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The Impact of Local Historical Designation on Residential Property Value;an Analysis of Three Slow-Growth and Three Fast-Growth Central Cities in the United States

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THE IMPACT OF LOCAL HISTORIC DESIGNATION ON RESIDENTIAL PROPERTY VALUES: AN ANALYSIS OF THREE SLOW-GROWTH AND THREE FAST-GROWTH CENTRAL CITIES IN THE UNITED STATES

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DEDICATION

To my parents, for whom I wish only long life, good health, and God's blessing.

To my wife, Ayesha; her love and support enabled me to complete my postgraduate studies, write this dissertation, and receive my doctoral degree.

To my children, Tayeb, Carma, and Mesk, for whom I wish only peace, joy, and wonder in the coming years.

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ABSTRACT

Historic designation is thought to have a role in neighborhood economic and community development. Local designation of historic districts is increasingly used as a tool to revitalize deteriorated neighborhoods and to protect endangered historical districts.

A number of limitations in several previous studies have made policy development as well as a complete assessment of the impact of designation difficult. Some past studies focused only on historic neighborhoods in one city or one state; other studies have tested the impact of historic designation in general without distinguishing between local, state, or federal designation. Lastly, several earlier studies have also relied on comparing changes in property values in historic areas with those non-historic areas but with too few control variables to isolate the effects of historic area designation. This dissertation expands upon previous work by examining the effects of local historic designation on residential property values across six central cities in five states in the United States while controlling for numerous other variables that could impact the property values. The study employs hedonic regression models and difference on difference (case-control) descriptive statistical models to estimate the impact of local government designation of an area as a historical district on the prices of residential property. This is accomplished

by the pairing of each historic district with a similar community that was not designated as historic. The research was performed in three fast-growth and three slow-growth central cities. The results indicate that local historic designation is associated with higher property values in the six central cities. In addition, the positive appreciation effects of local historic designation in slow-growth central cities were higher than in fast-growth central cities by 7.7 percent suggesting that historic designation has a role to play in urban revitalization for areas striving to improve property values despite slow population growth.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The cultural and historic resources of a community tell the story of its past while also creating a degree of uniqueness capable of separating one community from another. These resources also provide tangible connections for residents to an area's past and the events that have shaped a community. Preserving the physical reminders of the past creates a sense of place and community pride for residents and retains the character and legacy of a city. Historic preservation can also generate a wide range of economic benefits through the rehabilitation and adaptive reuse of historic properties, the attraction of heritage tourism visits, and the impact that historic designation can have on a neighborhood's character and property values.

Another benefit – and the focus for this dissertation – is the role that local historic preservation might assume in improving property values and the creation of possible

ripple effects on the value of property in surrounding neighborhoods. If property values are both enhanced and sustained then historic designation might be seen as more than just a tool to preserve the physical structure of buildings and facilities but it could also be an asset for community preservation and an economic development strategy for urban areas, central cities, small towns, and suburbs.

This could be of substantial policy significance especially to slower growth cities struggling to combat declining property values and the loss of residents.

This dissertation focuses on the impact of historic designation on residential property values. The effects of historic designation on property values will be assessed for single-family residential properties located in locally designated historic districts in six central cities in the United States. These cities have been placed into two groups reflecting their recent growth patterns. The first category represents slow growth central cities and includes Cleveland, Ohio; Pittsburgh, Pennsylvania; and Cincinnati, Ohio. The second category represents fast growth central cities and includes Dallas, Texas; Atlanta, Georgia; and Phoenix, Arizona. The purpose of using two groupings is to examine whether historic designation has greater impact in slow-growth central cities than in fast-growth ones. Again, as community leaders in slower-growth cities are under intense pressure to find tools that can help stabilize and enhance local tax bases, understanding the effects of historic designation for these areas is crucial. Information that was generated for fast-growth areas might not provide the evidence required to evaluate the value of historic designation for areas struggling to advance their local economies.

The effects of historic designation on property values will be measured using two statistical approaches. A case-control approach will be used to compare the values of properties within the historic district to similar properties in other comparable neighborhoods that have not received historic district designation. The dissertation will utilize hedonic regression models to estimate property prices in historic districts and comparable neighborhoods. The six historic districts have been selected for analysis following consultation with the National Trust for Historic Preservation, state heritage registers, local historic preservation societies and non-governmental organizations in each central city. Comparison neighborhoods were identified through consultation with local government administrators, planners working for each city, and local historic preservation officers.

The first section of the dissertation will review historic preservation and designation trends that are taking place in several American central cities, urban areas, and small towns. Other sections of the dissertation review previous studies related to the economic impacts of historic preservation in general and the effects of historic designation on property values. These previous studies will provide the framework for the dissertation by helping to identify the new work that was needed. The third section of the dissertation describes the research design, research methods used, and the study areas, data sources, before proceeding to the analysis of the data. The final part of the dissertation will focus on recommended policies based on the findings produced.

1.1 Definitions:

Before turning to a review of the literature and previous studies of the impact of historic preservation on property values it is necessary to establish the operational definition of several terms that will be used throughout this dissertation. Clear definitions are required to understand precisely what was studied and the fit of findings to policy development. There are many different terms used to describe activities attributed to historic places and sites, so it is important to define what is meant by such terms as historic preservation, historic designation, rehabilitation, maintenance and the designation of a neighborhood as an historic district.

According to the US Department of the Interior's Office for Standards for the Treatment of Historic Properties, there are four separate activities related to protection of historic properties: preservation, rehabilitation, restoration, and reconstruction (ICOMOS, 2007). Preservation focuses on the importance of changes and alterations to a structure that is accomplished by retaining all of the historic fabric through conservation, maintenance, and repair. Rehabilitation, also known as adaptive use, or using an old building for a new function, emphasizes the retention and repair of the historic integrity of a building while allowing certain liberties to be taken in the process for the retrofitting of the property for a new use. Restoration is the act of retaining materials and features specific to the most significant time in a property's history, and includes the removal of any materials or features that are not indicative of that time period.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) developed a number of charters, resolutions, and declarations regarding historic

preservation. The International Council on Monuments and Sites (ICOMOS) is the scientific arm of UNESCO responsible for drafting these definitions and charters. One of the earliest declarations was the Burra Charter agreed to in 1979. This agreement provided guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of ICOMOS members. This charter declared conservation as an integral part of the management of places of cultural significance and an ongoing responsibility of governments. The charter defines preservation as a tool to maintain the fabric of a place in its existing state and retarding deterioration.

Other definitions of historic preservations have also been advanced. For example, the American Institute for Conservation (AIC) defines historic preservation as the protection of cultural property through activities that minimize chemical and physical deterioration and damage that prevent loss of informational content. The primary goal of preservation is to prolong the existence of cultural property. However, AIC did not focus upon the issue of enhancing property values. The *Heritage Canada Foundation (1983*) defined historic preservation as a generic term for the broad range of processes associated with the restoration, rehabilitation, and adaptive re-use of historic structures. Other activities including the identification, evaluation, interpretation, maintenance, and administration of historic resources form an integral part of the movement to retain elements from the past. The United States *Secretary Of The Interior's Standards For Historic Preservation (1979*) defined historic preservation as the act or process of applying measures to sustain the existing form, integrity, material of a building or structure, the existing form, and the vegetative cover of a site. It may include initial

stabilization work, where necessary, as well as ongoing maintenance of the historic building materials.

1.2 Historic Designation:

With these different frameworks in mind, this dissertation will be guided by the following definition of historic designation. These definitions will then help specify the particular concept being measured in this dissertation that is used as a practical tool to preserve and to protect historical properties. Designation of historic districts and sites has been employed on a broad basis in the United States since passage of the National Historic Preservation Act (NHPA) in 1966 (Listokin, 1986). This law gave the Secretary of the Interior the authority to maintain a National Register of Historic Places. The register could identify districts, sites, buildings, and objects of local, state or national historic significance as national historic places (Wajno, 1991) and thus gave the Federal government authority to create or initiate the historic preservation movement.

An historic district is a group of buildings, properties or sites that have been designated by one of several entities on different levels as historically or architecturally significant. Buildings, structures, objects and sites within a historic district are normally divided into two categories: contributing and non-contributing. Districts greatly vary in size, some having hundreds of structures while others have just a few. The U.S. federal government designates historic districts through the U.S. Department of Interior under the auspices of the National Park Service.

1.2.1 Federal Historic District:

Federally designated historic districts are listed on the National Register of Historic Places. A listing on the National Register of Historic Places is acknowledgment of an historic district; however, the Register is "an honorary status with some federal financial incentives" (NPS, 2001). The National Register of Historic Places defines an historic district per U.S. federal law, last revised in 2004 (NRHP, 2004). According to the Register definition a historic district is:

> "a geographically definable area, urban or rural, possessing a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united by past events or aesthetically by plan or physical development. A district may also comprise individual elements separated geographically but linked by association or history." (NRHP, 2004)

1.2.2 State Historic District:

Any state can designate historic districts within its borders using criteria similar to those established by the U.S. Department of the Interior or criteria that state officials have proposed and enacted. Most state governments maintain a listing similar to the National Register of Historic Places for areas and properties deemed to have historical importance. The state designations can be used to permit property owners or communities to apply for certain benefits that are created to enhance preservation. In addition, there is usual no prohibition in state constitutions limiting the passage of additional state laws or local ordinances to provide more stringent protections to property within a state

designated historic district (NPS, 1995). The laws can be similar or different from the federal guidelines that govern the National Register. A state listing of a historic district on a "State Register of Historic Places," usually by the State Historic Preservation Office, can be an "honorary status," much like the National Register. The National Historic Preservation Act of 1966 requires states to have a historic preservation office if that state and properties in historic districts are to be eligible for federal programs designed for historic districts.

1.2.3 Local Historic Designation:

Some cities, in compliance with state laws and administrative guidelines have also created their own processes for designating historic districts. Property located within local historic districts usually enjoys the greatest level of protection from threats to historic integrity of parcels or the district. This is due to the fact that many land-use decisions are made at the local level (NPS, 1995). Local government designation of an historic district imposes restrictions on alterations and demolition and it may require maintenance of exterior ornamentation and other façade treatments over and above those required in the city ordinance.

There are more than 2,300 local historic districts in the United States. Local historic districts can be administered at the county or the municipal level. Both entities are involved in land use decisions (LCV, 2000). In this study, the appropriate municipality has designated all of the historic neighborhoods.

In the United States, the creation of historic districts for preservation purposes is one of the oldest tools used by local governments to protect historic properties. Charleston, South Carolina is credited with beginning the modern day historic districts movement (NPS, 1989). In 1931 Charleston enacted an ordinance which designated an "Old and Historic District" that was administered by a Board of Architectural Review (NPS, 1989). Charleston's early ordinance reflected the strong protection that local historic districts often enjoy under local law. It asserted that no alteration could be made to any architectural features which could be viewed by the public from the street (NPS, 1989).

1.3 Opposition to Historic Designation:

Despite strong support for the concept of historic designation among planning professionals and conservationists, there is opposition to designation by some who are concerned with the confiscation of property rights. Once a district is designated as historic property owners may have reduced options with regard to the use of their property and the types of renovations possible. There may also be requirements for maintenance and restoration that impose (excessive) or extra costs on property owners. When an area is designated as historic all property owners must comply with the attached building regulations (Hue, 2006; Vandam, 2006; FDD, 2007). For property owners within these preservation districts to make alterations they must adhere to a set of guidelines which concern roof form and materials, front and side porches (no screens allowed), shape, style and placement of windows and doors, construction materials (no hardboard, masonite, aluminum, or vinyl coverings allowed), lighting fixtures, fences,

paving, and paint color for masonry structures (Kreyling, 2006). The local historic district offers, by far, the most extensive legal protections for historic properties because most land use decisions are made at the local level. The tendency of local districts to place restrictions on property owners causes them to be the targets of the most resistance from the public. Table 1 illustrates the levels of historic designation in the United States and there jurisdiction levels, levels of protection attributes, and justification for designation for each level.

Table 1: Levels of Historic Designation

Level of designation	**Level of Register and jurisdictions**	**Level of protection, ordinance, and restriction**	**Justification for designation**
Federal Historic district	National Register, National Historic Preservation Act (NHPA) 1966	Less restrictive	Prestige, community pride, heritage significance.
State historic district	State Register, NHPA, State regulations and acts on Historic preservation	Less restrictive	Prestige, community pride, heritage significance.
Local historic designation	Local Register, NHPA, Local Historic district commissions, local ordinance	Restrictions on alterations and demolition, certificate of appropriateness, restrictions on land use	Protect a historic neighborhood from physical deterioration, neighborhood quality, social capital, positive spillovers, and community preservation.

1.4 Research Questions:

This dissertation expands upon previous work by examining the effects of local historic designation on property values across two sets of communities. One set of historic districts is paired with similar areas that have not been designated as historic districts in central cities characterized by slow population growth. A similar set of

historic and non-designated districts in central cities that are part of fast-growth regions was also studied. The research design allows the dissertation to address the following research questions:

1. Does local historic designation have a positive impact on residential property values when compared with outcomes for similar properties in non-designated areas?
2. Does an historic district create any spillover effects for nearby residential properties?
3. Does local historic designation have a more positive impact in slow-growth cities as a result of the special value created that is absent in other non-historic designated district?
4. Does local historic designation have a positive impact in fast-growth cities as a result of the special value created that is absent in other non-historic designated districts?

CHAPTER II

THEORETICAL FRAMEWORK

Many studies have focused on the economic benefits of historic preservation. The effect of historic designation on property values in particular has been part of the justification for why an area should be preserved or designated as historic and is used to counter objections. The generation of positive externalities from historic preservation has also been utilized to produce support for the designation of districts. The central thesis is that when an area is designated as historic, the value of the property will increase creating a positive impact on a city's tax base and higher values for the owners of all property within district. There is also the possibility that positive gains accrue to owners of properties located outside the district but in close proximity to the designated community. This means that when an area is assigned or designated as historical owners of all properties within the historic district and the surrounding non-historic area should benefit because of the positive externalities associated with historic district designation.

In this regard, historic properties generate external benefits for other property owners in adjacent areas. Also, if property value increments produce more tax revenue for local governments another important benefit is realized. The generation of externalities from designation, then, has the potential for creating three benefits. The owner from the direct benefit and that too constitutes an externality resulting from the protection afforded to the investor from compatible use and restoration of adjacent properties. In this manner the investment receives protection from the designation process. The area benefits because it will be economically revitalized by the designation and historic designation will works as a spillover tool to residential development even if the owners of adjacent properties delay restoration activities. It is also possible that property adjacent to or near the district also benefits.

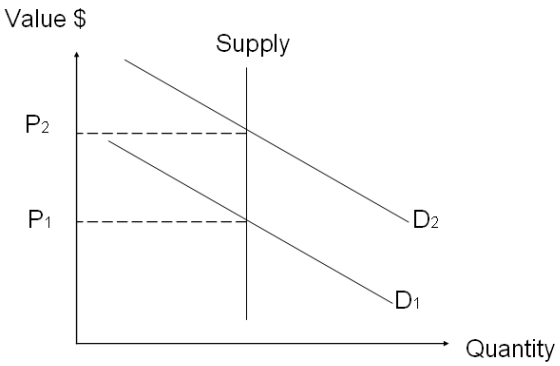
There are costs to property owners when an historic district is created. Owners lose a degree of control over the external appearance of the property as well as its economic use and the materials that must be used for repair, maintenance, and restoration as all changes and improvements must conform to the standards established for the district. In this regard classical political externality costs are created for owners who would not wish to comply with the property guidelines that exceed those found in normal zoning ordinances. As part of an historic district a property's external appearance must meet certain standards and an individual property owner's options are therefore restrained and restricted. Therefore, owners of homes in historic district do experience a loss of their property rights and could even sustain economic losses if their property could earn a higher return through a different use, the use of less costly materials for renovation and maintenance, or through a different appearance. However, marginal benefits could be

greater relative to these marginal costs if demand leads to higher prices. This anticipated increase in demand will be investigated in this dissertation. However, if must also be acknowledged that higher residential property values as the result of historic designation can also lead to increased rental prices and higher property taxes, and these, in turn, may displace low to moderate income residents (Leichenko et. al., 1999), and this negative externality also needs to be considered.

The second theoretical approach that used in this dissertation is tied to the ideas of a supply and demand model. It could be assumed that the supply of historic property is highly inelastic, mainly because of its scarcity. Furthermore, the rise in property values also signifies that consumers will be paying a price higher for properties. The premium paid (over comparable properties) includes the extra value created by location of the property in a historic district related to the uniqueness created and conveyed by designation which protects the investments of owners as they have greater assurances that neighbors will retain and enhance the character and value of their homes.

The increase in property values in the area will benefit the district and its surrounding neighborhoods. Figure 1 illustrates the demand of historic property and the value of historic designation.

Figure 1: Demand of historic property and the value of historic designation.



P_2-P_1= value of historic designation

In sum, by examining the evidence it will be possible to use an increase in property values as a measure of the effectiveness of historic district designation and to test if this designation can work as a tool for neighborhood development. The concluding part of this dissertation will also discuss different strategies that also are attentive to the need to protect affordable housing and dampen displacement and gentrification pressures. The limitation of this dissertation is that the costs of redevelopment incurred by owners and their assessment of any political externality will not be quantified. This dissertation focuses on the issue of the impact of local designation on property values in the district and for properties adjacent to or near the district.

CHAPTER III

LITERATURE REVIEW

Measuring the effects of historic designation is largely an empirical issue. The scholarly literature has yielded dissimilar results on the value of historic designation on property values, but these contradictions may be related to methodological choices made in the research strategies employed. Many reviews of the literature illustrate the impact of designation on property values, but stress the variations across studies according to the methodology and methods used. Several earlier studies of historic designation used a difference-in-difference method to identify price effects of historic designation. This method involves comparing sample average property value growth rates in historic and non-historic districts at one time. It seems that one of the important limitations of studies that used difference-in-difference methodology is that they depend on comparing the average of the growth rate in property values in historic areas with those in non-historic areas without controlling for the individual characteristics of properties. The absences of

controls for other important variables that can impact property values limits the usefulness of the approach for isolating changes in property values that can be related to the creation of an historic district.

More recent studies have employed hedonic regression method to assess the implicit price of properties' attributes, with historic designation being one of those attributes. Studies that used this approach also found mixed results. These mixed results in variation in price effects may be due to differences in types of historic designation, the variation of data sources, and type of historic designation. The authors of some previous studies did not differentiate between whether a property is locally or state designated. Another important factor that may have contributed to the mixed results is that the previous works look at a small number of historic neighborhoods in one city and based their results on limited sample either in one city or one state.

This dissertation seeks to expand and develop building on the previous studies by examining the effects of local historic designation or residential property values across large and diverse central cities. The advantage of this approach is that it employs the actual price data, differentiates between the types of designation, and includes other appropriate variables in the model such as neighborhood characteristics and structural characteristics of the property.

This chapter provides a more detailed review of the background information that led to the development of this research. The literature review chapter reviewed previous and current economic development studies that addressed the opportunities and the challenges that attributed to historical designation and preservation. In the following

literature review, historic preservation was revealed to be one of the economic development strategies that have led to the economic redevelopment and revitalization of both historical downtowns and historical neighborhoods as well. The opportunities and challenges of historic designation will be reviewed in particular. Finally, it will be shown, from information drawn from the literature, that historic preservation and district designation, with their opportunities and challenges have been a positive economic development strategy that resulted from historic preservation. The unique contribution of this study will also be identified and filled the gap in the literature that it addresses.

3.1 The History of Historic Preservation:

The earliest evidence of historic preservation in the United States was an 1816 protest where residents of Philadelphia rallied to have the city spend $70,000 to purchase and restore the old Pennsylvania State House (Independence Hall) and make it an historic landmark (Asabere and Huffman, 1994). There appears to have been very little attention to historic preservation as a public policy or action for the next 100 years. This pattern was reversed when Charleston, South Carolina enacted the first municipal ordinance creating an historic district in 1931 (Harrill and Potts, 2003). New Orleans soon followed with the adoption of its historic district ordinance in 1937 (Gale, 1991). Listokin and Lahr (1997) reported that the federal government authorized the 1935 Historic Sites Act which began identifying nationally significant landmarks on the National Register of Historic Sites and Buildings.

Said (1987: 28) concluded that historic preservation had four purposes. First, it provided educational opportunities for current and future generations. Second, historic

preservation provided recreational facilities. Said's third purpose for preservation was community pride. The fourth purpose was economic. "Old and historic buildings, sites, and structures are often valuable resources which with appropriate management can provide the stimulus for initiating or sustaining overall economic development.

Sable and Kling (2001: 77) described the purpose of historic preservation as having a double public good. "The double public good model informs us those single-side policies (supply-side versus demand-side) that concentrate on one variable or the other (experience of historic assets versus access to historic assets) will not maximize social welfare. The maximization of social welfare came from balancing the economic or market justifications of increases in property value, jobs created, and economic growth with the cultural or non-market justifications of aesthetics, cultural and existence values.

In addition, Brabec (1993) stated that the value of historic preservation came from three sources: 1) increases in property values, 2) tourism expenditures resulting from visits to historic areas, and 3) employment and other spending related to rehabilitation efforts. Brabec described three types of value that had been applied to historic resources: 1) antique value, 2) architectural value, 3) historical value. These values add significant contributions to a city's culture, ambience, and development. There are important challenges to the process of historic preservation. For example, Bovard (1994: 16) stated that historic preservation "started with laudable goals "that saved some important buildings. But he also notes that as movement, historic preservation "seems to have acquired a momentum of its own, sometimes to the chagrin of ordinary people whose homes are declared national treasures" (Bovard, 1994: 16). Gale (1991) commented that

some property owners have fought historic designation to avoid steep increase in property taxes and its association with gentrification that led to a class bias in terms of who could afford to live in areas designated as historic. According to Atkinson (2000: 307), "gentrification-induced displacement" has occurred when the more affluent created higher rents and housing prices because of historic preservation rehabilitation. Connor (2004: 13) stated that safeguards should be put in place to insure that local residents are not forced out of the areas due to "cultural-led regeneration initiatives".

There is another challenge to historic preservation which is a change in property values after historic designation had occurred. Bauer (1996) and the Department of Environment and Conservation of Tennessee (2003) debated the belief that preservationists hold, that historic designation increases property values while property-rights advocates said property values declined with historic designation. Studies conducted by preservationists and property rights activists have attempted to prove that property values in historic districts are affected by landmark designations. Almost without exception the preservationists hope to show that property values increase, while champions of property rights expect to see substantial devaluation as reflected both in real value of the property and the perception that landmark properties are more difficult to administer (and, ultimately sell). Neither group has managed to produce persuasive and irrefutable arguments.

The Department of Environment and Conservation of Tennessee (2003: 18) identified several additional challenges for historic preservation. For example, the Department's report indicated that newcomers to a community drove the historic

preservation activities in some towns. This created problems for those activities if long-time residents were not included. Another challenge mentioned by the Department was the enactment of a historic zoning ordinance without a "real commitment to the program".

As Paradis (1997: 67) stated,

> Small towns found it difficult to maintain their business districts as important community centers, given that economic restructuring has undermined the traditional economic and social roles of Main Street. In the face of past decline, communities across the United States are in the process of re-orienting their downtowns to new roles and functions. The process of downtown revitalization often involves the conservation of historic resources in an effort to attract tourists as well as local resident.

His qualitative study investigated three small and mid-sized Midwestern cities that depended, to varying degrees, on tourism as part of their communities' economic basis. Predominantly, his case study approach concentrated on the role of place attachment or sense of place, held by local residents and interest groups, as a change agent for downtown revitalization. He posed that the community's sense of place would be reflected in the demographic and social characteristics (age, income, education) of the community. His conclusions, specific to small towns, indicated that local residents of smaller towns had a greater place attachment than the residents of large cities. To this end, Paradis (1997: 23) predicted that "small town business districts will most likely never serve as the important retail trade centers they once were. But, if transformed by a

community's sense of place, the central business district could provide an alternative for a largely suburban society".

Baer (1995) conducted an empirical study of historic preservation and found an uneasy alliance between city planners and preservationists. He looked at the proportion of properties eligible for designation (greater than 50 years old) to the number of properties listed as architecturally historic. He concluded that the national norm (eligible buildings to be nominated for federal designation) of listing properties to eligible properties was 5.5 percent of the historic properties. This low percent shows the importance of local historic designation on local and neighborhood level. "There is implicit in this data an indicator for evaluating current local preservation practice against the national experience, that is, has the community done enough with regard to historic preservation?" (Baer, 1995: 80)

Besides the challenges of historic preservation, historic preservation also has been found to provide opportunities for a city's economic enhancement as concluded by Rpkema, 2001, 2003; Asabere and Huffman, 1994; Coulson and Leichenko, 2001. Rypkema (1994, 1999, 2001, and 2003) has written extensively on the positive economic impact of historic preservation. His 1994 book, *The Economics of Historic Preservation: A Community Leader's Guide* listed 100 reasons historic preservation made sense. Many of these have also been identified by other writers (Coulson and Leichenko, 2001; Leithe, 1993; Leithe and Tigue, 1999). The Office of Archaeology and Historic Preservation of California in a 2003 report found that preservation projects included far more expense for labor, 70 percent, as opposed to new construction where labor typically accounted for 50 percent of a project's costs. Rypkema (1999) reported that $1 million spent on

rehabilitation of a historic Maryland building created 3.2 more jobs than a comparable $1 million new construction project. Leithe and Tigue (1999) reported that from 1992 to 1997, historic preservation projects in Georgia created 7,550 new jobs. Listokin and Lahr (1997) found that $1 million in historic, nonresidential rehabilitation created 38.3 jobs while non-historic nonresidential rehabilitation created 36.1 jobs. These results indicate that historic preservation makes difference by creating new jobs.

Childs et al. (1997) identified three economic impacts that historic preservation had on local economies in West Virginia. First, they said, "historic preservation may increase property values" (Childs, et. al., 1997: 36) resulting in enhanced property tax revenues for the towns. Secondly, historic preservation enhanced the central business district that lead to increased retail sales, employment, income, and business retention. Finally, they linked an increase in the number of restaurants, hotels/motels, bed and breakfast inns, and cultural attractions to historic preservation activities.

Historic preservation was found to lead to heritage tourism (Childs et al., 1997; Office of Archaeology and Historic Preservation, 2003). "Paradoxically, it is the intangible benefits of historic preservation, a sense of place, community pride, and a culturally and visually rich environment that make possible one of its most significant tangible benefits: heritage tourism" (Office of Archaeology and Historic Preservation, 2003: 65). The previous studies indicate that historic preservation has been found to provide opportunities for city's economic enhancement. Historic preservation creates more jobs than other economic development activities.

Some scholars have studied the effect of the historic designation on property values. Some studies found that historic designation has both tangible and intangible benefits. The intangible benefits include the neighborhood pride and other attributes that serve to strengthen social capital. However, there is still a big debate among some researchers concerning the impact of historic designation on increased property values (Gale, 1991; Leichenko et al., 2001; Leithe, 1993; Leithe and Tigue, 1999). Leichenko at el. (2001: 3), plainly stated, "results suggest that, in most cases, historic designation caused a higher property values." Bennett's 1998 study of four historic neighborhoods in Knoxville, Tennessee concluded, "historic designation appears to be good for everyone".

