiler, Tank, and Shipping Container Manufacturing	92	1.48	1.62
6223	Specialty (except Psychiatric and Substance Abuse) Hospitals (Private)	213	5.83	1.61
3261	Plastics Product Manufacturing	468	0.65	1.53
6242	Community Food and Housing, and Emergency and Other Relief Services	137	2.05	1.53
6239	Other Residential Care Facilities	140	0.84	1.51
4411	Automobile Dealers	986	1.50	1.47
5151	Radio and Television Broadcasting	186	2.62	1.45
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	189	1.31	1.44
3329	Other Fabricated Metal Product Manufacturing	229	1.33	1.43
5241	Insurance Carriers	1,010	2.36	1.40
6233	Community Care Facilities for the Elderly	651	1.36	1.38
5615	Travel Arrangement and Reservation Services	168	0.28	1.38
3332	Industrial Machinery Manufacturing	84	3.54	1.38
8134	Civic and Social Organizations	305	2.06	1.35
3152	Cut and Sew Apparel Manufacturing	100	3.71	1.35
5613	Employment Services	2,612	1.00	1.34
5222	Nondepository Credit Intermediation	478	0.68	1.34
4542	Vending Machine Operators	33	0.32	1.34
8121	Personal Care Services	905	1.37	1.33
7139	Other Amusement and Recreation Industries	919	0.99	1.31
4533	Used Merchandise Stores	151	1.90	1.31
3254	Pharmaceutical and Medicine Manufacturing	208	0.38	1.29
6216	Home Health Care Services	994	1.09	1.28
4451	Grocery Stores	1,880	1.33	1.26
6243	Vocational Rehabilitation Services	253	1.43	1.25
5614	Business Support Services	650	0.76	1.21
6212	Offices of Dentists	637	1.13	1.21
4922	Local Messengers and Local Delivery	45	0.87	1.21

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

National LQ 4-digit Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
4869	Other Pipeline Transportation	261	19.11	17.77
7132	Gambling Industries	2,769	0.38	9.65
4931	Warehousing and Storage	8,497	3.64	5.97
4855	Charter Bus Industry	370	3.43	5.63
3121	Beverage Manufacturing	1,772	2.71	4.64
3152	Cut and Sew Apparel Manufacturing	1,151	4.36	4.39
3111	Animal Food Manufacturing	471	4.03	4.30
3359	Other Electrical Equipment and Component Manufacturing	1,079	1.13	4.16

National LQ 4-digit Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
3361	Motor Vehicle Manufacturing	1,551	2.87	4.15
3279	Other Nonmetallic Mineral Product Manufacturing	613	3.83	4.12
3113	Sugar and Confectionery Product Manufacturing	552	4.87	4.02
3399	Other Miscellaneous Manufacturing	2,221	3.13	3.69
3273	Cement and Concrete Product Manufacturing	1,024	2.24	2.98
7131	Amusement Parks and Arcades	1,077	3.41	2.75
3322	Cutlery and Handtool Manufacturing	211	0.87	2.69
3312	Steel Product Manufacturing from Purchased Steel	333	2.01	2.69
5511	Management of Companies and Enterprises	10,071	1.45	2.40
4241	Paper and Paper Product Merchant Wholesalers	599	0.70	2.40
5152	Cable and Other Subscription Programming	363	2.65	2.34
3315	Foundries	601	3.52	2.33
4233	Lumber and Other Construction Materials Merchant Wholesalers	868	1.61	2.27
6215	Medical and Diagnostic Laboratories	1,197	2.60	2.26
3332	Industrial Machinery Manufacturing	476	3.64	2.19
6222	Psychiatric and Substance Abuse Hospitals (Private)	468	0.00	2.17
6233	Community Care Facilities for the Elderly	3,579	2.05	2.13
3391	Medical Equipment and Supplies Manufacturing	1,395	2.93	2.10
3261	Plastics Product Manufacturing	2,221	1.49	2.04
3353	Electrical Equipment Manufacturing	597	1.91	2.03
6113	Colleges, Universities, and Professional Schools (Private)	7,695	2.45	2.00
7223	Special Food Services	2,945	2.45	1.99
3251	Basic Chemical Manufacturing	575	13.20	1.91
4854	School and Employee Bus Transportation	752	2.93	1.88
3222	Converted Paper Product Manufacturing	1,034	1.25	1.86
3339	Other General Purpose Machinery Manufacturing	952	1.24	1.81
5241	Insurance Carriers	4,610	2.22	1.79
3254	Pharmaceutical and Medicine Manufacturing	1,018	1.58	1.78
6219	Other Ambulatory Health Care Services	1,086	1.49	1.73
3324	Boiler, Tank, and Shipping Container Manufacturing	345	1.90	1.71
3149	Other Textile Product Mills	240	2.66	1.69
6221	General Medical and Surgical Hospitals (Private)	15,271	1.44	1.66
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	2,009	2.57	1.64
3352	Household Appliance Manufacturing	189	0.59	1.64
6211	Offices of Physicians	8,376	1.53	1.62
4452	Specialty Food Stores	824	1.62	1.61
3314	Nonferrous Metal (except Aluminum) Production and Processing	204	0.38	1.60
3271	Clay Product and Refractory Manufacturing	136	0.60	1.58
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	1,089	0.99	1.57

National LQ 4-digit Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
5621	Waste Collection	515	0.85	1.55
3259	Other Chemical Product and Preparation Manufacturing	271	1.97	1.55
5615	Travel Arrangement and Reservation Services	666	0.91	1.54
4543	Direct Selling Establishments	651	2.00	1.54
3119	Other Food Manufacturing	569	1.08	1.54
3329	Other Fabricated Metal Product Manufacturing	857	0.85	1.50
6112	Junior Colleges (Private)	260	2.01	1.48
4921	Couriers and Express Delivery Services	1,512	1.10	1.48
4531	Florists	235	1.22	1.47
4236	Electrical and Electronic Goods Merchant Wholesalers	970	0.68	1.45
2123	Nonmetallic Mineral Mining and Quarrying	263	1.41	1.44
8134	Civic and Social Organizations	1,151	2.07	1.43
4841	General Freight Trucking	3,373	0.99	1.43
3372	Office Furniture (including Fixtures) Manufacturing	307	1.24	1.43
5182	Data Processing, Hosting, and Related Services	748	1.10	1.41
4411	Automobile Dealers	3,333	1.28	1.39
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,790	0.88	1.37
7113	Promoters of Performing Arts, Sports, and Similar Events	349	0.75	1.36
5614	Business Support Services	2,561	1.82	1.34
5321	Automotive Equipment Rental and Leasing	489	0.75	1.32
5111	Newspaper, Periodical, Book, and Directory Publishers	1,285	1.47	1.31
8123	Drycleaning and Laundry Services	845	1.21	1.30
8121	Personal Care Services	3,144	1.36	1.30
5323	General Rental Centers	105	1.10	1.30
4884	Support Activities for Road Transportation	265	0.71	1.29
4451	Grocery Stores	6,807	1.34	1.28
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	330	0.60	1.27
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	243	0.68	1.26
4483	Jewelry, Luggage, and Leather Goods Stores	424	1.12	1.23
7139	Other Amusement and Recreation Industries	2,992	0.99	1.20
6213	Offices of Other Health Practitioners	2,130	1.08	1.20
4244	Grocery and Related Product Merchant Wholesalers	1,869	1.10	1.20
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	583	0.46	1.20

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

A.2. Manufacturing Sector Analysis

To focus on trends and opportunities specifically within the Manufacturing sector in the Allentown ZIP code region, 6-digit NAICS data - the highest level of detail - is addressed. Local industry sector data is benchmarked against the Lehigh Valley and the MSA. Each section begins with a summary of the manufacturing sector at the 3-digit industry level for the Allentown ZIP code region, followed by the top 25 industries at the 6-digit level for the Allentown ZIP codes, Lehigh Valley, and MSA.

EMSI data is limited to the ZIP code geographic level and is not available at the community-scale. As illustrated in the following map, the City of Allentown is covered by several ZIP codes that extend well beyond the City boundary. Therefore, following the EMSI data analysis of manufacturing industries, Dunn & Bradstreet business data specific to the city itself is considered.

City of Allentown ZIP Codes

Largest Manufacturing Industries

To show the trends in the 3-digit manufacturing sectors, the first table in this series shows the number of jobs for each 3-digit manufacturing sector in the Allentown ZIP code region for each year from 2003 to 2013.

Regarding the size of manufacturing sectors, we note the following:

- In the Allentown ZIP code, Miscellaneous, Fabricated Metal, Food, and Machinery manufacturing make up the largest 3-digit sectors by employment, with over 600 jobs each in 2013.
- At the 6-digit level, the manufacturing sector is a mix of various sectors of varying sizes. Top sectors by employment in the Allentown ZIP code are those related to the manufacturing of food, metals, plastics, and electronics. Surgical and Medical Instrument Manufacturing is a top employer in the region with over 1,000 jobs.
- Top manufacturing sectors in the Lehigh Valley and the MSA tend to overlap and include the manufacturing of trucks, medical equipment, art goods, and plastic products.

Note on the data below: LSI Corporation is a large electronics company that designs semiconductors. This company employs about 1,500 workers at its location on 1110 American Parkway NE in Allentown (http://www.lsi.com/Pages/default.aspx). In the past few years LSI bought out several smaller companies in Allentown including Alcatel-Lucent USA Inc., Agere Systems Inc., and Infineon Technologies AG. Employees of LSI are distributed among several different NAICS codes, primarily Computer and Electronics and Management of Companies and Enterprises.

Manufacturing Sector Trends 3-digit 2003-2013: Allentown Zip Codes												
NAICS	Description	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
339	Miscellaneous	1,916	1,736	1,090	1,108	1,228	1,362	1,409	1,399	1,345	1,320	1,344
332	Fabricated Metal	595	615	664	673	674	683	587	576	631	656	723
311	Food	1,088	1,100	1,096	1,107	1,008	897	712	740	642	663	668
333	Machinery	930	898	1,182	1,066	957	825	715	598	537	585	601
335	Electrical Equip	384	176	93	165	238	526	980	1,096	1,028	563	582
326	Plastics and Rubber	256	457	438	485	534	509	521	454	498	513	535
325	Chemical	326	255	426	210	236	306	266	178	303	313	324
334	Computer & Electronics	989	419	293	285	285	263	247	273	314	352	324
337	Furniture and Related	229	324	312	335	348	335	241	283	313	292	302
314	Textile Product Mills	547	442	391	340	236	214	194	198	196	186	191
323	Printing & Related	246	291	287	223	257	239	194	180	188	174	175
312	Beverage & Tobacco	295	276	297	293	325	259	208	185	172	174	175
327	Nonmetallic Mineral	75	64	103	113	130	105	114	102	87	113	121
315	Apparel	658	729	573	541	467	437	230	190	142	133	117
336	Transportation Equip	73	100	95	57	70	183	147	122	104	98	102
322	Paper	59	46	39	27	35	49	62	35	40	45	51
324	Petroleum and Coal	98	105	96	99	94	57	52	51	41	46	45
331	Primary Metal	12	<10	35	16	<10	27	34	34	39	39	43
313	Textile Mills	166	143	101	80	64	52	40	40	36	27	25
316	Leather and Allied	0	23	0	0	0	<10	0	0	0	0	0
321	Wood Product	20	39	54	42	31	28	25	16	<10	<10	<10
	Total	8,942	8,199	7,611	7,223	7,186	7,328	6,953	6,734	6,656	6,292	6,448

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Note: Industry names have been shortened.

Largest 6-digit Manufacturing Industries: Allentown Zip Codes			
NAICS	Industry	2013 Jobs	2013 Earnings
339112	Surgical and Medical Instrument Manufacturing	1,069	$75,709
311111	Dog and Cat Food Manufacturing	428	$68,515
335912	Primary Battery Manufacturing	352	$84,897
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	267	$53,068
333996	Fluid Power Pump and Motor Manufacturing	207	$77,263
335211	Electric Housewares and Household Fan Manufacturing	189	$70,108
312111	Soft Drink Manufacturing	170	$76,802
325413	In-Vitro Diagnostic Substance Manufacturing	166	$76,428
334413	Semiconductor and Related Device Manufacturing	155	$114,337
332912	Fluid Power Valve and Hose Fitting Manufacturing	136	$69,096
326199	All Other Plastics Product Manufacturing	133	$60,321
332313	Plate Work Manufacturing	131	$71,456
337127	Institutional Furniture Manufacturing	130	$52,405
337122	Nonupholstered Wood Household Furniture Manufacturing	119	$22,680
311330	Confectionery Manufacturing from Purchased Chocolate	118	$43,088
332710	Machine Shops	116	$64,131
333922	Conveyor and Conveying Equipment Manufacturing	113	$69,198
334290	Other Communications Equipment Manufacturing	104	$42,680
323119	Other Commercial Printing	102	$55,893
314991	Rope, Cordage, and Twine Mills	98	$47,975
314999	All Other Miscellaneous Textile Product Mills	91	$56,417
332420	Metal Tank (Heavy Gauge) Manufacturing	81	$53,515
339999	All Other Miscellaneous Manufacturing	72	$48,628
326212	Tire Retreading	67	$37,475
333911	Pump and Pumping Equipment Manufacturing	67	$92,513

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Largest 6-digit Manufacturing Industries: Lehigh Valley			
NAICS	Industry	2013 Jobs	2013 Earnings
336120	Heavy Duty Truck Manufacturing	1,546	$73,882
339112	Surgical and Medical Instrument Manufacturing	1,174	$74,550
339942	Lead Pencil and Art Good Manufacturing	970	$57,549
326199	All Other Plastics Product Manufacturing	953	$68,176
335912	Primary Battery Manufacturing	839	$84,897
312112	Bottled Water Manufacturing	835	$86,542
339992	Musical Instrument Manufacturing	778	$84,258
332710	Machine Shops	764	$62,490
315299	All Other Cut and Sew Apparel Manufacturing	589	$30,166
325412	Pharmaceutical Preparation Manufacturing	583	$100,910
327310	Cement Manufacturing	556	$90,954
312111	Soft Drink Manufacturing	536	$76,802
334413	Semiconductor and Related Device Manufacturing	493	$114,772
333996	Fluid Power Pump and Motor Manufacturing	492	$77,263
311111	Dog and Cat Food Manufacturing	467	$68,515
326160	Plastics Bottle Manufacturing	454	$71,829
331511	Iron Foundries	436	$90,774
322215	Nonfolding Sanitary Food Container Manufacturing	418	$62,698
322211	Corrugated and Solid Fiber Box Manufacturing	407	$75,681
332313	Plate Work Manufacturing	405	$68,477
311340	Nonchocolate Confectionery Manufacturing	370	$79,968
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	342	$60,595
325120	Industrial Gas Manufacturing	334	$89,595
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	333	$102,115
321920	Wood Container and Pallet Manufacturing	330	$45,886

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Largest 6-digit Manufacturing Industries: MSA			
NAICS	Industry	2013 Jobs	2013 Earnings
336120	Heavy Duty Truck Manufacturing	1,546	$73,882
311330	Confectionery Manufacturing from Purchased Chocolate	1,392	$149,878
339112	Surgical and Medical Instrument Manufacturing	1,174	$74,544
326199	All Other Plastics Product Manufacturing	1,161	$67,261
332710	Machine Shops	1,055	$61,978
339942	Lead Pencil and Art Good Manufacturing	970	$57,549
335912	Primary Battery Manufacturing	839	$84,897
312112	Bottled Water Manufacturing	835	$86,542
339992	Musical Instrument Manufacturing	778	$84,258
325412	Pharmaceutical Preparation Manufacturing	697	$104,995
331511	Iron Foundries	687	$87,550
334413	Semiconductor and Related Device Manufacturing	680	$105,096
315299	All Other Cut and Sew Apparel Manufacturing	589	$30,166
326160	Plastics Bottle Manufacturing	588	$73,228
336211	Motor Vehicle Body Manufacturing	562	$47,758
327310	Cement Manufacturing	556	$90,954
335931	Current-Carrying Wiring Device Manufacturing	550	$90,253
312111	Soft Drink Manufacturing	536	$76,802
333996	Fluid Power Pump and Motor Manufacturing	492	$77,263
311111	Dog and Cat Food Manufacturing	467	$68,515
322211	Corrugated and Solid Fiber Box Manufacturing	460	$80,379
322215	Nonfolding Sanitary Food Container Manufacturing	418	$62,698
332313	Plate Work Manufacturing	405	$68,460
321920	Wood Container and Pallet Manufacturing	394	$48,883
311340	Nonchocolate Confectionery Manufacturing	370	$79,968

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing Manufacturing Industries

Regarding manufacturing industry growth from 2003-2013, we note the following:

- Overall, growth within the manufacturing industry sector occurred across a variety of sub-sectors.
- At the 3-digit level, three sectors added over 100 jobs each: Plastics and Rubber (280 jobs), Electrical Equipment (200 jobs), and Fabricated Metal (130 jobs).
- Primary Battery Manufacturing was the fastest growing 6-digit industry sector adding almost 350 jobs from 2003-2013. The business(es) contributing to this growth could not be identified by the project team and it is assumed that the data for this sector is not reliable. East Penn Manufacturing is a large battery manufacturer located in Berks County, PA, we expect that in the EMSI data, the address for this business is incorrect. Additionally, we note that Stanley Back & Decker, Inc., an international company with a plant located on 11 Grammes Road in Allentown, is classified under this industry sector. Its Allentown plant manufactures metal cabinetry – not batteries – and, therefore, is likely skewing the LQ data for this industry sector.
- Sectors that added over 50 jobs from 2003 to 2013 include (those that overlap with the top 5 in Lehigh Valley are in bold and with the MSA are underlined):
    - ~~**Primary Battery Manufacturing: 352 new jobs (data not reliable)**~~
    - **Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing: 252 new jobs**
    - Fluid Power Valve and Hose Fitting Manufacturing: 111 new jobs
    - In-Vitro Diagnostic Substance Manufacturing: 102 new jobs
    - **Plate Work Manufacturing: 82 new jobs**
    - Electric Housewares and Household Fan Manufacturing: 79 new jobs
    - Dog and Cat Food Manufacturing: 74 new jobs
    - Construction Machinery Manufacturing: 66 new jobs
    - Tire Retreading: 53 new jobs
    - Metal Tank (Heavy Gauge) Manufacturing: 53 new jobs

Fastest Growing 3-digit Manufacturing Industries 2003-13: Allentown Zip Codes					
NAICS	Description	2003	2013	Change	% Change
326	Plastics and Rubber	256	535	279	109.0%
335	Electrical Equip	384	582	198	51.6%
332	Fabricated Metal	595	723	128	21.5%
337	Furniture and Related	229	302	73	31.9%
327	Nonmetallic Mineral	75	121	46	61.3%
331	Primary Metal	12	43	31	258.3%
336	Transportation Equip	73	102	29	39.7%
316	Leather and Allied	0	0	0	N/A
325	Chemical	326	324	-2	-0.6%
322	Paper	59	51	-8	-13.6%
324	Petroleum and Coal	98	45	-53	-54.1%
323	Printing & Related	246	175	-71	-28.9%
312	Beverage & Tobacco	295	175	-120	-40.7%
313	Textile Mills	166	25	-141	-84.9%
333	Machinery	930	601	-329	-35.4%
314	Textile Product Mills	547	191	-356	-65.1%
311	Food	1,088	668	-420	-38.6%
315	Apparel	658	117	-541	-82.2%
339	Miscellaneous	1,916	1,344	-572	-29.9%
334	Computer & Electronics	989	324	-665	-67.2%
321	Wood Product	20	<10	--	N/A
	Total	8,962	6,448	-2,494	32.2%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Note: Industry names have been shortened.

Fastest Growing 6-digit Manufacturing Industries 2003-13: Allentown Zip Codes					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
335912	Primary Battery Manufacturing	0	352	352	
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	15	267	252	1680.0%
332912	Fluid Power Valve and Hose Fitting Manufacturing	25	136	111	444.0%
325413	In-Vitro Diagnostic Substance Manufacturing	64	166	102	159.4%
332313	Plate Work Manufacturing	49	131	82	167.3%
335211	Electric Housewares and Household Fan Manufacturing	110	189	79	71.8%
311111	Dog and Cat Food Manufacturing	354	428	74	20.9%
333120	Construction Machinery Manufacturing	0	66	66	
326212	Tire Retreading	14	67	53	378.6%
332420	Metal Tank (Heavy Gauge) Manufacturing	28	81	53	189.3%
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	0	45	45	
339950	Sign Manufacturing	33	67	34	103.0%
323119	Other Commercial Printing	75	102	27	36.0%
325620	Toilet Preparation Manufacturing	0	26	26	
333319	Other Commercial and Service Industry Machinery Manufacturing	16	39	23	143.8%
333996	Fluid Power Pump and Motor Manufacturing	185	207	22	11.9%
322215	Nonfolding Sanitary Food Container Manufacturing	0	22	22	
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	0	22	22	
332996	Fabricated Pipe and Pipe Fitting Manufacturing	33	50	17	51.5%
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	47	63	16	34.0%
333922	Conveyor and Conveying Equipment Manufacturing	100	113	13	13.0%
311412	Frozen Specialty Food Manufacturing	0	13	13	
339931	Doll and Stuffed Toy Manufacturing	0	12	12	
332311	Prefabricated Metal Building and Component Manufacturing	23	31	8	34.8%
327390	Other Concrete Product Manufacturing	31	39	8	25.8%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 6-digit Manufacturing Industries 2003-13: Lehigh Valley					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
335912	Primary Battery Manufacturing	0	839	839	
332313	Plate Work Manufacturing	98	405	307	313.3%
326160	Plastics Bottle Manufacturing	152	454	302	198.7%
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	16	294	278	1737.5%
332912	Fluid Power Valve and Hose Fitting Manufacturing	59	324	265	449.2%
325413	In-Vitro Diagnostic Substance Manufacturing	67	284	217	323.9%
327991	Cut Stone and Stone Product Manufacturing	70	280	210	300.0%
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	102	311	209	204.9%
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	0	203	203	
315299	All Other Cut and Sew Apparel Manufacturing	414	589	175	42.3%
311511	Fluid Milk Manufacturing	98	265	167	170.4%
333922	Conveyor and Conveying Equipment Manufacturing	100	250	150	150.0%
332911	Industrial Valve Manufacturing	112	260	148	132.1%
322215	Nonfolding Sanitary Food Container Manufacturing	272	418	146	53.7%
335931	Current-Carrying Wiring Device Manufacturing	78	220	142	182.1%
325411	Medicinal and Botanical Manufacturing	14	149	135	964.3%
333294	Food Product Machinery Manufacturing	29	162	133	458.6%
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	161	291	130	80.7%
332420	Metal Tank (Heavy Gauge) Manufacturing	69	197	128	185.5%
315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	138	265	127	92.0%
321920	Wood Container and Pallet Manufacturing	204	330	126	61.8%
326212	Tire Retreading	34	159	125	367.6%
311919	Other Snack Food Manufacturing	78	200	122	156.4%
327390	Other Concrete Product Manufacturing	81	201	120	148.1%
312120	Breweries	198	317	119	60.1%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 6-digit Manufacturing Industries 2003-13: MSA					
NAICS	Industry	2003 Jobs	2013 Jobs	Change	% Change
335912	Primary Battery Manufacturing	0	839	839	
312112	Bottled Water Manufacturing	34	835	801	2355.9%
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	0	318	318	
332313	Plate Work Manufacturing	98	405	307	313.3%
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	16	294	278	1737.5%
332912	Fluid Power Valve and Hose Fitting Manufacturing	59	324	265	449.2%
327991	Cut Stone and Stone Product Manufacturing	117	347	230	196.6%
335931	Current-Carrying Wiring Device Manufacturing	322	550	228	70.8%
325413	In-Vitro Diagnostic Substance Manufacturing	68	286	218	320.6%
332420	Metal Tank (Heavy Gauge) Manufacturing	102	318	216	211.8%
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	102	311	209	204.9%
331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	0	183	183	
315299	All Other Cut and Sew Apparel Manufacturing	421	589	168	39.9%
311511	Fluid Milk Manufacturing	98	265	167	170.4%
333294	Food Product Machinery Manufacturing	29	191	162	558.6%
332911	Industrial Valve Manufacturing	112	260	148	132.1%
325211	Plastics Material and Resin Manufacturing	133	281	148	111.3%
322215	Nonfolding Sanitary Food Container Manufacturing	272	418	146	53.7%
333911	Pump and Pumping Equipment Manufacturing	178	310	132	74.2%
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	161	291	130	80.7%
326212	Tire Retreading	34	159	125	367.6%
315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	140	265	125	89.3%
333922	Conveyor and Conveying Equipment Manufacturing	127	250	123	96.9%
311919	Other Snack Food Manufacturing	78	200	122	156.4%
312120	Breweries	198	317	119	60.1%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Projected Manufacturing Industry Growth

Notable findings include:

- At the 3-digit level, manufacturing industry sectors expected to experience the most growth over the next 10-years include Fabricated Metal (180 jobs), Printing & Related (140 jobs), Electrical Equipment (130 jobs), and Chemical (120 jobs).
- Other industries in the Allentown ZIP code expected to add over 50 jobs in the next 10-years include (those that overlap with the top 5 in Lehigh Valley are in bold and with the MSA are underlined):
  - Other Commercial Printing: 121 new jobs
  - **In-Vitro Diagnostic Substance Manufacturing: 115 new jobs**
  - ~~Primary Battery Manufacturing: 110 new jobs~~ (data not reliable)
  - Other Communications Equipment Manufacturing: 101 new jobs
  - Plate Work Manufacturing: 68 new jobs
  - Printed Circuit Assembly (Electronic Assembly) Manufacturing: 68 new jobs
  - Construction Machinery Manufacturing: 53 new jobs
  - Electric Housewares and Household Fan Manufacturing: 52 new jobs
  - Pump and Pumping Equipment Manufacturing: 51 new jobs

Fastest Growing 3-digit Manufacturing Industries 2013-23: Allentown Zip Codes					
NAICS	Description	2013 Jobs	2023 Jobs	Change	% Change
332	Fabricated Metal	723	906	183	25.3%
323	Printing & Related	175	317	142	81.1%
335	Electrical Equip	582	711	129	22.2%
325	Chemical	324	448	124	38.3%
331	Primary Metal	43	117	74	172.1%
333	Machinery	601	669	68	11.3%
327	Nonmetallic Mineral	121	162	41	33.9%
334	Computer & Electronics	324	347	23	7.1%
336	Transportation Equip	102	121	19	18.6%
322	Paper	51	59	8	15.7%
316	Leather and Allied	0	0	0	
324	Petroleum and Coal	45	18	-27	-60.0%
311	Food	668	608	-60	-9.0%
326	Plastics and Rubber	535	473	-62	-11.6%
314	Textile Product Mills	191	82	-109	-57.1%
337	Furniture and Related	302	169	-133	-44.0%
312	Beverage & Tobacco	175	40	-135	-77.1%
339	Miscellaneous	1344	1146	-198	-14.7%
313	Textile Mills	25	<10	--	
315	Apparel	117	<10	--	
321	Wood Product	<10	<10	--	
	Total	6,448	6,393	87	152.0%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Note: Industry names have been shortened.

Fastest Growing 6-digit Manufacturing Industries 2013-23: Allentown Zip Codes					
NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
323119	Other Commercial Printing	102	223	121	118.6%
325413	In-Vitro Diagnostic Substance Manufacturing	166	281	115	69.3%
335912	Primary Battery Manufacturing	352	462	110	31.3%
334290	Other Communications Equipment Manufacturing	104	205	101	97.1%
332313	Plate Work Manufacturing	131	199	68	51.9%
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	24	92	68	283.3%
333120	Construction Machinery Manufacturing	66	119	53	80.3%
335211	Electric Housewares and Household Fan Manufacturing	189	241	52	27.5%
333911	Pump and Pumping Equipment Manufacturing	67	118	51	76.1%
331524	Aluminum Foundries (except Die-Casting)	33	82	49	148.5%
332912	Fluid Power Valve and Hose Fitting Manufacturing	136	184	48	35.3%
325411	Medicinal and Botanical Manufacturing	42	85	43	102.4%
327991	Cut Stone and Stone Product Manufacturing	40	81	41	102.5%
325991	Custom Compounding of Purchased Resins	36	73	37	102.8%
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	45	81	36	80.0%
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	63	92	29	46.0%
337127	Institutional Furniture Manufacturing	130	158	28	21.5%
323113	Commercial Screen Printing	27	50	23	85.2%
332420	Metal Tank (Heavy Gauge) Manufacturing	81	102	21	25.9%
311991	Perishable Prepared Food Manufacturing	37	57	20	54.1%
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	267	286	19	7.1%
336312	Gasoline Engine and Engine Parts Manufacturing	15	34	19	126.7%
333996	Fluid Power Pump and Motor Manufacturing	207	224	17	8.2%
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	42	58	16	38.1%
326212	Tire Retreading	67	81	14	20.9%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 6-digit Manufacturing Industries 2013-23: Lehigh Valley					
NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
333294	Food Product Machinery Manufacturing	162	332	170	104.9%
325413	In-Vitro Diagnostic Substance Manufacturing	284	446	162	57.0%
327320	Ready-Mix Concrete Manufacturing	255	406	151	59.2%
332212	Hand and Edge Tool Manufacturing	211	353	142	67.3%
311511	Fluid Milk Manufacturing	265	406	141	53.2%
323119	Other Commercial Printing	113	245	132	116.8%
327390	Other Concrete Product Manufacturing	201	329	128	63.7%
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	42	167	125	297.6%
333911	Pump and Pumping Equipment Manufacturing	159	282	123	77.4%
325411	Medicinal and Botanical Manufacturing	149	267	118	79.2%
331524	Aluminum Foundries (except Die-Casting)	80	196	116	145.0%
332912	Fluid Power Valve and Hose Fitting Manufacturing	324	439	115	35.5%
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	291	402	111	38.1%
337212	Custom Architectural Woodwork and Millwork Manufacturing	126	232	106	84.1%
334290	Other Communications Equipment Manufacturing	105	206	101	96.2%
337110	Wood Kitchen Cabinet and Countertop Manufacturing	282	381	99	35.1%
336120	Heavy Duty Truck Manufacturing	1,546	1,635	89	5.8%
327113	Porcelain Electrical Supply Manufacturing	114	196	82	71.9%
334416	Electronic Coil, Transformer, and Other Inductor Manufacturing	50	126	76	152.0%
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	311	387	76	24.4%
311919	Other Snack Food Manufacturing	200	259	59	29.5%
331513	Steel Foundries (except Investment)	64	122	58	90.6%
312130	Wineries	78	136	58	74.4%
333120	Construction Machinery Manufacturing	66	119	53	80.3%
335211	Electric Housewares and Household Fan Manufacturing	189	241	52	27.5%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 6-digit Manufacturing Industries 2013-23: MSA					
NAICS	Industry	2013 Jobs	2023 Jobs	Change	% Change
312112	Bottled Water Manufacturing	835	1,258	423	50.7%
321920	Wood Container and Pallet Manufacturing	394	725	331	84.0%
325131	Inorganic Dye and Pigment Manufacturing	190	480	290	152.6%
332313	Plate Work Manufacturing	405	677	272	67.2%
327991	Cut Stone and Stone Product Manufacturing	347	615	268	77.2%
335912	Primary Battery Manufacturing	839	1,100	261	31.1%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	333	545	212	63.7%
333294	Food Product Machinery Manufacturing	191	378	187	97.9%
326160	Plastics Bottle Manufacturing	588	760	172	29.3%
327320	Ready-Mix Concrete Manufacturing	277	442	165	59.6%
325413	In-Vitro Diagnostic Substance Manufacturing	286	447	161	56.3%
335931	Current-Carrying Wiring Device Manufacturing	550	710	160	29.1%
327390	Other Concrete Product Manufacturing	299	453	154	51.5%
325411	Medicinal and Botanical Manufacturing	227	375	148	65.2%
332420	Metal Tank (Heavy Gauge) Manufacturing	318	463	145	45.6%
332212	Hand and Edge Tool Manufacturing	211	353	142	67.3%
311511	Fluid Milk Manufacturing	265	406	141	53.2%
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	318	454	136	42.8%
323119	Other Commercial Printing	115	248	133	115.7%
334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing	48	167	119	247.9%
333298	All Other Industrial Machinery Manufacturing	189	305	116	61.4%
331524	Aluminum Foundries (except Die-Casting)	80	196	116	145.0%
337110	Wood Kitchen Cabinet and Countertop Manufacturing	308	423	115	37.3%
332912	Fluid Power Valve and Hose Fitting Manufacturing	324	439	115	35.5%
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	291	402	111	38.1%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Concentration of Manufacturing Industries (LQ)

Regarding concentration of manufacturing industry sectors relative to the U.S. as a whole, we note the following:

- In the Allentown ZIP region there are almost 40 6-digit manufacturing industry sectors that have a LQ over 1.2 and employ more than 20 workers.
- Primary Battery Manufacturing has the highest LQ in the Allentown ZIP region of 50, which indicates that half of the U.S. Primary Battery Manufacturing industry is located in this region. We note that Stanley Back & Decker, Inc., an international company with a plant located on 11 Grammes Road in Allentown, is classified under this industry sector. Its Allentown plant manufactures metal cabinetry – not batteries – and, therefore, is likely skewing the LQ data for this industry sector.
- Though textile-related manufacturing is not one of the largest or fastest growing industry sectors identified above, it has a significant LQ in the Allentown ZIP code region. This is likely because most textile manufacturing occurs outside of the U.S. so even a small presence of this industry achieves a high LQ.

