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# THE EFFECTS OF AN HISTORIC DISTRICT ON PROPERTY VALUES



HOLLIDAYSBURG, PENNSYLVANIA

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This study was directed by Diane Clapper, Hollidaysburg Zoning Administrator, and was conducted by Carol Maggio during an internship with the Borough of Hollidaysburg in the summer of 1997. The internship was part of a program organized by the Allegheny Heritage Development Corporation and was funded by the Pennsylvania Historical and Museum Commission, Bureau for Historic Preservation. The following individuals contributed to the study and the production of this report.

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### Borough of Hollidaysburg, 1997

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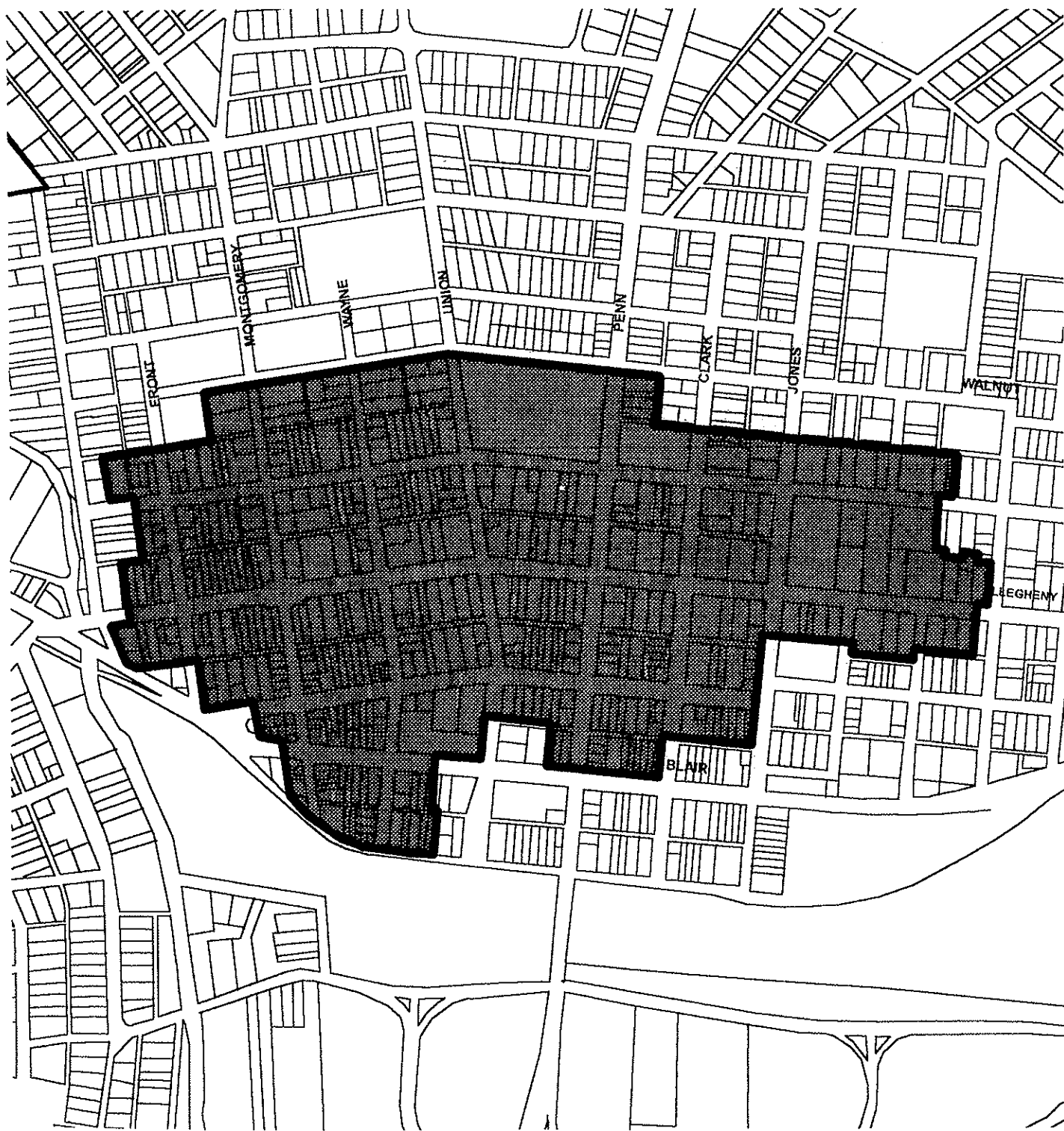
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# HOLLIDAYSBURG HISTORIC DISTRICT

ESTABLISHED 1989

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HOLLIDAYSBURG, PENNSYLVANIA

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# INTRODUCTION

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Historic buildings are one of the assets that make communities livable. They provide communities with a distinctive character and a unique identity. Local governments can utilize a variety of tools to manage growth that can erode these assets. One such tool — and one that is often controversial — is the establishment of local historic districts.

The establishment of local historic districts and historic district ordinances is often perceived as detrimental to the economic interests of property owners. Many owners believe that property subject to the additional restrictions of such ordinances loses value or is difficult to sell. However, this type of regulation can enhance the physical integrity and appearance of individual buildings and the overall area, making the properties more valuable than those located elsewhere in the community.

This report presents the findings of a case study of the effects of the establishment of the Hollidaysburg Historic District on the value of properties within and surrounding the historic district.<sup>1</sup> Utilizing both comparative and trend analyses, changes in property values in the district are examined.

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## HISTORY

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Hollidaysburg is a borough of roughly 5,600 people located a few miles from the city of Altoona in central Pennsylvania. The town was first laid out in 1796; by 1814 it consisted of several houses and a tavern. Hollidaysburg became the main transfer point between the Pennsylvania Canal and the Portage Railroad, making it the gateway to western Pennsylvania. The canal and Portage Railroad prompted considerable industrial and commercial development in the town in the 1830s, and in 1836 Hollidaysburg was established as a borough.

When Blair County was organized in 1846, Hollidaysburg was designated the county seat. This development attracted attorneys and politicians to the borough. This influx of professionals helped Hollidaysburg remain vital despite the loss of business that occurred when the railroad superseded the canal as the country's primary form of long distance transportation. Although the 1850s and 1860s saw a decline in population in Hollidaysburg, the 1870s marked a period of recovery, and the business of the courts supported Hollidaysburg throughout the nineteenth and into the twentieth century.

Early in the twentieth century, transportation again became important for Hollidaysburg. The Pennsylvania Railroad constructed a large switching yard in 1903, and US 22 was routed through the borough. The resulting railroad, truck, and auto traffic ensured the continued growth and support of the community.

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<sup>1</sup> The historic district referred to throughout this study is the local historic district established in 1989 under the Pennsylvania Historic District Act. This district, which operates in conjunction with a Historic District Ordinance, is separate from the National Register district, which was established in Hollidaysburg in 1985.





## THE HISTORIC PRESERVATION PROCESS

In Pennsylvania, in the mid-twentieth century, attention began to be focused on the importance of historic resources existing in communities across the state and their significance in community identity and quality of life. The State of Pennsylvania passed the Historic District Act in 1961, giving individual municipalities the power to officially preserve their heritage by designating, regulating, and protecting these resources in certified historic districts. The legislation was enacted to enhance the quality of life in the state's communities

and to protect historic resources for the cultural and economic benefit of community residents.

In 1989, the borough of Hollidaysburg established a local historic district and implemented a historic district ordinance according to the provisions of the 1961 Historic District Act. The Hollidaysburg Historic District encompasses the central part of the borough. It contains roughly 400 structures that represent a wide range of architectural periods and styles illustrating the development of the borough from its earliest establishment through the early twentieth century. These structures range from working-class houses to mansions built throughout the decades.<sup>2</sup>



The historic district and ordinance were implemented in Hollidaysburg to preserve the unique architectural and historical qualities of the borough for the continued enjoyment and welfare of the residents. The ordinance helps stabilize the architectural and historical character of the district by providing measures

for reducing the negative impact of new development on the district and its component buildings. The ordinance regulates alterations, additions, new construction, and demolition in the district. In addition to maintaining the character and physical fabric of the community, an important objective of historic preservation programs, like the one in Hollidaysburg, is to promote smart economic development. This process recognizes that historic character is often permanently lost as a trade-off for short term development

projects that have little, if any, long term benefit for the overall community. Through the process of administering the ordinance, a partnership is formed between the community and the local government. This partnership demonstrates the willingness of both groups to spend the time and resources necessary to protect the character and historic integrity of the town that make the community a unique and desirable place in which to live.

