# PRINCIPLES OF CITY HISTORIC PRESERVATION ECONOMIC INCENTIVE PROGRAMS: FOUR CASE STUDY EXAMPLES FROM PHOENIX, ARIZONA

by

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## Abstract

Currently there is no normative framework by which to standardize successful outcomes of adaptive reuse projects. Critical comparative analysis in commercial building reuse within a regulatory historic preservation context is problematic. This thesis analyzes four case study examples of historic commercial properties that were reused as part of two City of Phoenix Historic Preservation Incentive programs. The four case study examples provide a similar context to compare the only consistent variable between the four buildings: two incentive programs developed by the City of Phoenix Historic Preservation Division – the Demonstration Project Program and the Threatened Building and Warehouse Program. The four City of Phoenix cases study examples collectively exhibited substantial investment on the part of the developer and private funding projected in excess of $16 million dollars, while the city investment of public funding from general obligation bonds was $1 million for four buildings and gaining 30-year conservation easements for each property. While this shows an excellent investment of public funds across four funded incentive program projects, there is no comparative framework by which to objectively break down and analyze the all the regulatory processes a developer goes through and the decisions a developer makes in response during an adaptive reuse project.

An adaptive reuse framework must be an integrated framework that considers the needs of a municipalities' historic preservation and economic development. Creating a framework requires identifying the similarities and differences between adaptive reuse

projects of similar scale, condition and environment. Criteria cannot be defined if all the steps in the process are not identified. Recommendations are made here for creating an adaptive reuse framework based on the foundation of identifying qualified city historic preservation programs. Such programs must have delineated criteria for adaptive reuse projects within a regional context, and that capture all scales of reuse with comparable materials, architecture and environmental conditions. Second, identification of experienced developers whose primary work is with adaptive reuse projects and who are willing to share financial project data (pro forma/cost benefit) and post-project cost data. Finally, an appropriate sample size of projects to review must be determined after successful identification of historic preservation programs and a group of adaptive reuse developers willing to contribute their knowledge to an adaptive reuse framework.

## Introduction

This thesis analyzes four case study examples of historic commercial properties that were reused as part of two City of Phoenix Historic Preservation Incentive programs. Apart from the many community benefits of preserving an older building, there is no normative framework by which to standardize successful outcomes of adaptive reuse projects. How can the preservation community better define the benefits of preservation and building reuse beyond advocacy and apply measurable data to support both the cultural and economic value?

Critical comparative analysis in commercial building reuse within a regulatory historic preservation context is problematic. The literature review found a general lack of post-project review processes, predefined assessment criteria, and standardized metrics by which to compare adaptive reuse projects. Current literature is still weighted heavily toward advocacy (Mason, 2005:6). Return on Investment (ROI) is not publicly disclosed by developers and cannot convey the complexity of risk associated with adaptive reuse projects, thus preventing realistic case analysis based solely on ROI. Any analysis must account for that part of the decision-making process where a developer weighs both economic and cultural values of building reuse. The cultural value can't be quantified and thus never makes it into the economic evaluation, bringing the issue back to how to measure success.

A comparative analysis requires consistency between projects such as building types (e.g. warehouses) that share a similar square footage, floorplan and siting as a framework of analysis. The four case study examples discussed here provide a similar context to compare the only consistent variable between the four buildings: two incentive programs developed by the City of Phoenix Historic Preservation Division (HP): the Demonstration Project Program and the Threatened Building and Warehouse Program.

Preservation Incentive Programs exist at the federal, state and city level. Incentive programs help a developer equalize their risk in developing an older building by awarding grant money to owners who meet grant requirements and use matching funds to rehabilitate historic properties. To receive grant funding from the incentive programs, a developer completes the application process, which the City of Phoenix reviews on a first come, first served basis. There is no assumption of funding by an applicant. Incentive program funding is not a deciding factor in selecting a building for reuse (Mark Abromovitz, personal communication), but it is an option to consider and often employed by experienced developers who have a vison of reuse and understand the qualities of a building. Vision of a building's potential is hard to quantify. It may be an inherent characteristic, or it may come from experience, but vision is part of a developer's skill set. In their 2006 study Shipley, Utz and Parsons (Shipley et. al.) pointed out that "the heritage developer sees past the current state of the building and can imagine the potential - heritage advocates tend to see what the building used to look like, and they value that" (2006:517).

Economic feasibility is not the sole criteria in considering the adaptive reuse of building stock, but it ranks top on the list when developers and lenders consider a building for reuse. Accordingly, incentives for historic preservation are meant to provide the bridge for economic development, just as granting tax abatements for new buildings, or tax credits for new jobs, or low-interest loans for new business (Rypkema 2017:27). All are examples of economic development that encourage the private sector to generate a community benefit. Bullen and Love cite adaptive reuse as a later stage of the whole project life cycle of asset management which includes design, construction, commissioning, operating, maintaining, repairing, modifying, replacing and decommissioning/disposal (2011:32). Representing a voice from the construction management field, Bullen & Love presented a model for adaptive reuse decision-making within the framework of sustainable buildings and development in Perth, Australia (2011). They argue that while benefits of adaptive reuse is a well-known topic, owners and practitioners lack a point of reference to justify and evaluate their decision-making regarding reusing existing assets (2011:32). They found the three key criteria used to examine adaptive reuse decision making were: capital investment, asset condition and regulation. While issues associated with the environmental, economic and social tenets of sustainability were identified as important, they were given less priority when considering reuse (2011:32).

Shipley et. al. found that when adaptive reuse projects are presented to local councils and decision makers, generally only the developer/lenders cost analyses are presented which is not enough to make an informed judgement (2006:506). Based on interviews with 16

developers' experiences over 132 projects in Ontario Canada, Shipley et. al. found four categories of success when renovating older buildings: the special qualities of older buildings; building location and site advantages; return on investment (ROI); and government assistance (2006:508). Despite these benefits, the choice of demolition over reuse is often a default choice because owners, bankers and developers continue the argument that the cost of renovating and adapting buildings is too high (Shipley et.al. 2006:505). Such train of thought can represent either lack of experience, understanding or both, because in their conclusions Shipley et.al. found "the existence of dynamic, risk taking and creative investors, with a passion for beautiful older buildings is probably the most important single element in heritage development industry" (Shipley 2006:517). While such observations may be absolutely true, they lack replicability and definable criteria to apply to other research. This reflects the larger body of adaptive reuse literature as a whole - a lack of objective and standardized key process steps that define the success of an adaptive reuse project. Bullen and Love (2011) made progress by defining key criteria as definable operations in the adaptive reuse decision-making process. The next step is to breakdown the actionable steps in each category of capital investment, asset condition and regulation toward the goal of developing predefined measurable categories. Categories would include low to high investment risk, good to poor condition assessment, and defined regulations on how the property can be adapted. These categories should be assessed after a project and translated into a body of data that advances our understanding of reusing existing assets and measuring risk based on documented project parameters. Using a framework such as historic preservation incentive program criteria allows for

predefined regulations as they are applied across varying rates of capital investment and asset condition.

The City of Phoenix case study examples presented here highlight economic incentives that emerged over time as part of the City of Phoenix Historic Preservation (HP) Program. Project area location is bounded by S. 7th Avenue (west), E. Roosevelt (north), S. 7th Street (east) and E. Buckeye Road (south) (Figure 1). Economic incentives are only one component of successful adaptive reuse programs offered by a municipality to developers to reuse older buildings in lieu of demolition and new construction. Within any given context, variables exist in each situation where economic incentives are employed in adaptive reuse projects, and this thesis cannot comprehensively cover what factors constitute or contribute to a successful adaptive reuse project, that entails future research when more defined parameters exist. However, case study examples allow for comparative understanding between buildings which have proven to be a better economic choice that new construction. This thesis outlines a framework to examine the four selected case study examples within the context of the City of Phoenix Historic Preservation Incentive Programs.