National LQ 3-digit Manufacturing Industries: Allentown Zip Codes				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
339	Miscellaneous	1,344	4.64	3.78
314	Textile Product Mills	191	4.68	2.74
335	Electrical Equip	582	1.43	2.73
312	Beverage & Tobacco	175	2.51	1.53
326	Plastics and Rubber	535	0.54	1.4
337	Furniture and Related	302	0.65	1.38
315	Apparel	117	3.51	1.31
333	Machinery	601	1.38	0.93
332	Fabricated Metal	723	0.68	0.86
311	Food	668	1.21	0.77
325	Chemical	324	0.62	0.7
324	Petroleum and Coal	45	1.44	0.69
323	Printing & Related	175	0.6	0.65
327	Nonmetallic Mineral	121	0.25	0.55
334	Computer & Electronics	324	1.25	0.52
313	Textile Mills	25	1.08	0.37
322	Paper	51	0.2	0.23
331	Primary Metal	43	0.04	0.19
336	Transportation Equip	102	0.07	0.12
316	Leather and Allied	0	0	0
321	Wood Product	<10	0.06	--

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Note: Industry names have been shortened.

National LQ 6-digit Manufacturing Industries: Allentown ZIP Codes				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
335912	Primary Battery Manufacturing	352	0.00	50.00
314991	Rope, Cordage, and Twine Mills	98	41.35	45.58
335211	Electric Housewares and Household Fan Manufacturing	189	13.83	38.53
311111	Dog and Cat Food Manufacturing	428	33.62	33.65
333996	Fluid Power Pump and Motor Manufacturing	207	15.31	18.77
326212	Tire Retreading	67	3.17	16.44
339112	Surgical and Medical Instrument Manufacturing	1,069	24.49	14.91
325413	In-Vitro Diagnostic Substance Manufacturing	166	7.74	14.12
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	267	0.47	12.02
337127	Institutional Furniture Manufacturing	130	--	10.26
339931	Doll and Stuffed Toy Manufacturing	12	0.00	8.63
334290	Other Communications Equipment Manufacturing	104	7.19	8.02
327124	Clay Refractory Manufacturing	20	--	7.37
311330	Confectionery Manufacturing from Purchased Chocolate	118	10.20	6.69
333922	Conveyor and Conveying Equipment Manufacturing	113	5.59	6.64
337920	Blind and Shade Manufacturing	48	4.95	6.52
332912	Fluid Power Valve and Hose Fitting Manufacturing	136	1.15	6.27
333292	Textile Machinery Manufacturing	17	--	6.16
333295	Semiconductor Machinery Manufacturing	52	8.41	5.66
324121	Asphalt Paving Mixture and Block Manufacturing	40	7.29	5.23
337122	Nonupholstered Wood Household Furniture Manufacturing	119	2.07	5.22
323119	Other Commercial Printing	102	2.58	4.50
314999	All Other Miscellaneous Textile Product Mills	91	3.17	4.46
332313	Plate Work Manufacturing	131	1.91	4.39
333911	Pump and Pumping Equipment Manufacturing	67	--	4.02
332420	Metal Tank (Heavy Gauge) Manufacturing	81	2.04	3.93
312111	Soft Drink Manufacturing	170	4.64	3.91
325991	Custom Compounding of Purchased Resins	36	--	3.87
325411	Medicinal and Botanical Manufacturing	42	--	3.65
331524	Aluminum Foundries (except Die-Casting)	33	--	3.51
315999	Other Apparel Accessories and Other Apparel Manufacturing	10	15.65	3.19
315211	Men's and Boys' Cut and Sew Apparel Contractors	18	1.09	3.08
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	57	2.87	3.01
322215	Nonfolding Sanitary Food Container Manufacturing	22	0.00	2.98
327991	Cut Stone and Stone Product Manufacturing	40	--	2.64
339932	Game, Toy, and Children's Vehicle Manufacturing	15	--	2.49
315212	Women's, Girls', and Infants' Cut and Sew Apparel Contractors	57	8.86	2.48
332996	Fabricated Pipe and Pipe Fitting Manufacturing	50	2.04	2.44
339999	All Other Miscellaneous Manufacturing	72	2.03	2.25

National LQ 6-digit Manufacturing Industries: Allentown ZIP Codes				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing	45	0.00	2.04
332911	Industrial Valve Manufacturing	31	2.24	1.94
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	63	1.60	1.93
332311	Prefabricated Metal Building and Component Manufacturing	31	1.30	1.90
311991	Perishable Prepared Food Manufacturing	37	2.58	1.73
325199	All Other Basic Organic Chemical Manufacturing	34	5.92	1.66
335312	Motor and Generator Manufacturing	36	2.16	1.59
333120	Construction Machinery Manufacturing	66	0.00	1.57
339992	Musical Instrument Manufacturing	10	2.45	1.57
339950	Sign Manufacturing	67	0.69	1.55
333319	Other Commercial and Service Industry Machinery Manufacturing	39	0.48	1.42
334413	Semiconductor and Related Device Manufacturing	155	5.64	1.42
327390	Other Concrete Product Manufacturing	39	0.88	1.40
315299	All Other Cut and Sew Apparel Manufacturing	10	3.42	1.35
332919	Other Metal Valve and Pipe Fitting Manufacturing	11	10.03	1.23

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

National LQ 6-digit Manufacturing Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
339942	Lead Pencil and Art Good Manufacturing	970	58.60	116.99
335912	Primary Battery Manufacturing	839	0.00	33.41
339992	Musical Instrument Manufacturing	778	28.10	33.34
312112	Bottled Water Manufacturing	835	--	30.67
323118	Blankbook, Looseleaf Binders, and Devices Manufacturing	311	17.03	28.69
336120	Heavy Duty Truck Manufacturing	1,546	24.03	27.14
315299	All Other Cut and Sew Apparel Manufacturing	589	11.33	21.25
327310	Cement Manufacturing	556	21.10	20.67
322215	Nonfolding Sanitary Food Container Manufacturing	418	8.96	15.95
315234	Women's and Girls' Cut and Sew Suit, Coat, Tailored Jacket, and Skirt Manufacturing	63	11.34	13.46
314991	Rope, Cordage, and Twine Mills	98	12.07	12.79
333996	Fluid Power Pump and Motor Manufacturing	492	10.64	12.54
327992	Ground or Treated Mineral and Earth Manufacturing	205	34.85	12.39
326212	Tire Retreading	159	2.19	10.99
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	311	4.07	10.86
335211	Electric Housewares and Household Fan Manufacturing	189	4.04	10.81
325131	Inorganic Dye and Pigment Manufacturing	174	2.84	10.64
311340	Nonchocolate Confectionery Manufacturing	370	10.13	10.39
311111	Dog and Cat Food Manufacturing	467	10.71	10.31
327113	Porcelain Electrical Supply Manufacturing	114	5.29	10.19

National LQ 6-digit Manufacturing Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
315239	Women's and Girls' Cut and Sew Other Outerwear Manufacturing	265	2.37	9.79
339931	Doll and Stuffed Toy Manufacturing	48	4.84	9.41
333313	Office Machinery Manufacturing	124	11.11	9.23
325120	Industrial Gas Manufacturing	334	84.66	8.53
331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	203	0.00	7.03
322213	Setup Paperboard Box Manufacturing	49	0.00	6.93
326160	Plastics Bottle Manufacturing	454	2.09	6.88
325413	In-Vitro Diagnostic Substance Manufacturing	284	2.38	6.79
325991	Custom Compounding of Purchased Resins	199	6.52	6.00
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	333	4.19	5.65
333295	Semiconductor Machinery Manufacturing	185	8.68	5.62
331511	Iron Foundries	436	7.62	5.26
327991	Cut Stone and Stone Product Manufacturing	280	1.45	5.24
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	342	5.76	5.10
312120	Breweries	317	3.72	4.98
333294	Food Product Machinery Manufacturing	162	0.72	4.59
339112	Surgical and Medical Instrument Manufacturing	1,174	7.16	4.59
332911	Industrial Valve Manufacturing	260	2.32	4.57
315233	Women's and Girls' Cut and Sew Dress Manufacturing	72	2.59	4.47
333518	Other Metalworking Machinery Manufacturing	76	0.68	4.31
332212	Hand and Edge Tool Manufacturing	211	1.33	4.19
332912	Fluid Power Valve and Hose Fitting Manufacturing	324	0.80	4.19
333922	Conveyor and Conveying Equipment Manufacturing	250	1.63	4.11
315228	Men's and Boys' Cut and Sew Other Outerwear Manufacturing	54	11.71	4.07
335110	Electric Lamp Bulb and Part Manufacturing	68	0.00	3.84
332313	Plate Work Manufacturing	405	1.11	3.82
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	294	0.14	3.71
325411	Medicinal and Botanical Manufacturing	149	0.29	3.64
327993	Mineral Wool Manufacturing	114	4.84	3.47
312111	Soft Drink Manufacturing	536	4.28	3.46
335931	Current-Carrying Wiring Device Manufacturing	220	0.88	3.42
322214	Fiber Can, Tube, Drum, and Similar Products Manufacturing	62	0.00	3.35
321213	Engineered Wood Member (except Truss) Manufacturing	31	0.90	3.14
337212	Custom Architectural Woodwork and Millwork Manufacturing	126	1.16	3.04
335314	Relay and Industrial Control Manufacturing	300	3.30	3.03

National LQ 6-digit Manufacturing Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
334416	Electronic Coil, Transformer, and Other Inductor Manufacturing	50	1.58	2.99
337127	Institutional Furniture Manufacturing	132	--	2.92
311330	Confectionery Manufacturing from Purchased Chocolate	182	4.74	2.89
332410	Power Boiler and Heat Exchanger Manufacturing	148	6.23	2.69
333911	Pump and Pumping Equipment Manufacturing	159	--	2.68
332420	Metal Tank (Heavy Gauge) Manufacturing	197	1.47	2.67
311919	Other Snack Food Manufacturing	200	1.12	2.63
321920	Wood Container and Pallet Manufacturing	330	1.65	2.59
332997	Industrial Pattern Manufacturing	23	1.90	2.49
335312	Motor and Generator Manufacturing	200	1.55	2.47
311511	Fluid Milk Manufacturing	265	0.86	2.44
324121	Asphalt Paving Mixture and Block Manufacturing	66	3.55	2.42
325212	Synthetic Rubber Manufacturing	53	0.00	2.37
331524	Aluminum Foundries (except Die-Casting)	80	--	2.34
334290	Other Communications Equipment Manufacturing	105	2.10	2.28
322211	Corrugated and Solid Fiber Box Manufacturing	407	1.54	2.22
322299	All Other Converted Paper Product Manufacturing	72	4.67	2.17
336311	Carburetor, Piston, Piston Ring, and Valve Manufacturing	50	--	2.15
339932	Game, Toy, and Children's Vehicle Manufacturing	46	0.57	2.10
327124	Clay Refractory Manufacturing	20	--	2.07
339995	Burial Casket Manufacturing	16	--	2.06
326122	Plastics Pipe and Pipe Fitting Manufacturing	116	1.18	2.05
327390	Other Concrete Product Manufacturing	201	0.67	2.04
337122	Nonupholstered Wood Household Furniture Manufacturing	164	0.65	2.02
331525	Copper Foundries (except Die-Casting)	20	8.28	1.92
324191	Petroleum Lubricating Oil and Grease Manufacturing	41	0.56	1.87
337920	Blind and Shade Manufacturing	48	1.45	1.83
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	291	0.75	1.77
326199	All Other Plastics Product Manufacturing	953	1.35	1.73
333292	Textile Machinery Manufacturing	17	--	1.73
334519	Other Measuring and Controlling Device Manufacturing	110	0.42	1.72
337214	Office Furniture (except Wood) Manufacturing	75	2.68	1.67
313221	Narrow Fabric Mills	25	0.97	1.64
325211	Plastics Material and Resin Manufacturing	189	1.09	1.62
314999	All Other Miscellaneous Textile Product Mills	115	3.5	1.59
339999	All Other Miscellaneous Manufacturing	182	1.22	1.59
325520	Adhesive Manufacturing	65	1.55	1.57
327320	Ready-Mix Concrete Manufacturing	255	0.83	1.51
331513	Steel Foundries (except Investment)	64	2.31	1.49

National LQ 6-digit Manufacturing Industries: Lehigh Valley				
NAICS	Description	2013 Jobs	2003 LQ	2013 LQ
323112	Commercial Flexographic Printing	91	4.77	1.44
321999	All Other Miscellaneous Wood Product Manufacturing	66	0.24	1.43
323119	Other Commercial Printing	113	0.95	1.41
333298	All Other Industrial Machinery Manufacturing	94	1.65	1.41
311211	Flour Milling	37	1.68	1.39
332996	Fabricated Pipe and Pipe Fitting Manufacturing	102	0.84	1.39
335313	Switchgear and Switchboard Apparatus Manufacturing	87	2.12	1.37
332111	Iron and Steel Forging	70	1.06	1.36
325412	Pharmaceutical Preparation Manufacturing	583	1.85	1.35
315191	Outerwear Knitting Mills	12	2.38	1.33
337110	Wood Kitchen Cabinet and Countertop Manufacturing	282	0.55	1.28
332311	Prefabricated Metal Building and Component Manufacturing	74	2.25	1.27
334413	Semiconductor and Related Device Manufacturing	493	3.43	1.27
315211	Men's and Boys' Cut and Sew Apparel Contractors	26	1.63	1.26
336991	Motorcycle, Bicycle, and Parts Manufacturing	29	--	1.24
332710	Machine Shops	764	1.61	1.22
313111	Yarn Spinning Mills	49	0.73	1.21

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

A.3. Urban Manufacturing Sector Analysis

As described in the previous section, EMSI industry data is only available at the ZIP code level and; therefore, includes some businesses that have an Allentown ZIP code but are actually located outside of the cty boundary. Most manufacturers in the City of Allentown are located within a highly urbanized environment compared to some of the suburban business parks located adjacent to the city. Urban industrial properties are very different than suburban industrial properties and some businesses thrive in one type of environment over another whereas other businesses can prosper in either.

To contribute to the understanding of what types of manufacturing sectors are actually in the City (i.e. "urban manufacturers"), ESRI Business Analyst was used to identify and analyze manufacturing businesses within the City of Allentown boundary. Business data originates from Dun & Bradstreet, which ESRI then geo-codes by the reported business address. For this analysis, Camoin Associates ran a query in Business Analyst to identify businesses that have a NAICS beginning with 31-33 (Manufacturing) and are located within the City of Allentown.[2] The resulting dataset was then reviewed by City and AEDC staff, which augmented the data with additional information based on local records (2010 data) and existing knowledge of the business community. Camoin Associates also made about ten phone calls to randomly selected businesses to cross-check the reported employment data.

The manufacturing business data produced as a result of this exercise is summarized in the tables below. The business data was organized by 4-digit and 6-digit sector and sorted by size and number of establishments.

[2] For additional information on ESRI and Dun & Bradstreet data, please refer to ESRI's Methodology Statement: http://www.esri.com/data/esri_data/~/media/Files/Pdfs/library/whitepapers/pdfs/esri-data-business-locations.pdf

Largest Manufacturing Industries in Allentown

The Allentown manufacturing businesses dataset was analyzed to identify the largest manufacturing sectors in the City of Allentown at the 4-digit and 6-digit NAICS level. Top employment sectors include the manufacturing of semiconductors, paper products and printing, plastic products, machinery, fabric, food, and metal.

Largest 4-digit Manufacturing Industries: City of Allentown		
NAICS	Industry	Employees
3344	Semiconductor and Other Electronic Component Manufacturing	1600
3221	Pulp, Paper, and Paperboard Mills	547
3261	Plastics Product Manufacturing	275
3332	Industrial Machinery Manufacturing	220
3132	Fabric Mills	204
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	194
3231	Printing and Related Support Activities	168
3328	Coating, Engraving, Heat Treating, and Allied Activities	155
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	128
3329	Other Fabricated Metal Product Manufacturing	127
3152	Cut and Sew Apparel Manufacturing	112
3118	Bakeries and Tortilla Manufacturing	79
5621	Waste Collection	71
3121	Beverage Manufacturing	69
4244	Grocery and Related Product Merchant Wholesalers	69
5415	Computer Systems Design and Related Services	68
3399	Other Miscellaneous Manufacturing	65
3262	Rubber Product Manufacturing	60
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	60
3339	Other General Purpose Machinery Manufacturing	58
3149	Other Textile Product Mills	48
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	47
3273	Cement and Concrete Product Manufacturing	46
3151	Apparel Knitting Mills	45
5614	Business Support Services	42

Source: ESRI Business Analyst, Camoin Associates, City of Allentown

Largest 6-digit Manufacturing Industries: City of Allentown		
NAICS	Industry	Employees
334413	Semiconductor and Related Device Manufacturing	1600
322122	Newsprint Mills	543
323111	Commercial Printing	203
333249	Other Industrial Machinery Manufacturing	181
337122	Nonupholstered Wood Household Furniture Manufacturing	178
332812	Metal Coating, Engraving and Allied Services to Manufacturers	153
326199	All Other Plastics Product Manufacturing	125
332710	Machine Shops	120
332920	Other Metal Valve and Pipe Fitting Manufacturing	87
313230	Nonwoven Fabric Mills	80
326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	75
326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing	75
311812	Commercial Bakeries	72
562112	Hazardous Waste Collection	71
313210	Broadwoven Fabric Mills	70
312111	Soft Drink Manufacturing	69
315240	Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing	69
424490	Other Miscellaneous Durable Goods Merchant Wholesalers	69
541512	Computer Systems Design Services	68
326299	All Other Plastics Product Manufacturing	60
313312	Other Textile & Fabric Finishing Mills	54
333999	All Other Miscellaneous General Purpose Machinery Manufacturing	52
327390	Other Concrete Product Manufacturing	46
315190	Other Apparel Knitting Mills	45
561499	All Other Business Support Services	42

Source: ESRI Business Analyst, Camoin Associates, City of Allentow n

Manufacturing Industries by Establishments in Allentown

Organizing industry sectors by the number of establishments provides insight into whether an industry sector is dominated by one or two large companies or made up of several smaller businesses. As presented in the table below, manufacturing industries that are made up of several business establishments in Allentown include those related to printing, cut-and-sew, machine shops, industrial machinery, bakeries, plastics, and textiles.

Top 4-digit Manufacturing Industries by Establishments: City of Allentown				
NAICS	Industry	Establishments	Employees	Average Employment per Establishment
3231	Printing and Related Support Activities	22	168	8
3152	Cut and Sew Apparel Manufacturing	19	112	6
3327	Machine Shops; Turned Product; & Screw, Nut, & Bolt	17	128	8
3399	Other Miscellaneous Manufacturing	17	65	4
3332	Industrial Machinery Manufacturing	10	220	22
3118	Bakeries and Tortilla Manufacturing	8	79	10
3149	Other Textile Product Mills	8	48	6
3132	Fabric Mills	7	204	29
3261	Plastics Product Manufacturing	7	275	39
3371	Household & Institutional Furniture & Kitchen Cabinet	6	194	32
3391	Medical Equipment and Supplies Manufacturing	6	27	5
3328	Coating, Engraving, Heat Treating, and Allied Activities	5	155	31
3119	Other Food Manufacturing	4	31	8
3221	Pulp, Paper, and Paperboard Mills	4	547	137
3323	Architectural and Structural Metals Manufacturing	4	31	8
3329	Other Fabricated Metal Product Manufacturing	4	127	32
3222	Converted Paper Product Manufacturing	3	30	10
3339	Other General Purpose Machinery Manufacturing	3	58	19
3353	Electrical Equipment Manufacturing	3	13	4
3359	Other Electrical Equipment and Component	3	15	5
3114	Fruit and Vegetable Preserving and Specialty Food	2	47	24
3121	Beverage Manufacturing	2	69	35
3131	Fiber, Yarn, and Thread Mills	2	2	1
3151	Apparel Knitting Mills	2	45	23
3219	Other Wood Product Manufacturing	2	23	12

Source: ESRI Business Analyst, Camoin Associates, City of Allentow n

A.4: Global & Regional Trends in Manufacturing

The manufacturing environment is changing rapidly and, therefore, economic development approaches must be adapted to be able to help manufacturing thrive and grow in local and regional economies. For the Allentown Re-Industrialization Strategy, Camoin Associates has conducted research on recent national and global trend impacting manufacturing. The following is a summary of key finding.

Though there have been major decreases in employment nationally in manufacturing in the past 40 years, manufacturing is still a very important part of the economy:

- Manufacturing pays higher than average wages.
- Success in manufacturing is associated with success in the economic base overall contributing to growth in all sectors.
- Manufacturing is an important economic multiplier and responsible for considerable research and development and exports.
- Manufacturing has stopped shedding jobs and is contributing to the recent recovery.

Technology is changing manufacturing:

- The declining price of computer power allows small companies to be players in the global market.
- The increasing rate of disruptive technologies makes it hard to dominate the market for an extended period of time - or at all.
- 3-D printing is making it possible for small batch, custom manufacturing.

Opportunities exist in niche manufacturing and at cross-sections of sectors/technologies/process/and knowledge areas:

- Advanced materials composites and bio-manufacturing
- Nano-technology and molecular based manufacturing

On-shoring and near-shoring are creating new opportunities for US manufacturing. Being driven by:

- Increase in labor costs in China
- Reduced value of U.S. dollar
- Added cost of transportation and logistics and getting product into the hands of end-users
- Increase in American oil and natural gas production is increasing demand for machinery and chemicals and providing lower-cost energy compared to the past
- Lack of quality control and intellectual property protection

Insourcing in Pennsylvania:

- U.S. subsidiaries of global companies play a vital role in Pennsylvania's economy, insourcing 267,500 jobs, and writing paychecks to 5.3% of Pennsylvania's private-sector workforce.
- Pennsylvania ranks 5th in the nation in the total number of jobs at U.S. subsidiaries and 19th in per capita jobs.
- More than 40 percent of jobs at U.S. subsidiaries in Pennsylvania are in the manufacturing industry-accounting for 108,300 jobs

- Pennsylvania ranks 4th in the nation in the number of manufacturing industry jobs at U.S. subsidiaries

Resources

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Economic Development Forum, on Manufacturing, Mass Development,9/27/12 - and *Local Economic Development Strategies to Channel the Manufacturing Renaissance*, Massachusetts Association of Planning Directors Annual Conference, 6/6/2013 – Ninigret Partners

Near-Shoring Takes Hold, John T. Costanzo, Manufacturing Today, www.manufacturing-today.com/index.php/sections/columns1/801-near-shoring-takes-hold?goback=.gde_4585170_member_254322325

Global Investment Grows America's Economy, Organization for International Investment, http://www.ofii.org/resources/jobs-by-state/pennsylvania

Sector-Specific Industry Trends

To better understand some of the manufacturing sub-sectors that appear in the data, additional desktop research was conducted; the results of which are summarized in brief below.

Textile Industry Trends

As shown in the data above, Allentown has around 35 establishments with over 400 employees in textiles mills and apparel manufacturing related industries. Nationally, these industries are experiencing a turnaround. Consumers are demanding American-made, high-quality products which is driving trends in re-shoring. Small companies in the apparel sectors that produce high-value, design-oriented goods are thriving in trendy, post-industrial neighborhoods.

The challenge is finding workers with the necessary cut-and-sew skills. Often textile companies target areas with high immigrant populations that possess some of these skills; however, as described in a recent New York Times article, most companies are either training workers themselves or working with local educational entities to train workers.[3] Many textile manufacturers even prefer to train their workers on-the-job, so they can build specific skills through hands-on apprenticing. [4]

In Allentown, apparel and textile mill companies have lower than average earnings compared to the manufacturing industry sector as a whole:

- Manufacturing as a whole: $66,150
- Apparel: $26,600
- Textile Product Mills: $52,100

Metal Manufacturing Industry Trends

In the extensive industry data evaluated for this analysis, fabricated metal and other metal-related manufacturing consistently rose to the top. The industry magazine *Fabricating & Metalworking* (http://www.fabricatingandmetalworking.com/) notes the following industry trends (direct quotes from industry leaders):

- *The greatest amount of activity is found in equipment used for the* ***agricultural, medical, and food processing industries.*** *In addition to these sectors, the energy industry and automotive industry are also performing well.*

- *With respect to the market sectors generating the most activity, sales figures suggest the* ***fabrication side of the manufacturing industry is seeing more growth*** *than chipmaking operations. While it can be difficult to pinpoint what is driving a particular sector, it is my belief that fabrication is taking the lead* ***because it typically involves larger parts, which makes outsourcing overseas costly, inconvenient and time consuming.***

- ***In the metal fabrication industry as much as 70 percent of the market is created by smaller companies, often contract manufacturers, with less than 200 employees and privately owned.***

[3] http://www.nytimes.com/2013/09/30/business/a-wave-of-sewing-jobs-as-orders-pile-up-at-us-factories.html?emc=eta1&_r=2&

[4] http://colabradio.mit.edu/city-made-the-case-for-small-urban-manufacturers/

Many of the decisions in these types of shops are made based on the decisions of a single owner that draw their inspiration based on the things that they see and hear in their marketplace as well as the greater economy as a whole – and right now there are some concerns out there.

- *There are currently a number of* ***industries that continue to see strength and success, including agricultural and defense. In addition, growth in the food service and medical industries continues to remain on track.*** *We are currently seeing opportunities in applications which differentiate and/or enhance productivity and reduce the costs of manufacturing. These include projects for the newer style fiber lasers, which are fast with a lower hourly run cost, as well as larger laser cutting systems such as the 6 kW CO2 systems for faster cutting and piercing on a range of materials.*

- *Technological advances in automation, the emergence of additive manufacturing, and other developments have the potential to move companies' manufacturing operations close to product development and markets.* ***Urbanization continues to gather momentum*** *(already more than half of the people on Earth live in cities), making urban environments the most attractive markets. As these developments unfold, a number of converging trends will revitalize urban production in developed countries.*

A.5: EMSI Methodology for Making Projections

The following explanation is provided by EMSI as to their methodology for making projections on industry employment.

"EMSI creates long-term, 10-year industry projections starting from the current year. They are based on a combination of

- Recent trends in all industries for every local geography
- National industry projections produced by the BLS
- State and sub-state regional projections produced by individual states.

This methodology is designed to capture the expertise embodied in federal and state agencies, but since their official projections typically have a base year that lags 2-3 years behind the current year, EMSI projections are also informed by the most recent data and trends available.

The first step in the process is to track recent local trends using a linear regression function. Taking into account the previous base data from 15, 10, and 5 years prior to the base year, a line is plotted as a function of year and employment. This line is dampened (flattened) to curb any wild growth or decline and smooth out the effects of any volatility. Once this is done, state and local government industries (as well as Postal Service) are projected based on the growth or decline of local economies rather than projected through linear regression. Federal government and military, however, are projected through linear regression at the national level and their growth rate is then applied to the states and counties. Once this is done for each county, all counties' projections are adjusted so that they sum to state- and national-level numbers.

Once these initial projections are completed, we begin a series of controls and adjustments to other data sources. The first of these is an adjustment to the BLS staffing patterns. Essentially our projected national growth rate is changed to match the growth rate of the BLS numbers. This adjusts the curve up or down while staying as close to our projected values as possible. Following this, we adjust our county and state-level projections to the state-produced state and substate regional projections. Our county values are controlled to the regional data and our state projections are controlled to the reported state data.

Once these adjustments and controls are completed, the final state-level numbers are aggregated to determine the final national projections. This causes EMSI data to match state projections very closely, but it also means that EMSI projections can stray from the national projections."

Appendix B: Labor Market Analysis

B.1 Introduction

Thomas P. Miller and Associates, LLC (TPMA) completed an analysis to understand the current labor market and how it aligns with the needs of Allentown's employers. In economic development, the importance of a qualified, available workforce is a deciding factor for why an employer chooses to relocate, expand, or leave a community. Through the re-industrialization strategy, it imperative to understand the current assets for education and training, challenges the City must overcome, and opportunities to strengthen and better align resources to prepare a qualified workforce.

The analysis utilizes public and proprietary demographic and occupational data to generate a profile of the current labor market. To inform and validate, TPMA facilitated three on-site focus groups, two with students and jobseekers who are Allentown residents and one with a group of education and workforce development professionals representing community college, technical education, and the workforce system. TPMA also held on-site interviews with employers and additional phone interviews with representatives of education and workforce development programs. The quantitative and qualitative analyses informed the development of recommendations.

B.2: Quantitative Analysis

The Allentown Labor Market

As of June 2013, Allentown's labor force included 59,980 workers, the city's largest labor force in the last ten years. Of these workers, 53,700 are employed, also the largest number since January 2003. Unemployment was at its highest in July 2012, when 7,429 workers (12.6%) were unemployed. In June 2013, the most recent figure available, the number of unemployed workers dropped 15% to 6,249, or 10.1% of the labor force. See the table below for a summary of Allentown's current labor force and the minimum and maximum levels since 2003. See Appendix B.1 for full labor market statistics tables.