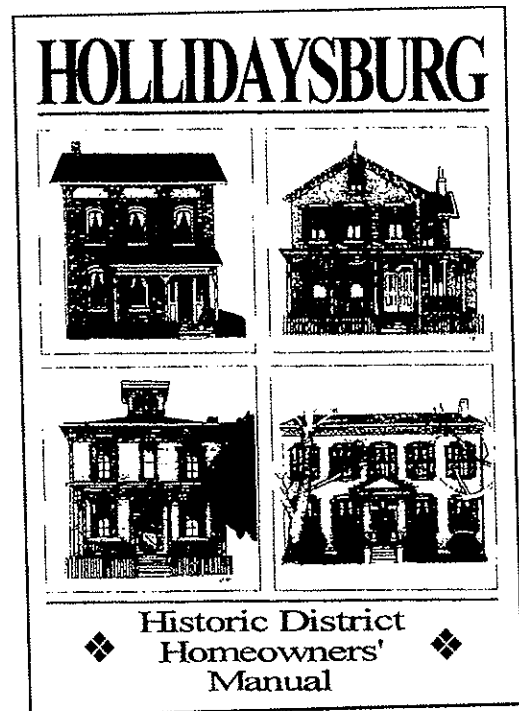
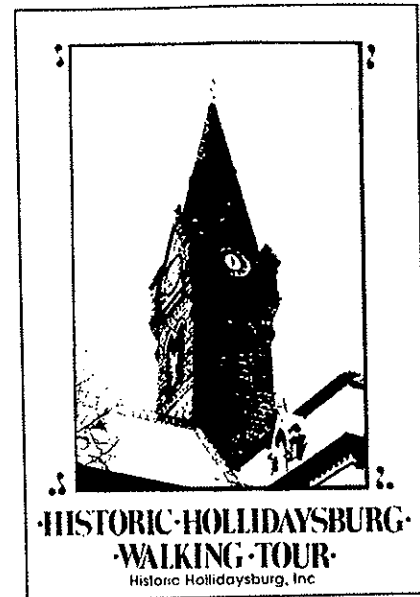
<sup>2</sup> The boundaries of the local historic district established in 1989 are the same as those of the 1985 National Register Historic District. National Register historic districts differ from local historic districts in that they offer little, if any, protection for the buildings and other resources included in the district.



# SUPPORT FOR HISTORIC PRESERVATION IN HOLLIDAYSBURG

Several resources exist in the borough of Hollidaysburg to support the community's preservation and economic development initiatives. The Hollidaysburg Historic District Homeowners' Manual was published in 1994 to explain the historic preservation ordinance to residents and to outline some of the options available for dealing with the maintenance and alteration of historic buildings in the borough. The manual promotes a deeper understanding and broader appreciation of the architectural significance of the borough's buildings, and focuses on maintenance as an important step toward retaining integrity. The manual continues to be distributed to property owners in the district and remains a useful tool for preservation projects.

A walking tour booklet of the district has been produced by, and is available from, Historic Hollidaysburg, Inc. Organized in 1981 as the Blair Foundation for Historic Hollidaysburg, this nonprofit organization is dedicated to historic preservation and community rejuvenation in the borough. Hollidaysburg also enjoys the benefits of an active Main Street Program, which operates under the name of the Hollidaysburg Community Partnership. Headquartered on Allegheny Street, this program is a successful joint effort of the State of Pennsylvania, the merchants of Hollidaysburg, and the borough government. The borough also supports an active Historic Architecture Review Board (HARB). The Board meets once or twice a month, depending on the time of year, to review plans for proposed construction, renovation, or demolition in the historic district. The Board recommends its approval or denial of each proposal to Borough Council, and works closely with applicants to meet the everyday challenges of preserving historic buildings in today's modern world.





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# THE STUDY

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## STUDY METHODOLOGY

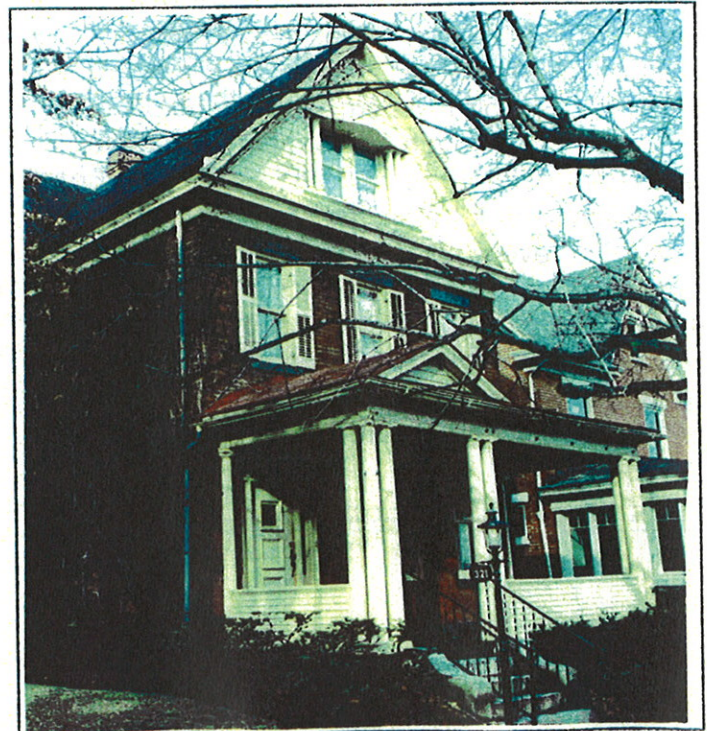
Property values are a function of a number of factors, including neighborhood characteristics, accessibility characteristics, and amenity variables, such as noise levels and air quality (Feller and Nelson, 1973). Each of these factors can affect property values positively or negatively. Through comparative analyses, this study examines one factor — the establishment of the Hollidaysburg Historic District — on property values in Hollidaysburg.

This study uses the methodology outlined in the National Trust's *The Economic Benefits of Preserving Community Character: A Practical Methodology*. Specifically, it is based on the chapter entitled *Estimating the Benefits of Real Estate Market Activity*, which attempts to isolate and measure the effects of a local historic district on property values. Other important elements of the methodology are listed below.

- The methodology outlined by the National Trust recommends using tax assessment data or Multiple Listing Service (MLS) data for comparison purposes. MLS data were used for this study.
- Residential sale prices were obtained from the MLS data. The MLS lists all the real estate activity that has occurred, by year. Because most Blair County realtors belong to the MLS, this is the best source of information on property values in Hollidaysburg.
- The Hollidaysburg Historic District was established in 1989. That year, five-year intervals before and after that year, and the most recent complete year were chosen as the years on which to gather data. Consequently, the years studied are: 1984, 1989, 1994, and 1996. Examination of MLS data for these years allows summary changes in property values to become evident.
- Based on the type and amount of data available, two groups of houses were compared. One group was located within the historic district boundaries. The other group was located outside the district

boundaries. (Available data did not allow the comparison of individual structures over successive years.)

- All house sales that occurred within the borough were recorded for the indicated years, thus eliminating the need for sampling.
- Information obtained from MLS data included: location and address, sales price, square footage, and age. For the listings that did not include square footage or age, this information was obtained from the property record cards in the Blair County Tax Assessor's Office.
- Obtaining the square footage of the houses allowed for the comparison of the price per square foot. (Only actual living space was used when calculating square footage.)
- 124 residences are represented in this study. 24 are located within the historic district; 100 are located in the borough, but outside the historic district boundaries. Despite the low number of prop-





