

APPENDICES

POPULATION AND HOUSING

The Southwestern Lehigh County Region is quite diverse. The boroughs of Alburtis and Macungie, originally settlements surrounded by rural areas, now have the least number of residents among the six municipalities (Table 1). The confined boundaries of the boroughs will limit their future population growth. However, the availability of public sewage and water service and the higher densities allowed within the boroughs have caused Macungie and Alburtis to experience significant growth as a percentage of their total population. Emmaus is the most populous borough in the region, but has seen the least overall growth since the 1960's due to limited annexation and its fixed position between South Mountain and the Little Lehigh Creek.

Lower Macungie Township, with its proximity to major employers and availability of public sewage, now has nearly five times the number of residents as in 1960, far exceeding the growth seen in any of the four other municipalities in the study area and the County as a whole. Upper Milford and Lower Milford Townships have experienced more modest growth rates, with Lower Milford in particular remaining primarily rural.

Unless otherwise stated, all data is from the U. S. Census.

TABLE 1
TOTAL POPULATION
Southwest Lehigh Area and Lehigh County -1960 - 2000

MUNICIPALITY	POPULATION					CHANGE (1960-2000)	
	1960	1970	1980	1990	2000	NUMBER	PERCENT
Alburtis Borough	1,086	1,142	1,428	1,415	2,117	1,031	94.9%
Emmaus Borough	10,262	11,511	11,001	11,157	11,313	1,051	10.2%
Lower Macungie Township	3,859	8,814	12,958	16,871	19,220	15,361	398.1%
Lower Milford Township	1,779	2,189	2,865	3,269	3,617	1,838	103.3%
Macungie Borough	1,266	1,414	1,899	2,597	3,039	1,773	140.0%
Upper Milford Township	3,614	3,992	5,013	6,304	6,889	3,275	90.6%
Southwest Lehigh Area	21,866	29,062	35,164	41,613	46,195	24,329	111.3%
LEHIGH COUNTY	227,536	255,304	272,349	291,130	312,090	84,554	37.2%

When considering growth in the last decade only, trends vary considerably. Albutis saw a spike in population growth at nearly 50%, uncharacteristic of the rest of the study area (Table 2). This growth primarily resulted from one large townhouse development. Macungie had the second largest percent increase in population. While Lower Macungie Township has seen notable growth in this time frame, the two smaller boroughs have lesser populations that therefore generate higher percentage rates of growth. Upper and Lower Milford Townships have the fifth and sixth highest growth rates among the municipalities.

TABLE 2
TOTAL POPULATION
Southwest Lehigh Area and Lehigh County - 1990 - 2002

MUNICIPALITY	POPULATION		POPULATION ESTIMATE 2002	POPULATION INCREASE (1990-2000)	
	1990	2000		NUMBER	PERCENT
Albutis Borough	1,415	2,117	2,098	702	49.6%
Emmaus Borough	11,157	11,313	11,250	156	14.0%
Lower Macungie Township	16,871	19,220	21,551	2,349	13.9%
Lower Milford Township	3,269	3,617	3,703	348	10.6%
Macungie Borough	2,597	3,039	3,076	442	17.0%
Upper Milford Township	6,304	6,889	7,010	585	9.3%
Southwest Lehigh Area	41,613	46,195	48,688	4,582	11.0%
LEHIGH COUNTY	291,130	312,090	317,533	20,960	7.2%

Municipalities adjacent to the study area include much of the western half of the Lehigh Valley metropolitan area, as well as rural townships in Berks, Bucks, and Montgomery Counties. With the exception of Allentown, all adjacent municipalities have grown in the past forty years, especially Upper Macungie Township at 285% (Table 3). The City of Allentown lost population since 1960, but has seen a resurgence since a 1980 low. Many Pennsylvania cities of similar size saw a population decrease during this time period as people moved to surrounding suburban communities.