Allentown Labor Force Summary, 2003-2013

	June 2013	Maximum	Max. Date	Minimum	Min. Date
Labor Force	59,980	59,980	Jun 2013	49,321	Feb 2004
Employment	53,700	53,700	Jun 2013	45,148	Dec 2009
Unemployment	6,280	7,429	Jul 2012	2,660	Dec 2006
Unemployment rate	10.1%	12.6%	Jul 2012	5.2%	Dec 2006

Source: BLS LAUS 2003-2013

In 2011, the most recent date for which data are available, the City of Allentown was a net importer of commuters. There were about 48,269 jobs in the city limits, just 9,911 (21%) of which were filled by workers who lived in Allentown city proper. The remaining 38,358 workers commuted in from outside the city limits. At the same time, 34,738 workers who lived in the city commuted to jobs located outside of the city, for a net commuter gain of about 3,600 workers each day. Cities that receive the most Allentown workers include Bethlehem, PA (3,164), Philadelphia, PA (1,188), and New York, NY (791). Cities that send the most workers to Allentown include Bethlehem, PA (2,868), Fullerton, PA (1,087) and Emmaus (787). See Appendix B.5 for a summary of commuter data.

Reliance on a Temporary Workforce

Several recent publications, including those by EMSI Intl., *Time*, *The Morning Call*, and others have reported the increasing prevalence of temporary workers – and, often, the undesirable employment and working conditions they face – in Allentown and throughout the country. These jobs have accounted for a large portion of the economic recovery, even though they are often "unseen, uncertain and underpaid"[5].

The impacts of temporary work are far-reaching and extend past temporary workers themselves. In a Princeton University working paper, Pedulla (2011) found that the presence of temporary workers leads to negative consequences even for permanent, or "standard," workers. When employers use temporary workers, negative consequences for permanent workers include diminished perceptions of job security and workplace attachment, diminished relationships with managers and strains in relationship with co-workers. These factors, especially in regards to diminished relationships with management, are subsequently related to increased employee stress, absenteeism and turnover. This is particularly true for smaller organizations.[6]

The perception that Allentown is home to a disproportionately large share of temporary workers is accurate.

In the Allentown-Bethlehem-Easton Metropolitan Statistical Area (MSA), nearly 7,300 workers are employed in the temporary services industry. Of these, 74% are in Lehigh County, even though Lehigh County employs only 52% of the total workers in the MSA. These trends hold nationally as well; Lehigh County's concentration of temporary services jobs is 70% higher than the national concentration.

While the entire MSA has seen a growth in the number of temporary services jobs, it has been concentrated in Lehigh County. Total jobs in Lehigh County increased by 4% from 2009 to 2013, but the number of temporary services jobs grew at more than ten-times that rate, with an increase post-recession of 41%. Nearly nine in ten new temporary services jobs in the Allentown-Bethlehem-

Lehigh County Temporary Workers At a Glance

Total temp jobs, 2013	**5,397**
Temp jobs in manufacturing and logistics, 2013	**2,103**
Temp jobs in the MSA, 2013	**7,278**
Lehigh Co. portion of all MSA temp jobs, 2013	**74%**
Lehigh Co. portion of MSA temp job growth, 2009-2013	**89%**
All jobs lost, 2008-2009	**5,667**
Temp jobs lost, 2008-2009	**1,443**
Portion of job loss, temporary	**26%**
All jobs gained, 2009-2013	**8,541**
Temp jobs gained, 2009-2013	**1,563**
Portion of job gain, temp	**18%**
Temp jobs, pre-recession (2007)	**5,379**
Temp jobs, current (2013)	**5,397**
Change, pre-recession to current	**0.3%**

[5] Grabell, M. (2013). The 4 a.m. army. *Time*. Accessed 21 October 2013 from <nation.time.com/2013/06/27/the-4-am-army>.

[6] Pedulla, David S. (2011). The hidden costs of contingency: Employers' use of contingent workers and standard employees' outcomes [Working paper]. Center for the Study of Social Organization. Princeton University. Accessed 21 October 2013 from <www.princeton.edu/csso/working-papers/WP6.pdf>.

Easton MSA were in Lehigh County, and Lehigh County's growth in temporary services jobs alone comprised more than 9% of total job growth in the MSA.

Further, many of these jobs are in manufacturing, transportation and distribution – the very industries Allentown is trying to grow with a re-industrialization strategy. Temporary services jobs in manufacturing, transportation and distribution are concentrated in fifteen occupations, outlined in the table below. Four in ten temporary services workers are employed in these 15 occupations, and temporary jobs make up about 10% of all the work in these 15 occupations. Since 2009, employment in the top 15 temporary manufacturing, transportation and distribution occupations has grown 42%, compared to 22% growth for permanent jobs in these same occupations.

Lehigh County Temporary Manufacturing, Transportation and Distribution Jobs				
Occupation	2009 Temp Jobs	2013 Temp Jobs	# Change, 2009 - 2013	% Change 2009 - 2013
Laborers and Freight, Stock, and Material Movers, Hand	413	548	135	33%
Helpers--Production Workers	237	354	117	49%
Team Assemblers	241	352	111	46%
Packers and Packagers, Hand	169	245	76	45%
Assemblers and Fabricators, All Other	77	107	30	39%
Packaging and Filling Machine Operators and Tenders	58	80	22	38%
Industrial Truck and Tractor Operators	47	67	20	43%
Machinists	41	65	24	59%
Heavy and Tractor-Trailer Truck Drivers	37	53	16	43%
Inspectors, Testers, Sorters, Samplers, and Weighers	36	52	16	44%
Production Workers, All Other	40	52	12	30%
Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	29	42	13	45%
Electrical and Electronic Equipment Assemblers	26	40	14	54%
Light Truck or Delivery Services Drivers	20	29	9	45%
Welders, Cutters, Solderers, and Brazers	13	17	4	31%
Total	1,484	2,903	619	42%

Growth in temporary employment in manufacturing, transportation and distribution likely does not mean better outcomes for workers, as temporary jobs are more likely to provide low pay. Of the top 15 manufacturing, transportation and distribution temporary jobs in the table above, the average full-time, non-temporary worker earns about $33,000 per year, while the average temporary services worker earns about $25,000. It is important to note that this earning level is for all temporary services workers, as no data exist for the average annual earnings of temporary manufacturing, transportation and distribution jobs.

Growth in temporary services jobs, however, is not a new trend.

Although many reports have focused on the rapid growth in temporary services jobs since 2009, these jobs had been growing rapidly for the previous ten years in Lehigh County and were becoming an increasing share of the county's economy. Temporary services jobs made up 1.7% of all jobs in Lehigh

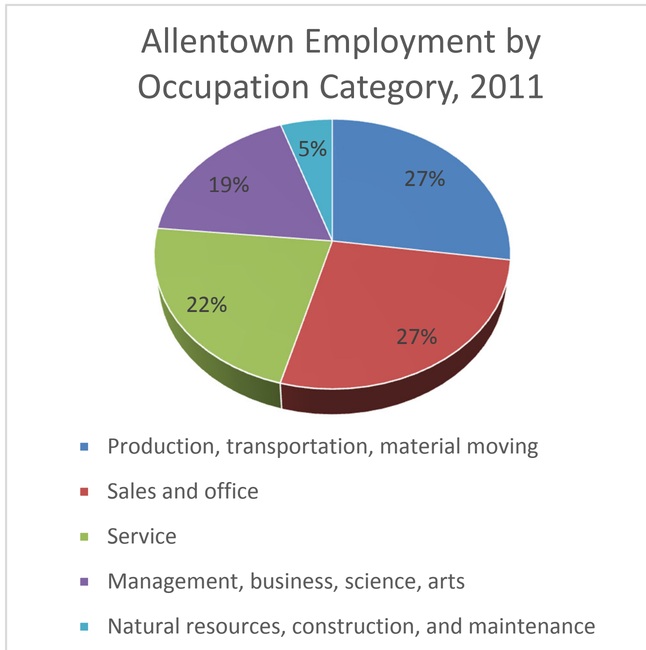
County in 2003 but were 2.5% of employment by 2007. This figure dropped back to 1.8% in 2008 and 2009, as temporary workers were the first jobs to be cut in the economic downturn. As of the third quarter of 2013, temporary services jobs are once again about 2.5% of all jobs in Lehigh County.

Further, while it is true that a significant portion of Lehigh County's economic recovery has been in temporary services jobs, it is also the case that a large portion of job loss during the recession was in temporary jobs; from 2008 to 2009, Lehigh County saw a decline of 1,443 temporary services jobs, which was more than one-quarter of all jobs lost during that period. Since 2009, 1,563 temporary services jobs have been added back into the economy, for a net gain of just 18 jobs. These trends are true for manufacturing, transportation and distribution jobs as well. Lehigh County lost 629 manufacturing and logistics temp jobs from 2007-2009 and has gained 619 of those back since 2009.

Put another way, while temporary jobs have comprised 18% of the total post-recession recovery in Lehigh County, they were 26% of the loss. This suggests temporary jobs are more volatile in general than the average permanent job.

Labor Market Strengths

A re-industrialization strategy comes at an important time in Allentown's development. The city has a strong base of workers to build from, as production, transportation and material moving occupations comprise 27% of employment in Allentown, compared to 14% in Pennsylvania and 12% nationally. Three in five workers are in the "core" working age of 20 to 64, and just over two in five are age 20 to 49. Allentown also has comparatively large private sector employment; 93% of Allentown's jobs are non-governmental, compared to 88% in Pennsylvania and 85% nationally.[7]



In addition, while cities like Akron, Ohio; Baltimore, Maryland; and Flint, Michigan have seen their populations decline, Allentown has swelled nearly 11% in the last ten years, growing from 106,000 residents in 2003 to 119,000 in 2012. This increase not only outpaces the state's growth by more than 9 percentage points, but the influx of residents to the City of Allentown accounts for more than 3% of Pennsylvania's total population growth over the last ten years.[8]

With Allentown's growth has come an increase in the pool of available workers. From 2003-2013, its population grew 11%, but the labor force grew nearly 16%, once again outpacing the state, which had an increase of 6%.[9] While specific data on population growth by age group is not available, these data suggest Allentown's growth has been concentrated in working-age adults who are seeking employment.

[7] U.S. Census Bureau ACS, 2011.

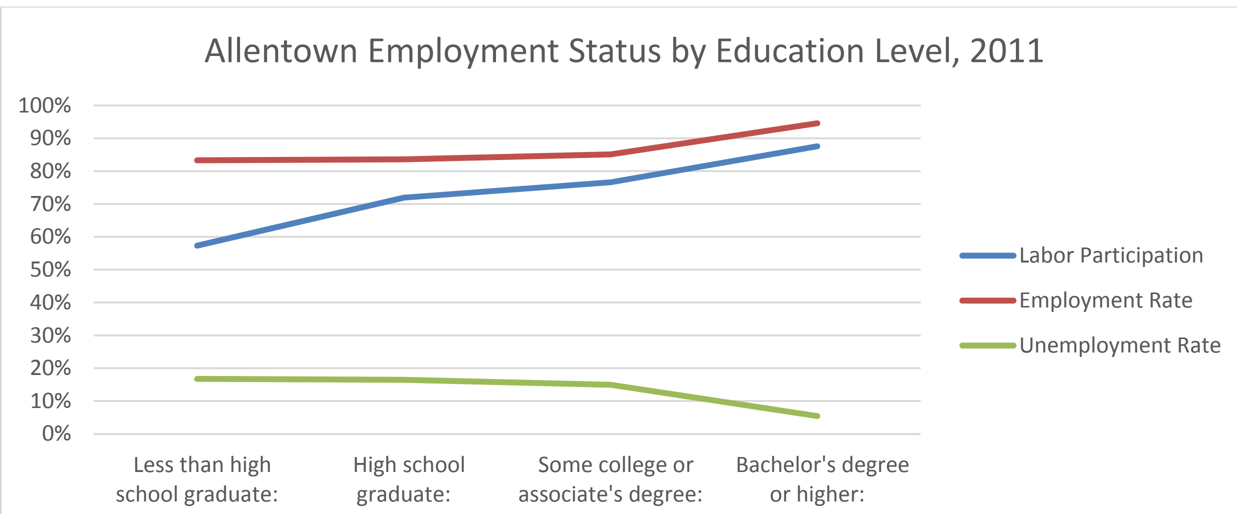
[8] U.S. Census Bureau Population Estimates Program, 2013.

[9] U.S. Bureau of Labor Statistics LAUS, 2013 Not Seasonally Adjusted.

Labor Market Challenges

Despite many positive trends, Allentown faces several significant labor market challenges. Labor participation in the city is lower, and unemployment is higher, compared to the state.[10] This means that, relative to the state, a smaller portion of adults in Allentown are choosing to work or actively look for work, and, of those who do, a smaller portion are able to find jobs. Of the 60 cities and towns in Pennsylvania with more than 25,000 residents, Allentown is tied with Reading for fifth-highest 2012 annual average unemployment rate.[11] Unemployment in Allentown has been above 10% each month for the last 4.5 years, and the number of unemployed workers as of June 2013 was more than twice as high as it was in June 2007.[12]

City residents also struggle with education attainment, which is correlated with both labor force participation and employment rates. For Allentown residents between 25 and 64 years old who have less than a high school diploma, fewer than six in ten participate in the labor force. Of those who do, 17% are unemployed. Individuals on the other end of the spectrum, who hold a bachelor's degree or higher, participate in the labor force at a rate of 88%, and just 5% are unemployed.[13] The graph below shows the positive correlation between educational attainment and employment.



While individuals with less than a high school diploma participate in the labor force at lower rates than more educated individuals, this cohort still comprises one in five Allentown workers. The majority of jobs in the city (66%) do not require formal postsecondary education,[14] but many require an individual to complete on-the-job training or earn a certification or other credential. Less educated individuals may lack the hard and soft skills needed to gain employment or may not meet the minimum education standards employers require. See the graph below for concentration of labor force, employment and unemployment by education level in the City of Allentown.

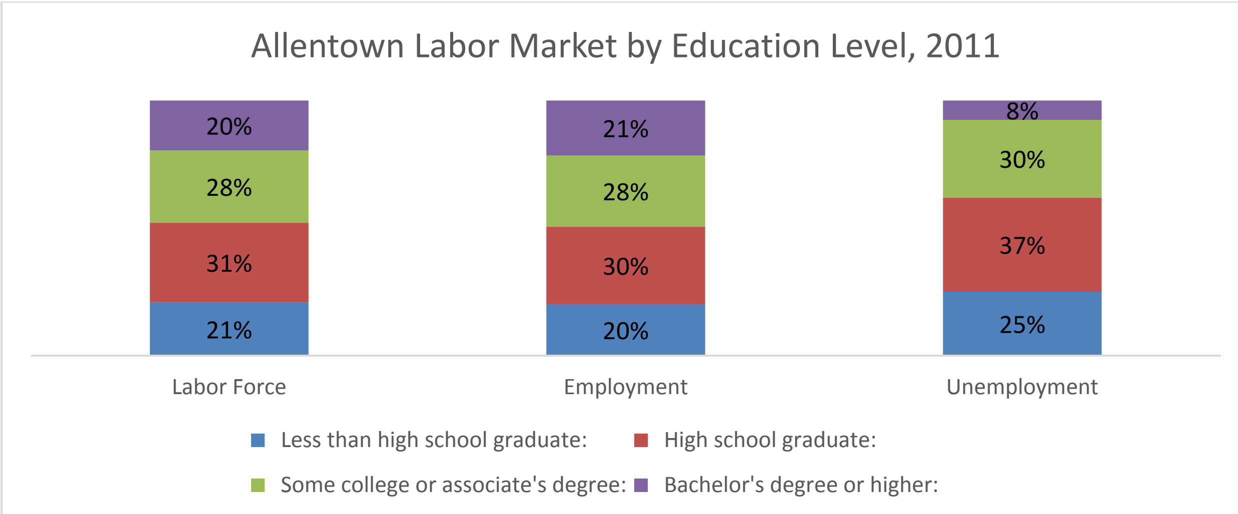
[10] U.S. Census Bureau ACS, 2011.

[11] U.S. Bureau of Labor Statistics LAUS, 2013 Not Seasonally Adjusted.

[12] U.S. Bureau of Labor Statistics LAUS, 2013 Not Seasonally Adjusted.

[13] U.S. Census Bureau ACS, 2011.

[14] TPMA analysis using EMSI Analyst 3.0, 2013.2.



In many places, including Pennsylvania and the nation as a whole, educational attainment is higher for younger adults. In Allentown, however, the portion of the population with a bachelor's degree or higher is slightly lower for adults age 25 to 34 than it is for the whole population over 25 (15% vs. 14%). As a result, the gap in education attainment between Allentown and the state is growing; the gap for bachelor degree attainment among all adults over age 25 is 12 percentage points (15% vs. 27%), but the gap between young adults is 21 percentage points (14% vs. 35%).

Allentown, too, lags the state in income and earnings. Median household income in the city ($30,784) and average worker earnings ($43,998) are both about 38% lower than Pennsylvania overall. Of the city's 42,300 households, 28% (11,800) receive Supplemental Nutrition Assistance Program (SNAP) benefits, compared to 10% of households across the state and nation. In total, about 30% of Allentown residents and 45% of children under 18 fall below the federal poverty level.[15]

Labor Market Opportunities

Middle skill jobs are Allentown's future. Jobs that require a certificate or associate's degree comprise 17.5% of all jobs in Allentown today but account for 33% of total job growth over the next five years. At the same time, high-skill jobs are also important. Bachelor and master's degree jobs are projected to hold steady over the next five years and will continue to comprise about 18% of all jobs in Allentown.

Current educational attainment rates suggest there is a sufficient number of educated residents to fill current jobs; 48% of the Allentown labor force has at least some college, and about 36% of jobs require postsecondary education. Similarly, about 20 of the labor force has at least a bachelor's degree, and 18% of Allentown jobs in 2018 will require that level of education. These figures suggest there may be some excess supply of skilled and educated workers, but further analysis would be needed to determine alignment between those skills and the needs of existing and future employers.

[15] U.S. Census Bureau ACS, 2011.

B.3: Qualitative Analysis

Education and Workforce Development Programs

The Lehigh Valley has targeted regional efforts focused on preparing students and jobseekers for in-demand occupations in manufacturing. Short-term certification and associate degree programs are offered through the following education and training providers:

- Lehigh Career and Technical Institute (LCTI) – technical high school located in Schnecksville (10 miles north of Allentown) that provides education and training programs for high school students and adult jobseekers from Allentown. Programs related to manufacturing include Welding, Mechatronics, CNC Machining as well as short-term training programs such as Forklift Training, CDL, and Heavy Equipment Operation. Over 1,000 high school students from Allentown School District are taking course(s) at LCTI during the school year.
- Lehigh Carbon Community College – regional community college with Center City Allentown location at the Donley Center. The majority of courses offered at the Donley Center are general education requirements with more specialized coursework completed at the main LCCC campus in Schnecksville. There are also English as a Second Language (ESL) courses offered which are well utilized by residents of Center City.
- Welder Training and Testing Institute (WTTI) – located in Allentown, WTTI provides comprehensive welding training preparing individuals for career opportunities with Allentown and Lehigh Valley manufacturers. It is accredited by the American Welding Society and certified as an accredited test facility allowing students to complete their training with an industry-recognized credential.
- The Literacy Center – located in downtown Allentown, TLC provides basic literacy, GED, and English as a second language (ESL) instructional programs to Lehigh Valley adults. TLC also offers instruction on health literacy, basic computer literacy, workforce literacy instruction, and life skills and nutrition classes. Approximately 60% of the immigrants that attend TLC classes have a high school or college degree. This percentage when extrapolated out to all the ESL students served that year, translates to 280 students served in just one year that have high school or college degrees.

Each of the education and training providers has industry advisory groups that incorporate employer inputs to assist with curriculum development. Additionally, the Lehigh Valley Workforce Investment Board, a regional organization that administers federal Workforce Investment Act (WIA) funding and oversees a network of CareerLink centers available to jobseekers and employers, has formed a diversified manufacturing industry partnership linking employers and education and training providers focused on addressing skill gaps and strengthening communication about job opportunities in manufacturing.

The Manufacturers Resource Center (MRC) is a regional organization that provides consulting and training assistance to existing manufacturers in the Lehigh Valley including programs focused on Lean Manufacturing and Six Sigma. It is located on the campus of Lehigh University in Bethlehem. In March 2013, the MRC received a $298,500 grant from the Commonwealth of Pennsylvania to launch the Skill-up initiative in collaboration with the Lehigh Valley WIB, LCTI, and the Da Vinci Science Center, a science education learning center in Allentown. The program is focused on addressing the skills gap in manufacturing by providing better communication and outreach to students and jobseekers about regional education and training programs in manufacturing and job opportunities available with Lehigh Valley employers. The initiative has connected superintendents from 17 school districts including

Allentown School District and is working to launch an Adopt-A-School program where manufacturing companies partner with a Lehigh Valley school to provide mentoring, school presentations, factory tours, and internship/apprenticeship opportunities.

Skills USA Council is a national non-profit organization focused on career and technical education. Regionally, District 11 serves over 6,000 students annually from Lehigh, Monroe, Northampton, and Upper Bucks counties through events and competitions that expose students to career opportunities that emphasize leadership, employability, and technical skills needed for success in the workplace. Skills USA partners include LCTI and employers who serve as sponsors and provide volunteers.

Student/Jobseeker Perspective

Effort to better inform, educate, and connect individuals to job opportunities in manufacturing are there at the regional level but not as easy to access and connect with locally in Allentown. This is particularly challenging for Center City residents who often rely on public transportation to get to classes at institutions such as LCTI and LCCC and to work at manufacturing facilities. The Lehigh and Northampton Transportation Authority (LANTA) does have a number of bus routes that reach campuses and job sites but frequency of buses and front door access are challenge for students and jobseekers.

Many employers are relying on temporary employment agencies to hire individuals for basic factory positions and warehousing positions. Jobseekers are working with agencies but having mixed results linking into long-term career opportunities. These positions do not typically require industry-recognized credentials with most utilizing on-the-job training. Transitioning from a temporary position into a full-time position is not guaranteed and there was frustration with short-term assignments and periods without placements.

Education training programs such as welding, precision machine tool technology, and CDL have high placement rates for graduates. These job opportunities are not limited to Allentown with students willing to travel throughout the Lehigh Valley. A challenge is getting students/jobseekers to participate in these programs. There is still a perception that attending a 4-year college or university is a goal rather than completing a program geared to employment related to a specific skill or trade in manufacturing.

Employer Perspective

Allentown manufacturers have varying types of occupations and skill levels that they are looking to fill. Manufacturers have low-skill, lower wage positions where the focus is on employees that will learn on-the-job and emphasis is placed on employees who can show up on time, pass a drug test, and commit to staying with an employer for over 90 days. Skilled positions typically have lower turnover but are hard to fill when employees leave or retire. With a large number of employees reaching retirement age, employers want to replace them with experienced jobseekers and/or graduates of programs that link directly to their equipment/processes. Large manufacturers have the number of placements to customize larger training programs but it is more difficult for small and medium-sized manufacturers that are locally-based or small facilities for corporations to understand and link up with resources available. Recruitment for degree/advanced degree positions was not cited as a significant problem. However, Allentown is not a primary draw to relocate degree/advanced degree positions. Instead, emphasis is placed on the collective Lehigh Valley with many individuals living in other communities while working in Allentown.

B.4: City of Allentown Labor Market History

Allentown Labor Force													
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
2003	49,677	49,560	49,804	49,761	50,214	51,107	50,580	50,233	50,168	50,253	50,390	50,153	50,158
2004	49,581	49,321	49,734	49,644	50,099	50,910	50,941	50,268	49,762	50,202	50,336	50,149	50,079
2005	49,547	49,665	49,765	50,078	50,599	51,046	51,471	51,054	50,604	50,630	50,750	50,756	50,498
2006	50,056	49,932	50,443	50,500	50,942	51,579	51,606	51,439	50,784	50,738	50,674	50,707	50,784
2007	50,262	49,797	50,023	49,714	50,376	51,243	51,153	50,921	50,799	50,722	50,893	51,048	50,579
2008	51,076	51,024	51,232	51,171	51,975	52,353	52,212	52,078	51,421	51,663	51,493	51,853	51,630
2009	51,629	51,765	51,601	51,438	52,227	52,761	52,565	52,117	51,604	51,420	51,411	51,245	51,815
2010	55,602	55,367	55,567	55,821	56,239	56,566	56,619	56,322	56,027	55,590	55,794	55,867	55,948
2011	56,180	55,913	55,733	56,351	56,985	57,500	57,562	57,249	57,204	56,897	56,652	56,519	56,729
2012	56,426	56,446	56,858	57,136	58,225	58,915	59,004	58,700	58,711	59,248	58,283	58,198	58,012
2013	58,241	57,787	57,519	57,950	58,796	59,980							

Allentown Employment													
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
2003	45,808	45,661	46,004	46,227	46,576	47,200	46,950	46,830	46,827	47,016	47,123	47,123	46,612
2004	45,826	45,676	45,917	46,283	46,526	47,151	47,212	46,808	46,605	47,026	47,032	47,074	46,595
2005	45,914	45,897	46,158	46,771	47,217	47,644	48,059	47,674	47,358	47,560	47,633	47,705	47,133
2006	46,579	46,426	46,995	47,117	47,468	48,212	48,228	48,163	47,892	48,070	47,939	48,047	47,595
2007	46,945	46,596	47,018	46,863	47,382	48,178	48,006	47,954	47,956	47,891	48,036	47,941	47,564
2008	47,189	46,836	47,168	47,319	47,697	48,113	48,004	47,891	47,616	47,752	47,359	47,159	47,509
2009	45,861	45,522	45,525	45,760	46,084	46,355	46,173	45,831	45,567	45,462	45,450	45,148	45,728
2010	48,700	48,485	48,805	49,316	49,676	50,035	49,827	49,738	49,837	49,486	49,496	49,774	49,431
2011	49,231	49,142	49,252	49,961	50,310	50,478	50,469	50,583	50,672	50,579	50,640	50,798	50,176
2012	50,161	50,260	50,647	50,939	51,441	51,741	51,575	51,561	51,858	52,191	51,684	51,735	51,316
2013	51,148	51,273	51,451	52,114	52,856	53,700							

Allentown Unemployment													
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
2003	3,869	3,899	3,800	3,534	3,638	3,907	3,630	3,403	3,341	3,237	3,267	3,030	3,546
2004	3,755	3,645	3,817	3,361	3,573	3,759	3,729	3,460	3,157	3,176	3,304	3,075	3,484
2005	3,633	3,768	3,607	3,307	3,382	3,402	3,412	3,380	3,246	3,070	3,117	3,051	3,365
2006	3,477	3,506	3,448	3,383	3,474	3,367	3,378	3,276	2,892	2,668	2,735	2,660	3,189
2007	3,317	3,201	3,005	2,851	2,994	3,065	3,147	2,967	2,843	2,831	2,857	3,107	3,015
2008	3,887	4,188	4,064	3,852	4,278	4,240	4,208	4,187	3,805	3,911	4,134	4,694	4,121
2009	5,768	6,243	6,076	5,678	6,143	6,406	6,392	6,286	6,037	5,958	5,961	6,097	6,087
2010	6,902	6,882	6,762	6,505	6,563	6,531	6,792	6,584	6,190	6,104	6,298	6,093	6,517
2011	6,949	6,771	6,481	6,390	6,675	7,022	7,093	6,666	6,532	6,318	6,012	5,721	6,553
2012	6,265	6,186	6,211	6,197	6,784	7,174	7,429	7,139	6,853	7,057	6,599	6,463	6,696
2013	7,093	6,514	6,068	5,836	5,940	6,280							

Allentown Unemployment Rate													
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
2003	7.8	7.9	7.6	7.1	7.2	7.6	7.2	6.8	6.7	6.4	6.5	6.0	7.1
2004	7.6	7.4	7.7	6.8	7.1	7.4	7.3	6.9	6.3	6.3	6.6	6.1	7.0
2005	7.3	7.6	7.2	6.6	6.7	6.7	6.6	6.6	6.4	6.1	6.1	6.0	6.7
2006	6.9	7.0	6.8	6.7	6.8	6.5	6.5	6.4	5.7	5.3	5.4	5.2	6.3
2007	6.6	6.4	6.0	5.7	5.9	6.0	6.2	5.8	5.6	5.6	5.6	6.1	6.0
2008	7.6	8.2	7.9	7.5	8.2	8.1	8.1	8.0	7.4	7.6	8.0	9.1	8.0
2009	11.2	12.1	11.8	11.0	11.8	12.1	12.2	12.1	11.7	11.6	11.6	11.9	11.7
2010	12.4	12.4	12.2	11.7	11.7	11.5	12.0	11.7	11.0	11.0	11.3	10.9	11.6
2011	12.4	12.1	11.6	11.3	11.7	12.2	12.3	11.6	11.4	11.1	10.6	10.1	11.6
2012	11.1	11.0	10.9	10.8	11.7	12.2	12.6	12.2	11.7	11.9	11.3	11.1	11.5
2013	12.2	11.3	10.5	10.1	10.1	10.5							

Source: BLS LAU 2013 Not Seasonally Adjusted

B.5: Allentown Commuter Flow Detail

Allentown Commuter Inflow-Outflow, 2011		
	Count	Share
Employed in Allentown	45,536	100%
Living in Allentown	41,812	91.8%
Net Job Inflow (+) or Outflow (-)	3,724	-
Living in Allentown	41,812	100%
Living and Employed in Allentown	9,260	22.1%
Living in Allentown, Employed Outside	32,552	77.9%
Employed in Allentown	45,536.0	100%
Living and Employed in Allentown	9,260.0	20.3%
Employed in Allentown, Living Outside	36,276.0	79.7%

Source: Census Bureau On the Map, 2011

Out-Commuter Characteristics		
	Count	Share
External Jobs Filled by Residents	32,552	100%
Workers Aged 29 or younger	9,315	28.6%
Workers Aged 30 to 54	17,798	54.7%
Workers Aged 55 or older	5,439	16.7%
Workers Earning $1,250 per month or less	7,618	23.4%
Workers Earning $1,251 to $3,333 per month	14,664	45.0%
Workers Earning More than $3,333 per month	10,270	31.5%
Workers in the "Goods Producing" Industry Class	5,285	16.2%
Workers in the "Trade, Transportation, and Utilities" Industry Class	8,251	25.3%
Workers in the "All Other Services" Industry Class	19,016	58.4%

Source: Census Bureau On the Map, 2011

In-Commuter Characteristics		
	Count	Share
External Jobs Filled by Residents	36,276	100%
Workers Aged 29 or younger	6,815	18.8%
Workers Aged 30 to 54	20,918	57.7%
Workers Aged 55 or older	8,543	23.6%
Workers Earning $1,250 per month or less	6,895	19.0%
Workers Earning $1,251 to $3,333 per month	12,002	33.1%
Workers Earning More than $3,333 per month	17,379	47.9%
Workers in the "Goods Producing" Industry Class	3,149	8.7%
Workers in the "Trade, Transportation, and Utilities" Industry Class	5,296	14.6%
Workers in the "All Other Services" Industry Class	27,831	76.7%

Source: Census Bureau On the Map, 2011

Non-Commuter Characteristics		
	Count	Share
External Jobs Filled by Residents	9,260	100%
Workers Aged 29 or younger	2,176	23.5%
Workers Aged 30 to 54	4,959	53.6%
Workers Aged 55 or older	2,125	22.9%
Workers Earning $1,250 per month or less	2,776	30.0%
Workers Earning $1,251 to $3,333 per month	4,103	44.3%
Workers Earning More than $3,333 per month	2,381	25.7%
Workers in the "Goods Producing" Industry Class	969	10.5%
Workers in the "Trade, Transportation, and Utilities" Industry Class	1,238	13.4%
Workers in the "All Other Services" Industry Class	7,053	76.2%

Source: Census Bureau On the Map, 2011

B.6: Occupational Trends

The following series of tables summarizes occupational trends in the City of Allentown zip codes at the 2-digit and 5-digit Standard Occupational Classification (SOC) codes for 2003 through 2013 and 2013 through 2013. The analysis begins with an overview of all occupations in the study area and then narrows to focus on occupations specifically in the Manufacturing industry sector.