Morton (2000: 49) also studied historic residential neighborhoods in South Carolina. She studied nine communities ranging from small towns to large cities. This study, "confirmed that historic district status has positive impacts in both the short and long-term". In a study of the overall economic benefits of designation during the prior 20 years, Scribner (1976) found that in Alexandria, Virginia, un-restored buildings in the Old Town were worth approximately two and a half times more than those outside of the historic district. A similar pattern was found in the Capitol Hill area of Washington D.C., where buildings in the Capitol Hill historic district increased about 40 percent in value, whereas those off the Hill decreased by 25 percent. Rackham (1977) echoed these findings in a study of Georgetown in Washington, D.C. He found that historic Georgetown had the highest rate of growth of house prices in the city and that, for almost all cases of residential properties, location within the historic commanded a premium.

The U.S. Advisory Panel on Historic Preservation (1979) examined four historic

neighborhoods across the nation: Alexandria (Virginia), Galveston (Texas), Savannah (Georgia), and Seattle (Washington). Comparisons of property selling prices inside and outside these areas over three decades (1950s to 1970s) led the council to conclude that there was a direct link between location in a historic district and higher values. Cohen (1980) looked at decennial census tract data from 1950, 1960, and 1970 for six Chicago historic districts and compared the median value of owner-occupied housing in these neighborhoods with the city as a whole. He found that with one exception, there was a great rise in values in the historic districts from 1950 to 1970. Median rents also increased faster, with the same exception, over the same period.

Deborah Ford (1989) examined the value of owner-occupied housing in historic districts versus non-historic neighborhoods in Baltimore. Data were obtained for these areas from the Baltimore Realtors Multiple Listing Service for 1980 and 1985. Information from the 1980 census for the respective neighborhoods was obtained as well. Ford concluded that if neighborhood and house characteristics are held constant, the effect on prices of a historic district designation is positive. Prices of housing in designated neighborhoods were higher than in similar non-historic areas and Ford attributed this effect to homebuyers willing to pay a premium "for the assurance that the neighborhood surrounding their houses will remain unchanged over time" (1989: 131).

In a study for the National Trust for Historic Preservation, Leithe and others (1991: 53) considered methodologies for examining the "economic benefits of preserving community character." One dimension considered was real estate activities for which the authors recommended that property value trends be examined in historic and in control

(comparison areas). The authors conducted case studies according to the recommended comparative methodologies and found that Galveston, Texas, prices in two historic neighborhoods increased by two to five times the appreciation in the city as a whole. In Fredericksburg, Virginia, the appreciation in residential properties in historic districts was 75 percent greater than non-historic commercial properties.

Others found there is no benefit of historic designation or there are mixed and sometimes negative impacts of historic designation. Costonis (1974) attempted to develop a formula that determines the financial costs of alteration and demolition restraints that are imposed as a result of designation. For illustration, he calculated that four land marked Chicago office towers incurred a loss of value from $400,000 to more than $3,500,000 per building.

Heudorfer (1975) looked at four designated districts in New York City (Central Park West-76th Street, Chelsea, Mount Morris Park and Riverside Drive-West 105th Street) and contrasted them with four comparable adjacent areas. She concluded that landmark status had a small to negligible influence on property values. Properties in the historic districts sold for a premium both before and after designation. In some cases, the premium increased after designation. The New York Landmarks Conservancy (1977) studied three historic districts in New York City (Mount Morris Park Slope, and West 76th Street), comparing the prices of the designated areas with adjacent non-designated neighborhoods. The Conservancy found that designation did not exert a quantifiable independent effect. Moreover, in Park Slope, the greatest price increase came before designation; after designation, price growth was about the same as in the controls case.

The St. Louis Development Agency (1980) considered the implications of landmark alteration and demolition restrictions for St. Louis's central business district. The results were mixed. Some buildings may not have been affected, but others that were suitable for intense development were put at a "disadvantage," i.e., landmark designation reduced their value. Samuels (1981) examined changes in residential sales prices from 1972 to 1978 in five residential historic districts in Washington, D.C. They were compared with five non-designated but comparable neighborhoods that had experienced gentrification, had structures built in the last century, and were located in older sections of the city. She found that none of the five historic districts had a significant difference in the growth rate of property values compared to the non-historic areas. Rather, she argued that the growth rates were related to the stage of revitalization in each neighborhood. She indicates that where revitalization was more advanced, rates of appreciation in landmark areas were also higher. Since two of the areas were designated in 1978 and one in 1976, there may not have been enough time for any impact to manifest itself, since the study was undertaken in 1981.

The Virginia Historic Landmarks Commission (1986), in a multi-city study, showed large average annual increases in property values for historic districts. However, no data from comparable non-designated neighborhoods was reported. Schaeffer and Ahern (1988), in a study of Chicago, found a significant increase in prices and turnover in the residential neighborhoods listed on the National Register of Historic Places, but no corresponding increase in two neighborhoods listed on the local register. The authors speculate that the difference was the result of the more stringent controls imposed in the two local districts and in the prestige of location in nationally recognized neighborhoods.

In an analysis of the effects of historic district designation on property value, Benson and Klein (1988) examined property transfers by price range between 1980 and 1984 in two historical neighborhoods in Cleveland (Ohio City and Shaker Square) and in non-designated adjacent areas. They found that there was a relatively low level of real estate activity (i.e., property transfers) in the historic neighborhoods and those that occurred were in the lower price range. They further observed that numerous property owners bought parcels adjacent to the historic districts to "take advantage of the benefits and to avoid the drawbacks of being in the historic areas" (p.228). Based on this outcome, the authors concluded that historic districts are "not necessarily a panacea for urban decline".

Gale (1991) examined three historic districts in Washington, D.C., and compared them to three similar non-designated districts using property tax assessment data. For the historic districts, post-designation growth rates did not diverge from those in the non-historic controls over the same period. However, there was a decline in two of the historic districts, whereas all three of the control non-historic districts had greater declines than the city average. Gale concluded that designation may insulate property values from cyclical peaks and troughs, but there is no evidence that there was an increase in values from designation per se. A legislatively mandated study in Virginia (State of Virginia 1991) examined assessed values inside and outside national and state designated historic districts and found that assessed values were not reduced (neutral) as a result of designation.

In accounting to the mixed or negative results of a number of studies, some researchers thought that the effect of historic designation on price may depend upon the level of designation (Brabec, 1993; Gale, 1991). The National Historic Preservation Act of 1966 established the National Register of historic places, which currently, consists of 78,000 listings that are comprised of 1,200,000 individual resources (National Register Information System, n.d., and "Using the NRIS"). Gale (1991: 221) reported that the strength of local historic preservation ordinances vary from town to town and state to state. "The strength of their legislation and the level of political support for their ideals" determined the effectiveness of the local regulations. He stated, also, that a National Register listing provided the property owner with prestige but offered few "controls are influencing the use and enjoyment of [the] property."

The Preservation Alliance of Virginia (1996) cited numerous instances in the state in which property value appreciation (as measured by assessment data) in historic areas exceeded that in non-historical neighborhoods. This study was done by Rypkema who found that in Staunton, Virginia, between 1987 and 1995 residential property assessments citywide grew by 51 percent and nonresidential property values appreciated 25 percent. By contrast, assessments on historic residential properties appreciated 52 to 66 percent and historic commercial properties gained from 28 to 256 percent. The values varied by historic area. This variation indicates the importance of investment in residential historic preservation and the importance of the domestic ordinance.

Bauer (1996) stated that a national historic designation did nothing more than recognize that the building contributes to the historical development of a community. He

identified that the purpose of local designation as the vehicle that ensured buildings within the area maintained their historical character. In addition to the above mentioned academic research, the following reports results represent recent studies (1995-2005) examining the impact of historical designation on residential property values. While the subject properties and methodologies vary, in general terms the studies indicate that local historical districts do not have a negative impact on property and in most cases property values increased at an equal, if not greater, value than the property values of buildings in comparable non-designated areas. Table 2 summarizes the results of the previous scholarly articles on the impact of historic designation on property values.

A summary of the previous scholarly studies indicates that historic designation's influence on property values has been seen to be positive but in some cases neutral or negative. There are a number of important limitations of the above studies. Comparing sample averages of the growth rate in property values in historic districts with non-historic district, mixing among the levels of designation, focuses on historic districts in one city. In this dissertation I examine gaps in the previous work and to formulate a methodology to fill these gaps as possible.

Table 2: Results of Previous Scholarly Studies

Author/Year	Level of Historic Designation	Location	Research Method	Impact of Designation on Property Value
Ford (1989)	Federal &State	Baltimore, MD	Hedonic Regression	Positive (+)
Schaeffer and Ahern (1991)	Federal, State, and Local	Chicago, IL	Hedonic Regression	Negative (-)
Asabere and Huffman (1994a)	Federal &State	Philadelphia, PA	Hedonic Regression	Positive (+)
asabere and Huffman (1994b)	Federal &State	Philadelphia, PA	Hedonic Regression	Negative (-)
Kilpatrick (1995)	Mixed	Columbia, South Carolina	Hedonic Regression	Positive (+)
Coulson and Leichenko (2001)	Mixed	Abilene, TX	Hedonic Regression	Positive (+)
Leichenko et al. (2001)	Mixed	Nine Texas cities	Hedonic Regression	Positive (+)
Heudorfer (1975)	Mixed	New York City	Case-control	Neutral (N)
Scribner (1976)	Federal &State	Alexandria, VA	Case-control	Positive (+)
Rackham (1977)	Federal &State	Washington, DC	Case-control	Positive (+)
New York Landmarks Conservancy (1977)	Mixed	New York City	Case-control	Neutral (N)
US Advisory Panel on Historic Preservation (1979)	Federal &State	Alexandria, VA; Galveston, TX; Savannah, GA; Seattle, WA	Case-control	Positive (+)
Cohen (1980)	Mixed	Six Chicago historic districts	Case-control	Positive (+)
Samuels (1981)	Federal &State	Washington, DC	Case-control	Neutral (N)
Gale (1991)	Federal &State	Washington, DC	Case-control	Neutral (N)

Table 2: Results of Previous Scholarly Studies (continue…)

Benson and Klein (1988)	Mixed	Cleveland, OH	Case-control	Neutral (N)
Leithe and Tigue (1999)	Mixed	Four Georgia cities	Case-control	Positive (+)
Costonis (1974)	Mixed	Chicago, IL	Case study	Negative (-)
Schaeffer and Ahern (1988)	Mixed	State Of Rhode Island	Case study	Mixed (+ and -)
Leithe et. al. (1991)	Federal &State	Galveston, Texas; Fredericksburg, Virginia	Case study	Positive (+)
Leithe (1993)	Mixed	Case studies from Fredericksburg, Virginia and Galveston, Texas	Case study	Positive (+)
Bauer (1996)	Federal &State	Washington, DC	Survey: Interviews and Observation	Positive (+)
Bennett (1998)	Mixed	Knoxville, Tennessee	Case study	Positive (+)
Mortor (2000)	Federal &State	South Carolina (nine communities)	Repeat sales methodology	Positive (+)

The Office of Archaeology and Historic Preservation (2003) stated, "many people believe that listing a resource on the state or national register protects it from being significantly altered or demolished. It does not. Such programs are honorary distinctions but they provide few protections" (p.87). The New York City Independent Budget Office (2003) found clear evidence that, after controlling for property and neighborhood characteristics, market values of properties in historic districts were higher than those outside historic districts for every year in their study. Although the results for price

appreciation during particular sub-periods were mixed, for the entire 1975 through 2002 period properties in historic districts increased in price at a slightly greater rate than properties not in districts. Finally, there is not sufficient evidence to conclude that districting itself causes higher prices or greater appreciation.

The Michigan Historic Preservation Network (2002: 32) concluded that the property values debate is a complex issue involving multiple variables that change widely by community. "What effect does local historic district designation really have on property values?" Their Michigan research supports the conclusion that historic district designation does not decrease property values. This effect was not observed in any of the case studies researched for this study or in any similar national studies. On the contrary, property values in the designated areas experienced value increases that were either higher than, or similar to, nearby, non-designated areas. The Colorado Historic Foundation (2002), reports that historic designation does not decrease property values. Property values in the designated areas experienced value increases that were either higher than, or the same as, nearby, undesignated areas.

Kilpatrick (2002) in his report, which was prepared for the South Carolina Department of Archives and History, used a repeat sales methodology to measure the effect of local districts on house prices over time. The results show that residential historic district designation had a definite positive impact. House prices increased faster in the protected neighborhoods than in the market as a whole. The annualized rate of return for houses in the two residential districts was 7.3 percent, while for the entire Columbia market it was 5.8 percent. Therefore, the average homeowner in one of the

local historic districts enjoyed a per year gain in house value 26 percent greater than homeowners outside the districts. Lettle and Tigue (1999) in their study for Athens-Clarke Unified Government and Historic Preservation Division concluded that historic preservation activity enhances property values. Studies undertaken in various communities throughout the state of Georgia show the positive net impact of preservation. Recent studies of Lettle and Tigue (1991) which conducted in four cities, Tifton, Rome, Athens, and Savannah, confirmed that historic preservation enhances property values.

Masterson (1999) in his technical report which was prepared for the State Historical Society of Iowa, concluded that historic designation has a positive effect on property values in both Owl's Head and Sherman Hill districts, the city of Des Moines, Iowa State.

The Center for Urban Policy Research at Rutgers University (1999) examined nine Texas cities. In all nine, historical designations stabilized property values. Seven of these showed significantly higher property values within designated historic districts when compared with similar but non-designated areas. In some cases, as much as a 20 percent difference existed between designated area and a non-designated area. The remaining two cities could not establish a quantifiable increase or decrease in property values. Bennett (1996) in her study for the Knoxville County Metropolitan Commission concluded that all of the neighborhoods that are located in every Knoxville cities had experienced an increase in average sales price per square foot. Old Knoxville North, with a 157 percent increase from 1990 through 1994, had seen the most dramatic rise in value; with the other two historic study areas also experiencing an increase that far exceeds the

average for Knox County as a whole. The greatest increases were in the two historic areas.

Leimenstoll (1996) in his study for Preservation Greensboro revealed that property values after designation increased more in the designated historic districts than in the non-designated comparison neighborhoods. While each pairing represented a different scenario, a statistically significant increase in property values over the comparison neighborhood during the post-designation periods was found across the board.

Summary:

The question of the effects of historic designation on property values has been explored in the empirical literature for more than 30 years. A large number of studies, 28, have found that designation has a positive effect on property values. Six studies found, however, that designation had a neutral impact and six studies found that designation had negative effect on property values. The majority of the studies found a positive economic, fiscal, and community impacts. Most of these studies of the effect of historic designation employ either difference-on-difference or hedonic regression models. A number of studies employing hedonic regression methods have concluded that designated historical properties and properties located within historic districts typically sell for a premium when compared with similar, non-designated properties (Leichenko *et al*., 2001). Other studies have found mixed or negative results. In accounting for the mixed results, Schaeffer and Millerick (1991) note that the effect of historic designation on price may depend upon whether a property is locally or nationally designated. Their study found a positive impact on values with national designation but a negative impact with local designation.

Rypkema (2003) concluded that not every historic district in every community can expect values to climb at these rates. But the claim that historic designation somehow reduces property values is simply a claim with no basis in fact whatsoever. Table 3 summarized the previous empirical reports on the impact of historic designation on property values.

Table 3: Results of Previous Empirical Technical Reports

Report	**Level of Designation**	**Location**	**Research Method**	**Impact of Designation on Property Values**
New York City Independent Budget Office (2003)	Federal &State	New York City	Hedonic price analysis	Mixed (+ and -)
The Center for Urban Policy Research at Rutgers University in Texas (1999)	Mixed	Nine Texas cities	Hedonic regression analysis	Positive (+)
State of Virginia (1991)	Mixed	Multi-city study	Probit regression models	Neutral (N)
Knoxville- Knox County Metropolitan Commission by Bennet, A. (1996).	Mixed	Knoxville North (Tennessee)	Case study	Positive (+)
Preservation Greensboro by Leimenstoll, R. (1996)	Federal &State	Greensboro, North Carolina	Case study	Positive (+)
The Preservation Alliance of Virginia (1996)	Federal &State	Staunton, Virginia	Case study	Positive (+)
Oregon State Historic Preservation Office (1992)	Mixed	Multnomah county	Case study	Positive (+)
Colorado Historic Foundation (2002)	Federal &State	Denver	Case-control	Positive (+)

Table 3: Results of Previous Empirical Technical Reports (continue…)

Historic Landmarks Foundations of Indianapolis by Rypkema, D. (1997).	Mixed	Anderson, Elkhart, Evansville, Indianapolis, and Vincennes	Case-control	Positive (+)
St. Louis Historic Development (1980)	Mixed	St. Louis's historic districts	Case-control	Mixed (+ and -)
The South Carolina Department of Archives and History by Kilpatrick, J., (2000)	Federal &State	Columbia	Case-control	Positive (+)
Athens-Clarke County Unified Government and Historic Preservation Division of the Georgia Department of Natural Resources by Lettle, J., and Tigue, P. (1999)	Federal &State	Tifton, Roma, Athens, and Savannah (Georgia)	Case-control	Positive (+)
State Historical Society of Iowa by Masterson, C. (1999)	Federal &State	Owl's Head and Sherman Hill (City of Des Moines), Iowa State	Case-control	Positive (+)
Alliance Virginia by Rypkema, D. (1995)	Federal &State	Sharonville, Williamsburg, and Hampton	Case-control	Positive (+)
Virginia Historic Landmarks Commission (1986)	Mixed	Multi-city study	Case-control	Positive (+)
Michigan Historic Preservation Network (2002)	Mixed	Detroit	Input-output analysis	Positive (+)

In sum, there is variability with regard to the impact of historic designation on property values. Theoretically, designation should imply many economic benefits to an area, but evidence to support this is inconclusive. Therefore, this dissertation examines the effects of local historic designation on residential property values a cross a large set

of central cities and it attempts to avoid the limitations of the previous researches that leaded to the ambiguity results. This dissertation employs both statistical descriptive approach and hedonic regression approach to estimate housing prices in historic districts and comparable neighborhoods in six central cities in the United States. These cities have been placed into two groups reflecting their recent growth patterns. The first category represents slow growth central cities: Cleveland, Ohio; Pittsburgh, Pennsylvania; and Cincinnati; Ohio. The second category represents fast growth central cities: Dallas, Texas; Atlanta, Georgia; Phoenix, Arizona.

The following chapter discusses the conceptual framework of this dissertation.

CHAPTER IV

CONCEPTUAL FRAMEWORK

The conceptual framework that guides this study is based on a simple premise. If there are two similar homes in reasonably proximate neighborhoods, but only one area is identified as an historic district, and if appropriate statistical controls are included in the tests models, it can be determined if the home in a historic district has a higher sale price. If indeed the value of properties in districts designated as historic is higher than those of similar properties in undesignated communities, then historic designation can be said to contribute to the enhancement of the value of residential property. Because of the possible impact of urban services and air quality on property values it is essential that the comparison neighborhoods also be located in reasonable proximity to each other so that those factors do not have a differential impact on property values.

The research or conceptual framework guiding this dissertation also assumes that the properties in both designated and undesignated areas are zoned for residential use only and that each property is representative of the maximum permitted use. In other words, the properties compared must be conforming to the best and highest possible use permitted. In each of the communities studied, residential use is both the current as well as the highest and best use. One city-district is designated an historical neighborhood, which prohibits its properties demolition, whereas the other is not designated district. In this instance, it could very well be the case that the historic district with its prestige of official landmark status and assurance that its desirable historic amenities will be fostered into the future by public regulations, is worth more money than similar properties in neighborhoods where such assurances are not present. When an area is identified as a landmark, the property's value in this designated area could be enhanced by the recognition of its historical importance, by the prestige accorded by governmental recognition, or by the rejuvenation encouraged in the surrounding neighborhoods if the landmark encompasses a larger area.

In building a hedonic model or equation capable of isolating the effect of historic designation, several factors must be addressed, including:

1. Designation type and landmark regulatory process.

2. A property's characteristics.

3. A property's spatial relationships to assets and amenities

4. Property location and its current/future best economic use.

5. Market trends over space and time.

The model used in this dissertation involves a comparison between house prices in two similar neighborhoods in six central cities a cross the United States. The selection process of the case and control districts insured that the two neighborhoods were quite similar, except in each city one was designated as a historic district (case) and the other was not (control). Those houses in the designated historic district defined the experimental group (case group); those properties in the neighborhood that was not designated as historic were the control group for this study.

The sale price of each home is a measure of the property's characteristics, the characteristics of the neighborhood, and historic designation (or not). This study is also interested in learning of the effect of local historic designation is the same, smaller, or larger for slow growth central cities as compared to outcomes in fast growth areas. Slow growth areas, characterized by lower levels of demand for houses, may well find that historic designation creates a unique feature that has a larger impact. Figure 2 shows the conceptual model of this research.

The basic form of the hedonic model is as follows:

Price = f (*characteristics of spatial structure, neighborhood characteristics, and historic status*) (1)

Where, *Price* is the sale price of the house; *characteristics of the spatial structure* of the house include square footage, year built, number of bedrooms, number of bathrooms, number of garage spaces, and central air condition; *neighborhood* refers to

indicated the neighborhood characteristics; network distance from downtown, network distance from amenities, characteristics of the local school district, natural landscape view; and *historical status* indicates whether or not the house is located in a district designated as historical or not. Definitions of all of the variables used in the comparison are presented in Table 4.

In sum, local historic designation may be exerting price effects on properties that are located in historic districts. This increment may be a result of the prestige, property protection from deterioration or demolishing, community development, or economic development targeted to historic district. The observed influence of local historic designation on property values could allow decision makers and local leaders to understand the benefits from historic designation and preservation and its role as a tool for revitalization, to rejuvenate blighted areas in slow growth central cities. Figure 2 illustrates the conceptual model of this dissertation.

4.1 Hypotheses

The following hypotheses will be tested:

Hypothesis 1:

- ***H0:*** Residential properties located in designated historical districts will not have a significant difference in average price from comparable residential properties in similar districts not designated as historic, holding all else constant.

- ***H1:*** Residential properties located in a designated historic district will have a significantly higher average price than comparable properties in similar neighborhoods that have not been designated as historic, holding all else constant.

Hypothesis 2:

- ***H0:*** The effect of local historic designation on residential property values compared to similar properties in non-designated areas is the same for slow growth and fast growth central cities.
- ***H1***: The effect of local historic designation on residential property values compared to similar properties in non-designated areas is larger for slow growth central cities.

Hypothesis 3:

- ***H0:*** Designation of a neighborhood as historic has no spillover effects on property values for nearby residential properties.
- ***H1***: Designation of a neighborhood as historic has positive spillover effects on property values for nearby residential properties.

Figure 2 shows the conceptual map of the impact of local historic designation on residential property values.

Figure 2: Historic Designation and Property Values Conceptual Model

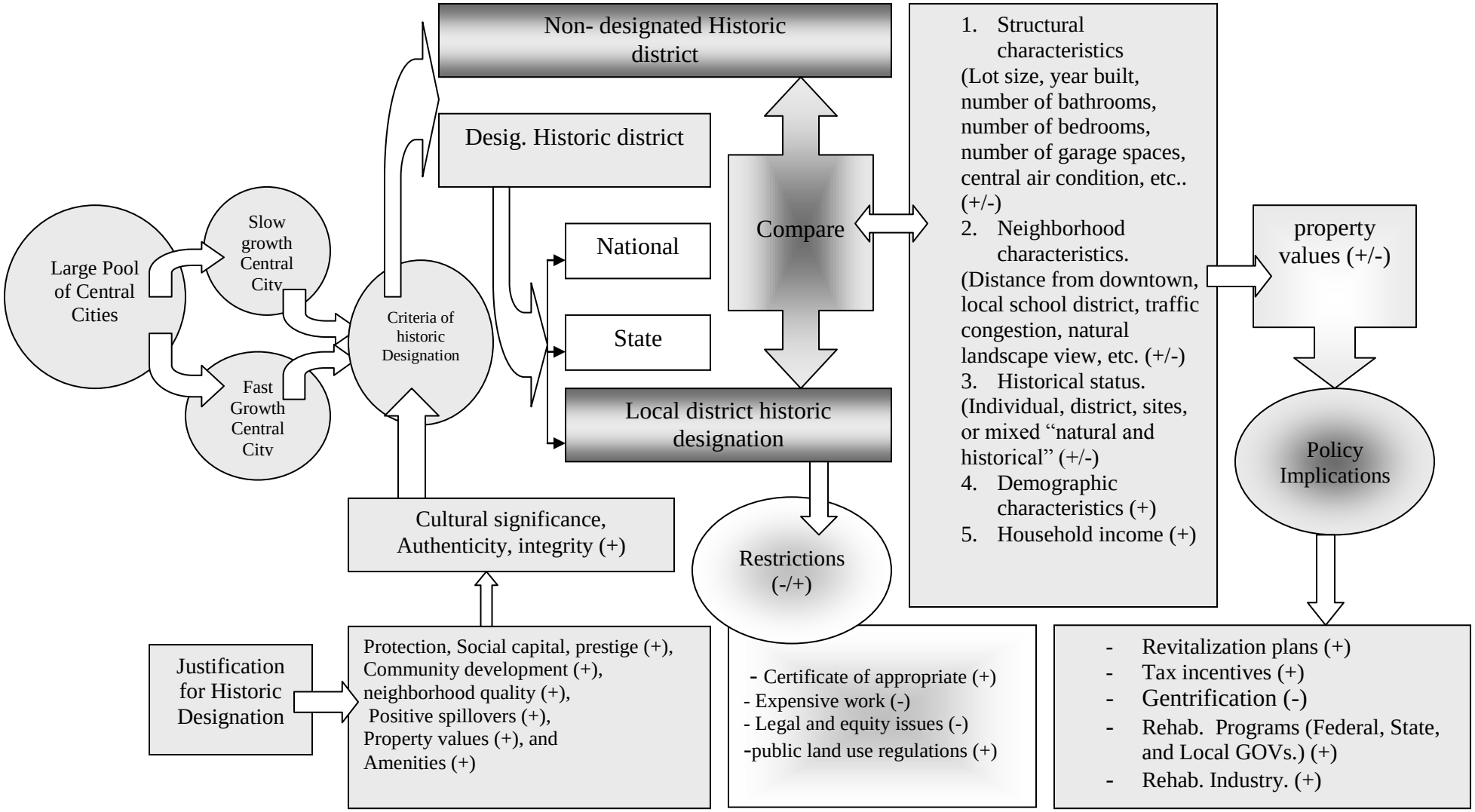


Table 4: Comparison Variables Definitions	
Variable name	**variable definitions**
House characteristics	
Bath	Number of bathrooms (full and half)
year built	The year of the house built
square footage	Square footage of the house
Bedroom	Number of bedrooms
Story	Number of stores
Heat- air conditioning	Presence of central heating and central air-conditioning
Garage spaces	Number of Garage spaces
Structure	Number of buildings on the property
Number of porches	Number of porches available at the house
Lot size	Square footage of the lot
Historic designation	
Historic status	Local designation or other status
Local	Local register
Other	Federal and State (non-local designation)
Neighborhood controls	
Dallas	
The Junius Street-San Jacinto Avenue	Historic district location-comparison area
Phoenix	
Alvarado district-Palm Lane	Historic district location-comparison area
Atlanta	
Wittier Mill district-Paul avenue	Historic district location-comparison area
Cleveland	
Ohio City North of Lorain-OCS of Lorain	Historic district location-comparison area
Cincinnati	
Betts-Longworth (His. part)-Betts South	Historic district location-comparison area
Pittsburg	
Allegheny West- Allegheny East	Historic district location-comparison area
Neighborhood characteristics	
Distance to CBD	Network distance to the downtown
Natural landscape (water front, open green areas, and scenery green built panorama	the availability of natural views (good or poor view) which is determined by the city planners
Distance to facilities	Network distance to water, electricity, and sewer
School district (constant)	Designated and non-designated are located in the same school district

Source: Simons, R. etc. (1998); Dings, C., etc. (2000); and Leichenko, R. M., etc. (2001).

