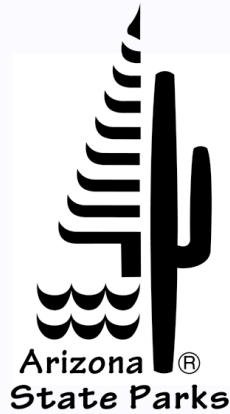


**State and Municipal Historic Preservation Incentive Programs
and Residential Property Values: A Case Study of Phoenix,
Arizona (2007)**

and

2013 Update

**William S. Collins
State Historic Preservation Office
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State and Municipal Historic Preservation Incentive Programs and Residential Property Values: A Case Study of Phoenix, Arizona

Summary. Economic analyses of the effects of historic preservation programs on property values have generally focused on neighborhoods designated as historic districts at the federal, state, and/or local levels. Such designations, however, serve as proxies for a variety of governmental activities—incentive programs and property restrictions—each of which may have differing effects. This study expands upon the existing literature by disaggregating a number of historic preservation programs at work in the case study of Phoenix, Arizona. While the general conclusion is consistent with previous studies in other locales that historic designation has no negative impact on property values and is often associated with accelerating values versus comparable properties, the disaggregating of the historic property data into particular neighborhoods and specific programs leads to conclusions sometimes counter to naïve attributions of cause and effect. Factors such as property tax reductions and rehabilitation grants are found to have a larger impact over time than merely designating a neighborhood as a historic district. The accelerated rise in property values observable here and in other studies is better explained by an examination of tangible actions and programs directly affecting individual property and neighborhoods.

1. Introduction

The effect of historic preservation (HP) programs on private property values has been a major concern since the inception of the preservation movement. Agencies of the federal, state, and local governments charged with administration of HP programs have tried to satisfy this concern by sponsoring economic studies of these effects. Their cumulative conclusion over the past two decades has generally been positive, that is, HP activities have been found to be associated with property value increases at least no less than that of comparable property in the same locale, and sometimes considerably accelerated. These findings have been widely circulated among HP advocates and are accessible in popular publication formats [e.g., Rypkema, (1994, 2nd Ed. 2005); Listokin *et al* (2002); Lennox and Revels (n.d.); Washington Department of Archaeology and Historic Preservation (2006)]. The current state of the literature on the economic impact of HP programs is evaluated in The Brookings Institution report “Economics and Historic Preservation: A Guide and Review of the Literature” (Mason, 2005). That report cites property value studies as one of the largest categories of economic analyses, reflecting the broad concern over the question repeatedly posed by HP skeptics.

Many studies focus on the single factor of official designation of properties as historic, especially the designation of neighborhoods as residential historic districts. An early study by Ford (1989) found a positive correlation between designation and house values in Baltimore, with the qualification that there was weak evidence of the neighborhood already having a relatively higher value prior to designation. A study of municipally designated districts in Alabama, for instance, found that the event of district designation had an immediate and large positive effect on property values in Montgomery, Decatur, and Birmingham (Deravi, 2002). A widely cited New Jersey study calculated that approximately 5 percent of the value of historic property could be attributed to “the value-enhancing effect of historic designation” (New Jersey Historic Trust, 1998, p. 6). A comparative study of nine cities in Texas concluded “historic designation is associated with average property value increases ranging between 5 per cent and 20 per cent of the total property value” (Leichenko *et al*, 2001, p. 1984). The report on a study of four communities in South Carolina was also positive, with house prices in historic districts in Columbia, for example, reported to have increased 26 percent faster than the general market, that is, 7.3 percent compared with 5.8 percent for the whole of Columbia (South Carolina Dept. of Archives & History, 2000). One of the most recent studies in the State of Washington found a “slightly faster” rate of appreciation in historic districts in Bellingham and Tacoma and rough equivalence to comparable non-designated property in Ellensburg and Spokane (Dadswell and Beyers, 2006, p. 13).

There is no single, uniform program of historic designation. Such designations can be made by federal, state, and/or local officials, and many historic districts have multiple levels of designation. Each level of designation has unique implications in terms of regulatory control over private property and the availability of incentives for the preservation of historic property. The federal National Register of Historic Places (NRHP), administered by the National Park Service, provides the only designation with nationally standardized criteria of eligibility. Many state and local registers have their own criteria, and even when they adopt the NRHP criteria, they lack the uniformity imposed by a single administering body. The NRHP imposes no restrictions or requirements on property owners. Such protection as it affords derives from the regulatory provisions of the National Historic Preservation Act of 1966, as amended, that requires federal agencies to take into account in their planning the effects of their undertakings on NRHP listed or eligible properties, including districts. A federal rehabilitation tax credit program affects only commercial properties, which are not our present concern. State registers generally also do not directly affect private property owners except through linked incentive programs. Listing in a state register may be an eligibility requirement for a grant or tax benefit, but no control is imposed on a property owner, for example in the form of an easement, unless the owner first chooses to take advantage of the benefit. It is cities and towns, through their zoning powers, that may impose restrictions on owners of historic property. Typically, such controls come into play when an owner applies for a building or demolition permit. The provisions of local HP zoning regulations vary considerably. Furthermore, there are tax, grant, and other benefits available in some communities and not others, important factors to bear in mind in comparing economic impact studies.

As a distinct field of study, historic preservation economics has not attracted wide attention from urban economists. The existing studies are nearly all sponsored by HP advocacy organizations working with contract economists. The State Historic Preservation Offices are common patrons of such work, providing much of the data, determining the research questions examined, and publishing the results. As yet there is no general, disinterested evaluation of findings and methodology, a task not undertaken in The Brookings Institution study. Because sponsoring HP organizations, whose staffs are not trained in economic analysis, typically focus on summary 'popular publications,' there is a danger of over-generalized and optimistic conclusions being given wide circulation while the more guarded and circumspect conclusions of technical reports are neglected. Only a small portion of HP economic studies appear in academic journals and so undergo systematic peer review. Property values studies (as in the present case) generally employ similar methods, e.g., hedonic modeling, event analysis, and trend analysis, but vary considerably in the nature of their data sets and choices by the researchers.

The study of historic districts in four communities in Washington used a nonrandom selection of comparison neighborhoods, treated as alike in all relevant characteristics except their historic designation (Dadswell and Beyers 2006, pp. 12-13). The study of eight communities in Florida likewise compared historic districts with non-randomly selected property (Listokin *et al*, (2002). Yet because HP designations are supposed to be selective of the 'best' properties of their type, both in terms of architectural significance and physical integrity, the results were, *a priori*, likely be biased in favor of the historic district. In the designation event study of the Garden District of Montgomery, Alabama, data from the year prior to the district's designation was ignored on the claim that it represented speculation, a data point which, had it been included, would have reversed the study's conclusion (Deravi, 2002, p. 8). A problem in resale studies is the failure to identify whether a subject property was rehabilitated in the interim between first and second sale. Very small sample sizes, typical in HP economics studies, can also be a problem leading to erratic patterns of sales prices from year to year or large standard errors in hedonic models, statistical qualifications rarely reported in popular publications.

Less cited in advocacy publications are studies that report ambiguous or negative relationships between property values and designation or, even more important, suggest alternative relationships that may have a greater explanatory power than the factor of designation. Asabere and Huffman (1991) examined the effects of district designation on the value of vacant lots and found a strongly positive correlation between price and NRHP designation and only weak evidence of a positive effect associated with local designation. Schaeffer and Millerick (1991) found a positive relationship between house price and NRHP designation and a negative association with local

designation. A study of apartment buildings in Philadelphia by Asabere *et al* (1994) concluded that local designation had a strongly negative influence on property values. Two important, though neglected studies suggest that the focus on historic designation obscures underlying real factors that are more influential in affecting house price. Lockhard and Hinds (1983) examined the incidence of historic property rehabilitations in Charleston, South Carolina, and found a greater correlation between house values and architectural qualities such as fashionable historic styles than with historic designation. This finding was amplified by Asabere *et al* (1989) in a study of Newburyport, Massachusetts, in which the variable for historic district dropped out of statistical significance after controlling for the influence of different style types. These findings suggest that it is the particular qualities of houses that appeal to home buyers, not a nominal designation as historic that is influencing value.¹

A significant problem, a trap even, awaiting naïve application of economic methods to historic preservation questions is the sponsoring agency's lack of familiarity with economic and statistical methods (economists' lack of familiarity with the subtleties of HP programs is another). In particular, when regression analyses of property values indicates a correlation between historic designation and higher market value, the implication is too quickly made that the designation *causes* higher prices. Whether consultants provide adequate warning to their clients about this potential problem is unknown, but certainly advocates are unlikely to deeply probe superficially positive results (a notable exception is New York Independent Budget Office [2003]).

At the risk of oversimplification, it can be said that historic district designations are sought after for two reasons. The first is as a means to stabilize and revitalize residential neighborhoods that have suffered from many years of disinvestment. Preservation is an alternative to the 'clean slate' method of urban renewal characterized by demolition and new construction that has come under increasing criticism. The rehabilitation of existing buildings can be a cost effective means of conserving housing resources and removing blight, while at the same time preserving structures of historic or architectural significance that are valued by their communities for other than economic reasons. The second reason is to prevent already highly valued neighborhoods from sliding into a pattern of abandonment and disinvestment or to protect them from a particular threat. In the first case, property values will likely be below the community's average, initially. In the second this may not be the case. Aggregating data for historic districts will tend to hide the experiences of particular neighborhoods.

Taking first the case of the decayed neighborhood, virtually all HP economic studies fail to take into consideration other factors that might affect revitalization efforts. These might include special tax benefits, grants—some bearing the title of historic preservation others funded by programs such as HUD Community Development Block Grants—and design review for new construction and rehabilitation. In addition to formally HP programs other factors at play might include the activities of law enforcement, anti-blight ordinances, non-governmental organizations, neighborhood activism, and private investment. Many of these factors represent programs or interests that are just as likely, perhaps justifiably, to claim the neighborhood's improvement as the result of their actions as historic preservationists. In addition, little notice is paid to the fact that historic designation in and of itself does nothing physically to properties that might enhance their value. The designation does little other than announce that a place has importance and is worthy of preservation. Review of new construction and demolition is not a factor until a property owner actually proposes to do something. There may be psychological value deriving from designation such as pride among residents or anticipation of future gains, but there is little *a priori* reason to expect such factors to greatly affect market values as compared to real activities such as those listed above. The focus on district designation assigns that factor a disproportionate weight of implications that are properly attributable elsewhere.