The following tables include data on “Annual Openings”, which is a different measurement than the total number of jobs within each occupation category. Openings are the estimated employment change and turnover for an occupation during the identified timeframe. Openings are divided by the number of years in the timeframe to derive Annual Openings. This is an estimate of labor market demand for an occupation.

We further note that job projections are a method of **trending past employment numbers into the future** for an industry or occupation – assuming all else remains constant. Projections are not predictions, and projected job growth is not the same thing as “demand”. It is anticipated that by implementing this Re-Industrialization Strategy, the baseline projections summarized below will be exceeded.

Occupation Trends: All Occupations

At the 2-digit SOC code level, the largest occupation category in the zip code region is Office and Administrative Support Occupations (15,266 jobs) followed by Healthcare Practitioners and Technical Occupations (11,768 jobs) and Sales and Related Occupations (7,969 jobs). Production Occupations has 5,316 jobs and is the fifth largest 2-digit SOC occupational category in the Allentown zip region.

Manufacturing businesses are in a period of workforce transition, which is represented in the data by the high rate of turnover in Production Occupations at the 2-digit level. While the total number of Production Occupations in the Allentown zip region declined by 19% or 1,216 jobs from 2003 to 2013, the average number of job openings in the region was almost 350 annually. In other words, those 350 jobs represent the rate of job churn, replacing existing personal that are leaving their current position for one reason or another (retirement, taking a new position, relocation, etc.).

2013 to 2023 projections show that the fastest growing occupations in the Allentown zip region include Healthcare Practitioners and Technical Occupations (2,126 new jobs), Healthcare and Support Occupations (711 new jobs), and Office and Administrative Support Occupations (497 new jobs). Production Occupations are expected to add over 200 jobs from 2013 to 2023, with an average annual opening rate of about 165 jobs annually.

At the 5-digit level, the fastest growing occupations from 2003 to 2013 in the Allentown zip region were Registered Nurses (1,192 new jobs), Nursing Assistants (365 new jobs), and Combined Food Preparation and Serving Workers, Including Fast Food (365 new jobs). With the exception of nursing related occupations, most of the fastest growing occupations in the zip region require only on-the-job training.

Growth in healthcare occupations is expected to continue through 2023 with top occupations projected to include Registered Nurses (1,057 new jobs), Nursing Assistants (247 new jobs), Home Health Aides (176 new jobs), Personal Care Aides (170 new jobs), and Medical Secretaries (161 new jobs).

Occupational categories projected to be among the fastest growing outside of the healthcare sector include Combined Food Preparation and Service Workers, Including Fast Food (204 new jobs) and Heavy and Tractor-trailer Truck Drivers (204 new jobs).

Largest 2-digit Occupations: Allentown Zip Codes							
SOC	Occupation	2003 Jobs	2013 Jobs	Change	% Change	Median Hourly Earnings	Annual Openings
43-0000	Office and Administrative Support Occupations	15,057	15,266	209	1.0%	$16.64	644
29-0000	Healthcare Practitioners and Technical Occupations	9,102	11,768	2,666	29.0%	$36.69	544
41-0000	Sales and Related Occupations	8,537	7,969	(568)	-7.0%	$17.26	415
35-0000	Food Preparation and Serving Related Occupations	5,613	6,331	718	13.0%	$10.16	323
51-0000	Production Occupations	6,532	5,316	(1,216)	-19.0%	$16.72	347
53-0000	Transportation and Material Moving Occupations	4,997	5,162	165	3.0%	$15.24	324
31-0000	Healthcare Support Occupations	3,718	4,698	980	26.0%	$13.59	196
13-0000	Business and Financial Operations Occupations	3,570	3,480	(90)	-3.0%	$31.24	153
11-0000	Management Occupations	3,543	3,423	(120)	-3.0%	$47.33	140
49-0000	Installation, Maintenance, and Repair Occupations	3,828	3,314	(514)	-13.0%	$20.17	155
39-0000	Personal Care and Service Occupations	2,696	3,202	506	19.0%	$9.91	185
37-0000	Building and Grounds Cleaning and Maintenance Occupations	2,704	3,137	433	16.0%	$12.13	132
47-0000	Construction and Extraction Occupations	3,111	2,939	(172)	-6.0%	$20.25	165
25-0000	Education, Training, and Library Occupations	2,106	2,333	227	11.0%	$23.08	116
21-0000	Community and Social Service Occupations	1,607	2,061	454	28.0%	$18.56	110
15-0000	Computer and Mathematical Occupations	1,580	1,573	(7)	0.0%	$37.83	66
33-0000	Protective Service Occupations	1,368	1,396	28	2.0%	$21.40	63
17-0000	Architecture and Engineering Occupations	1,724	1,362	(362)	-21.0%	$37.37	85
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	1,038	992	(46)	-4.0%	$20.64	68
19-0000	Life, Physical, and Social Science Occupations	506	581	75	15.0%	$27.70	42
23-0000	Legal Occupations	532	447	(85)	-16.0%	$44.35	13
55-0000	Military occupations	475	370	(105)	-22.0%	$24.18	2
45-0000	Farming, Fishing, and Forestry Occupations	62	56	(6)	-10.0%	$11.30	4
99-0000	Unclassified Occupation	0	0	0	0.0%	$0.00	0
	Total	84,006	87,175	3,169	4.0%	$21.63	4,292

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 2-digit Occupations 2013-23: Allentown Zip Codes							
SOC	Occupation	2013 Jobs	2023 Jobs	Change	% Change	Median Hourly Earnings	Annual Openings
29-0000	Healthcare Practitioners and Technical Occupations	11,768	13,894	2,126	18.0%	$36.69	472
31-0000	Healthcare Support Occupations	4,698	5,409	711	15.0%	$13.59	146
43-0000	Office and Administrative Support Occupations	15,266	15,763	497	3.0%	$16.64	435
35-0000	Food Preparation and Serving Related Occupations	6,331	6,799	468	7.0%	$10.16	278
53-0000	Transportation and Material Moving Occupations	5,162	5,559	397	8.0%	$15.24	188
39-0000	Personal Care and Service Occupations	3,202	3,531	329	10.0%	$9.91	129
47-0000	Construction and Extraction Occupations	2,939	3,220	281	10.0%	$20.25	109
37-0000	Building and Grounds Cleaning and Maintenance Occupations	3,137	3,408	271	9.0%	$12.13	90
21-0000	Community and Social Service Occupations	2,061	2,315	254	12.0%	$18.56	75
13-0000	Business and Financial Operations Occupations	3,480	3,712	232	7.0%	$31.24	110
49-0000	Installation, Maintenance, and Repair Occupations	3,314	3,524	210	6.0%	$20.17	105
51-0000	Production Occupations	5,316	5,525	209	4.0%	$16.72	164
41-0000	Sales and Related Occupations	7,969	8,148	179	2.0%	$17.26	295
11-0000	Management Occupations	3,423	3,600	177	5.0%	$47.33	103
25-0000	Education, Training, and Library Occupations	2,333	2,469	136	6.0%	$23.08	68
17-0000	Architecture and Engineering Occupations	1,362	1,470	108	8.0%	$37.37	49
19-0000	Life, Physical, and Social Science Occupations	581	683	102	18.0%	$27.70	29
15-0000	Computer and Mathematical Occupations	1,573	1,663	90	6.0%	$37.83	44
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	992	1,042	50	5.0%	$20.64	38
55-0000	Military occupations	370	376	6	2.0%	$24.18	1
99-0000	Unclassified Occupation	0	0	0	0.0%	$0.00	0
45-0000	Farming, Fishing, and Forestry Occupations	56	52	(4)	-7.0%	$11.30	2
33-0000	Protective Service Occupations	1,396	1,378	(18)	-1.0%	$21.40	41
23-0000	Legal Occupations	447	413	(34)	-8.0%	$44.35	9
	Total	87,175	93,954	6,779	8.0%	$21.63	2,980

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 5-digit Occupations 2003-13: Allentown Zip Codes								
SOC	Occupation	2003 Jobs	2013 Jobs	Change	% Change	Median Hourly Earnings	Annual Openings	Education Level
29-1141	Registered Nurses	3,350	4,542	1,192	36.0%	$32.91	210	Associate's degree
31-1014	Nursing Assistants	1,634	1,999	365	22.0%	$14.15	69	Postsecondary non-degree award
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	1,371	1,736	365	27.0%	$9.25	83	Short-term on-the-job training
31-1011	Home Health Aides	463	725	262	57.0%	$8.86	44	Short-term on-the-job training
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,246	1,462	216	17.0%	$12.18	62	Short-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	718	924	206	29.0%	$19.06	54	Short-term on-the-job training
43-4171	Receptionists and Information Clerks	850	1,028	178	21.0%	$12.87	52	Short-term on-the-job training
29-2061	Licensed Practical and Licensed Vocational Nurses	712	886	174	24.0%	$21.58	45	Postsecondary non-degree award
39-9021	Personal Care Aides	310	483	173	56.0%	$10.22	26	Short-term on-the-job training
31-9092	Medical Assistants	697	858	161	23.0%	$14.49	34	Moderate-term on-the-job training
37-2012	Maids and Housekeeping Cleaners	741	895	154	21.0%	$10.72	35	Short-term on-the-job training
43-9061	Office Clerks, General	2,238	2,386	148	7.0%	$14.50	86	Short-term on-the-job training
21-1014	Mental Health Counselors	192	335	143	74.0%	$18.79	22	Master's degree
43-6013	Medical Secretaries	453	592	139	31.0%	$15.11	22	Moderate-term on-the-job training
29-1069	Physicians and Surgeons, All Other	531	664	133	25.0%	$96.67	29	First professional degree
29-2034	Radiologic Technologists	328	445	117	36.0%	$26.32	19	Associate's degree
39-9011	Childcare Workers	649	764	115	18.0%	$8.83	44	Short-term on-the-job training
29-2041	Emergency Medical Technicians and Paramedics	189	292	103	54.0%	$17.62	15	Postsecondary non-degree award
11-9111	Medical and Health Services Managers	355	455	100	28.0%	$42.61	22	Bachelor's degree
29-2011	Medical and Clinical Laboratory Technologists	384	481	97	25.0%	$26.05	20	Bachelor's degree
35-3031	Waiters and Waitresses	1,035	1,130	95	9.0%	$9.39	73	Short-term on-the-job training
29-1123	Physical Therapists	204	298	94	46.0%	$35.45	14	First professional degree
21-1011	Substance Abuse and Behavioral Disorder Counselors	114	201	87	76.0%	$14.18	13	Bachelor's degree
21-1023	Mental Health and Substance Abuse Social Workers	122	201	79	65.0%	$17.74	13	Master's degree
29-1062	Family and General Practitioners	240	310	70	29.0%	$77.57	15	First professional degree

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Fastest Growing 5-digit Occupations 2013-23: Allentown Zip Codes								
SOC	Occupation	2013 Jobs	2023 Jobs	Change	% Change	Median Hourly Earnings	Annual Openings	Education Level
29-1141	Registered Nurses	4,542	5,599	1,057	23.0%	$32.91	201	Associate's degree
31-1014	Nursing Assistants	1,999	2,246	247	12.0%	$14.15	53	Postsecondary non-degree award
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	1,736	1,940	204	12.0%	$9.25	73	Short-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	924	1,128	204	22.0%	$19.06	41	Short-term on-the-job training
31-1011	Home Health Aides	725	901	176	24.0%	$8.86	28	Short-term on-the-job training
39-9021	Personal Care Aides	483	653	170	35.0%	$10.22	22	Short-term on-the-job training
43-6013	Medical Secretaries	592	753	161	27.0%	$15.11	26	Moderate-term on-the-job training
43-4171	Receptionists and Information Clerks	1,028	1,159	131	13.0%	$12.87	47	Short-term on-the-job training
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,462	1,586	124	8.0%	$12.18	44	Short-term on-the-job training
31-9092	Medical Assistants	858	978	120	14.0%	$14.49	27	Moderate-term on-the-job training
43-9061	Office Clerks, General	2,386	2,506	120	5.0%	$14.50	59	Short-term on-the-job training
29-2061	Licensed Practical and Licensed Vocational Nurses	886	998	112	13.0%	$21.58	37	Postsecondary non-degree award
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1,183	1,288	105	9.0%	$13.16	51	Short-term on-the-job training
29-2034	Radiologic Technologists	445	542	97	22.0%	$26.32	18	Associate's degree
29-2041	Emergency Medical Technicians and Paramedics	292	373	81	28.0%	$17.62	15	Postsecondary non-degree award
49-3023	Automotive Service Technicians and Mechanics	614	693	79	13.0%	$16.14	25	Postsecondary non-degree award
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1,074	1,150	76	7.0%	$29.57	35	Moderate-term on-the-job training
37-3011	Landscaping and Groundskeeping Workers	535	611	76	14.0%	$12.48	18	Short-term on-the-job training
41-2031	Retail Salespersons	1,916	1,984	68	4.0%	$10.83	68	Short-term on-the-job training
29-1069	Physicians and Surgeons, All Other	664	732	68	10.0%	$96.67	22	First professional degree
21-1014	Mental Health Counselors	335	402	67	20.0%	$18.79	15	Master's degree
11-9111	Medical and Health Services Managers	455	522	67	15.0%	$42.61	19	Bachelor's degree
37-2012	Maids and Housekeeping Cleaners	895	958	63	7.0%	$10.72	22	Short-term on-the-job training
35-3031	Waiters and Waitresses	1,130	1,191	61	5.0%	$9.39	65	Short-term on-the-job training
43-1011	First-Line Supervisors of Office and Administrative Support Workers	856	911	55	6.0%	$28.67	29	Work experience in a related occupation

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

Occupational Trends: Production Trends

Data in the following series of tables summarizes all occupations in the **Manufacturing industry sector only, and excludes jobs in other industry sectors.** Most of the occupations are Production occupations (SOC 51); however, other jobs that support the manufacturing sector are also included such as Customer Service Representatives, Office Clerks, Sales Representatives, etc. For example, the data show that there were 110 Customer Service Representatives in 2013 in the Manufacturing industry sector. However, this occupation is necessary in almost every industry sector; in total there were nearly 2,000 Customer Service Representatives in the zip region in 2013. The intent of analyzing this data is to understand the occupational trends specific to the Manufacturing industry sector in Allentown.

Note: The "Annual Openings" data includes openings in all industry sectors and is not specific to the Manufacturing industry sector.

In the Manufacturing industry, the largest 5-digit occupations include (jobs in 2013, annual openings from 2003-2013):

- **Team Assemblers**: 449 jobs, 37 annual openings
- **Machinists:** 265 jobs, 18 annual openings
- **First-Line Supervisors of Production and Operating Workers:** 204 jobs, 12 annual openings
- **Electrical and Electronic Equipment Assemblers:** 182 jobs, 28 annual openings
- **Inspectors, Testers, Sorters, Samplers, and Weighers:** 178 jobs, 15 annual openings
- **Packaging and Filling Machine Operators and Tenders:** 176 jobs, 13 annual openings
- **Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products:** 159 jobs, 57 annual openings
- **Laborers and Freight, Stock, and Material Movers, Hand:** 133 jobs, 87 annual openings
- **Helpers--Production Workers:** 130 jobs, 17 annual openings
- **Packers and Packagers, Hand:** 120 jobs, 30 annual openings

It is important to note that while most of the largest occupations in the Manufacturing industry sector declined in terms of the total number of jobs from 2003 to 2013, the total number of annual openings for these occupations remains high, typically between 20-30 positions annually.

The fastest growing occupations from 2003 to 2013 in the Manufacturing industry sector include Cabinetmakers and Bench Carpenters (32 new jobs), Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic (23 new jobs), and Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic (12 new jobs). Almost all of the fastest growing occupations require moderate-term on-the-job training.

Over the next 10-years through 2023, the fastest growing occupations in the Manufacturing industry sector are expected to include Welders, Cutters, Solderers, and Brazers (21 new jobs), Computer-Controlled Machine Tool Operators, Metal and Plastic (15 new jobs), Print Binding and Finishing Workers (15 new jobs), and Machinists (13 new jobs).

Largest 5-digit Manufacturing Occupations Allentown Zip Codes								
SOC	Occupation	2003 Jobs	2013 Jobs	Change	% Change	Median Hourly Earnings	Education Level	*Annual Openings
51-2092	Team Assemblers	557	449	(108)	-19.0%	$13.99	Moderate-term on-the-job training	37
51-4041	Machinists	283	265	(18)	-6.0%	$19.46	Long-term on-the-job training	18
51-1011	First-Line Supervisors of Production and Operating Workers	286	204	(82)	-29.0%	$31.20	Work experience in a related occupation	12
51-2022	Electrical and Electronic Equipment Assemblers	253	182	(71)	-28.0%	$16.24	Short-term on-the-job training	28
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	232	178	(54)	-23.0%	$17.80	Moderate-term on-the-job training	15
51-9111	Packaging and Filling Machine Operators and Tenders	227	176	(51)	-22.0%	$14.63	Moderate-term on-the-job training	13
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	205	159	(46)	-22.0%	$29.57	Moderate-term on-the-job training	57
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	182	133	(49)	-27.0%	$13.16	Short-term on-the-job training	87
51-9198	Helpers--Production Workers	181	130	(51)	-28.0%	$11.02	Short-term on-the-job training	17
53-7064	Packers and Packagers, Hand	164	120	(44)	-27.0%	$12.05	Short-term on-the-job training	30
49-9041	Industrial Machinery Mechanics	135	117	(18)	-13.0%	$23.19	Long-term on-the-job training	12
53-7051	Industrial Truck and Tractor Operators	128	117	(11)	-9.0%	$15.59	Short-term on-the-job training	28
49-9071	Maintenance and Repair Workers, General	138	112	(26)	-19.0%	$18.86	Moderate-term on-the-job training	29
43-5071	Shipping, Receiving, and Traffic Clerks	166	110	(56)	-34.0%	$15.50	Short-term on-the-job training	18
43-4051	Customer Service Representatives	154	110	(44)	-29.0%	$15.38	Short-term on-the-job training	114
43-9061	Office Clerks, General	148	109	(39)	-26.0%	$14.50	Short-term on-the-job training	86
51-6031	Sewing Machine Operators	383	105	(278)	-73.0%	$11.33	Short-term on-the-job training	6
17-2112	Industrial Engineers	128	97	(31)	-24.0%	$41.81	Bachelor's degree	9
11-1021	General and Operations Managers	139	85	(54)	-39.0%	$50.17	Bachelor's or higher degree, plus work experience	23
51-4121	Welders, Cutters, Solderers, and Brazers	82	81	(1)	-1.0%	$17.76	Postsecondary non-degree award	8
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	80	79	(1)	-1.0%	$16.32	Moderate-term on-the-job training	5
51-2023	Electromechanical Equipment Assemblers	92	77	(15)	-16.0%	$22.29	Short-term on-the-job training	7
51-7011	Cabinetmakers and Bench Carpenters	45	77	32	71.0%	$18.04	Moderate-term on-the-job training	13
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	64	76	12	19.0%	$12.91	Moderate-term on-the-job training	7
11-3051	Industrial Production Managers	92	74	(18)	-20.0%	$46.83	Bachelor's or higher degree, plus work experience	3

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

* Represents job openings in manufacturing and non-manufacturing industry sectors.

Fastest Growing 5-digit Manufacturing Occupations 2003-13: Allentown Zip Codes								
SOC	Occupation	2003 Jobs	2013 Jobs	Change	% Change	Median Hourly Earnings	Education Level	*Annual Openings
51-7011	Cabinetmakers and Bench Carpenters	45	77	32	71.0%	$18.04	Moderate-term on-the-job training	13
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	30	53	23	77.0%	$17.60	Moderate-term on-the-job training	7
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	64	76	12	19.0%	$12.91	Moderate-term on-the-job training	7
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	67	73	6	9.0%	$14.54	Moderate-term on-the-job training	5
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	38	44	6	16.0%	$14.79	Moderate-term on-the-job training	3
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	15	20	5	33.0%	$12.85	Long-term on-the-job training	2
19-2031	Chemists	18	23	5	28.0%	$31.28	Bachelor's degree	6
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	29	33	4	14.0%	$15.13	Moderate-term on-the-job training	3
47-2211	Sheet Metal Workers	14	16	2	14.0%	$30.54	Long-term on-the-job training	4
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	23	25	2	9.0%	$15.60	Moderate-term on-the-job training	1
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	38	39	1	3.0%	$16.39	Moderate-term on-the-job training	3

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

* Represents job openings in manufacturing and non-manufacturing industry sectors.

Fastest Growing 5-digit Manufacturing Occupations 2013-23: Allentown Zip Codes								
SOC	Occupation	2013 Jobs	2023 Jobs	Change	% Change	Median Hourly Earnings	Education Level	*Annual Openings
51-4121	Welders, Cutters, Solderers, and Brazers	81	102	21	26.0%	$17.76	Postsecondary non-degree award	8
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	79	94	15	19.0%	$16.32	Moderate-term on-the-job training	3
51-5113	Print Binding and Finishing Workers	19	34	15	79.0%	$15.64	Short-term on-the-job training	3
51-4041	Machinists	265	278	13	5.0%	$19.46	Long-term on-the-job training	10
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	178	187	9	5.0%	$17.80	Moderate-term on-the-job training	9
19-2031	Chemists	23	31	8	35.0%	$31.28	Bachelor's degree	4
51-2041	Structural Metal Fabricators and Fitters	69	77	8	12.0%	$20.01	Moderate-term on-the-job training	3
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	61	68	7	11.0%	$16.05	Moderate-term on-the-job training	2
49-9041	Industrial Machinery Mechanics	117	124	7	6.0%	$23.19	Long-term on-the-job training	9
17-2031	Biomedical Engineers	18	24	6	33.0%	$41.09	Bachelor's degree	2
11-3051	Industrial Production Managers	74	80	6	8.0%	$46.83	Bachelor's or higher degree, plus work experience	3
15-1133	Software Developers, Systems Software	17	23	6	35.0%	$50.90	Bachelor's degree	4
51-5111	Prepress Technicians and Workers	12	18	6	50.0%	$20.36	Postsecondary non-degree award	1
47-2211	Sheet Metal Workers	16	21	5	31.0%	$30.54	Long-term on-the-job training	3
13-1051	Cost Estimators	15	20	5	33.0%	$29.97	Bachelor's degree	5
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	39	44	5	13.0%	$16.39	Moderate-term on-the-job training	1
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	20	25	5	25.0%	$14.32	Moderate-term on-the-job training	1
17-2141	Mechanical Engineers	73	78	5	7.0%	$38.91	Bachelor's degree	7
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	73	77	4	5.0%	$14.54	Moderate-term on-the-job training	2
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	11	15	4	36.0%	$19.05	Moderate-term on-the-job training	1
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	44	47	3	7.0%	$14.79	Moderate-term on-the-job training	2
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	17	20	3	18.0%	$16.91	Moderate-term on-the-job training	1
51-9199	Production Workers, All Other	44	47	3	7.0%	$11.57	Moderate-term on-the-job training	5
13-1081	Logisticians	12	15	3	25.0%	$34.26	Bachelor's degree	2

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

* Represents job openings in manufacturing and non-manufacturing industry sectors.

Appendix C: Bridgeworks Enterprise Center Analysis

C.1: Introduction

Innovation Policyworks LLC, a subcontractor to Camoin Associates, completed this analysis in July and August 2013. In addition to a visit to Allentown on July 8-11, 2013, and the completion of 20 in-person interviews at that time, we also held telephone interviews with three additional organizations. Anthony Durante arranged the meetings with individuals and organizations that we selected. The interviews included current management, current tenants, graduates of the program, potential clients, members of the Lehigh Valley entrepreneurial education community, other entrepreneurial service providers and others in the community with knowledge of the ecosystem. A complete list is included in **Appendix J.**

We toured the Bridgeworks facility extensively and visited TechVentures as well. Bergmann Associates, the architecture firm on the team, who visited the facility in late June, also contributed to our observations of the facility.

The information gathered from these visits and interviews is described in **Sections C.2** and **C.3**. Best practices are documented in **Section C.4**. Our findings (**Section C.5**) and recommendations are based on a comparison of best practice to the existing situation at Bridgeworks.

C.2: History of the Bridgeworks Enterprise Center

In 2014, the Bridgeworks Enterprise Center (BEC) will celebrate its 25th anniversary. The building itself started life as the Mack Truck Works Building 4A and was built in the 1920s. When Mack Truck left Allentown in the early 1980s, the building was left vacant.

Mack 4A, at the intersection of South 10th and Harrison Streets, was purchased by the Allentown Economic Development Corporation (AEDC) in 1988 to use as a manufacturing incubator. Over $2 million of renovations were needed, including removing asbestos, insulating, partitioning and cleaning up the building. According to Wayne Barz, former Bridgeworks incubator manager and now Director of the Ben Franklin TechVentures facility, AEDC received financing from the Ben Franklin Partnership, the City of Allentown, Allentown Redevelopment Authority, Private Industry Council, Pennsylvania Department of Community Affairs (now Department of Community and Economic Development), and Merchants Bank (now First Union) to get the incubator started.

The incubator was officially launched on June 21, 1989. The facility was initially outfitted with two interior loading docks with overhead crane capacity, two large conference rooms, a library, a 2,500 square-foot reception and administrative office area, two exterior truck docks, two drive-in doors, a state-of-the-art actively monitored security system, parking for 60 vehicles, and a dozen[16] subdivided tenant units with 15’ clear ceiling heights and heavy load bearing floors.

At the time, the incubator phenomenon was in its infancy. There were less than 100 incubators in the country in 1987, and little documented best practices or knowledge about what worked. The National Business Incubation Association (NBIA) was only a few years old, and the practice of incubation was just beginning.

[16] It appears that some suites may have been subsequently subdivided, as there are now sixteen rentable spaces.

There was considerable turnover in incubator management in the early days, but Wayne Barz did run the program in the 1990s and was well respected by tenants from that time. However, a new incubator manager arrived around 2000, and a different era began. In the 2000s, the BEC was operated primarily as low-cost manufacturing space, with little programming or business assistance offered. Tenants from this time report having few interactions with AEDC management, and little assistance beyond cheap office space. Nevertheless, several significant companies emerged from the BEC in the last decade, and they have stayed in the Lehigh Valley and prospered.

In 2008, Scott Unger and Matt Tuerk took over the AEDC, with a different vision for the incubator. The Strategic Plan 2010-2015 for AEDC includes the mission: “Attract Innovative People -- Shape an environment that stimulates entrepreneurs, artisans and tradespeople to create wealth-building opportunities.” This came with a specific milestone of achieving 85% occupancy at the Bridgeworks Enterprise Center. For the 2010-2011 operating year, AEDC set as its goals the establishment of the Hive4A, a co-working space, strengthening relationships with local higher education and vocational educational institutions, and improving incubator operations and programming. The goal also laid out the need for a strategic plan for the BEC.

Only some of these plans came into fruition. The Hive4A co-working space was built out. In addition, one tenant suite was leased to Make Lehigh Valley, a makerspace club, for free. The intent of these additions to the programming at the BEC was to increase the connection to entrepreneurs in the Lehigh Valley, and potentially bridge a gap between the incipient entrepreneurs and those with sufficient revenues to afford to rent space in the building.

Also, in January 2012, the AEDC moved its own operations to the facility from City Hall. In 2011, the incubator manager left, and Anthony Durante was hired in April 2012. His background includes a career in the Marines, and an MBA from Lehigh including the entrepreneurship program. He is currently pursuing training and certification from the National Business Incubation Association.

At one time the BEC was part of the statewide Ben Franklin Incubator Network and received state funds through Ben Franklin. The amount was $20,000 a year except in 2006, 2007 and 2008 when it was $30,000. However, due to state level budget cuts to Ben Franklin, this amount dropped to $10,000 in 2009 and $5,000 in 2010. The BEC no longer receives any funding from the state and any collaboration exists only due to personal relationships between the managers.

C.3: The Bridgeworks Enterprise Center Today

The Facility

Today, the BEC is still housed in the Mack 4A building. Comprising 62,525 square feet of space, approximately 44,500 is available for rental. The rest is used for the AEDC offices, common spaces (hallways, rest rooms, conference rooms, loading dock, machine shop). As of September 1, 2013, 18,000 sq. ft. (43.3 percent) is rented. A new tenant, Colony Meadery, is scheduled to move in shortly. The last anchor tenant, Luminaire Testing Laboratory (acquired by Underwriter’s Laboratory), moved out in late 2012. The breakout of the space is shown in **Table C-1**.

The rental rate for incubator tenants is $8.50/sq ft. This compares with $5.72 average minimum for commercial manufacturing and warehouse space in the Lehigh Valley. However, the pricing differential is intentional, implying the availability of additional services. Interestingly, there is also a perception of the facility as “cheap space.”

During our visit during the first week of July, 2013, the co-working space was virtually empty (and the air conditioning didn’t work for two of the three days we were there). There are three tenants in the HOA space. Only one was physically there during the week that we visited. This company is a media company and appears to have stayed the same size for a number of years.

From the outside, the building is showing its age. Aside from the iconic water tower at the entrance, there is little signage until you are immediately in the parking lot. There is parking for 34 cars inside the fence (plus two handicapped spaces), and another 10-15 alongside the building. The parking lot is in disrepair. There is little exterior lighting, and minimal landscaping. The exterior siding is rough, and the general impression is of an old and poorly maintained building.

Table C-1. Use of Rentable Space at Bridgeworks Enterprise Center

Use of space	Square footage	Percent	Potential revenue if fully rented @$8.50/sq. ft.	Percent of Revenue
16 incubator suites	35,726	80.26%	$147,388	91%
6 Home Office Alternative suites	952	2.13%	$11,540	7.13%
Shared areas (makerspace, Co-working space, Conference Room, Machine Shop)	7835	17.6%	$3000	1.85%
Total	44,513	100%	$161,928	100%

Once inside, you enter into the AEDC suite of offices, with a receptionist (and working AC). Go further through the door into the incubator space, and a wide and long corridor down the center of the building greets you. Because of the high ceilings, skylights and white painted walls, and carpeted floors, the space is spacious and airy, but empty. Flags mark the front doors of the various tenant spaces.

Immediately on the right is the HOA space. There are 6 individual offices and a small conference room, all sharing a small reception area. The rooms are not furnished. The ceiling tiles are damaged or missing; the walls have peeling paint. There is no soundproofing between rooms, and conversations in one office or conference room are clearly heard throughout the area.

Across the hall is the makerspace. By design, this is a big open area (3,420 sq ft) full of various pieces of equipment and electronics in different stages of being built and/or torn apart. In this space, you can see the original framework of the Mack building, with old wooden floors, and extremely high ceilings. This space is not air-conditioned and the users come here mostly in the evenings to work.