**TABLE 3
TOTAL POPULATION
Southwest Lehigh Area, Adjacent Municipalities and Lehigh County -1960 - 2000**

ADJACENT MUNICIPALITIES	POPULATION					CHANGE (1960-2000)	
	1960	1970	1980	1990	2000	NUMBER	PERCENT
City of Allentown	108,347	109,527	103,758	105,090	106,632	- 1,715	- 1.6%
Hereford Township (Berks Co.)	1,288	1,641	2,837	3,026	3,174	1,886	146.4%
Longswamp Township (Berks Co.)	2,918	3,727	4,627	5,387	5,608	2,690	92.2%
Milford Township (Bucks Co.)	3,524	4,812	6,053	7,360	8,810	5,286	150.0%
Salisbury Township	7,294	11,285	12,259	13,401	13,498	6,204	85.1%
South Whitehall Township	10,932	13,971	15,919	18,261	18,028	7,096	64.9%
Upper Hanover Township (Montgomery Co.)	2,293	2,721	3,870	4,604	4,885	2,592	113.0%
Upper Macungie Township	3,605	4,390	7,446	8,757	13,895	10,290	285.4%
Upper Saucon Township	5,926	7,954	9,635	9,775	11,939	6,013	101.5%
LEHIGH COUNTY	227,536	255,304	272,349	291,130	312,090	84,554	37.2%

The term "median age" means that half the residents are older than a certain age, while half are younger. The municipalities have median ages that hover near the county median of 38 (Table 4). One major exception is Alburdis. This borough, and to a lesser extent Macungie Borough, tend to attract younger residents. This can be traced to higher rental percentages and more affordable housing (as described later in this section). Alburdis also has the highest percentage of small children (ages 5 and under), which also helps mold its low median age. Emmaus Borough has the highest percentage of senior citizens. One important contributing factor is the aging of citizens who have continuously inhabited the original post-war neighborhoods in Emmaus. In addition, a senior housing complex exists within Emmaus.

**TABLE 4
AGE DISTRIBUTION
Southwest Lehigh Area and Lehigh County - 2000**

Age Groups	Alburdis Borough		Emmaus Borough		Lower Macungie Township		Lower Milford Township		Macungie Borough		Upper Milford Township		Southwest Lehigh Area		LEHIGH COUNTY	
	NUM-BER	%	NUM-BER	%	NUM-BER	%	NUM-BER	%	NUM-BER	%	NUM-BER	%	NUM-BER	%	NUM-BER	%
Under 5	161	7.6	590	5.2	1,083	5.6	199	5.5	153	5.0	308	4.5	2,494	5.4	18,762	6.0
5 - 19	510	24.1	1,999	17.7	4,111	21.4	794	22.0	534	17.6	1,535	22.3	9,483	20.5	63,776	20.4
20 - 24	94	4.4	551	4.9	663	3.4	127	3.5	165	5.4	287	4.2	1,887	4.1	17,339	5.6
25 - 44	818	38.6	3,509	31.0	5,011	26.1	1,055	29.2	1,015	33.4	1,984	28.8	13,392	29.0	91,114	29.2
45 - 54	263	12.4	1,496	13.2	3,420	17.8	656	18.1	495	16.3	1,224	17.8	7,554	16.4	43,721	14.0
55 - 64	117	5.5	1,002	8.9	2,204	11.5	371	10.3	270	8.9	706	10.2	4,670	10.1	27,944	9.0
65+	154	7.3	2,166	19.1	2,728	14.2	415	11.5	407	13.4	845	12.3	6,715	14.5	49,434	15.8
TOTAL	2117	100	11,313	100	19,220	100	3,617	100	3,039	100	6,889	100	46,195	100.0	312,090	100
MEDIAN	33.3	-	39.6	-	41.3	-	40.5	-	38.5	-	40.5	-	-	-	38.3	-

A household is composed of related or unrelated persons living in the same housing unit. Between 1980 and 2000, Lehigh County saw a 15% increase in total households (Table 5). Much of this increase was due to continued residential development of the townships surrounding Allentown.

In the Southwest Lehigh County Region, from 1980 to 2000, growth was more than three times the county rate. Lower Macungie Township added the most units by number, nearly 3,000. Macungie Borough saw the most percentage increase of housing units (83%) due to the development of new neighborhoods to its relatively small existing housing stock.

From 1990 to 2000, the Southwest Lehigh region experienced a 17% increase in the total number of housing units.