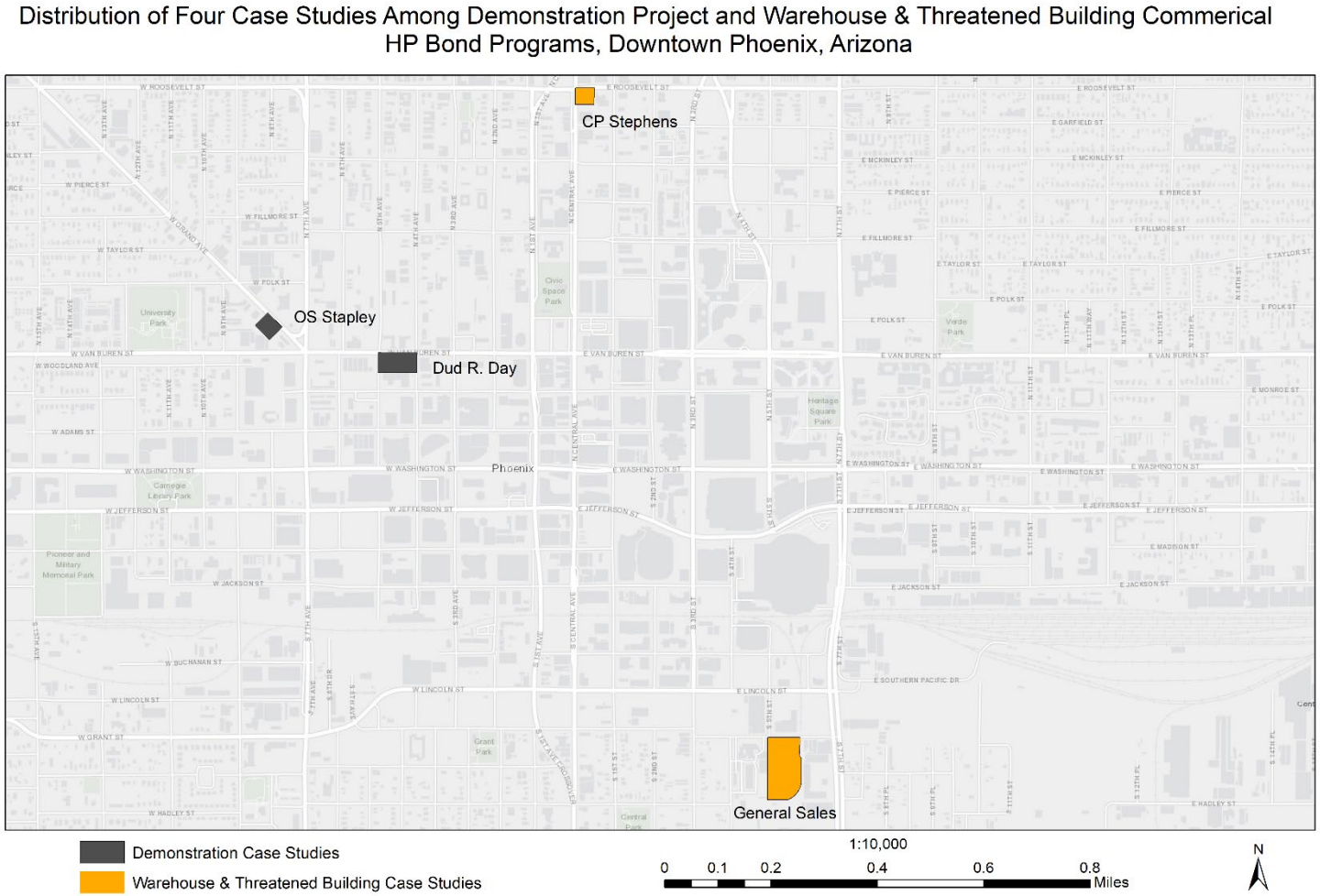


Figure 1. Downtown Phoenix showing distribution of highlighted case study examples. Map created August 2018. Source data credit, HP Phoenix HP Department GIS. ESRI base map.

Behind the success of the City of Phoenix Historic Preservation Incentive Programs lies the framework of the city's preservation plan called *PreserveHistoricPHX* [sic] which partners with the City of Phoenix Master Plan, linking Historic Preservation guidance to City planning goals. Driven by an experienced Historic Preservation Program team, the case study examples developed out of Historic Preservation Incentive Programs, specifically voter approved general obligation bond funds approved in 1999, 2001, and 2006, respectively, which focused on historic preservation. A general obligation bond is a form of debt obligation that, when issued, provides local government with funds to finance large capital investment improvements that serves the public community.

Four distinct incentive programs are currently offered (Demonstration Project Program, Exterior Rehabilitation Assistance program, Low-Income Historic Housing Rehabilitation Program, and the Warehouse and Threatened Building Program) that connect private investment and redevelopment with historic preservation in the form of grants that come directly from bond funds. Some programs focus on residential or non-income producing properties. The cases studies presented in this paper focus on the two commercial programs, the Demonstration Project Program and the Warehouse and Threatened Building Program, both of which will be detailed in Chapter 2. These commercial incentive programs could be used as templates for other cities and preservation programs with similar building stock and vision toward adaptive reuse. Case study research within the same city and within a distinct timeframe allows for a close up view of some, but not all, variables found in adaptive reuse projects. First, the Demonstration Project program and the Warehouse and Threatened Building programs

were both created from general obligation bond funds and both have very similar program criteria. Second, requests from the HP Program to grant historic preservation overlay zoning for all four case study examples occurred within 5 years of each other, allowing for a reasonably defined snapshot of the City of Phoenix commercial market. Third, building age, materials, siting and natural environment were comparable.

## Research Methods

Initially, both Tucson and Phoenix were considered for case study examples based on regional familiarity of Arizona history with consideration given to similar building types and ages, but only the City of Phoenix had a comprehensive adaptive reuse program. Collection of documentation and data for all four case study examples came directly from Michelle Dodds, City of Phoenix Historic Preservation Officer. Ms. Dodds selected the case study examples based on my request to look at "successful" adaptive reuse projects, resulting in the four case study examples presented here. The term successful is used loosely here and lacks criteria. It simply meant projects that been well received by the public based on news media as well as examples that the HP program staff thought were good examples. While having the cases studies selected by the City of Phoenix HP Program represents a selective bias, it narrowed down the topic and focus to the economic incentives of commercial projects and structured the goal of identifying what a successful project looked like within a large urban context. Much of the information used in this research came from publicly accessible web content on the City of Phoenix Historic Preservation website.

Each case study example involved different owners and developers, but each project did follow the criteria for either the Demonstration Project Program or the Warehouse and Threatened Building program and worked with City of Phoenix HP staff as part of the application process. Both Demonstration Project Program and the Warehouse and Threatened Building incentive programs represent individual bond programs and funding for projects and are referred to as grant applications by the City's HP Office. The bond program history is further detailed below. The term "criteria" is used here to coincide with the City of Phoenix HP website and describes the city government regulations that are put in place to outline the steps required to apply for and meet grant requirements. Michelle Dodds shared her planning and historic preservation knowledge in a phone interview and over email correspondence as questions arose over the course of research. In addition, interviews of one of the case study project developers, Mark Abromovitz, and Mark Briggs, the 2006 Bond Fund Committee Chair, were conducted to learn more about how the bond program worked from a perspective outside the City Historic Preservation department. Outreach for interviews to other people involved in the economic incentive development was undertaken without response, so information was gathered from the City of Phoenix HP website or preservation documents to fill in how the bond programs were shaped.

## Geospatial Data Analysis

While only four case study examples are discussed in detail, it was important to understand the scale and spatial distribution of all the Demonstration Project and Warehouse and Threatened Building programs across the City of Phoenix to understand

their proximity to each other. The City of Phoenix geospatial data did not have attribute data on incentive programs, so Demonstration Project and Warehouse and Threatened Building project shapefiles were created for this research (Figure 2). The map was created by filtering City of Phoenix historic preservation geospatial data for both the Demonstration Bond program and the Warehouse and Threatened Building Bond programs. Next a relational join of filtered incentive program data and data from an Easement Spreadsheet which had addresses of City of Phoenix historic properties with conservation easements was completed. Buildings names were cross-referenced with addresses to double check accuracy, however due to differences in file naming conventions (either building names or addresses) between the two data sets, it was clear not all Demonstration Bond program and the Warehouse and Threatened Building Bond program properties were able to join correctly. Therefore, Figures 1 and 2 only represent a partial distribution of Demonstration Bond program and the Warehouse and Threatened Building Bond program properties.

Nineteen out of sixty-two Demonstration Project property names (30%) did not match spatial data features during the relational join. Five out of eighteen Warehouse and Threatened Building property names (27%) did not match spatial data features during the relational join. A full list of Demonstration Program and Warehouse and Threatened Building properties can be found in Appendix A, as well as the methodology of the relational join. A map showing just City of Phoenix HP Parcel data can be found in Appendix A for general reference (Figure A1).