This study does not pretend to give all potential factors relating to residential neighborhood revitalization their due. Rather, it tries to demonstrate the value of disaggregating different programs associated with historic preservation in order to distinguish the relative contribution of each. Phoenix, Arizona is particularly useful as a case study because it has an active HP program that includes local district designations with their accompanying HP zoning overlay, a local exterior rehabilitation grant program, NRHP designation of historic districts, and a substantial state property tax (SPT) reclassification program. Unlike most other HP economic studies, this

case study takes advantage of a very large pool of data and so avoids the ambiguities resulting from small samples.

2. Data

The data for this study was gathered from a number of sources. The Maricopa County Assessor's Office provided information related to the physical characteristics of the property, including the square footage of interior space, the size of the lot in square feet, the presence or absence of a swimming pool, and the property's classification (Class ###). The class variable represents an evaluation by the Assessor on the property's overall quality. The largest class is 131 and in this model is omitted as a separate variable so that all other class coefficients represent differences compared with that base. The first digit indicates a single family dwelling and the last that it is in an urban, subdivided parcel. The middle digit indicates the property's quality. In general, properties of class 111 and 121 are very small or substandard housing, while 151 and above are custom houses. Classes 131 and 141 are typical tract housing. There were no properties of class 171 and because there were only two cases of class 191 out of a sample of $n=12033$ for 2006 they were omitted. The Assessor's database and maps also provided information on sales prices going back to 1993 and on location attributes such as whether the property was located on a corner, in a gated community, or located adjacent to an amenity such as a green belt, golf course, lake, or mountain preserve. From the U.S. Census of 2000 was taken data on the median commute time to work in minutes by census block groups and other demographic data. The City of Phoenix historic preservation office provided information on properties that had received funds from its exterior rehabilitation grant program and on the boundaries of its municipally designated historic districts. Information on properties within NRHP-listed districts and on properties receiving the state's property tax reduction for historic properties was gathered from the State Historic Preservation Office.

The data set is a very large sample of annual sales from 30 zip code areas within the boundary of the City of Phoenix. The data on sales prices is from Information Source at azcentral.com, a real estate information website sponsored by *The Arizona Republic*, the state's largest newspaper. These zip code areas represent nearly all of the developed area within Phoenix at the time of the federal census of 2000. Omitted areas were largely undeveloped agricultural or recently annexed regions of anticipated development. Although many houses existed in these areas by 2006, most are in areas that did not have census tract data. The data falls short of the complete population of sales within the study area because of a small number of cases where certain property characteristic data was missing or where accuracy was ambiguous.

3. Hedonic Modeling

Aggregated factor OLS model

Hedonic modeling has been for some three decades a standards method of evaluating residential property values and needs little explanation here. Residential properties have proven especially amenable to this method because the psychological aspects of housing demand are more easily disaggregated into a set of attributes for which purchasers seem able to express particular demand. Hedonic models include a variety of physical and location factors as independent variables. Thus, the application of multiple regression techniques for market price on various housing characteristics has yielded satisfying results, both practically and theoretically.² The primary purpose of this study is to demonstrate the value of extending this technique beyond its common application in the HP literature. This is done by disaggregating the term for HP designation into more meaningful, individualized property characteristics. This suggests that HP designation can be considered a proxy for other, perhaps more "real" factors affecting property value.

To appreciate the value of disaggregating the HP designation variable it will be useful to apply the common method, i.e., the aggregate factor model to the Phoenix case study data. The common model takes market sales price (some studies use assessed value if market data is unavailability) as the independent variable, which is regressed using Ordinary Least Square (OLS) on a number of independent attribute variables. These independent variables include physical features of the

property, such as square footage of the house, number of bathrooms, number of car spaces, lot size, etc., the choice depending on what data is readily available. Location attributes are sometimes included, e.g., distance to downtown. Historic designation is treated as an indicator variable for whether the property is inside or outside a designated historic district.

In this study, the dependent variable is natural log of market price for house sales recorded in 2006. Independent variables include the following physical features: natural log of the house square footage, natural log of the lot size, the age of the property, and indicator variables for the Assessor's classification and the presence of a swimming pool. Location attributes are the mean time to work in minutes, an indicator variable for whether the property is located on a corner, and a categorical variable of cumulative special location attributes, such as a gated community or being adjacent to a golf course, green belt, mountain preserve, etc.³ Historic designation is another indicator variable. The results are displayed in Table 1. All independent variable coefficients had p values of 0+ except those for a Corner location (p=0.023) and Class111 (p=.002).

The coefficient for historic designation, 0.320 can be converted to an approximate percentage effect using the formula $100(e^b-1)$, which yields a value of 37.7 percent, which is to say that properties within historic districts area are associated with a sales price approximately 37.7 percent higher than comparable properties outside historic districts. This does not imply that HP designation *causes* the higher value. The question of causation is investigated further below.

Disaggregated factors OLS model

The historic district variable can be broken down into a number of more specific HP-related variables. This requires a detailed explanation of the different HP programs at work in the Phoenix context, some of which are common to other communities, others unique. First, as described previously, there are two levels of designation potentially at work, federal and local. Most studies

Table 1.

	<i>Aggregated Model (2006 Data)</i>				<i>Disaggregated Model (2006 data)</i>				<i>(2003 Data)</i>			
	<i>B</i>	<i>se</i>	<i>t</i>	<i>Sig.</i>	<i>B</i>	<i>se</i>	<i>t</i>	<i>Sig.</i>	<i>B</i>	<i>se</i>	<i>t</i>	<i>Sig.</i>
(Constant)	6.734	0.083	81.309	0.000	6.737	0.083	81.656	0.000	6.080	0.070	86.305	0.000
LnSqFoot	0.555	0.010	57.143	0.000	0.552	0.010	56.970	0.000	0.624	0.009	72.951	0.000
LnLotSize	0.232	0.008	30.444	0.000	0.234	0.008	30.788	0.000	0.189	0.006	30.326	0.000
Pool	0.055	0.006	9.509	0.000	0.055	0.006	9.521	0.000	0.072	0.005	14.854	0.000
Age	-0.003	0.000	-19.443	0.000	-0.003	0.000	-19.896	0.000	-0.004	0.000	-28.620	0.000
Corner	-0.014	0.006	-2.276	0.023	-0.014	0.006	-2.207	0.027	-0.016	0.005	-3.117	0.002
LocFeat	0.111	0.012	9.171	0.000	0.111	0.012	9.199	0.000	0.115	0.008	14.371	0.000
Class 111	-0.104	0.034	-3.056	0.002	-0.103	0.034	-3.038	0.002	-0.211	0.035	-6.083	0.000
Class 121	-0.153	0.013	-11.341	0.000	-0.152	0.013	-11.319	0.000	-0.127	0.013	-9.776	0.000
Class 141	0.326	0.008	40.346	0.000	0.326	0.008	40.443	0.000	0.277	0.006	44.446	0.000
Class 151	0.606	0.020	30.906	0.000	0.605	0.020	30.953	0.000	0.610	0.014	42.280	0.000
Class 161	0.778	0.063	12.435	0.000	0.778	0.062	12.479	0.000	0.985	0.054	18.322	0.000
Class 181	0.154	0.019	8.029	0.000	0.159	0.019	8.293	0.000	0.224	0.019	11.822	0.000
Time_work	-0.014	0.001	-27.555	0.000	-0.014	0.001	-27.304	0.000	-0.015	0.000	-34.025	0.000
Hist_district	0.320	0.015	21.964	0.000								
Con_spt					0.451	0.025	18.375	0.000	0.531	0.020	26.625	0.000
Con_no_spt					0.340	0.028	12.330	0.000	0.332	0.021	16.076	0.000
Noncon					0.281	0.044	6.334	0.000	0.188	0.036	5.289	0.000
Phx_district					0.169	0.024	7.043	0.000	0.117	0.022	5.454	0.000
Phx_grant					0.122	0.069	1.753	0.080	0.107	0.062	1.737	0.082

ignore the federal designation because it is perceived as largely an honorary status lacking a real regulatory effect (an exception can be found in Rypkema 1997). Arizona, however, links its SPT reduction incentive to National Register, but not local register listing. This means that properties listed in the National Register qualify for a property tax reduction of up to 50 percent.⁴ This makes the federal designation a potentially important variable to consider. Economic theory would suggest that the market should to some extent capitalize the value of this lower tax rate in the value of the property. There are a total of 35 local historic districts, of which 18 are also NRHP listed. Because of the large sample size of sales (N = 12033, of which 351 are within historic districts), the model here sustains much finer distinctions of variables than are possible in more common, small sample studies.

The disaggregation can be carried further than simply distinguishing NRHP from local designation. Local designation applies the zoning overlay regulations on all properties within the district's boundary, regardless of whether the property is genuinely considered historic. The federal designation on the other hand distinguishes between what are termed "contributors" and "noncontributors." The former meet the age and integrity criteria of the NRHP, while the latter are either not yet old enough or have been so altered that they no longer convey their historic character. Only properties with contributing status qualify for the SPT reduction. Furthermore, because the SPT program is voluntary there are some contributors receiving the tax advantage and others not.⁵ Additionally, the City of Phoenix has its own incentive program of grants of up to \$10,000 for exterior repair available for properties within its historic districts.

Instead of a single variable for HP designation, this model uses five to distinguish the various HP programs.⁶ There are indicator variables for contributing properties receiving the lower tax rate, contributing properties not receiving the lower tax rate, noncontributing properties (properties within NRHP districts that do not qualify for the tax program), location within a city, but not a NRHP district, and, finally, for whether the property has received a grant. The use of an indicator variable for the grant program factor rather than a dollar amount is justified because while the amount of the grant is known, the grant typically represents only a portion, and sometimes a very small portion of a larger rehabilitation project. This variable does not so much find the dollar-for-dollar effect of a grant as it proxies the fact that a property has undergone rehabilitation.