TABLE 5
HOUSING UNIT INCREASE
Southwest Lehigh Area and Lehigh County 1980-2000

	NUMBER OF HOUSEHOLDS			Change 1980-2000	
	1980	1990	2000	NUMBER	PERCENT
Alburtis Borough	484	491	774	290	59.9%
Emmaus Borough	4,216	4,674	4,985	769	18.2%
Lower Macungie Township	4,348	5,965	7,158	2,810	64.6%
Lower Milford Township	898	1,125	1,277	379	42.2%
Macungie Borough	746	1,086	1,366	620	83.1%
Upper Milford Township	1,643	2,156	2,514	871	53.0%
Southwest Lehigh Area	12,335	15,497	18,074	5,739	46.5%
----- LEHIGH COUNTY	106,005	118,005	121,906	15,901	15.0%

The average household size in the study area has dropped in every municipality by an average of 0.15 in the past decade (Table 6). As part of a nationwide trend, household sizes have decreased because of persons getting marriage at an older age, increased divorce rates, fewer families having more than 2 children, and more elderly households. In the region, Lower Milford Township has the highest average household size (2.83) while Macungie Borough has the lowest (2.22).

**TABLE 6
HOUSEHOLD SIZE
Southwest Lehigh Area and Lehigh County -1990 - 2000**

	AVERAGE NUMBER OF PERSONS PER HOUSEHOLD	
	1990	2000
Alburtis Borough	2.88	2.74
Emmaus Borough	2.38	2.26
Lower Macungie Township	2.83	2.65
Lower Milford Township	2.91	2.83
Macungie Borough	2.39	2.22
Upper Milford Township	2.92	2.74
LEHIGH COUNTY	2.58	2.48

As households and families mature, their housing needs and desires often change. Young couples look for starter homes and move to larger homes as families grow. As children leave and the remaining occupants grow older, requirements often return full circle to apartments, townhouses and other smaller units.

The Southwestern Lehigh region offers a diversity of such options, with substantial numbers of townhouses and apartments located in Alburtis, Macungie and Lower Macungie (Table 7), and a much greater percentage of single-family detached units in Upper and Lower Milford Townships. Lower Macungie Township has a moderate amount of housing within apartment and townhouse complexes, particularly along the Route 222 corridor and around Macungie. The region has a higher percentage of single-family detached homes than Lehigh County as a whole. The county average, though, is affected largely by the abundance of rowhomes, townhouses and apartments in Allentown. Lower Macungie also has a few manufactured/mobile home parks, most of which predate zoning regulations.

**TABLE 7
HOUSING TYPE
Southwest Lehigh Area and Lehigh County -2000**

Housing Type	Alburtis Borough		Emmaus Borough		Lower Macungie Township		Lower Milford Township		Macungie Borough		Upper Milford Township		Southwest Lehigh Area		LEHIGH COUNTY	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Single-Family Detached	308	38.2	2,259	43.5	4,891	66.1	1,261	96.4	464	32.7	2,247	87.6	11,430	68.0	61,617	47.8
Single-Family Attached	437	54.2	1,285	24.7	1,324	17.9	12	0.9	450	31.7	258	10.1	3,766	18.4	31,108	24.1
Units in 2-4 Unit Structures	35	4.3	554	10.7	154	2.1	21	1.6	171	12.1	44	1.8	979	3.1	12,782	9.9
Units in 5+ Unit Structures	26	3.2	1,077	20.7	600	8.1	7	0.5	333	23.5	11	0.4	2,054	7.2	20,205	15.7
Mobile Homes/Other	0	0	23	0.4	429	5.8	7	0.5	0	0	4	0.2	463	3.3	3,198	2.4
TOTAL	806	100	5,198	100	7,398	100	1,308	100	1,418	100	2,564	100	18,692	100.0	128,910	100

The amount of rental housing in an area affects housing affordability and the ability to accommodate life cycle changes. More rental housing usually signifies an area more affordable to singles, young families and older people. At the same time, areas with high rates of owner-occupied housing offer a higher rate of stability.

A plentiful majority (79.2%) of housing in the region is owner-occupied (Table 8). This is slightly more than the county average of 68.8%. The municipality with the highest such majority is Lower Milford Township (91%), which is common in such family-oriented rural areas. Macungie borough has the least percentage of owner-occupied housing at 58%. However, the highest vacancy rate of the study area, 3.9%, is found in Emmaus. Meanwhile, Upper and Lower Milford Townships share the lowest vacancy rates. None, however, fall close to Lehigh County's average vacancy rate of 5.4%.