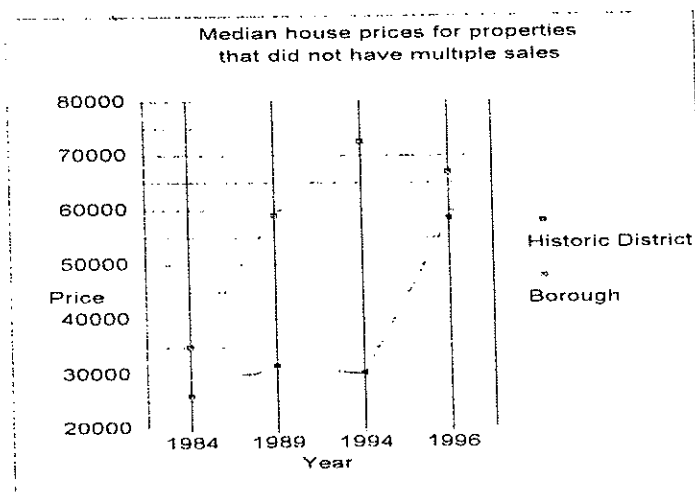
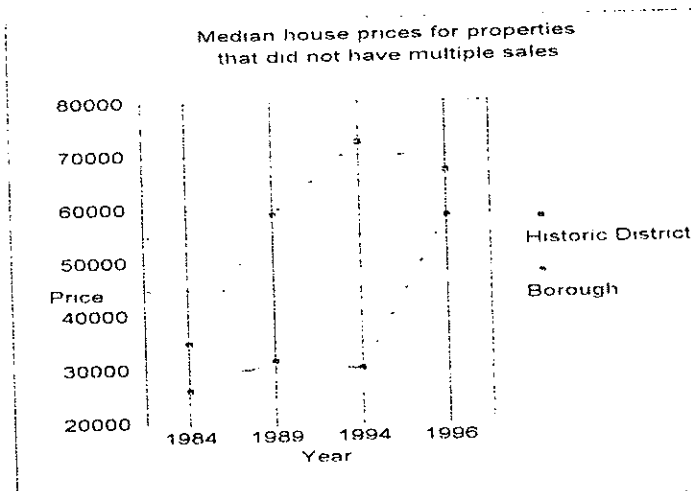
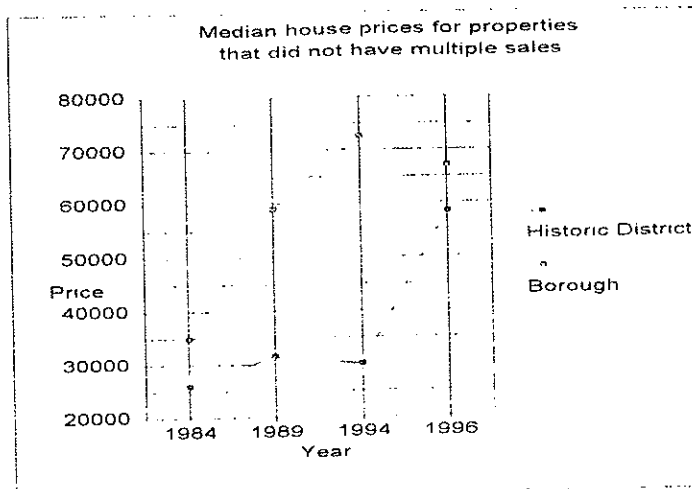
erties studied, the data represent all the sales that occurred during the selected years and is sufficient to show trends in the housing market for Hollidaysburg.

- The MLS does not include information on owner-sold homes; the number of owner-sold homes in Hollidaysburg was determined to be insignificant and should not have an impact on the findings.
- The MLS does not include information on non-member, realtor-sold homes. However, the majority of Blair County realtors belongs to the MLS, making it the best source of data for this study.
- To control for as many outside factors as possible, the data were stratified and analyzed by four categories:
  - Age,
  - Size,
  - Multiple sales, and
  - Location.

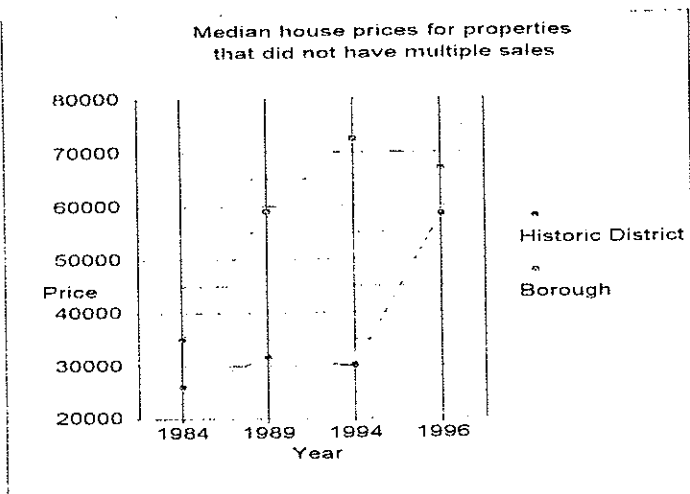
When comparing the percent change in average house sales price, the trends are most striking. The percent change in sales price of houses in the historic district quadrupled, whereas the same figure for the rest of the borough declined over the study period. Between 1989 and 1994, in the historic district, the average house sales price increased 32 percent;

## RESULTS

The data from the MLS indicate that there has been an increase in property values in the historic district, along with the rest of the borough. Property values in the borough, excluding the historic district, have increased steadily since 1984. The property values in what is now the historic district declined between 1984 and 1989 (the date of historic district establishment), but have increased steadily since then.



between 1994 and 1996 the price increased 68 percent. Outside the district, between 1989 and 1994, the average house sales price decreased 18 percent; between 1994 and 1996, it decreased 27 percent. See Graph 1. In addition, the average and median sales prices and prices per square foot for houses in the historic district have increased steadily, with the biggest gains being realized between 1994 and 1996.<sup>3</sup> See Graphs 2, 3 and 4.



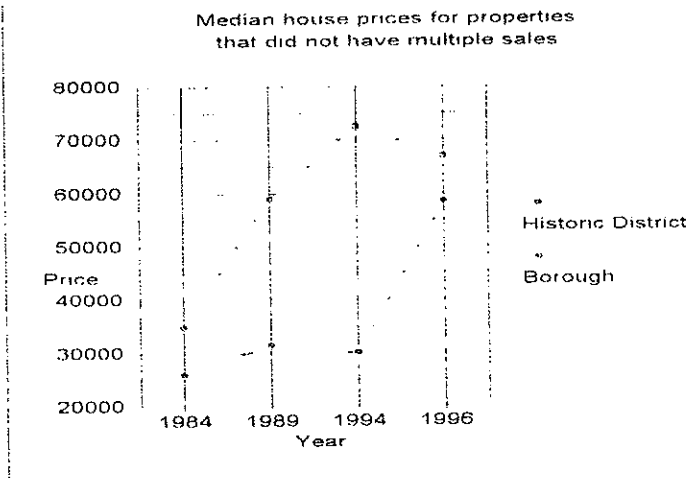
### AGE

Houses constructed prior to 1911<sup>4</sup> were identified both inside and outside the historic district, then sales prices were compared for these substantially similar houses. This age category was chosen because it includes sufficient numbers of houses inside and outside the district to make comparisons. The resulting trends support those illustrated in the overall data. See Graphs 5 and 6.

Graph 5 indicates that median property values for houses constructed prior to 1911 inside the historic district have increased since 1989. In 1996, the historic district almost equaled the rest of the borough in median house prices for this age category. The median house price for the historic district increased from \$25,450 in 1984 to \$61,100 in 1996, and the median price for the rest of the borough increased from \$28,500 in 1984 to \$61,500 in 1996. The borough has increased consistently since 1984, whereas the historic district had the majority of its increase between 1994 and 1996.

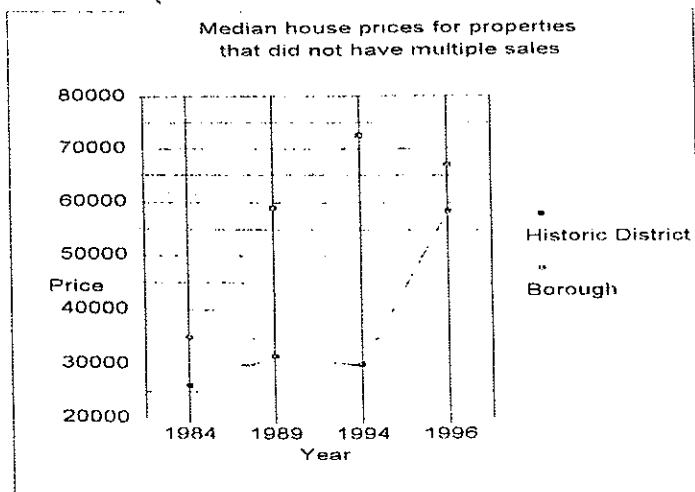
Graph 6 compares average prices per square foot for houses constructed prior to 1911 inside and outside the historic district. Houses in the historic district increased from \$25.93 per square foot in 1984 to \$38.05 per square foot in 1996. This change included a drop in price per square foot from 1984 to 1994, then a sharp rise from 1994 to 1996. Houses in the rest of the borough have risen consistently in price per square foot, from \$19.63 in 1984 to \$41.17 in 1996.

The patterns shown in Graphs 5 and 6 are similar. In the older houses, which are most representative of the historic district, substantial gains in property values occurred between 1994 and 1996, resulting in median house prices and prices per square foot within the historic district almost equaling those of the rest of the borough.