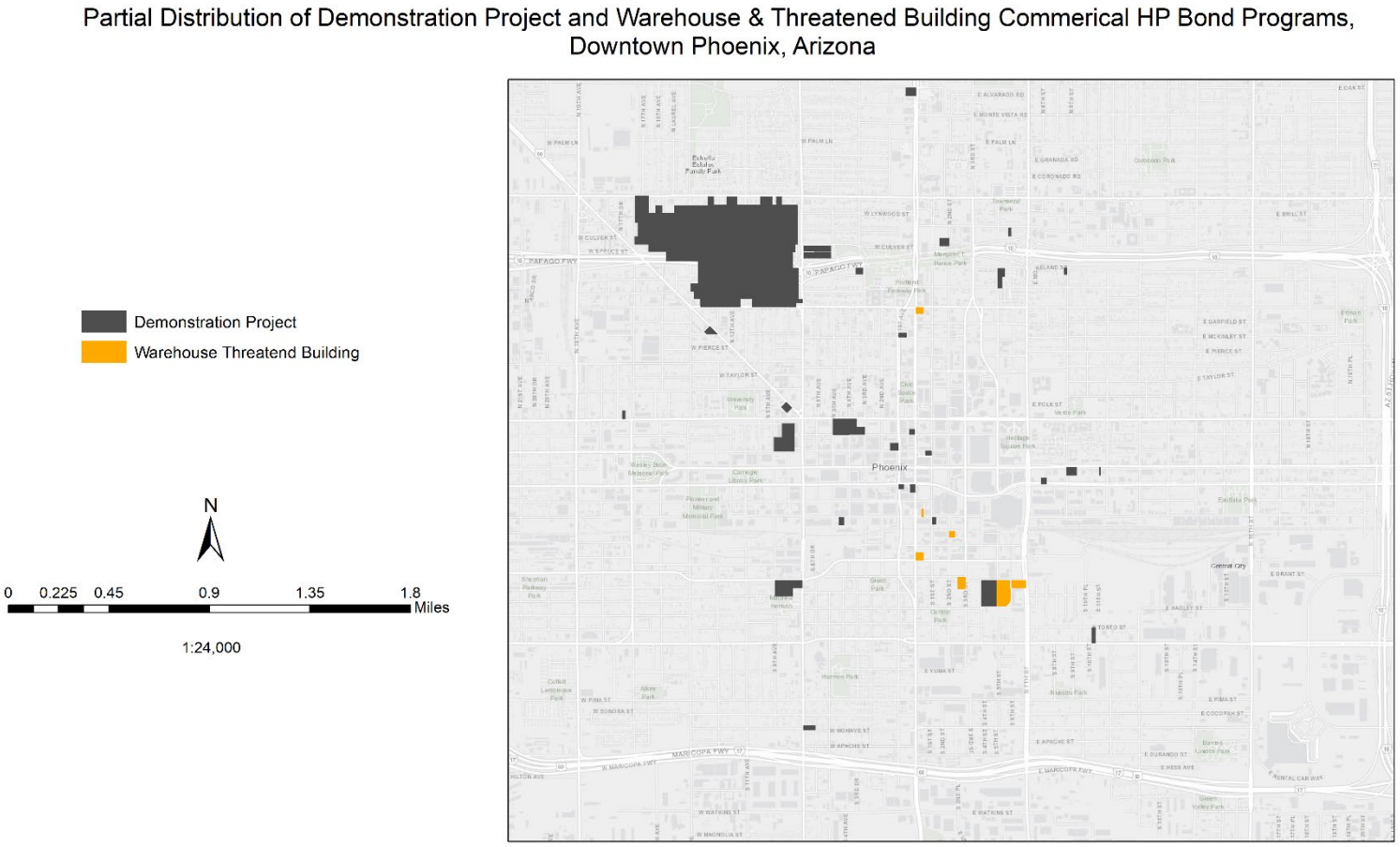


Figure 2 Partial distribution of Demonstration Project and Warehouse & Threatened Building HP Bond Programs. Map created August 2018. Source data credit, HP City of Phoenix HP Department GIS. ESRI base map.

## Chapter 1

## Adaptive Reuse as a Preservation Strategy for Downtown Revitalization

A longstanding citation in historic preservation is that "the greenest building in the one already built" (Elefante 2007) and is core philosophy to many in the field of historic preservation. Reuse of existing building stock is not a new topic, it's a blend of practicality that has occurred since "time immemorial" where reuse of a space/building fits a given situation (Wong 2017:6).

Previous studies as cited by Rypkema show that rehabilitation of historic structures is a cost-effective reuse of existing assets based on certain cost ranges, but those ranges still use general estimates such as "interior demolition and partitioning, updating but not replacing mechanical and plumbing systems, replacing roof cover but not roof structures" (2014:84). Rypkema observed that mechanical systems never last as long as the building, they must be updated even in newer construction as a buildings system "rarely have a productive life of more than 25-30 years" (2014:84). Stewart Brand pays homage to the structure itself, not just the processes that change it, but the original shape of the building and how buildings have been adapted over time. The simpler the building, the better for it to adapt to changing needs of people:

> *As for shape: be square. The only configuration of space that grows well and subdivides well and is really efficient to use is the rectangle. Architects groan with boredom at the thought, but that's tough. If you start boxy and simple, outside and in, then you can let complications develop with time, responsive to use. Prematurely convoluted surfaces are expensive to build, a nuisance to maintain, and are hard to change.*
>
> Stewart Brand 1994:192

The shape of a building may not sound like an economic observation with regard to adaptive reuse, but Brand correctly ties in the initial design of a building to its longevity and usefulness in a changing world. All four case study examples were organically designed with a basic rectangular footprint and have survived modification despite the additions because most modifications did not significantly alter the basic rectangular footprint or character defining features. Commercial buildings have greater flexibility for adaptation based on their size. For example, larger commercial spaces allow for "sequential redevelopment" where tenants can be accommodated in one part of the building providing ongoing income while other parts of the structure are under renovation (Shipley et. al. 2006:508).

From a conservation ethic, adaptive reuse promotes the sustainable preservation of existing buildings supporting of the argument that embodied energy is a critical aspect to consider when choosing adaptive reuse or demolition (Jackson 2005; Hasenfus 2013). Embodied energy is the estimated sum total energy cost of a building from cradle to grave, including the raw materials and manufacturing of materials, the transportation of materials and goods to the building site, the construction assembly process operations and maintenance of the buildings and its end life demolition (Costanza 1980). However embodied energy is still conceptual for many outside academia and may not typically be part of the initial mainstream economic-based discussion a commercial property owner considers. Still, sustainability is a core tenant behind the philosophy of stewardship of the built environment and is widely understood to meet the needs of the present while not compromising future generations (Young 2012; green-technology.org).

Looking to metrics to help identify sustainable models of reuse, we find the scale tipped toward green building products over good building design and local materials (i.e. vernacular architecture). Engineering and planning professionals learn about Leadership in Energy and Environmental Design (LEED), the leading assessment and certification system in the United States, as part of their professional training and education, but likely would not hear about the benefits of vernacular architecture and design unless they took a historic preservation planning class. This ultimately leaves city planners and policymakers without clear rationale for supporting older and diverse urban fabric (Powe et.al. 2016:167). The support of green technology such as low energy lighting and state of the art ventilation and air condition (HVAC) systems is therefore better understood and applied in the planning sector than adaptive reuse because it is rewarded in the LEED building assessment system. This is not to say that LEED does not encourage adaptive reuse. LEED BD&C does reward points for historic buildings reuse (5 points), building and material reuse (2-4 points), and whole building life-cycle assessment (3 points) (usgbc.org). Building and material reuse specifically addresses structural elements like roof decking and floors, and enclosure materials such as skin and framing as well as walls, doors floor coverings and ceiling systems (usgbc.org). LEED points for adaptive reuse of a historic building are a significant plus to historic preservation. Ironically, historic preservation lacks a framework of measurement to likewise track or score how historic building design (siting, operable windows, roof overhang, awnings, building materials) contribute to not just the energy efficiency of the building, but the historic character of the building.

Adaptive reuse and green technology are not mutually exclusive topics. Retrofitting a historic building is better than demolition, and often the central approach in adaptive reuse. What is not well understood is that the use of regional materials, local geographic context and vernacular building design itself is part of what makes older building stock inherently sustainable. Boschmann and Gabriel point out the misinformation between the benefits of new construction over adaptive reuse using case study examples in Colorado, their analysis created a framework took look at what they termed "light green/deep green" dichotomy in sustainably and architectural design;

> *A light green perspective achieves reduced energy consumption and pollution through technology and green gadgetry, a deep green approach focuses on local geographic conditions to work with natural climate systems through design informed by vernacular architecture as well as the benefits of adaptive reuse.*
>
> Boschmann and Gabriel 2012:1

Specifically, Boschmann and Gabriel found through six different case study examples in Denver and Boulder, Colorado that LEED building assessments did not consider original design and material, favoring light green approaches. Their conclusions found systems like LEED ultimately limit regional consideration in design and keeps architects, contractors and developers from pursuing sustainability though deep green design, and ultimately restricts "transformative paradigm-shifting advances in sustainability" (Figure 1). Ideologies that underpin LEED ratings and systems like it will not change until adaptive reuse of historic buildings has similar metrics to compete in the economic areas of sustainability.

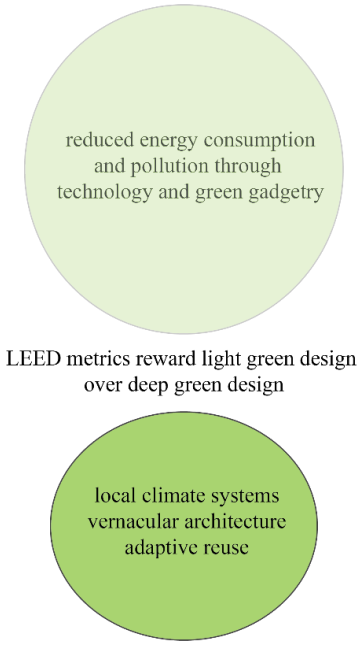


Figure 3. Illustration of LEED credit points over good building design. Adapted from Boschmann and Gabriel 2012.

**Big Data: Building Guidelines & Policy Recommendations Through Research**

Big data analytics cannot rate an individual building like LEED metrics can, but it can provide measurements of social, economic and environmental outcomes at the local landscape level.

Current research by the Research & Policy Lab (formerly Preservation Green Lab), a component of the National Trust for Historic Preservation launched in March of 2009, uses big data analytics to promote historic preservation. They maintain a national database of buildings across cities to support communities to "leverage their built assets" (savingplaces.org). Understanding variables differ in every project, adaptive reuse has no single recipe for success, however the Research & Policy Lab promotes eight strategies to promote building reuse in their report 2017 report *Untapped Potential* (savingplaces.org/greenlab).

1. **Know your Historic Building inventory**: Leverage data and mapping tools to understand reuse opportunities. Knowing a city's built asset is the first step to being able to target incentives, programs, and infill development.
2. **Eliminate, reduce, or recalibrate parking requirements**. Fewer parking requirements incentivizes investment in older buildings. Shared parking in nearby locations can also fill this need.
3. **Adopt a comprehensive adaptive reuse program**. Adaptive reuse ordinances bring together incentives along with flexibility in building and zoning codes, removing unnecessary barriers to reuse projects.
4. **Cultivate new sources of public and private capital for smaller projects or projects in weaker markets**. Leverage new and existing funds to cover gap financing, pre-development costs, and other expenses.
5. **Retain and strengthen existing incentives for building reuse.** Support ongoing advocacy for the federal historic tax credit and new and strengthened state historic tax credits.
6. **Update zoning codes to meet 21st-century needs.** Promote new uses, greater diversity of uses, accessory dwelling units, and other context-sensitive zoning changes to provide more opportunities for reuse and infill.
7. **Remove barriers that prevent change of use in existing buildings.** Establishing provisions within the zoning code for appropriate and compatible "sister uses" can ease the transition to new uses by reducing red tape.
8. **Develop a "solutions database" for overcoming building code challenges.** Daylighting creative solutions, successful projects, and paths to navigate complex

redevelopment problems can be invaluable to small-scale infill and adaptive reuse projects.