The next space is the Hive4A, the co-working space. This 2,260 sq foot area has been somewhat fixed up. The wood floors have been sanded and sealed; three offices with doors flank one wall, a shared kitchen space with a Keurig machine (and a broken refrigerator, recently replaced with a donated unit) are at one end. The rest of the space has tables, chairs, and some cubicles for users to occupy on a first-come, first-served basis.

At the time of our visit, there was only one small conference room for tenants to use, although one space is designated for an upgraded facility for this purpose. [The work to build out the conference facility is in progress as of the writing of this report.] The loading dock, at the far end of the building, has access to the street. There is a forklift, but apparently it is not functional. There is also a machine shop with a few donated machines in it.

Eighty-two percent of the rentable building is available for incubator tenants, separated into 16 suites. Incubator tenants occupy six suites plus one is rented to the Allentown Public Theatre. The quality of their spaces varies widely, depending upon how much the company has invested into the space. All have provided their own furnishings; some have installed their own AC and phone systems. Many have built interior offices and conference spaces and added carpeting. Quite a few spaces recently vacated are in need of updating and clean up. At our visit, this was a work in progress, although it was not evident that the improvements were a priority with the maintenance crew.

The building has a simple security system where doors are secured with push pin locks. Tenants are given their own code to use to obtain 24/7 access to the building. Other than one recent incident where a co-working space user gave their code to a person who was sleeping in the building, tenants report no safety or security issues either inside or outside the building. In contrast, several community members expressed concerns about the neighborhood and lack of lighting, and prefer not to come to the facility after dark.

The building is showing evidence of years of deferred maintenance. The most glaring problem is the roof, which was apparently “upgraded” sometime in the past two decades with a clear material with little R-value. As a result, the building is extremely hot in the summer and cold in the winter. For several years, AEDC has been trying to raise the funds to improve the situation.

In August, 2012, a $500,000 grant was announced from the US EDA. The grant will pay for the replacement of the building's fiberglass roof panels with insulated panels and glass skylights, which will improve the efficiency of the center's heating and cooling systems. The infrastructure improvements are projected to lead to a 30 to 60 percent reduction in energy costs, for a savings of around $50,000 in utility costs. A matching commitment of $500,000 from AEDC has been made and the work started in late August 2013. AEDC is hopeful that a grant from the state’s Redevelopment Assistance Capital Program (RACP) will replace their half of the capital.

Services Provided

Aside from the space, AEDC provides some programs to tenants. Starting 21 months ago, seminars are held roughly once a month. Tenants report that these are somewhat useful, but the management sophistication of the tenants is quite varied, so some found them interesting and some found them not useful at all. A list of recent seminars is included as **Table C-2**.

As part of the incubator program, tenants are required to provide semi-annual financial reports, and this gives the incubator manager the ability to have structured conversations and provide advice to the management teams. All the tenants spoke highly of the current incubator manager and of their experience since he took over.

Some of the tenants report that they have had significant interactions with other tenants, and have done business with each other.

One of the tenants has received financing from the Ben Franklin Technology Partners program headquartered at TechVentures. None have received funding from Lehigh Valley Angel Investors.

Table C-2. Seminars Held at BEC, 2012 and 2013		
Class Title	Instructor	Date
Intellectual Property Legal Checklist for Startups	Doug Panzer	9/11/13
Marketing Strategies for Startups	Sharen Kindel	8/22/13 (cancelled)
Accounting for Change	James Barchiesi	7/17/13
Go Fund Yourself	James Barchiesi	6/19/13
Water Quality Mini-Clinic	Stephanie Olexa	6/13/13 (Special clinic for selected clients and prospects)
Trade Secrets and Noncompetes	Josh Gildea	5/1/13
Press Release Basics	Joe McDermont	3/14/13
Startup and Growth Stage Financing	SBA/LVEDC/AEDC/Bank representative	1/14/13
Banking 101 for Small Businesses	Marilyn Morel	4/19/12
Telling Stories – The Inexpensive Way to Increase Sales	Joe McDermott	2/16/12
Legal 101 for Startups and Independent Professionals	Jack Gross	1/18/12

Incubator Operations

The incubator has no separate mission, strategic plan, or financials per se. AEDC believes that there should be a separate strategic plan for the incubator, but that fully separating the financials creates a risk to the program.

There is a process for intake of clients. A company that is interested in being part of the incubator contacts the incubator manager, and there are usually several meetings. At this time, there is about one tour per week. The company provides a brief business plan like document, and then has the opportunity to make a presentation to the Advisory Committee (see **Table C-3**). If the Advisory Committee decides that the company is an appropriate client, it makes a recommendation to the AEDC Board of Directors. The AEDC Board must give final approval. If approval is secured, then the incubator manager negotiates with the company for the details of the lease.

There is no specific exit policy and leases are initially for three years. An informal assessment is done at the time of lease renewal. The manager is planning on implementing an exit policy.

There does not appear to be a specific set of guidelines for what constitutes an acceptable client, although the stated policy is that the incubator is for manufacturing entities. This does not extend to the co-working or HOA space.

If the incubator were operating on its own, its current (September 2013) revenue projections for July 2013-June 2014 are $160,764. This number assumes that Colony Meadery moves in in October and that an additional tenant (already identified) would start paying rent in November. This also assumes that one HOA client will leave and another will arrive in November. All revenues are from tenant rents.

The expenses of the facility are primarily fixed at $208,650 for the year, including utilities, technology (internet service), all of the incubator manager's salary, projections of reimbursed heating and Internet charges, and facilities and maintenance charges.This also includes $27,000 of debt service related to the original renovation of the BEC that AEDC carries, although it is secured by a separate piece of real estate.

These numbers suggest that the breakeven for the building is around 70 percent leased, or another 13,150 sq. ft. rented.

Table C-3. Advisory Board Membership

Name		Title	Organization
Wayne	Barz	Manager, Entrepreneurial Services	Ben Franklin Technology Partners
Robin	Cook	Production Manager	Aurora Essentials
Jerome	Frank, Esq.	Attorney at Law	King Spry, Herman, Freund & Faul LLC
Lawrence	Johnson	Senior Vice President	Univest Bank
Michael	Grather	Principal Engineer (former President)	Underwriters Laboratories (Luminaire Testing Laboratory)
Stephanie	Olexa	Founder	Lehigh Valley Angel Investors

Outcomes

At this writing, while incubator management is aware of the number of employees of current tenants, but it does not appear that consistent records have been kept about past tenants, nor has there been an effort to keep graduates involved in the program. An interview that we conducted with a successful company that resided at the BEC for many years was the occasion for the new incubator manager to meet the company president for the first time.

At BEC's tenth anniversary in 1999, the program reported a total of eighteen tenants of whom 15 had graduated. Altogether, 300 jobs had been added. The most recent report by the Ben Franklin Center, dated December 31, 2012, suggests that a total of 40 tenants have either graduated or left the building, resulting in 263 jobs created. Of the 40 past tenants, only 13 are deemed "successful" according to Ben Franklin. The numbers on these reports do not correspond to numbers reported to us by company executives, and conflict with each other.

A review of public documents yields a list of 25 companies who have been in the BEC since 1990, less than the total number of tenants that have been there, but still a high percentage still in business and still in the Allentown area (although not necessarily in the City of Allentown[17]). Two of the companies have more than fifty employees, and another one is approaching twenty. The rest are quite small. Based on conversations with a small number of past tenants who have been successful, and with current

[17] Those who moved out of the City cited the need for specific attributes such as proximity to I-78 and new construction.

tenants, it is not clear whether their involvement with the Bridgeworks Enterprise Center has help them to grow. Two of the most successful companies were anchor tenants, and therefore were already doing well when they arrived at the Center.

The BEC is working hard to better capture the history of the Center and its results. Their September 2013 count is:

- Companies through incubator: 44
- Job creation/retention: 266/19
- Companies currently in business: 15 (5 in the City of Allentown and 10 into the Lehigh Valley outside of Allentown).

Lehigh Valley Entrepreneurial Ecosystem

Considering the population of the Lehigh Valley, there is a sizable entrepreneurial ecosystem. In addition to the Bridgeworks Enterprise Center, there is another incubator, TechVentures, located in Bethlehem at Lehigh University. There is also a Small Business Development Center (SBDC), also at Lehigh, a Service Corp of Retired Executives (SCORE) chapter at Lehigh Carbon Community College, and the Manufacturing Resource Center (MRC), a National Institutes of Standards and Technology (NIST) Manufacturing Extension Partnership (MEP) center. All of these organizations offer counseling assistance to small and medium sized businesses, as well as various training and seminar programs.

TechVentures, as a part of the Ben Franklin network, focuses on technology-based businesses, and has Class A office space as well as laboratory space available for clients. Their newly renovated buildings also include a state-of-the-art meeting facility. TechVentures offers three fulltime staff to counsel entrepreneurs, has a full training and seminar schedule, and assists clients with access to Ben Franklin funding.

Like their counterparts throughout the country, the SBDC and SCORE focus on small and start-up companies, offering one-on-one counseling and basic small business training, usually through short-term projects. The MRC is focused on small and medium-sized manufacturers and does not provide services to start-up companies.

Lehigh University, Lehigh Carbon Community College and Muhlenberg College all have entrepreneurship curriculums, and various training and extracurricular entrepreneurship activities such as business plan competitions. Lehigh's offerings are the most extensive and are organized through the Baker Institute, an interdisciplinary program. LCCC and Muhlenberg's entrepreneurship programs are part of their business schools.

In addition, the Community Action Committee of Lehigh Valley (CACLV), through its subsidiary, the Community Action Development Corporation of Allentown, offers "The Start Your Own Business Program," aimed creating neighborhood businesses enterprises that employ neighborhood residents. These classes are taught in English and in Spanish. According to their website, this 20-week program "is a combination of two-hour seminars and workshops on preparing to start, run or expand your business. The series includes instruction on financial planning, marketing and promotion, accounting, tax preparation, and networking in addition to basic business skills. Local successful business owners and experts assist in presenting and strengthening course material as students are guides through the process of writing a business plan."

There is a relatively young angel investor group, Lehigh Valley Angels (lehighvalleyangelinvestments.com) organized by a successful entrepreneur, Stephanie Olexa. Several members serve on the Advisory Committee.

An organization founded by entrepreneurs, Lehigh Valley Tech (lehighvalleytech.org), has organized and hosted a number of important events like hackathons and Lehigh Valley Startup Weekend based on a global model. They also have monthly events and meetups that cater to start-ups, entrepreneurs, hackers and technology enthusiasts.

C.4: Best Practices in Incubation

"Business incubation programs are designed to accelerate the successful development of entrepreneurial companies though business support resources and services, developed by or orchestrated by an incubator program manager and offered in the incubator and though a network of contacts. The goal is to produce successful firms that are financially viable and freestanding."[18]

While many states, regions and cities support entrepreneurs and small businesses, an incubator is a specific tool that aims to use a multi-year, intensive engagement with a company to increase its likelihood of success and/or to accelerate its trajectory. Differentiated from counseling programs like SBDCs and SCORE, incubators serve a smaller number of companies, but aim to provide in-depth services and yield higher employment growth per company.

Recent trends in incubation and acceleration include a closer coupling of mentors and financing programs with the traditional advice, counseling and coaching offered by on-site incubator professionals.

Potential clients[19] are motivated by the flexible space offered, but more importantly by the services and programs available that they perceive will reduce the risk of their emerging company and increase the speed with which they can attain success. Access to capital is high on the list for most entrepreneurs, but incubators also seek to increase their client's readiness for financing by working on other aspects of the business such as marketing, clear definitions of business models, technical challenges and resource management. Finally, most clients acknowledge the importance of the network of entrepreneurs as a significant benefit to incubator programs.

In contrast, the primary cause of incubator failure is having a "building-driven project" where the incubator was launched solely to fill an existing building.

[18] Lewis, David A., Harper-Anderson, Elsie and Molnar, Lawrence. 2011. "Incubating Success: Incubation Best Practices That Lead to Successful New Ventures. University of Michigan, Institute for Research on Labor, Employment, and the Economy, University of Michigan, Ann Arbor, Michigan. Prepared for the US Department of Commerce, Economic Development Administration.
http://www.edaincubatortool.org/pdf/Master%20Report_FINALDownloadPDF.pdf

[19] This terminology is significant because it signals that the company is being assisted, rather than just provided office space.

National Business Incubation Association

The National Business Incubation Association has been studying best practices in incubation for over thirty years. Their list of best practices has been adopted by many incubators around the country and continues to demonstrate its efficacy. The NBIA best practices are:[20]

- Commit to the two core principles of business incubation:
  - The incubator aspires to have a positive impact on its community's economic health by maximizing the success of emerging companies and
  - The incubator itself is a dynamic model of a sustainable, efficient business operation.
- Obtain consensus on a mission that defines the incubator's role in the community and develop a strategic plan containing quantifiable objectives to achieve the program mission.
- Structure for financial sustainability by developing and implementing a realistic business plan.
- Recruit and appropriately compensate management capable of achieving the mission of the incubator and having the ability to help companies grow.
- Build an effective board of directors committed to the incubator's mission and to maximizing management's role in developing successful companies.
- Prioritize management time to place the greatest emphasis on client assistance, including proactive advising and guidance that results in company success and wealth creation.
- Develop an incubator facility, resources, methods and tools that contribute to the effective delivery of business assistance to client firms and that address the developmental needs of each company.
- Seek to integrate the incubator program and activities into the fabric of the community and its broader economic development goals and strategies.
- Develop stakeholder support, including a resource network that helps the incubation program's client companies and supports the incubator's mission and operations.
- Maintain a management information system and collect statistics and other information necessary for ongoing program evaluation, thus improving a program's effectiveness and allowing it to evolve with the needs of the clients.

EDA Survey Results

The Economic Development Administration (EDA) incubation best practice report written by the University of Michigan[21] says,

"No one incubator practice, policy or service is guaranteed to produce incubation program success. Instead, it's the synergy among multiple practices, policies and services that produce optimal outcomes. In other words, there is no 'silver bullet.'"

The EDA study confirmed the National Business Incubation Association best practices. According to the study, management practices that are related to higher economic outcomes for the incubator include:

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[20] Rice, Mark and Matthews, J. 1995. "Growing New Ventures, Creating New Jobs: Principles and Practices of Successful Business Incubation," National Business Incubation Association.
[21] Lewis, op. cit., page 7.

- Having a written mission statement.
- Selecting clients based on their compatibility with the culture of the program and their potential for success.
- Reviewing clients at entry and using this information to develop a customized action plan for their development.
- Showcasing clients to the community and to funders.
- A robust payment plan for rent and service fees.
- Exit policies that let clients know what the expectations are.

In addition, the EDA study found that an incubator advisory board with both a graduate firm and technology transfer and commercialization expert was associated with higher client success. Other good board members were local legal, accounting, intellectual property and economic development professionals.

The size of the incubator and the age of the program were not determinants of success, but the ratio of staff to clients was considered a significant predictor.

More successful incubators consistently collect information about their client companies and for longer periods of time, e.g., at least five years after graduation. Data collected included: revenue, employment, graduation rates and survival rates.

The non-profit incubators were more successful than for-profit incubators, and those with higher public sector support were also better at growing companies, probably because they had a more explicit economic development mission. On the average, 60 percent of the budget of the successful incubators came from rent and service fees. Generally bigger budgets were correlated with more capacity to do assistance and program delivery.

Target Market

Another consideration for any incubator is its target market. The Kauffman Foundation has been researching the implications of this for many years. They have recently released a paper that documents the differences between innovation-driven entrepreneurship and small business entrepreneurship.[22] Without drawing any conclusions about the relative value of these two models, the authors note that these entrepreneurs require significantly different assistance. They define "innovation-driven enterprises (IDEs) as companies that are pursuing global opportunities based on bringing to customers new innovations that have a clear competitive advantage and high growth potential." The authors note that innovation can be a technology, a market or a business model. By contrast, the authors define small business entrepreneurship as "the creation of small and medium enterprises (SME), serving local markets with traditional, well-understood business ideas and limited competitive advantage." Other research has consistently shown that innovation-driven companies have higher revenue and profit growth as well as employment.

[22] Aulet, Bill and Murray, Fiona. 2013. "A Tale of Two Entrepreneurs: Understanding Difference in the Types of Entrepreneurship in the Economy. Kauffman Foundation.

Facilities for Innovation and Community

It is common to see incubators in older buildings that have been adapted to their new use. However, in these cases a number of factors must be taken into account to be sure that the space is appropriate to the needs of the client companies. For instance, is the location convenient for companies, with a safe neighborhood, access to highways and plenty of parking? Is the configuration consistent with client needs? For instance, is there enough office space as well as high-bay manufacturing space? Are there attractive places for lunches and other meetings, places that encourage networking and sharing among the tenants? And, above all, does the math work for the building, in terms of having around 80-90 percent available for rental, and not having fatal flaws in the building that will ultimately cost more to fix than the rent can cover.

In the past few years, the ideas about what makes a space appropriate for and supportive of innovation and community building have been evolving. The consensus now is quite different from just a few years ago, and quite different from the 1980s when the Bridgeworks was configured.

Today, architects and interior designers recognize the importance of shared spaces to create community and encourage collaboration and connection among members. There are several characteristics that create a space that encourages social activity. These include having a place that is easy to get to, to stay in and to move through, and one that is clean and safe. These places need to make it easy to create things, and should inspire creativity. They should allow enough density to support interaction, but also have private places for audio and video teleconferencing, meetings or just quiet for individual work. Galleries for art displays or other presentation materials are encouraged, as are large white boards, or indeed, entire walls covered with white board material or paint. Natural lighting, plants, and a view outdoors are also encouraged, as is visibility. There is a lot of use of glass to create openness, but allow privacy when needed. Technology is also necessary, such as robust wireless connections throughout, outlets for power, audio and video teleconferencing equipment, and projections systems. Furniture should be comfortable, flexible and easy to reconfigure.

The demographics of the target audience also matter since younger entrepreneurs desire a 24/7 facility and expect to be able to eat, exercise and relax as well as work at their workspace.

C.5: Findings

The following table summarizes the comparison of incubator best practice with the current situation at the Bridgeworks Enterprise Center. Each observation is characterized as being a strength (S), weakness (W), opportunity (O) or threat (T).

Best Practice	Bridgeworks Enterprise Center	SWOT
The mission of the incubator should be well-defined.	Mission has varied over the 25-year life of the program; not well-defined in terms of target client or outcomes desired.	W
The incubator's mission should be to have a positive impact on its community by maximizing the success of emerging companies.	This may have been the goal 25 years ago, and is probably the goal today, but in between, the goal was to have a fully rented building. Being housed at the BEC may not have impacted the successes that some companies had. Clarity on the mission is needed.	W

Best Practice	Bridgeworks Enterprise Center	SWOT
Target clients will grow and create jobs in the community	Several of newer clients brought in since 2008 have great potential to grow.	S
The incubator should be a dynamic model of a sustainable, efficient business operation.	The incubator is part of a larger organization that appears to be doing well. However, the financial viability of the incubator itself is possible only because staff and programming is limited and maintenance on the building is deferred.	W
Tenant rent and service fees should make up 70-80% of total budget; rest is usually public support to enable appropriate client assistance.	Financials may not work--big investments needed. No public support. No service fees.	W
Facility appropriate for defined use.	Space is suitable for manufacturing use. High bays, loading dock, location in industrial zone.	S/O
Amenities appropriate and competitive.	Poor heat and AC; layout not conducive to building a community, supporting creativity or collaboration.	W
Program should have a robust payment plan for rent and services.	This is being tracked, and appropriate action taken. Services are provided pro bono, and are therefore not valued.	S
Recruit and appropriately compensate management capable of achieving the mission and having the ability to help companies grow.	New, energetic and motivated incubator manager, working hard to learn incubation business and build community. Manager's background well suited for his role.	S
Staff to client ratio should be high.	Incubator manager is only 60% dedicated to the program, although charged 100% to program budget. Maintenance staff have responsibilities for AEDC's complete inventory, and therefore are not available to the incubator fulltime.	W
Prioritize manager's time to focus on client assistance.	Majority of manager's time is spent on building related issues and networking to attract clients.	W
Programming supports clients with appropriate counseling, training, mentoring and community building.	Programming is weak and overlaps with offerings by other service providers in the community.	W
Incubator should be deeply involved with entrepreneurial ecosystem	Incubator manager deeply involved with entrepreneurial ecosystem through Lehigh Valley Tech. TechVentures is a well-funded and successful competitor/partner.	S/O
Incubator has written entrance policy and review system.	Advisory Board reviews incubator tenants, but the AEDC Board has final say. Focus is more on filling space than having the "right" tenants.	W
Incubator has written exit policy	Although this policy is alluded to in lease, it does not exist in written form and does not seem to have been applied on a regular basis.	W

Best Practice	Bridgeworks Enterprise Center	SWOT
Incubator showcases clients to the community.	Based on small number of press stories about clients and incubator, this could be improved.	W
Incubator Advisory Board should be effective and support the manager. It should include graduate, technology Transfer experts, legal, accounting, Intellectual property, etc.	Existing Advisory Committee does include one graduate, leader of local angel group, other economic development professionals. Could be expanded and given more authority to work with incubator manager.	O
Develop management information system to track clients, collect statistics.	Manager's recommendation to acquire IcuTrack, a system built for management of incubators, still under consideration by AEDC.	W

Appendix D: Industrial Land & Building Overview

Industrial Land Use

In order to gain an understanding of the industrial composition of the City of Allentown, tax parcel data provided by the Bureau of Planning and Zoning was examined. This data classifies lands into a series of nine generalized land use categories, including industrial lands. Within each generalized category, land uses are further classified to provide additional levels of detail related to each parcel's specific use. Industrial land uses are grouped into four categories:

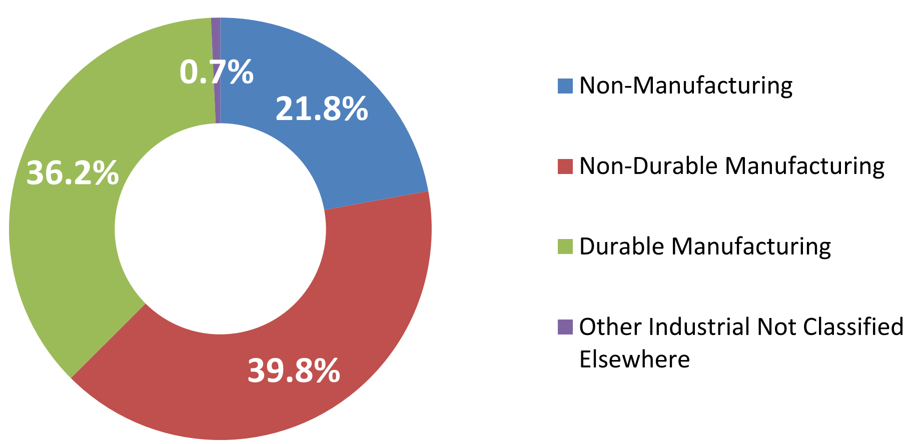
- Non-Manufacturing;
- Non-Durable Manufacturing;
- Durable Manufacturing; and
- Other Industrial Not Classified Elsewhere

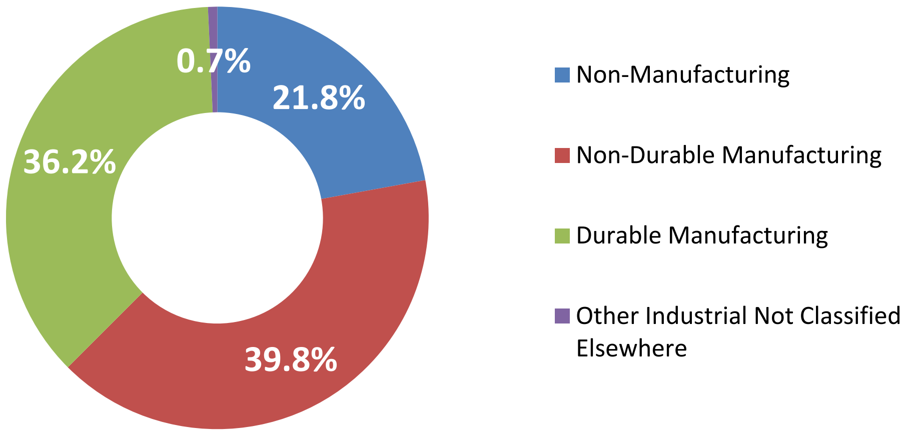
There is also a fifth category that includes accessory parking and loading areas; however, this category is not discussed as these are typically ancillary to the primary industrial use.

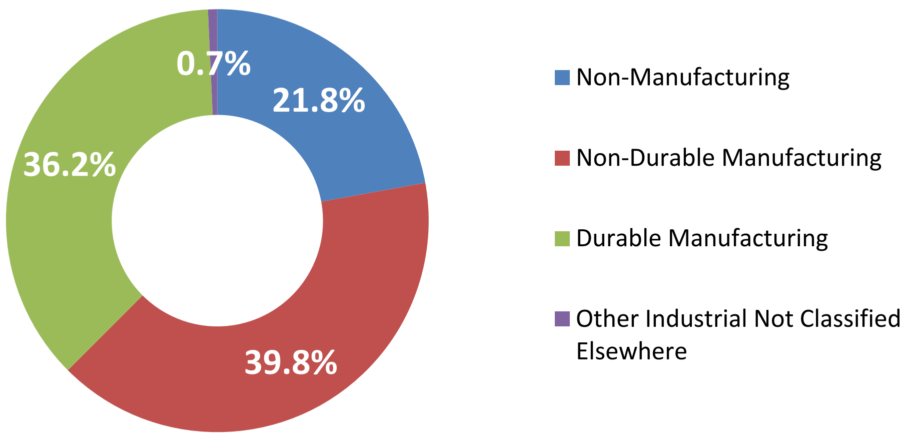
Based on the review of tax parcel data, industrial land uses comprise approximately 504.2 acres of land on 224 parcels in the City of Allentown, accounting for five percent of all lands in the city. Although these lands are scattered across the city, they are most prevalent in the central and northern portions, particularly along the Lehigh Creek, Jordan Creek and Little Lehigh Creek corridors. A second concentration of industrial lands is located in the southern portion of the city in the vicinity of the Queen City Airport (see Map 1). There are very few industrial uses within and west of the downtown core.

As noted above, the City recognizes four general categories of industrial uses. As depicted in Figure 1, Non-Durable Manufacturing and Durable Manufacturing comprise the majority of industrial lands in the city, combining for 76 percent of all industrial uses.

Figure 1: Industrial Land Uses in the City of Allentown







Source: City of Allentown

Examining the industrial land uses in further detail reveals that 27 specific industrial uses are in operation in the city (see Table 1). Of these 27 specific uses, the following four comprise 40 percent of all industrial uses in the city:

- Research Facilities (Non-Manufacturing) – 12.3 percent;
- Fabricated Metal Products and Ordinance Machinery (Durable Manufacturing) – 11.5 percent;
- Textile Mill Products (Non-Durable Manufacturing) – 8.6 percent; and
- Chemical, Petroleum Refining, Synthetics and Allied Products (Non-Durable Manufacturing) – 7.4 percent.

Industrial Land Uses in the City of Allentown						
Industrial Land Use Type	Land Use Code	Number of Parcels	Percent of Total Parcels	Acres	Percent of All Industrial Acres
Non-Manufacturing					
Non-Manufacturing	0310	2	0.9%	4.5	0.9%
General constrution contractorss	0311	6	2.7%	2.8	0.6%
Special trade construction	0312	23	10.2%	18.6	3.7%
Agricultural and animal services	0313	2	0.9%	0.2	0.0%
Mining, quarry, and pits	0315	1	0.4%	15.2	3.0%
Research facilities	0316	2	0.9%	62.1	12.3%
Other	0319	3	1.3%	6.5	1.3%
TOTALS		*39*	*17.3%*	*109.9*	*21.8%*
Non-Durable Manufacturing					
Non-Durable Manufacturing	0320	3	1.3%	14.4	2.9%
Food and kindred products	0321	10	4.4%	21.2	4.2%
Textile mill products	0323	17	7.6%	43.4	8.6%
Apparel and other finished products made from fabrics and other similar products	0324	23	10.2%	22.2	4.4%
Paper and allied products	0325	3	1.3%	3.2	0.6%
Printing, publishing, and allied industries	0326	18	8.0%	26.9	5.3%
Chemical, petroluem refining, synthetcs and allied products	0327	9	4.0%	37.2	7.4%
Leather and rubber products	0328	3	1.3%	27.2	5.4%
Other	0329	4	1.8%	4.8	1.0%
TOTALS		*90*	*40.0%*	*200.5*	*39.8%*
Durable Manufacturing					
Durable Manufacturing	0330	8	3.6%	14.2	2.8%
Lumber, furniture, and wood products	0331	14	6.2%	16.8	3.3%
Stone, clay, and glass products	0332	7	3.1%	32.4	6.4%
Primary metal industries	0333	8	3.6%	24.1	4.8%
Fabricated metal products and ordinance machinery except transportation equipment	0334	20	8.9%	58.1	11.5%
Machinery, except electrical	0335	3	1.3%	1.6	0.3%
Electrical machinery, equipment, and supplies	0336	2	0.9%	6.0	1.2%
Transportation equipment	0337	2	0.9%	21.2	4.2%
Professional, scientific, and controlling instruments, photographic and optical goods, watches, clocks, surgical equipment, etc.	0338	3	1.3%	0.6	0.1%
Other	0339	5	2.2%	7.8	1.6%
TOTALS		*72*	*32.0%*	*182.7*	*36.2%*
Uknown Code					
Unknown Code	0342	1	0.4%	0.8	0.2%
TOTALS		*1*	*0.4%*	*0.8*	*0.2%*
Accessory Parking and Loading Areas					
Structures	0381	1	0.4%	0.1	0.0%
Lots	0382	19	8.4%	6.6	1.3%
TOTALS		*20*	*8.9%*	*6.6*	*1.3%*
Other Industrial Not Classified Elsewhere					
Other Industrial Not Classified Elsewhere	0390	3	1.3%	3.5	0.7%
TOTALS		*3*	*1.3%*	*3.5*	*0.7%*
TOTALS		**225**	**100.0%**	**504.2**	**100.0%**

Source: City of Allentown

The tax parcel data also identifies two categories for vacant industrial lands – Vacant Industrial Land and Vacant Industrial Structures. In total, vacant industrial lands encompass approximately 81.9 acres on 62 parcels. These parcels range in size from less than 0.1 acre to 11.7 acres and are generally located in close proximity to active industrial lands. Only one parcel (2.6 acres) is included in the Vacant Industrial Structures category.

Industrial Buildings

In 2011, the City of Allentown conducted a study to better understand the composition of its industrial base. As part of this effort, 821 commercial and industrial buildings were mapped and a series of relevant data were collected for each, including:

- Building name;
- Building type;
- Rentable building area;
- Anchor tenants;
- Minimum and maximum ceiling heights;
- Number of stories;
- Number of docks;
- Sprinkler types;
- Heating type; and
- Sewer, water and gas.

To provide a baseline of information regarding the amount and distribution of industrial building space in the City of Allentown, the analysis provided below focuses on the amount of rentable building area by building type and by zoning district.

Industrial Buildings by Type

The survey conducted by the City identified eleven different types of industrial buildings, including:

- Flex;
- Flex (Community Center);
- Industrial;
- Manufacturing (MFG);
- Non-Manufacturing (NON_MFG);
- Residential;
- Retail;
- Service Garage;
- Storage;
- Warehouse; and
- No type.