### LOCATION

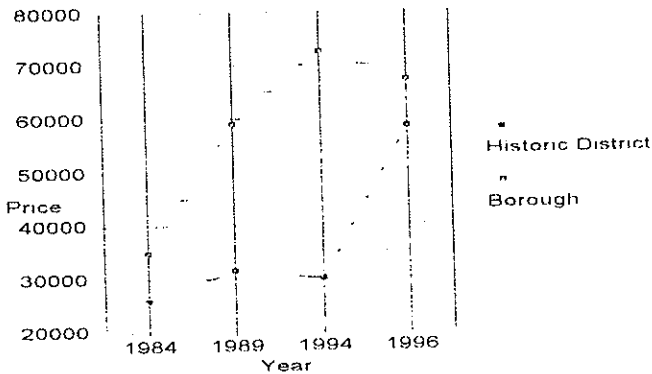
The possible effects of location were studied to see if the historic district was having any effects on the houses closest to its boundaries. Only those houses located within two blocks of the historic district boundaries were considered in this part of the study. Graphs 7 and 8 illustrate the resulting trends. The median price for houses outside of, but close to, the historic district increased steadily from \$28,000 in 1984 to \$80,250 in 1994, and then dropped to \$72,000 in 1996. The median price for houses in the historic district dropped between 1984 and 1989, and then increased substantially from \$30,000 in 1994 to \$72,000 in 1996.



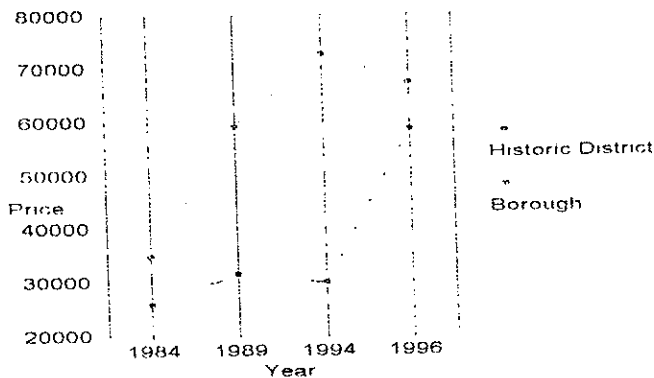


With regard to average price per square foot, the trends are nearly the same. The average price per square foot of a house within two blocks of the historic district increased consistently from 1984 to 1994, then remained steady between 1994 and 1996. The price for houses in the historic district dropped at first, then rose from \$25.63 in 1994 to \$38.07 in 1996.

Median house prices for properties that did not have multiple sales



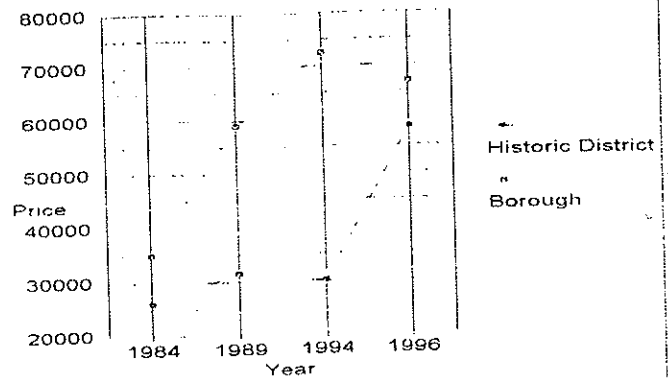
Median house prices for properties that did not have multiple sales



## MULTIPLE SALES

Because a property that has a high turnover rate might not be representative of the general housing stock due to artificially inflated values, non-representative location, or other factors, houses that were sold more than once in the selected years (known as *multiple sales*) were eliminated from the study. The eliminated properties included two houses in the historic district and eleven houses outside the district.

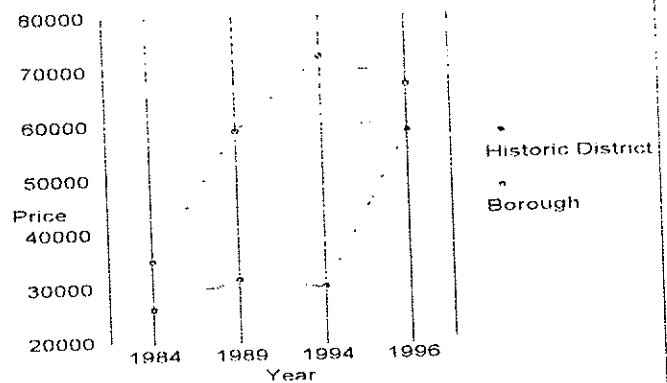
Median house prices for properties that did not have multiple sales



With multiple sales eliminated, the median price of a house in the historic district rose consistently from \$26,000 in 1984 to \$58,450 in 1996. The median house values for the rest of the borough increased constantly until 1994, when they declined slightly. See Graph 9 for a summary of these data.

Graph 10 illustrates the price per square foot for houses in and out of the historic district, with multiple sales eliminated. The historic district has experienced a constant increase in this value from 1989 to 1996 with the price per square foot increasing from \$24.87 to \$38.07. The houses in the rest of the borough increased in price per square foot, reaching \$57.70 in 1994, when the price dropped about five dollars per square foot between 1994 and 1996.

Median house prices for properties that did not have multiple sales

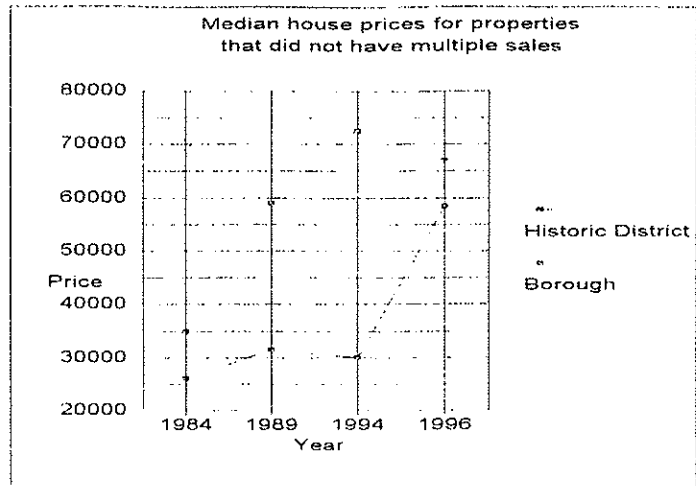


## SIZE

House size is an important factor that can affect property values. To avoid comparing very small houses with very large houses, the study properties were arranged into categories by square footage. The study categories include: 1) Houses under 1,000 square feet in area; 2) Houses between 1,000 and 2,000 square feet in area; and 3) Houses over 2,000 square feet in area. The historic district and the rest of the borough had dissimilar numbers of houses in the first and third categories; consequently, the 1,000 to 2,000 square foot category, which had sufficient numbers of representative houses in both areas to make an effective comparison, was used.

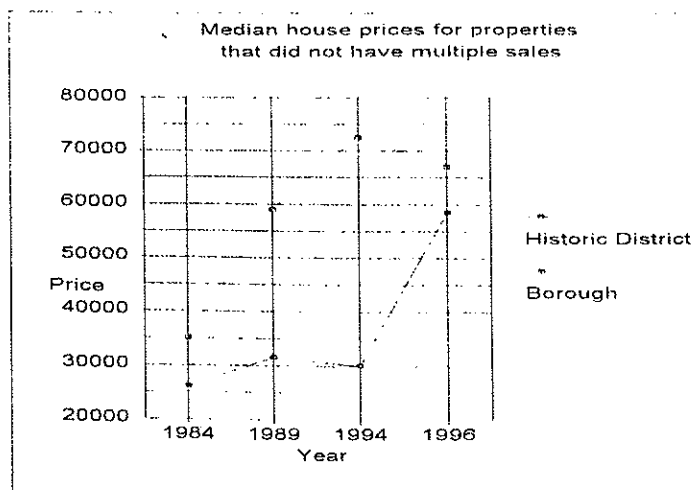
Graphs 11 and 12 summarize the findings of the size comparison. Houses of 1,000 to 2,000 square feet in area within the historic district have increased consistently in both median house price and price per square foot since 1984, with the median price climbing from \$24,900 to \$58,450 and the price per square foot increasing from \$19.04 to \$38.07. Houses of this size range located outside the district experienced increases in median house prices until 1994, when a slight drop occurred. The price per square foot for houses outside the district in this category has been constantly increasing since 1984, with a minimal increase between 1994 and 1996.

For additional summaries of the changes in property values that have occurred, see the graphs in Appendix 2.



## SUPPLEMENTARY STUDIES

Trend analyses were conducted to supplement and corroborate the results of this study. Analyses utilized the Hedonic Pricing Technique and the Random Choice Model Technique. These studies indicated that, as household income rises, households remain in the area. This trend is unlike that commonly found in similar communities, where households with increasing income tend to move out of the area. These findings suggest that historic preservation has been a successful neighborhood revitalization, and possibly, an economic revitalization, tool in the borough. One can expect that, as household income increases, improvements are more readily made to residences and property values increase. See Appendix 1 for details on these studies.