**TABLE 8
HOUSING OWNERSHIP AND VACANCY
Southwest Lehigh Area and Lehigh County - 2000**

	Owner-Occupied Units		Renter-Occupied Units		Vacant Units		Total Units	
	Number	%	Number	%	Number	%	Number	%
Alburtis Borough	655	84.6	119	15.4	25	3.1	799	100.0
Emmaus Borough	3,180	63.8	1,805	36.2	201	3.9	5,186	100.0
Lower Macungie Township	6,270	87.6	888	12.4	247	3.3	7,405	100.0
Lower Milford Township	1,161	90.9	116	9.1	31	2.4	1,308	100.0
Macungie Borough	798	58.4	568	41.6	52	3.7	1,418	100.0
Upper Milford Township	2,253	89.6	261	10.4	62	2.4	2,576	100.0
Southwest Lehigh Area	14,317	79.2	3,757	20.8	618	3.3	18,692	100.0
LEHIGH COUNTY	83,849	68.8	38,057	31.2	7,004	5.4	128,910	100.0

In 2000, Lower Milford Township had the highest owner-occupied median housing value in the region (Table 9) at \$172,700. Conversely, Alburtis Borough had the lowest owner-occupied median housing value at \$98,500, which is lower than the county median of \$113,600.

**TABLE 9
HOUSING VALUE
Southwest Lehigh Area and Lehigh County - 2000**

	MEDIAN VALUE OF OWNER-OCCUPIED HOUSING
Alburtis Borough	\$98,500
Emmaus Borough	\$113,100
Lower Macungie Township	\$169,000
Lower Milford Township	\$172,700
Macungie Borough	\$116,800
Upper Milford Township	\$160,500
LEHIGH COUNTY	\$113,600

Median income is the level at which half of an area’s households earn more and half earn less. Median income exceeds the county average of \$43,449 in all five municipalities of the study area (Table 10). Lower Macungie Township has the highest median income at \$69,592, representing rather well the abundance of upper-middle class homeowners in this municipality. Upper Milford Township, however, has the lowest percentage of families in poverty. Emmaus Borough has the lowest median income at \$44,181, while Alburty has the highest poverty rate. Poverty levels are based on a federally established minimum income that changes based on number of persons in a household.

TABLE 10
MEDIAN INCOME AND POVERTY
Southwest Lehigh Area and Lehigh County - 2000

	MEDIAN HOUSEHOLD INCOME	PERCENT OF FAMILIES IN POVERTY
Alburty Borough	\$52,361	2.8
Emmaus Borough	\$44,181	2.2
Lower Macungie Township	\$69,592	1.3
Lower Milford Township	\$67,008	2.1
Macungie Borough	\$51,721	1.7
Upper Milford Township	\$66,694	0.5
LEHIGH COUNTY	\$43,449	6.6

Upper Saucon Township has the highest median household income of the municipalities adjacent to the study area (\$66,703, Table 11). This wealthy township also has the lowest poverty rate at 0.9%. None of the neighboring municipalities, however, exceed Lower Macungie Township’s previously-mentioned high median income value. The City of Allentown has the lowest median income at \$32,016, and the highest poverty rate (14.6%). With the exception of Allentown, all poverty rates in the region fall below the Lehigh County average of 6.6%.

TABLE 11
MEDIAN INCOME AND POVERTY
Southwest Lehigh Area Adjacent Municipalities - 2000

	MEDIAN HOUSEHOLD INCOME	PERCENT OF FAMILIES IN POVERTY
City of Allentown	\$32,016	14.6%
Hereford Township (Berks Co.)	\$49,046	4.4%
Longswamp Township (Berks Co.)	\$47,965	2.9%
Milford Township (Bucks Co.)	\$59,683	2.1%
Salisbury Township	\$52,935	1.7%
South Whitehall Township	\$54,759	3.1%
Upper Hanover Township (Montgomery Co.)	\$65,018	3.2%
Upper Macungie Township	\$65,062	2.0%
Upper Saucon Township	\$66,703	0.9%
LEHIGH COUNTY	\$43,449	6.6%

The three townships include similar amounts of land area. Lower Macungie Township, while having the largest land area (22.57 square miles), has enough suburban development to push its population density close to 1,000 people per square mile (Table 12). Meanwhile, Upper and Lower Milford Townships are much less dense on the average, with the latter having a population density of only 184 people per square mile. Emmaus Borough, with smaller lots and an abundance of multi-unit homes, has the highest population density at 3,998 people per square mile. Albutis Borough has the smallest land area at 0.71 square miles, but is not as densely populated as Emmaus or Macungie. The region as a whole has a population density of 714, up from 644 in 1990.