The coefficient signs present no surprises. Market value is positively associated with physical features such as the size of the house and lot and the presence of a pool. The special location features have a significant positive relationship. The coefficient of 0.111, which corresponds to a percentage value of approximately 11.7 percent, implies, for example, that a property located within a gated community would have a value premium of that amount over a house with the same characteristics located outside a gated community. The coefficients for the quality classes are negative for the two substandard classifications (Class 111 and 121) and positive for the remainder (with Class 131 being the standard). Age, time to work, and a corner location have negative coefficients, although the latter has a relatively lower level of significance ($p = 0.027$).⁷

The coefficients for the five HP factors are all positive, but with distinctive values that follow a pattern. Expressed as percentages, they say that, first, a house that is a contributor in a NRHP historic district that is receiving the state's property tax benefit (**Con_spt**) is associated with a price premium of approximately 57.0 percent over comparable property outside any historic district and not receiving the lower property tax rate. A contributing property within a district, but whose owner has not entered the tax program (**Con_no_spt**) also has a price premium over comparable non-historic property, but of only approximately 40.5 percent. A property within a NRHP district that is classified as noncontributing (**Noncon**) and so is ineligible for the lower tax rate is associated with a price premium of about 32.4 percent. Houses within a locally, but not NRHP designated historic district (**Phx_district**) have a price premium of about 18.4 percent. The final factor, receipt of a city exterior rehabilitation grant (**Phx_grant**), which can be for a property in either a locally or NRHP districts has a market value of approximately 13.0 percent, although with a relatively high standards error and subsequently wider confidence interval. Again, this factor proxies a property having undergone a rehabilitation, but one of unknown extent.

In 2004 and 2005, the metro Phoenix housing market experienced an unprecedented inflation in housing prices. Within the 30 zip code areas sample of this study, the median per square foot house price increased from \$100 in 2003 to \$175 in 2006. Given the scope of this upheaval, it is

useful to compare the above findings with what characterized the market previously. Therefore, the model was also applied to 2003 data.

The magnitudes of the factor coefficients in 2003 differ little from those in 2006 and all signs are consistent. Among the non-historic factors the elasticity of price on square footage declined from 0.624 in 2003 to 0.552 in 2006. The factor for quality class 111 increased from -0.211 in 2003 to only -0.103 in 2006, which implies a closing of the gap between the values of the most substandard housing and the typical house. This is compatible with the commentary of real estate analysts that the housing price rise beginning in 2004 was driven by an influx of investment funds that purchased first the lowest end housing, in effect drying up the bargain housing supply, which subsequently in 2005 spread to near panic buying among all classes of housing.⁸

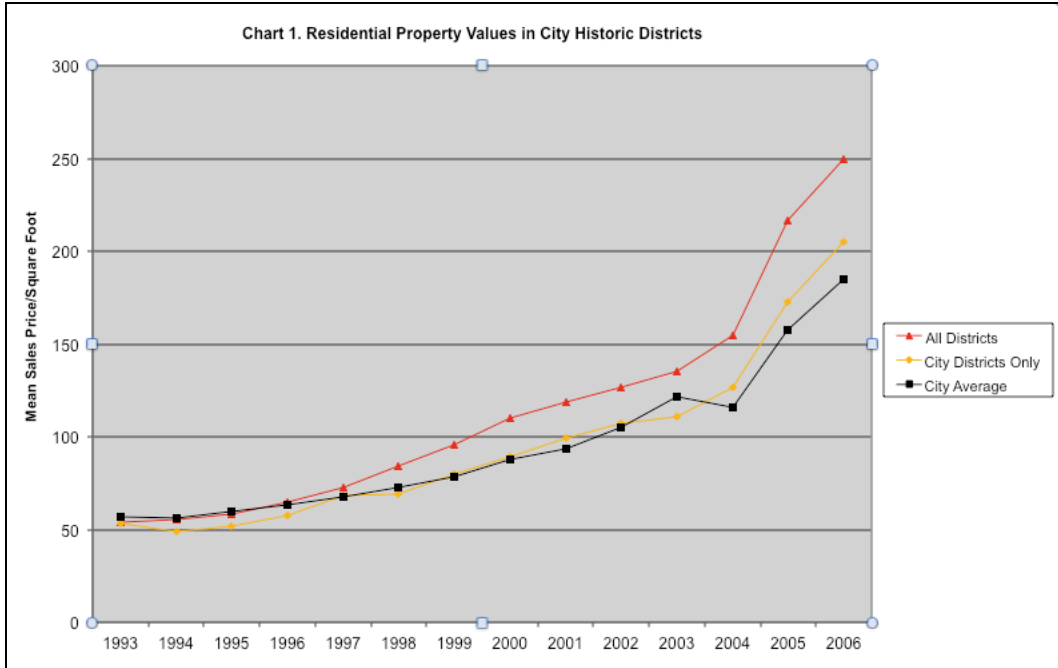
While the values of the HP variables changed somewhat, the overall pattern and magnitude remained the same. Again, converting the coefficients to percentages, houses within NRHP districts receiving the lower property tax had a price premium of about 70.1 percent in 2003. Houses in NRHP districts not receiving the tax break had a premium of 39.4 percent. Within city districts the price premium was 12.4 percent. Finally, the premium associated with the Phoenix grant program was 11.3 percent. The differences in the coefficients and percentage premiums for HP variables between 2003 and 2006 was largest for houses in NRHP district and receiving the tax benefit, a decline from 70.1 percent to 57.0 percent. For contributing houses not receiving the tax benefit, the premium remained virtually unchanged, increasing slightly from 39.4 to 40.5 percent. For city districts, the advantage increased from 12.4 to 18.4 percent. The benefit of the rehabilitation grant was little changed, rising from 11.3 to 13.0 percent, although, again, this factor has a much wider confidence interval than the others.

The disaggregated variables model provides more relevant information than the aggregated model, particularly, evidence of a difference between NRHP-listed districts and those listed only locally, even apart from the impact of the property tax reduction. Noncontributing properties in NRHP districts, i.e., those that do not qualify for the tax break, have a price premium well above that of only locally designated properties (20.7 percent in 2003 and 32.4 percent in 2006).⁹ The property tax reduction appears to have a major effect. Those houses that have the lower property tax have significantly higher prices than those with normal tax rates, and this is a controlled finding between property both eligible and ineligible for the benefit. This is strong evidence that the value of the property tax reduction is capitalized into the sales price of the house. We have not, however, arrived at a point where definitive statements of cause and effect can be made. The next section will examine sales values across a larger period of time and further disaggregate the data to analyze additional differences between historic neighborhoods.

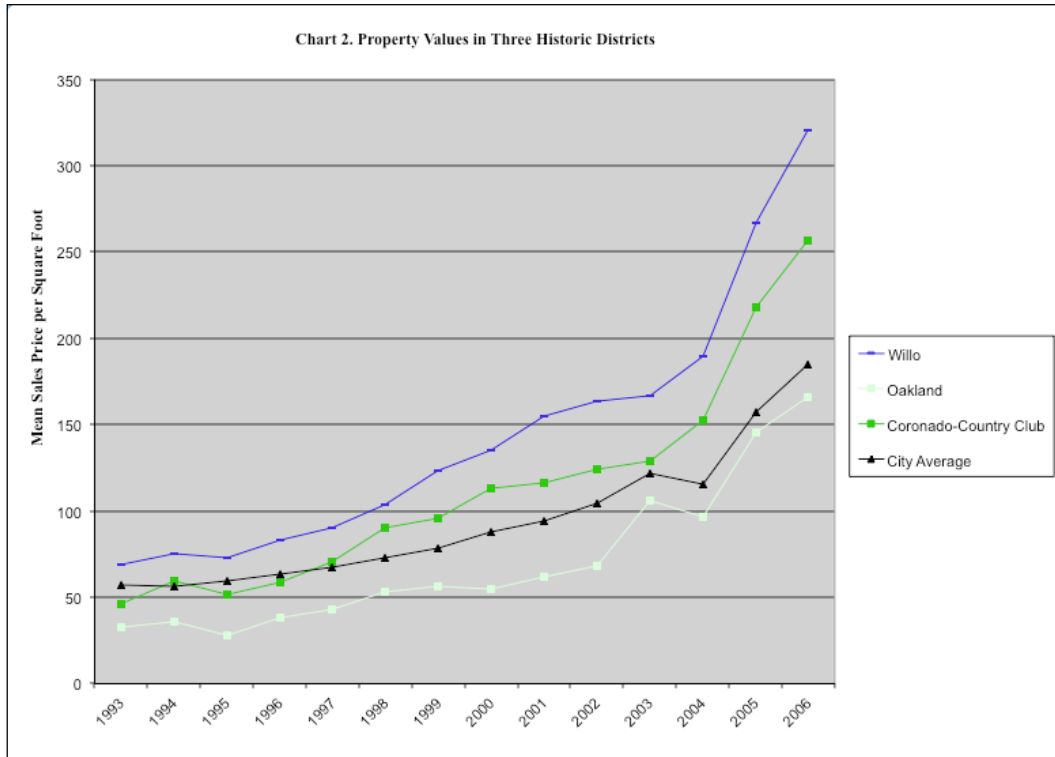
4. Trend Analysis

General patterns among local historic districts

The further disaggregating of historic property data reveals even more complex patterns that are hidden when all factors are considered only by the simplistic proxy of historic designation. The urban fabric contained in Phoenix's historic districts varies considerably in terms of physical characteristics, demographic attributes, and economic conditions. Among the 35 historic districts are poor neighborhoods where housing is often dilapidated and there are a higher proportion of rentals. The Woodland, Oakland, and Garfield historic districts, for example, are areas with a higher proportion of black and Hispanic residents than the metropolitan average, where household income is well below the median, and where schools are underperforming. Yet not too distant from these are the Encanto-Palmcroft and Willo historic districts both with precisely the opposite characteristics. In the 1970s and eighties, historic designation was sought by neighborhoods because residents felt threatened by potentially devastating projects, such as the Papago Freeway (Interstate 10) that was carried through the heart of the residential areas that had been built from the 1910s and twenties, or by the general spread of urban decay in an era prior to the downtown's full revival. More recently, neighborhoods have actively sought historic designation in order to gain access to the state's property tax reduction program. One result has been the designation of a number of isolated neighborhoods at some distance from the area immediately north of the downtown where the largest numbers of historic properties are located.¹⁰