CHAPTER V

RESEARCH DESIGN AND METHODOLOGY

5.1 Study Areas:

To meet the objectives of this dissertation it is necessary to know the state of the real estate market in the designated areas, the recent of the history of the historic districts created by local governments, and the characteristics of the neighborhoods selected as the comparison areas. The first group represents cities located in a fast-growth region as defined by population growth while the second group represents central cities in slower growth regions as defined by population growth. Each group consists of three central cities creating a total of six pairs of historic and non-historic districts. The fast growth regions selected were Dallas, Texas; Phoenix, Arizona; and Atlanta, Georgia. The slower growth areas are represented by Cleveland, Ohio; Cincinnati, Ohio; and Pittsburgh, Pennsylvania.

5.2 Selection of the Central Cities:

Regions were defined using US Bureau of the Census' definitions for metropolitan statistical area. Designation as either slow or fast growth was made relative to population changes since 2000. Table 6 shows the six central cities and their suburban population attributes by metro area type. All of the central cities studied had a sufficient number of the residents to be among the largest 100 metropolitan areas in the United States. In addition to population aspects, social, economic, and housing characteristics were also used to refine the classification as fast or slow growth communities. Each of the slower-growth MSA study areas had central cities that lost residential population from 2000 to 2006. Each of the central cities in the fast-growth regions gained residents. One of the slower-growth areas had suburban areas that actually lost residents across the MSA; suburban areas in the Pittsburgh MSA lost 1.2 percent of their population between 2000 and 2006. In the faster growth region every suburban area had at least a 15 percent increase in its residential population from 2000 to 2006. The two groups of regions thus afforded these study areas that had experienced very different rates of growth and decline between 2000 and 2006 (see Table 5).

Table 5: Central City and Suburb Population Attributes by Metro Area Type (6 of the Largest 100 Metropolitan Areas).

Metropolitan Area Type	Percent Change, 2000 to 2006	
Metro Name	**Central Cities**	**Suburbs**
Dallas-Fort Worth-Arlington	6.3	15.7
Phoenix-Mesa-Scottsdale, AZ	10.3	28.9
Atlanta-Sandy Spring-Marietta, GA	12.9	15.1
Cleveland-Elyria-Mentor, OH	-5.1	0.2
Cincinnati-Middletown, OH-KY-IN	-6.6	4.6
Pittsburgh, PA	-5.1	-1.2

Source: William H. Frey analysis of the US Census sources, Population Studies Center, University of Michigan, 2006.

Table 6: Metropolitan Area Growth Rankings of Population (1990-2006).

Rank	Name	Percent change, 1990 to 2006
Fastest- Growing Large Metropolitan Areas*		
1	Las Vegas-Paradise, NV	165
2	Austin-Round Rock, TX	128.1
3	Raleigh-Cary, NC	116.3
4	Atlanta-Sandy Spring-Marietta, GA	110.1
5	Phoenix-Mesa-Scottsdale, AZ	109.5
6	Portland-Vancouver, OR	92.3
7	Albuquerque, NM	87.8
8	Dallas-Fort Worth-Arlington, TX	87.5
9	Orlando, FL	84.8
10	Jacksonville, FL	84.5
Slowest-Growing Large Metropolitan Areas*		
1	Pittsburgh, PA	6.4
2	Buffalo-Niagara Falls, NY	7.7
3	Youngstown-Warren- Boardman, OH-PA	7.7
4	Scranton-Wilkes-Barre, PA	7.9
5	Cleveland-Elyria-Mentor, OH	17.8
6	Cincinnati-Middletown, OH-KY-IN	21.5
7	Toledo, OH	21.8
8	Dayton, OH	21.8
9	Syracuse, NY	24.2
10	Bridgeport-Stamford-Norwalk, CT	24.5

Source: U.S. Bureau of the Census Population Estimates, 2006.

5.3 Selection of comparison neighborhoods:

There has been a wide range of previous studies of the effects of historic designation on property values that employed some form of a paired comparison approach. Using this approach analysts compare the values of properties within historic districts with similar properties outside areas designated as historic. This study also uses that approach, and the comparison neighborhoods were selected based on their similarities to the historic district as determined by the similar in the ages of homes, the size of houses, the residential character of the areas, and the overall neighborhood scale (number of units) and geographic size. The comparison neighborhoods were intended to be as similar to the respective historic district as possible (in range of 75 percent), with the main difference of historic designation. Attention was also directed to selected demographic characteristics to increase the similarities between the areas. These similarities insured that the comparison neighborhoods were quite aligned with the obvious or most important difference being the lack of historic designation in one area.

Geographic proximity insured that each district received municipal services from the same city and educational services from the same school district. Each central city has more than one historic district, but those selected for study were done to ensure the best possible match with a comparison area.

To avoid the potential value of spillover effects of the historic designated districts on real estate values in the comparison districts, each of the comparable areas was located approximately one mile away from the area with a historic designation. Ding, C. etc (2000), Simons etc. (1998) justified the one mile distance to avoid the halo effects of

historic designation. Comparison neighborhoods were identified for each central city by local historic preservation officers and confirmed by the researcher by reviewing the similar components and data through information and statistics available in the City Data Books (CCDB).

The historic districts selected for evaluation and their comparison neighborhoods are identified in Tables 7 and 8. These tables also identify the year the district was added to the Local Register and the number of properties in each district. Figure 3 shows the process of neighborhood pair-matching.

Table 7: Study Historic Districts and Comparison Neighborhoods in Slow Growth Central cities.

Central City	Historic District	Year Designated	Number of Properties	Number of residential properties converted to commercial	% of Converted Properties	Comparison District
Cleveland, OH	Ohio City north of Lorain Avenue	1998	181	21	11.6	Ohio City south of Lorain
Cincinnati, OH	Betts-Longworth	1995	174	18	10.3	Betts-Longworth South
Pittsburgh, PA	The Allegheny West	1995	210	26	12.4	The Allegheny East

Sources: City of Cleveland; Urban Planning and Development Unit, City of Cincinnati; Department of Planning and, City of Pittsburgh; Urban Development Authority.

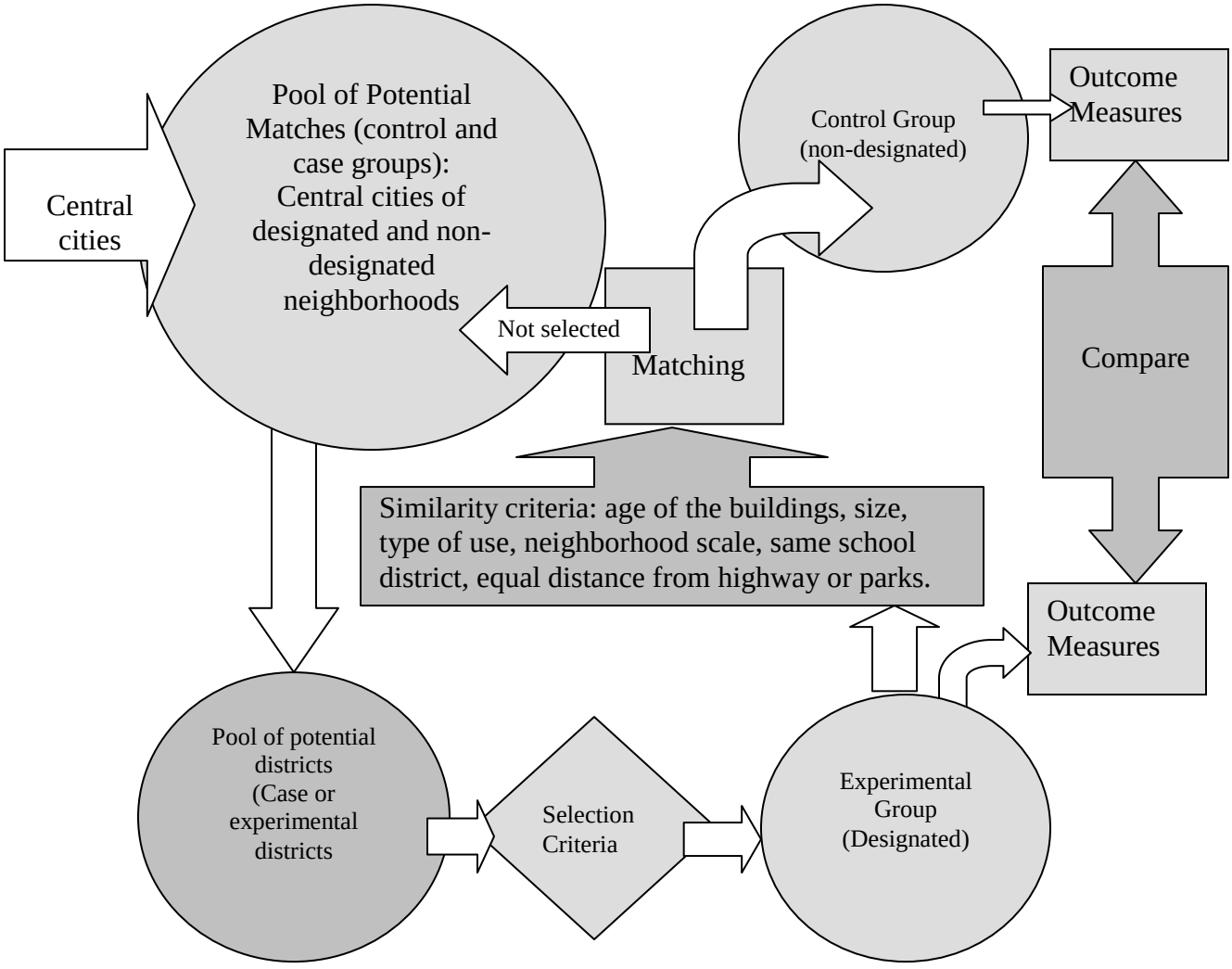
Table 8: Study Historic Districts and Comparison Neighborhoods in Fast Growth Central cities.

Central city	Historic District	Year Designated	Number of Properties	Number of residential properties converted to commercial	% of converted properties	Comparison District
Dallas, TX	Junius Street	1995	132	18	13.6	San Jacinto neighborhood
Phoenix, AZ	Alvarado	1995	147	15	10.2	Palm-Lane
Atlanta, GA	The Whittier Mill Historic District	1994	153	16	10.5	Paul Avenue

Sources: City of Dallas; Department of Development Services, City of Phoenix; Department of Historic Preservation, and City of Atlanta; Department of Planning (2007).

Figure three shows the selection process of both case and control neighborhoods.

Figure 3: General process of neighborhoods pair-matching.



5.4 Neighborhood descriptions:

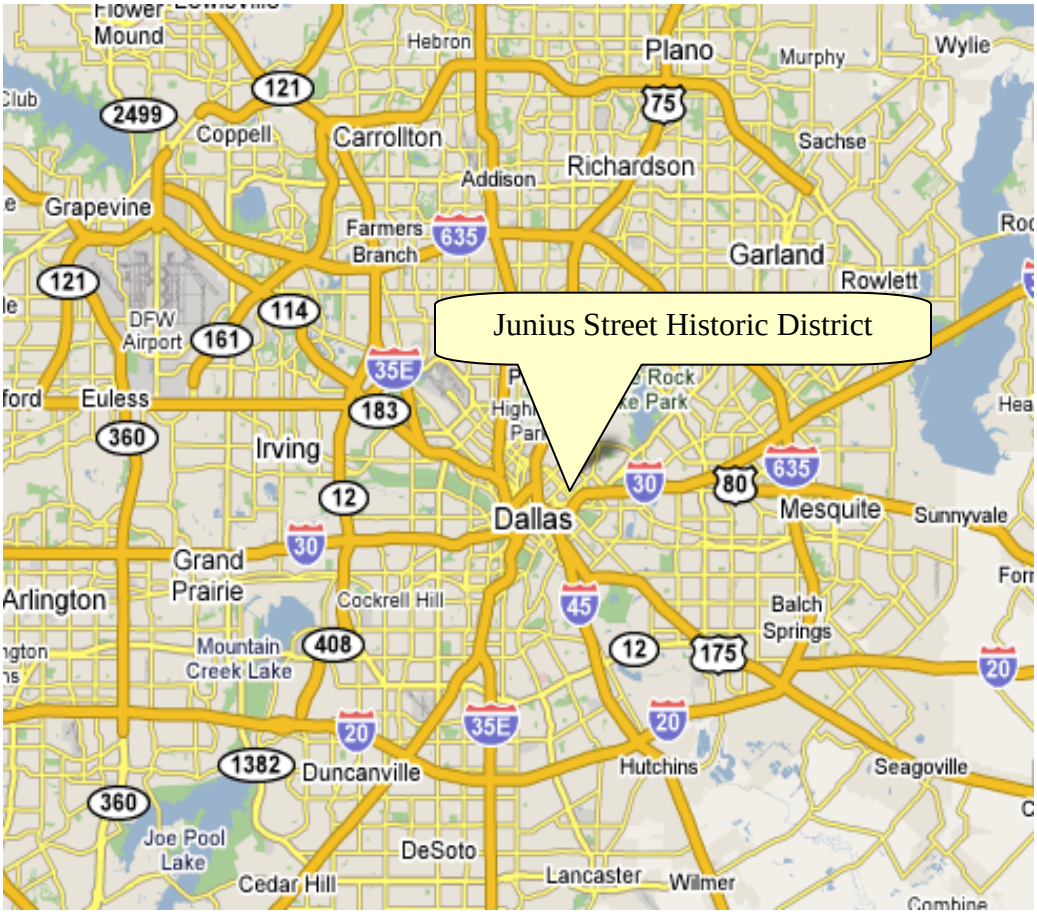
5.4.1 Junius Street Historic District, Dallas, Texas:

Junius Street is a part of the Peak Suburban Addition Historic District in Dallas.. The Junius Street Historic District is unusual in that it developed over a period of years with three distinct architectural styles (Junius Historic District, 2007). There are homes constructed in the Victorian style as well as Prairie era properties. In addition, examples of streetcar apartments from the 1920s and 1930s are also present. The Junius Street area was Dallas' fourteenth historic district created or designated in 1995. This neighborhood has one of the highest concentration of Victorian homes in Dallas which represents 68 percent of the historic properties (Junius Historic District, 2007).

The neighborhood is listed in the Local Registers of Historic Places and is comprised of approximately 140 carefully preserved and restored homes representing Victorian architectural styles and others are located in the neighborhood (NRIS, 2007).

Junius historic district is a street and historic district in east Dallas, Texas. The street is 1.5 miles long and along it are more than hundred of homes of historic and architectural value. The entire district, Junius between Columbia Avenue and Gaston Avenue, was listed on the Local Registers of Historic Places on May 1995. (Junious Historic District, 2007).

Figure 4: Junius Street Historic District, Dallas, Texas



Source: Google map, www.google.com/search (2007)

The San Jacinto neighborhood was selected as the comparison neighborhood because it consists of single family residences with similar historic character. This neighborhood is not designated as historic district. However, this non historic district is similar to the historic districts in the year that both neighborhoods were built and they share the same house structural characteristics. The allowable tolerances of similarity are 25 years difference between the years of built, and 75 percent (in average) of similarity on the other characteristics. Table 8 illustrates the similarities between the two neighborhoods.

Figure 5: Junius Street Historic District and San Jacinto Street non-Historic District.

Source: City of Dallas, Department of Development Services and Google map (2007)

Table 9: Junius Street Historic District Neighborhood Comparison

Neighborhood characteristics in average	Junius Street Historic District	San Jacinto Street non-Historic District
Year built	1920	1945
Lot Size	0.14	0.18
Average square feet	1,450	1,550
Garage (Y/N)	51%	40%
Number of bedrooms	3.5	3.0
Number of full baths	2.0	1.5
Number of sales since 1990	221	238
Average annual number of sales	13.0	14.0

- These data are for properties that had sales between 1990 and 2007 only. There may be some properties that did not sell over this period and are, as a result, not included in these averages.

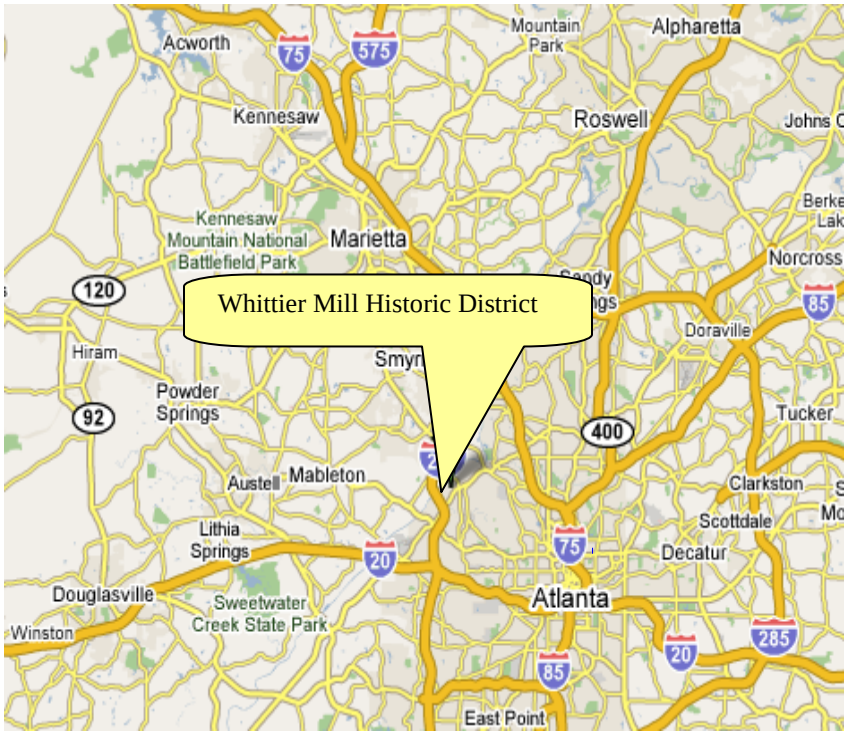
- Source: Dallas County Assessor, 2007.

4.5.2 Whittier Mill Historic District, Atlanta, GA:

According to Pierce (1956), Whittier Mill is a local reminder of a period of great importance to the history of Atlanta and the Southeast. As the "New South" emerged from the ruin and chaos of civil war and reconstruction, Atlanta became a regional symbol and center for economic rejuvenation (Pierce, 1956). As the increasing railroads tied the Southeast to Atlanta, and both the region and the city to a national market economy, industries developed along the rail lines and near labor supplies. The mill village provided a transitional area for rural and mountain people to adjust to communal and even urban life in some cases. "Under the paternalistic, if hard and demanding, eye of the mill owners and managers, poor whites did indeed achieve a new lifestyle as the twentieth century dawned while enduring low wages, long hours and the utilization of

child labor" (Pierce, 1956: 167). Whittier Avenue was connected by streetcar lines and a commuter railroad to the larger metropolis of Atlanta-Sandy Spring-Marietta. Churches and schools were built to encourage socialization, education, and worker stability. The placement of the settlement house in the community in 1910 shows the prevalence of the Progressive Movement's ideas in Atlanta as it helped introduce modern medical treatment and group activities to the "villagers" (Hartshorn, 1996). The large, community-oriented buildings of the mill and settlement house were destroyed. The distinctive and typical mill tower (needed to contain a water tank for fire protection) remains to create a visual anchor for the industrial nature of the development, however. Most important, the housing of the workers or operatives remains and gives a true sense of time and place, especially if interpreted realistically (Hartshorn, 1996: 34). According to local residents, there has been very little new construction in the community since the 1920s, thus enhancing the value of Whittier Mill as an historic district (Andrews, 1987: 132). Whittier Mill Avenue was designated as local historic district in 1994 (Hartshorn, 1996).

Figure 6: Whittier Mill Historic District, Atlanta, GA



Source: City of Atlanta, Department of Planning and Google map, www.google.com/search (2007).

Paul Avenue neighborhood was selected as the comparison neighborhood because it shares a number of similar characteristics with Whittier Mill Historic District in terms of the construction date of most homes, neighborhood characteristics, and individual dwelling spatial characteristics. Table 9 illustrates the similarities between the two neighborhoods.

Figure 7: Whittier Mill Historic District and Paul non-Historic Avenue.

½ mile

Source: City of Atlanta, Department of Planning and Google map, www.google.com/search (2007).

Table 10: The Whittier Mill Historic District and Paul Neighborhood Comparison.

Neighborhood characteristics in average	The Whittier Mill Historic District	Paul Avenue
Year built	1910	1936
Lot Size	0.14	0.11
Average square feet	1,680	1,510
Garage (Y/N)	60%	39%
Number of bedrooms	3.0	2.1
Number of full baths	2.0	1.5
Number of sales since 1990	170	204
Average annual number of sales	10.0	12.0

- These data are for properties that had sales between 1990 and 2006 only. There may be some properties that did not sell over this period and are, as a result, not included in these averages.

- Source: Fulton County Auditor, 2006.

4.5.3 City of Phoenix: Alvarado Historic District and Palm lane District.

The Alvarado historic district was registered as a Local Historic Landmark in 1995 by Maricopa County. The district is also known as Alvarado Place. It is bounded by Central Avenue, Oak Street, 3rd Street, and Palm Lane, and the historic areas has 147 historical buildings. The Alvarado historic district is functioning as residential neighborhood and it has the following historic significance:

- Architectural Style: Mission/Spanish Revival, Colonial Revival, Bungalow/Craftsman.
- Area of Significance: Community Planning and Development, Architecture.
- Period of Significance: 1900-1924, 1925-1949, 1950-1974.

The life of present-day Phoenix began in 1867 when Civil War soldier, prospector, promoter, and speculator John William, known as Jack Swilling, began to irrigate and cultivate land along the northern bank of the Salt River. “Inspired by the remnants of ancient canals, Swilling established a company to supply the U.S. Army troops at Camp McDowell, twenty miles to the northeast. His activities attracted additional settlers, and by 1870, the community boasted a population of 235 with 1,500 acres of land under cultivation. In that same year, the terrain was surveyed and laid out in a square-mile grid pattern. With the reservation of a central town site, Phoenix was born” (CPHPO, 2007: 234).

Patterns of development emerged with the growth of thriving commercial and residential districts along the major north-south thoroughfare, Center Street, now Central Avenue. Roughly bounded by Central Avenue, Third Street, Oak Street and Palm Lane, the future site of Alvarado was two miles north of the city’s center, and still just vacant desert (CPHPO, 2007: 3). But rapid growth soon would propel development northward. In 1879, the Southern Pacific Rail line made Phoenix more accessible with the extension of its line to within 30 miles south of town. With incorporation of the city in 1881, the stage was set for a dramatic new era (CPHPO, 2007).

In 1885, completion of the Arizona Canal provided the Valley with 41 additional miles of irrigation, opening up 100,000 acres of desert land for agricultural development. The economic impact of the Canal and the promotional efforts of its builder, W. J. Murphy, brought a period of rapid growth and "boosterism" to Phoenix and the Salt River

Valley. Phoenix was selected as the Territorial Capital in 1889. A flurry of municipal activity established water, sewer, gas, and electric utility franchises (CPHPO, 2007).

> "Arriving in Phoenix in 1895, Dwight B. Heard quickly assessed the Valley's great potential and grasped the limitations imposed by the cycle of floods and drought which plagued the Valley. Motivated by investments in land and agriculture, he became an active force in efforts to promote federal projects that would harness the Valley's water. With successful passage in 1902 of the National Reclamation Act, Heard applied his efforts locally where he served as a county water commissioner, helping to lay the groundwork that led to construction of the Roosevelt Dam. Completed in 1911, the dam tamed the waters of the Salt River, transforming the Valley by providing both stable irrigation and protection from inundating floods" (CPHPO, 2007: 4)

In 1903, Heard and his wife Marie constructed a 6,000-square-foot Spanish Colonial Revival mansion they named "Casa Blanca." Located at the corner of Monte Vista and Central, the home was the cornerstone of the future Alvarado neighborhood and was a frequent stop for visitors and dignitaries from throughout the nation. Sensing the promise this north central location held, Heard purchased the entire quarter section of land on which his estate was located. In 1909, he subdivided the 160 acres, which ranged from Central Ave to Seventh Street and McDowell Road to Oak Street, into 32 parcels of five acres each. Intended for upscale, estate size homes, the project, named Los Olives, was the

most prestigious of the early suburban home site subdivisions with the largest lots available (CPHPO, 2007: 6)

. Preparing the project for sale, Heard provided numerous plantings throughout the subdivision, including hundreds of palm trees (CPHPO, 2007).