TABLE 12
POPULATION DENSITY
Southwest Lehigh Area and Lehigh County - 1990 - 2000

	Land Area (in square miles)	Population		Population Density (in persons per square mile)	
		1990	2000	1990	2000
Albutis Borough	0.71	1,415	2,117	1,993	2,993
Emmaus Borough	2.83	11,157	11,313	3,942	3,998
Lower Macungie Township	22.57	16,871	19,220	747	852
Lower Milford Township	19.65	3,269	3,617	166	184
Macungie Borough	0.99	2,597	3,039	2,623	3,057
Upper Milford Township	17.91	6,304	6,889	351	385
Southwest Lehigh Area	64.66	41,613	46,195	644	714
LEHIGH COUNTY	346.66	291,130	312,090	840	900

Land area data courtesy of Lehigh Valley Planning Commission

Table 13 shows the average travel time to places of employment for each municipality, as well as car occupancy figures. Lower Milford Township has the highest such value, 25.6 minutes. This is a logical figure considering its situation in the southern corner of Lehigh County, relatively far from the employment opportunities of the Lehigh Valley and cities to the south. Emmaus, which has the shortest travel time to work (19.4), is closer to the economic core of the Lehigh Valley. Otherwise, most travel times remain near the county average of 22.1 minutes.

Lower Macungie Township has the highest percentage of solo drivers at 89.9%. Although public transportation is available in Lower Macungie, it is not used as much as in Macungie, Emmaus and Upper Milford Township. The use of public transportation is still very low in all six municipalities, never exceeding Macungie’s 0.6% rate, and not even reaching the county average of 1.6%. Carpooling is common in Alburdis Borough, where 11.8% of residents share vehicles while driving to work. Lower Milford Township, whose rural character would seem to encourage solo driving due to the unavailability of transit and the dispersion of residents, actually has the lowest percentage of single-occupancy commutes at 83.2%.

**TABLE 13
COMMUTE TO WORK
Southwest Lehigh Area and Lehigh County -2000**

	Average Travel Time to Work (minutes)	Method of Commuting to Work		
		Drive Alone (%)	Carpool (%)	Public Transportation (%)
Alburdis Borough	21.1	85.8	11.8	0
Emmaus Borough	19.4	87.2	5.9	0.4
Lower Macungie Township	21.7	89.9	5.0	0.3
Lower Milford Township	25.6	83.2	6.3	0
Macungie Borough	22.9	88.7	7.9	0.6
Upper Milford Township	22.9	85.4	7.3	0.4
LEHIGH COUNTY	22.1	81.7	9.8	1.6

The U.S. Census reports when people moved into their current homes, within 5-year ranges. Table 14 tabulates those who have lived in their current homes since 1995 or earlier. The highest percentage of such people occurs in Upper Milford Township (68.4%), where many families have lived in the same house for several decades. This is a primarily rural phenomenon that is not prevalent in Macungie Borough, where only 46% of people lived in the same home since 1995. Alburdis, a similar town in many respects, has a much higher rate of 63% living in the same home since 1995. These figures correlate well with the housing occupancy rates shown in Table 8.

TABLE 14
LENGTH OF HOUSING OCCUPANCY
Southwest Lehigh Area and Lehigh County - 2000

	Same Residence Since 1995 or Earlier (%)
Alburdis Borough	62.7%
Emmaus Borough	60.2%
Lower Macungie Township	60.4%
Lower Milford Township	66.8%
Macungie Borough	46.0%
Upper Milford Township	68.4%
LEHIGH COUNTY	58.3%

Population Projections

The following table shows projections of populations of the region, as forecast by the Lehigh Valley Planning Commission (LVPC). LVPC projects a 44 percent increase in the region's population from 2000 to 2030 - an increase of over 15,000 residents. If this projection holds true, the region would include over 50,000 residents by 2030.

LVPC projects that the numeric increase in Lehigh County's population will be slightly slower in upcoming decades than the 21,000 person increase that occurred during the 1990s.

LVPC projects that the vast majority of the region's population growth will occur within Lower Macungie Township.

**TABLE 15
POPULATION GROWTH PROJECTIONS
2000 TO 2030**

Prepared by the Lehigh Valley Planning Commission, 2003

	2000 Population	2010 Projection	2020 Projection	2030 Projection	2000-2010 Projected Numeric Increase	2000-2030 Projected Numeric Increase
Alburtis	2,117	2,161	2,202	2,244	44	127
Emmaus	11,313	11,313	11,313	11,313	0	0
Lower Macungie Twp.	19,220	23,374	27,898	32,966	4,154	13,746
Lower Milford Twp.	3,617	3,924	4,246	4,571	307	954
Macungie	3,039	3,039	3,039	3,039	0	0
Upper Milford Twp.	6,889	7,161	7,370	7,531	272	642
Total - Southwest Lehigh Co.	46,195	50,972	56,068	61,664	4,777	15,469
Total - Lehigh Co.	312,090	329,552	347,286	362,460	17,462	50,070

Source - Lehigh Valley Planning Commission, 2003.