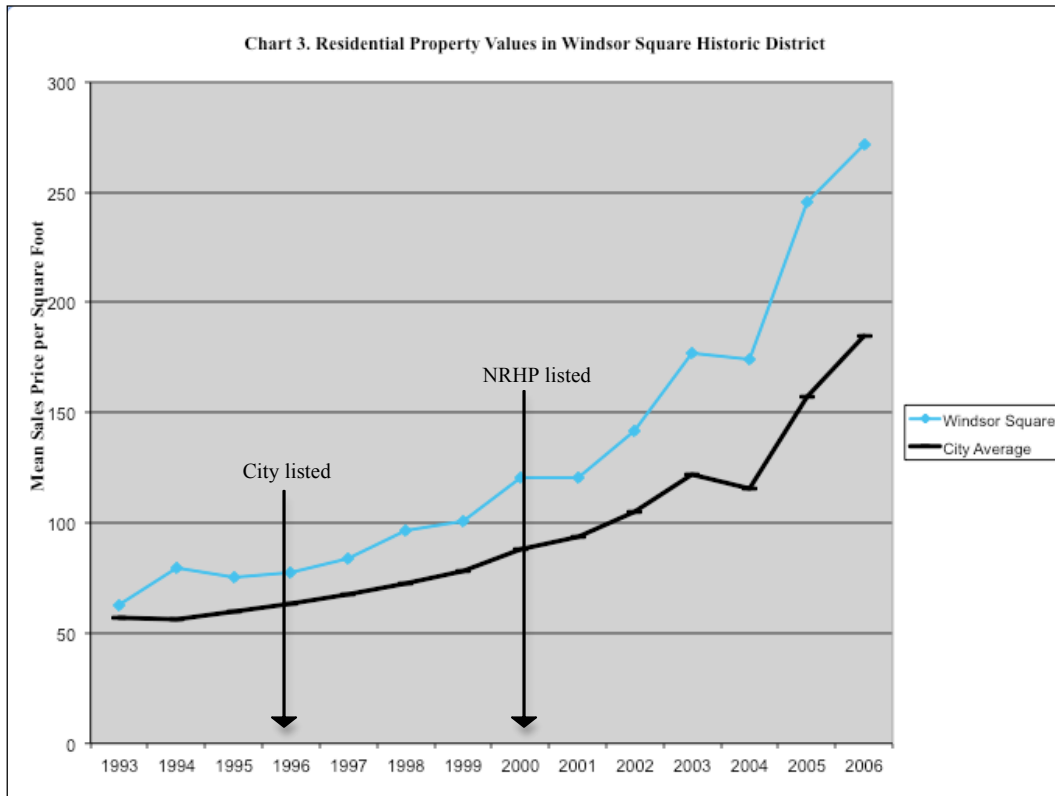


The information in Chart 1 can serve as a baseline for the detailed investigation in this section. The notable trends from 1993 to 2006, the period under investigation, are the rise in the median and average sales prices of single-family houses (per square foot). These are citywide trends against which the performance of property values in historic districts may be compared. There are two anomalies visually apparent in Chart 1. First, as described above, there was a large upswing in the rate of increase in the median housing price during 2004 and 2005. The trends slowed greatly during 2006 and have shared in the larger cooling of the housing market found nationwide in 2007. The second anomaly requires more explanation. The line of the average sales price per

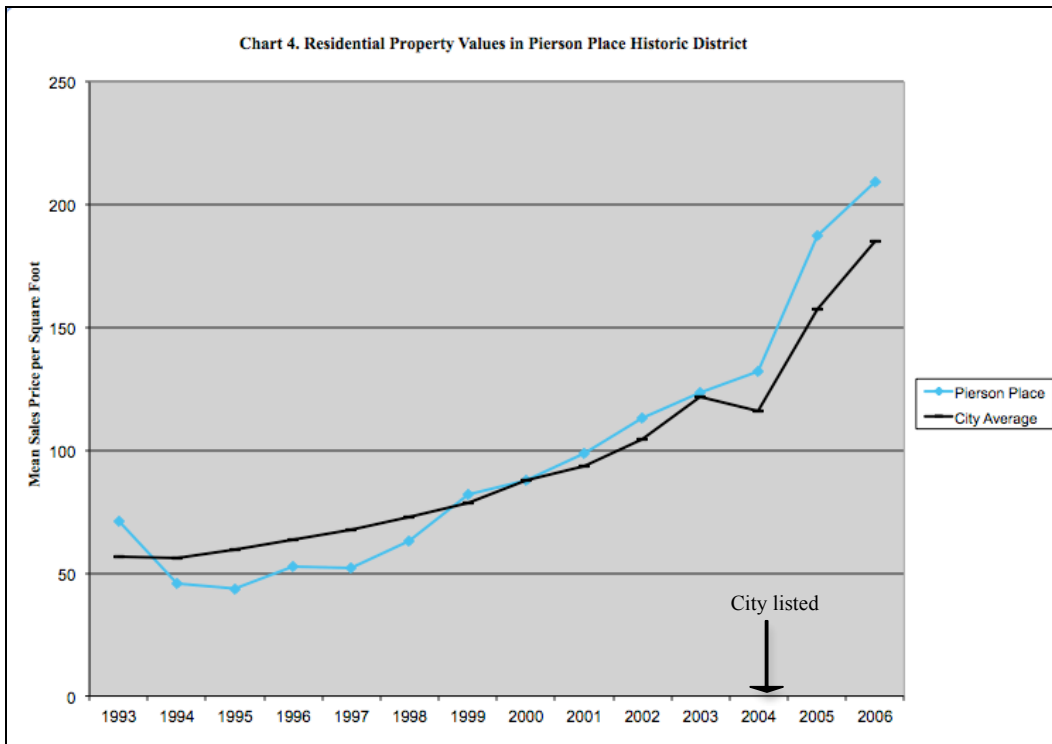


square foot of house interior space dips in 2004 despite the rise in the median price. The reason for this was the disproportionately voluminous purchase of smaller, bargain-priced housing at the lower end of the market that marked the starting phase of the housing boom. The remaining two trends lines in Chart 1 are the aggregate average sales price for housing in all historic districts and for those in city districts only. Both are above the lines for the city average with the city-only designated districts below the line of the aggregate of all historic districts. This illustrates that the pattern revealed in the hedonic models appears to carry through the entire period 1993 to 2006.

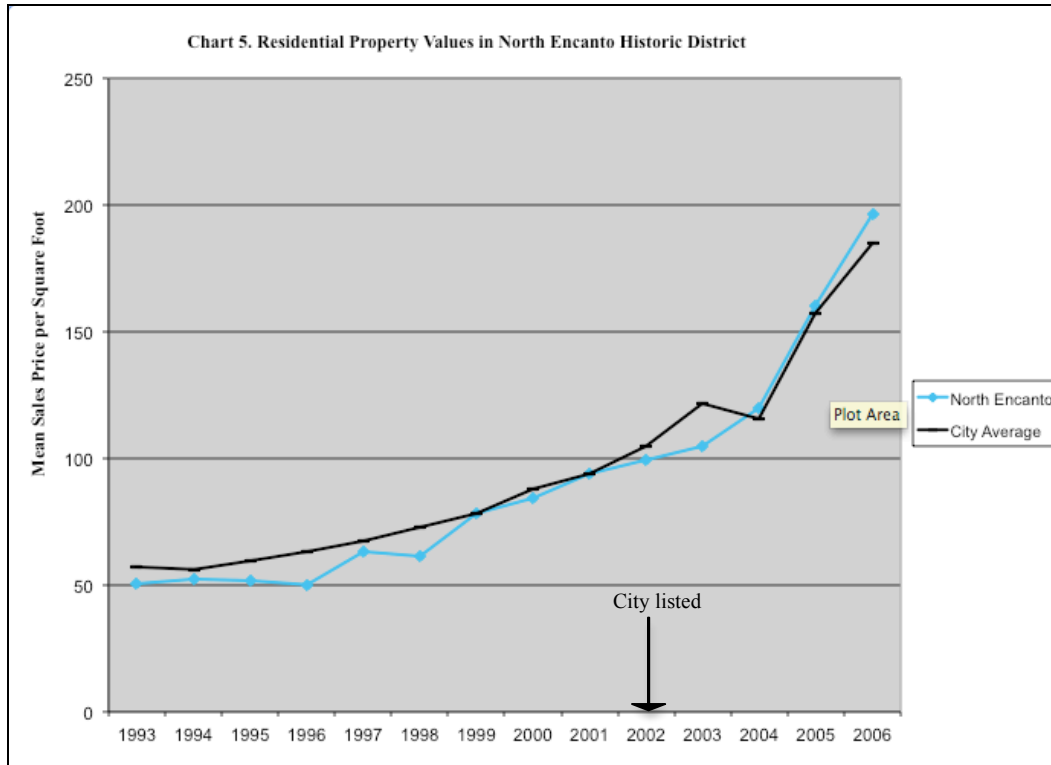
The trend lines in Chart 2 illustrate the wide variation in sales prices between historic districts. The Coronado-Country Club area, two adjacent historic districts within a well-defined neighborhood has a trend line very nearly identical to the average of all historic districts (not shown in Chart 2). The trend line for this area has risen fairly steadily, from at or below the city average until about 1997 to well above the city average afterwards. The Willo Historic District is one of the showcase neighborhoods of historic preservation. Located between one and two miles of downtown, this neighborhood has seen a remarkable turnaround in the past two decades from an area threatened by the spread of high rise commercial development and residential disinvestment to one of the most desirable areas in the urban area. Not only has the market price of houses in Willo risen steadily, it has done so at a rate faster than the city average. At the other end of the spectrum is the Oakland neighborhoods, located northwest of the downtown and for many decades an area of poverty and physical decay. Its sales price trend line is persistently below the city average, but with some evidence of convergence in recent years. All of these districts share similar status, being on both the local and federal registers. Owner-occupied houses classified as contributors qualify for reduced property taxes. Participation rates in the tax program vary widely, reflecting the relative proportions of owner-occupied to rental housing. In Willo, 97.9 percent of the eligible houses were receiving the tax benefit in 2006. The rate in Coronado-Country Club was 38.4 percent and only 2.1 percent in Oakland. This reflects the proportion of owner-occupied (eligible) housing, which was 79.4, 60.8, and 28.4 percent, respectively, and the relative value of houses and so the incentive to join the tax program. Mean sales price per square foot was \$320 in Willo, \$256 in Coronado-Country Club Park, and \$166 in Oakland in 2006.