3 The average sale price is the mean price. The median sale price is the price that falls in the middle of the series of prices, so that half of the prices are lower, and half of the prices are higher. To illustrate the difference between average and median, suppose five persons have wages respectively of \$3, \$4, \$5, \$7, and \$11. The median wage is \$5; the average wage is \$6.

4 Some construction dates have been approximated based on Sanborn maps.



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# SUMMARY & RECOMMENDATIONS

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## SUMMARY

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The comparative and trend analyses of this study shows a positive relationship between the establishment of the Hollidaysburg Historic District and property values in the district. Before the establishment of the Hollidaysburg Historic District in 1989, property values in the area of the district were declining. The data also show that, in the historic district, there was a decrease in property values between 1984 and 1989.

The data show that, since 1989, property values have increased in the historic district, with the most substantial gains being realized between 1994 and 1996. The rest of the borough has also experienced constant increases in property values, but not as dramatically as has the historic district. These trends are constant across the data and are visible in average (mean) house sales price, in percent change in average house sales price, in median house sales price, and in price per square foot. This finding is further supported by analyses based on age and size.

The data consistently show that, since the establishment of the historic district, and especially since 1994, the property values of houses within the Hollidaysburg Historic District have increased. This finding suggests that the establishment of the historic district has helped reverse a decline in this part of Hollidaysburg.

Supplementary trend analyses conducted suggest that the establishment of the historic district has created another related economic benefit. The data show that as household income increases, households are remaining in the area. This trend is predicted to continue, and its continuation would likely see physical improvements to individual properties, with resultant increases in property values and house sales prices. This trend would also support the broader economy of the overall borough, thus showing an additional benefit of historic preservation and historic district establishment in Hollidaysburg.

In conclusion, this study did not support the claim that the establishment of the historic district would lessen property values. It has shown that the establishment of the Hollidaysburg Historic District has had a positive effect on the value of property in the district. And the study predicts that the district will continue to positively benefit the economy of Hollidaysburg into the future. Consequently, the establishment of the historic district can be viewed as a significant step in the physical and economic revitalization of the borough of Hollidaysburg.

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## RECOMMENDATIONS

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Although the best available data were used, a more definitive study could be accomplished by utilizing current tax assessment data. Such data would give a reliable, consistent measure through time, so that individual structures could be tracked and compared over the years. It is the recommendation of this study that the analysis be repeated using the National Trust for Historic Preservation methodology once Blair County completes an updated tax assessment. (There has not been a tax assessment in the county since the 1950s.) This method would provide for the use of a random sample of representative structures and, consequently, a more definitive study overall.

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**APPENDIX 1**  
**SUPPLEMENTARY STUDIES**

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# EFFECTS OF AN HISTORIC DISTRICT ON RESIDENTIAL PROPERTY VALUES: HEDONIC PRICING TECHNIQUE AND RANDOM CHOICE MODEL

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The Pennsylvania State University, Altoona College

1997

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## Observations from the Hedonic Price Technique

Economic theory has long recognized that some characteristics of land, such as environmental, aesthetic, or historical qualities, may affect the productivity of land either as a producer's good or as a consumer's good. Where this is so, the structure of land rents will reflect these exogenously determined differentials. Rent differentials will be equal to land productivity differentials where the land is used as a producer's good, whereby competition and the mobility of users eventually eliminate above-normal profits. But, where the principal use of land is as a consumer good, such as personal housing services, the differences in individual preferences among households may result in some households reaping economic benefits by occupying the land at a price which is less than their maximum willingness to pay for it--at the same time as no other household is willing to outbid them to occupy that parcel of land.

These results from classical rent theory have, since the mid-1960s, aroused considerable interest among economists in the possibility of using land rent or land value information for residential properties to measure the benefits to communities brought about by changes in various residential characteristics. More recently, several researchers have designed empirical studies as applications of what is now called the Hedonic Price Technique to assess the value of changes in residential attributes such as, for example, the effects of an historic district on property values in Hollidaysburg.

The basic theory of hedonic price estimation assumes that individuals maximize their welfare from purchases of goods and services, including housing services, with a limited money income. A cross section of land purchases at given prices thus reflects the tradeoffs each individual is willing to make concerning the amenity services each location may provide. Any large area has in it a wide variety of sizes and types of housing with different locational, neighborhood, and environmental characteristics. An important assumption of the hedonic technique is that an urban area as a whole can be treated as a single market for housing services. Individuals must have information on all (or most) alternatives and must be free to choose a housing location within their budget anywhere in the urban market. Households can alter the level of any characteristic by finding an alternative location alike in every respect but offering more of the desired characteristic. It must be assumed that the housing market is in equilibrium, that is, that all households have made their welfare maximizing residential choices given the prices of alternative housing locations, and that these prices just clear the market given the existing stock of housing and its characteristics.

Given these assumptions, the price of the  $i$ th residential location,  $P_i$ , can be taken to be a function of the characteristics of that location. In other words,

$$P_i = P(S_i, N_i),$$

where  $S_i$  represents structural characteristics such as square footage and age of the house, and  $N_i$  represents neighborhood characteristics such as whether the house lies within a historic district. If the above equation is estimated for an urban area using cross sectional data on housing prices, the partial derivative with respect to any of its arguments, for example  $N_i$ , gives the implicit marginal value of that characteristic, that is, the additional amount or value that is attached by the average household to move to an area with that particular characteristic.

Table 2 provides a log linear estimate of the rent gradient function for Hollidaysburg Borough from a sample of 137 households. Variable names, definitions, and descriptive statistics of all variables are presented in Table 1. Structural characteristics used in the Table 2 estimates include the age and square footage of the house, and a dummy variable indicating whether or not the house lies within the Hollidaysburg Historic District. An interaction variable is also included to measure changes in historic district rents over time.

Results indicate that there is no statistically significant effect, either positive or negative, of the historic district on property values for the Hollidaysburg area. This is evidenced by the low t-values of the variables HIST-DIST and HIST-DIST\*TREND in Table 2. The estimated rent gradient function does indicate a statistically significant positive association between house price and square footage and a negative association between house price and age--results that are consistent with numerous other hedonic property value studies.

If the question of statistical significance is set aside, the combined effect of the variables HIST-DIST, and HIST-DIST\*TREND indicate that the rent gradient within the Hollidaysburg Historic District is rising over time; more specifically, between 1984 and 1996 housing prices rise approximately \$1025 1996 dollars per year.

### Observations from a Random Choice Model

In order to shed more light on individuals' perceptions of the quality of housing within the historic district between 1984 and 1996, a random utility model based upon buyers' observed house purchases for that period can be applied to the data in Table 1. The basis of the random utility (or welfare) model is that each individual faces a number of alternatives from which one must be chosen. Here, the problem of interest is to analyze an individual's probability of purchasing a home within the Hollidaysburg historic district conditional upon characteristics of the available alternatives [homes] in the area and of the individual decision-maker (most importantly, personal income). To model individual decision-making, we will assume the existence of an "average" decision-maker, and that this "average" individual (say individual  $i$ ) derives welfare,  $W_{ij}$ , if the  $j$ th alternative [house] is purchased, and that  $W_{ij}$  can be expressed as the linear function,

$$W_{ij} = x_{ij}\beta,$$

where  $x_{ij}$  represents a list of observations on variables that are specific to the  $j$ th alternative (e.g., square footage and age of the house), and the  $i$ th individual. The parameter list  $\beta$  is assumed to be constant across the entire population.

In order to separate out the individual from the average, a stochastic component is added to the "average" welfare so that the welfare derived by the  $i$ th individual from the selection of the  $j$ th house is

$$W_{ij} = x_{ij}\beta + e_{ij},$$

where  $e_{ij}$  is a random variable. The usual justifications for the addition of  $e_{ij}$ s are made, namely that  $e_{ij}$  represents the combined effects of unobserved factors and random individual behavior.

If each individual is a welfare maximizer, the estimated probability that individual  $i$  will select a home in the Hollidaysburg historic district,  $h$ , versus a home outside the district,  $o$ , is given by

$$P_{ih} = \text{Probability}\{U_{ih} > U_{io}\}.$$

The explanatory variables used to estimate this relationship, given by  $P_{ih} = x_{ij}\beta$ , represents the  $i$ th individual's conditional welfare (i.e., conditional choice demand) for the particular ( $h$ th) house in question. This estimated probability, which includes the house selling price and measures of personal income, also provides information on individuals' income elasticity of demand for housing. For instance, if the income elasticity of demand for housing is found to be negative (which is sometimes the case for lower income neighborhoods) the housing location may be considered an "inferior good," in the sense that as personal income levels rise, area residents substitute their demand for housing away from that location to alternative locations.