The population growth will be affected by many factors, including the growth of local employers, the completion of the Route 222 bypass, mortgage interest rates, the availability of central sewage capacity and local zoning decisions.

These population projections appear low for Alburtis, Lower Milford and Upper Milford. For example, 96 new townhouses are proposed in Alburtis. If no other changes occur, and if these townhouses average 2.2 persons per household, that development by itself would generate 211 new residents. In Lower Milford, 82 new lots are currently proposed in three new subdivisions. Those three subdivisions by themselves can be expected to generate at least 262 new residents. The current zoning of Upper Milford could allow hundreds of new homes to be built.

At the same time, the population growth projected for Lower Macungie between 2010 and 2030 seems high, unless Lower Macungie in the future would allow very intense development within its agricultural preservation and rural zoning districts. The projected Lower Macungie population growth from 2000 to 2030 would be equal to over 80 percent of the total population that existed in Lower Macungie as of 1990. However, in 1990, much of Lower Macungie's population resided within developments of singles with modest-sized lots, apartments and townhouses. These same densities may not be replicated in outlying parts of Lower Macungie.

An Overview of the History of Southwestern Lehigh County

The following is based primarily on local publications. These include past comprehensive plans of each municipality, the History of the Lehigh Valley by Professor Ross W. Yates, the Lower Macungie Township History book prepared by Craig and Ann Bartholomew in 1986 and revised in 1996, and a guide to historic properties in Emmaus developed by the Emmaus Main Street Program.

The Lehigh Valley and upland areas to the south were originally inhabited by the Unnami people, one of many “tribes” constituting the Lenni Lenape nation. Hundreds of years prior to European settlement, Native Americans migrated to this region from the west. Several locations in the area serve as monuments to the Unnami people and their way of life. The Jasper Pits near Vera Cruz in Upper Milford Township provided a wealth of the yellow-red quartz-like mineral for tools and weaponry, some of which have been found as far away as New England. Areas along Swabia Creek at the base of South Mountain were known as *Manoh Kuntchie* or *Maguntache* meaning “feeding place of the bears.” This term was converted by settlers to the current name of Macungie.

In 1681, a time when Europeans had only begun to explore these regions, King Charles II conveyed the lands now comprising Pennsylvania to William Penn. Many followed his open invitation to be able to own their own farm and to practice religious freedom. Most early settlers were Scottish, Irish and Germans. Most immigrants docked in Philadelphia, and many continued up the Schuylkill River, the Perkiomen Creek and the Hosensack Creek to settle in the region. Most early settlement occurred in the 1730s. Germans, in particular, searched for rolling limestone valleys similar to those they had left behind in their homeland, which they found in the Macungie area.

Settlers established an agrarian lifestyle. The entire region was covered with mature woods, requiring the laborious cutting of trees and clearing of stumps and rocks in order to make land suitable for farming. The hard wood and stones made excellent building materials for barns and homes. One of the oldest such structures in the region is the Shelter House, built in 1734 at the base of South Mountain in what is now the Borough of Emmaus. This log cabin most likely served as a safe house for newcomers and travelers.

The early settlers found it difficult to transport their products to markets, particularly to reach Philadelphia, which was the largest city in the North America. In response to a public petition in 1732, the King’s High Road was constructed as the first public road in the area. The road following Lenni Lenape trails. The road began near Breinigsville, proceeded through what is now Macungie, Old Zionsville and Hosensack, and continued through central Montgomery County to reach Philadelphia.

Other area roads were constructed in the 1740's and 1750's, including a road between Zionsville and Slatington, a road between Macungie and Bethlehem (which became Main Street in Emmaus and Emmaus Avenue), and a road between Easton, Allentown and Reading (which became Route 222). All of these roads facilitated the movement of goods and people in the area, and also initiated the development of hotels and taverns in rural villages such as Limeport, Dillingersville, Macungie (originally Millersville) and Wescosville. In addition to agriculture, light industry began to appear in the form of mills along Hosensack, Little Lehigh, Swabia and other creeks. The new road network facilitated the arrival of new immigrants, increased farm productivity, and spurred the growth of villages. Emmaus was originally a closed Moravian village named Salzburg, completed in 1759 for the purpose of live-in religious teaching and worship.