Based on the results of the inventory, Industrial buildings comprise just under one-half (42.3 percent) of all buildings surveyed (see Table 2). The next largest group of buildings includes those for which no building type was provided; these non-categorized buildings comprise 35.0 percent of all buildings surveyed. The next four largest categories include Flex buildings (7.7 percent), Manufacturing buildings (5.7 percent), Non-Manufacturing buildings (5.2 percent) and Warehouse buildings (3.3 percent). The remaining five categories each comprise less than one percent of all buildings surveyed.

Commerical & Industrial Building Types in the City of Allentown					
Building Type	Number of Buildings	Percent of Total Buildings	Rentable Building Area (sq ft)	Percent of Total Rentable Building Area	Average Rentable Building Area (sq ft)
Flex	63	7.7%	989,792	7.0%	15,711.0
Flex (Community Center)	2	0.2%	11,000	0.1%	5,500.0
Industrial	347	42.3%	4,879,888	34.4%	14,063.1
Manufacturing (MFG)	47	5.7%	3,825,005	26.9%	81,383.1
Non-Manufacturing (NON_MFG)	43	5.2%	1,332,491	9.4%	30,988.2
Residential	1	0.1%	10,375	0.1%	10,375.0
Retail	1	0.1%	14,139	0.1%	14,139.0
Service Garage	2	0.2%	12,610	0.1%	6,305.0
Storage	1	0.1%	1,152	0.0%	1,152.0
Warehouse	27	3.3%	1,303,456	9.2%	48,276.1
No Type	287	35.0%	1,824,702	12.8%	6,357.8
TOTALS	**821**	**100.0%**	**14,204,610**	**100.0%**	**17,301.6**

Source: City of Allentown

The results of the inventory also found that there is approximately 14,204,610 square feet of rentable building area in the city. The two largest contributors of this space include Industrial buildings (4,879,888 square feet, or 34.4 percent) and Manufacturing buildings (3,825,005 square feet, or 26.9 percent). While buildings with no type provided comprised 35.0 percent of all buildings, these non-categorized buildings only account for 12.8 percent of the rentable building area (1,824,702 square feet). The next three largest categories include Non-Manufacturing buildings (1,332,491 square feet, or 9.4 percent), Warehouse buildings (1,303,456 square feet, or 9.2 percent) and Flex buildings (989,792 square feet, or 7.0 percent). The remaining five categories each comprise less than one percent of the rentable building area in the City of Allentown.

Vacancy status was also noted for each building surveyed as part of the 2011 effort. However, building that were partially vacant were not included in this assessment – only fully vacant. In total, 17 of the 821 buildings were identified as vacant. These buildings encompass 1,426,950 square feet, or 10.0 percent, of rentable building area, broken down into the following five building types:

- Manufacturing buildings – 1,223,007 square feet vacant
- Non- Manufacturing buildings – 114,946 square feet vacant
- Industrial buildings – 48,181 square feet vacant
- Warehouse buildings – 25,000 square feet vacant
- Flex buildings – 15,816 square feet vacant

Industrial Buildings by Zoning District

While the amount of rentable building area by building type can indicate potential suitability for specific uses, the zoning district in which these buildings are located dictates the specific uses that can occur in those buildings. To gain a better understanding of the potential for new industrial development in the City of Allentown, it is important to understand how much rentable building area is available in each of the City's zoning districts (see Table 3).

Commerical & Industrial Buildings by Zoning District in the City of Allentown					
Building Type	Number of Buildings	Percent of Total Buildings	Rentable Building Area (sq ft)	Percent of Total Rentable Building Area	Average Rentable Building Area (sq ft)
B1/R - Limited Business/Residential	12	1.5%	242,435	1.7%	20,202.9
B2 - Central Business District	6	0.7%	31,628	0.2%	5,271.3
B3 - Highway Business	67	8.2%	864,757	6.1%	12,906.8
B5 - Urban Commercial	21	2.6%	310,682	2.2%	14,794.4
BLI - Business/Light Industrial	216	26.3%	2,622,442	18.5%	12,140.9
I2 - Limited Industrial	202	24.6%	3,515,455	24.7%	17,403.2
I3 - General Industrial	160	19.5%	5,546,889	39.0%	34,668.1
P - Parks	8	1.0%	46,672	0.3%	5,834.0
R1	4	0.5%	12,215	0.1%	3,053.8
RH - High Desnity Residential	3	0.4%	43,130	0.3%	14,376.7
RM - Medium Density Residential	11	1.3%	65,722	0.5%	5,974.7
RMH - Medium High Density Residential	103	12.5%	779,662	5.5%	7,569.5
RML - Medium Low Density Residential	4	0.5%	62,075	0.4%	15,518.8
No District	4	0.5%	60,846	0.4%	15,211.5
TOTALS	**821**	**100.0%**	**14,204,610**	**100.0%**	**17,301.6**

Source: City of Allentown

Based on the results of the 2011 survey, industrial and commercial buildings were identified in 13 of the City's 22 zoning districts. However, more than 82 percent of the rentable building area is located in the following three districts:

- General Industrial (I3) – 5,546,889 square feet, or 39.0 percent rentable building area
- Limited Industrial (I2) – 3,515,455 square feet, or 24.7 percent rentable building area
- Business/Light Industrial (BLI) – 2,622,442 square feet, or 18.5 percent rentable building area

Based on a review of the vacancy data, the vast majority (78.6 percent) of vacant rentable building area is located in the General Industrial (I3) district, accounting for 20 percent of the total rentable building area in the district. The I3 district is also the most permissive industrial district in the city.

- General Industrial (I3) – 1,121,982 square feet vacant rentable building area
- Limited Industrial (I2) – 175,127 square feet vacant rentable building area
- Business/Light Industrial (BLI) – 107,091 square feet vacant rentable building area
- Urban Commercial (B5) – 26,350 square feet vacant rentable building area

Industrial Zoning

While the examination of existing industrial land uses helps to identify the composition and extent of the industrial market in Allentown, understanding how zoning may impact future industrial development is an important factor when considering revitalization strategies. Based on a review of the City of Allentown's Zoning Ordinance, three 22 zoning districts focus on industrial development. However, a small number of industrial uses are also permitted in several of the business districts. The three primary industrial districts are:

- Business/Light Industrial District (BLI);
- Limited Industrial District (I2); and
- General Industrial District (I3).

A discussion of each of these three districts can be found below.

Business/Light Industrial District (BLI)

The purpose of this district is to provide for a mix of commercial and light industrial uses to offer a wide market in areas suitable for both types of uses. The BLI District is the smallest industrial zoning district in the City of Allentown, covering 343 acres on 501 parcels, or 3.6 percent of the city. This district is primarily located along Sumner Avenue in the north-central portion of the city, along American Parkway and Union Boulevard in the northeastern portion of the city and along the Little Lehigh Creek Corridor (see Map 2).

Industrial uses not permitted in this district include:

- Flammable Liquids, Above-Ground Bulk Storage for Off-site Use, other than as accessory to a home heating company;
- Junk-outdoor storage, display or processing of, other than within an approved junkyard or solid waste disposal facility;
- Junkyard (which includes Scrap Yard);
- Mineral Extraction and related processing, stockpiling and storage;
- Slaughterhouse or Stockyard;
- Solid Waste Transfer Facility or Solid Waste to Energy Facility;
- Tires, Used, Bulk Storage as Principal or Accessory Use;
- Trucking Terminal;
- Manufacture and/or bulk processing of Ammunition, Fireworks or Explosives (or bulk storage of);
- Manufacture and/or bulk processing of Cement, actual manufacture of, or Asphalt;
- Manufacture and/or bulk processing of Cement, Gypsum, Concrete or Plaster Products other than actual manufacture of cement;
- Manufacture and/or bulk processing of Chemical Products that are not “extremely hazardous substances”;
- Manufacture and/or bulk processing of Chemicals, Manufacture, Mixing, or Bulk Storage of “extremely hazardous substances”;
- Manufacture and/or bulk processing of Incineration, Reduction, Distillation, Storage or Dumping of Slaughterhouse Refuse, Rancid Fats, Garbage, Bones, Dead Animals or Offal (other than within an approved solid waste facility);
- Manufacture and/or bulk processing of Metal Products, Primary;
- Manufacture and/or bulk processing of Paper – Raw Pulp;
- Manufacture and/or bulk processing of Rubber, Natural or Synthetic; and
- Manufacture and/or bulk processing of Soaps, Detergents, Paints, Varnishes or Enamels.

Limited Industrial District (I2)

This district provides for a range of light industries and related businesses in a manner that is compatible with adjacent neighborhoods, parks and the Queen City Airport. The district regulations include a set of performance standards and other guidelines designed to protect residential property values, provide a desirable transition between industrial and other uses and promote a high order of industrial development. The I2 District is the largest industrial zoning district in the City of Allentown, covering 865 acres on 413 parcels, or 9.3 percent of the city. This district is located throughout the central portion of the City, with large concentrations found near the Queen City Airport and along American Parkway and Union Boulevard adjacent to the Lehigh River (see Map 2).

Industrial uses not permitted in this district include:

- Flammable Liquids, Above-Ground Bulk Storage for Off-site Use, other than as accessory to a home heating company;
- Junk-outdoor storage, display or processing of, other than within an approved junkyard or solid waste disposal facility;
- Junkyard (which includes Scrap Yard);
- Mineral Extraction and related processing, stockpiling and storage;
- Slaughterhouse or Stockyard;
- Solid Waste Transfer Facility or Solid Waste to Energy Facility;
- Tires, Used, Bulk Storage as Principal or Accessory Use;
- Manufacture and/or bulk processing of Ammunition, Fireworks or Explosives (or bulk storage of);
- Manufacture and/or bulk processing of Cement, actual manufacture of, or Asphalt;
- Manufacture and/or bulk processing of Chemicals, Manufacture, Mixing, or Bulk Storage of “extremely hazardous substances”;
- Manufacture and/or bulk processing of Incineration, Reduction, Distillation, Storage or Dumping of Slaughterhouse Refuse, Rancid Fats, Garbage, Bones, Dead Animals or Offal (other than within an approved solid waste facility); and
- Manufacture and/or bulk processing of Paper – Raw Pulp.

General Industrial District (I3)

The purpose of this district is to provide areas suitable for a wide variety of industrial and related uses with controls necessary to ensure that sound industrial development do not have a significant impact on adjacent uses. The I3 District is the second largest industrial zoning district in the City of Allentown, covering 649 acres on 260 parcels, or 7.0 percent of the city. This district is concentrated in four locations – (1) near the Queen City Airport, (2) along the Little Lehigh Creek, (3) along the Lehigh River and (4) adjacent to the Lehigh Valley International Airport (see Map 2).

Industrial uses not permitted in this district include:

- Junk-outdoor storage, display or processing of, other than within an approved junkyard or solid waste disposal facility; and

- Manufacture and/or bulk processing of Incineration, Reduction, Distillation, Storage or Dumping of Slaughterhouse Refuse, Rancid Fats, Garbage, Bones, Dead Animals or Offal (other than within an approved solid waste facility).

Industrial Zoning Conclusions

Based on a review of city-wide industrial zoning, the City of Allentown should consider the following:

The **Business/Light Industrial (B/LI) district** was established at a time of continued decline in industrial uses within the city and Lehigh Valley Region. The B/LI district was intended to maintain land values by creating opportunities for additional, complementary uses within traditionally industrial areas by allowing a number of commercial uses such as restaurants, shopping centers, retail establishments and offices. The B/LI district creates a mixed commercial/industrial zone that can service the needs of area employees, as well as adjacent residential neighborhoods. However, a notable drawback to allowing such a diversity of commercial uses in formerly industrial areas is an increased level of competition with other traditional commercial areas where land values are typically higher. Therefore, the BLI district may be inadvertently siphoning valuable commercial uses away from the Limited Business/Residential (B-1/R) mixed use district.

Furthermore, at the date of this report, the outlook for manufacturing is increasingly positive, and the City has identified a need for industrial–zoned lands. The low land values and adjacency to industrial uses has also attracted marginal commercial uses within the B/LI zone, making these areas attractive for redevelopment with more intensive industrial activity. Therefore, some B/LI-zoned areas may see increased interest for a transition back to manufacturing uses.

Based on the identified need for additional manufacturing parcels and the potential for the B/LI district to compete with the B-1/R district, it is our recommendation that the City investigate the conversion of BLI lands to Limited Industrial (I2).

The conversion of targeted areas of B/LI to I2 would expand the number of potential parcels available for industrial activity and the associated creation of jobs. In addition, a reduction in B/LI lands may also encourage commercial uses to locate within traditional commercial districts. It may not be beneficial or necessary to eliminate the B/LI district altogether as the zone remains a valuable tool to encourage mixed use employment areas. Sumner Avenue, for example, is a weak candidate for conversion to I2. This street's numerous parcels are generally small and the B/LI district will allow small manufacturing operation in proximity to commercial and residential uses. By contrast, Lehigh Street in the Little Lehigh Industrial Corridor is an example of a strong candidate for conversion from B/LI to I2 in order to create a manufacturing district.

Lands zoned **General Industrial (I3)** permit heavy industrial uses, with the most intensive approved only as a Special Exception Uses, such as junkyards, slaughterhouses or stockyards, solid waste transfer facilities, used tire storage, cement and asphalt manufacturing and the manufacture of "extremely hazardous substances." The location of all heavy industrial uses should be carefully considered to limit adverse impacts on surrounding uses. Ideally, heavy industrial uses should be consolidated into a district to minimize their perimeter area. In Allentown, I3 uses are dispersed as shown on Map 2. ***We recommend that the City study the rezoning of I3 parcels in order to consolidate the heavy industrial uses.*** Small parcels of land zoned I3 that are in close proximity to residential and commercial districts should be considered the most carefully.

APPENDIX E: INDUSTRIAL REAL ESTATE MARKET ANALYSIS

The purpose of the Industrial Real Estate Market Analysis is to identify current demand for land and structures for industrial use and highlight where opportunities exist to promote market-feasible industrial development and redevelopment within the City of Allentown.

Greater Philadelphia Real Estate Market

Greater Philadelphia Industrial Market Trends

From a regional real estate perspective, Allentown is located in the Greater Philadelphia industrial market, which includes Eastern Pennsylvania, Southern New Jersey, and Delaware. National real estate companies Colliers International, Cushman & Wakefield, and CB Richard Ellis, project an increasingly positive outlook for the Greater Philadelphia industrial market in 2013: healthy absorption, decreased vacancy, and built-to-suite construction.

The Greater Philadelphia market gained a healthier supply-demand balance during the first half of 2013 and absorption was at its highest 6-month level since 2006. Sub-markets that account for the largest share of absorption include the Lehigh Valley, I-81/I-83 Corridor, and Northeast Pennsylvania. There are over 20 million square feet of users actively in the market that could tighten vacancy rates.

Industrial requirements are becoming more specialized in order to achieve operational efficient and cost savings. Buildings with low ceiling heights, insufficient loading, or structural challenges will have an increasingly difficult time finding tenants. Signing rents have been rising and landlords feeling greater confidence are becoming more willing to make upgrades to close deals such as loading and lighting improvements.

With limited supply available - particularly for specialty manufacturing and flex-warehouse - existing companies are more frequently contemplating build-to-suit projects. This is driving many developers to transition from building on spec to preparing shovel-ready sites. The increased industrial demand in the market has driven up land prices and the total cost of construction.

E-commerce, specialty manufacturing, food/beverage, and medical/pharmaceutical products and services are expected to be the most active sectors in the regional market through 2013.

Lehigh Valley Real Estate Market

Only 95 miles to New York City and 53 miles from Philadelphia, the Lehigh Valley is an attractive area for importers, exporters, manufacturers, and high-tech companies.

The following table summarizes the industrial real estate market for the Lehigh Valley based on data from national real estate firms CB Richard Ellis (CBRE), Cushman & Wakefield (C&W), Colliers International (Colliers) and a firm based in Allentown, PA, NAI Summit.[23] In the Lehigh Valley industrial real estate market there is about 58-million square feet of industrial property; roughly 4.9-million square feet of which is on the market or “available”. The 8.4% vacancy rate is down about 1% from 2012

[23] Since different firms employ different methodologies for collecting and reporting real estate information, an average is shown.

indicating that this market is tightening. Reported lease rates varied among the data, but average to about $4.30 per square foot.

Industry Real Estate Market Report Summary: Lehigh Valley					
Measure	NAI Summit	CBRE	C&W	Colliers	Average
Inventory (sf)	56,801,599	60,419,586	54,275,869	62,092,202	58,397,314
Available (sf)	4,544,128	5,756,994	4,559,173	4,781,100	4,910,349
Vacancy Rate	8.0%	9.5%	8.4%	7.7%	8.4%
Net Absorption (sf)	N/A	N/A	915,000	613,152	764,076
Lease Rates (sf)	$3.99	$4.35	$4.15	$4.59	$4.27

Source: Market reports from real estate firms.

Note: Different methodologies for tracking real estate indicators account for variations in data.

As with the greater Philadelphia market, there is a limited supply of quality space, particularly for warehouse users looking for 50,000 to 100,000 square feet.

Industries that typically occupy industrial properties include Manufacturing, Extraction, Wholesale; and Transportation and Warehousing industries.[24] Of these, Wholesale Trade and Transportation and Warehousing are projected to grow considerably in the coming years in both the Allentown ZIP code region and the Lehigh Valley.

The projected employment increase in industrial space utilizing industry sectors can be used to estimate the increase in demand for industrial space in the Lehigh Valley. Currently, these four sectors represent almost 60,000 jobs in Lehigh Valley and, as noted above, there is approximately 53.5-million square feet of occupied industrial space. Therefore, on average each job requires roughly 892 square feet. Assuming the projected 4,700 new jobs will have similar space requirements; the new jobs will require approximately 4.2-million square feet of space over a 10-year period. There is about 4.9-million square feet of space available on the market today yet the quality of many older properties and their ability to meet specialized needs of individual users suggests there is not enough supply to satisfy projected demand.

Trends in Industrial Space Users					
Allentown Zip Codes					
NAICS	Description	2013 Jobs	2023 Jobs	Change	% Change
21	Mining, Quarrying, and Oil and Gas Extraction	50	70	20	40.0%
31	Manufacturing	6,450	6,405	-45	-0.7%
42	Wholesale Trade	3,865	4,110	245	6.3%
48	Transportation & Warehousing	2,041	2,207	166	8.1%
	Total	12,406	12,792	386	3.1%
Lehigh Valley					
NAICS	Description	2013 Jobs	2023 Jobs	Change	% Change
21	Mining, Quarrying, and Oil and Gas Extraction	388	490	102	26.3%
31	Manufacturing	30,836	31,042	206	0.7%
42	Wholesale Trade	11,740	13,152	1,412	12.0%
48	Transportation & Warehousing	17,003	20,014	3,011	17.7%
	Total	59,967	64,698	4,731	7.9%

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - EMSI 2013.3 Class of Worker

[24] We note that there are several sub-sectors that sometimes occupy industrial space such as research and development sectors; however, it is highly varied.

The projected growth is within industries that are transportation and distribution-oriented and tend to occupy warehouse and flex space that is found in suburban areas as opposed to urban cores. One important driver in the uptick in the warehouse market activity in this region is the widening of the Panama Canal, which will allow larger cargo ships to pass through. Related to this expansion, the Port of New York and New Jersey is investigation an opportunity to open an inland rail port in Bethlehem, off of Route 412. Investigations are being conducted into the level of demand for such an amenity in the region. [25]

Allentown Real Estate Market

According to real estate professionals interviewed for this analysis, the greatest demand for space by unit size in the region is 8,000 square feet or less and 20,000 to 40,000 square feet up to 80,000 square feet. Multi-story buildings are not attractive to most tenants as modern manufacturing processes generally require high ceilings. As such, 18-20 foot ceilings are highly sought after. Rail is a “nice marketing feature” for properties that have existing spurs but not essential and several individuals commented that it is not worth investing in. This is because if a user is specifically looking for rail access they will go straight to Bethlehem, which has existing rail infrastructure.[26] Manufacturers that require rail are typically shipping heavy, bulky components in large volumes.

To understand the industrial property supply that is being actively marketed, information was obtained from PASiteSearch.com. According to this database, there are currently 26 industrial building-sites available in the City of Allentown; 19 available for sale, 22 for lease. In total, there is 1.6 million square feet of industrial space on the market currently in Allentown. Nine of the available properties are 8,000 square feet and below and eight are in the 20,000-80,000 square feet “sweet spot”.

[25] *Bethlehem being considered for inland rail port.* June 5, 2013, Lehigh Valley Live. http://www.lehighvalleylive.com/bethlehem/index.ssf/2013/06/bethlehem_being_considered_for.html

[26] Note: None of the manufacturing businesses interviewed for this study used rail as a method of transporting goods.

Industrial Property Supply, City of Allentown					
Address	Min Size	Max Size	For Sale	For Lease	Lot Size
1130-1132 Godfry St.	2,770	2,770	yes	yes	0 acres
1427 E Pennsylvania St	1	4,000		yes	
709 East Congress St	4,000	4,000	yes	yes	0 acres
905 Harrison Street	1	4,047		yes	2.45 acres
460 Business Park Ln	6,225	6,225	yes	yes	0 acres
515 Business Park Ln	6,546	6,546	yes	yes	.49 acres
460 Business Park Ln	6,925	6,925	yes	yes	.48 acres
2830 Mitchell Ave	1	7,840		yes	
312 Sumner Ave	8,000	8,000		yes	
526 Aubrey St	10,500	10,500	yes		1.55 AC acres
1130 Hanover Ave	15,400	15,400	yes	yes	
713 N 13th St	19,200	19,200	yes		
1417 W Chew St	1	21,774	yes	yes	
430 Allentown Dr	1	25,689		yes	
1139 Sumner Ave	1	30,000	yes	yes	
700 N Fenwick St	1	38,889	yes	yes	
1324 N Sherman St	1	44,000	yes	yes	
314 N 12th St	48,000	48,000	yes		
1220 W Allen St	1	53,966	yes	yes	
1135 N Plymouth St	84,590	84,590	yes		
2027 S 12th St	1	106,000		yes	
1901 South 12th Street	130,000	130,000	yes	yes	8 acres
2200 S. 12th Street	203,000	203,000	yes	yes	22 acres
2027 S 12th St	1	225,000		yes	
1629 - 1915 South 12th St	260,000	260,000	yes	yes	12 acres
2645 Mitchell Ave	1	273,000	yes	yes	
	805,168	1,639,361			

Source: PASiteSearch.com

Some of the key industrial properties in the City of Allentown include:

The Allentown Metal Works Property – This recently-vacated property is comprised of seven buildings with over 260,000 square feet on 19 acres of land. It was acquired by the Allentown Economic Development Corporation in the spring of 2013. The property is in Allentown's Enterprise Zone and was placed in the Keystone Opportunity Zone, with the approval of the Allentown School Board and the Lehigh County Commissioners. The local community is focused on this property becoming a source for jobs and, as such, it should be placed at the top of the list of strategic properties. The buildings will be available for occupation following an environmental cleanup, but improvements such as weatherization; heating, ventilation and cooling (HVAC); lighting and site improvements would make the building more marketable.

Former Mack 5C Site – This former Mack Truck assembly plant is privately owned. It consists of three parcels on over 83 acres, 24 of which are vacant. The site is developed with the single largest building in the city - roughly 1-million square feet of space that is highly underutilized. Located across the street from the Queen City Airport, this site also has redevelopment potential but is not currently being marketed heavily.

The Bridgeworks Enterprise Center (BEC) – This property is a 76,000 square foot former Mack Truck plant on 2.5 acres of land. It is currently home to the Bridgeworks Small Business Incubator. The BEC has successfully attracted several businesses, however, there is still space available and the site should continue to be promoted to businesses.

Former Hill's Import Property – This is a privately-owned property comprised of four buildings totaling 270,000 square feet on 12 acres of land. The property is in the Keystone Opportunity Zone and the Allentown Enterprise Zone. The City should continue to work with the property owner to promote the site to businesses.

Former Incinerator Site – This 21-acre site is currently undeveloped and is available for development, although 6.9 acres are in a flood zone. This site has the potential to be a unique opportunity in Allentown as the site is completely vacant of structures and available for new construction. The site is in both the Keystone Opportunity Zone and Allentown's Enterprise Zone.

We note that none of these industrial properties are listed on AECD's website: http://allentownedc.com/available-real-estate/industrial-sites/ or the City's website: http://www.allentownpa.gov/Businesses/BusinessRealEstateGuide/tabid/343/Default.aspx.

Almost every business interviewed for this project indicated they are growing and have plans for expansion within the next 5-10 years. Several are actively in the market now and expressed concerns over the lack of suitable space in the city.

A detailed description of industrial land uses in Allentown is provided in Appendix D.

Who is Allentown's Target Market?

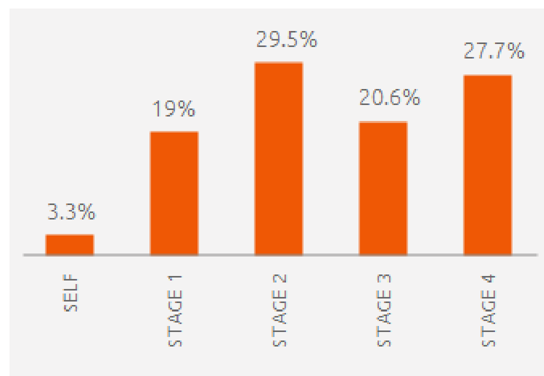
Based on the market research and data analysis, characteristics of the target market for urban industrial properties in Allentown include manufacturers looking for:

- Space below market rate, low-cost everything
- Direct access to a dense labor market, walk-to-work environment
- Re-use opportunities instead of building on green space
- Businesses or developers willing to take on a "project" and invest in upgrades to a property
- Expansion opportunities locally
- Greater access to supply chains to better serve on-demand markets
- Commitment to urban experience and benefits of city diversity, services, and amenities

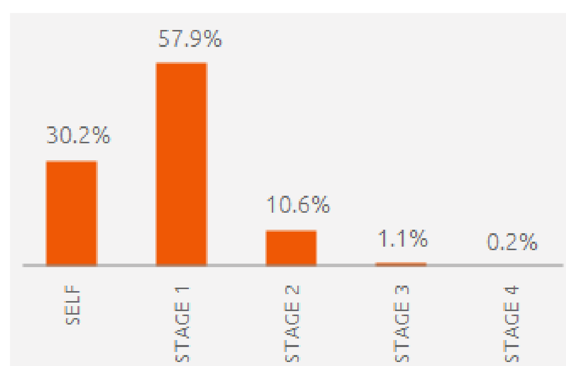
Life Stage

The target market, particularly in the short-term, is not those businesses in the startup phase. They are not in the market for investing in large chunks of building space. The ideal manufacturers are either second stage companies or mature companies looking to expand/relocate in/to Allentown.

Lehigh County Jobs by Stages



Lehigh County Establishments by Stages



Second stage companies are typically 10 to 99 employees in size. They are beginning to exceed the size in which the owner or CEO can comfortably manage the company yet they typically do not yet have a complete professional management team. Most businesses begin to enter their second stage when they approach about $1 million in total receipts.[27]

In Lehigh County, almost 30% of the workforce or 72,000 jobs are at companies in stage 2 (note that this is all jobs, not specific to the manufacturing sector). There are about 2,800 stage 2 companies in Lehigh County, which represents 10.6% of the total number of establishments (all 2012 data). For additional information on second-stage companies, the role in which they play in a local economy, and the new challenges they face as they enter the second stage, visit YourEconomy.org and the Edward Lowe Foundation (http://edwardlowe.org/).

Second stage and mature companies often have different reasons for being in the real estate market. Second stage companies are typically looking for space because they are outgrowing their current space and looking to expand locally to retain their existing wokforce, suppliers, and market position. During the interviews

[27] Edward Lowe Foundation: http://edwardlowe.org/who-we-serve/secondstage/

for this project, we spoke with several business in this situation. Supporting and retaining these businesses requires an economic gardening approach.

On the other hand, mature – third and fourth stage – businesses are more likely to expand into a new area to gain better access to markets, supply chains, laborforce, and other competitive advantages. Business attraction strategies, supported by a strong, consistent web and social media presence, are needed to attract these companies. Understanding Allentown's role in regional supply chains will strengthen and focus attraction efforts.

Targeted Geographies

One important market opportunity for Allentown, from a geographic perspective, is manufacturing businesses in North Jersey looking to expand. North Jersey is more expensive, more congested, and has less room for growth than Allentown. Allentown offers space for a much lower price point yet direct access to the same regional market, with a reverse commute. Additionally, North Jersey's workforce is diverse with large immigrant and non-English speaking populations much like Allentown's. These companies have experience hiring in culturally diverse labor pools and understand the value of live-work environments. There is growing interest by North Jersey companies in the Lehigh Valley and several manufacturers from New Jersey have and/or are planning on moving into the suburban industrial areas around Allentown.

Targeted Sectors

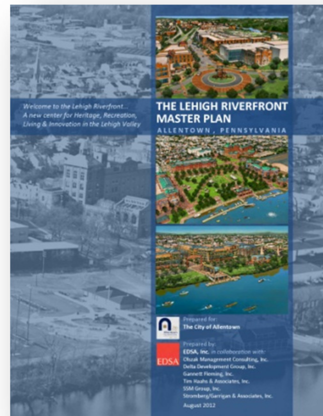
As discussed in detail in other sections of this report, focusing on manufacturing overall instead of selecting a few sub-subsectors is recommended, starting outreach efforts with sectors that have had recent success in the city or region. These include:

- Fabricated Metal
- Food
- Machinery
- Plastics and Rubber
- Surgical and Medical Instrument
- Electrical Equipment

Appendix F: Current Plans & Programs

There are a number of recent reports, documents and studies that were reviewed for their relevance to the effort to re-industrialize the City of Allentown. Following is a brief review of the most relevant:

The Lehigh Riverfront Master Plan



EDSA Inc. prepared the recent (2012) plan for the Lehigh Riverfront area. The Riverfront study area is generally defined by the Lehigh River to the east, the Allentown city – Lehigh County line to the north, Front Street to the west and the Hamilton Street Bridge crossing to the south. The approximately 120-acre study area is divided into eight "Thematic Riverfront and Neighborhood Zones," each with their own plan for future enhancements.

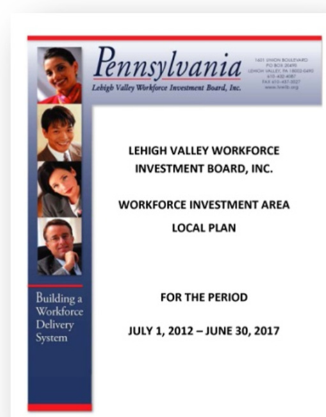
The southernmost zone, the "Lehigh Landing - Hamilton Street Gateway," includes the properties immediately surrounding the north and south sides of the Hamilton Street corridor at the Riverfront. These properties are also at the northeast corner of the Little Lehigh Re-Industrialization Study Area which has Hamilton Street as its northern boundary. Plans for this area of the riverfront include a series of new restaurants, the "America on Wheels" Museum and a large surface parking lot.