The Research & Policy Labs eight strategies are guidelines. For a city to be able to implement all eight strategies would be extremely difficult considering the disparate zoning and planning policies of municipalities at the state and regional level. At first glance the eight strategies imply a one size fits all approach that makes no sense on a community-by-community level. However, *as guidelines*, the strategies reflect key areas within a city's own planning and historic preservation department to focus efforts on. These guidelines are big picture ideas scaled to a local level, such guidelines can only be implemented within the local government landscape on a case by case basis with larger planning implications for growth and revitalization of a given city. Keeping these guidelines in mind with the inherent variables of different cities, a city the size of Phoenix, with a population of 1.6 million in 2016 (Google) has the infrastructure in place to implement such guidelines.

Based on PreserveHistoricPHX, a few strategies that the City of Phoenix has implemented:

1. *Know your Historic Building inventory*: This is conveyed by extensive historic property documentation, records, and geospatial data. As early as 1985, the Historic Preservation Office had 22 historic districts listed on the Phoenix Historic Property Register (2015:53). Several historic Phoenix property surveys have been done by preservation consultants hired by the City of Phoenix to write

context studies outlining themes that relate to specific property types, such as the *City of Phoenix Asian American Historic Property Survey* completed by Arizona Historical Research (PreserveHistoricPHX 2015:52).

2. *Cultivate new sources of public and private capital for smaller projects or projects in weaker markets:* The 1999 and 2006 bond fund program initiatives like the Demonstration and Warehouse & Threatened Building programs are an excellent example of creating a publicly supported economic funding for adaptive reuse projects that meet the City of Phoenix's criteria. Two of the case study examples, Dud R Day and General Warehouse, benefited from funds outside of the Historic Preservation bond funds. Specifically, gap funding was provided by the City's Community & Economic Development Department.
3. *Adopt a comprehensive adaptive reuse program*: The City of Phoenix developed an adaptive reuse program to help with renovation of existing buildings for new business uses, offers development guidance, streamlined processes, reduced timeframe and cost savings (PreserveHistoricPHX 2015:23). City of Phoenix HP also created Adaptive Reuse Fee Waivers in 2013 to help offset fees associated with qualifying Adaptive Reuse projects on HP eligible and HP designated properties (Michelle Dodds, personal communication).

Creating a comprehensive adaptive reuse program entails multi-disciplinary approach within a regulatory framework that has yet to be created in an accessible "template form." Any adaptive reuse program must have the political support of city government and local citizens if bond programs such as those in Phoenix are to be leveraged. If such a program

were feasible, programs would have been readily adopted by now. What big data organizations like Research & Policy Lab can do is breakdown a city's built asset list and statistically compile the livability, walkability and general character of a city. This can help a city move towards an adaptive reuse program resulting in a stronger integration of city planning and historic preservation.

Tucson, Arizona is an example of a city with a rich historic core but lacks the adaptive reuse planning of Phoenix. A big data analysis was done in 2016 of Tucson, just 113 miles south of Phoenix, called *Older Smaller Better -Measuring how the character of buildings and blocks influences urban vitality in a southwestern city.* Written by Preservation Green Lab, the same department that is now called Research and Policy Lab (of the National Trust for Historic Preservation), this study analyzed elements taken from Jane Jacobs (1961) and tested the theory that older buildings and mixed-vintage blocks contribute significantly to Tucson's economic vitality and sense of place (2016:3). The study capitalized on Jacobs outcry at urban renewal as a measurement of progress and her observation that a mix of old and new buildings brings different levels of economic yield. It also recognized that new business often naturally emerges in older buildings with low economic yield (2016:8).

Preservation Green Lab measured Tucson's urban landscape using GIS and spatial statistics (multivariate regression) to assess relationships between characteristics of the built environment (historic, infill and new construction) and livability, economic vitality, residential density and diversity. They created a composite Character Score that served as

a single measure for testing the role of older smaller buildings and mixed vintage blocks (2016:9). Character Score combined data including 1). median building age taken from property assessor's records, 2). diversity of building age - also drawn from county assessor's records which relates to Jacobs concept that healthy neighborhoods "mingle buildings that vary in age and condition" and 3). granularity, which scores the size of buildings and the size of the parcels where high granularity means there are many small buildings on small lots vs low granularity means there are fewer, bigger buildings on large lots (2016:10).

To simplify what the study found, sections of downtown Tucson that had older smaller buildings had higher Character Scores, and therefore the most measurable economic vitality. This was recognized by finding the best-voted restaurants and businesses; good access to the street car, promoting the walkability of the area; more diverse, locally owned businesses; and a younger median age in the resident population to name a few of the study's core findings. The study was built on longstanding theories of Jane Jacobs, Oscar Newman, William H. Whyte, arguing that "characteristics of the built environment tend to play a limited, but important, role in influencing behaviors and outcomes" of economic viability (2016:11). This is a scale and level of analysis that gives weight to the importance of long-term city planning, in which the City of Phoenix has begun to invest. Despite the statistically significant data trends found by Research and Policy Lab, Tucson's biggest challenge and one of the study's key recommendations was to conduct outreach to developers interested in building reuse and create an adaptive reuse program.

Big data at this scale is incredibly informative, giving planners and historic preservationists alike much to consider, but it cannot create an adaptive reuse program overnight. Nor do all concepts capture the desire for walkability of a city and ample parking by residents. Interviews with developers found parking to be a huge issue even in places like Ontario where there is ample access to diverse public transit options "because potential buyers or renters insist on parking spaces even if municipalities are willing to waive parking requirements" (Shipley et.al.2006:515).

The data can only highlight the cumulative social and physical attributes of Tucson's historic core, nudging the city to leverage the existing built environment while it's still standing. At this writing, Tucson is working off of *Plan Tucson*, a general plan approved by voters in 2013 which addresses the Built Environment, including historic resources, as a chapter (Plan Tucson, Chapter 3). The City of Tucson Planning and Development Services is working toward an adaptive use program via a pilot study which will be implemented when the city has the staff to do so (Jonathan Mabry 2017, Allison Diehl 2018 personal communication). As of this writing, the City of Tucson Historic Preservation division lacks the staffing that the City of Phoenix does to concentrate on program development, but they have looked at City of Phoenix as a precedent for adaptive reuse and have goals to create a program in the future (Jonathan Mabry, personal communication 2017). Creating an adaptive reuse program takes time and financial support from local government.

## Local, State and Federal Incentives

Federal incentives like Historic Tax Credits (HTC) have a direct impact on local preservation. In 1976, a decade after the National Historic Preservation Act, Congress began to provide historic tax credits for historic buildings in the form of accelerated depreciation (Novogradac & Company 2018). Later tax reforms in 1979 and 1981 created a tiered tax credit system where the older the buildings the higher the tax credit based on qualified expenditures (Novogradac & Company 2018). In 1986 federal tax reform changed to a two-tiered system with at 10% credit for nonresidential buildings placed in service before 1936. This was significant because it applied to historic buildings did not qualify as a certified (eligible) historic structure, and that it could be non-contributing building to a historic district. In the second tier, a 20% tax credit was allowed for structures deemed eligible by National Park Service standards of eligibility (Novogradac & Company 2018). The 1986 tax credit was in place until 2017.

The recent federal tax bill H.R.6081 Historic Tax Credit Enhancement Act of 2018 that was passed in December 2017 amended Section 50(c) Internal Revenue Code of 1986. Specifically, it eliminated the requirement for a building owner to subtract the amount of the historic tax credits from a building's basis, i.e. the amount a property is worth for tax purposes (National Housing & Rehabilitation Association 2018). H. R. 6081 retained the 20% HTC allowed for certified rehabilitations of historic structures, but changes to the bill spaced out the 20% credit out at a rate of 4% per year over a five-year period. Previously, the 20% credit could be claimed in its entirety once a project was placed in service. The H. R. 6081 bill eliminated the 10% tax credit that was part of the 1986 bill.

Removing the incentive to rehabilitate a non-eligible historic structure was a loss to commercial building preservation.

Spreading the 20% tax credits over five years meant an approximate value reduction of 11% to 17% , a significant change to investors who could previously use the 20% upfront (Engemam and Davis 2018). This is expected to reduce the amount of reinvestment flowing into historic communities (National Housing & Rehabilitation Association 2018). On a positive note, a transition rule included in the bill allows for a building owner to claim the 20% tax credit under the previous code if the owner had commenced their ownership or long-term lease of the property as of December 31, 2017 and ownership is maintained through the tax credit recapture period. Table 1 outlines Arizona state property tax and Federal tax incentives for 2017-2018.