Table 3 displays the estimated probability of an individual purchasing a home within the Hollidaysburg Historic District from the sample of 137 Hollidaysburg area households between 1984 and 1996. Included in the

estimated equation are the age and square footage of the house, selling price, and buyer income measured by 1996 median household income levels by census tract for Hollidaysburg Borough. Probability estimates were obtained using a binary probit model and are based on the assumption that the stochastic  $e_{ij}$ s have a multivariate normal distribution. The variable in Table 3 denoting personal income (INCOME) is negative and statistically significant, suggesting a negative income elasticity of demand for housing located within the historic district. This finding isn't surprising given the sizable number of lower income households which currently reside in the district. However, there appears to be a significant trend away from this negative income elasticity for the years 1984 to 1996, as evidenced in Table 3 by the interaction term INCOME\*TREND. This term is positive and statistically significant, indicating that homes within the historic district have a time increasing income elasticity of demand (approximately 2.5 percent per year between 1984 and 1996). If this predicted trend continues, the historic district can expect to attract ever higher income households over the next several years.

**Table 1**  
**Acronyms, Definitions, Sample Means and Standard Deviations (N = 137)**

<u>Acronym</u>	<u>Definition</u>	<u>Mean</u>	<u>Standard Deviation</u>
<b><u>Endogenous Variables</u></b>			
HIST-DIST	House purchased lies within the Hollidaysburg Historic District: 1=yes; 0=no.	0.182	0.388
<b><u>House Variables</u></b>			
PRICE	Selling price of house in thousands of nominal dollars.	55.507	27.464
SQFOOT	Total square footage of the house.	1438.20	511.34
AGE	Age of the house in years in 1996.	72.139	29.113
<b><u>Household Variables</u></b>			
INCOME	Median income of Hollidaysburg Borough households by census tract in thousands of 1996 dollars.	24.08	4.856
TREND	Number of years prior to 1996 the home was sold (e.g., 1984 = 12).	5.87	22.0



**Table 2**  
**Ordinary Least Squares Estimates**  
**of the Hollidaysburg Area Rent Gradient Function**

Explanatory Variable	Dependant Variable <sup>2</sup>
	log(PRICE)
log(SQFOOT)	0.7562*** (7.021)
log(AGE)	-0.3748*** (-5.124)
HIST-DIST	-0.1138 (-0.751)
HIST-DIST*TREND	-0.0220 (-1.030)
Degrees of Freedom	137
Log-Likelihood	- 82.76
Log-Likelihood at Zero	-114.10
Chi-Squared (4)	62.67

\*t-statistics are in parentheses.

\*\*\*Significant at the 1 percent level.

**Table 3**  
**Probit Estimates of the Probability**  
**of a Home Sale within the Hollidaysburg Historic District**

Explanatory Variable	Dependant Variable <sup>a</sup>
	HIST-DIST
Constant	0.1608 (0.184)
PRICE	-0.0098** (-2.304)
INCOME	-0.8721** (-2.203)
SQFOOT	0.0003 (1.555)
AGE	0.1744** (1.920)
INCOME*TREND	-0.003** (-2.117)
Degrees of Freedom	137
Log-Likelihood	-45.58
Log-Likelihood at Zero	-65.09
Chi-Squared (5)	39.04

<sup>a</sup>t-statistics are in parentheses.

\*\*Significant at the 5 percent level.

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# APPENDIX 2

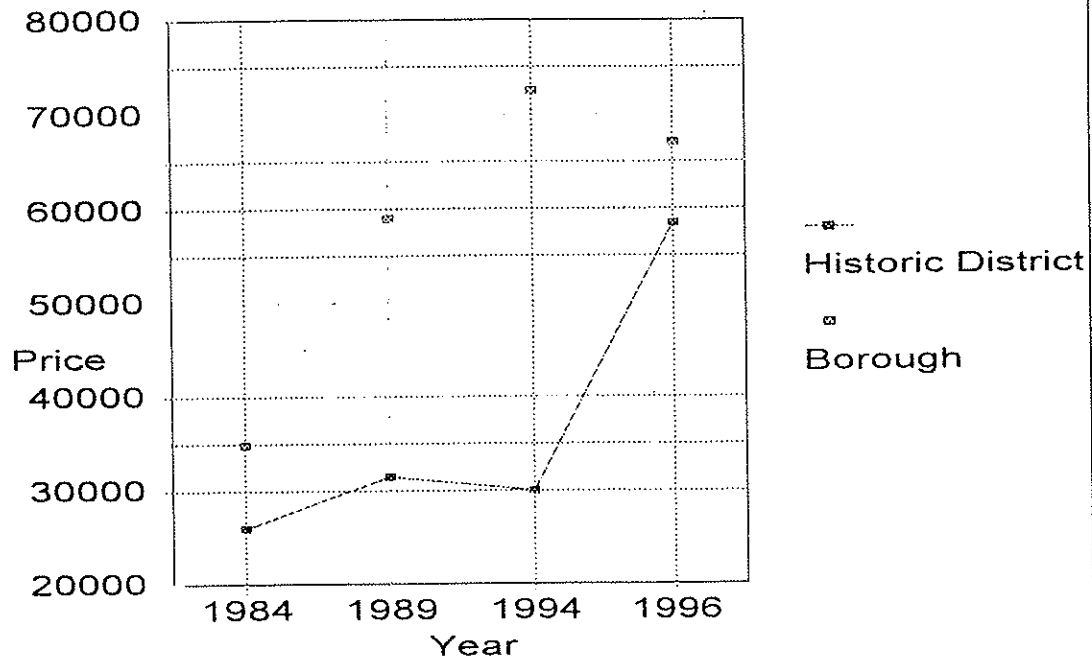
## ADDITIONAL GRAPHS

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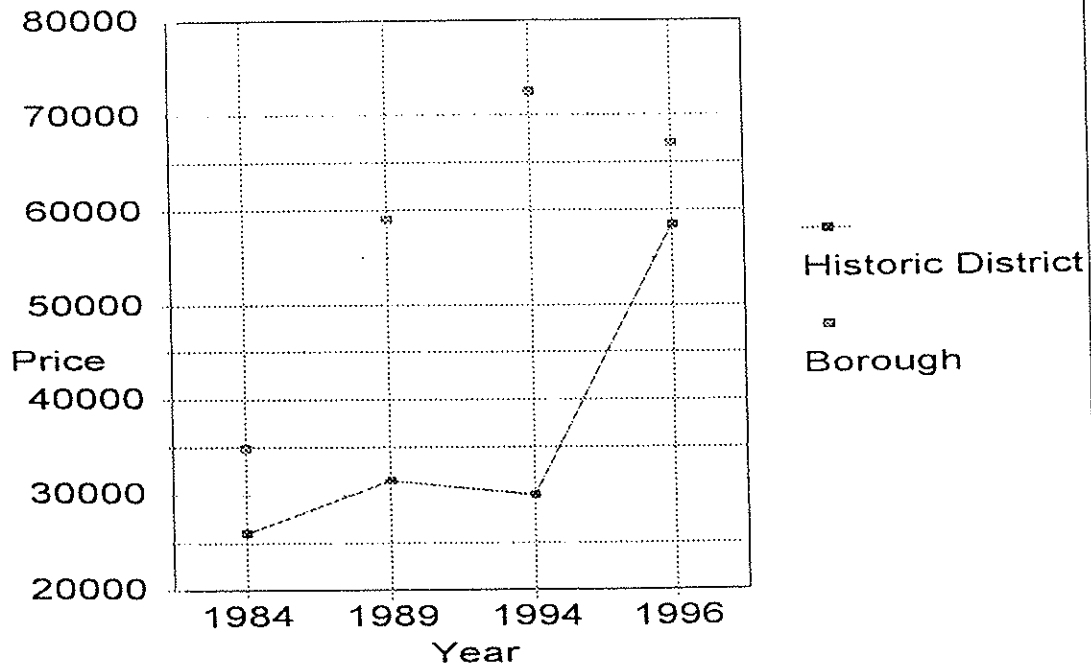
**Graph A**