In 1738, Upper Milford Township was formed from Milford Township, Bucks County. Upper Milford included the present-day townships of Upper and Lower Milford Township. In 1743, Macungie Township was established as a separate township, covering what is now Lower Macungie, Upper Macungie, Alburtis and Macungie. In 1832, Macungie Township was separated into Upper and Lower Macungie; with the separation between Upper and Lower Milford occurring in 1847. Macungie, Emmaus and Alburtis did not achieve borough status until 1857, 1859 and 1913, respectively. Lehigh County was formed in 1812 from Northampton County.

While many area residents served during the Revolutionary War, there was little military activity in the region. Members of the Moravian settlement in Emmaus largely resisted the call to arms, as they were a pacifistic society. After the revolution, several domestic conflicts transpired. In the 1799 Fries Rebellion, John Fries and other residents of the Macungie area protested new taxes levied by the Federal Government. Their threats and brawls with tax collectors landed them in jail. Soon after, President Adams sentenced the men to hanging in Philadelphia, a decision that was enforced by federal troops. As the men awaited death in the capital, however, the decision to hang these men was highly contested in federal circles, and the prisoners were released. A lesser rebellion occurred in the same year when multiple women in Macungie poured boiling water on tax collectors, known as the "Hot Water Rebellion."

By the 1830's, the industrial revolution began to take hold in the Lehigh Valley. Major industrial employers concentrated in Allentown and Bethlehem, including iron working. The hillier areas of southwestern Lehigh County that were not along major rivers remained mostly agricultural. In Macungie, industry first arrived as small manufacturing operations such as tanneries, knitting mills, and hat making. Early industries in Upper and Lower Milford included a brick factory, marble works, saddlery and shirt factory in Zionsville, and a creamery, cigar factory and carriage factory in Lower Milford. Some areas of the region were mined for iron ore, which was used in blasting furnaces locally.

In 1859, the Reading and Lehigh Railroad Company completed a major railroad line from Reading, through Fleetwood, Topton, Alburtis, Macungie and Emmaus. This railroad continues through Allentown and Bethlehem and into Northern New Jersey. The railroad promoted local industry, with important connections to New York City, Harrisburg and eventually Pittsburgh. The Catasauqua and Fogelsville Branch Railroad was built as a spur from the main railroad line in Alburtis soon after. The Perkiomen Branch Railroad was extended from the main railroad line from Emmaus to Pennsburg in 1874.

The Lock Ridge iron furnace was completed one year before the Reading and Lehigh Railroad, and began major production just in time for the Civil War. Later known as the Thomas Iron Company, the operation was very successful during and after the Civil War because of its proximity to iron ore and a major railroad line. Iron workers, many of Welsh, English and German descent, lived in a cluster of homes that eventually became the town of Alburtis. Alburtis mainly developed around its industries.. Emmaus also boasted a fairly successful iron furnace, the Donaldson Iron Company, which operated from 1882 to 1943. Macungie had an iron furnace dating from 1874, but an economic depression in the latter part of that decade made operations sporadic at this facility. In 1876, the Keystone Roller Mills constructed a flour, feed and bran mill on Race Street in Macungie. Emmaus developed a successful silk industry in the late 1800's while Alburtis housed smaller operations producing shirts and ribbon.

The formation of Borough governments in Macungie (1857), Emmaus (1859) and Alburtis (1913) was “a legal and political guarantee of self-government for the entrepreneurs, merchants and workers” which served as “bases of operations for protecting business and industry against agrarian prejudices”, according to one historian.

In the rural townships, population growth slowed during the late 1800s and early 1900s. Most immigrants to the region during this period were attracted to work and live in Allentown and Bethlehem, which included major industrial employers. In addition, the advent of farm machinery lessened the need for farmhands in rural areas and allowed farms to become larger. As new roads and railroads were built, there was little growth in villages along older roads, such as Hosensack, Zionsville and Dillingersville. These villages once contained thriving hotels, general stores and taverns - all drawing business from travelers.