Table 1. Arizona State and Federal Tax Incentives for Commercial Properties 2017-2018.

| **Investment Tax Credit (ITC)** ***Federal*** | **State Property Tax** ***Commercial/Industrial*** |
|---|---|
| 20 percent income tax credit on the cost of rehabilitating historic buildings for industrial, commercial, or rental purposes | Aids owners who rehabilitate underutilized historic commercial or industrial properties |
| Depreciation of such improvements over 27.5 years for a rental residential property and 31.5 years for commercial property | Offers participants a substantial reduction in their annual state property taxes |
| The rehabilitated building must be a certified historic structure that is subject to depreciation | Provides an owner the opportunity to make a building presentable to tenants and allow such tenants a period to establish business without the burden of increased rent due to property tax increases |

| | |
|---|---|
| The rehabilitation must be certified as meeting The Secretary of the Interior's Standards for Rehabilitation, established by the National Park Service (NPS) | 10-year agreement during which the property is rehabilitated and maintained according to The Secretary of the Interior's Standards for Rehabilitation |
| The ITC program is governed by Section 43 of the Internal Revenue Code (26 U.S.C. 47) and Section 170 (h) of the Internal Revenue Code of 1986 (26 U.S.C. 170(h)) | Temporary tax classification set by the county assessor does not necessarily change the current base assessment |
| The Internal Revenue Service is responsible for all procedures, legal determinations, and rules and regulations governing the tax consequences of the ITC program | Modifications intended to restore or rehabilitate the property are almost entirely tax free (assessed at 1 percent of full cash value rather than 25 percent |

In Section 1b of the National Historic Preservation Act (NHPA), Congress specifically states that the spirit and direction of the nation are founded upon and reflected in its historic heritage. This does not imply federal funding is, or should be, the sole source. Federal, state and local funding for historic preservation will continue to fluctuate with the cycles of political appointments and the country's economic stability.

In the last decade, research by the Advisory Council on Historic Preservation (ACHP) addressed the role of federal involvement in the "right-sizing" of larger cities in New England, the Mid-Atlantic and Midwest, regions that were once large centers of industrial commerce which experienced a massive exodus of population due to loss of industry jobs. It was thought that federal programs like Housing and Urban Development (HUD) could help legacy cities like Pittsburgh or Detroit gain leverage at the local level by creating new programs to supplement existing block grants. Like all incentive programs, this type of federal aid, when available, is not a sure thing. The need for cities to compete for funding was not necessarily the deal-breaker, rather it was the fact many federal

programs rely on congressional earmarks which are no longer available (ACHP 2011:11). One of the recommendations made by the ACHP right-sizing study was the need for collaboration between federal agencies to ensure that historic preservation values are incorporated in national programs that support updated urban policies (2011:53). Thee ACHP promotes Preserve America matching grants available from the National Park Service, an excellent example of a federal program authorized in legislation but not currently funded. The fluctuating nature of federal and state funding illustrates why local level preservation is so central to continued preservation of historic resources.

When available, state funding strengthens and supports city planning departments that value historic preservation as part of economic development. State funding for historic preservation, like federal funds, fluctuates, and can be lost during times of nationwide economic stress. Colorado still has significant grant funding for historic preservation, where funds are generated from the gaming compacts. The Colorado Historical Fund has granted over $300 million to historic properties across the state with 282 active grants (Fort Morgan Times 2018). In 2009, during the country's most recent recession, Fort Morgan Colorado created a preservation ordinance and appointed a board to select local landmarks designations. With a local landmark listing, building owners on their Main Street applied for grants from the Colorado Historical Fund to revitalize historic buildings and storefronts. Denver does not offer incentive programs like City of Phoenix does, but it does encourage the use of tax credits and grants from the State Historical Fund that offer a public benefit.

Big data also supports state preservation strategies. The National Trust for Historic Preservation just issued guidance for "local policy makers to understand the benefits of historic rehabilitation and the key factors for structuring an effective state historic tax credit program" (National Trust 2018). Their publication, *State Historic Tax Credits: Maximizing Preservation, Community Revitalization and Economic Impact*, shares characteristics of the most successful historic preservation incentives from the thirty-five states that offer historic tax credit programs (Figure 2).

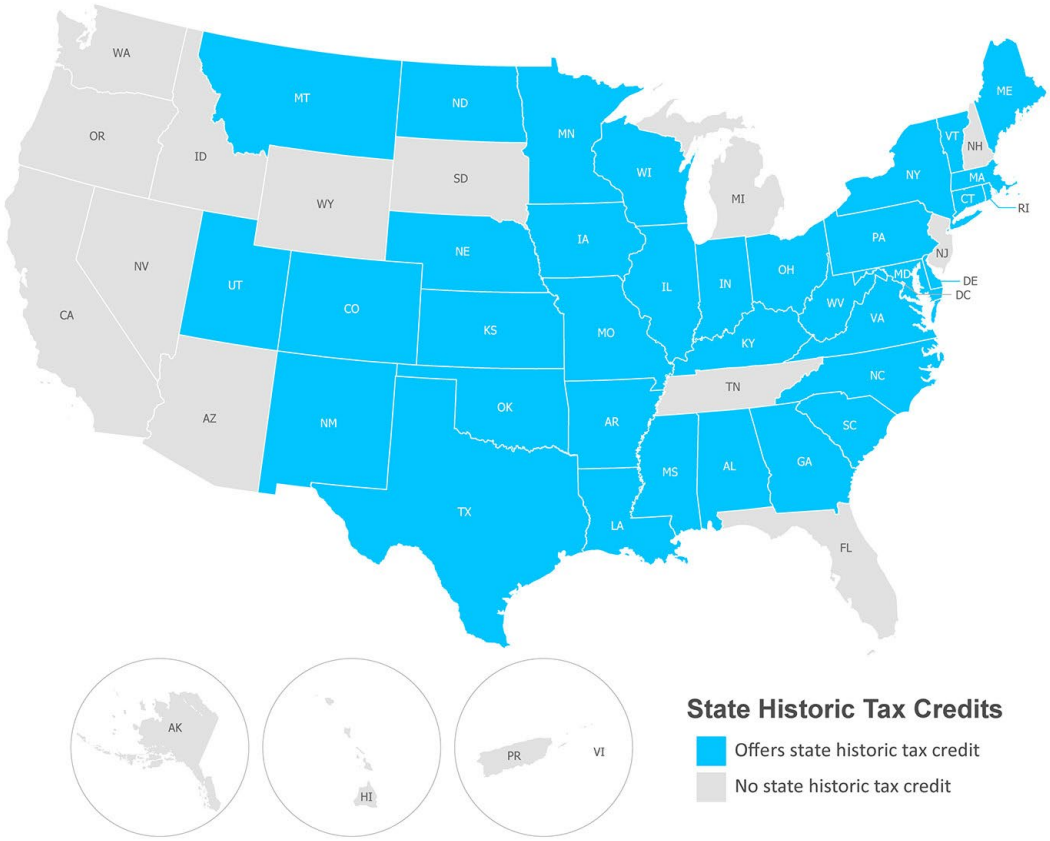


Figure 4. U.S. Map with current states that have a State Historic Tax Credit program. Image credit, National Trust for Historic Preservation, 2018.

Arizona had a historic tax credit program but is no longer active. In 1990, Arizona voters set aside Heritage Funds by voting that $20 million in lottery money was to be divided each year between State Parks and the Department of Game and Fish. The money was often used as seed money for matching grants, and while it developed parks and campgrounds, it also allowed for historic restoration grants (Thornton 2014). Those heritage funds were reallocated into the general fund by the Arizona state legislature in 2010 and in 2011 the state eliminated the fund (Thornton 2014).

# Chapter 2

## City of Phoenix Preservation Bond History

The City of Phoenix's first voter approved ballot initiative bond programs came in the early 1970s in the form of protecting and maintaining urban parks in the sum of $21.5 million (Preserve Historic Phoenix [PHP] 2015:46). In 1979, attorney Terry Goddard was hired to lead the Arizona: Past & Future Foundation lawsuit against the US Department of Transportation, the Federal Highway Administration and the Arizona Department of Transportation for failure to protect historic resources in the planning of freeway construction. The case did not win but, the foundation did bring awareness and public support for the protection of historic resources and archaeological sites (PHP 2015). Also in 1979, the City of Phoenix followed up with a Special Conservation District Ordinance followed by the City of Phoenix Historic Building survey identifying buildings eligible for the national register, and in again in 1984 with a Commercial Properties Survey (PHP 2015:47). That same year, then Mayor Terry Goddard created the Phoenix Ad Hoc Committee on Historic Preservation to manage the historic building stock, and later imposed a temporary ban on razing or "significantly altering historic buildings" which then led to historic preservation overlay zoning for properties zoned for historic preservation (PHP 2015:4). In addition to recommending the overlay zone, the Ad Hoc Committee recommended creating a historic preservation commission and a historic preservation officer position – which were adopted by the City Council (PHP 2015:47).

This work paved the way for Proposition 2, the first voter approved bond funds for City of Phoenix historic preservation which appropriated $15 million in 1989. In 1999, three of the current historic preservation grant programs were established including the Demonstration Project, and the approval of two additional preservation staff (PHP 2015:48). In 2001 voters approved $14 million in bond funds for the Historic Preservation Program and again in 2006, approving $13.1 million and the creation of the Warehouse and threatened Building Program (PHP 2015:49). In 2015, the City approved PreserveHistoricPhoenix [sic], a comprehensive plan which guides the City of Phoenix Historic Preservation Program and supports PlanPHX [sic], the City's 2015 General Plan (PHP 2015:1). Out of 580 total historic preservation easements city-wide, the 2006 Warehouse and Threatened Building program has 18 projects and the 1999 Demonstration Program has 62 projects as of this writing.

## Brief Overview of Historic Preservation Law & Zoning

The bond funds work within the greater scope of the National Historic Preservation Act (NHPA) of 1966. Qualifications for historic property designation apply to all listed on the Phoenix Historic Property Register and/or the National Register of Historic Places with a property's significance either at the local, state or national level and meeting one or more of the National Register criteria for significance.

> **Criterion A**: A property is associated with events that have made significant contribution to the broad patterns of history (e.g. Civil War is a national example, commercial growth of a city would be local).