In Chart 3 is shown the price trend for the Windsor Square Historic District, which is located approximately 4.5 miles north of downtown Phoenix. Throughout the period, the neighborhood displayed a higher than average market value and no significant adjustment occurred at the time of the neighborhood's designation on the city register. However, a slight acceleration of the rising price trend followed the designation on the National Register after which homeowners would have been eligible for the SPT benefit. The trends in Charts 4 and 5 illustrate two other distinct patterns. The Pierson Place Historic District, located about four miles north of downtown, was designated on the city's historic register in 2004 and has not yet been placed on the NRHP, therefore there is no influence from the property tax program. The house price trend line is clearly upward and at a rate higher than that of the city average. Also apparent is that this accelerated rate within the Pierson Place neighborhood dates back to at least 1998 or six years prior to the city designation and while the rate of increase has risen after 2004, the rate is roughly equivalent to the rate of rise citywide. The North Encanto Historic District was listed by the city near the end of 2002. As with Pierson Place, the average sales price prior to the listing hovered somewhat below the city average and since the listing has moved slightly above the average. Again, no influence from the property tax program has been felt, as the district was only NRHP listed at the beginning of 2007.

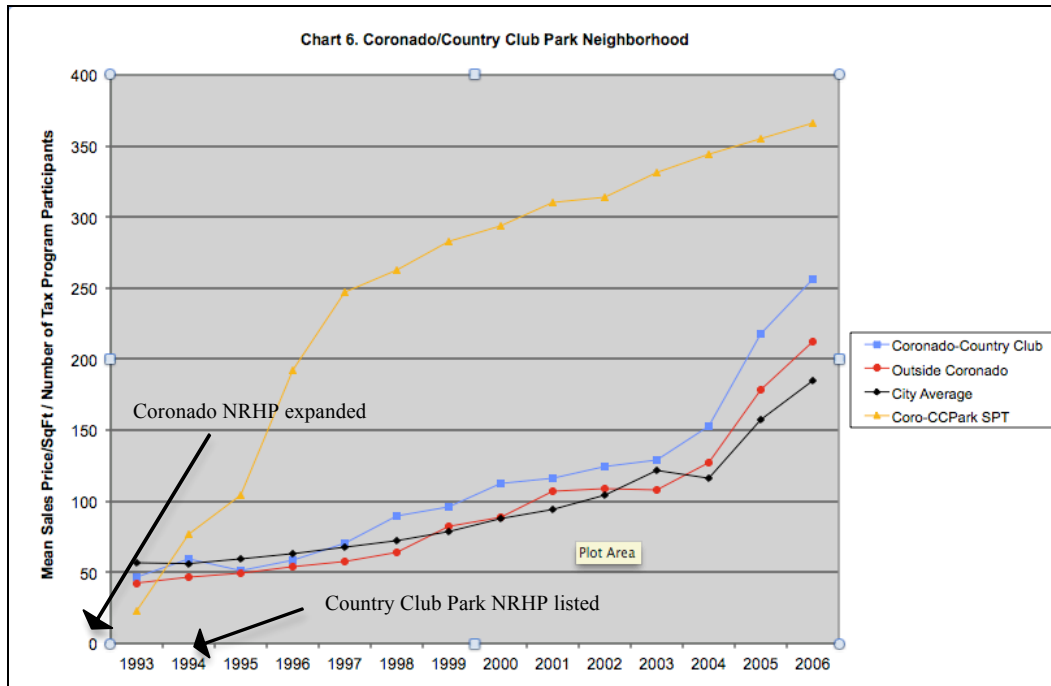


The three types of trend lines illustrated in Charts 3 to 5 are typical of the locally designated historic districts of Phoenix. These historic districts have as a whole and individually performed at least as well as the city average and sometimes better. Districts also NRHP listed have performed even better as homeowners have signed on to the property tax program and the tax reduction has been capitalized into the market value of the house. We can reasonably conclude that the local designation at the very least does no harm to residential property values. While the HP zoning overlay does impose some restrictions on the development of properties, the market appears to value the benefits of stabilized and more aesthetically pleasing neighborhoods above the cost. Furthermore, in recent years the average sales price per square foot of living space of houses in historic districts have been significantly above the city's average, this having been demonstrated in the hedonic models and visually illustrated in Chart 1. However, it cannot be definitively claimed



that local historic designation is a cause of this higher performance. In some instances, the neighborhoods selected for historic designation already had superior average market values or a pattern of improvement was already apparent prior to the designation. Other influential factors seem to be at work in these neighborhoods. Local historic designation is a benign factor, perhaps positive to a small degree, but at least not detrimental. National Register listing, with its associated reward of a significant property tax reduction appears to be a strongly positive influence.

The hedonic model revealed the association of higher market value with participation in the state property tax program, the conjecture being that the market capitalizes some portion of the value of the tax benefit in the current sales price of the house. If this conjecture holds then there should also be a time trend between the rate of participation and the mean sales price of houses in a district. This is seen in Chart 6 in which the mean sales price of properties within the Coronado and Country Club Park Historic Districts are graphed along with the mean for the city and for properties within the larger neighborhood, but outside the district boundaries. An additional line charts the number of properties certified for the SPT program. The Coronado Historic District was initially listed in the National Register in 1986 and its boundaries expanded in 1992. Participation in the SPT program gained slowly, being only 23 in 1993. At the end of 1994, the Country Club Park Historic District was listed and a special effort to publicize the tax benefits of the listing resulted in a rapid rise in participation, to 247 (in both districts) in 1997 and to 366 in 2006. The mean sales price of houses in the districts was generally below the city average through 1996 and then accelerated upwards thereafter. Since the rapid rise in SPT participation preceded the start of the rise in market value, there is evidence that it played to some degree a causal role in that rise. This conclusion is supported by the pace of the rise in values for properties outside the district. These houses, being ineligible for the tax benefit, saw a discernable rise in property values only with a delay of approximately three years. These neighboring properties rose in value above the city mean only in 1999 and the lag continued throughout the period. It is further conjectured that this lagging rise owes to the externality of being adjacent to the more desirable area within the districts.



Case study of the Garfield Neighborhood

The Garfield neighborhood is a highly complex case of HP program intervention in a revitalization effort. The neighborhood is located within about a mile northeast of the downtown commercial complex in an area of approximately 0.70 square miles. Most, but not all of this area is within the boundaries of two adjacent locally registered historic districts, Garfield and North Garfield. Non-historic properties are scattered around the edges of the districts and in a large donut hole-like area within. Although an analytical challenge, it is revealing of the factors that contribute to successful urban revitalization. To understand its dynamics one must draw from a number of sources beyond the historic qualities of its housing stock, including social and economic history and an examination of a wider range of factors that affected the decline and revival of the neighborhood over several decades.

The early history of what is now referred to as the Garfield neighborhood dates to 1883 when the Dennis Addition to the Phoenix Townsite was platted. The area later included the city's first well and pumping plant and the repair and storage facilities of the Phoenix Street Railway, at a site that is now Verde Park. Additional small subdivisions were platted up until the Schultz Place subdivision rounded out the neighborhood in 1923. Houses were built individually as lots were purchased and owners hired architects or contractors, or were built by speculative builders. Construction accelerated in the aftermath of the economic boom spurred by the completion of the Theodore Roosevelt Dam on the Salt River in 1911, slowed during the First World War, and revived during the building boom of the 1920s. The Great Depression again slowed construction, which revived to largely fill out the neighborhood in the late 1930s prior to the start of the Second World War. Ethnically, the area was white since black and Hispanic residents of the city were excluded by legal and cultural practices of segregation, and most households represented working and middle class occupations. Rapid changes followed the end of the war starting first with the dramatic introduction of families of Hispanic veterans in a public housing project near the area in

the later 1940s. This project roused bitter complaints among white residents and started the process of ethnic transformation that resulted in its currently dominant Hispanic character.

The Garfield neighborhood suffered severe disinvestment in the decades following the Second World War. Middle class families abandoned it as employment and retail facilities moved into the rapidly growing suburban regions. By 2000 area residents were 86.0 percent Hispanic, compared to the metropolitan area proportion of 25.1 percent. In the three census tracts constituting the neighborhood the median household income in 1999 ranged from \$17,101 to \$26,689, compared to the metropolitan area median of \$44,752. The proportion of owner-occupied housing was only 32.5 percent; the metropolitan area proportion was 68.0 percent. The nadir of the neighborhood's experience may have been in the 1970s, just prior to the start of significant public and private efforts to stabilize and revitalize inner city neighborhoods. Fortunately for the stock of historic buildings of which residents are now proud, Phoenix largely failed to take part in the urban renewal movement that began with the passage of the Housing Act of 1954 and which often followed a model of wiping the urban slate clean of blighted properties in order to build anew. It was not until 1970, when the city amended its building code to include minimum standards for existing housing, that federal program funds become available. Only a few programs and activities can be mentioned here, but they convey the type of improvement efforts that have gradually had a visible effect. One of the earliest efforts was the city's Home Improvement Program, which evolved into Neighborhood Housing Services of Phoenix, Inc., a non-profit formed in 1975 that works in partnership with the city, banks, and National NeighborWorks Partners to construct new houses and promotes homeownership. According to NHS Phoenix publicity, the organization has constructed 45 houses in the Garfield neighborhood since 1993. Phoenix's one major urban renewal effort, starting after 1973, was the clearing of the even more blighted Booker T. Washington neighborhood, immediately south of Garfield. By the late 1990s this area had been largely redeveloped with condominium housing. The Garfield neighborhood is within the boundaries of the central Phoenix Redevelopment Area, is an Enterprise Community, and is one of five Neighborhoods Initiative Areas, all of which indicate that Garfield is one the most targeted areas for city assistance of any place in Phoenix. Innovative efforts to control crime in Phoenix date to the initiation of Crime Stop in 1968 and continue to this day. Most recently, the Garfield neighborhood has not suffered disproportionately from crime. This is in no small measure the result of special efforts by the Phoenix Police Department in the central city precinct, which includes the Garfield neighborhood. The precinct as a whole was targeted for special attention by the Auto Theft Reduction Squad, the Burglary Reduction Program, and the Walking Beat Squad. Outstanding warrant round-ups cleared the streets of repeat offenders. With some 8,599 adults and 781 juvenile arrests during 2006 alone, this area saw a drop in crime of 2.8 percent. The department took credit for a much improved sense of security among precinct residents.