Median house prices for properties that did not have multiple sales



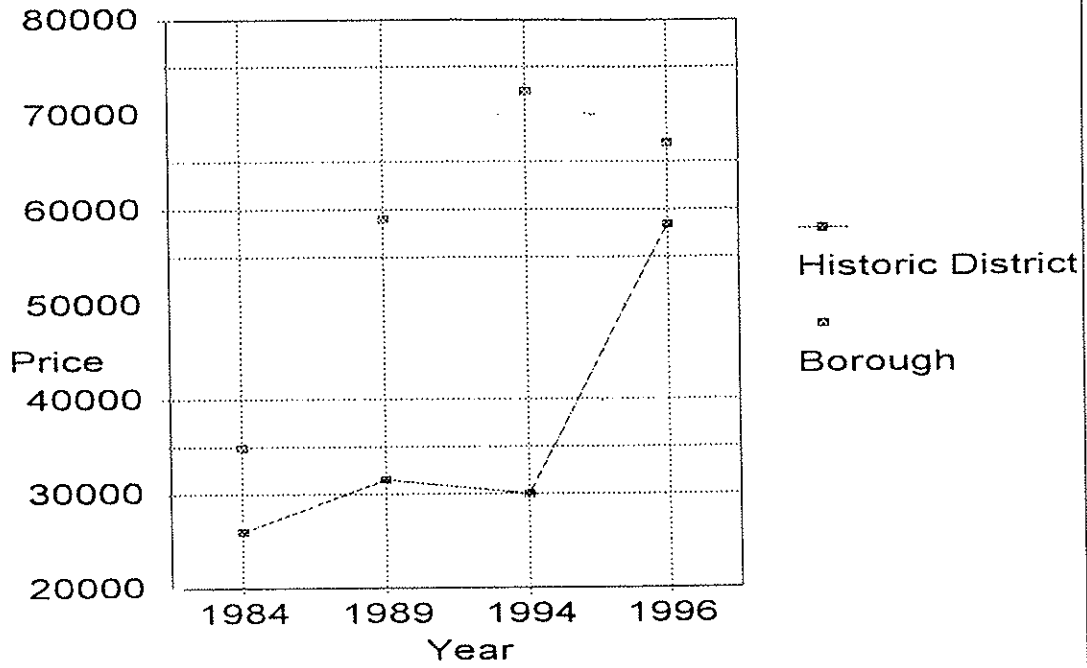
**Graph B**

Median house prices for properties that did not have multiple sales



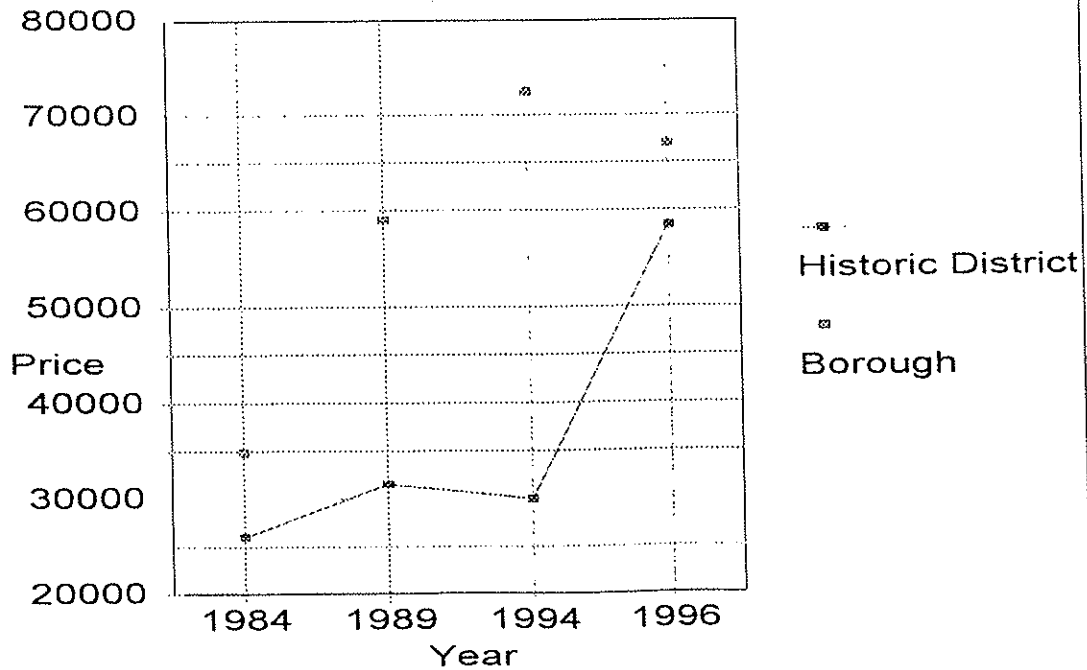
**Graph C**

Median house prices for properties that did not have multiple sales



**Graph D**

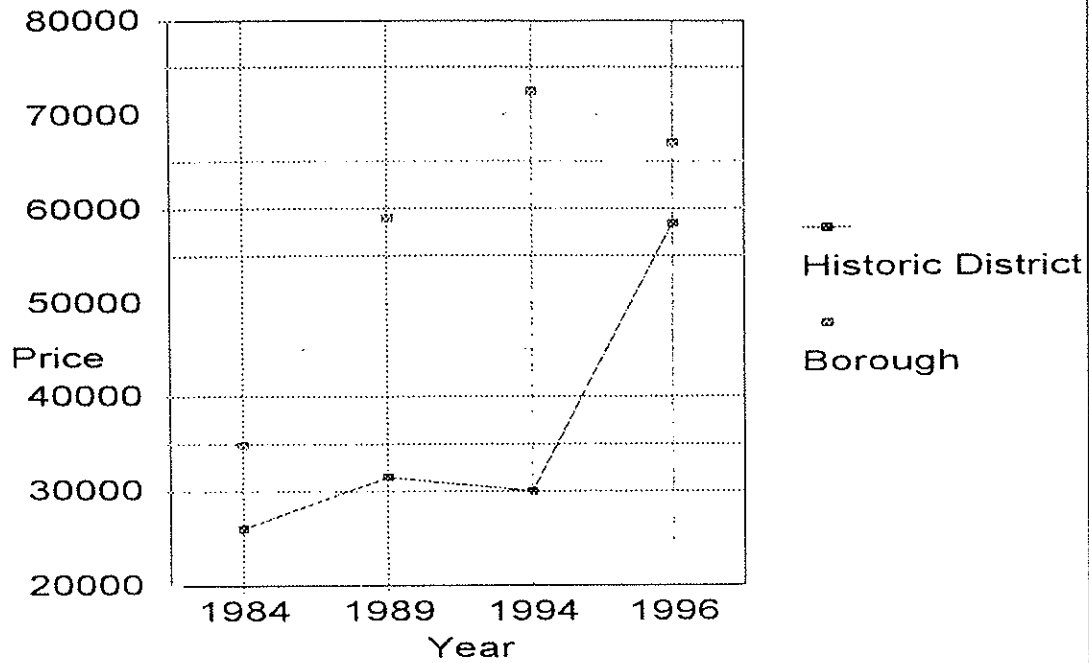
Median house prices for properties that did not have multiple sales