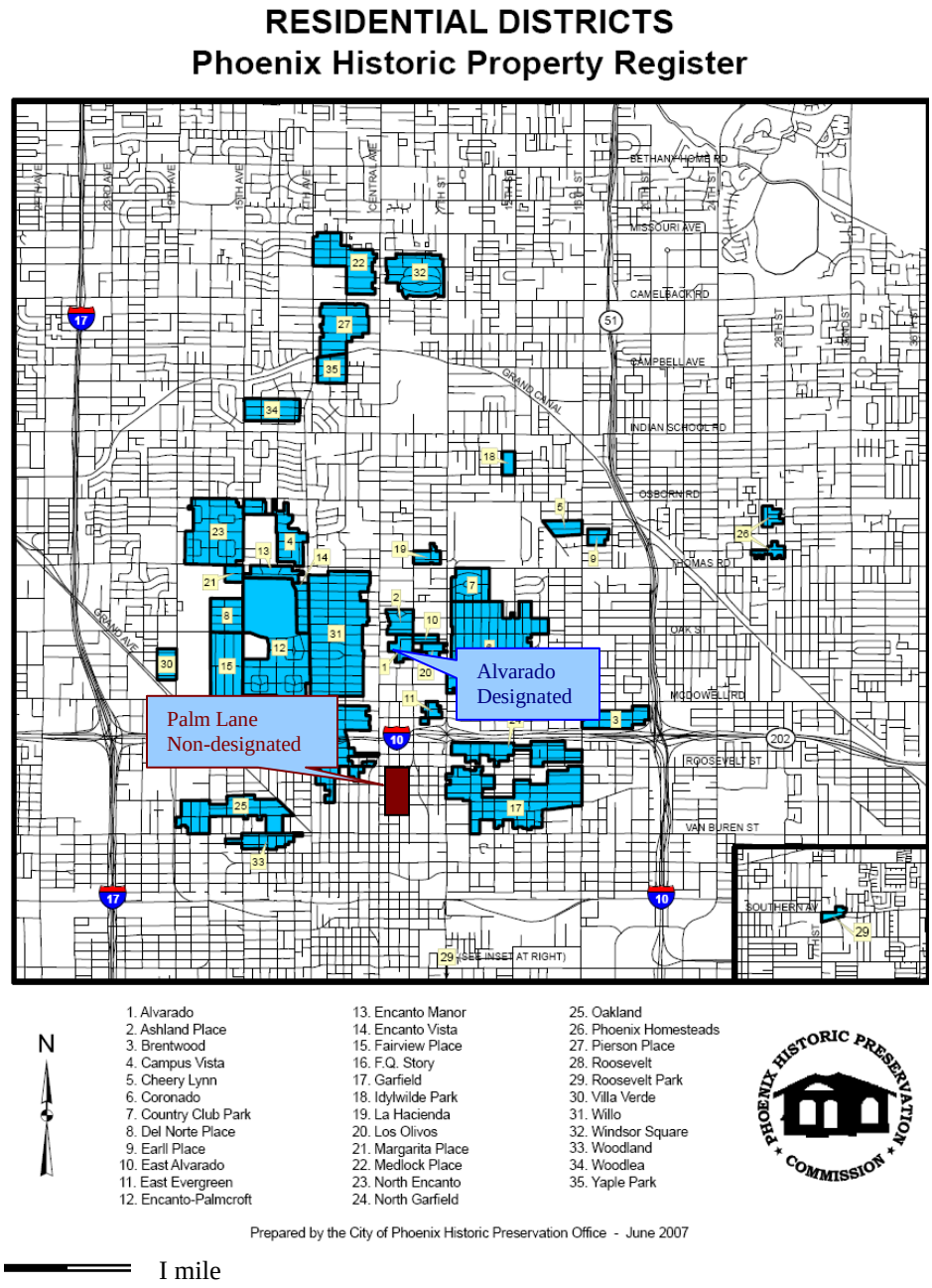
Palm Lane is illustrative of the City Beautiful or Garden City designs, a fully realized comprehensive approach to neighborhood planning that unifies architecture, community planning, and landscape design. This approach has its roots in the nineteenth century's picturesque and romantic suburbs. These movements called for innovative street plans, street landscaping, ornamental light fixtures and parks integrated into the housing areas (CPHPO, 2007).

The historical district has 150 buildings. The district gains it significance from the following:

Architectural Style: Modern Movement, and landscape architecture.

- Period of Significance: 1925-1949.
- Historic Function: Domestic, Landscape.
- Historic Sub-function: Park, Single Dwelling.
- Current Function: Domestic, Landscape.

Figure 8: Alvarado Historic District and Palm Lane non-Historic District in Phoenix.



Source: City of Phoenix, Department of Historic Preservation (2004).

The Palm Lane district was selected as the comparison neighborhood because it is a single family residential neighborhood that shares a number of historical and use characteristics with the Alvarado Historic District. Table 10 summarizes the similarities between the two neighborhoods.

Table 11: The Alvarado Historic District Neighborhood Comparison

Neighborhood characteristics in average	The Alvarado Historic District	Palm Lane neighborhood
Year built	1925	1926
Lot Size	0.16	0.14
Average square feet	1,645	1,585
Garage (Y/N)	57%	52%
Number of bedrooms	3.3	3.1
Number of full baths	2.0	1.9
Number of sales since 1990	272	306
Average annual number of sales	16.0	18.0

- These data are for properties that had sales between 1990 and 2006 only. There may be some properties that did not sell over this period and are, as a result, not included in these averages.

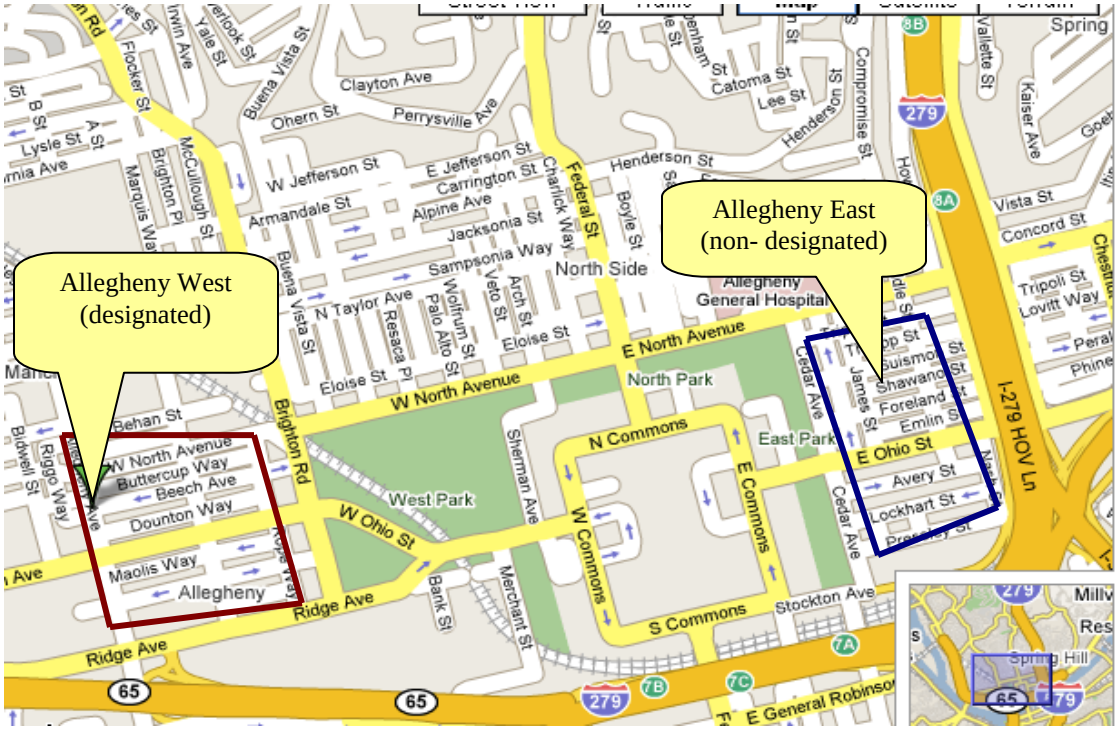
- Source: Maricopa County Auditor, 2007.

5.4.4 City of Pittsburgh: The Allegheny West Historic District.

The Allegheny West neighborhood is located on the North Side of the city of Pittsburgh, near Allegheny Historic Center and Heinz Field (home to the National Football League's Pittsburgh Steelers). The neighborhood extends from Brighton Road on the east to Allegheny Avenue on the west and from Ridge Avenue on the south to West North Avenue on the north. In 1995, the Pittsburgh City Council designated the

surviving residential sections of the neighborhood as a city historic district, encompassing about 210 buildings (HDP, 2007).

Figure 9: Allegheny West Historic District and Allegheny East non-historic District, Pittsburgh, PA.



Source: City of Pittsburgh, Urban Development Authority and Google map, www.google.com/search (2007).

Allegheny West is a residential district bisected by a commercial street, Western Avenue. Nearby commercial areas include the Allegheny Center and stores along Brighton Road, Federal Street, and East Ohio Street. Two churches are located within the historic district, along Allegheny Avenue, while other churches are nearby. Across Brighton Road lies the expanse of West Park, with its playgrounds and aviary (HDP,

2007). The Allegheny West neighborhood was originally (in 1788) laid out as part of the "out lots", or farming area, that lay outside the commons land (expression used to identify the agricultural open space out side the town that owned by peasants) that ringed the town of Allegheny, the "in-lots". (HDP, 2007)

The population of the Allegheny area grew rapidly after 1830, spilling out across the Commons into new residential neighborhoods built on the old out lots. Between 1867 and 1876, in response to public demands, town officials developed the Commons into a public park (which is now a City Historic Site). This amenity, together with the location of the neighborhood next to Monument Hill and west (upwind) of the new railroad lines through Allegheny district, would later act to make the Allegheny West area the most prestigious residential section in the city (HDP, 2007).

By 1872, Allegheny West had become an exclusive residential district, with large houses lining Brighton Road and Ridge Avenue and much of the section south of Western Avenue built up. Construction continued rapidly through the 1870s, with Beech Avenue being largely developed by 1884. Brighton Road and Ridge Avenue continued to be the streets of choice for the rich and socially prominent, with North Lincoln Avenue only a little lower on the scale. Church and school-Emmanuel Episcopal Church (1886), Calvary Methodist Church (1895), and the Allegheny Preparatory School - helped to anchor the prestigious residential area. (HDP, 2007)

Allegheny West is a Victorian and Edwardian neighborhood. The terms "Victorian" and "Edwardian", however, do not refer to a specific architectural style, but instead to the era of Queen Victoria and King Edward of Great Britain (from 1837 to

1911). During that time, many different architectural styles were popular including Greek Revival (circa 1825 to 1860); the Italianate (circa. 1860 to 1885) and its contemporary, the French Second Empire; and Richardsonian Romanesque and Queen Anne (circa 1880 to 1900), which were superseded by the Classical Revival at the turn of the century.

Some of these styles overlapped in their periods of popularity, and individual houses sometimes incorporated elements from more than one style. However, since Allegheny West was an affluent neighborhood when it was developed, the houses are often complete high style "renovated" versions of their styles. However, a countervailing interest in the preservation of the remaining residential structures in this district began in the 1970s, and has led to the renovation and restoration of much of the solid but much-abused housing stock to its nineteenth-century elegance (HDP, 2007).

The Allegheny East neighborhood is considered part of the physical fabric of the Allegheny district as it is descried by the city planners. However, major physical changes took place in the Allegheny East community during the 1960s and 1970s. Much of the south side of Ridge Avenue was demolished and rebuilt as the campus of the Community College of Allegheny County.

The Allegheny East district was selected as the comparison neighborhood because it is a residential district that shares a number of economic, functional, and historical characteristics with the Allegheny West Historical District. One notable difference is the presence of new modern structures in the district that makes the Allegheny East lacking

the historic significance and integrity (HDP, 2007). Table 11 summarizes these similarities between the two comparison neighborhoods.

Table 12: The Allegheny Historic District Neighborhood Comparison

Neighborhood characteristics in average	The Allegheny West (Historic district)	The Allegheny East
Year built	1876	1900
Lot Size	0.17	0.15
Average square feet	1,152	1,018
Garage (Y/N)	73%	71%
Number of bedrooms	3.5	2.8
Number of full baths	1.5	1.2
Number of sales since 1985	253	299
Average annual number of sales	11.0	13.0

- These data are for properties that had sales between 1985 and 2007 only. There may be some properties that did not sell over this period and are, as a result, not included in these averages.

- Source: Allegheny County Auditor, 2007.

5.4.5 City of Cleveland: Ohio City North of Lorain Historic District.

Ohio City north of Lorain Avenue (historic designation) and Ohio City south of Lorain (no designation) are the case and control districts in Cleveland. Both districts have properties that are of a similar architecture style and the history of two areas is also quite similar. The historical district was designated as local historic neighborhood in 1998.

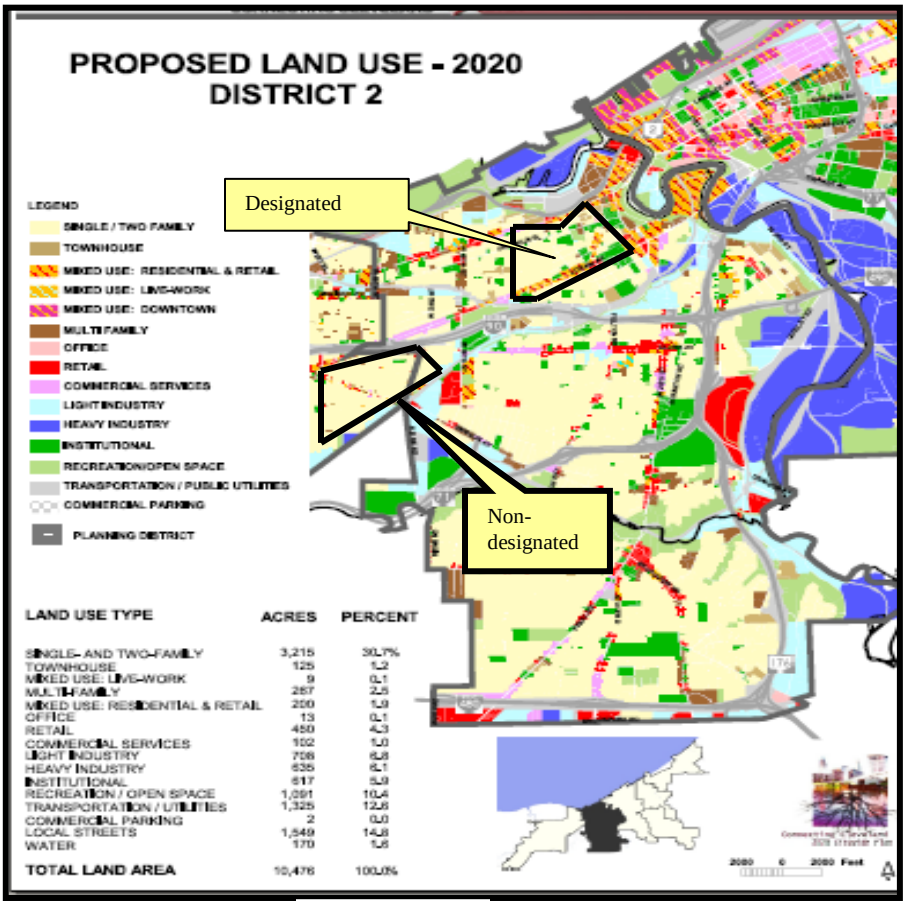
Planning District 2 comprises seven neighborhoods (or "Statistical Planning Areas"): Detroit-Shoreway, Ohio City, Tremont, Stockyards, Clark-Fulton, Brooklyn

Centre *and* Old Brooklyn. The District includes all of City Council Wards 14, 15, and 16, the majority of Ward 17, those portions of Ward 13 located west of the Cuyahoga River, and a small sliver of Ward 18 encompassing Edgewater State Park. (CCCLC, 2007)

Ohio City was incorporated as its own municipality in 1836 just two days before the incorporation of its "rival," Cleveland. It was subsequently annexed to Cleveland in 1854. Housing in Ohio City dates principally from the late nineteenth century (Cigliano, 1991). The predominantly Victorian-style one-and two-family buildings range from modest working class houses to the luxurious residences on portions of Franklin Boulevard and Clinton Avenue. The commercial district at Lorain and West 25th was first established in 1840 as “Market Square." The neighborhood is home to many institutional uses and social service agencies. Lakeview Terrace Estates, built in 1935, was among the first public housing projects in the country. The history, location and major assets of the neighborhood have spurred the renovation of large areas of the neighborhood over the past 30 years (Porter, 1976).

Ohio City is a neighborhood which has a significant number of older homes with unique architectural styles not typically found in newer homes, much of which was built in the early 1900s. Many of the homes were built in close proximity to factories, giving residents access to available jobs. As advancement in transportation grew, the more affluent residents began to move further out, abandoning the housing in the neighborhood (Cigliano, 1991).

Figure 10: Ohio City North of Lorain Historic District and Ohio City South of Lorain Non-Historic District.



1 mile

Source: City of Cleveland, Urban Planning and Development Unit (2006).

Table 13: The Ohio City Historic District Neighborhood Comparison.

Neighborhood characteristics in average	Ohio City north of Lorain Avenue (Historic district)	Ohio City South of Lorain Avenue
Year built	1911	1920
Lot Size	0.16	0.14
Average square feet	1,626	1,435
Garage (Y/N)	60%	69%
Number of bedrooms	3.15	2.9
Number of full baths	1.59	1.45
Number of sales since 1976	390	420
Average annual number of sales	13.0	14.0

- These data are for properties that had sales between 1976 and 2006 only. There may be some properties that did not sell over this period and are, as a result, not included in these averages.

- Source: Cuyahoga County Auditor, 2006.

Ohio City, South of Lorain neighborhood was selected as the comparison neighborhood because it is a single family residential neighborhood that shares a number of historical and uses characteristics with the Lorain North Historic District. Table 12 summarizes these similarities between the two comparison districts.

5.4.6 City of Cincinnati: Betts-Longworth Historic District.

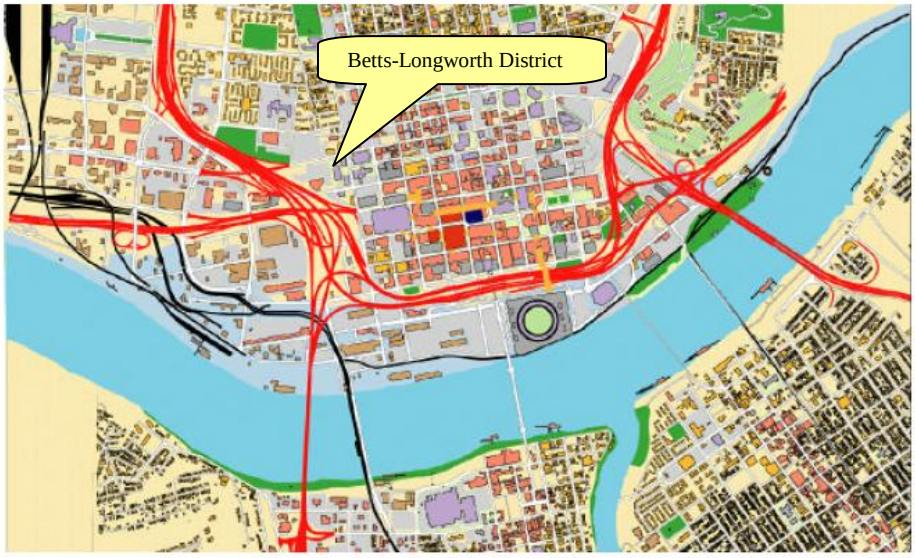
The Betts-Longworth historic district is generally bounded by Ezzard Charles, Central Avenue, Court Street, and Mound Street (West End). The district was designated as a local historic district by the city government and listed in the local register in 1995. The Betts-Longworth Historic District, also known as the Queensgate II Historic

Redevelopment District, includes well-preserved collections of residences built in the 1860 to 1910 period. These properties range in style from Italianate to Queen Anne. Decorative iron fences and low, stone walls are characteristic of the area and add to the area's strong sense of time and place. (CCDPH, 2007).

The Betts-Longworth Historic District is located just northwest of downtown Cincinnati. The district consists of a ten-block sub-neighborhood of the historic West End that contains Federal, Italianate and Queen Anne architecture and the neighborhood's history makes it an extremely important part of Cincinnati's history. The district was initially developed in the early 1800s by Revolutionary War veteran William Betts. The Betts House located at 416 Clark Street has been part of Cincinnati's history for 200 years. It was built in 1804 and is the oldest brick house in Ohio. The Old Jewish Cemetery, Cincinnati is also located in the district (CCDPH, 2007). When the area known as Queensgate II was developing in the mid-1800s and it was not unusual to find houses next to livery stables or even a packing house. The area was dense and active, developing over a period of about 75 years from 1830 through the turn of the century (CCDPH, 2007: 13).

The Betts-Longworth Historic District is dominated by the Italian style of architecture, which was popular in Cincinnati for about 30 years, starting at the time of the Civil War. The earlier buildings are generally small, simple structures. These are Greek revival style, and are characterized by simplicity in form and detail. Also found in the area is the Queen Anne style, which was built in Cincinnati from about 1880-1900 (CCDPH, 2007: 6).

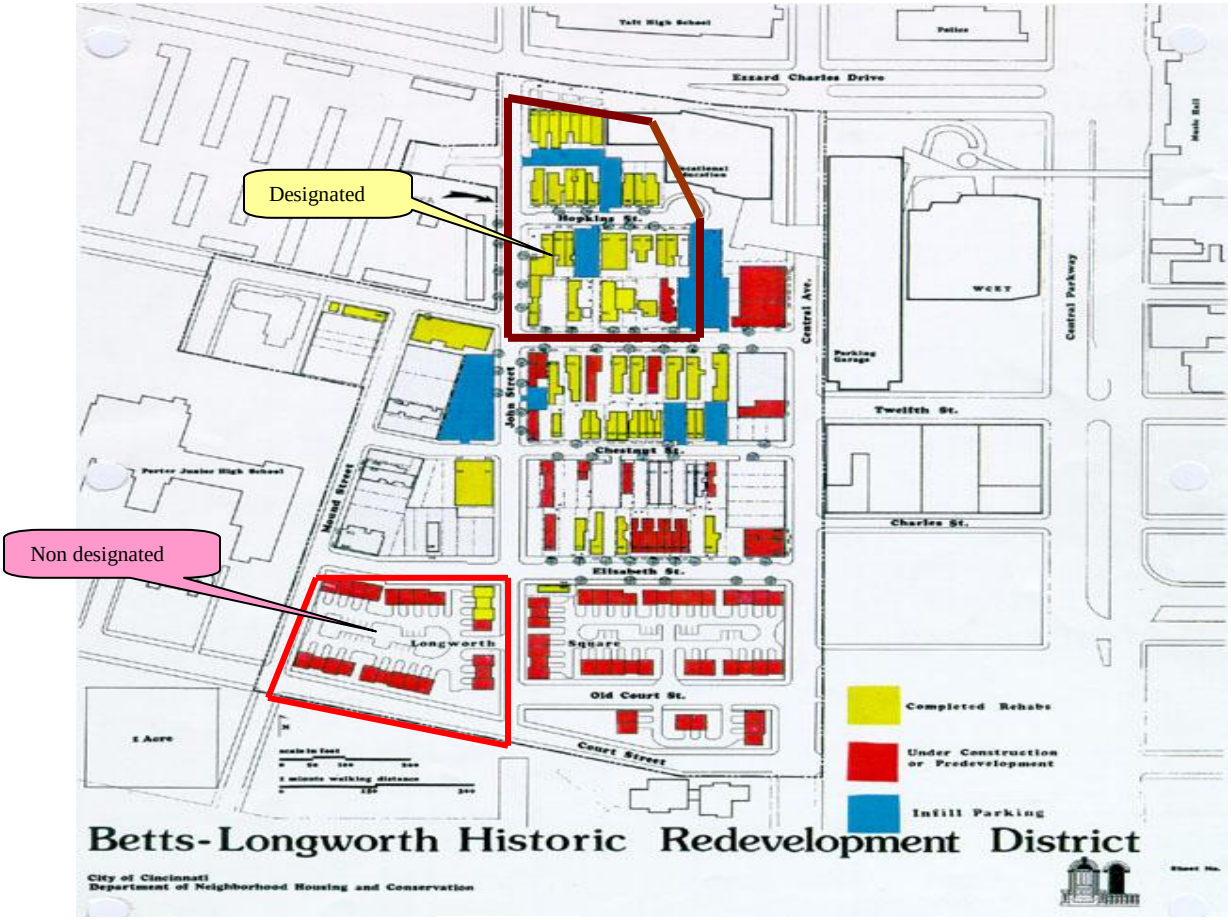
Figure 11: Betts-Longworth Historic District; City of Cincinnati, Ohio State.



Source: City of Cincinnati, Department of Planning (2005).

The Betts-Longworth non-historical part of the district is located just south of the historical part. The Southern part of the Betts-Longworth district was selected as the comparison neighborhood because it is a single family residential district that shares a number of economic, functional, and historical characteristics with the historical part of the district (CCDPH, 2007). Table 13 summarizes the similarities between the comparison neighborhoods.

Figure 12: Betts-Longworth Historic District and the Non-designated Part.



Source: City of Cincinnati, Department of Historic Preservation (2005).

Table 14: The Betts-Longworth Historic District Neighborhood Comparison.

Neighborhood characteristics in average	The Betts-Longworth North (Historic district)	The Betts-Longworth South (non historical part)
Year built	1800, 1925-1945	1935
Lot Size	0.14	0.12
Average square feet	1,250	1,120
Garage (Y/N)	41%	46%
Number of bedrooms	3.2	2.7
Number of full baths	2.2	1.7
Number of sales since 1990	324	360
Average annual number of sales	18.0	20.0

- These data are for properties that had sales between 1990 and 2007 only. There may be some properties that did not sell over this period and are, as a result, not included in these averages.

- Source: Hamilton County Auditor, 2007.

5.5 Data Sources:

Previous literatures that studied the impact of historic designation on property values were depend on two main sources of data to analyze the fiscal effects of historic designation: assessed value data compiled from the appropriate assessor's office and actual sales data. Assessed value data has been used in a number of past studies, but concerns have been expressed that these data may not provide a sufficiently accurate representation of market conditions. Assessed value, while based on actual market values of similar properties, that is, actual sales, is only an approximation of market value and generally thought to lag behind true market conditions (Clarion Associates et al., 2002).

The data for this research was the actual sales price that purchased from six counties' auditors files.

The first step in the research process was to obtain a list of all designated districts for a given community in the six central cities and to find the matching non-designated neighborhood in that community. This list was obtained through the Historic Preservation Office at each city. The list contained the boundaries and addresses of the designated properties as well as the year that each district was designated. The next step was to remove all the properties that were not in each city real estate market and were not residential properties. Examples of these types of properties include churches that are not for sale, cemeteries, municipal, and governmental buildings. These properties were excluded since they are not available for sale on the free market. Once the designated historic districts and their comparable districts were identified, it was necessary to seek out a source of sales history information for each property (both residential and commercial) that is located in the historic and comparison districts.

Sales data were obtained from secondary sources and from each county's auditors files or databases. The property value and characteristics of each property came from the County Auditor's databases and data files maintained by each city. The County and City Data Books (CCDB) are comprehensive and contain a wealth of information. Part of the descriptive data on the central cities ranking is derived from the 1990 and 2000 Censuses of Population and Housing.

The data were sorted and properties that were not-market-based sales were excluded (cemeteries, municipal, and governmental buildings). Sales data for properties

that were not single family residences were also excluded. The years of available sales data and the number of sales included in each analysis are summarized in Table 14.

Table 15: Available Residential Sales Data

Central city	Year Designated	Available Sales Data	Total Number of Sales		Average annual number of sales	
			Historic District	Comparison District	Historic District	Comparison District
Cleveland	1998	1976-2006	390	420	13.0	14.0
Cincinnati	1995	1990-2007	324	360	18.0	20.0
Pittsburgh	1995	1990-2007	253	299	11.0	13.0
Dallas	1995	1990-2007	221	238	13.0	14.0
Phoenix	1995	1990-2006	272	306	16.0	18.0
Atlanta	1994	1990-2006	170	204	10.0	12.0

Sources: the County Auditors in Cleveland, Cincinnati, Pittsburgh, Atlanta, Phoenix, and, Dallas County Assessor.

5.6 Research Variables:

5.6.1 Dependent Variable:

Inflated adjusted sales price of the residential unit in the six central cities sub-markets and the unit of observation is individual single family house.

5.6.2 Independent Variables:

Three groups of independent variables were used in this analysis. Physical spatial characteristics of the properties, neighborhood attributes, and historical status.

- Physical spatial characteristics of the property included the following variables: year built, total number of bedrooms, number of full baths,

garage space, square footage; structure, lot size, heat-air conditioning, and number of porches.