The earliest historic preservation-related activity centered on the NRHP designation of the Victoria Place Historic District in 1988. This pocket neighborhood contains thirty houses built mainly during the period from 1915 to 1930. Very little action followed the listing and of the district's 28 contributing properties only one has been certified for the SPT reduction. On the other hand, the city was aggressively pursuing blight reduction through federally-funded programs such as HUD Community Development Block Grants. These projects ranged from simple repairs of coolers and heaters to substantial rehabilitations involving lead paint abatement, water and sewer system repairs, replacement of substandard electrical systems, window and door replacement, and other work from foundation to roof. There were also many acquisition and demolition projects as well as construction of infill housing on vacant lots. Neighborhood residents expressed concerns over the loss of the area's historic character and included a historic preservation initiative in their 1992 Garfield Neighborhood Plan. Also, concerned that alterations to historic buildings threatened to erase the neighborhood's historic character, the State Historic Preservation Office gave a grant to fund a historic building survey that would be the catalyst for further HP efforts. The rate of loss of historic fabric was so severe that even during the course of the survey work two nineteenth century houses, a very rare asset in Phoenix, and two other historic houses were destroyed in arson-caused fires. Designations of four small districts followed the survey only after several years delay (see Chart 7). These were consolidated and expanded in 2005 into the current Garfield and North Garfield Historic Districts.

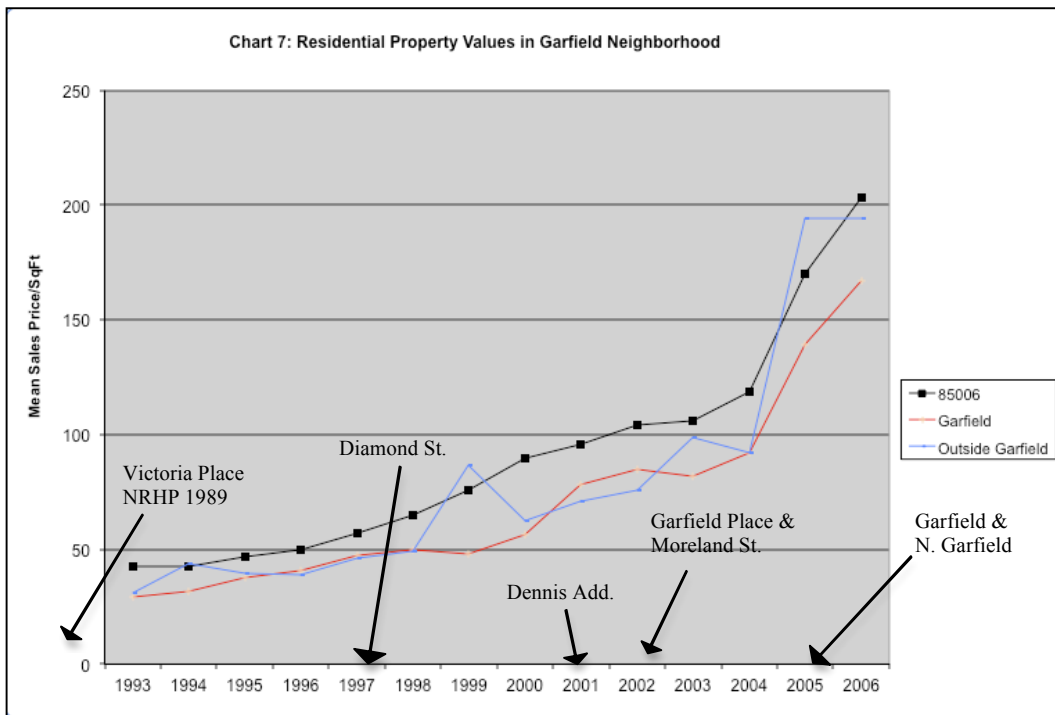


Chart 7 displays three price trend lines for properties within the two Garfield historic districts, properties in the neighborhood but outside the district boundaries, and, as a reference, the average sales prices of houses within the zip code area encompassing the neighborhood. The trend line for the zip code area is somewhat accelerated over the city average (not shown) and includes three other historic districts. Nothing can be said about the impact of the NRHP listing of the Victoria Place Historic District because it occurred prior to the data available. There was a significant rise in average prices at the time the Dennis Addition was designated, although it might also be looked at as a restoration of the earlier trend line after a temporary two-year dip. A second dip occurred immediately after the designation of the Garfield Place and Moreland Street districts. The trend around the time of the consolidation and enlargement of the current Garfield and North Garfield districts is indistinguishable from the trend of the zip code area. It can be seen that the Garfield neighborhood is maintaining its values relative to the larger zip code area, which as noted, is rising faster than the city average. The trend line for properties outside the districts is more erratic due to the small sample size, but can be seen in most years to be at or above that of the historic properties. It appears safe to conclude that the historic designations have had no negative impact on the ability of property values to rise. The events of district designation had no apparent impact on sales prices. The overall price rise has been faster than the city average but how much historic designation has influenced this performance is difficult to gauge. Given the evidence of the superior performance of properties outside the districts it would appear to be very little.

It can be added that the other two HP programs considered in this study can have had only negligible impact as only a single property receives the state's lower property tax rate for historic properties and only one other has received a city exterior rehabilitation grants, in the amount of \$6,465. On the other hand, far more has occurred in the neighborhood than is covered by these HP programs. As mentioned above, the Garfield neighborhood has been for several years a target area for several inner city revitalization programs. This includes numerous grants from federal and local funds. The records of the State Historic Preservation Office include 117 federally-funded

grant projects between 2000 and 2005, such as demolitions of over forty blighted properties, construction of new housing, major and minor rehabilitation projects, and general improvements such as installation of speed bumps on the streets.¹¹ Furthermore, such projects have been occurring in the Garfield area for several years prior to this period. The sum total of funds invested in the Garfield neighborhood is unknown, but given the cost of new construction at the least must have amounted to several million dollars. Although these projects did not carry a HP program label, many of them were done on historic properties. It is theoretically possible, although was beyond the scope of this study, to further disaggregate the factors influencing historic property values to take these additional programs into account.

5. Summary

The evidence of this study is unequivocal that properties with national or city historic designation are associated with higher market value than other comparable property within the city of Phoenix. The examination of trends over time indicates that this divergence has occurred largely within the period 1993 to 2006. Furthermore, this superior performance is generally shared between both poorer and more affluent historic districts, although with the latter demonstrating a somewhat faster rate of increase than the former. At the very least it is clear that historic designations at either governmental level have had no negative affect hindering the rise of residential property values. This answers one of the most persistent questions from the public regarding proposals to designate properties as historic. These findings are consistent with previous studies of the impact of historic designation on property values.

Whether designation itself is a significant causal factor in the improved performance of sales values in historic districts is problematic. Apart from the SPT program benefit, there is little that NRHP designation does that ought (theoretically speaking) to affect property values, yet even ineligible and nonparticipating properties within NRHP districts enjoy a large price premium. Furthermore, the premium is higher than might have been predicted from the results of Man and Bell (1996), whose study of the Phoenix housing market suggested that a 50 percent reduction in property taxes would result in a higher sales price more on the order of 5 percent. Consideration of several historic districts leaves ambiguous any firm conclusion about the effect of local designation as well. While the hedonic model revealed an important price premium, trend analysis showed few observable fluctuations in price immediately before and after designations indicating a pattern of influence. While there are cases where the long-term price trend improved following designation, there are also cases where that trend was already observable well before the designation. This finding contradicts that of most historic designation studies which claim to have found evidence of historic designation as a cause of an accelerated rise in property values. The opening section of this paper discussed certain methodological aspects of HP economics studies that leave some open to questioning, including very small sample sizes, potentially biased selection of comparison properties, and choices by researchers whose justification are not always indisputable. There is, furthermore, little consideration of the theoretical aspect of designation as a “real” factor that might influence property values. Designation does nothing to a property physically and does not affect property owners until there is an application for a building or demolition permit, which is a very small percentage of properties in the short term. What influences designation in itself may have are typically conjectures regarding psychological effects such as neighborhood pride or a spur to real estate speculators.

The resolution of this contradiction with previous literature lies in disaggregating the factor of historic designation into a number of real factors that have a more satisfying relationship with economic theory. In the first place, there is a state property tax program that gives a substantial property tax reduction to properties listed in the National Register of Historic Places. The city also offers small grants to property owners undertaking exterior rehabilitations of their historic properties. Hedonic models taking these factors into account indicate that they strongly affect the market value of historic homes, to the subsequent diminishment of the designation factor alone. There is evidence suggesting that a portion of the rise in historic district house values has followed the rise in participation of home owners in the tax program. A detailed case study of one particular historic neighborhood indicates that the rising property values owe less, if not very little, to

historic designation than to the effects of major investments from the public sector in neighborhood renewal from federal grants, law enforcement, and other real factors. It is true, however, that much of this investment went into historic properties, just not through programs that carry a historic preservation label. The active neighborhood organization proudly displays restored historic homes to entice new residents and investment and it is commonly felt—and probably justifiably so—that historic preservation, including designation, has been positive influences in the neighborhood’s revitalization. There are also cases in the literature indicating that architectural qualities, rather than historic status, are real factors influencing price that are masked by focus on the designation variable alone. The final conclusion of this study is that historic district designation should be considered only one factor influencing the value of historic property and that if the field of historic preservation economics is to every rise above the realm of advocacy literature, it will require closer attention to best practices methodology and to a wider consideration of the factors influencing market values, including cultural values, externalities, and public goods.

Endnotes

¹ Although not directly related to the issue of historic designation, Asabere and Huffman (1994) examined the impact of historic preservation easements on residential condominium values in a case study of Philadelphia and found a negative correlation.

² For example, Man and Bell (1996) used an extensive hedonic model based on Phoenix data to determine that differences in sales taxes between municipalities affected residential housing prices.

³ The special location features variable might have been treated as another indicator variable, but because properties may possess more than one of these features it was decided in this study to create a metric from zero to three according to the number of such features. This implicitly treats all such features as equivalent.

⁴ The property tax reduction can be somewhat less than 50 percent depending on the presence or absence of special assessment districts.