- **Criterion B**. A property is associated with the lives of significant people (e.g. the home of a President or famous author are a national example, the birthplace of community leader is a local or state example)
- **Criterion C**. A property is distinguished by a type, period or method of construction, or is the work of a master, or possesses high artistic value (e.g. built by Frank Lloyd Wright, or a bridge that is an outstanding example of engineering).
- **Criterion D**. A property has the potential to yield or has yielded information important to the understanding of history or prehistory (e.g. archaeological sites primarily fall into this category).

There are five property types eligible for listing on the NRHP and Phoenix Historic Property Register registers, examples below are from PreserveHistoricPHX (PHP 2015). Any of the property types can also occur within a district:

- **Building:** Created principally to shelter any form of human activity (e.g. house barn, stable, city hall, school, church).
- **Structure:** Distinct from buildings, made usually for purposes other than human shelter (e.g. bridge, roadway, fire tower, bandstand).
- **District:** Properties such as neighborhoods, central business districts, college campuses, industrial complexes. Districts no not have to be contiguous. Some properties such as canal networks or features that represent a historical theme such as Civilian Conservation Corps (CCC) walls, dams, buildings, picnic areas,

can be part of a CCC District that falls within the same period of significance, such as 1935-1939.

- **Site:** the location of a significant event, prehistoric or historic occupation or activity or a building or structure ruined or gone, where the location itself possess historic, cultural or archaeological value regardless of the value of any existing structure (e.g. battlefield, rock shelter, village site, trails, designed landscapes).
- **Object:** Construction primarily artistic in nature, distinct from buildings and structures, and associated with its setting even if object is movable (e.g. sculpture, fountain, monument).

At the local city government level, zoning is an important tool in historic preservation of the built environment. Zoning is the method used to create a historic overlay of a property type, called a conservation easement, and defines what can and cannot be done within that overlay without going through a formal zoning adjustment or variance process. Zoning power is done through Arizona Revised Statues, Section 9-462.01(A)(10) whereby the legislative body may establish districts of historical significance (PlanPHX:29).

In the bigger picture, zoning ordinance is a land-use regulation that separates land into sections, or zones, with different rules governing activities on that land and which has shaped the built environment in North America for the last hundred years (Hirt, 2018). Zoning has a varied history, with objectives borne out of the industrial era to manage urban development and improve health and safety (Fischler 2018). As used within the bond programs, conservation easements serve as a tool in historic preservation to either supplement preservation planning where there are formal guidelines (as is the case for the

City of Phoenix) or to protect historic resources in the form of historic zoning overlays, where there is no formal written city historic preservation plan linked to a city's management plan, like Tucson and many other cities. Without zoning, a city could not maintain or enforce conservation easements of historic commercial or residential historic properties. The case study examples presented here fall in an ideal situation were the historic preservation incentive programs are representative of a shared vision with the City's 2015 general plan PlanPHX, ultimately working towards long term goals and policies. A conservation easement is granted to the City for a predetermined amount of time based the amount of funds allocated to the property. The more funds granted, the longer the conservation easement. All Demonstration and Warehouse & Threatened Building projects are granted a conservation easement zoning overlay by the Phoenix City Council as recommended by the City of Phoenix Planning & Development Department to ensure the exterior historic character of the property is maintained.

## Bond Program Goals and Principles

The purpose of both Demonstration and Warehouse and Threatened Building Programs is to preserve historic properties in downtown Phoenix. The Demonstration Project Program provides funding assistance for historic rehabilitation projects which best demonstrate city historic preservation goals and objectives where historic rehabilitation projects which encourage the retention of historic building materials and features, reverse inappropriate alterations, reconstruct missing historic details, and return a building to its historic appearance. Similarly, the focus of the Warehouse and Threatened Building Programs is retaining historic downtown warehouses and other threatened historic buildings, and to return them to a viable use. The program supports projects that protect building exteriors,

reverse inappropriate alterations, reconstruct missing historic details, and provide needed repairs. All Demonstration and Warehouse and Threatened Building Programs projects are required to meet the City's Preservation Philosophy (City of Phoenix Preservation Philosophy, 2014) and the Secretary of the Interior's Standards for the Treatment of Historic Properties (National Park Service, 2017).

Demonstration and Warehouse and Threatened Building Program criteria are presented below in Tables 2 and 3. If criteria differ between the two programs in Table 1, it was noted in Table 2 with Demonstration or W&TB in bold after the criterion to distinguish it belongs to that program only. Otherwise, all criteria apply to both programs. In general, all criteria must improve a historic property and meet City of Phoenix preservation objectives in similar ways.

Table 2 Selection Criteria for Demonstration & Warehouse and Threatened Building (W&TB) Projects. Adapted from the City of Phoenix Planning & Development website.

| Selection Criteria |
| --- |
| Undertake critically needed stabilization, preservation, restoration or reconstruction work; |
| Implement a comprehensive rehabilitation strategy for a building, including projects that adaptively reuse a historic building in order to preserve it/return it to viable use; |
| Provide maximum leverage of city funds through the use of private funds or other monies. |
| Exemplify the City's Preservation Philosophy |
| Preserve a property that is individually listed on the Phoenix Historic Property Register or eligible for individual listing on the Phoenix Historic Property Register Demonstration program only. |
| Improve the appearance of a historic neighborhood, area, streetscape, or individually significant site Demonstration program only. |
| Further city community development goals for designated Neighborhood Initiative Areas, Re-development Areas or consistent with other city plans Demonstration program only. |
| Activate a historic building (i.e., uses with human activity and which provide public access**) W&TB program only.** |
| Contribute to community values, economic development goals, and where applicable to city downtown vision **W&TB program only** |

Table 3 Eligible Exterior work items for Demonstration & Warehouse and Threatened Building (W&TB) Projects. Adapted from the City of Phoenix Planning & Development website.

| Eligible Improvements |
| --- |
| Exterior Wall Repairs |
| Roof Repairs/Replacement |
| Window and Door Rehabilitation and Weatherization Improvements |
| Structural Reinforcement |
| Exterior Woodwork |
| Masonry/Stucco Repairs |
| Porch and Step Repairs |
| Cornices and Parapet Repairs |
| Americans with Disabilities Act (ADA) Alterations |
| Storefront Restoration |
| Foundation Repair |
| Historic Outbuilding Rehabilitation |
| Reversal of Previous Inappropriate Alterations |
| Demolition of Non-Historic Additions |
| Reconstruction of Original Architectural Porch and Step Repairs Elements Based on Historic Documentation or Physical Evidence |
| Restoration of decorative interior historic features provided there is public access to portion of building where features are located **W&TB program only.** |

Table 4. Qualified Interior Work & Architectural & Engineering Costs. Adapted from the City of Phoenix Planning & Development website.

| |
|---|
| Eligible for funding provided costs cannot amount to more than 35 percent of the project's total eligible costs: |
| *Qualified Interior Work* Includes structural work necessary to stabilize or protect the building's historic exteriors provided that a licensed structural engineer provides written documentation that these improvements are needed to prevent physical damage to the building.<br><br>The program can also fund restoration of unique, character-defining interior historic features provided there is public access to the inside.<br><br>The HPO determines which interior items are eligible for reimbursement.<br><br>Interior work cannot exceed 25 percent of the project's total eligible costs |
| *Architectural and Engineering* includes design work, special architectural and structural studies, and construction drawings and specifications related directly to eligible work items, provided costs amount to no more than 10 percent of a total request.<br><br>This does not include pre-agreement or construction administration costs. An owner cannot be reimbursed for architectural or engineering services provided by the applicant or an immediate family member. All eligible architectural and engineering services must be performed by appropriate licensed professionals. |
| *Ineligible Expenses:* This program does not fund acquisitions, landscaping, fencing, site improvements, or additions/new construction other than historic reconstruction work. Painting is only eligible if directly related to another eligible work item. The HPO determines the eligibility of all proposed work items. |

Application procedures are the same for both incentive programs, with the addition of information on how the project fits into a larger rehabilitation plan for the property for Warehouse and Threatened building applications. Application procedures can be found in Appendix B.

## City of Phoenix Commercial Bond Programs

Two case study examples came from the City of Phoenix Demonstration Project Program:

- O.S. Stapley Company Buildings
- Dud. R. Day Phoenix Motor Company

Two case study examples came from the City of Phoenix Warehouse & Threatened Building Program

- General Sales Company Warehouse
- C.P. Stephens DeSoto Six Dealership Building

The result of the bond programs was the creation of incentive programs for eligible residential and commercial historic properties.

Outlined below are the two commercial programs in this study, the Demonstration Project Program (Demonstration) and the Warehouse and Threatened Building Project (W&TB). Both programs require significant effort and compliance on behalf of grant recipients, and monies are not disbursed until work items are complete and approved by the City of Phoenix Preservation Office. Grant funds are meant to encourage rehabilitation but are by no means capable of being the sole source of funding. That means grant recipients must put in as much, or more, money toward non-eligible repairs.

Demonstration Program and Warehouse and Threatened Building Program grant criteria are similar in scope of maintaining compliance with city regulations, with only a few distinctions between the two bond programs that relate directly to the individual bond program focus.

## Demonstration Project

The Demonstration Project Program uses Historic Preservation Bond funds to encourage the rehabilitation and reuse of significant historic commercial, multi-family and/or institutional (museums, non-profit offices, churches, etc.) buildings.

The program pays up to 50 percent of eligible rehabilitation costs on a reimbursement basis for projects that substantially preserve, restore and/or rehabilitate significant historic properties in the City of Phoenix and supports adaptive reuse projects that keeps a building economically viable (PHP 2015:61). The Historic Preservation Office (HPO) considers funding requests over $10,000, with the maximum funding amount based on the extent to which the project meets the Project Selection Criteria, the extent of the project's needs, and the availability of funds (PHP 2015:61).