- Neighborhood locational attributes include network distance to CBD, natural landscape (good view or poor view) which is determined by the city planning office, and network distance to facilities.
- Historical status is a dummy variable that assigning 1 for a historical home located in a local historic district and 0 elsewhere.

5.7 Model Specification:

The main goal of this research is to identify any impacts of local historic designation on residential property values. To detect the potential price effects of local historic designation, standard hedonic pricing models represented by equations 2, 3, and 4 were used. Control factors were assigned to all other factors that may affect market value, including measurements for neighborhood location, spatial structural characteristics of the properties, and the historic status of the property. The hedonic models may be specified in an ordinary least square (OLS), natural log form, or semi-logarithmic form, meaning that the house price is specified as the linear, semi-log, or natural log and the explanatory variables are specified in linear units. With the semi-logarithmic form, the coefficient on each explanatory variable is interpreted as the percentage change in the house's price that is associated with a one-unit increase in the explanatory variable.

As is typical in hedonic studies of this type, it is important to control for covariates of historical designation in the specifications, as this variable can be correlated

to some degree with other attributes. To address this issue, I examined bi-variate correlations between designated and the other housing attributes in each sample. Designation is obviously correlated with the year built in each case area, but in a number of the samples it is also positively correlated with lot size or landscape and interior areas as strongly as with year built. Hence inclusion of these and other attributes is appropriate, as omission of them would bias upwards our measurement of the price difference between designated and non designated properties.

The multiple regression hedonic models can be expressed in the following general form:

$$PRICE = \beta_0 + \beta_1 HIST + \beta_2 UNIT + \beta_3 NHOOD + E_j \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$\text{Log } DSP_i = \beta_0 + \beta_1 LOC + \sum_{i=2}^{N} \beta i \; UNIT_{ij} + \sum_{k=n+1}^{m} \beta_k \; NHOOD_{Kj} + E_j \ldots\ldots\ldots (3)$$

OR:

$$\text{Ln}PRICE = \beta_0 + \beta_1 HIST + \beta_2 UNIT + \beta_3 NHOOD + E_j \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Where the notation is:

PRICE	=	Linear price of the residential property. Ordinary Least Square (OLS) form, the coefficient on each explanatory variable is interpreted as the average change in the house's price unit that is associated with a one-unit change in the explanatory variable.
Log DSP_i	=	Actual sale price of the home in log form.
Ln*PRICE*	=	Semi-logarithmic form, the coefficient on each explanatory variable is interpreted as the percentage change in the house's price that is associated with a one-unit change in the explanatory variable.
HIST	=	Dummy variable assigning 1 for a home located in a local historic district and 0 elsewhere (non-design.)
UNIT	=	A vector of physical characteristics of the property. Specially, the following variables are included: year built; total number of bedrooms; number of full baths; garage space; square footage; lot size;;

		structure; heat-air conditioning; and number of porches
NHOOD	=	A vector of neighborhood locational characteristics including distance to CBD; traffic congestion, natural landscape "view", and distance to facilities
E	=	Error term

The functional form chosen for the dissertation models of analysis, ordinary least square type, was found to provide the best fit for the data and to avoid hetrosedasticity, multicollinearity, and autocorrelation problems. That is, the nonlinear model more easily handled nonlinear partial effects and interactions among variables.

The second goal of this dissertation is to search for the impacts of local historic designation on residential property values out side of the historical districts. Difference on difference methodology was used to assess the potential "halo effects" from the six historical neighborhoods on nearby properties. This analysis will compare average annual sales prices for properties within the designated district with those out of the historic district over time. This analysis assumes that any difference in average sales price between houses that are located in the historic district and comparison houses that are located in the area out of historic district (in the range of less than 250 to 300 feet distance from the historic district and those houses are located in the range of more than 250 to 300 feet away from the historic district) may be attributed to the local historic designation. Simons etc. (1998) and Ding, C. etc (2000) justified this distance according to their practical and research experience which indicate that spillover effects almost range from one to two block boundaries. Depending on their research in real estate, this analysis looking at halo effects defined as price increments present for properties are

located in historic district compared to properties between 250 and 300 feet of the district (one block boundary).

CHAPTER VI

ANALYSIS AND DISCUSSION

To analyze the potential price effects of local historic designation in six historical districts in six central cities, two statistical methods of analysis were used. An ordinary least squares regression model was utilized to test for the existence of an effect of the local historic designation of an area on property values, for both homes in and out side designated areas. A more descriptive method was used to assess whether or not there was a halo effect from the creation of a historic district on neighboring properties (homes located outside of but in close proximity to the district). In this descriptive analysis that focused on homes within 250 to 300 feet of both designated and non-designated areas comparison price changes were analyzed to understand if any differences existed. These techniques for each pair of cities allow each of the following hypotheses to be addressed.

- Residential properties located in designated historical district will have a positive and statistically significant different average price increases from comparable residential properties in similar districts not designated as historic.
- The effect of local historic designation on residential property values compared to similar properties in non-designated areas will be larger for central cities located in slow growth area as compared to outcomes in fast growth areas.
- Designation of a neighborhood as historic has positive spillover effects on property values for nearby residential properties.

The analysis for each city is organized into two parts. The first part discusses the hedonic regression results that address the first hypothesis, while the second part examines the impact of local historic designation on nearby neighborhoods (in range of 250 to 300 feet). The second part of each analysis attempts to formulate an answer to the third hypothesis, whether designation has spillover effects on property values. The first three analyses interpret the impact of local historic designation on property values in the three slower (or no) growth regions (Cleveland, Cincinnati, and Pittsburgh) and the last three analyses interpret the impact of local historic designation on property values in three fast-growth regions (Dallas, Phoenix, and Atlanta). After the first three analyses, the results of each group and the impact of historic designation on residential property values are summarized. At the end of this chapter, a summary describes the individual and collective findings and focuses on answering the second hypothesis.

1. Slow Growth Areas

1.1 Cleveland- Lorain North Historic District and Lorain South Non-historic Designated Comparison District.

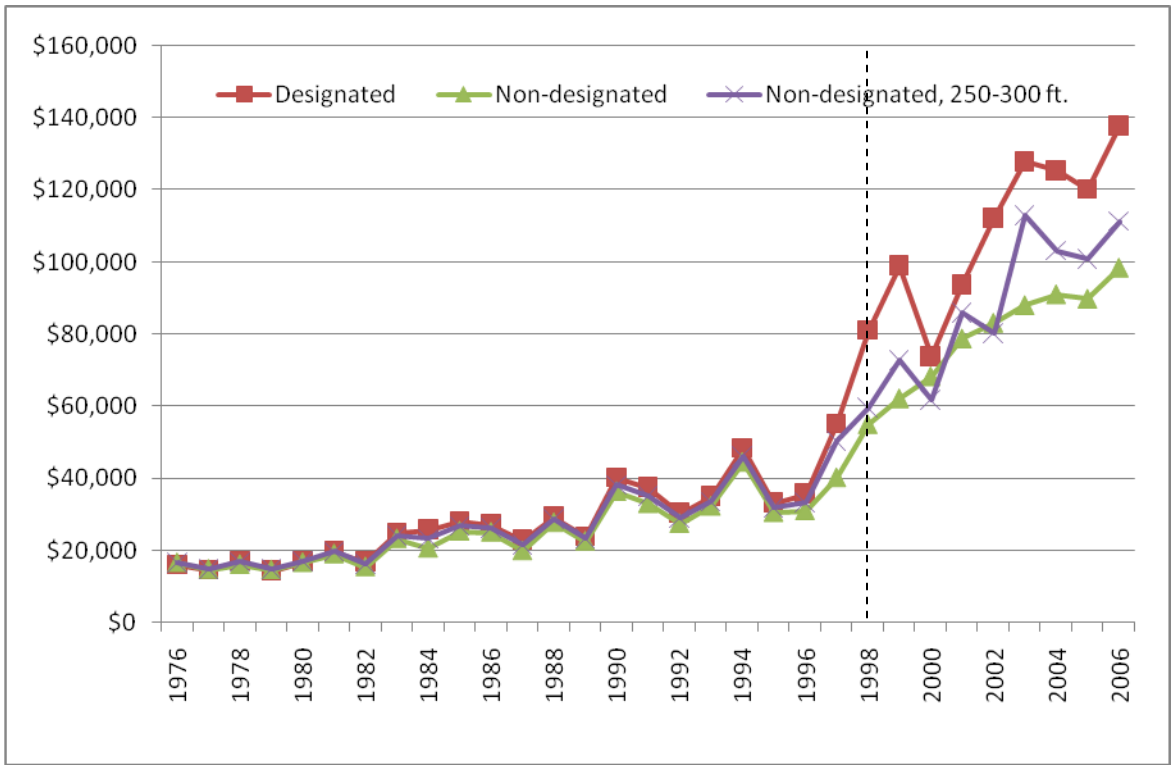
A coefficient of 12,765 for historic designation suggests that values for homes in designated historic districts are higher than for similar properties in non-designated areas. The coefficient on local historic designation indicates that locally designated historic properties within a historic district, on average while controlling for other variables sells for $12,765 more than similar properties in non-designated districts. The results indicate that local historic designation has a positive effect on property values and is statistically significant at the one percent level of confidence. For houses in the Cleveland, Lorain North historically designated and comparison areas, other things being equal, is also related to higher sale prices. For every increase in size of 1 square foot, based on average, there is a $21 change in price. Similarly, on average, holding other variables constant, each additional square foot of land area increases property value by $1.70 in each area. An additional bathroom adds, on average and holding other variables constant, $2,140 to the value of properties. On average, houses with additional garage space have values that are $2,602 greater than similar houses without this amenity. With regard to the additional floor, each additional story increases a house's value by $11,993.

All of these estimates are statistically significant at standard levels of confidence excluding the increased value from a bathroom where the confidence level was 0.10. The housing characteristics coefficients in the Ohio City model may be interpreted in similar fashion. In general, the majority of property characteristics had the expected signs and were generally statistically significant.

While the negative (non-significant) effects of the number of bedrooms seem to be counterintuitive, the reasons for the result becomes clear if one keeps in mind that the analysis is controlling for square footage. Given a control for square footage, the negative sign on bedrooms may indicate that a smaller home with more bedrooms – each of which may be smaller than those in a larger home with fewer bedrooms – would account for the observed price differential.

The individual coefficients for the neighborhood characteristics were generally found to be statistically significant. For instance, the slope coefficient of $ 5,359 suggests that if a home has a better view, the sale price of that house will increase by, on average, by $ 5,359. This coefficient is also highly significant at the one percent level of confidence. Distance from the main road had a slope coefficient of 5.32 which suggests that homes closer to the man road increase in value by $5.32 for each foot that improves proximity. This coefficient was also highly significant at the one percent level of confidence. In terms of the overall explanatory power of the model, The adjusted R-square value of 0.616 indicate that in the Lorain/ Ohio City historic district, the attributes included account for 61.6 percent of the variation in house prices.

Figure 13: average sales value 1976-2006, Lorain North Historic district versus Lorain South non-designated district.



The appreciation rate for average sale price in the designated, non designated comparison district, and the area that is located nearby the historic district, are presented for the period after designation (see Figure 13). These data indicate that the average sale price increased at a faster rate in the locally historic designated district than it did in the comparison non-designated Lorain South neighborhood. The increment in values for homes inside the district was also larger than for nearby properties. Historic district residential properties increased, on average of 9.5, percent per year, while properties in the non-historic designated neighborhood experienced an average annual increase of 7.4 percent. The average value of a single-family property in the area that is located nearby (between 250 to 300 feet) enjoyed increases of 8.1 percent per year. Additionally,

properties in the Lorain North historic district experienced an average appreciation of 17.7 percent in comparison to properties in the non-designated district. The nearby properties experienced an increase of 12.9 percent in value in comparison to properties located beyond the non-designated district. Annual average sales values are presented graphically for the three areas in Figure 13. Detailed results of the ordinary least squares regression, heteroskedasticity-corrected estimates for Lorain North historic district and non-designated- comparable districts are presented in Model 1.

Model 1:

Cleveland, OLS model with Heteroskedasticity and collinearity corrected
Estimates using 801 observations.
Missing or incomplete observations dropped: 9
Dependent variable: SALE Price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	-122708	66973.4	-1.8322	0.06730	*
YRBUI	167.069	33.8624	4.9338	<0.00001	***
HISSAT	12765.28	1077.98	11.8418	<0.00001	***
STORY	11992.95	2002.89	5.9878	<0.00001	***
OPEN_PORCH	3.28327	5.54911	0.5917	0.55424	
BSMT_SQ_FT	5.68127	1.47333	3.8561	<0.00001	***
HEAT	626.916	1289.47	0.4862	0.62697	
AIR	5720.25	1123.26	5.0925	<0.00001	***
BDRMS	-488.205	552.231	-0.8841	0.37694	
BTHRMS	2140.573	1334.19	1.6044	0.64277	
HLF_BTHS	6129.06	3300.48	1.8570	0.06368	*
FIREPLS	3738.02	2731.39	1.3685	0.17154	
GAR_CAP	2601.8	882.832	2.9471	0.00055	***
LOT-SQ_FT	1.71263	0.494496	3.4634	0.00056	***
BLT_SQ_FT	20.86391	6.71582	3.1067	0.05369	**
VIEW	5359.2	560.12	9.5679	<0.00001	***
Distance_mroad	5.32953	0.522783	10.1945	<0.00001	***
DIS.CBD_ft	-26.7039	2.54242	-10.5033	<0.00001	***

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.628131$
Adjusted $R^2 = 0.616461$
F-statistic (16, 784) = 36.684 (p-value < 0.00001)

1. 2. Cincinnati- Betts-Longworth North Historic District and Betts-Longworth South Non-designated District.

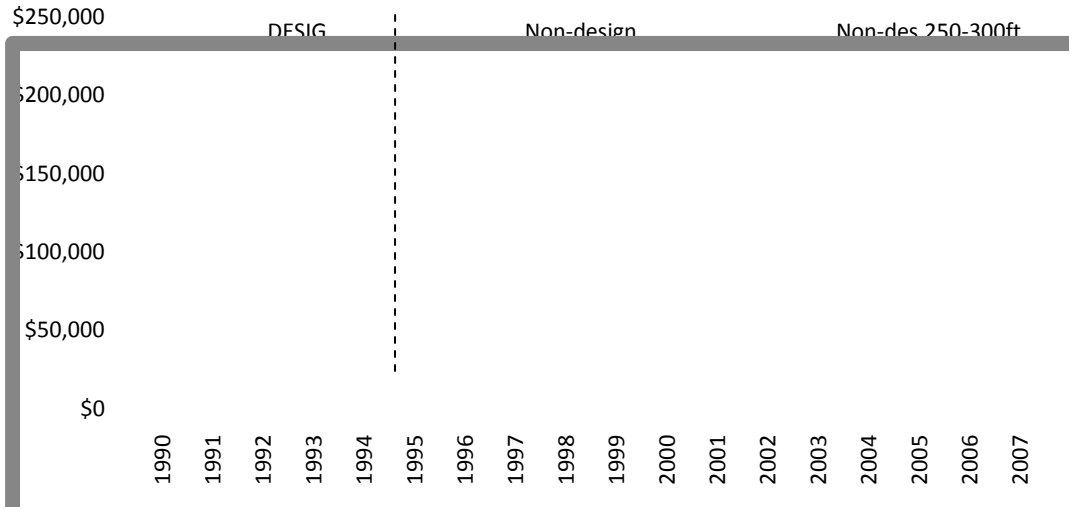
A coefficient of $ 16217.99 dollars for historic designation suggests that values for homes in designated historic districts are higher than for similar, non-designated historic areas. The coefficient on local historic designation indicates that locally designated historic properties within a historic district, on average and holding other variables equal, sell for $16,218 more than similar properties in non-designated districts. The results indicate that local historic designation had a positive effect on property values and statistically significant at the one percent level of confidence. For houses in the Cincinnati, Betts-Longworth historically designated and comparison areas, other things being equal, is also related to higher sale price. For every increase in size of the living area of 1 square foot; based on average, is associated with an increase house value by $ 11.96. Similarly, on average, holding other variables constant, each additional unit of air conditioning with AC increases property value by $ 6.0. Each additional fireplace increases property value by $ 6,566. All these estimates are statistically significant at standard levels of confidence. An additional full bath adds an increase of $1,510 in property values. On average, houses with additional basement garage space have values that are $ 1,057 greater than similar houses without this amenity. With regard to the additional attic square feet each additional attic square foot increases the house's value by $ 1.40. The other housing characteristics coefficients in the Bitts-Longworth model may be interpreted in similar fashion. In general, the majority of property characteristic had the expected signs and were generally statistically significant.

While the negative effects of the number of bedrooms in Cincinnati seem to be counterintuitive, the reasons for the negative result becomes clear if one keeps in mind that the analysis is controlling for square footage. Given a control for square footage, the negative sign on bedrooms may indicate that a smaller home with bedrooms-each of which may be smaller than those in a large home with fewer bedrooms-would account for the observed price differential.

The individual coefficients for the neighborhood characteristics were generally found to be statistically significant. The slope coefficient of about 13,523 suggests that if the house has a best view, the sale price of that house increases on average, $13,523.This coefficient is also highly significant at the one percent level of confidence. Distance from the main road had a slope coefficient of 16.5 which suggests that properties closer to the main road increase in value by $16.50 for each foot that improves proximity. This coefficient is also highly significant at the one level of confidence.

In terms of the overall explanatory power of the model, the adjusted R-square values of about 0.58 indicate that in the Betts-Longworth North historic district, the attributes included account for a large share of 58 percent of the variation in house prices.

Figure 14: average sales value 1990-2007, Betts-Longworth North Historic district versus Betts-Longworth South non-designated district.



The appreciation rate for average sale price in the designated, non designated comparison district, and the area which is located nearby the historic district, are presented for the period after designation (see Figure 14).. These data indicate that the average sale price increased at a faster rate in the district that locally designated than it did in the comparison non-designate Betts-Longworth South neighborhood. The increment in values for homes inside the district was also larger then for nearby properties. Historic district residential properties increased, on average of 7.1 percent per year, while properties in the non-historic designated neighborhood experienced an average annual increased of 3.9 percent. The average value of a single-family property in the area that is located nearby (between 250 to 300 feet) enjoyed increase of 5.9 percent per year. Additionally, properties in the Betts-Longworth North historic district experienced an average appreciation of 16.6 percent in comparison to properties in the

non-historic designated district. The nearby properties experienced an increase of 10.5 percent in value in comparison to properties located beyond the non designated district. Annual average sales values are presented graphically for the three areas in Figure 14. Detailed results of the ordinary least squares regression, heteroskedasticity-corrected estimates for Betts-Longworth North historic district and non-designated- comparable districts are presented in Model 2.

Model 2:

Cincinnati, OLS Model with Heteroskedasticity-corrected estimates using 683 observations from 1-684
Missing or incomplete observations dropped: 1
Dependent variable: Sale price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	4.55107e+06	3.14509e+06	1.4470	0.14832	
HistStat	16217.99	1353.65	11.9809	<0.00001	***
View	13522.8	1542.73	8.7655	<0.00001	***
addlivarea	5.57526	7.75097	0.7193	0.47219	
airtype	6039.3	1688.19	3.5774	0.00037	***
atticsqft	1.40501	7.219	0.1946	0.84574	
basegar	1056.63	2398.9	0.4405	0.65973	
famlrooms	9813.82	3938.96	2.4915	0.01295	**
fireopen	6566.31	2848.36	2.3053	0.02143	**
liverfsft	11.9618	6.8346	1.7502	0.08051	*
numacres	-6485.36	8304.74	-0.7809	0.43511	
numbdrooms	-1307.53	2444.07	-0.5350	0.59283	
totalrooms	-1326.61	1442.08	-0.9199	0.35792	
yearbuilt	-2230.47	1633.26	-1.3657	0.17248	
halfbath	762.394	3166.79	0.2407	0.80982	
fullbath	1510.11	8846.57	0.1707	0.86454	
Dist_MnRod	16.498	2.10725	8.2050	<0.00001	***
Dist_CBD	-14055.1	14378.7	-9.7749	0.97749	

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.59226$
Adjusted $R^2 = 0.580221$
F-statistic (17, 717) = 40.8905 (p-value < 0.00001

1.3 Pittsburgh- Allegheny West Historic district and Allegheny East non-designated district.

A coefficient of 10564.96 for historic designation suggests that values for homes in designated historic districts are higher than for similar properties in non-designated areas. The coefficient on local historic designation indicates that locally designated historic properties within a historic district, on average and holding other variables equal, sell for $ 10565.0 more than similar properties in non-designated districts. The results indicate that local historic designation had a positive effect on property values and statistically significant at the one percent level of significance. For houses in the Pittsburgh, Allegheny West historically designated and comparison areas, other things being equal, are also related to higher sale price. For every increase in size of the lot area of 1 square foot; based on average, is associated with an increase house value by $ 12.0. Similarly, on average, holding other variables constant, each additional story increases property value by $ 10,578. House with fireplace increases property value by $ 6,229. Holding other variables constant and on the average, an additional garage space adds an increase of $ 7,879 in property value. Other things being equal, an increase of 1 square foot of the living area; based on average, is attributed with an increase house value by $ 10.24. All the above estimates are statistically significant at standard levels of confidence. An additional full bath room adds an increase of $ 4,309 in property values. On average, houses with heating and cooling unit have values that are $ 1,854 greater than similar houses without this amenity. However, full bath, half bath, heating cooling, and bedrooms variables are not statistically significant. With regard to the half bath; each additional half bath increases the house's value by $ 1,752. The other housing characteristics coefficients in the Allegheny model may be interpreted in similar fashion.

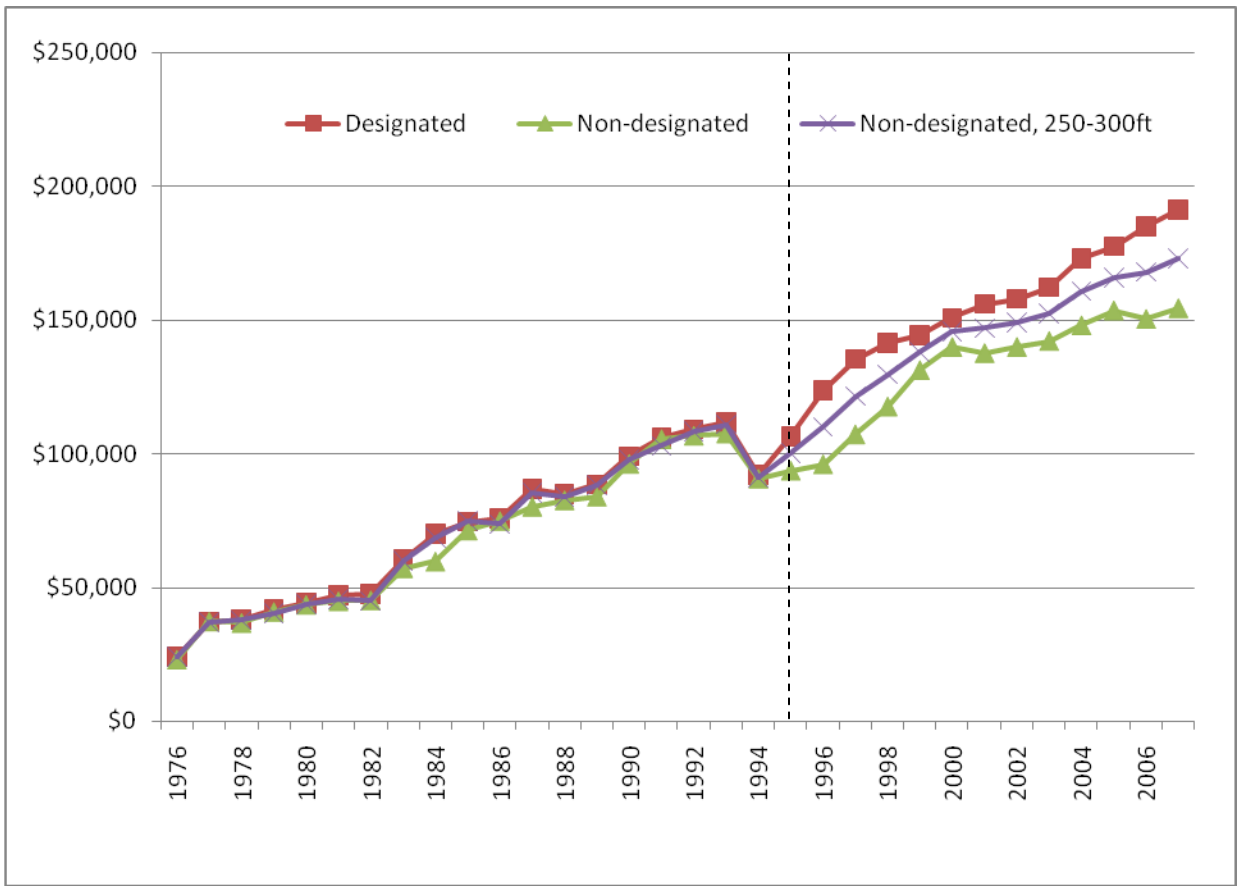
In general, part of housing characteristic variables had the expected signs and were generally statistically significant.

While the negative effects of number of bedrooms in Pittsburgh seem to be counterintuitive as well as in the previous two models, the reasons for the negative result becomes clear if one keeps in mind the previous example that the analysis is controlling for square footage. Giving the control for square footage, the negative sign on bedrooms may tells that a smaller home with more bedrooms-each of which may be smaller than those in a larger home with fewer bedrooms-would account for the observed price differential.

The individual coefficients for the neighborhood characteristics were generally found to be statistically non-significant. Fore instance, the slope coefficient of about 4,913 suggests that if the house has a best view, the sale price of that house will goes up, on average, by $ 4,913. Distance from the main road had a slope coefficient of 4.18 which suggests that houses closer to the main road by one foot, on average, the house value goes up by $ 4.18. However, this coefficient is not significant.

In terms of the overall explanatory power of the model, the adjusted R-square values of about 0.639 indicate that in the Allegheny West historic district, the attributes included account for a large share of 64 percent of the variation in house prices.

Figure 15: average sales value 1976-2006, Allegheny West Historic district versus Allegheny East non-designated district.



The appreciation rate for average sale price in the designated, non designated comparison district, and the area which is located nearby the historic district, are presented for the period after designation (see Figure 15). These data indicate that the average sale price increased at a faster rate in the district that locally designated than it did in the comparison non-designate Allegheny East neighborhood. The increment in values for homes inside the district was also larger than for nearby properties. Historic district residential properties increased in value on average of 7.9 percent per year, while properties in the non-designated neighborhood experienced an average annual increased of 5.7 percent. The average value of a single-family property in the area that is located

nearby (between 250 to 300 feet) enjoyed increased in value at 6.1 percent per year. Additionally, properties in the Allegheny West historic district experienced an average appreciation of 12.8 percent in value in comparison to properties in the non-designated district. The nearby properties experience an increase of 9.3 percent in value in comparison to properties located beyond the non-designated district. Annual average sales values are presented graphically for the three areas in Figure 15. Detailed results of the ordinary lest square regression, heteroskedasticity-corrected estimates for Allegheny historic district and non-designated- comparable districts are presented in Model 3.