⁵ The NRHP does not itself apply regulatory oversight on what property owners may do with their property. Owners wishing to take advantage of the tax program must agree to allow the State Historic Preservation Office to review and approve substantial projects affecting the character of the house. Owners of contributing properties not participating in the program are usually either unaware of the program or choose not to accept this additional “string” attached to the benefit.

⁶ Clark and Herrin (1997) attempted a similar disaggregation in a case study of Sacramento, which has two property tax incentive programs for designated historic buildings. Their indicator variables coded for NRHP and local designation and participation in the tax benefits, but failed to meet specifications for statistical significance. This was likely due to a sample size too small to sustain so many distinctions and because of an oversight in not defining the variables so as to specify mutually exclusive categories.

⁷ Goodman and Thibodeau (1995) described how use of age as an independent variable can contribute to heteroskedasticity in the error term. Diagnostics of the hedonic model in this study, however, indicated no such difficulty.

⁸ The Phoenix-Mesa market had the highest rate of increase among all U.S. cities in the widespread housing price bubble in the third quarter of 2005. The median house price increase 55 percent from the previous year to \$268,000. Associated Press, “Home Price Increases in U.S. Led by Phoenix, Orlando,” Nov. 15, 2005, azcentral.com.

⁹ There is a potentially biasing factor built in the data, which includes only owner-occupied houses. Renter-occupied houses occur in somewhat higher proportion in the poorest districts and so the districts with a relatively lower average value are likely to be somewhat underrepresented. An examination of the data confirmed that cases from these poorer districts did occur, however.

¹⁰ The City of Phoenix has had an active designation program since the 1980s. However, there is typically a long delay, sometimes of many years between the time when local district zoning overlay is applied and when a district is eventually listed in the National Register of Historic Places. The reason is that the processes are separate and require different types of supporting documentation. While city staff has actively assisted neighborhoods onto its local register, placing

them on the National Register has had a far lower priority. This has meant that there are usually many more local districts than NRHP districts, an analytical advantage for this study.

¹¹ State Historic Preservation Office records of federally funding project in Phoenix are of proposals only and not of what finally occurred or the amounts spent. There are cases of contradictory project proposals, for example, both demolition and rehabilitation of the same property. It was beyond the ability of this project to determine what actually occurred.

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2013 Update to Phoenix Historic Residential Property Values Study

INTRODUCTION

The 2007 study ended at approximately the peak of the residential housing boom when residential property values in Phoenix, as in most of the rest of the United States, rose to unprecedented and unsustainable heights. The collapse of the housing bubble between 2007 and 2011 greatly reduced property sales values and, with some delay, reduced assessed property values, thus contributing to a substantial decline in tax revenues. This event, dubbed the Great Recession, marked the greatest and longest reversal of residential property values that Arizona has experienced since the Great Depression of the 1930s. This update examines the impact of the Great Recession on sales value of historic houses to determine whether recent economic trends have had a disproportionate impact on historic property, either positively or negatively, compared with price changes in the market as a whole.

This update does not reproduce the hedonic modeling used previously. Neither does it examine trends district by district. Factors identified previously as significant and their signs (positive or negative) are presumed to remain relevant although their magnitude may have varied. In this update data on sales values are tracked in order to compare the trend in the average price of houses to that of historically designated property. The study area remains the same thirty zip code areas of the City of Phoenix and covers the period from 2006 to 2012. Although foregoing regression analysis tools, this study makes two simplifications in order to make data more comparable. First, the results presented here consider only those properties classified by the Maricopa County Assessor as Class 131 single-family residential.¹ Second, sale and assessed values are calculated per square foot.

Through analysis of assessed property values, this update investigates the additional question of whether the Arizona historic state property tax (SPT) program has had a substantial effect on the total property taxes paid by homeowners in historic districts.

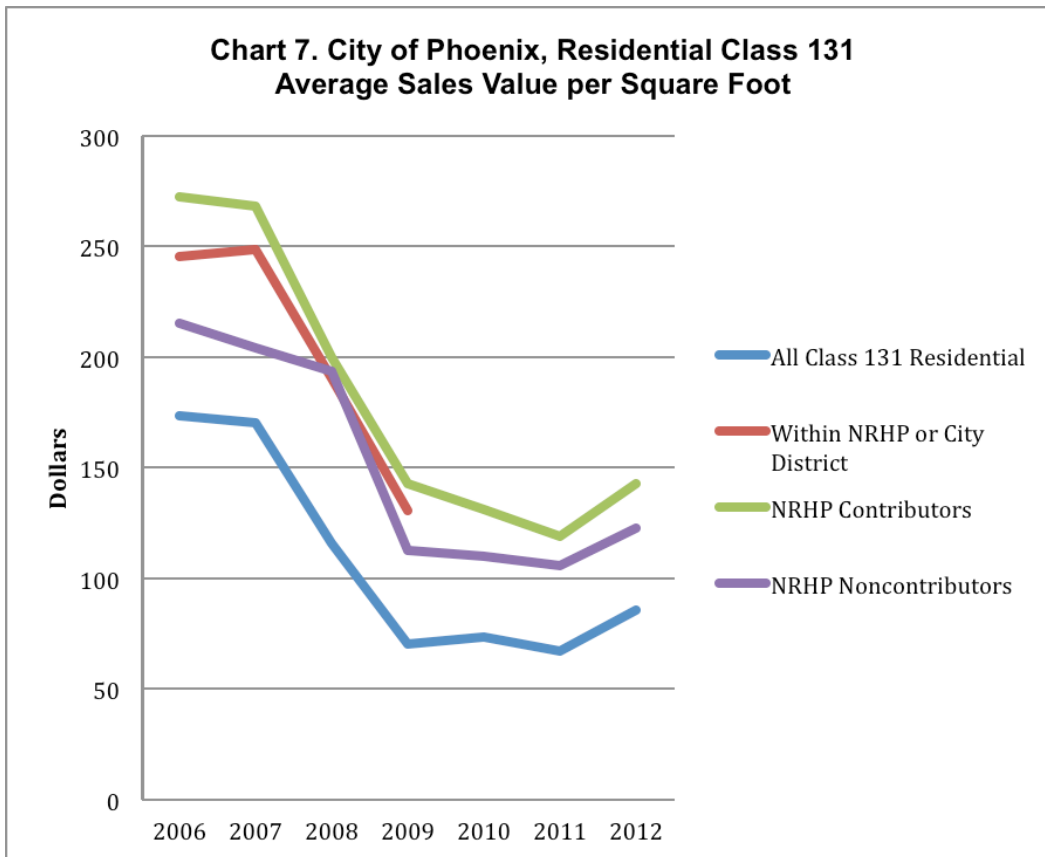
SUMMARY

Between 2006 and 2011, the sale price of single-family, detached houses in the City of Phoenix declined from \$173.71 per square foot to a low of \$67.21, a decline of 61.3 percent. Prices recovered to \$86.08 in 2012 and have continued to rise during the first half of 2013 (not included in this update). Chart 1 illustrates this trend and also shows trend lines for properties in City and National Register of Historic Places (NRHP) listed districts.²

The trend line for properties within NRHP districts follows very closely the trend of Class 131 property, apart from a temporary rise that occurred in 2010. Sale prices of houses within NRHP districts declined from a high of \$265.35 (per square foot) in 2006 to a low of \$118.85 in 2011, a decline of 55.2 percent. At the end of the period in 2012,

¹ This study was limited to Class 131 for pedagogical purposes. Data on all single-family, owner-occupied housing, Classes 111, 121, 131, 141, 151, 161, and 181 was compiled and analyzed. The trend lines for the larger body of residential housing is nearly identical that that of the Class 131 housing alone, which is unsurprising since Class 131 constitutes nearly eighty percent of the total sample. See the 2007 study for discussion of the influence of these classifications as independent factors.

² The separate trend line for properties in City historic districts ends in 2010. Between 2007 and 2010, the remaining City districts not yet listed in the NRHP were so listed, ending the anomaly of districts being locally designated but not nationally.



following a notable rise in housing prices, Class 131 housing sold at an average of \$86.08 and property within historic districts at an average of \$139.76. This means that between 2006 and 2012, all Class 131 housing declined 50.5 percent, compared to a decline of 47.3 percent for historic districts. Comparing these trends with those of Chart 1 (2007: 8) indicates that through the 1990s and up to the Great Recession the sale value of property designated historic diverged positively from the Phoenix average. Just prior to the Great Recession, property within historic districts had a price premium of just under 53 percent during 2006 and 2007. Between 2008 and 2012, this premium generally increased to over 70 percent in 2008, 2010, and 2011, with 2009 exhibiting an unusual 36.7 percent, before settling at 62.3 percent in 2012.

Using the results from the 2007 study, we may venture some explanatory statements regarding these observations. Between 2007 and 2010, fifteen City districts were listed in the NRHP, with eleven listed in 2010 alone. Following listing, property classified as Contributing qualified and began receiving certification to the historic SPT reclassification program. Over time, as more properties enter the program the reduced property tax rate should be capitalized into the price of the house, raising the premium for historic designation. Since that time, the City of Phoenix has ceased designation of new historic districts and at the present there are no neighborhoods actively pursuing NRHP

listing.³ We may speculate that within a few years, most of the qualifying property will receive the tax benefit and the price premium should stabilize.⁴

Properties within NRHP districts are further classified as either Contributing or Noncontributing, with only the former qualifying for the property tax benefit. Chart 7 includes separate trend lines for each of these and, consistent with the 2007 findings, Contributors enjoys a substantial sales price premium above Noncontributors.

Throughout the study period, the proportion of sales of property within NRHP districts was remarkably stable at between 86 and 88 percent Contributing with the remainder Noncontributing. With this high proportion, the Contributing trend line matches very closely the overall trend of all properties within NRHP district. The Noncontributing trend line diverges somewhat as a result of the relatively small number of such properties sold each year, but overall follows the general trend.