### Project Selection Criteria

The city's decision to fund an application is based on the extent to which the project meets city historic preservation objectives (“Historic Preservation Demonstration Project Program” 2018). Priority for funding is given to projects that:

- Undertake critically needed stabilization, preservation, restoration or reconstruction work;
- Implement a comprehensive rehabilitation strategy for a building, including projects that adaptively reuse a historic building in order to preserve it (such as the conversion of a house into a restaurant);
- Exemplify the City's Preservation Policy

- Preserve a property that is individually listed on the Phoenix Historic Property Register or eligible for individual listing on the Phoenix Historic Property Register;
- Improve the appearance of a historic neighborhood, area, streetscape, or individually significant site;
- Further city community development goals for designated Neighborhood Initiative Areas, Re-development Areas or consistent with other city plans; and
- Provide maximum leverage of city funds through the use of private funds or other monies.

**Warehouse and Threatened Building Program**

The Warehouse and Threatened Building Program uses 2006 Historic Preservation Bond funds to protect historic downtown warehouses and other threatened historic buildings. The City can use these funds to acquire/assist with acquisitions of threatened historic properties or to assist a property owner with rehabilitation work. If the City acquires a property, it will either find a public use for the property or transfer it to a new owner through a Request for Proposals process. For rehabilitation projects, the program can pay up to 100 percent of eligible project costs provided that the owner is expending an equal or greater amount on other rehabilitation work items (e.g., interior elevators, plumbing upgrades, etc.). In exchange for funding, owners convey a conservation easement to the city. The program considers requests over $10,000, with the maximum award based on the project needs, project's contribution to city goals, and the availability of funds. Monies are disbursed after work items are completed and approved by the Historic Preservation Office. (“Warehouse and Threatened Building Program” 2018).

## Eligible Buildings

To be eligible for Warehouse and Threatened Building Program, properties must meet both of the following criteria ("Warehouse and Threatened Building Program" 2018):

- Be individually listed on the Phoenix Historic Property Register OR be eligible for individual listing on the Register (as determined by the City of Phoenix Historic Preservation Office); and

Consist of either:

- A historic warehouse located in the Warehouse Overlay District, OR
- A historic building (other than a warehouse) that is "severely threatened," i.e., a building in an extremely deteriorated condition (documented fire damage, deemed a dangerous and unsafe building, etc.) and/or with a high likelihood of demolition

Commercial goals for adaptive reuse have fundamentally the same goals and objectives for both Demonstration and Warehouse and Threatened Building Program incentive programs but Warehouse and Threatened Building Program specifically looks at properties in the Warehouse District or a severely threated building.

# Chapter 3

# City of Phoenix Adaptive Reuse Case Study Examples

## O.S. Stapley Company Buildings

### Location and Background

The O.S. Stapley Buildings are an example of Demonstration Project Bond funds and are located near the corner of Grand Avenue and Van Buren Street (723-735 Grand Avenue). The main two-story building was constructed in 1927 with subsequent additions of three one-story bays after (Figure 5). The company sold retail hardware, appliances, tools, sporting goods, farm and industrial equipment and implements and held company offices on the second floor until they closed in 1962 (City of Phoenix 2012a, Towne 2016). Records indicate the buildings has had many uses other than retail including restaurants and cafes, offices, warehouses and even a heavy machine supply and repair shop with an industrial museum displaying working 19th and early 20th century heavy machinery (City of Phoenix 2012a:1).

Architecturally, the buildings are an example of early 20th Century street-oriented commercial architecture with four individual brick facades with large storefront windows and wood transoms above main entry doors along the front elevation (City of Phoenix 2012a). Figure 4 was taken after the 2012 Demonstration Project funds were dispersed and the developer had completed the restoration. The first tenant to move in after restoration was Tuft and Needle, a mattress company founded locally in Phoenix the same year, 2012 (Figure 6).


Figure 5. O.S. Stapley Company Buildings circa 1927. Photo courtesy Phoenix Historic Preservation Program.

Figure 6. O.S. Stapley Company Buildings circa 2012. Photo courtesy Phoenix Historic Preservation Program.

The Staff Report noted that the building form was intact despite alterations over the years including changes to the façade including blocking in the storefront windows with concrete block and cutting out a new entry in the southeast façade that allowed entry to a parking lot. The building only had remnants of character defining features, such as the wood transoms, but storefront windows had several iterations of glazing systems and originally entry doors were replaced with roll-up garage doors. Exposed brick had been sandblasted to remove paint. The side and rear façades were mostly unaltered, including the rolling bays with roll up doors, all which remained unpainted per the original intent (2102a:2). The O.S. Stapley Company buildings meet Criterion A for significance due to their association with early commerce in Phoenix. The buildings are rare remaining examples of the property type "Post-World War I Strip Commercial and Office Buildings 191-1942 (2102a:3).

**Funding Details**

The Demonstration Project Grant application requesting $500,000 in Historic Preservation Bond funds to assist with rehabilitation was submitted on March 12, 2012. According to the budget provided in the application, the total cost of the eligible items was estimated at $1,015,916. When architectural and engineering expenses were added, the total cost increased to $1,097,348. In this case, the owner has estimated that expenses for non-eligible items—including interior, plumbing, electrical, mechanical and site work—will be an additional $1,285,248 (City of Phoenix 2012a). An overview of project grant funding criteria met can be found in Table 5.

Under the Demonstration Project Program, the City's share of the eligible items was 50 percent, or $548,674. The Staff Report noted that given the amount of funds in the

Historic Preservation Bond budget and considering other projects were lining up for grant funds, the HP staff recommended that the grant funding for this project be capped at $300,000 which the Phoenix City Council approved June 6. 2012 (2012a:3). The owner provided approximately $2.08 million to cover additional work items not funded by the grant. The city received a 30-year conservation easement on the property with the requirement that the property be maintained in good condition.

**Table 5. O.S. Stapley Demonstration Project Grant Funding Criteria Met.**

| Selection Criteria Met | Eligible Improvements Met |
|---|---|
| Implemented a comprehensive rehabilitation strategy for a building, that adaptively reuse a historic building in order to preserve it | Roof Repairs/Replacement |
| Preserved a property that is individually listed on the Phoenix Historic Property Register | Storefront Restoration |
| Improved the appearance of a historic neighborhood, area, streetscape, and individually significant site | Masonry/Stucco Repairs |
| Provided maximum leverage of city funds through the use of private funds | Window and Door Rehabilitation and Weatherization Improvements |
| Exemplified the City's Preservation Philosophy | Reversal of Previous Inappropriate Alterations |
| | Reconstruction of Original Architectural Porch and Step Repairs Elements Based on Historic Documentation or Physical Evidence |

## Dud. R. Day Phoenix Motor Company

### Location and Background

This case study is an example of Demonstration Project Bond funds and is located at 401-477 West Van Buren Street. Historically known as the Dud R. Day Motor Company (Figure 7), the property later became the Phoenix Motor Company, Quebedeaux Chevrolet, and Ray Korte Rambler-Jeep, and met Criterion A for its significance due to its association with early commerce in the City of Phoenix and is an excellent example of the property type "20th Century Auto Dependent Commercial Architecture, 1919-1945 (City of Phoenix 2017). Originally a partner in a California dealership, Day moved to Phoenix in 1930 and created Dud R Day Motor Company becoming the second authorized Ford dealership in Phoenix.

The property was built in 1930 by builder Dave M Dubach and designed by Lescher & Mahoney, a prominent local architecture firm, in the Spanish Colonial Revival style (City of Phoenix 2017). Possibly impacted by the onset of the Great Depression, Day sold his firm and the property began to change hands, however the building stayed within the automotive industry sector and was expanded in 1939 by the Packard Phoenix Motor Company. The expansion was significant, and the original property was now referred to as "a complete automotive plant" which included a spacious showroom, a service station, parts store, repair department and two used car lots (City of Phoenix 2017).

The Dud R. Day property changed hands several times and underwent heavy modifications, altering character defining features to the point that Historic Preservation staff initially thought the property would not be eligible for funding. The property owner

at the time of the grant application commenced work with private funds in 2016 to reverse many of the modifications, uncovering original windows and doors (Figure 8). While not all modifications could be reversed, enough were feasible so that the building became eligible for Historic Preservation approval, zoning and bond funds. Eligible work was later reimbursed with grant funding (Figures 9 and 10).


Figure 7 . Phoenix Motor Company 1939. Dud R Day Motor Company Building. Photo credit City of Phoenix Historic Preservation Office.

Figure 8. Owner begins to reveal original character defining features of building. Dud R Day Motor Company Building. Photo credit City of Phoenix Historic Preservation Office.

Figure 9. Work in progress (2017) to rehabilitate the windows and doors on the Dud R. Day Motor Company. Photo credit City of Phoenix Historic Preservation Office.


Figure 10. After Demonstration Project Bond Funds 2017, the Dud R Day Motor Company is now home to the *Van Buren*, a popular music venue.

**Funding Details**

The Staff Report for Dud R. Day property had an itemized breakdown of work items than the other case study examples reported. The applicant requested grant funding of $250,000 for assistance for eligible work items such as specialty doors and frames ($49,463.15), storefront and entrances ($239,991.00), plaster and stucco ($90,500.00), membrane and tile roofing ($107,095.35) totaling a projected cost of $486,969.50.