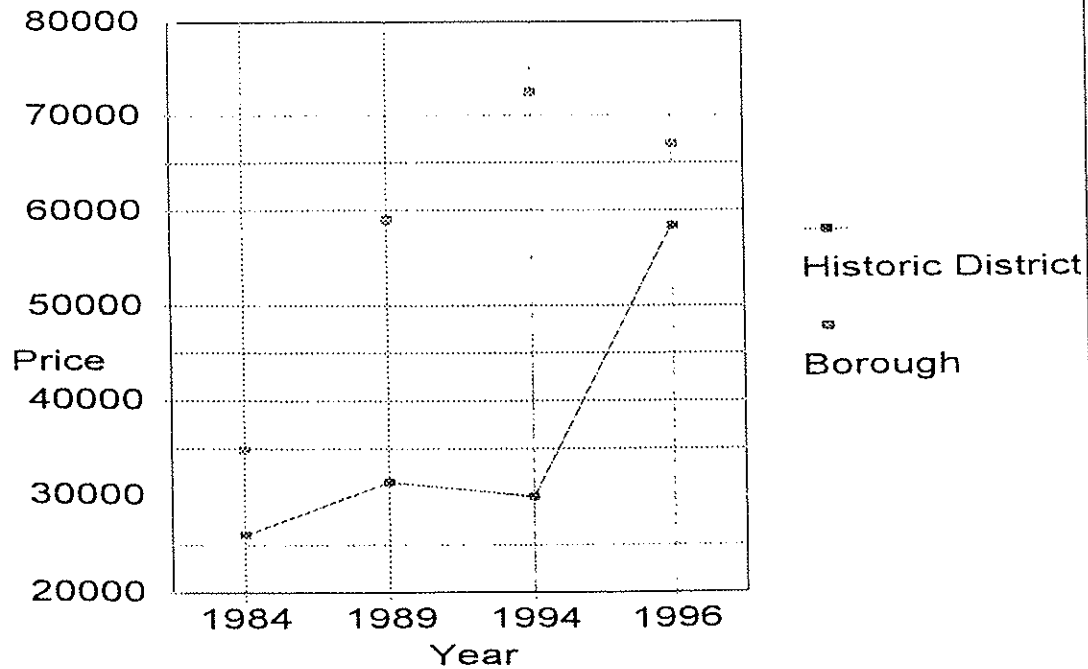
**Graph E**

Median house prices for properties that did not have multiple sales



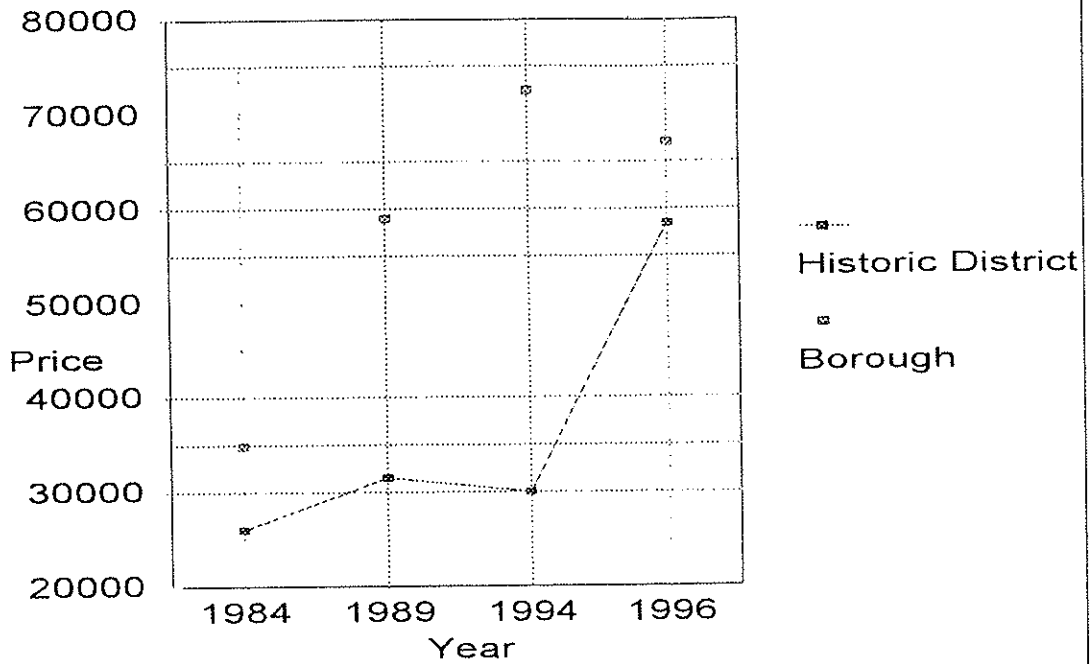
**Graph F**

Median house prices for properties that did not have multiple sales



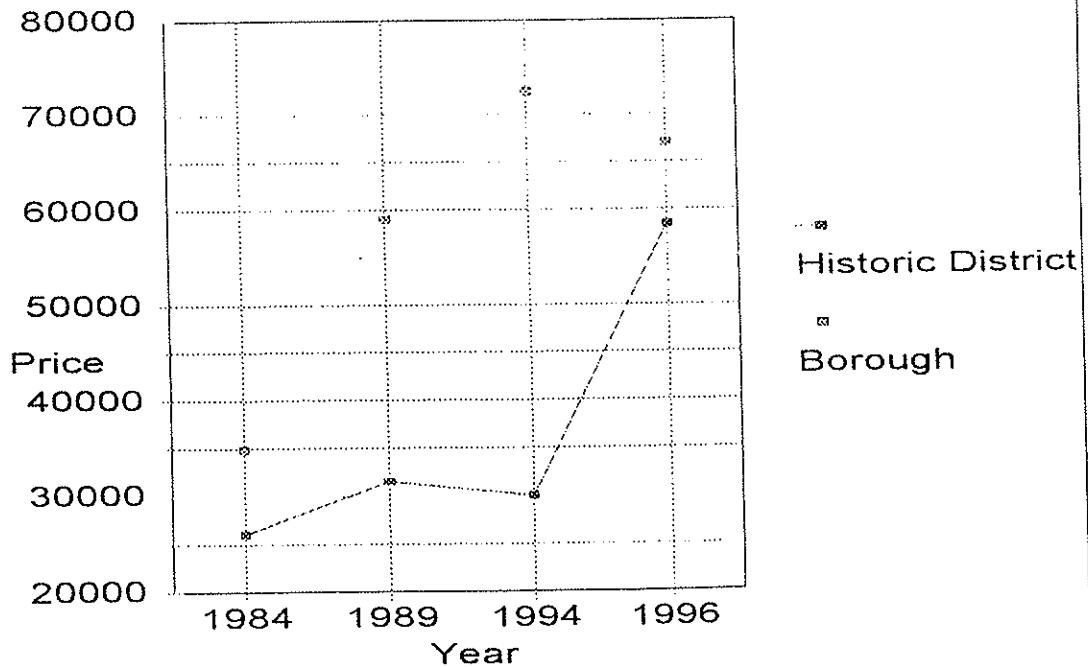
**Graph G**

Median house prices for properties that did not have multiple sales



**Graph H**

Median house prices for properties that did not have multiple sales







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**APPENDIX 3**  
**U.S. CENSUS DATA**

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A greater understanding of the residential buildings of Hollidaysburg may be obtained by examining the housing conditions in communities surrounding the borough. The following tables present a summary of housing conditions for Hollidaysburg and surrounding communities, and provide information on total housing units, median housing value, and median rent. Statistics for Blair County provide a regional perspective. U.S. Census data were used for this comparison; however, not all of the 1990 census data categories for housing information were used in the 1980 census, making some data unavailable for 1980. Although the

**Table 1**  
**Total Housing Units**

<b>Location</b>	<b>1980</b>	<b>1990</b>
Blair County	52050	54349
Altoona	22474	22698
Logan Township	-	4770
Allegheny Township	-	2832
Frankstown Township	-	2807
Tyrone Borough	-	2524
Hollidaysburg Borough	-	2395
Blair Township	-	1577
Roaring Spring Borough	-	1089

**Table 2**  
**Median Housing Value**  
(for owner occupied housing units)

<b>Location</b>	<b>1990</b>
Frankstown Township	\$74,800
Blair Township	\$57,100
Allegheny Township	\$56,800
Hollidaysburg Borough	\$51,000
Logan Township	\$49,000
Roaring Spring Borough	\$41,600
Blair County	\$41,100
Tyrone Borough	\$34,000
Altoona	\$31,600

**Table 3  
Median Rent**

<b>Location</b>	<b>1990</b>
Frankstown Township	\$433
Allegheny Township	\$306
Blair Township	\$305
Logan Township	\$276
Hollidaysburg Borough	\$271
Blair County	\$224
Roaring Spring Borough	\$219
Altoona	\$218
Tyrone Borough	\$173

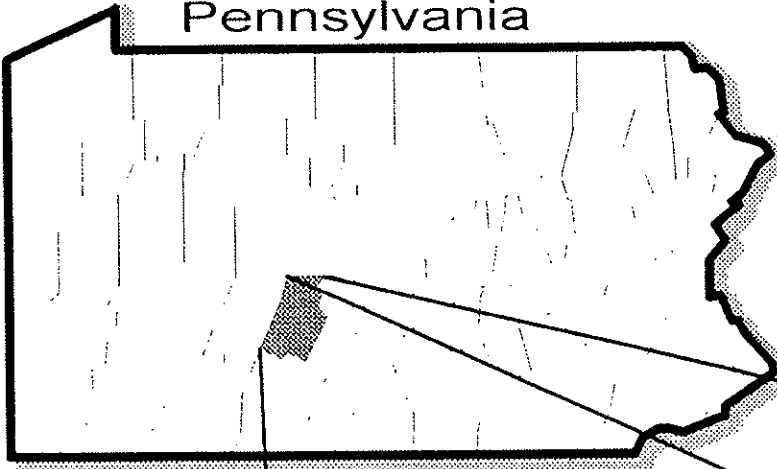
Although the census data are not for the current year, a broad picture of how Hollidaysburg compares with surrounding communities can be obtained. Table 1 shows that Hollidaysburg is relatively small, with the third fewest total housing units. Table 2 indicates that Hollidaysburg has a fairly high median housing value of \$51,000. Table 3 illustrates that Hollidaysburg ranks at the mid-point for rent prices in the area.

**Table 4  
Median Household Income  
for Hollidaysburg Borough  
(Census Tract 112)**

<b>Block Group</b>	<b>Income</b>
1	\$28,041
2	\$25,405
3	\$17,262
4	\$21,696
5	\$12,727
6	\$30,962
7	\$23,556
8	\$26,806
9	\$31,944



Pennsylvania



BLAIR COUNTY