In the early part of the 1900s, Alburtis, Emmaus and Macungie exhibited modest industrial growth, with Macungie adding a brass manufacturing company, shoe factory, silk mill, carriage works, and pipe fitting foundry (today’s Tyler Pipe Company). This era also saw improvements in transportation. The Millersville - Shimersville Turnpike became a county-controlled public road in 1911. Between the years 1899 and 1928, an electric trolley line carried passengers from Macungie, through downtown Emmaus to center city Allentown. By the end of World War II, the majority of the region outside of Macungie, Wescosville and Alburtis was still very rural.

Following World War II, a completely new growth pattern emerged as economic and population booms ensued. West of Allentown, increased use of the automobile, improved roads and easy access to financing caused suburbanization. This was especially true in Lower Macungie Township, where small-lot housing subdivisions such as Ancient Oaks and Shepherd Hills offered semi-rural living just minutes from Allentown. Macungie and Emmaus Boroughs annexed new suburban neighborhoods on the fringe of their older sections. New industry followed residential growth in a similar decentralized fashion. Allen Organ, Mack Trucks, Buckeye Petroleum and a number of other industries built facilities in rural fields.

The highest growth rate was in Lower Macungie, which has the greatest access to public water and sewage services, particularly after the late 1960s. Upper and Lower Milford Townships grew to a much lesser extent, mostly in the form of residential growth on one acre lots with on-lot septic systems and wells. The boroughs of Emmaus, Macungie and Alburtis experienced notable residential growth, particularly from an increase in persons commuting to jobs in other parts of the region. Residential growth was spurred by many new employers locating in western Lehigh County, including Air Products, industrial parks around the Route 22/100 interchange, and the Lehigh Valley Hospital. Some of the residential growth also resulted from persons commuting to jobs in the Philadelphia suburbs, particularly in Lower Milford.

Traffic Volume Data

The following is a listing of estimated average daily traffic volumes on various roads, according to the Pennsylvania Department of Transportation (PennDOT), as of early 2004. Some of this data is based upon PennDOT estimates from counts conducted in earlier years.

<u>Road Segment</u>	<u>Estimated Average Daily Traffic Volume</u>
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Lower Macungie Township:

Pennsylvania Turnpike	41,400
Route 222 east of Turnpike	38,600
Route 222 west of Brookside Road	22,400
Brookside Road south of Route 222	13,300
Lower Macungie Road west of Brookside Road	10,900
Lower Macungie Road east of Brookside Road	10,400
Minesite Road west of Cedar Crest Boulevard	2,000
Cedar Crest Boulevard north of Minesite Road	20,900
Cedar Crest Boulevard south of Minesite Road	18,200
Cedar Crest Boulevard south of Lower Macungie Road	22,300
Riverbend Road east of Cedar Crest Boulevard	2,500
Mill Creek Road north of Sauerkraut Road	5,600
Indian Creek Road	2,200
Mountain Road	2,100
Sweetwood Drive	1,200
Route 100 south of Trexlertown	14,300
Route 100 north of Macungie	10,100
Weilers Road south of Route 222	1,000
Spring Creek Road north of Alburdis	5,700
Alburdis Road east of Alburdis	2,900
Butz Road	600
Mertztown Road west of Weilers Road	1,500

Emmaus:

Main Street East of Triangle	17,300
Lehigh Street/State Avenue west of Harrison Street	12,300
Harrison Street	8,200
E. Main Street/Dalton Avenue/Emmaus Avenue	9,200

Upper Milford Township:

Chestnut Street at Turnpike Bridge	20,000
Chestnut Street north of Buckeye Road	19,900
Route 29 south of Buckeye Road	10,300
Route 100 south of merger with Route 29	13,300
Route 100 west of Old Zionsville	11,900
Buckeye Road	8,900
S. 5 th St. south of Emmaus	1,800
Vera Cruz Road north of Vera Cruz	4,000
Main Street East of Vera Cruz	2,100
West Main Street East of Route 100	3,000
St. Peters Road	1,400

Macungie Borough:

Route 100/Main Street in Downtown Macungie	14,500
Route 100 South of Chestnut Street	6,300

Alburtis Borough:

West Penn Avenue west of Main Street	1,800
Main Street/Franklin Street	1,700

Lower Milford Township:

Limeport Pike in Limeport	3,800
Limeport Pike west of Turnpike	2,000
Limeport Pike east of Kings Highway	1,400
Kings Highway south of Limeport Pike	2,500
Church View Road west of Limeport Pike	1,100
Steinsburg Road	300
Spinnerstown Road	1,400
Palm Road	800
Dillingersville Road	800