Among the major recommendations for the Allentown Riverfront are:

- A north-south trail and greenway along the river's west bank;
- Improved pedestrian/bike linkages over the Hamilton Street Bridge;
- Creation of a Riverfront Festival Park for city-wide events;
- The retention and adaptive reuse of the Neuweiler Brewery, the Ribbon Works Factory, the American Atelier Building and the A&B Meats Building; and
- The retention, conservation and infill of existing rowhouse residential/commercial blocks along Front Street and Brick Street.

Collectively, these recommendations will necessitate a public/private partnership to accomplish the goal of having Riverfront redevelopment provide an economic stimulus for the entire City of Allentown.

Workforce Investment Area - Local Plan for the Period July 1, 2012 – June 30, 2017



This report, prepared by the Lehigh Valley Workforce Investment Board, Inc., consists of two sections; the Strategic Plan and the Operational Plan.

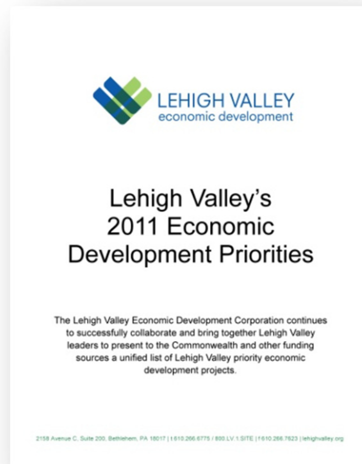
The Strategic Plan is the vision, goals, economic and workforce information analysis, strategies and outcomes identified for the future of the Lehigh Workforce Investment Area and how this will work in tandem with the

Governor's vision for the future of Pennsylvania. This includes an economic and workforce information analysis.

The Operational Plan illustrates how specific workforce programs will be used to achieve the vision, strategies, and goals identified in Section I. It describes how groups will be served by the programs described in the local plan and how services will be delivered for employers and jobseekers. This section includes an overview of the workforce system and its organization at the local level and descriptions of specific workforce programs.

Lehigh Valley's 2011 Economic Development Priorities

The Lehigh Valley Economic Development Corporation prepared this report in order to continue, *"to successfully collaborate and bring together Lehigh Valley leaders to present to the Commonwealth and other funding sources a unified list of Lehigh Valley priority economic development projects."*


LEHIGH VALLEY
economic development

Lehigh Valley's
2011 Economic
Development Priorities

The Lehigh Valley Economic Development Corporation continues to successfully collaborate and bring together Lehigh Valley leaders to present to the Commonwealth and other funding sources a unified list of Lehigh Valley priority economic development projects.

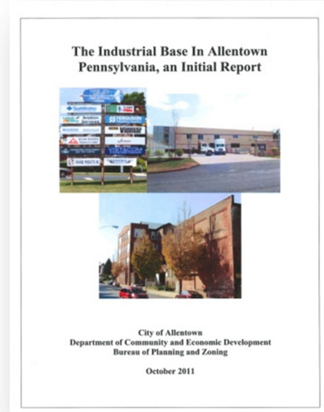
The introduction to the report states that the document *"represents the priorities of the Cities of Allentown, Bethlehem, and Easton as well as Lehigh and Northampton Counties."* The priority projects process has been in place since 2003 and has been used to obtain more than $100 million in public funding.

The document identifies 32 priority economic development projects within the various Lehigh Valley counties and cities. Projects are categorized as either Redevelopment Assistance Capital Program (RACP) or Comprehensive Economic Development Strategy (CEDS) projects.

There are a number of projects listed which are intended to support industrial uses and are particularly relevant to the proposal for the re-industrialization of Allentown:

- **South 10th Street Industrial Manufacturing Corridor** encompasses the major industrial buildings in the general area including the Bridgeworks Enterprise Center, the Allentown Metal Works Buildings and the Hill's Imports buildings. Approximately $12 million is being requested to complete all desired improvements associated with this RACP project.
- **The Bridgeworks Enterprise Center**, located within the 10th Street Manufacturing Corridor listed above, is listed individually as a CEDS project with an $11 million scope of work.
- **The Allentown Metal Works property**, also along the 10th Street Industrial Corridor, was recently acquired by the City and is listed for $10.9 million in upgrades.
- **The Hill's Import building** is a privately-owned set of large buildings in the 10th Street Industrial Corridor that has a need for $11.8 million in upgrades, including the purchase of the property.
- **The Lehigh Structural Steel site** at Lehigh Landing along the city's waterfront consists of nine building covering 20 acres of land. The City would like to acquire and redevelop this site for industrial uses at a cost of $13.1 million.

The Industrial Base in Allentown, Pennsylvania – An Initial Report



The City of Allentown Department of Community and Economic Development, Bureau of Planning and Zoning completed this short study in October of 2011 with the purpose of understanding the composition of the city's industrial base in order to better perform economic development planning. The study lists the numbers of industrial firms, numbers of employees, and maps of the firm's geographic locations. A number of key findings within the report include:

- Allentown had 126 manufacturing firms with about 3,647 employees in 2010;
- By employment numbers, the largest sector was printing and publishing with 668 employees;
- The largest sector by number of firms was Apparel and Other Finished Products; and
- Most industrial firms were small, with 61 firms having less than 10 employees.

Connecting Our Community - A Plan for Connecting Allentown's Parks and People through a Network of Bicycle and Pedestrian Trails

Also known simply as the Allentown Trails Plan, this report was prepared in 2010 for the City of Allentown by a team led by Greenways Incorporated. The year-long study identified potential projects, programs, policies and guidelines that are intended to improve pedestrian and bicycle access in the city.

The report lists 20 trail projects city-wide with three identified as priority trail projects. The MLK Parkway Trail in Allentown was identified among the priority trail projects. Proposed improvements include enhancing connectivity with spur trails and improving continuity since there are small missing segments.

In addition to trail projects, 20 streetscape and intersection improvements were also suggested that would improve connectivity and pedestrian and bicycler safety. The report also included a number of useful guides such as a program and policy toolbox, a list of funding opportunities, a report on legal feasibility, a signage report, a design toolbox and an operations and management toolbox. These guides will make it easier to implement the specific recommendations in the report.

Allentown 2020 – The City of Allentown Comprehensive Plan

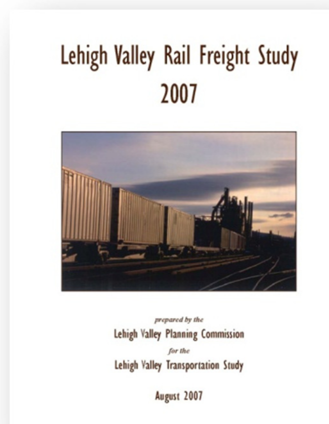
The creation of a Comprehensive Plan is authorized under the Pennsylvania Municipalities Planning Code. In Allentown, the Plan was prepared by City staff for the Allentown City Planning Commission, and was completed and adopted by the City in January 2009.

"Allentown 2020" provides a series of goals, policy statements and action steps to help Allentown better position itself for the future. The plan focuses on eight aspects of the city: Land Use, Housing, Economic Development, Community Facilities, Neighborhood Conservation, Historic Preservation, Transportation and the Environment and Natural Resources. Many of the plan's recommendations are summarized in a "Framework for the Future", a series of ten statements that describe some of the ideals presented in the Plan, and through the identification of eight "Strategic Planning Areas" throughout the city that hold the most potential for positive change.

The Little Lehigh Creek Corridor, from South 3rd Street to South 10th Street, was identified as one of the eight "Strategic Planning Areas". The plan notes that "*This area runs along the Little Lehigh Creek and Martin Luther King Jr. Drive and consists of parkland, an auto salvage operation, several vacant industrial buildings and other marginal uses. The area is also home to the Bridgeworks Enterprise Center and Business Incubator, and a large industrial operation. In addition to the existing parkland, the City has acquired a former rail line for the purpose of establishing a trail through this area. Because of its proximity to both Martin Luther King Jr. Drive and Lehigh Street, the area is highly visible and in need of attention.*"

With regard to the broader re-industrialization of Allentown, the economic development goals in "Allentown 2020" are particularly relevant, with discussions on workforce development, retaining current businesses and attracting new industries. There is specific mention of using the Bridgeworks Incubator as an inducement to attract start-up businesses. The chapter on Land Use goals includes a discussion of encouraging industrial uses and promoting the reuse of existing industrial buildings.

Lehigh Valley Rail Freight Study 2007



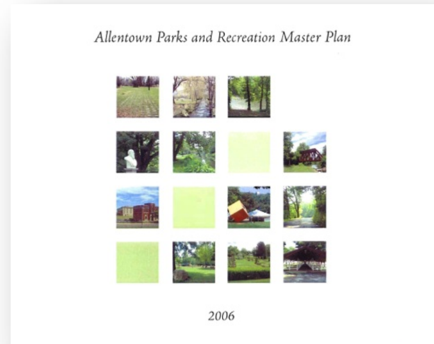
This report was prepared by the Lehigh Valley Planning Commission for the greater Lehigh Valley Transportation Study. The analysis is intended to "*advise decision makers regarding possible intervention or investment in connection with abandonment of rail lines.*" The report finds that the lines that remain in operation are viable and should not be abandoned.

Today, only freight rail service is available in the Lehigh Valley. Rail service is operated by nine different rail companies from the larger Class One carriers such as Norfolk Southern and Canadian Pacific, to smaller short-line and terminal railroads. The study notes that rail freight service adds value to Allentown's industrial properties by making shipping of large and heavy items more affordable. Other benefits noted in the study include:

- the reduction of truck travel, resulting in reduced congestion and highway infrastructure costs;
- the fact that rail is a critical link in the intermodal logistics network;
- the improvement of air quality and fuel efficiency due to reduced trucking;

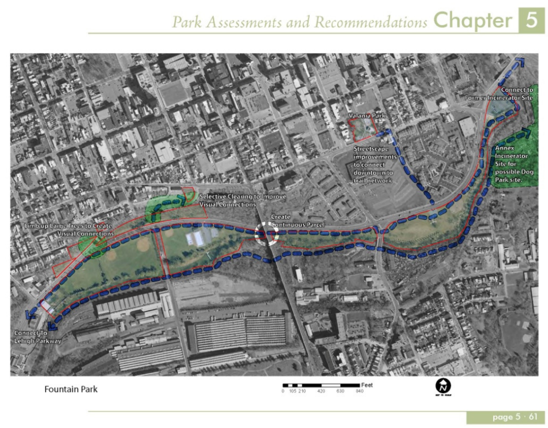
- the support of movements related to the military and national defense; and
- the provision of transportation system redundancy during national emergencies.

The report also points out that in Allentown; *"railroads participate in intermodal movements by serving six intermodal or transloading facilities. These include facilities that handle containers and trailers. Other facilities unload commodities, either for temporary storage or directly onto trucks for local delivery."*



Allentown Parks and Recreation Plan

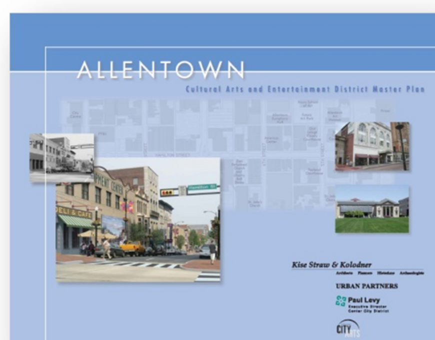
Completed in 2006 by City of Allentown staff, this document represents a broad look at Allentown's parks and recreation system. It includes an extensive inventory of existing conditions, goals and objective statements, an analysis of management and staffing and a series of recommendations for priority projects. The Parks and Recreation Plan also includes assessments of existing parks within the city, as well as corresponding recommendations for each.



A component of the Plan that is particularly relevant to the Allentown Re-industrialization Study is the assessment and recommendations for Fountain Park, the 50-acre park between the south side of MLK Parkway and the Little Lehigh River. A concept plan for Fountain Park shows a proposed trail on the south side of the Little Lehigh River that runs behind the Allentown Metal Works buildings. In addition, the plan shows the proposed trail connecting to the former incinerator site (a possible industrial re-use site) with a note: "Annex Incinerator Site for possible Dog Park site."

Allentown Cultural Arts & Entertainment District Master Plan

This 2004 report was prepared by the architectural firm Kise, Straw and Kolodner and includes a series of recommendation for Hamilton Street between Fourth and Seventh Streets (the Arts District). This district is just north of the Little Lehigh River industrial area. Nine key properties in this area were identified as major redevelopment opportunities and a list of suggested reuse options were included. Public realm improvements were also recommended, including wider sidewalks, bumpouts, improved lighting, wayfinding signage and improved site furnishings. Improvements were grouped into manageable projects that included a specific implementation strategy for each. If implemented, the recommendations in this report would provide an economic stimulus to the City of Allentown by helping to make the city a place where people, and companies, would like to locate.



Appendix G: SWOT Analysis

Economic Base

Strengths	Weaknesses
– Manufacturing sector is a driver, not a true "cluster" – Manufacturers mostly include small to mid-size companies (5-100 employees) – Local manufacturers are industry leaders, good at what they do, include "creative-types" – Lots of machine shops that work well together to support local businesses	
Opportunities	**Threats/Challenges**
– History of manufacturing in the region – Manufacturing sector pays higher than average wages in Allentown ($66,150 manufacturing vs. $54,100 average)	– In the region, transportation, warehousing and logistics are major industries - some view as threat because of demands on roads, lower wages, and less jobs per square foot

Incentives

Strengths	Weaknesses
– NIZ: Driving commercial and residential development – KOZ – KIZ – Enterprise Zone	– Local taxes are perceived as being high – Many existing businesses & entrepreneurs were not aware of or confused about the funding programs available to them (Local or State) – Most incentives are geography-based and those outside the zone feel slighted
Opportunities	**Threats/Challenges**
– NIZ: Creating momentum that can spin-off to other parts of the City - People's perception of the City is changing for the better – KOZ: Viewed as an important factor by those in the zone due to tax savings – Available funding for redevelopment and infrastructure improvements	– NIZ: Some manufacturers feel like the City's focus isn't on them/their sector – Enterprise Zone: If located outside the zone, not viewed as positive – Incentives are likely needed to support redevelopment

Workforce

<table>
<tr><th>Strengths</th><th>Weaknesses</th></tr>
<tr><td>
– Regional collaboration around workforce - Lehigh Valley WIB has industry partnerships and LCTI, Lehigh Carbon Community College have advisory groups
– Decent population of working-age adults to draw from
– Positive results reported by companies that use recruiters to fill openings
– Strong private sector employment - 93% non-government workers in Allentown, compared to 88% in PA and 85% in U.S.
– Production, transportation and material moving occupations still make up a very large portion of employment in Allentown: 21%, compared to 14% in PA and 12% in U.S. (strong base of workers to build from)
</td><td>
– Lack of collaboration with the immigrant population
– Low English speaking populations
</td></tr>
<tr><th>Opportunities</th><th>Threats/Challenges</th></tr>
<tr><td>
– Increased partnerships between employers, education, workforce development
– Future Jobs:
o City Center: hospitality, customer service, retail, sales, etc.
o Transportation, distribution, logistics - Production, make up a large portion of employment in Allentown: 21%, compared to 14% in PA and 12% in U.S. (strong base of workers to build from)
– High potential utilization of programs to support middle skill jobs (i.e., those that require some postsecondary but less than a four-year degree).
– Hispanic & Latino Communities & Immigrant Population - Untapped source of entrepreneurs
– Some view companies that pay and treat employees well can get workers
– National trends in workers wanting to live near workplace
</td><td>
– Literacy challenges are not being met
</td></tr>
</table>

Education

Strengths	Weaknesses

– LCTI
  ○ Strong training programs, proven connections with employers
  ○ Downtown, accessible campus
– LCCC
  ○ Downtown, accessible campus
  ○ Positive experience by many businesses
	– LCTI
	  ○ Travel can be an obstacle as not located in downtown, near school
	  ○ Better coordination with Community College needed
	– Low education attainment compared to state and nation

Opportunities	**Threats/Challenges**
– Charter schools seen as possible alternative by some	– Must overcome stigma of manufacturing jobs as dying jobs with students, parents, counselors

Little Lehigh Corridor

Strengths	Weaknesses
– Rail access – Proximity to downtown core – Vacant incubator site – Ample number of industrial building	– Lack of move-in space – Flood Zone – Steep slopes – Run down aesthetics – Sidewalks and curb cuts in rough shape – Auto salvage business
Opportunities	**Threats/Challenges**
– Parkland along MLK drive poses an opportunity to revitalize connections to park and bring “life” base to programming events – Former Mack Truck buildings are likely more sound than they appear – AEDC ownership of Allentown Metal Works buildings	

City's Industrial Property Supply

Strengths	Weaknesses
– Cheaper than suburban sites – Scattered industrial sites creates easy access to residential areas	– Available space in poor shape – Lack of "move in" space – Lack of large tracks of shovel-ready undeveloped land – Property owners are difficult to engage and some are sitting on properties waiting for "tomorrow" – Absentee Landlords
Opportunities	**Threats/Challenges**
– LWRP Projects growing demand of over 15 million SF – Target Market: Urban Manufacturing Pioneers: Sustainability, re-use, urban core, walk-to-workforce, responsibility to community – Demand for space is in 8, 000 sqf of less and 20,000 to 40,000 sqf	– Require significant investment for use – Manufacturers don't want a "project" – Significant time required to redevelop – Lack of money for prepping city-owned buildings for redevelopment – Most development activity occurring in suburban markets – Big-name real estate firms (Colliers, CBRE) work in the region Allentown is located in and serves, but don't work in or have knowledge of the City's real estate market

Quality of Life & Place

Strengths	Weaknesses
– Park system	– Bethlehem has done more to transition from a steel town and it has more things to do than in Allentown – Perception of past history of crime- viewed as less safe than other parts of Lehigh Valley – Run down aesthetics
Opportunities	**Threats/Challenges**
– Sense of change in Allentown and Region – Local perception is changing – growing pride	– "Outsider" perception of the city are negative

Infrastructure & Public Services

Strengths	Weaknesses
– Access to highway is good for those on perimeter – Regional access to Port of New Jersey – Transportation is typically not a cost factor for companies (more nuisance) – American Parkway Upgrades will provide better access to the inner-city – Good access to natural gas – Power is cheaper in the Valley than other parts of the northeast	– Transportation – schedule of services is not frequent and routes are not necessarily going directly to work sites – Weight capacity of some bridges is an issue – Windy roads make it hard for some customers to find manufacturing businesses
Opportunities	**Threats/Challenges**
– Potentially restore old rail service – Access to airport is good	– Getting around the city with a truck is difficult – not planned for large trucks

Entrepreneurship & Innovation

Strengths	**Weaknesses**

− BEC Building – Suitable for manufacturing with high ceilings, wide bays, loading docks, and natural sunlight
− Services – new, energetic, and motivated management with the willingness to learn and restart the program
− Several tenants are innovation driven with potential to grow
− Community is trying to support entrepenuers
	− BEDC Building – Poor heat & AC, closed off nature of spaces, lack of appropriate sound proofing
	− Financial feasibility of the incubator itself is possible only because staff and programming is limited and maintenance on the building is deferred
	− Programming lacks coherent mission, strategy and goals
	  o Too much and too little going on at once
	  o Trying to be everything to everyone
	  o Clients include whoever can rent there
	− Not enough resources available for clients
	− Wide variety of programs and duplication in small business support in the community
	− Incubator manager is only 60% dedicated to the project. Most of manager's time is spent on building related issues and networking to attract clients.

Opportunities	**Threats/Challenges**
− BEDC Building could be reconfigured to yield more rentable space without changing footprint − Hispanic and African-American communities are untapped source of entrepreneurs − Incubator manager deeply involved with entrepreneurial ecosystem through Lehigh Valley Tech. TechVentures is a well-funded and successful competitor/partner. − Many student entrepreneurship and manufacturing training programs in the region are an untapped source of client companies as well as interns and apprentices.	− Great, innovation-based entrepreneurs get to choose between TechVentures and Bridgeworks Enterprise Center. − Are the best entrepreneurs choosing manufacturing businesses? Or, when great businesses finish their initial R&D at TechVentures, are they considering staying in Lehigh Valley or Allentown for their manufacturing facility?

Business Environment

Strengths	Weaknesses
– Most manufacturers said the City is really good to work with, including better to work with than smaller communities in the reigon – Industrial zoned properties – Local presence of headquarters of major companies	– Industrial uses clustered but not connected
Opportunities	**Threats/Challenges**
– Pennsylvania is perceived as more business friendly than New Jersey	– Entrepreneurs and Hispanic community see the City's customer service/permitting as difficult and hard to get assistance – Trend of re-zoning away from industrial

Economic Development Efforts

Strengths	Weaknesses
– Engaged Chamber and good coordination with City	– Connection of Allentown to Regional Efforts – part of the Lehigh Valley but not as engaged with regional efforts
Opportunities	**Threats/Challenges**
– More prominent role for Allentown in regional efforts; access to programs and funding – Allentown can be the urban manufacturing center of the region meeting the needs of companies that want to be in urban area	

Existing Manufacturers

Strengths	Weaknesses
– Like the Allentown address – Most owners have a personal connection to the city/region – Wastewater – City's ability to work with manufactures handling this (Note: Lehigh County Authority is now responsible for water and sewer supply and processing.) – Direct access to workforce – Sustainability – Desire to keep green space and farmland undeveloped – Close proximity to NJ market, partners, and port – More influenced by this rather than Philly – Diverse manufacturing base – Chamber Manufacturing Council – Companies with positive things to say about the workforce tent to use temp agencies and pay higher wages – Tend to do a lot of training themselves	– Concerns finding move-in space in the city that is of or near move-in quality – Feel like the City is not focused on them if they are not high-tech or downtown – Manufacturers with more positive view of workforce tend to pay "beltway salaries" (higher than local workforce) – Work with tech-school to get candidates, just not enough qualified to go around – Challenge to find skilled laborers and unskilled laborers – Need employees with better soft skills and employability skills
Opportunities	**Threats/Challenges**
– Region is "known for" manufacturing with a strong history – Most see expansion on the horizon – Prefer to stay in the region – Would like networking opportunities – Significant demand for machinists	– Not a strategic location in itself – no one factor or resource that drives competitiveness of location – All are aware of lack of space in the city – Once space becomes an issue this will be a hard perception to overcome – Expecting significant turnover in coming years due to retirement

National/Regional Trends

Strengths	Weaknesses
– Live/work environment in demand	
Opportunities	**Threats/Challenges**
– "Flexible Specialization" – Allentown manufacturers fit this trend – Manufacturing resurgence in U.S. means more manufacturing returning or staying in regions like Lehigh Valley – Declining price of computer power allows small companies to be players in the global market - Entrepreneurs are better able to compete with the "big guys" – Increasing rate of disruptive technologies make it hard to dominate market for an extended period of time - or at all – Barriers to market entry are being broken down – Barriers between companies and companies-institutions are being blurred "co-opetition" – Open Innovation – Labor cost of manufacturing is increasing overseas and shipping costs adds to offshore production costs	

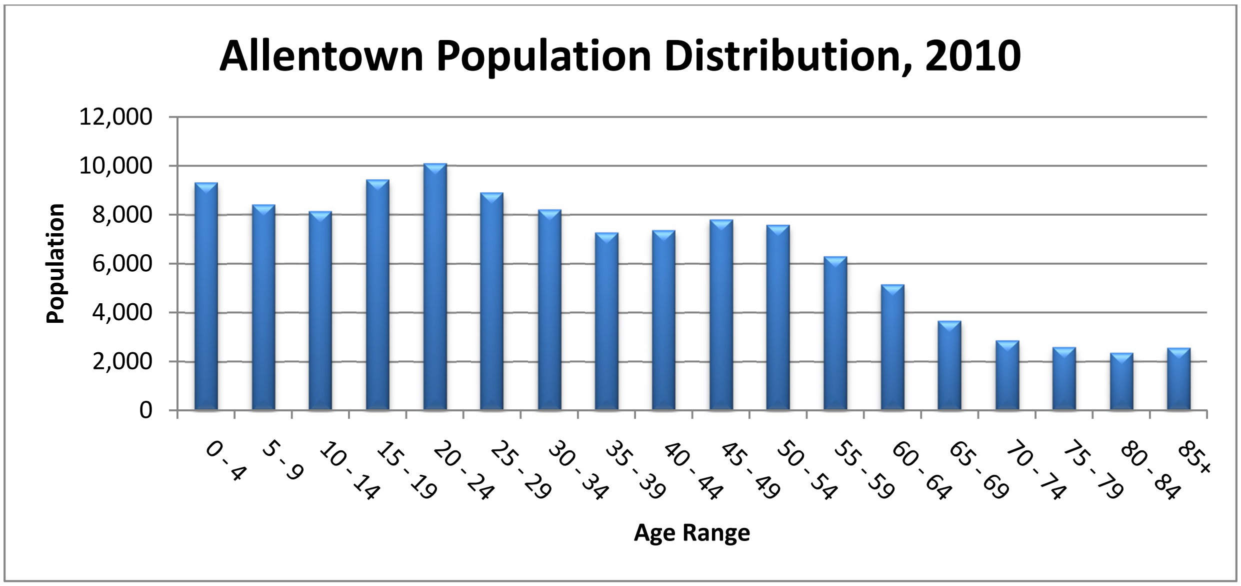
APPENDIX H: BACKGROUND INFORMATION

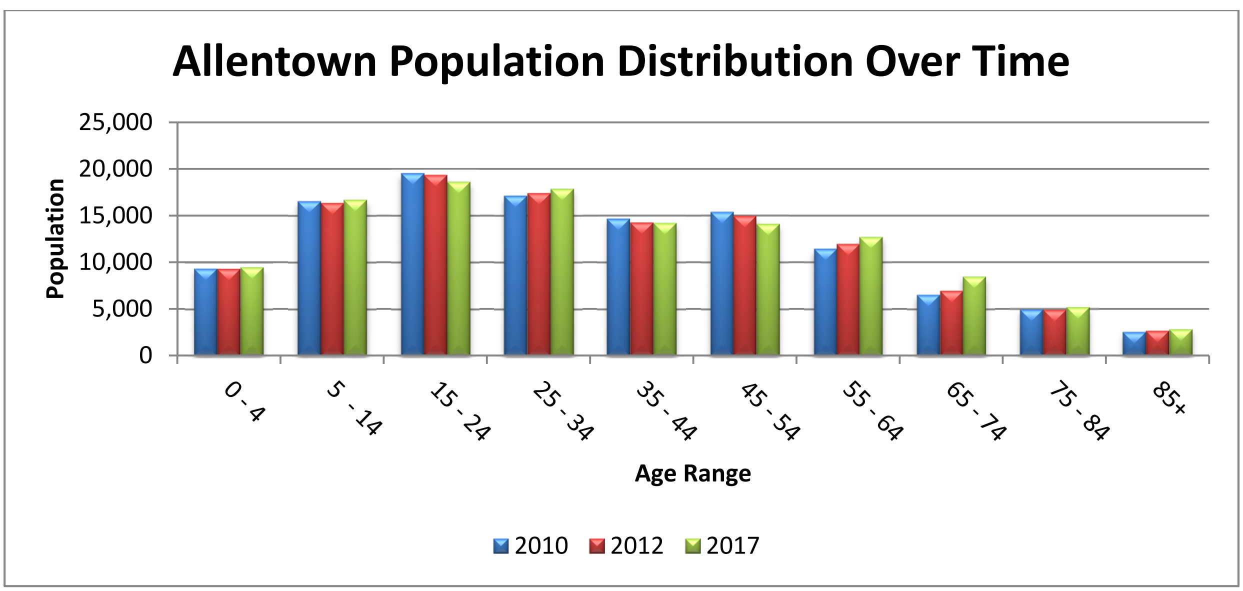
Demographic & Socioeconomic Data

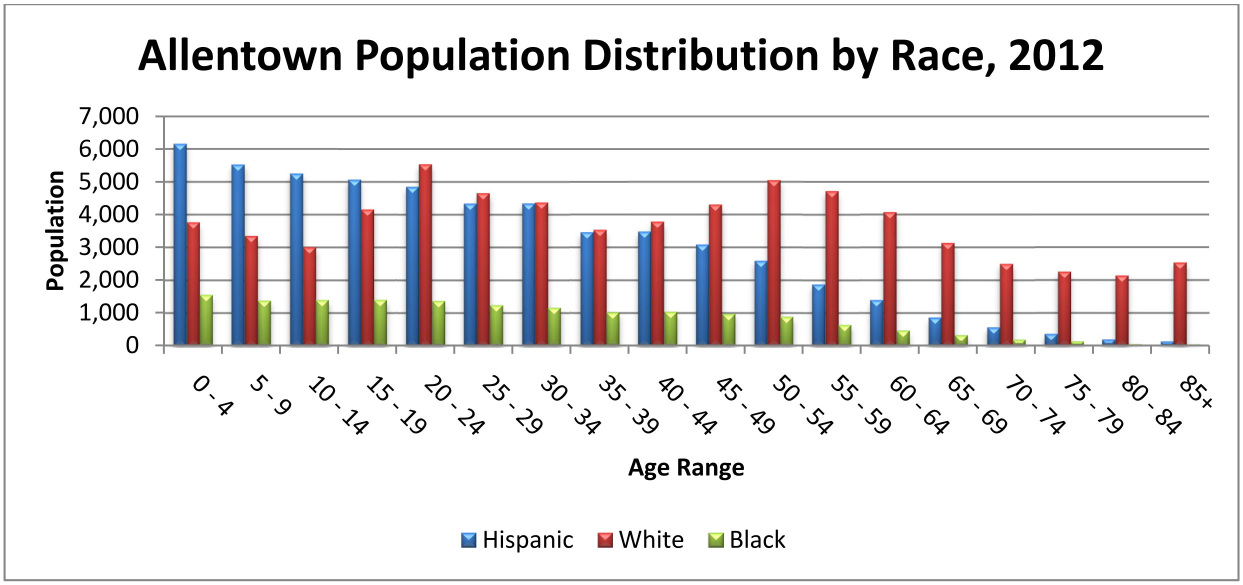
It is important to take into consideration when reviewing the demographic data that the City of Allentown's population is the largest it has ever been.