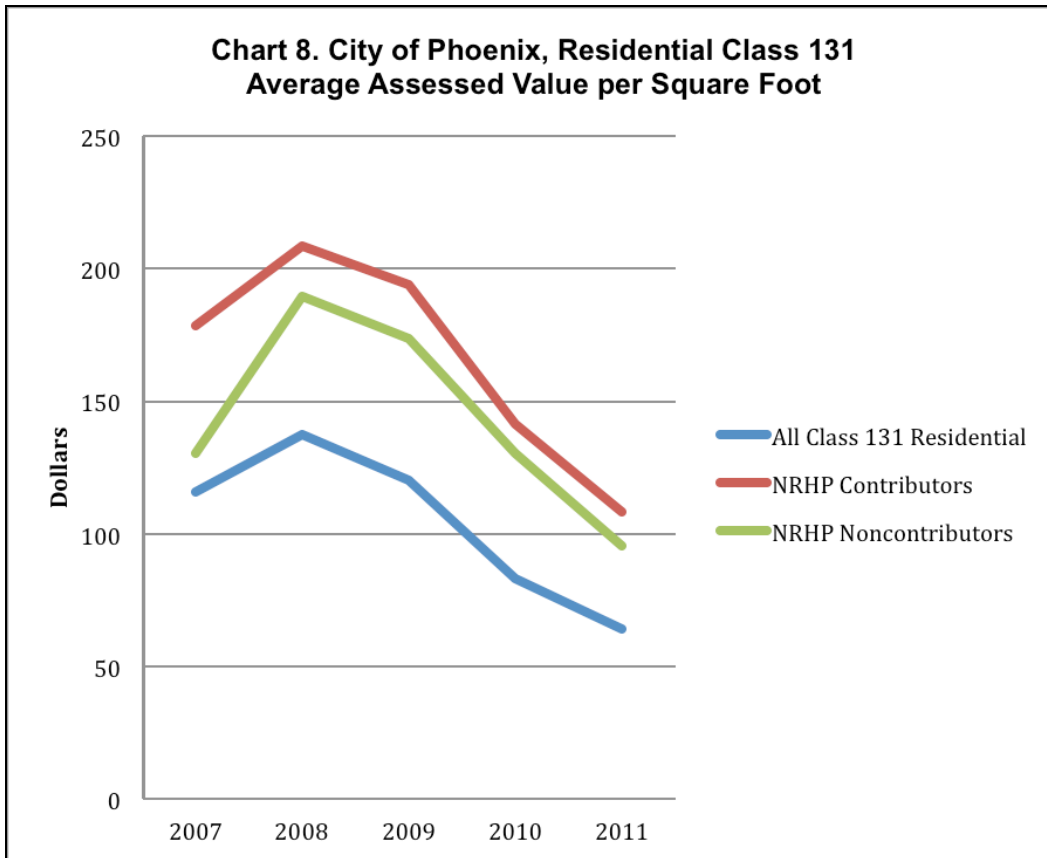
ANALYSIS OF ASSESSED VALUES AND TAX REVENUE EFFECTS

The 2007 study examined only the relationship between sales value and various independent variables. The 2013 update also examines the trend lines of assessed valuation from which we may estimate the total effect on property tax revenues resulting from the historic property tax reclassification program. These are illustrated in Chart 8. Assessed value is established by the Maricopa County Assessor's Office based on a formula that includes the sales value of comparable housing. Assessed values lag behind changes in sales value, as shown in Chart 8 where the peak occurs in 2008, two years after the peak in sales prices. The trend line falls through 2011, where the data set ends, but will presumably rise again following the general rise in house prices in 2012 and 2013.

Over the period 2006 to 2011, Contributing property averaged about 60 percent higher assessed value than the Class 131 average. Noncontributing property had a premium of about 40 percent. By itself and without the SPT program, these higher assessed values would mean proportionately higher taxes. Noncontributors do in fact pay more because, again, they do not qualify for the tax break. Noncontributors and non-participating Contributors paid approximately 40 and 60 percent more, respectively, in property taxes than the Class 131 average. The enhanced assessed value of all property in NRHP districts implies higher total tax revenues. Given the steady 87:13 percent proportion of Contributors to Noncontributors, the 40 percent higher assessed value for

³ Since Arizona voters approved Proposition 207 in 2006, no city or town has created a new locally designated historic district. The proposition requires compensation to private property owners should a government regulation result in a reduced the value for the property. Despite consistent evidence that historic designation results in higher property values, public policy has been ruled by the common belief that such designation will reduce property values.

⁴ The historic property tax reclassification program is voluntary on the part of homeowners and not an automatically granted entitlement. Homeowners must agree to keep the house according to minimum maintenance standards and allow the State Historic Preservation Office to review alterations that might affect the historic character of the property. One hundred percent participation has never and likely will never be reached because some owners are unaware of the benefit and other object on ideological grounds. Also, because rental property does not qualify, some houses may come into or leave the program as their use status changes. The participation rate in the Encanto-Palmcroft and Willo historic districts is about 85 and 83 percent of potentially qualifying property, respectively. These being among the oldest districts in Phoenix and among those with the highest property values (and thus greatest potential tax saving), these participation rates may represent a stable maximum.



Noncontributors should result, *ceteris paribus*, in approximately 5.2 percent greater property tax revenue to the government.

Calculating tax revenue from Contributors is complicated by three factors. First, such property as stated above averaged about 60 percent higher in assessed value than the Class 131 average during the study period. At the same time, the property tax rate paid by participating Contributors is substantially lower, but unfortunately for ease of calculation, not fixed. Property tax on single-family, detached, owner-occupied housing in Arizona is normally calculated on 10 percent of assessed value. For participants in the SPT program the rate is only 5 percent. The total tax payment is not, however, cut in half because of a third factor. Most Arizona homeowners receive an educational tax credit rebated from their property taxes. This credit is proportional to the assessed value of the home and is capped at \$300. This credit is unavailable to historic property in the reclassification program. As a result, the total tax savings homeowners enjoy is somewhat less than the 50 percent the lower rate would imply. Further, because the credit is capped the total savings rate approaches 50 percent as a limit as the value of the house increases. In other words, the more valuable the historic house, the higher the rate of tax savings. As a general rule of thumb, typical owners of historic property may see tax savings in the mid-40s percent.

The 50 percent rate cut can serve as the upper limit of the tax reduction which, when applied to the average 60 percent premium, calculates to a 20 percent discount from what average Class 131 property owners paid during the period. Given 87 percent as the upper limit of potentially qualifying properties, this means that total tax revenues from

Contributors could be reduced by a maximum of 17.4 percent.⁵ Taken in sum with the additional 5.2 percent paid by the Noncontributors implies a total potential tax revenue decline from historic districts of 12.2 percent. To restate the point, if every potential Contributor to Phoenix historic districts joined the SPT program, and given the 87:13 proportion of Contributors to Noncontributors, and using the 60 percent/40 percent average assessed value premium derived for Contributors and Noncontributors, respectively, total tax revenue received by the state from these districts should be no more than 12.2 percent less than if they were valued and taxed at the average rate for their class.

For the reasons stated above, the effective tax rate enjoyed by reclassified historic property will be greater than 5 percent. No study has yet determined the precise average rate, but for illustrative purposes, a rate of 5.5 percent can be used as a reasonable estimate. This would be a 45 percent reduction in rate from the standard rate paid by typical Class 131 houses. Using the same method as in the paragraph above, this rate suggests a tax revenue reduction, Contributors and Noncontributors combined, of only 5.2 percent. These calculations presume full participation by all potentially qualifying Contributing property, but as noted not every property that qualifies actually participates. Qualifying but non-participating property not only continues to pay at the higher 10 percent rate, but applies that rate to the enhanced assessed value. If we indulge in a presumption that, say, 80 percent of qualifying property actually participates in the program, the range for tax revenue reduction would fall from 5.2 to 12.2 percent to a range of 3.2 to 8.7 percent.

The above calculations are important because the common perception among the public policy makers and even most preservationists is that the historic property tax reclassification program cuts property taxes in half. It is then commonly, though naïvely extrapolated that total tax revenues from historic properties would also be cut in half, raising concerns about significant loss in tax revenue. But as these studies have demonstrated, the lower tax rate paid by program participants is to a large measure compensated for by much higher assessed values. Add to this the fact that Noncontributors and non-participating Contributors continue to pay at the higher rate on the higher assessed base and total reduction in tax revenue is largely mitigated. A fairly simple, yet economically safe summary statement is that property tax revenue paid by the historic districts of Phoenix is likely less than 10 percent below what would have been paid if the property were assessed and valued at the average of their class.

The 2007 study demonstrated that the enhanced value of historic districts owes to a number of factors, some of which relate to historic designation and programs intended to incentivize historic preservation, while some relate to other physical, locational, and demographic variables. Historic preservation factors, especially the property tax reduction available to certain NRHP-listed property, have been determined to have a large impact on value. The 2013 update found that the price premium has not only continued, it slightly expanded during the course of the Great Recession. There is no known reason why this pattern should not continue into the near future. There is also no reason why, if this pattern continues, that the negative tax revenue effect could not be cancelled out altogether, yielding no net change in property tax revenue, or even a net gain in tax revenue. Given the above method of calculation this could be approached if the premium for Contributors was to exceed 70 percent and that for Noncontributors

⁵ The 2007 study disaggregated among Contributors participating and not participating in the property tax program, with the former enjoying a substantial sale price premium as well as all of the tax benefit. However, for this update all Contributors are aggregated and the tax effect averaged between both participants and nonparticipants.

remained no less than 40 percent. Notably, this nearly occurred during the course of the Great Recession during 2010 and 2011.

CONCLUSION

The 2013 update demonstrates that the generally positive effects of historic designation found in the 2007 study have continued through the Great Recession of 2008-2011. Although the market value of all homes suffered greatly by the deflation of the housing market, property within historic districts continues to command a significant price premium over comparable non-historic property. There is some evidence to suggest that the premium may continue to grow into the future, although it is suggested here that this is likely to, or perhaps already has, stabilized, at least as far as historic preservation incentives like the property tax reduction program can influence. Although the historic districts in Phoenix are not equally successful, on average they appear poised to emerge from the Great Recession as desirable places to live and to invest.

The question of the tax revenue effects of the property tax reclassification program is important for public policy because state and local governments, schools, and other public institutions dependent on tax revenue suffered greatly from the budget crises induced by the Great Recession. It has been suggested that the state cannot afford the loss of revenue due to bestowing a special tax break for historic homes. This study suggests that the net loss in total tax revenue generated by the historic districts of Phoenix is likely less than 10 percent and perhaps approaching breakeven. This is a result of the success of the property tax program, city grants for historic preservation, and other benefits associated with historic designation in driving and maintaining the value of historic properties significantly above comparable non-historic property.