Model 3:

Pittsburgh, OLS Model with Heteroskedasticity-corrected estimates using the 552 observations 1-552

Dependent variable: Sale Price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	-41782.8	11225	-3.7223	0.00023	***
HistStat	10564.96	720.23	14.6687	<0.00001	***
LotArea	12.0657	1.30762	9.2273	<0.00001	***
Stories	10577.6	3979.17	2.6583	0.00817	***
YearBuilt	8.08135	4.71964	1.7123	0.08761	*
TotalRooms	-83.3709	1909.63	-0.0437	0.96520	
Bedrooms	-738.058	2968.55	-0.2486	0.80378	
FullBaths	4308.88	4522.41	0.9528	0.34127	
HalfBath	1751.49	3808.37	0.4599	0.64583	
HeatingCooling	1854.52	2851.04	0.6505	0.51576	
Fireplaces	6229.15	2588.46	2.4065	0.01655	**
AttachGarage	7878.95	3982.37	1.9785	0.04856	**
FinishLivingAre/sqft	10.245	3.52486	2.9065	0.00386	***
View	4913.38	3260.39	1.5070	0.13259	
Dist_MnRod	4.18604	2.62676	1.5936	0.11180	

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.651225$
Adjusted $R^2 = 0.639139$
F-statistic (14, 404) = 53.8815 (p-value < 0.00001)

Summary:

From the aforementioned analysis, in slow-growth central cities, historic designating has a statistically significant effect on property values increases ranging between approximately 7.09 percent and 9.5 percent of the total property value. In percentage terms, the smallest average increases in property values occur in Pittsburgh, where the value of historic properties is 12.8 percent higher than the value of comparable, non-historic properties in that district. The largest average percentage increases occur in Cleveland, where the value of historic properties is 17.7 percent higher than the value of comparable properties located in the non-historic comparison district. In addition, local historic designation also has positive effects on the nearby property values. Properties that are located within the 250-300 feet radius of the designated districts gain an increase in property values ranging between 9.3 percent and 12.9 percent higher than the values of comparable properties located in the on-historic district. In terms of the overall explanatory power of the models, the adjusted R-square values indicate that in the three slow-growth central cities, the attributes included account between 58 and 63.9 percent of variation in house prices. Based on the above modeling results, Table 16 presents an average dollar value (coefficients) and t-value of each coefficient. Table 17 estimates an average appreciation rate impact of local historic designation in each slow-growth central cities.

In the second phase of the following analysis explains the impact of local historic designation on residential property values in three fast-growth central cities. Phoenix, Arizona; Atlanta, Georgia; and Dallas, Texas.

2. Fast Growth Areas:

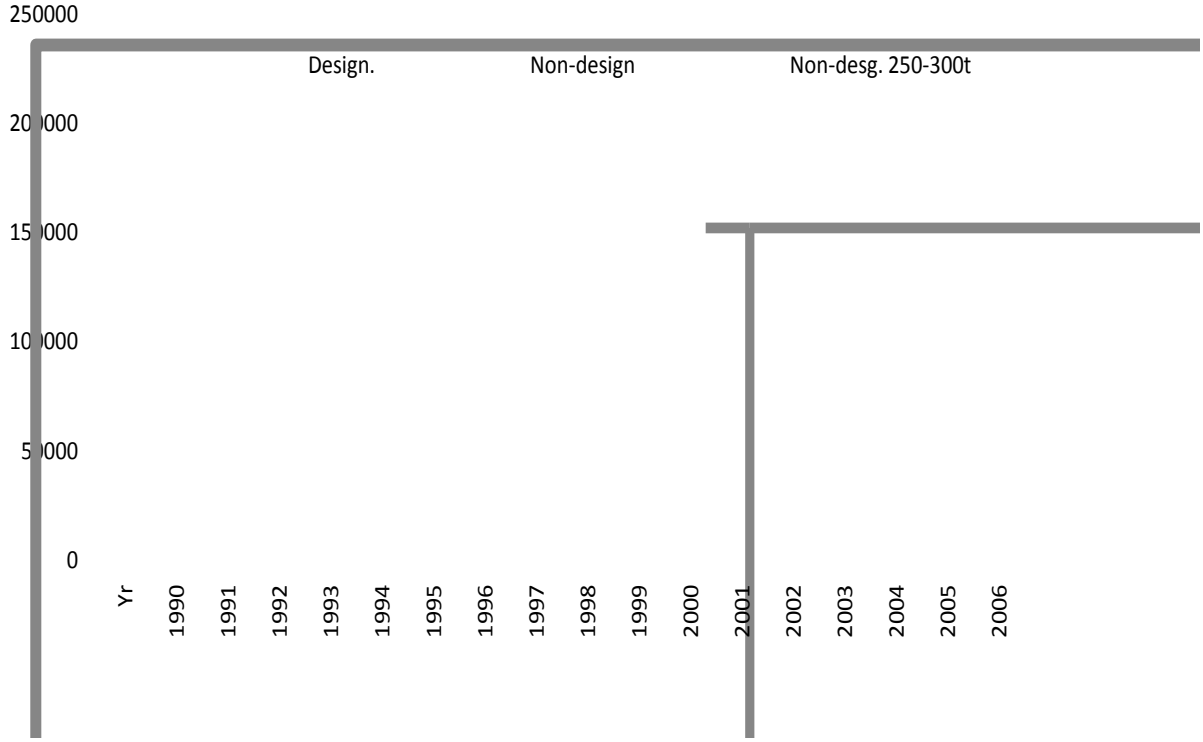
2.1 Phoenix-Alvarado Historic District and Palm Lane Comparison Non-historic district.

A coefficient of 12532.3 for historic designation suggests that values for homes in designated historic districts are higher than for similar properties in non-designated areas. The coefficient on local historic designation indicates that locally designated historic properties within a historic district, on average and holding other variables equal, sell for $ 12,532 more than similar properties in non-designated districts. The results indicate that local historic designation had a positive effect on property values and statistically significant at the one percent level. For houses in Phoenix's Alvarado historic district and Palm Lane comparison neighborhood, other things being equal, is also related to higher sale price. For every increase in the size of the total square feet of finished living area by 1 square foot; based on average, is associated with an increase house value by $ 30.80. Similarly, on average, holding other variables constant, each additional air conditioning with AC unit increases property value by $ 7,600. Each additional fireplace increases property value by $ 5,523. All the above estimates were statistically significant at different standard levels of confidence. An additional half bath room adds an increase of $6,310 in property values. On average, houses with additional basement garage space have values that are $ 2,929 greater than similar houses without this amenity. With regard to the additional attic square feet; each additional attic square foot increases the house's value by $ 20,332. The other housing characteristics coefficients in the Alvarado model may be interpreted in similar fashion. In general, the majority of housing characteristic variables had the expected signs and were generally statistically significant. With regard

to the additional bedroom; each additional bedroom increases the house's value by $ 1,780. However, this coefficient is not statistically significant. The individual coefficients for the neighborhood characteristics were generally found to be statistically non-significant except the coefficient of landscape variable which has a highly significant at the one percent level. Fore instance, the slope coefficient of about 8,209 suggests that if the house has a best view, the sale price of that house will goes up, on average, by $ 8,209. This coefficient is also highly significant at one level of confidence. Distance from the main amenities has slope coefficient of 1.2 which suggests that if the house close to the main amenities by one foot, on average, the house value goes up by $ 1.2. Other things being equal, an increase in the distance from the central business district by 1 foot; based on average, is associated with a decrease of house value by $ 2.16. However, the previous two coefficients are not statistically significant.

In terms of the overall explanatory power of the model, The R-square values of about 0.654 indicate that in the Alvarado Historic district and Palm Lane non-designated district, the attributes included account for a large share of 65.4 percent of the variation in house prices.

Figure 16: average sales value 1990-2006, Alvarado Historic district versus Palm Lane non-designated district.



The appreciation rate for the average sale price in the designated versus the non designated comparison district, and the area which is located nearby the historic district, are presented for the period after designation (see Figure 16). These data indicate that the average sale price increased at a faster rate in the historic district than in the locally designated area than it did in the comparison non-designated Palm Lane neighborhood. The increment in values for homes inside the district was also larger than for nearby properties. Historic district residential properties increased in value on average of 8.1 percent per year, while properties in the non-designated neighborhood experienced an average annual increased in value of 6.0 percent. The average value of a single-family property in the area that is located nearby (between 250-300 feet) enjoyed increase of 6.9

Model 4:

Phoenix, OLS Model with Heteroskedasticity-corrected estimates using 572 observations from 1-572
Dependent variable: Sale price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	-63848.7	15376.7	-4.1523	0.00004	***
fireopen	5522.47	3350.83	1.6481	0.09992	*
liverfsft	30.8048	6.97427	4.4169	0.00001	***
numacres	-5079.36	2384.11	-2.1305	0.03358	**
numbdrooms	1780.17	2017.91	0.8822	0.37807	
sqftbuild	8.34224	5.83223	1.4304	0.15319	
sqftflr2	1.62964	4.71752	0.3454	0.72989	
sqfrflrh	2.34819	5.57285	0.4214	0.67366	
totalrooms	459.608	1159.22	0.3965	0.69191	
halfbath	6310.01	3245.78	1.9441	0.05241	*
fullbath	615.295	3207.74	0.1918	0.84796	
Landscape	8209.3	1530.35	5.3643	<0.00001	***
Dsitance_CBD	-2.1687	1.36821	-1.5851	0.11354	
Distance_aminti	1.21087	1.3111	0.9236	0.35613	
HisSatus	12532.3	2794.58	4.4845	<0.00001	***
addlivarea	10.5982	7.7397	1.3693	0.17146	
airtype	7599.47	2889.11	2.6304	0.00877	***
atticsqft	20.332	11.3394	1.7930	0.07353	*
basegar	2929.05	2928.79	1.0001	0.31772	
basement	1441.29	1921.44	0.7501	0.45352	
extwalls	23.742	39.7864	0.5967	0.55093	
famlrooms	5639.87	3365.29	1.6759	0.09434	*
finvallnd	1.54347	0.0974388	15.8404	<0.00001	***

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted R^2 = 0.669327
Adjusted R^2 = 0.65463
F-statistic (24, 540) = 45.543 (p-value < 0.00001)

percent per year. Additionally, properties in the Alvarado historic district experienced an average appreciation of 9.4 percent in comparison to properties in the non-designated district. The nearby properties experienced an increase of 5.4 percent in value in comparison to the properties located beyond the non-designated district. Annual average

sales values are presented graphically for the three areas in Figure 16. Detailed results of the ordinary lest square regression, heteroskedasticity-corrected estimates for Alvarado historic district and non-designated- comparable districts are presented in Model 4.

2.2 Dallas- Junius Street Historic District and San Jacinto Street non-Historic District.

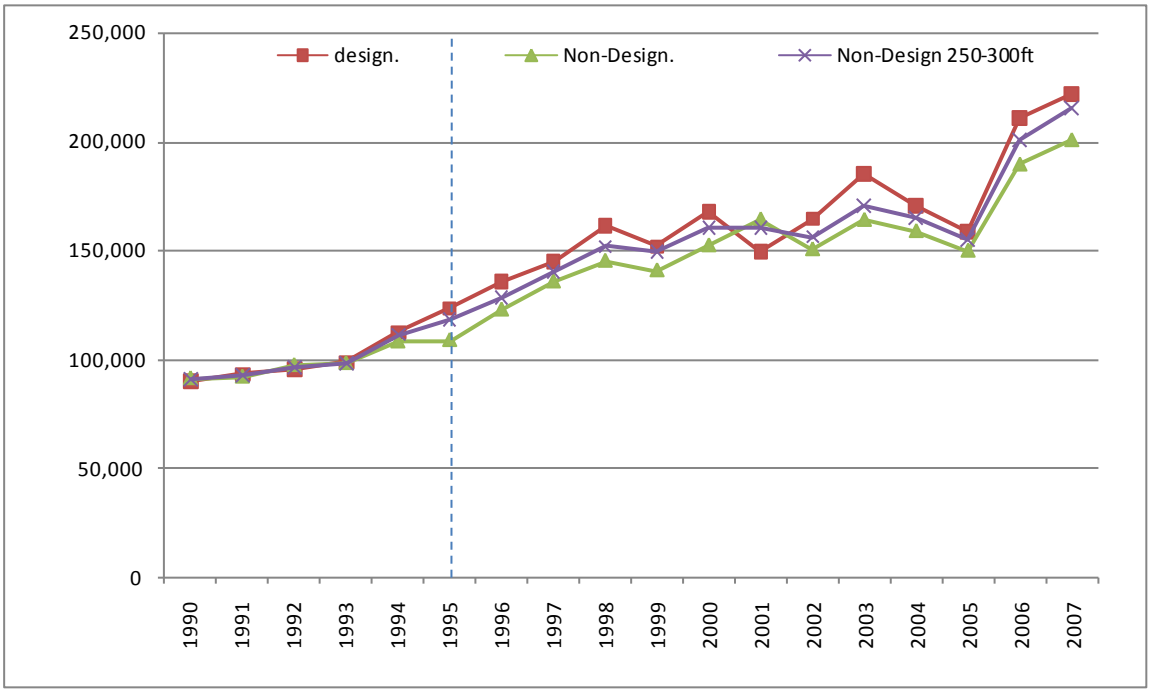
A coefficient of 8590.03 suggests that values for homes in designated historic districts are higher than for similar properties in non-designated areas. The coefficient on local historic designation indicates that locally designated historic properties within a historic district, on average and holding other variables equal, sell for $ 8,590 more than similar properties in non-designated districts. The results indicate that local historic designation had a positive effect on property values. However, the positive effect of local historic designation is statistically significant only at 10 percent level. For houses in the Dallas, Junius historic district and comparison areas, San Jacinto Street non-Historic District, other things being equal, an increase in size of the living area of 1 square foot; based on average, is associated with an increase house value by $ 9.30. Similarly, on average, holding other variables constant, each additional air conditioning with AC unit increases property value by $ 3,595. Each additional fireplace increases property value by $ 5,017. An additional full bath room adds an increase of $ 870.93 in property values. On average, houses with additional garage space have values that are $ 4,669 greater than similar houses without this amenity. All the above estimates are not statistically significant at any standard level of confidence. The other housing characteristics coefficients in the Junius Street model may be interpreted in similar fashion. With regard to the additional attic square feet; each additional attic square foot increases the house's

value by $ 32.0. Holding other variables constant, properties with heating system have values, on average, that are $ 14,514 greater than similar properties without this service. Heating system was statistically significant at the one level of significance and attic space was statistically significant at the 5.0 percent standard level of confidence.

The individual coefficient for the neighborhood landscape or view characteristic was found to be statistically significant. The slope coefficient of about 9830.16 suggests that if the house has a best view, the sale price of that house will goes up, on average, by $ 9,830. This coefficient is significant at the 10 per cent level of confidence. Other neighborhood characteristics were dropped because they had a high level of multicollinearity.

In terms of the overall explanatory power of the model, The R-square values of about 0.44 indicate that in the Junius Street Historic District, the attributes included account for a large share of 44 percent of the variation in house prices.

Figure 17: average sales value 1990-2007, Junius Street Historic District and San Jacinto Street non-Historic District, Dallas, Texas.



The appreciation rate for average sale price in the designated, non designated comparison district, and the area which is located nearby the historic district, are presented for the period after designation (see Figure 17). These data indicate that the average sale price increased at a faster rate in the district that locally designated than it did in the comparison non-designate, San Jacinto Street. The increment in values for homes inside the district was also larger than for nearby properties. Historic district properties increased in value on average of 7.5 percent per year, while properties in the non-historic designated neighborhood experienced an average annual increased of 4.5 percent. The average value of a single-family property in the area that is located nearby (between 250-300 feet) enjoyed increases of 4.9 percent per year. Additionally, properties in the Junius Street Historic District experienced an average appreciation of 7.3 percent in

value in comparison to properties in the non-designated district. The nearby properties experience an increase of 3.9 percent in value in comparison to properties located beyond the non designated district. Annual average sales values are presented graphically for the three areas in Figure 17. Detailed results of the ordinary lest square regression, heteroskedasticity-corrected estimates for Junius Street historic district and non-designated- comparable districts are presented in Model 5.

Model 5:

Dallas, OLS Model with Heteroskedasticity-corrected estimates using 462 observations from 1-463.

Missing or incomplete observations dropped: 1
Dependent variable: sale price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	76048.1	21203.9	3.5865	0.00037	***
hisstat	8590.03	4790.8	1.7930	0.07353	*
Lndscp	9830.16	4968.49	1.9785	0.04856	**
addlivarea	9.35689	15.2882	0.6120	0.54083	
airtype	3595.22	6737.53	0.5336	0.59388	
atticsqft	32.0254	16.1158	1.9872	0.04751	**
garspace	4668.69	5146.14	0.9072	0.36478	
famlrooms	2673.43	10484.8	0.2550	0.79886	
fireopen	5017.0	3182.9	1.5762	0.11568	
heating	14513.8	3879.76	3.7409	0.00021	***
numacres	-15923.9	25035	-0.6361	0.52506	
totalrooms	-5446.66	3929.49	-1.3861	0.16641	
halfbath	4429.04	8595.42	0.5153	0.60661	
fullbath	870.937	8772.95	0.0993	0.92096	

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted R^2 = 0.466739
Adjusted R^2 = 0.440642
F-statistic (14, 447) = 6.38905 (p-value < 0.00001)

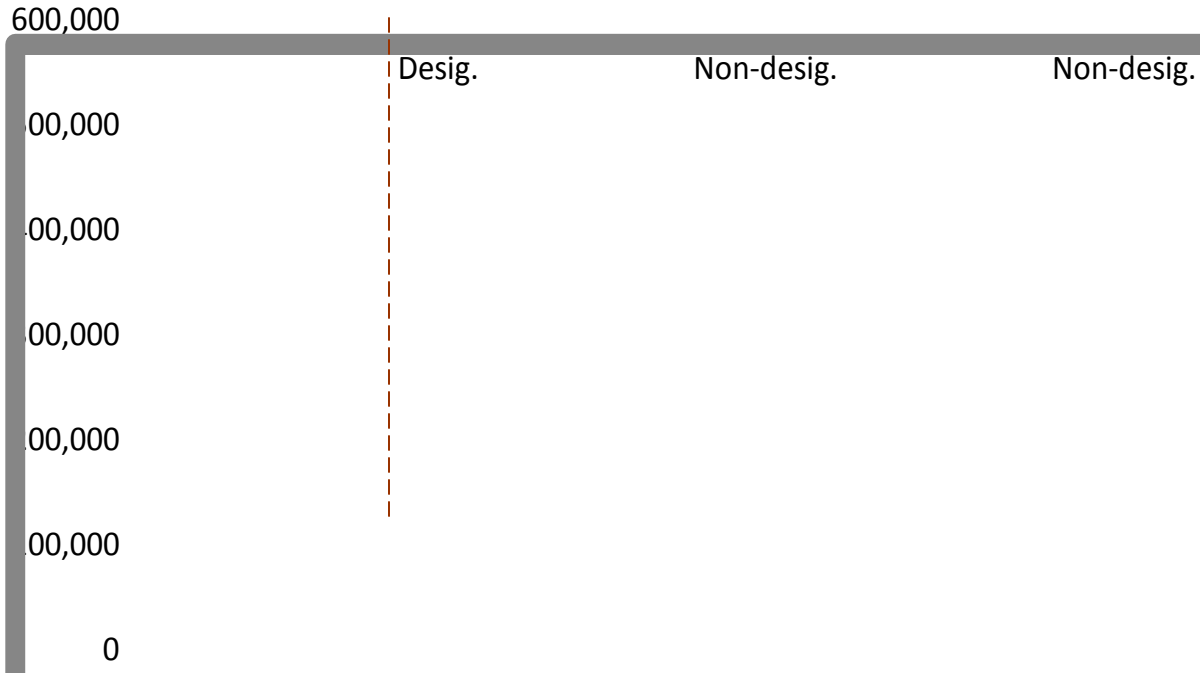
2.3 Atlanta- Whittier Mill Historic District and Paul non-Historic Avenue.

A coefficient of 22001.6 for historic designation suggests that values for homes in designated historic districts are higher than for similar properties in non-designated areas. The coefficient on local historic designation indicates that locally designated historic properties within a historic district, on average and holding other variables equal, sell for $ 22,002 more than similar properties in non-designated districts. The results indicate that local historic designation had a positive effect on property values and statistically significant at the 5.0 percent level. For houses in Atlanta's Wittier Mill historic district and Paul non-historic comparison areas, other things being equal, is also related to higher sale price. For every increase in size of the property by additional living area; based on average, is associated with an increase house value by $ 34,184. Concerning the lot size, on the average, holding other variables constant, each additional acre to the lot size decreases property value by $ 20,331. House with basement space has values that are $ 11,740 greater than similar house without basement space. With regard to the additional attic space; each additional attic area increases the house's value by $ 22,290. On average, houses with heating system have values that are $ 12,476 greater than similar houses without this amenity. All the above estimates were statistically significant at standard different levels of confidence. An additional half bath room adds an increase of $10,922 in property values. On average, houses with additional basement garage space have values that are $ 9,200 greater than similar houses without this amenity. The other housing characteristics coefficients in the Whittier Mill Historic District model may be interpreted in similar fashion. In general, the majority of housing characteristics variables had the expected signs and were statistically significant.

The individual coefficients for the neighborhood characteristics were generally found to be statistically significant. For instance, the slope coefficient of about -4436.55 suggests that if the house has a better view, the sale price of that house will goes down, on average, by $ 4,437. However, this coefficient was not statistically significant. Distance from the main amenities has slope coefficient of 16.62 which suggests that if the house close to the main amenities by one foot, on average, the house value goes up by $ 16.60. This coefficient was statistically significant at the 5.0 percent level of confidence. Similarly, on average and holding other variables constant, houses that are close to the central business district by one mile, the house value goes down by $ 8,797.This coefficient was also significant at the 5.0 percent level of confidence.

In terms of the overall explanatory power of the model, the adjusted R-square values of about 0.649 indicate that in the Whittier Mill Historic District model, the attributes included account for a large share of 64.9 percent of the variation in house prices.

Figure 18: average sales value 1990-2006, Whittier Mill historic district versus Paul non-historic comparison areas.



The appreciation rate for average sale price in the designated, non designated comparison district, and the area which is located nearby the historic district, are presented for the period after designation (see Figure 18). These data indicate that the average sale price increased at a faster rate in the Wittier Mill district that locally designated than it did in the comparison non-designate Paul non-historic comparison neighborhood. The increment in values for homes inside the district was also larger than for nearby properties. Historic district residential properties increased in value on average of 12.0 percent per year, while properties in the non-designated neighborhood experienced an average annual increased of 11.1 percent. The average value of a single-

family property in the area that is located nearby (between 250-300 feet) enjoyed increases of 11.8 percent per year. Additionally, properties in the Wittier Mill historic district experienced an average appreciation of 7.4 percent in value in comparison to properties located beyond the non-designated district. The nearby properties experience an increase of 4.4 percent in comparison to the same-non historic district. Annual average sales values are presented graphically for the three areas in Figure 18.

Detailed results of the ordinary lest square regression, heteroskedasticity-corrected estimates for Wittier Mill historic district and non-designated- comparable districts are presented in Model 6.

Model 6:

Atlanta: Whittier Mill historic district and Paul non-historic comparison areas, OLS Model with Heteroskedasticity-corrected estimates using 373 observations from 1-374

Missing or incomplete observations dropped: 1
Dependent variable: Price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
Parkprox	7814.58	3737.79	2.0907	0.03727	**
Hisrcstus	22001.6	10383.5	2.1189	0.03480	**
Lndscp	-4436.55	7762.92	-0.5715	0.56802	
Distament	1.66260	0.78465	2.1136	0.03525	**
Livunit	34184.4	15191.5	2.2502	0.02505	**
Calcacres	-20331.2	8664.54	-2.3465	0.01951	**
Util	9690.22	20145.5	0.4810	0.63081	
Parkquanit	3922.38	676.474	5.7983	<0.00001	***
Stories	29235.9	18700.2	1.5634	0.11886	
D_Yrblt	5384.99	472.235	11.4032	<0.00001	***
Rmtot	2144.64	4735.87	0.4529	0.65094	
Rmbed	7045.07	7497.58	0.9396	0.34804	
Rmfam	1896.92	11522.7	0.1646	0.86933	
Fixbath	-8743.86	7852.68	-1.1135	0.26626	
Fixhalf	10922	13743	0.7947	0.42730	
Bsmt	11739.6	5220.85	2.2486	0.02516	**
Heat	12475.6	5345.08	2.3340	0.02016	**
Attic	22290.2	6455.23	3.4530	0.00062	***
garagcar	9200.13	11603.7	0.7929	0.42839	
DistcCBD	-8797.27	4153.3	-2.1181	0.03486	**

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.667994$
Adjusted $R^2 = 0.64913$
F-statistic (20, 352) = 35.411 (p-value < 0.00001)

Table 16 : Results for the Six Central Cities

	Slow-growth Central cities			Fast-growth central cities		
Variable	**Cincinnati**	**Cleveland**	**Pittsburgh**	**Phoenix**	**Atlanta**	**Dallas**
Historic status	16217.9 (11.98)***	12765.28 (11.84)***	10564.96 (14.66)***	12532.3 (4.48)***	22001.6 (2.1189)**	8590.03 (1.79)*
Neighborhood characteristics						
View	13522.8 (8.76)***	5359.2 (9.56)***	4913.38 (1.50)	8209.3 (5.36)***	−4436.55 (−0.5715)	9830.16 (1.97)**
Distance from amenities	16.49 (8.2)***	5.32 (10.1)***	4.1 (1.59)	1.2 (0.9)	16.626 (2.1136)**	–
Utility	–	–	–	–	9690.22 (0.4810)	–
Distance from CBD	−2.6 (−9.77)	−26.70 (−10.5)***	–	−2.1(−1.5)	−8797.27 (−2.1181)**	–
Parking quantity	–	–	–	–	3922.38 (5.7983)***	–
Spatial structural characteristics						
Lot size	–	1.71 (3.46)***	12.0 (9.22)***	–		–
Year built	−2230.47 (−1.36)	167.06 (4.93)***	8.08 (1.71)*	–	5384.99 (11.4032)***	–
Total rooms	−1326.61 (−0.92)	–	−83.37 (−0.04)	459.60 (0.39)	2144.64 (0.4529)	−5446.66 (−1.3861)

* indicate statistically significant at the 10 per cent level.
** indicate statistically significant at the 5 per cent level.
*** indicate statistically significant at the 1 per cent level.