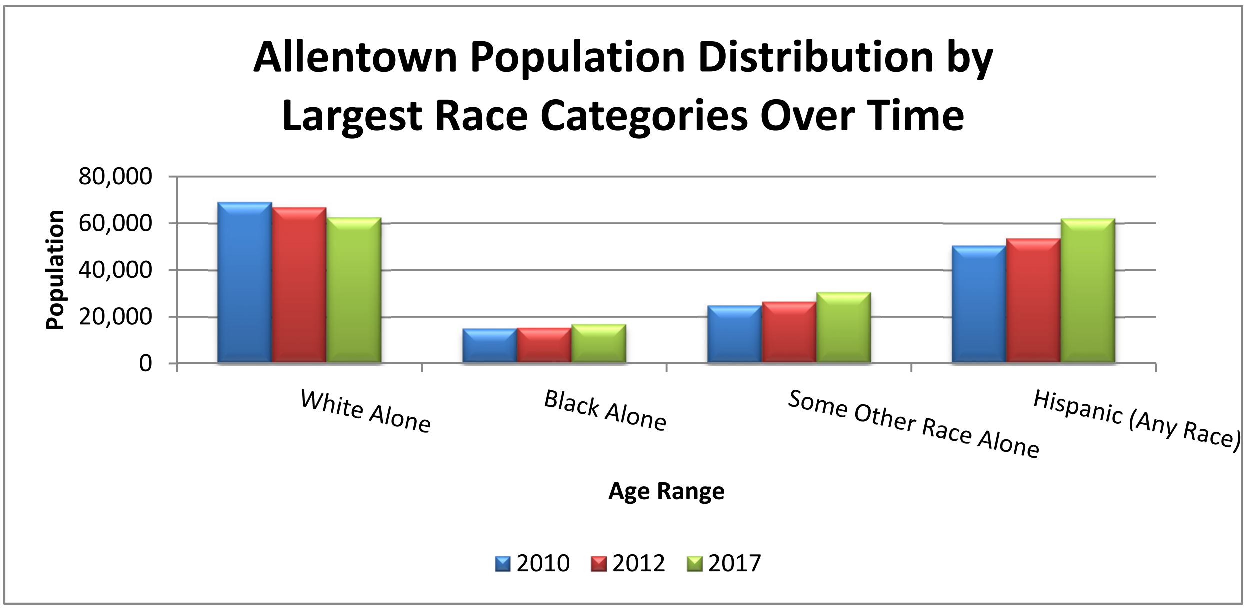
City of Allentown Demographic Summary					
	2010	2012	2017	Change 2012-17	Annual Rate 2012-17
Population	118,032	118,058	120,091	2,033	34%
Households	42,804	42,833	43,101	268	12%
Median Age	32.9	33	33.5	0.5	30%
Median Male Age	31.9	32.1	32.7	0.6	37%
Median Female Age	33.8	33.9	34.3	0.4	23%

Source: EMSI Business Analyst






Allentown Population Distribution by Race, 2012
Population
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
0 - 4
5 - 9
10 - 14
15 - 19
20 - 24
25 - 29
30 - 34
35 - 39
40 - 44
45 - 49
50 - 54
55 - 59
60 - 64
65 - 69
70 - 74
75 - 79
80 - 84
85+
Age Range
Hispanic
White
Black


Allentown Population Distribution by Largest Race Categories Over Time
Population
80,000
60,000
40,000
20,000
0
White Alone
Black Alone
Some Other Race Alone
Hispanic (Any Race)
Age Range
2010
2012
2017

Ongoing Manufacturing Initiatives

Governor's Manufacturing Advisory Council (GMAC)

Recognizing that manufacturing is the foundation on which Pennsylvania was built, the Team Pennsylvania Foundation created the Governor's Manufacturing Advisory Council.[28] This is a private-sector initiative intended to develop a roadmap to rebuilding advanced manufacturing in the state though innovation in entrepreneurship, and spurring investment though enhanced economic competitiveness. The council issued a report in 2012[29], which includes recommendations to encourage growth in the state's manufacturing sector by focusing on these key areas:

- Talent & Workforce
- Opening New Markets: International, Domestic, and Emerging Energy
- Making Government Work Better for Manufacturers
- Innovation
- Access to Capital

We note that the Advisory Council Membership does not include any Allentown manufacturers.

Additive Manufacturing Innovation Institute

A public–private team headquartered in Youngstown, OH, in partnership with Pennsylvania and West Virginia, was awarded a $30 million federal grant from the Department of Defense to develop a National Additive Manufacturing Innovation Institute (NAMII).[30] The institute will develop a roadmap to increase domestic competitiveness through increasing the successful transition of additive manufacturing technology, advancing innovation and creating a workforce capable of meeting industry needs.

Lehigh University, Manufacturers Resource Center, Northampton Community College, and Ben Franklin Technology Partners are members of this consortium, which includes nine research universities, 40 private companies, four community colleges and eleven trade associations and other nonprofit organizations.[31] NAMMI was founded in August of 2012 and is the pilot institute for up to 15 similar institutes across the country.

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[28] GMAC website: http://teampa.com/impact/business-growth/governors-manufacturing-advisory-council/

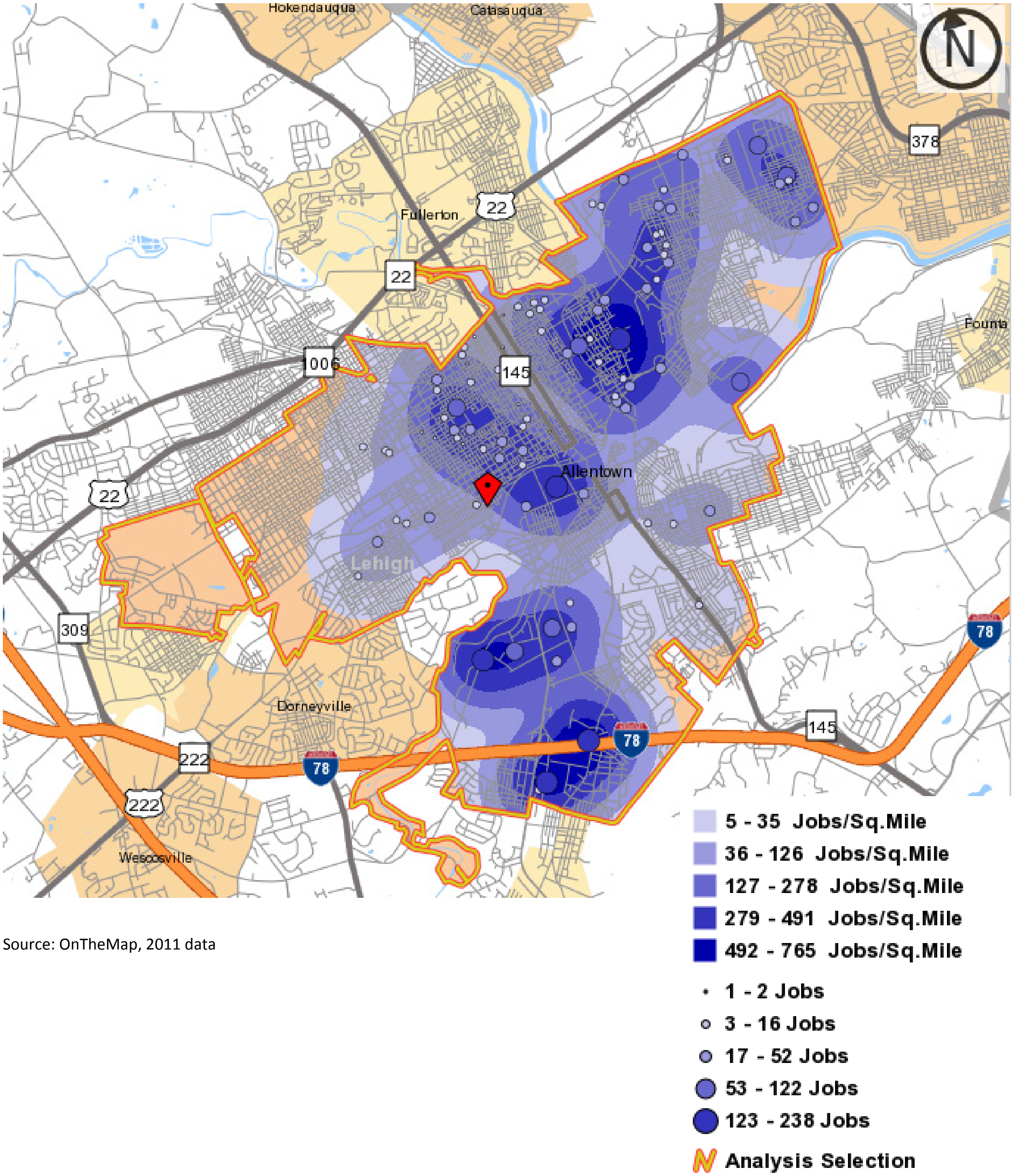
[29] GMAC report: http://teampa.com/wp-content/uploads/2012/09/GMAC_FinalReportRecommendations_Revised.pd

[30] NAIIM website: http://namii.org/

[31] *New public-private partners aims to help revitalize manufacturing,* PENN STATE News http://news.psu.edu/story/147394/2012/08/17/new-public-private-partnership-aims-help-revitalize-manufacturing

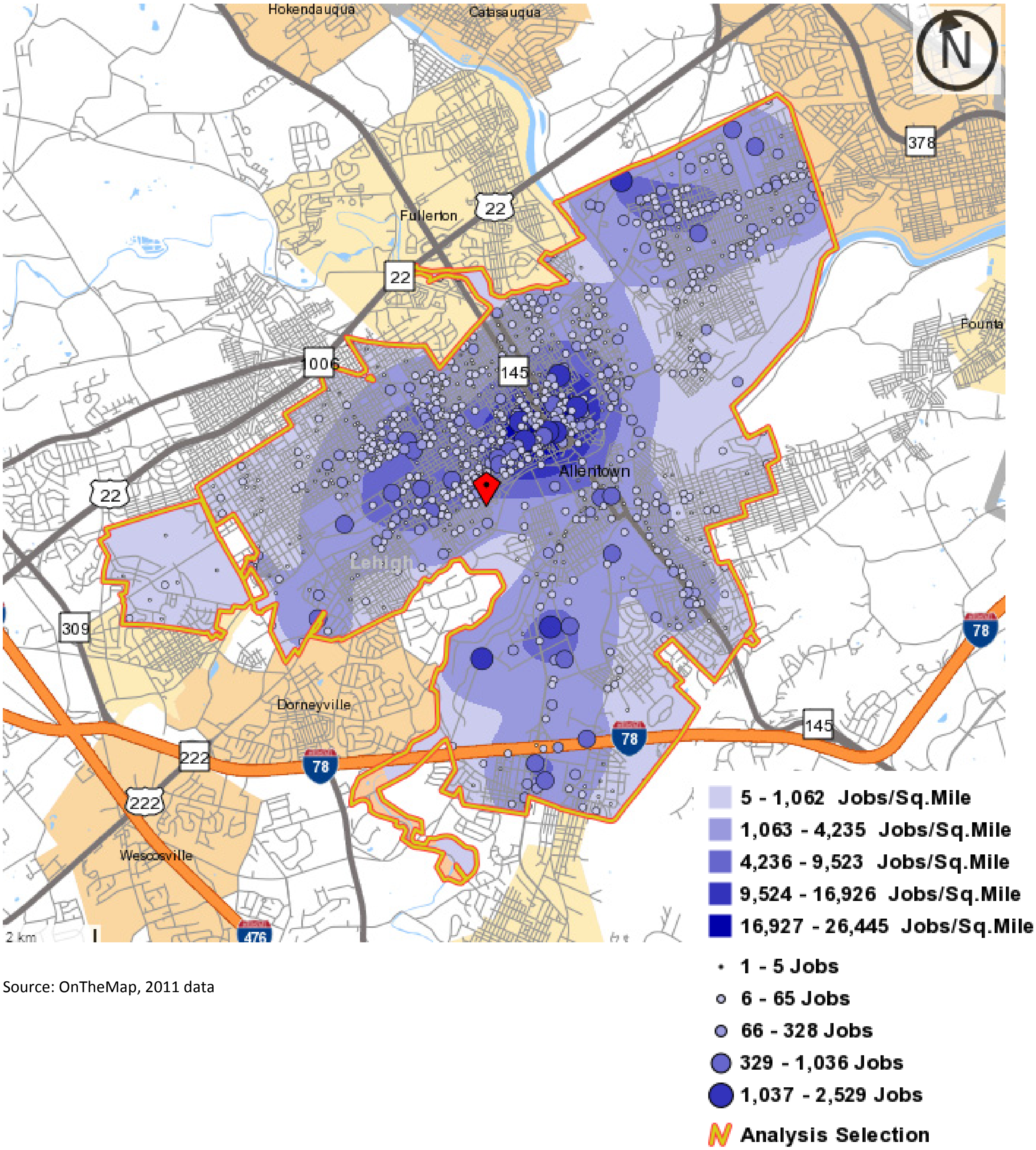
APPENDIX I: MAPPING

Distribution of Manufacturing Jobs in the City of Allentown



Source: OnTheMap, 2011 data

Distribution of Jobs in the City of Allentown



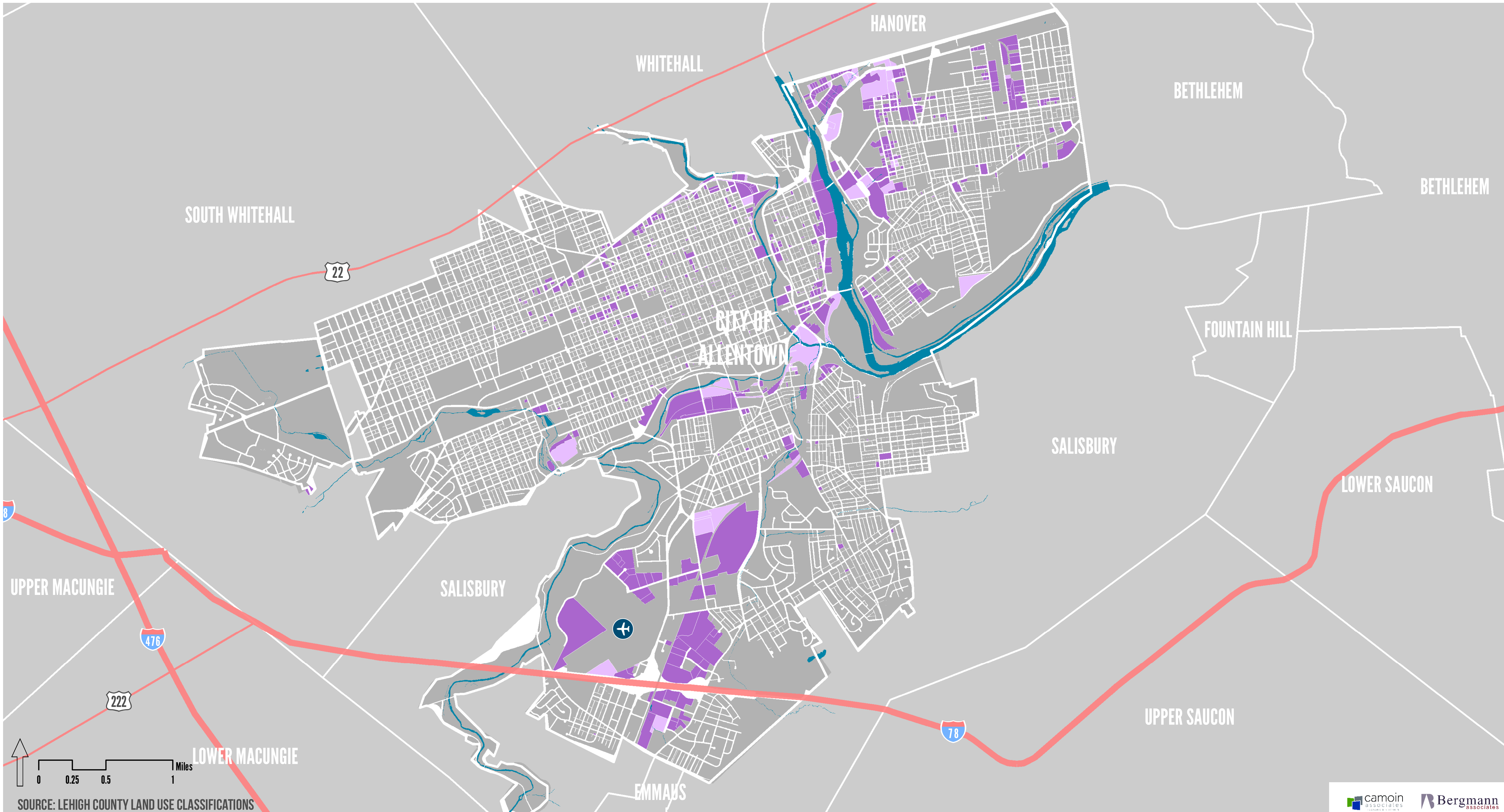
Source: OnTheMap, 2011 data

Re-Industrialization Study

CITY OF ALLENTOWN, PA

MAP 1: CITY-WIDE INDUSTRIAL LAND USE

- Interstates
- US Highways
- Warehouse & Manufacturing Lands
- Vacant Industrial Lands
- All Other Lands



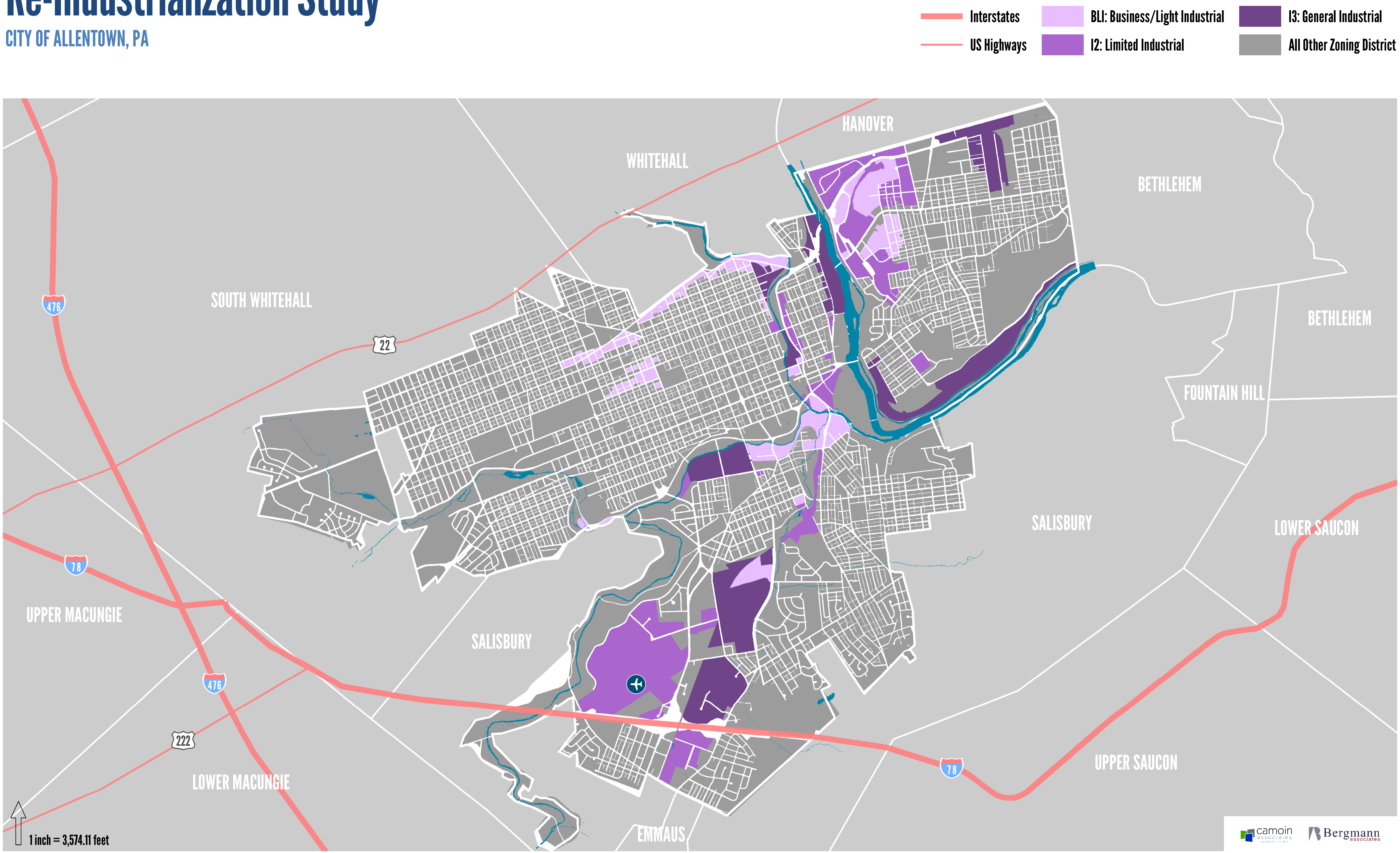
SOURCE: LEHIGH COUNTY LAND USE CLASSIFICATIONS

camoin associates Bergmann associates

Re-Industrialization Study

CITY OF ALLENTOWN, PA

MAP 2: CITY-WIDE INDUSTRIAL ZONING



Appendix J: Interviews Conducted

Industrial & Real Estate Market Analysis Interviews (Camoin Associates)

Business Leaders

Brian Rocca, Eastern Surfaces

Dirk Cos, Lightweight Manufacturing

Steve Wilson, Phoenix Global Partners

Rich Mullen & Angela Nolan, Vistacom

Kevin Ulrich, Mi Productions, Inc.

John Read, Penetron

Joe McDermott, McDermott Communications

Sandy Posco, Insulation Corporation of America

Gary Abramowitz, Fresh Tofu

Community & Economic Developers

Alan Salinger, City of Allentown

Michael Hefele, City of Allentown

Cindy Feinberg, Lehigh County Community & Economic Development

Jack Pfunder, Manufacturers Resource Center

Don Cunningham, Lehigh Valley Economic Development Corporation

Miriam Huertas & Tony Ianelli, Lehigh Valley Chamber of Commerce

Real Estate Professionals

Tom Skeans, Sperry Van Ness-Imperial Realty

Kerry Wrobel, Lehigh Valley Industrial Parks

Linda Deitrick, Deitrick Group

Mike Adams, NAI Summitt

Tom Shaughnessy, J.G. Petrucci Company, Inc.

Labor Market Analysis Interviews & Focus Groups (Thomas P. Miller & Associates)

Karen Buck, Project Manager for Skill-up, Manufacturers Resource Center (MRC)

John Chowansky, Lead Advanced Manufacturing Consultant/Instructor, Lehigh Career & Technical Institute

Keith Falko, Director of Instructional Initiatives, Allentown School District (ASD)

Susan Griffith, Operations Director, PA CareerLink Lehigh Valley

Sandy Hines, Executive Director, Lehigh Career & Technical Institute

Wendy Harris, School-to-Work Coordinator, Lehigh Career & Technical Institute

Jan Klevis, Director Postsecondary & Workforce Education, Lehigh Career & Technical Institute

Gina Kormanik, Director of Business Development, Lehigh Valley Workforce Investment Board

RoseMarie Larson, Vice President, Berks and Beyond

Karen Lockard, Job Seeker Services Manager, PA CareerLink Lehigh Valley

Steve Long, President, Protective Coating Co.

Owen O'Neil, Director of Planning, Lehigh and Northampton Transportation Authority, (LANTA)

MaryAnn Przekurat, Executive Director, Literacy Council of the Lehigh Valley

Edward Roma, Plant and Operations Manager, Stanley Vidmar

Jefferson Vitelli, Lehigh Valley Professionals

Dr. Todd A. Watkins, Executive Director Dexter F. Baker Institute for Entrepreneurship at Lehigh University

Esther Wenck, Workforce Operations Director, Lehigh Valley Workforce Investment Board

Lois Yeakel, Director of Leadership and Workforce Development, Lehigh Carbon Community College

Entrepreneurial/Bridgeworks Enterprise Center Analysis Interviews (Innovation Policyworks)

Managers of Bridgeworks Enterprise Center

Anthony Durante, Allentown Economic Development Corporation

Scott Unger, Allentown Economic Development Corporation

Kenneth Vance, Allentown Economic Development Corporation

Current Incubator Tenants

Rich Serio, ZeroTruck

Ajay Khati and Terry Rufer, ColdEdge Technologies

Jared Steckel and Ellis Farmer, Make Lehigh Valley

Matthew and Tara Sommerfield, MTS Ventures

Graduates

Michael Grather, Underwriters Laboratory (formerly Lumunaire Testing Laboratory)*

Rolf Schlake, Applied Separations

Potential Tenants

Christian T. Birch, Map Decisions, LLC

Tom Knesel, Pivitec

Entrepreneurial Education in Lehigh Valley

Trexler Proffitt, Muhlenberg College

Richard Wagner, Lehigh Carbon Community College

Todd A Watkins, Baker Institute, Lehigh University

Other Entrepreneurial Service Providers

Wayne Barz, Ben Franklin Technology Partners of Northeastern Pennsylvania*

Sandra Holsonback, Small Business Development Center

Stephanie Olexa, Lehigh Valley Angels*

Jack E. Pfunder, Manufacturers Resource Center

Community Members with Knowledge of Entrepreneurial Ecosystem

Joshua Gildea, Fitzpatrick, Lentz & Bubba

Rafael De La Hoz, Susquehanna Bank

Danielle Joseph, Greater Lehigh Valley Chamber of Commerce

Matthew Tuerk, Lehigh Valley Economic Development

J. Matthew Zator, Zator Law, and President of the Greater Lehigh Valley Chamber of Commerce, Small Business Council

*Members of Bridgeworks Enterprise Center Advisory Committee

Appendix K: Re-Industrialization Tools

Detailed Overviews of the Business Visitation Process & Resources Available at:

The University of Florida IFAS Extension Office: http://edis.ifas.ufl.edu/fe655

University of Minnesota Extension: http://www1.extension.umn.edu/community/business-retention/

Bank of IDEAS: http://www.bankofideas.com.au/Downloads/BR+E_Summary.pdf

Journal of Extension: http://www.joe.org/joe/2012june/rb1.php

Ohio State University Extension: http://ohioline.osu.edu/cd-fact/pdf/1562.pdf

Redevelopment Tracking Template for Key Industrial Properties

Note: There can and will likely be multiple limiting factors for each property. In those cases it makes sense to use multiple rows for the same property.

Property Name	Address	Limiting Redevelopment Factor	Ability to address factor (low, medium,high)	Steps to addressing limiting factor	Project Lead	Project Partners & Role	Potential Funding Sources	Redevelopment Status, Progress, Next Steps

Redevelopment Stakeholders Template

Stakeholder Type	Stakeholders	Role	Interest/Wants
Property Owner	Property Owner	Sell or develop the property	Receive fair value of their property Manage any liability concerns upfront (related to environmental contamination)
Public Sector	AEDC	Facilitate redevelopment of city-owned properties, develop redevelopment plan, coordinate stakeholders, identify local manufacturers looking to expand	Economic growth for Allentown's industrial sector, re-use of underutilized industrial properties
	City of Allentown Community & Economic Development	Assist AEDC with redevelopment plan and management, engage stakeholders as needed	Economic Growth for Allentown, tie in property redevelopment into larger redevelopment plans for city
	LVEDC	Attraction	Economic growth for Lehigh Valley
	Greater Lehigh Valley Chamber of Commerce	Engage with manufacturing community	Economic growth for Allentown
	Pennsylvania DEP	Land Recycling Program	Successful re-use of environmentally contaminated properties
	U.S. EPA	Programs & Funding for redevelopment of contaminated properties	Successful re-use of environmentally contaminated properties
	Housing Alliance of Pennsylvania	Legal tools for addressing blighted properties	Successful re-use of blighted properties
	Lehigh County Community & ED	Grants?	
	Other Federal Organizations		
	Other State Organizations		
	Other Nonprofit Organizations		

Stakeholder Type	Stakeholders	Role	Interest/Wants
Private Sector	Real Estate Brokers	Sell property to private sector, educate property owners on market trends	Strong real estate market
	Investors	Project equity funding	Measurable return on investment
	Lending Institutions	Project debt funding	Low-risk financial investment
	Developers	Secure financing, manage redevelopment	Successful redevelopment, earn return on investment
	Local Manufacturers	Assist with identifying industries to target and attraction efforts via supply chain network, may also provide some funding	Gain a competitive advantage from having local suppliers in close proximity
	Insurers	Provide insurance for project	Appropriate return on investment
Other Parties	Attorneys	Provide legal guidance during redevelopment	Successful redevelopment
	Real Estate Consultants	Market Analysis & financial Feasibility - create redevelopment scenarios and identify funding gaps	Successful redevelopment
	Environmental Consultants	Site Investigations & Remediation recommendations - remove unknowns about contamination and costs of remediation	Successful redevelopment
	Fundraising Consultants	Fundraising campaign	Successful redevelopment
	State and Federal Regulators	Permitting and approvals	Mitigate significant environmental impacts from project

Example Familiarization Tour Invite via E-Newsletter

Dear Christa,

Good morning,

DECD Commissioner Catherine Smith has agreed to speak at our Fam Tour Luncheon coming up on September 25th. Please see the information below and sign up today!

Based on the success of previous Suffield Familiarization Tours, we are going to have another familiarization event to highlight our Planned Development Industrial Park land (light ind./office/distribution) in the vicinity of Bradley International Airport, Industrial land off Route 159, and a mixed-use opportunity in our Town Center on Wednesday, September 25th. It will include a bus tour leaving from the Suffield Country Club, 341 N. Main Street, at 10:30 a.m. The tour will be followed by lunch at the Suffield Country Club at noon (sponsored by the First National Bank of Suffield) and then a round of golf (9 holes shot-gun start at 1 p.m.). We are inviting Realtors, state and regional ED professionals, utility reps, builders/developers, architects and engineers. Repeat customers are asked to bring a developer contact along.

Businesses locating near Bradley may qualify for incentives under the Bradley Airport Development Zone established by the State of Connecticut and managed by the Connecticut Airport Authority. Several airport region businesses have already taken advantage of the program.

Space is limited so if you're interested then please respond by phone or e-mail today!

Regards,

Patrick McMahon
Director of Economic and Community Development
860-668-3849
pmcmahon@suffieldtownhall.com

Appendix L: Financing Overview

1. The need for direct financing was not among the top issues identified by manufacturing businesses through our interviews. The top issues were workforce and availability of space suitable for manufacturing, on which we focused most of our recommendations. As described below, the Phase I recommendations include a series of strategies designed to both directly and indirectly reduce the financial burden of overcoming and mitigating these issues.

2. For medium and larger companies where move-in space is a priority (existing businesses looking to expand or new companies looking to locate in Allentown), financial support comes indirectly from AEDC/City investing in the redevelopment of large sites such as Metalworks. By taking initial steps to study, plan, and make other investments, AEDC/City is making these sites financially accessible for companies to do their own project, thus indirectly assisting with financing.

   Additionally, these larger companies can access incentives to help with financing through the various investment zones (Allentown Enterprise Zone, Keystone Opportunity Zone, etc.).

3. From the workforce side, for one company alone it can be expensive to take on workforce issues and provide the education and training needed to support manufacturing. The City and its partners mitigate those costs through the ongoing and proposed workforce development efforts. This will require the City and AEDC to collectively increase involvement in workforce collaborations with the K-12 schools, higher education, and the workforce investment board.

4. Access to capital is often an issue for start-ups and entrepreneurs. We do see an opportunity to finance startup and small business growth as they move through Bridgeworks, grow, and develop out of the incubator. (Pg 76 of Appendix):

   > "Potential clients [1] are motivated by the flexible space offered, but more importantly by the services and programs available that they perceive will reduce the risk of their emerging company and increase the speed with which they can attain success. Access to capital is high on the list for most entrepreneurs, but incubators also seek to increase their client's readiness for financing by working on other aspects of the business such as marketing, clear definitions of business models, technical challenges and resource management. Finally, most clients acknowledge the importance of the network of entrepreneurs as a significant benefit to incubator programs."

   In the report, we identified that a valuable service would be repurposing the Enterprise Zone Revolving Loan Fund (EZRLF): (Page 34 of Findings)

   > "Another valuable service would be to have financing for client companies. Would it be possible to repurpose the be Enterprise Zone Revolving Loan Fund (EZRLF) program that is currently undersubscribed to support clients? This would be a draw to companies choosing between Bridgeworks and TechVentures, especially because manufacturing companies are more likely to need debt rather than equity capital for working capital, inventory and receivables financing."

[1] This terminology is significant because it signals that the company is being assisted, rather than just provided office space.