Bedroom	−1307 (−0.59)	−488.20 (−0.88)	−738.05 (−0.24)	1780.17 (0.88)	7045.07 (0.9396)	–
Half bathroom	762.39 (0.24)	6129.06 (1.86)*	1751.49 (0.45)	6310.01 (1.94)*	10922 (0.7947)	4429.04 (0.5153)
Full bathroom	1510.11 (0.7)	2140.57 (1.60)	4308.88 (0.95)	615.29 (0.19)	−8743.86 (−1.1135)	870.937 (0.0993)
Garage space	1056.63 (0.44)	2601.8 (2.9)***	7878.95 (1.97)**	2929.05 (1.0)	9200.13 (0.7929)	4668.9 (0.9072)
Built-up sq-ft	–	20.86 (3.10)**	–	8.34 (0.15)		–
Number of acres	−6485.36 (−0.78)	–	–	−5079.36 (−2.1)**	−20331.2 (−2.3465)**	−15923.9 (−0.6361)
Heat	–	626.91 (0.48)	–	–	12475.6 (2.3340)**	14513.8 (3.7409)***
Air type	6039.3 (3.57)***	with AC 5720.25(5.09)***	1854.52 (0.65)	7599.47 (2.63)***	–	3595.22 (0.5336)
Attic square foot	1.4 (0.19)	–	–	20.33 (1.79)*	unit 22290.2 (3.4530)***	32.02 (1.9872)**
Number of story	–	11992.95 (5.98)***	10577.6 (2.65)***	–	29235.9 (1.5634)	–
Additional living area	ft-sq 5.57 (0.71)	–	–	ft-sq 10.59 (1.36)	34184.4 (2.2502)**	–
Number of porch	–	3.28 (0.59)	–	–	–	–
Family room	9813.82 (2.49)**	–	–	5639.87 (1.67)*	1896.92 (0.1646)	2673.43 (0.255)
Fire open	6566.31 (2.3)**	3738.02 (1.36)	6229.15 (2.4)**	5522.47 (1.64)*	–	5017.0 (1.5762)
Basement	–	6129.06 (1.86)*	–	1441.29 (0.75)	11739.6 (2.2486)**	–
Living area sq-ft.	11.96 (1.75)*	–	10.24 (2.9)***	30.8 (4.41)***		9.36 (0.612)
R-square	**0.58**	**0.61**	**0.64**	**0.65**	**0.65**	**0.44**
n	**684**	**810**	**552**	**572**	**374**	**462**

* indicate statistically significant at the 10 per cent level.
** indicate statistically significant at the 5 per cent level.
*** indicate statistically significant at the 1 per cent level.

Table 17 : Summary of the impacts of Local Historic Designation on Residential Property Values

City	Is local historic designation significant?	Average of annual appreciation rate in the historic district	Average of annual appreciation rate in the comparison non-historic district	Average of annual appreciation rate in the comparison non-historic district in range of 250-300ft	Average of annual appreciation rate between the historic district and comparison non-historic district	Average of annual appreciation rate between the non-historic district in range of 250-300ft. and comparison non-historic district
Cincinnati, OH	Yes	**Betts-Longworth Historic District**				
Before designation		-2.2	-2.8	-3.0	3.2	7.5
After designation		7.09	3.9	5.9	16.6	10.5
Cleveland, OH	Yes	**Lorain North Historic District**				
Before designation		4.3	3.9	4.1	5.7	3.9
After designation		9.5	7.4	8.1	17.7	12.9
Pittsburgh, PA	Yes	**Allegheny West Historic District**				
Before designation		4.5	3.4	4.0	3.6	2.5
After designation		7.9	5.7	6.1	12.8	9.3
Phoenix, AZ	Yes	**Alvarado Historic District**				
Before designation		5.9	4.6	5.3	1.2	0.5
After designation		8.1	6.0	6.9	9.4	5.4
Atlanta, GA	Yes	**Whittier Mill Historic District and Paul non-Historic Avenue**				
Before designation		11.3	10.6	11.2	3.3	1.4
After designation		12.0	11.1	11.8	7.4	4.4
Dallas, TX	Yes	**Junius Street Historic District and San Jacinto Street, non-Historic District**				
Before designation		6.5	3.6	5.5	0.8	0.7
After designation		7.5	4.5	4.9	7.3	3.9

Summary:

From the aforementioned analysis, in fast-growth central cities, historic designating has also a statistically significant effect on property values increases ranging between approximately 12.0 percent and 7.5 percent of the total property value. In percentage terms, the smallest average increases in property values occur in Dallas, where the value of historic properties is 7.3 percent higher than the value of comparable, non-historic properties in that district. The largest average percentage increases occur in Phoenix, where the value of historic properties is 9.4 percent higher than the value of comparable properties located in the non-historic comparison district. In addition, local historic designation also has positive effects on the nearby property values. Properties that are located within the 250-300 feet radius of the designated districts gain an increase in property values ranging between 3.9 percent and 5.4 percent higher than the values of comparable properties located in the non-historic district. In terms of the overall explanatory power of the models, the adjusted R-square values indicate that in the three fast-growth central cities, the attributes included account for a large share between 44 and 65 percent of variation in house prices. Based on the above modeling results, table 16 presents an average dollar value (coefficients) and t-value of each coefficient. Table 17 estimates an average appreciation rate impact of local historic designation in each fast-growth central cities.

CHAPTER VII

CONCLUSION AND POLICY IMPLICATIONS

This dissertation was designed to advance past research efforts and provide a more precise view of the effects of local historic designation on residential property values in six central cities. Three of these cities were in fast-growth areas and three were in slow-growth parts of the United States. The previous results had addressed each hypothesis.

Residential properties located in designated historical district had a positive and statistically significant different average price increases from comparable residential properties in similar districts not designated as historic. The analysis found that the effect of local historic designation on residential property values compared to similar properties in non-designated areas was larger for central cities located in slow growth area as compared to outcomes in fast growth areas.

The results strongly suggest historic designation is particularly valuable for increasing the market value of residential property in slow-growth regions. In the slow-growth areas residential properties in historic districts had sales prices that were from 19.8 percent to 23.7 percent higher than the sale price of comparable properties in the comparison areas. In fast growth areas positive impacts were also evident, but the increment in values relative to the sale price of homes in comparison areas ranged from 7.3 percent to 9.4 percent higher. The robust nature of the findings and their statistical significance allows this research to be an important addition to the study of historic designation and urban redevelopment. The hypotheses of this dissertation were tested. Relative to null hypotheses, each one is rejected. The findings in each hypothesis sustain H1 hypothesis as follows:

- Residential properties located in designated historical district have a positive and statistically significant different average price increases from comparable residential properties in similar districts not designated as historic.
- The effect of local historic designation on residential properties values compared to similar properties in non-designated areas found to be larger for central cities located in slow growth area as compared to outcomes in fast growth areas.
- Designation of a neighborhood as historic has positive spillover effects on property values for nearby residential properties.

The analysis also indicates that designation of a neighborhood as historic had positive spillover effects on property values for nearby residential properties. The results illustrate that historic designation generates a "halo effect." The sale price of homes located less

than 250-300 feet from an historic district was likely to be higher than for comparable properties located near the neighborhoods selected as comparison areas. In summary, this study produced clear indications that local historic designation has a positive impact on residential property values. This finding makes historic preservation and the designation of historic districts as a policy tool for elected and community leaders seeking to find ways to protect and enhance residential property values in central cities.

7.1 Policy Implications:

While the local efforts of preservationists expanded over the first half of the twentieth century, historic preservation and designation received little attention from either the general public or the federal government. Indeed, federal programs such as urban renewal and the interstate highway system often led to the demolition of older districts. In the 1960s, however, national campaigns for historic reservation emerged as a strong force. There was support for preservation from the environmental movement that raised the nation's awareness of the importance of conservation for reducing sprawl and energy consumption. The National Historic Preservation Act (NHPA) helped to make historic preservation a part of national policy in the 1960s, but the focus was on conservation and preservation, not economic development. This study clearly illustrates that historic preservation has a definite economic mission.

The NHPA and subsequent preservation legislation in the 1970s reflected both the patriotic and aesthetic motivations for historic preservation and brought to light the value in and for urban revitalization from the creation of historic districts. Many preservationists looked beyond the cultural contributions of historic preservation and

began to view it as a community and economic development tool that could help to reinvigorate cities. For some, historic preservation and its associated public funding and support, could be used as a strategy to recreate traditional urban communities that offered vibrant neighborhoods. For others, preserving historic neighborhoods was a tool to increase the supply of affordable housing through the stabilization of distressed urban neighborhoods. Having initially attracted support from those focused on preservation, conservation, and affordable housing, this study now makes it possible for those concerned with enhancing property values in core cities to also support historic preservation efforts. The economic benefits found in this study make it easier to justify public policies to enhance preservation and the creation of historic districts. Noting that historic designation is a tool to achieve both preservation and community economic development, there are a number of important policy implications to the designation positive findings of this dissertation.

First, critics of historic preservation often charge that designation negatively impacts property values. While that surely could be the case on an individual basis, overall, it was not true for the six central cities studied. The evidence from the geographically diverse six central cities suggests just the opposite – designation enhances value. More importantly, the value appreciation in slow-growth central cities is greater than in fast-growth central cities.

Second, appreciation of property values may displace less-affluent residents of historic districts after designation takes place. It must indeed be recognized that with increasing values comes the very real possibility that displacement of neighborhood

residents can occur. While this dissertation has not examined the issue of gentrification and affordable housing, rising prices in local historic districts may be in turn result in displacement of low-income and middle-income residents. However, historic protection either by designation or preservation in its main context should guard against gentrification effects by joining preservation and conservation programs by efforts and plans to retain affordable housing.

There is no doubt that gentrification is a serious issue, especially if, as the results of this study would suggest, historic designation is not likely to be a tool for the creation of affordable housing (the rate of increase in sales prices observed ranging approximately between 12.0 percent and 7.5 percent of the total property value). The ultimate safeguard against gentrification is homeownership and historic policies for neighborhood revitalization consistently strive for homeownership by existing residents as a top priority. However, far from having a negative impact on low-income residents, the revitalization of historic urban neighborhoods can improve the quality of life among disadvantaged households as they benefit from rising property values.

Rypkema (2002: 15) states that "gentrification is the result of too little historic preservation, not too much." People are attracted to historic neighborhoods because of the quality of the house, the investment protection afforded, the frequent presence of a wide range of housing styles, and the frequent presence of community activists committed to working together to advance the district's amenities and value. As Rypkema concludes, "Because the number of households looking for neighborhoods with those characteristics exceeds the supply, historic neighborhoods are in high demand. The answer is not to have

fewer local historic districts; the answer is to provide local historic district protections to more districts" (Rypkema, 2002: 16).

Policy makers should respond to the unmet demand for historic preservation in urban areas with aggressive plans for new and extended districts.

This can be accomplished in several ways.

At the local level:

- Designate local historic districts to protect cultural resources and preserve a rapidly vanishing inventory of affordable housing.
- Inaugurate a fast-track system for acquisition and redevelopment of vacant, abandoned, and tax-foreclosed properties.
- Give priority to historic neighborhoods for infrastructure and amenities improvements, recreation and park facilities.
- Awareness and educational programs on the economic importance of historic preservation sector specially its capacity to reduce the poverty in distressed areas.

There are also roles for the state government:

- Give priority to low-income tax credit projects that utilize historic buildings.
- Adopt a rehabilitation-friendly building code that has a feasible impact of local historic district renovation.
- Create state tax credits for the rehabilitation of local historic districts.

And, at the federal level:

- Create rehabilitation incentives such as tax credits and abatements.
- Reform economic and community development programs especially the federal housing programs to include building rehabilitation projects, preservation of residential historic districts, and adaptive reuse initiatives.
- Promotion programs to encourage and preserve local building materials industry.
- Reduce poverty by developing handcraft training programs for low-skilled workforce.
- Readjust unemployed workers to be absorbed in historic preservation industry.

This dissertation's results also have implications for the granting of special property tax incentives for the rehabilitation of designated properties. This study's finding that designation enhances property supports incentive and actions for preservation districts to produce higher property taxes from residences in urban areas (Leichenko *et al*, 2000).

In summary, the six central city analyses add to the evidence that local historic districts have positive financial rewards for property owners. Having said that slow-growth central cities have more distressed urban residential neighborhoods than fast-growth central cities, the question is, "How can these results in general benefit slow-growth central cities?"

If these cities have a historical preservation ordinance, the dissertation results support the idea of providing property owners and local officials with a compelling economic incentive to continue supporting local historic districts. Supportive policies may take many action forms, including:

- Providing information to owners about the maintenance and repair of historic buildings.
- Complying with decisions made in the design review process.
- Developing and distributing guidelines on appropriate changes in the local historic districts.
- Coordinating local historic district zoning with base zoning.
- Designating additional local historic districts.
- Offering financial incentives to assist the rehabilitation of historic properties in local historic districts.

If the community does not have any zoning provisions to protect historic properties, these positive results can be used to encourage property owners and local officials to consider adopting a preservation and designation ordinance. Encouragement policy may take many action forms, including:

- Helping people in these communities to learn about the financial benefits of local historic districts through newspapers articles, public meetings, even word of mouth.
- Bringing property owners in older neighborhoods together to encourage the governing body to adopt a preservation and designation ordinance through letters, phone calls and attendance at public meetings.
- Drafting a preservation and designation ordinance for the planning commission and city council to be considered.

7.2 Validity and Generalization

Validity questions are designed to insure that findings are legitimate increments to knowledge and can thus be relied upon for policy development. In this regard, "getting it right" means thinking through and identifying what is causal and what is merely associated with an observed outcome (Marascuilo, 1977). Getting the validity and generalization correct pushes researcher to identify, and then subsequently test, any generalization or relationship. This study shows that by using comparable neighborhoods and properties and with a sufficient number of factors included in the hedonic regression models increments related to historic designation can be isolated. There are always factors that cannot or were not included in a regression model.

Although this dissertation offers more robust findings than have been previous identified and included in the regression models major factors others had not for estimating implicit prices, very little attention had been paid to controlling for unobserved quality characteristics, Architectural details, ornaments, building material, home garden style, and painting, rehabilitation private investment activities, and the presence of the influence racial and income factors could also account for price changes. Future research must expand on the work performed and consider these factors in the regression analysis. In addition, the effect of the level of investments in historic preservation can vary from property to property. Future studies must look at the investments made by owners. Those investments need to be part of future regression models. Estimating and studying the effects of historic preservation local policies should also be included in the next generation of studies. Efforts were made in this work to

insure that there were no special local efforts, but more attention to that factor is needed. Without that work generalization to other slow-growth cities is somewhat limited.

To avoid threats to internal validity, variables were categorized in two categories (dependent and dependent). Also, the treatment groups, variables, and units that are similar to conditions of control groups allowed the analysis to avoid attrition issues and problems with differences in observed effects. Shadish and his colleagues argue that most external validity questions are about persons, settings, treatments, and outcomes that were not studied in the experiment because they arise only after the study is done. They argue that researchers should be held responsible only for answering the questions that they pose and study, not questions that others might pose later about conditions of applications that might be different than the original one (Shadish, Cook and Campbell, 2002).

In this dissertation, possible threats concerning the public investment in historic preservation in the designated areas and its effect on property values were also assessed. Public investment in the field of historic preservation that could involve special tax credits were considered and found not to exist. Again, future studies need to consider if any other resources were made available to historic districts such as staff or technical assistance that could have led to enhanced property values.

In this dissertation, states and local governments in Arizona, Pennsylvania, and Texas do not offer a rehabilitation tax credit. However, Georgia offers a minute amount of incentive which is $5,000 per selected project. In Ohio a, tax credit program is limited to 100 projects per year for two years (2007-2008). However, the Ohio Department of

Development (ODOD) must conduct a cost benefit analysis on each proposed project; only projects that will result in a net gain in state and local taxes will be approved. ODOD must determine that the tax credit is a major factor in applicant's decision to rehabilitate the building or increase the level of investment in the building. The selected 11^{th} projects for this project are not included in either of the two study areas in Cleveland and Cincinnati. These projects are limited to income-producing properties. For more details on tax credits for historic preservation on the studied areas in this dissertation, see appendix E.

In this dissertation, I utilized Shadish's principles to draw generalized conclusions about a causal connection between local historic designation and the appreciation in residential property values. Thus, the conditions of narrow to broad generalization were met by the variables included and the sample chosen. However, the findings pertain only to the three slow-growth central cities that were used as experiments in this study and they cannot be generalized in other fast-growth central cities markets because of the possibility of omitted variables; that is the work that must be next undertaken. A replication of this study in other fast-growth central cities would show the extent of the external validity of the second part of this dissertation that tested the impact of local historic designation on property values in the fast-growth central cities.

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APPENDICIES

APPENDIX A

DEFINITIONS OF HISTORIC PRESERVATION

There are also many different perspectives on the concept or maintenance. The Burra Charter notes that maintenance is the continuous protective care of the fabric and setting of a place and is to be distinguished from repair. Repair involves restoration or reconstruction.

This various definitions of cultural heritage should also be noted. UNESCO declared cultural heritage to be:

1. Monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

   2. Groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

   3. Sites: works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

Cultural significance:

Burra Charter. Cultural significance is the aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.

Protection:

USA Secretary Of The Interior's Standards For Historic Preservation 1979. Protection is defined as the act or process of applying measures designed to affect the physical condition of a property by defending or guarding it from deterioration, loss or attack, or to cover or shield the property from danger or injury. In the case of buildings and structures, such treatment is generally of a temporary nature and anticipates future historic preservation treatment; in the case of archaeological sites, the protective measure may be temporary or permanent.

APPENDIX B

HEDONIC REGRESSION MODELS WITH CORRECTED ESTIMATES

Model 1:

Cleveland, OLS model with Heteroskedasticity and collinearity corrected
Estimates using 801 observations from 1-810
Missing or incomplete observations dropped: 9
Dependent variable: SALE Price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	-122708	66973.4	-1.8322	0.06730	*
YRBUI	167.069	33.8624	4.9338	<0.00001	***
HISSAT	15765.28	1331.32	11.8418	<0.00001	***
STORY	11992.95	2002.89	5.9878	<0.00001	***
OPEN_PORCH	3.28327	5.54911	0.5917	0.55424	
BSMT_SQ_FT	5.68127	1.47333	3.8561	<0.00001	***
HEAT	626.916	1289.47	0.4862	0.62697	
AIR	22881	4493.04	5.0925	<0.00001	***
BDRMS	-488.205	552.231	-0.8841	0.37694	
BTHRMS	2140.573	1334.19	1.6044	0.64277	
HLF_BTHS	6129.06	3300.48	1.8570	0.06368	*
FIREPLS	3738.02	2731.39	1.3685	0.17154	
GAR_CAP	2601.8	882.832	2.9471	0.00055	***
LOT-SQ_FT	1.71263	0.494496	3.4634	0.00056	***
BLT_SQ_FT	20.86391	6.71582	3.1067	0.05369	**
VIEW	25359.2	2650.45	9.5679	<0.00001	***
Distance_mroad	5.32953	0.522783	10.1945	<0.00001	***
DIS.CBD_ft	-26.7039	2.54242	-10.5033	<0.00001	***

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.628131$
Adjusted $R^2 = 0.616461$
F-statistic (16, 784) = 36.684 (p-value < 0.00001)

Model 2:

Cincinnati, OLS Model with Heteroskedasticity-corrected estimates using 683 observations from 1-684
Missing or incomplete observations dropped: 1
Dependent variable: Sale price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	4.55107e+06	3.14509e+06	1.4470	0.14832	
HistStat	16217.99	1353.65	11.9809	<0.00001	***
View	13522.8	1542.73	8.7655	<0.00001	***
addlivarea	5.57526	7.75097	0.7193	0.47219	
airtype	6039.3	1688.19	3.5774	0.00037	***
atticsqft	1.40501	7.219	0.1946	0.84574	
basegar	1056.63	2398.9	0.4405	0.65973	
famlrooms	9813.82	3938.96	2.4915	0.01295	**
fireopen	6566.31	2848.36	2.3053	0.02143	**
liverfsft	11.9618	6.8346	1.7502	0.08051	*
numacres	-6485.36	8304.74	-0.7809	0.43511	
numbdrooms	-1307.53	2444.07	-0.5350	0.59283	
totalrooms	-1326.61	1442.08	-0.9199	0.35792	
yearbuilt	-2230.47	1633.26	-1.3657	0.17248	
halfbath	762.394	3166.79	0.2407	0.80982	
fullbath	1510.11	8846.57	0.1707	0.86454	
Dist_MnRod	16.498	2.10725	8.2050	<0.00001	***
Dist_CBD	-14055.1	14378.7	-9.7749	0.97749	

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.59226$
Adjusted $R^2 = 0.580221$
F-statistic (17, 717) = 40.8905 (p-value < 0.00001

Model 3:

Pittsburgh, OLS Model with Heteroskedasticity-corrected estimates using the 552 observations 1-552

Dependent variable: Sale Price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	-41782.8	11225	-3.7223	0.00023	***
HistStat	10564.96	720.23	14.6687	<0.00001	***
LotArea	12.0657	1.30762	9.2273	<0.00001	***
Stories	10577.6	3979.17	2.6583	0.00817	***
YearBuilt	8.08135	4.71964	1.7123	0.08761	*
TotalRooms	-83.3709	1909.63	-0.0437	0.96520	
Bedrooms	-738.058	2968.55	-0.2486	0.80378	
FullBaths	4308.88	4522.41	0.9528	0.34127	
HalfBath	1751.49	3808.37	0.4599	0.64583	
HeatingCooling	1854.52	2851.04	0.6505	0.51576	
Fireplaces	6229.15	2588.46	2.4065	0.01655	**
AttachGarage	7878.95	3982.37	1.9785	0.04856	**
FinishLivingAre/sqft	10.245	3.52486	2.9065	0.00386	***
View	4913.38	3260.39	1.5070	0.13259	
Dist_MnRod	4.18604	2.62676	1.5936	0.11180	

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.651225$
Adjusted $R^2 = 0.639139$
F-statistic (14, 404) = 53.8815 (p-value < 0.00001)

Model 4:

Phoenix, OLS Model with Heteroskedasticity-corrected estimates using 572 observations from 1-572
Dependent variable: Sale price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	-63848.7	15376.7	-4.1523	0.00004	***
fireopen	5522.47	3350.83	1.6481	0.09992	*
liverfsft	30.8048	6.97427	4.4169	0.00001	***
numacres	-5079.36	2384.11	-2.1305	0.03358	**
numbdrooms	1780.17	2017.91	0.8822	0.37807	
sqftbuild	8.34224	5.83223	1.4304	0.15319	
sqftflr2	1.62964	4.71752	0.3454	0.72989	
sqfrflrh	2.34819	5.57285	0.4214	0.67366	
totalrooms	459.608	1159.22	0.3965	0.69191	
halfbath	6310.01	3245.78	1.9441	0.05241	*
fullbath	615.295	3207.74	0.1918	0.84796	
Landscape	8209.3	1530.35	5.3643	<0.00001	***
Dsitance_CBD	-2.1687	1.36821	-1.5851	0.11354	
Distance_aminti	1.21087	1.3111	0.9236	0.35613	
HisSatus	12532.3	2794.58	4.4845	<0.00001	***
addlivarea	10.5982	7.7397	1.3693	0.17146	
airtype	7599.47	2889.11	2.6304	0.00877	***
atticsqft	20.332	11.3394	1.7930	0.07353	*
basegar	2929.05	2928.79	1.0001	0.31772	
basement	1441.29	1921.44	0.7501	0.45352	
extwalls	23.742	39.7864	0.5967	0.55093	
famlrooms	5639.87	3365.29	1.6759	0.09434	*
finvallnd	1.54347	0.0974388	15.8404	<0.00001	***

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.669327$
Adjusted $R^2 = 0.65463$
F-statistic (24, 540) = 45.543 (p-value < 0.00001)

Model 5: Dallas, OLS Model with Heteroskedasticity-corrected estimates using 462 observations from 1-463

Missing or incomplete observations dropped: 1
Dependent variable: sale price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
const	76048.1	21203.9	3.5865	0.00037	***
hisstat	8590.03	4790.8	1.7930	0.07353	*
Lndscp	9830.16	4968.49	1.9785	0.04856	**
addlivarea	9.35689	15.2882	0.6120	0.54083	
airtype	3595.22	6737.53	0.5336	0.59388	
atticsqft	32.0254	16.1158	1.9872	0.04751	**
garspace	4668.69	5146.14	0.9072	0.36478	
famlrooms	2673.43	10484.8	0.2550	0.79886	
fireopen	5017.0	3182.9	1.5762	0.11568	
heating	14513.8	3879.76	3.7409	0.00021	***
numacres	-15923.9	25035	-0.6361	0.52506	
totalrooms	-5446.66	3929.49	-1.3861	0.16641	
halfbath	4429.04	8595.42	0.5153	0.60661	
fullbath	870.937	8772.95	0.0993	0.92096	

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted R^2 = 0.466739
Adjusted R^2 = 0.440642
F-statistic (14, 447) = 6.38905 (p-value < 0.00001)

Model 6: Atlanta: Whittier Mill historic district and Paul non-historic comparison areas, OLS Model with Heteroskedasticity-corrected estimates using 373 observations from 1-374

Missing or incomplete observations dropped: 1
Dependent variable: Price

Variable	*Coefficient*	*Std. Error*	*t-statistic*	*p-value*	
Parkprox	7814.58	3737.79	2.0907	0.03727	**
Hisrcstus	22001.6	10383.5	2.1189	0.03480	**
Lndscp	-4436.55	7762.92	-0.5715	0.56802	
Distament	1.66260	0.78465	2.1136	0.03525	**
Livunit	34184.4	15191.5	2.2502	0.02505	**
Calcacres	-20331.2	8664.54	-2.3465	0.01951	**
Util	9690.22	20145.5	0.4810	0.63081	
Parkquanit	3922.38	676.474	5.7983	<0.00001	***
Stories	29235.9	18700.2	1.5634	0.11886	
D_Yrblt	5384.99	472.235	11.4032	<0.00001	***
Rmtot	2144.64	4735.87	0.4529	0.65094	
Rmbed	7045.07	7497.58	0.9396	0.34804	
Rmfam	1896.92	11522.7	0.1646	0.86933	
Fixbath	-8743.86	7852.68	-1.1135	0.26626	
Fixhalf	10922	13743	0.7947	0.42730	
Bsmt	11739.6	5220.85	2.2486	0.02516	**
Heat	12475.6	5345.08	2.3340	0.02016	**
Attic	22290.2	6455.23	3.4530	0.00062	***
garagcar	9200.13	11603.7	0.7929	0.42839	
DistcCBD	-8797.27	4153.3	-2.1181	0.03486	**

* indicates statistically significant at the 10 per cent level.
** indicates statistically significant at the 5 per cent level.
*** indicates statistically significant at the 1 per cent level.

Unadjusted $R^2 = 0.667994$
Adjusted $R^2 = 0.64913$
F-statistic (20, 352) = 35.411 (p-value < 0.00001)

Standard error of residuals = 101361

APPENDIX C

COLLINEARITY TESTS OF THE SIX CENTRAL CITIES MODELS

1. Collinearity test of Lorain, Cleveland Model

Variance Inflation Factors

Minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem

HISSAT	1.327
STORY	1.597
OPEN_PORCH	1.241
HEAT	1.037
BDRMS	1.659
BTHRMS	1.705
HLF_BTHS	1.066
FIREPLS	1.020
GAR_CAP	1.164
LOT_SQ_FT	1.211
VIEW	1.114
DISCBD_mile2	9.651
Distance_mroad1	9.357
AIR	1.052
BSMT_SQ_FT	1.409

VIF(j) = 1/(1 - R(j)^2), where R(j) is the multiple correlation coefficient between variable j and the other independent variables

Properties of matrix X'X:

1-norm = 2.0476477e+011
Determinant = 2.2523666e+066
Reciprocal condition number = 6.6180609e-012

2. Collinearity test of Betts-Longworth, Cincinnati Model

Variance Inflation Factors

Minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem

HisStat	1.462
View	1.283
Addlivarea	6.470
Airtype	1.115
Atticsqft	1.245
Basegar	1.166
Famlrooms	1.181
Fireopen	1.200
Liverfsft	8.455
Numacres	1.020
Numbdrooms	2.386
Totalrooms	4.277
Yearbuilt	1.022
Halfbath	1.189
Fullbath	1.874
Dist-MnRod	3.491
Dist-CBD	3.772

VIF(j) = 1/(1 - R(j)^2), where R(j) is the multiple correlation coefficient between variable j and the other independent variables

Properties of matrix X'X:

1-norm = 9.7795521e+009
Determinant = 9.3472899e+062
Reciprocal condition number = 1.3871367e-014

3. Collinearity test of Allegheny, Pittsburgh Model

Variance Inflation Factors

Minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem

HistStat	1.268
LotArea	1.235
SaleDate	1.135
Stories	1.605
YearBuilt	1.031
TotalRooms	5.379
BedRooms	4.899
FullBath	1.853
HalfBath	1.315
HeatingCooling	1.743
Fireplaces	1.399
AttachGarage	1.507
FinishLivingArea	2.612
View	1.159
Dist-MnRod	1.066

VIF(j) = 1/(1 - R(j)^2), where R(j) is the multiple correlation coefficient between variable j and the other independent variables

Properties of matrix X'X:

1-norm = 3.6203502e+011
Determinant = 4.725987e+061
Reciprocal condition number = 2.1353116e-014

4. Collinearity test of Junius Street Historic District and San Jacinto Street non-Historic District, Dallas Model

Variance Inflation Factors

Minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem
1.519

Fireopen	1.519
Liverfsft	7.789
Numacres	1.204
Numbdrooms	1.732
sqftbuild	1.542
Sqftflr2	2.558
Sqfrflrh	1.359
Totalrooms	2.698
Halfbath	1.200
Fullbath	1.984
Landscape	1.098
Dist-CBD	1.045
Dist-amint	1.034
HistSatus	1.079
Addlivarea	6.693
Airtype	1.177
Atticsqft	1.205
Basegar	1.259
Basement	1.104
Extwalls	1.256
Famlrooms	1.285
finvallnd	2.078

VIF(j) = 1/(1 - R(j)^2), where R(j) is the multiple correlation coefficient between variable j and the other independent variables

Properties of matrix X'X:

1-norm = 2.4201263e+012
Determinant = 1.2416894e+124
Reciprocal condition number = 1.2404561e-012

5. Collinearity test of Alvarado historic district and Palm Lane non-historic district, Phoenix Model

Variance Inflation Factors

Minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem

hisstat	1.042
Lndscp	1.030
Addlivarea	2.859
Airtype	1.057
Atticsqft	1.061
Garspace	1.080
Famlrooms	1.138
Fireopen	1.255
Heating	1.017
Numacres	1.182
Totalrooms	2.965
Halfbath	1.346
Fullbath	1.757

VIF(j) = 1/(1 - R(j)^2), where R(j) is the multiple correlation coefficient between variable j and the other independent variables

Properties of matrix X'X:

1-norm = 2.169373e+008
Determinant = 2.3549359e+038
Reciprocal condition number = 2.1205707e-009

6. Collinearity test of Whittier Mill historic district and Paul non-historic comparison area, Atlanta Model

Variance Inflation Factors

Minimum possible value = 1.0
Values > 10.0 may indicate a collinearity problem

Hisrcstus	1.394
Lndscp	1.083
Distament	1.350
Livunit	1.255
Calcacres	2.189
Util	1.191
Parkquanit	1.028
Stories	2.479
Yrblt	2.592
Rmtot	7.284
Rmbed	6.313
Rmfam	1.550
Fixbath	3.556
Fixhalf	1.758
Bsmnt	2.263
Heat	1.344
Attic	1.628
Garagcar	1.854

VIF(j) = 1/(1 - R(j)^2), where R(j) is the multiple correlation coefficient between variable j and the other independent variables

Properties of matrix X'X:

1-norm = 4.216366e+011
Determinant = 4.3313356e+056
Reciprocal condition number = 1.1237796e-014

APPENDIX D

DATA SAMPLES

1. Lorain North Historic District and Lorain South Non-historic District.

SALE	YRBUILT	HISSAT	SALEDATE	STORY	OPEN_PORCH	BSMTsqft	HEAT	AIR	BDRMS	BTHRMS	HLF_BTHS	FIREPLS
$18,500	1900	0	09/19/80	2	104	1832	1	0	4	2	0	0
$20,000	1900	0	09/23/80	2	0	760	1	0	4	2	0	0
$20,000	1890	0	09/23/80	1.5	0	532	1	0	3	1	0	0
$26,500	1914	0	10/02/80	1.5	130	660	1	0	3	1	0	1
$18,000	1900	0	10/17/80	2	0	1356	1	1	6	2	0	0
$21,500	1900	0	10/22/80	1.5	179	1340	0	0	4	1	0	0
$27,800	1890	0	10/28/80	2	272	1115	1	0	4	2	0	0
$33,900	1914	0	01/15/81	2	317	1220	1	0	4	2	0	0
$19,000	1885	0	02/20/81	2.5	326	840	1	0	4	2	0	0
$28,500	1917	0	03/02/81	2	0	1130	1	0	4	2	0	0
$22,000	1900	0	03/20/81	2	220	739	1	0	5	2	0	0
$35,900	1900	0	03/27/81	2	338	923	1	0	5	3	0	0
$17,000	1900	0	04/08/81	2	32	100	0	0	4	2	0	0
$17,800	1900	0	04/14/81	2	275	1088	1	0	5	2	0	0
$32,500	1900	0	04/20/81	1.5	280	800	1	0	3	1	0	1
$28,000	1885	0	05/05/81	2	342	1016	1	0	4	2	0	0
$20,800	1890	0	05/27/81	2	56	140	1	0	4	1	0	0
$20,000	1900	0	05/29/81	2	80	834	1	0	4	2	0	0
$20,000	1900	0	06/03/81	2	70	500	1	0	4	2	0	0
$16,900	1850	0	06/05/81	1.5	0		0	0	4	1	0	0

2. Betts-Longworth Historic Distinct and Comparison Non-designated District.

Saledate	HistStat	View	Saleprice	addlivarea	airtype	atticsqft	basegar	cooling	famlrooms	fireopen	liverfsft	numacres	numbdrooms	totalrooms	fullbath
1990	0	1	$100,000	1190	0	0	2	0	0	0	2354	0.15500	2	4	2
1990	0	1	$101,000	626	1	0	0	1	1	0	1333	0.09600	3	6	1
1990	0	1	$101,000	0	1	0	1	1	0	0	976	0.09000	2	6	1
1990	0	1	$105,000	789	1	0	0	1	1	1	1782	0.19000	3	7	1
1990	0	1	$106,500	950	1	0	2	1	0	0	1900	0.10300	4	8	2
1990	0	1	$107,500	964	1	0	0	1	0	1	2211	0.22100	4	7	2
1990	0	1	$115,000	1492	1	484	1	1	0	0	2523	0.20300	4	10	1
1990	0	1	$132,000	655	1	0	1	1	1	1	1483	0.10700	2	7	1
1990	0	1	$149,500	837	1	0	2	1	1	1	1907	0.17200	3	7	1
1990	0	1	$219,000	1222	1	0	1	1	0	1	2554	0.22200	4	12	2
1990	0	1	$332,500	1784	1	425	2	1	1	1	3108	0.25400	4	11	3
1990	0	0	$94,500	0	1	0	0	1	0	0	988	0.08300	2	4	1
1990	0	0	$96,930	962	0	312	0	0	0	0	1612	0.19900	3	7	2
1990	0	1	$102,600	0	0	0	0	0	0	0	834	0.22800	2	5	1
1990	0	1	$108,000	587	0	0	0	0	0	0	1154	0.10300	2	5	1
1990	0	1	$108,000	570	0	0	1	0	0	1	1203	0.10700	3	7	1
1990	0	1	$113,400	760	0	0	0	0	0	0	1520	0.09100	4	8	2
1990	0	1	$116,100	0	0	0	0	0	0	0	896	0.17200	2	5	1
1990	0	1	$116,100	461	1	0	0	1	0	0	1098	0.19900	2	6	1
1990	0	1	$118,530	358	0	358	1	0	0	0	1352	0.16000	2	5	1

3. Allegheny West Historic District and Allegheny East Non-Historic District.

SalePrice	HistStat	LotArea	SaleDate	Stories	YearBuilt	TotalRooms	Bedrooms	FullBaths	HalfBath	HeatingCooling	Fireplaces	AttachGarage	FinishLivingArea
$60,000	1	12400	1985	2	1924	4	3	2	0	0	0	0	1130
$13,000	0	2400	1985	2	1890	6	3	1	0	2	0	0	1350
$12,500	0	1300	1985	1	1939	2	1	1	0	0	0	0	636
$29,900	1	5000	1985	2	1935	2	1	1	0	0	0	1	769
$26,000	0	1180	1986	3	1927	8	4	2	0	2	1	0	1904
$48,000	1	6250	1986	2	1930	5	2	2	0	2	0	0	1248
$22,500	0	2201	1986	2	1924	6	3	1	0	2	0	0	1200
$68,000	1	5850	1987	2	1905	3	2	1	1	0	0	1	1243
$35,000	0	5000	1987	2	1920	7	4	1	0	2	0	0	1782
$71,500	1	6830	1987	1	1987	5	3	2	0	1	1	2	1248
$58,800	0	885	1987	2	1900	6	3	1	0	2	0	0	1752
$57,000	1	6631	1987	2	1896	6	3	1	0	2	0	0	2476
$36,000	0	1726	1987	2.5	1890	10	4	2	0	2	0	0	2376
$38,000	0	2353	1987	2	1940	6	3	1	1	2	0	0	1357
$34,000	0	6250	1988	1	1930	4	2	1	0	1	0	0	1012
$25,000	0	5880	1988	2	1930	5	2	1	0	2	0	0	1224
$69,900	0	5000	1988	2	1920	6	3	1	0	1	0	1	1300
$56,500	0	9020	1988	1	1968	6	3	1	0	2	0	1	936
$45,900	1	6250	1989	2	1930	8	4	1	1	1	0	0	2227

4. Alvarado Historic District and comparison district in Phoenix, Arizona

liverfsft	numacres	saleprice	numbdrooms	sqftbuild	sqftfin	sqftflr1	sqftflr2	sqfrflrh	totalrooms	yearbuilt	halfbath	fullbath	Landscape	Dsitance-CBD	Distance-amintis
1008	0.098	43200	2	624	1186	624	0	562	6	1925	0	1	0	1251	4607
812	0.207	53500	4	1048	2199	1048	928	0	9	1925	0	2	0	625	4116
2554	0.222	219000	4	704	1267	704	0	563	5	1925	0	1	0	2217	3738
988	0.083	35000	2	2588	4031	2588	0	1443	11	1925	0	2	0	3341	3851
1352	0.16	43900	2	288	288	288	0	0	2	1925	0	1	0	2024	3581
1622	0.172	59900	4	988	1976	988	988	0	8	1925	2	1	0	1978	5241
1393	0.161	58000	4	736	1472	736	736	0	7	1925	0	2	1	2888	5237
1112	0.129	54900	2	1024	1523	1024	0	499	6	1925	0	1	0	3326	5403
1520	0.096	45000	2	994	1780	994	786	0	6	1925	0	2	0	509	3977
2119	0.144	72000	4	792	1584	792	792	0	8	1925	0	2	1	458	4211
1300	0.342	49800	3	748	748	748	0	0	4	1925	0	1	0	3905	4882
1456	0.027	39900	2	559	1079	559	520	0	5	1925	0	1	0	631	4722
1140	0.956	38000	2	572	1144	572	572	0	6	1925	0	1	0	2929	4091
1184	0.121	45000	2	726	1074	726	0	0	5	1925	0	1	1	2212	4112
1153	0.11	42500	3	624	1061	624	0	437	5	1925	0	1	1	1348	4794
864	0.184	68000	2	866	1672	866	806	0	6	1925	0	1	0	625	6955
576	0.173	55000	2	816	816	816	0	0	5	1925	0	1	0	1871	4210
1168	0.076	53000	3	1272	2512	1272	912	0	7	1925	0	3	0	2365	5807
4031	0.52	228000	4	1468	2876	1468	1408	0	11	1925	0	4	1	1307	3641
888	0.094	35500	2	709	1156	709	0	447	6	1925	0	1	0	3890	4313
969	0.12	45000	2	760	1520	760	760	0	8	1925	0	2	0	880	6381
1055	0.083	67000	2	760	1660	760	900	0	9	1925	0	2	0	692	4789
1900	0.081	64800	3	1158	2681	1158	1078	0	10	1925	0	2	0	2868	5906
1147	0.133	25800	2	764	1186	764	0	422	7	1925	0	1	1	2217	3636
1564	0.205	119500	3	1215	1756	1215	0	541	6	1925	0	2	0	1225	5807
1656	0.153	30000	2	504	504	504	0	0	3	1925	0	1	0	2319	5249

5. Junius Street Historic District and, the comparison district, San Jacinto Street non-Historic District; Dallas of Texas.

slprice	datsale	hisstat	Lndscp	Livng-sqft	airtype	attic-sqft	gargspc	cooling	famlyrom	fireplc	heating	halfbath	fullbath	numacres	numbdrooms	sqftfin	totalrooms
106400	1996	0	0	363	0	363	1	0	0	0	1	0	1	0.1	3	1119	6
60000	1996	0	0	360	1	360	1	1	0	1	1	1	1	1.07	3	1126	6
96000	1996	1	0	202	0	202	0	0	0	1	1	0	2	0.161	2	1042	6
69900	1996	0	0	1170	1	0	0	1	1	2	1	1	3	0.334	4	3174	10
80000	1996	1	0	392	0	392	0	0	1	0	1	0	1	0.109	2	1208	5
59000	1996	1	0	0	1	0	0	1	0	0	1	0	1	0.105	2	956	5
41000	1996	0	0	439	0	439	1	0	0	0	1	0	1	0.178	4	1354	5
103000	1996	0	1	0	1	0	0	1	1	1	1	0	2	0.297	3	1964	7
54000	1996	0	0	0	0	0	1	0	0	0	1	0	1	0.111	2	832	5
75000	1996	0	0	242	1	242	1	1	0	0	1	0	1	1.148	1	1044	5
89000	1996	1	0	181	1	181	0	1	0	0	1	0	1	0.101	1	937	4
37000	1996	0	0	452	1	452	1	1	0	1	1	1	1	0.101	3	1416	7
68500	1996	0	0	323	1	323	0	1	0	0	1	0	1	0.118	2	995	6
88000	1990	0	0	0	1	0	0	1	0	1	1	0	2	0.652	2	1540	6
62000	1990	0	0	794	0	0	0	0	0	1	1	0	2	0.117	3	2115	6
82500	1990	0	0	422	1	0	1	1	1	1	1	0	1	0.182	2	950	5
113000	1990	0	1	413	0	413	1	0	1	0	1	1	1	0.177	2	1301	6
69000	1990	0	0	538	1	0	1	1	1	1	1	0	1	0.18	2	1210	5
101000	1990	0	1	413	1	413	1	1	1	0	1	0	1	0.176	4	1301	7
122500	1990	0	1	730	1	0	1	1	0	1	1	0	1	0.177	2	1642	7
123000	1990	0	1	213	1	213	1	1	1	0	1	0	1	0.129	1	1101	5
60000	1990	0	0	936	0	0	2	0	0	0	1	1	2	0.113	2	1894	6

6. Whittier Mill Historic District and Paul Avenue and the comparison non-Historic District; Atlanta of Georgia.

Saledt	Price	Hisrcstus	Lndscp	Distament	Livunit	Calcacres	Util	Parkprox	Parkquanit	Sf	Acres	Bsize	Stories	D Yrblt	Rmtot	Rmbed	Rmfam	Fixbath	Fixhalf	Bsmt
1990	93000	0	0	1325	1	2.04	1	1	2	43560	1	1	2	1935	9	3	0	2	0	2
1990	94000	0	0	1456	1	0.2617	1	1	2	11400	0.2617	9000	1	1935	9	4	0	2	0	3
1990	98300	0	0	1108	1	0.6772	1	1	2	29500	0.6772	18000	2	1935	8	3	0	3	1	3
1990	90100	0	0	1209	1	0.6772	1	1	2	29500	0.6772	18000	2	1935	8	3	0	3	1	3
1990	89000	0	0	1976	1	1.4463	1	1	2	63000	1.4463	18000	2	1935	9	4	1	3	1	3
1990	87250	0	0	1347	1	1.4463	1	1	2	63000	1.4463	18000	2	1935	9	4	1	3	1	3
1990	87000	0	0	1001	1	0.98	1	1	2	42688	0.98	18000	1	1935	2	1	0	1	0	4
1990	88300	0	0	1287	1	0.4752	1	1	2	20700	0.4752	18000	2	1935	7	3	0	2	0	4
1990	95000	0	0	1910	1	0.4752	1	1	2	20700	0.4752	18000	2	1935	3	1	0	1	0	4
1990	95000	0	0	1430	1	0.9206	1	1	2	40100	0.9206	18000	1.5	1935	5	2	0	1	1	2
1990	97051	0	1	1576	1	0.2312	1	1	2	10070	0.2312	9000	1	1935	8	3	2	3	0	4
1990	89000	0	0	1760	1	0.6772	1	1	2	29500	0.6772	18000	2	1935	8	3	0	3	1	3
1990	99000	0	1	1984	1	0.1699	0	1	2	7400	0.1699	9000	1	1935	4	2	0	1	0	2
1990	88000	0	0	980	1	2.04	1	1	2	45302	1.04		2	1935	9	3	0	2	0	2
1990	91000	0	1	670	1	0.6772	1	1	2	29500	0.6772	18000	2	1935	8	3	0	3	1	3
1990	92000	0	0	1870	1	0.7475	1	1	2	32560	0.7475	18000	2	1935	8	4	0	4	2	4
1990	94665	0	1	650	1	0.6772	1	1	2	29500	0.6772	18000	1	1935	1	1	0	1	0	2
1990	95000	0	0	470	1	2.04	1	1	2	45302	1.04		2	1935	9	3	0	2	0	2
1990	92000	0	0	654	1	0.6772	1	1	2	29500	0.6772	18000	1	1935	1	1	0	1	0	2
1990	93000	0	1	873	1	2.04	1	1	2	45302	1.04		2	1935	9	3	0	2	0	2
1990	97000	0	1	548	1	1.0953	1	1	2	47712	1.0953	18000	1	1935	4	2	0	1	1	1
1990	88000	0	1	974	1	0.8449	1	1	2	36805	0.8449	18000	1	1935	8	3	1	3	1	4
1991	100000	0	0	1579	2	0.0922	1	1	2	4016	0.0922	7500	1	1930	6	3	0	1	1	2
1991	100000	0	0	1670	2	0.0922	1	1	2	4016	0.0922	7500	1	1930	6	3	0	1	1	2
1991	100000	0	0	1840	2	0.0922	1	1	2	4016	0.0922	7500	1	1930	6	3	0	1	1	2
1991	100000	0	0	1950	2	0.1148	1	1	2	5000	0.1148	7500	1	1920	7	5	0	2	0	2
1991	100000	0	0	1798	2	0.1148	1	1	2	5000	0.1148	7500	1	1920	7	5	0	2	0	2
1991	101250	0	1	980	2	0.1148	1	1	2	5000	0.1148	7500	1	1920	7	5	0	2	0	2

APPENDIX E

STATES TAX CREDITS FOR HISTORIC PRESERVATION

- State Tax Credits for Historic Preservation; Ohio, Pennsylvania, Texas, Georgia, and Arizona States Summary.
- Source: National Trust for Historic Preservation, Washington D.C., July 2007

State Contact	State Income Commercial Tax Credit	State Income Tax Credit for Homeowners	Program Details
Arizona State Historic Preservation Office 602-542-4009 www.pr.state.az.us/partnerships/shpo/shpo.html			Arizona does not offer a rehabilitation tax credit
Georgia Georgia Historic Preservation Division 404-656-2840 www.dnr.state.ga.us/dnr/histpres	20% rehabilitation tax credit for eligible income-producing properties.	10% credit for owner-occupied properties in non-target area; 15% for owner-occupied properties in target area.	Cap: $5,000 per project; annual statewide cap. Minimum investment: none Transferability: carry forward 10 years.
Texas Texas Historic Preservation Commission 512-463-6100 www.thc.state.tx.us			Texas has no state income tax

Pennsylvania Pennsylvania Bureau for Historic Preservation 717-787-4363 www.phmc.state.pa.us/bhp/overview.asp?secid=25			Pennsylvania does not offer a rehabilitation tax credit
Ohio Ohio Historic Preservation Office 614-298-2000 www.ohiohistory.org/resource/histpres	25% of qualified rehabilitation expenditures for approved projects can receive state credit. Credit is fully refundable	25% of qualified rehabilitation expenditures for approved projects can receive state credit. Credit is fully refundable	Cap: Program is limited to 100 projects per year for two years. Applications to be accepted in the order filed. The Ohio Department of Development (ODOD) must conduct a cost benefit analysis on each proposed project; only projects that will result in a net gain in state and local taxes will be approved. ODOD must determine that the tax credit is a major factor in applicant's decision to rehabilitate the building or increase the level of investment in the building.

Ohio Historic Preservation Tax Credit

Program Summary:

A refundable tax credit is available to the owner of a historic building who applies for and receives a tax credit certificate from the Ohio Department of Development. The credit can be claimed against the building owner's Ohio corporate franchise tax, personal income tax, or dealer-in-intangible tax liability. The credit is equal to 25% of the owner's qualifying rehabilitation expenditures incurred in the rehabilitation of a historic building. By direction of the General Assembly, not more than 100 tax credit certifications can be approved by the Director of Ohio Department of Development each year of a two-year period beginning on July 1, 2007. Each program year, applications will generally be considered in the order in which they are filed with the Ohio Historic Preservation Officer, although applications can be considered at the discretion of the Director in order to ensure a mixture of high and low cost historic preservation projects receive the credits. The Director may approve an application if, after consultation with the Ohio Historic Preservation Officer and the Ohio Tax Commissioner, the Director determines that:

- The applicant is the fee simple owner of the building described in the application.
- The building is listed on the National Register of Historic Places, is located in a registered historic district and is certified by Ohio's Preservation Officer as being of historic significance to the district, or is listed as a historic landmark by a certified local government.
- The rehabilitation work as described in the application is consistent with the United States Secretary of the Interior's Standards for Rehabilitation.
- The issuance of an Ohio Historic Preservation Tax Credit is a major factor in the applicant's decision to rehabilitate the historic building or to increase the level of investment in the rehabilitation of the historic building.
- Rehabilitation of the historic building will result in a net revenue gain in state and local taxes once the historic building is used.

Source: Ohio Historic Preservation Office
www.ohiohistory.org/resource/histpres/ Retrieved on February 16th, 2008

Ohio Awards Historic Preservation Tax Credit Recipients
COLUMBUS, Ohio (November 27, 2007) — The $120 million Ohio Historic Preservation Tax Credit program will provide recipients tax credits equal to 25 percent of qualified rehabilitation expenditures.

Ohio economic development officials recently announced 11 awards through the Ohio Historic Preservation Tax Credit program, which awards refundable tax credits to owners of historic buildings who renovate and rehabilitate the buildings in preparation for commercial or residential uses.

The $120 million Ohio Historic Preservation Tax Credit program will provide recipients tax credits equal to 25 percent of qualified rehabilitation expenditures. Ohio's Historic Preservation Office must determine that rehabilitation plans comply with United States Interior Department Standards for Treatment of Historic Properties.

"Ohio's communities are full of unique historic buildings that are irreplaceable and vital to preserving the history and heritage of those communities," said Lt. Governor Fisher, who also serves as Director of the Ohio Department of Development. "The re-development of these buildings not only preserves a community asset, but holds great potential for spurring economic development and creating jobs."

The 11 recipients announced will invest more than $147 million combined in projects to rehabilitate historic buildings for re-development. 103 applications for the Ohio Historic Preservation Tax Credit program have been submitted to date, and review of the remaining applications by the Department and Ohio's Historic Preservation Office continues.

A list of the Ohio Historic Preservation Tax Credit recipients follows:

Selle Gear Co. (Akron, Summit County)
Total project investment: $3.7 million
Estimated qualified rehabilitation expenditures: $3,207,252
Total estimated value of credit: $801,813

Sunshine Cloak Co. Building (Cleveland, Cuyahoga County)
Total project investment: $7.5 million
Estimated qualified rehabilitation expenditures: $6,472,220
Total estimated value of credit: $1,618,055

M.T. Silver Building (Cleveland, Cuyahoga County
Total project investment: $9.6 million
Estimated qualified rehabilitation expenditures: $9,005,000
Total estimated value of credit: $2,251,250

William Taylor, Son & Co. Department Store - The 668 Euclid Building (Cleveland, Cuyahoga County)
Total project investment: $55.9 million
Estimated qualified rehabilitation expenditures: $65,617,753
Total estimated value of credit: $16,404,438

John Hartness Brown Building (Cleveland, Cuyahoga County)
Total project investment: $27.4 million
Estimated qualified rehabilitation expenditures: $23,023,200
Total estimated value of credit: $5,755,800

Cleveland Athletic Club Building (Cleveland, Cuyahoga County)
Total project investment: $23.2 million
Estimated qualified rehabilitation expenditures: 16,586,400
Total estimated value of credit: $4,146,600

Second National Bank Building (Hamilton, Butler County)
Total project investment: $972,608
Estimated qualified rehabilitation expenditures: $937,888
Total estimated value of credit: $234,472

Howell-Sohngen Building (Hamilton, Butler County)
Total project investment: $3.2 million
Estimated qualified rehabilitation expenditures: $3,106,754
Total estimated value of credit: $776,689

Davis-McCrory Building (Hamilton, Butler County)
Total project investment: $1.8 million
Estimated qualified rehabilitation expenditures: $1,817,158
Total estimated value of credit: $454,290

Hotel Onesto (Canton, Stark County)
Total project investment: $6 million
Estimated qualified rehabilitation expenditures: $5,803,200
Total estimated value of credit: $1,450,800

The Hotel Reiger (Sandusky, Erie County)
Total project investment: $7.2 million
Estimated qualified rehabilitation expenditures: $7 million
Total estimated value of credit: $1,750,000

The Ohio Historic Preservation Tax Credit program was authorized for a two-year period beginning July 1, 2007. The program is administered by the Ohio Department of Development with assistance provided by the Ohio Historic Preservation Office of the Ohio Historical Society and the Ohio Department of Taxation.

For more information about the Ohio Historic Preservation Tax Credit and application procedures, visit http://www.odod.state.oh.us/edd/OHPTC/.

Source:

Expansion Management Magazine, November 27th 2007
www.expansionmanagement.com/SMO/articleviewer/default.asp