Under the Demonstration Project grant program, the City of Phoenix's share of eligible items was 50 percent of the total, coming to $243.484.74. At the time that amount was greater than what was available in the Demonstration Project budget, which was $75,000. To cover the gap in financing, the City's Community & Economic Development Department offered $125,000 in Community Reinvestment Funds to raise the grant amount to the requested amount of $200,000. As noted in Chapter 1, this is one of the adaptive reuse strategies the City of Phoenix has done well and is an excellent example of leveraging fund to cover gaps in financing as outlined by Research and Policy Lab's eight strategies set forth in the Untapped Potential report. An overview of project grant funding criteria met can be found in Table 6.

Per the Demonstration project criteria, the applicant matched the requested $200,000, with an estimate of approximately $3.5 million investment by the owner to rehabilitate the historic property. In exchange for the $200,000 grant funds, the City of Phoenix received a 30-year conservation easement on the exterior of the building.

**Table 6. Dud R Day Motor Company Demonstration Project Criteria Met.**

| Selection Criteria Met | Eligible Improvements Met |
|---|---|
| Implemented a comprehensive rehabilitation strategy for a building, that adaptively reuse a historic building in order to preserve it | Roof Repairs/Replacement |
| Preserved a property that is individually listed on the Phoenix Historic Property Register | Storefront Restoration |
| Improved the appearance of a historic neighborhood, area, streetscape, and individually significant site | Masonry/Stucco Repairs |
| Provided maximum leverage of city funds through the use of private funds | Window and Door Rehabilitation and Weatherization Improvements |
| Exemplified the City's Preservation Philosophy | Reversal of Previous Inappropriate Alterations |
| | Reconstruction of Original Architectural Porch and Step Repairs Elements Based on Historic Documentation or Physical Evidence |

## C.P. Stephens DeSoto Six Dealership Building

### Location and Background

A Threatened Building and Warehouse grant application was submitted requesting $250,000 in April of 2012 to assist with property rehabilitation. Located at 913-917-North Central Avenue, the property was built in 1928 for C.P. Stephens De Soto Six who occupied the space until 1955. The building was designed by Architects McDonald & Morrison in the Spanish Colonial Revival style using stuccoed brick and a bowstring truss roof (City of Phoenix 2012b:1).

Vacant at the time the new owner requested bond funding (Figure 11), the buildings served various iterations for auto and motorcycle sales, an antique store and an advertising warehouse in the past (2012b:1). The building is situated along the light rail station, making it a prime property to rehabilitate. The owner stabilized and rehabilitated the exterior before leasing the property, but funding was granted by requiring tenant interior improvements before occupancy. The building had structural issues which placed it on the threatened building list (Figure 12). To qualify for Threatened Building funds, the rehabilitation must contribute to community goas as outlined in the bond program requirements. In this case, Historic Preservation staff found that the project would save a "highly visible community resource that was very near demolition in 2011. The end use of the project will build upon the success of the transit-oriented light rail corridor and reinforce the development of the Arts, Cultural and Small Business overly area and specifically near Roosevelt Row" (City of Phoenix Warehouse and Threatened Building Program Application 2012).

The C. P. Stephens building meets Criterion A for significance due to its association with early commerce in Phoenix. It is an excellent example of the property type "20th Century Auto-Dependent Commercial Architecture, 1919-1945," a once common but now rare property type. The C.P. Stephens building is one of just two remaining automobile dealerships in Phoenix from the years prior to World War II. The other is A.E. England Motors, Inc. at 424 North Central Avenue, built in 1926. (City of Phoenix 2012b:3). The 1984 Historic Inventory form noted the property in fair condition and minor alterations (Figure 13). The rectangular plan of the building was suitable for many uses, and the façade was dominated by large storefront window and originally had decorative cast stone over the façade and wall openings, the parapet is still topped with mission tile. As part of the application process, the Architectural Building Assessment related historical and recent architectural details (Figures 14 and 15) and subcontracted the structural condition assessment out to certified engineer Andrew Haines, P.E. (Motely Design Group 2012).

Figure 11. View of C. P. Stephens building in 2011 looking southeast. Photo credit City of Phoenix Historic Preservation Office.

Figure 12. Interior detail of C.P. Stephens building broken trusses requiring stabilization. Photo credit City of Phoenix Historic Preservation Office.

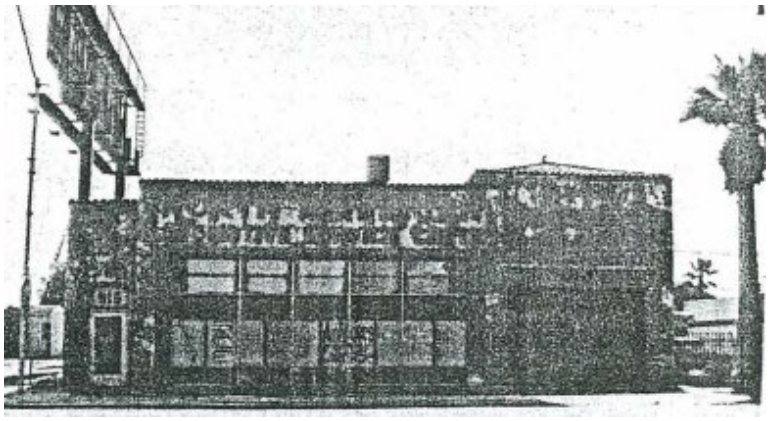

Figure 13. Undated photo of C.P. Stephen building taken from the 1984 SHPO Historic Inventory form.

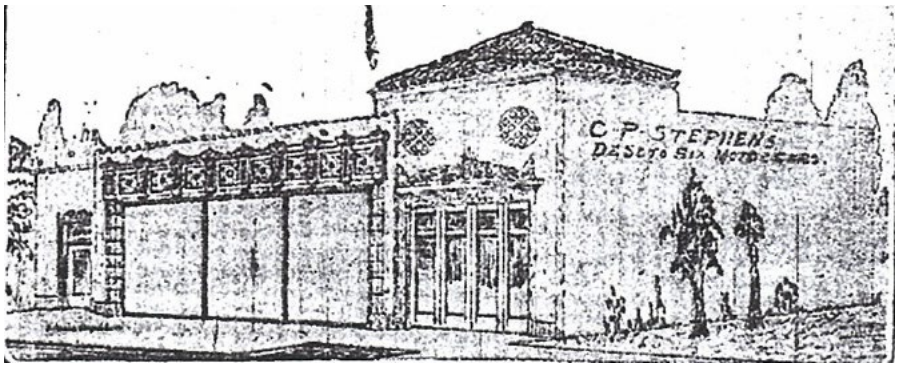


Figure 14. Drawing of C.P. Stephens DeSoto Motor Company from a 1928 newspaper article on the front page of The Arizona Republic. Credit Motley Design Group, LLC 2012.


Figure 15. C.P. Stephens property after stabilization and rehabilitation 2012. Note the light rail tracks in front of the building. Photo credit City of Phoenix Historic Preservation Office.

**Funding Details**

The property owner requested $250,000 in Historic Preservation Bond funds to assist with rehabilitation of the property. The Historic Preservation Commission initiated HP

zoning for the property on April 16, 2012 and the application was approved for $250,000 by the Phoenix City Council on June 6, 2012. The estimated owner cost was $456,896.00 to rehabilitate the building. The City received a 30-year conservation easement on the property requiring that the historic character of the property be preserved and that the property be insured and maintained in good condition. The property had to be formally listed on the Phoenix Historic Property Register before any grant funds were disbursed. An overview of project grant funding criteria met can be found in Table 7.

**Table 7. C.P. Stephens Threatened Building Criteria Met.**

| Selection Criteria Met | Eligible Improvements Met |
|---|---|
| Undertook a critically needed stabilization, preservation, restoration or reconstruction work; | Roof Repairs/Replacement |
| Implemented a comprehensive rehabilitation strategy to return a historic building to a viable use | Storefront Restoration |
| Activated a historic building (i.e., uses with human activity and which provide public access) | Masonry/Stucco Repairs |
| Provided maximum leverage of city funds through the use of private funds | Window and Door Rehabilitation and Weatherization Improvements |
| Contributed to community values, economic development goals, and where applicable to city downtown vision | Reversal of Previous Inappropriate Alterations |
| Was listed on the Phoenix historic Property Register | Reconstruction of Original Architectural Porch and Step Repairs Elements Based on Historic Documentation or Physical Evidence |

## General Sales Company Warehouse

### Location and Description

In April of 2016, a Threatened Building & Warehouse application was submitted for the General Sales Company Warehouse, a 122,220 square foot warehouse constructed in 1946 to rehabilitate the vacant building and restore it to use as an office space (City of Phoenix 2016) (Figure 16). In this case, the owner had lined up two future tenants for the buildings, both tech companies, and had an estimated completion date of late 2016. The building is located at 515 East Grant Street.

True to Stewart Brand's "square is simple" principle, the building originally had a rectangular plan as built but later had an irregular shaped addition constructed at the back of the warehouse to extend the storage to the rear property line (City of Phoenix 2016:2). Architecturally, the Staff Report describes the buildings' massing as symmetrical using a central block and wing layout with the wings serving as a one-story warehouse and the central block a two story (2016:2). It was designed by Lescher & Mahoney and built by the Del Webb Construction Company (Figure 17).

The building is significant under Criterion C as a local example of the warehouse building type which developed mid-twentieth century in Arizona and is representative of the role agricultural exports played in the development of post-depression and WWII Arizona. The need for storage expanded due to increased desire for different variety of produce nationwide. The city had rebounded quickly after WWII and housing increased as did the transportation infrastructure, bringing trucking in to supplement the railroad.

General Sales Company was built adjacent to the Southern Pacific Railroad in downtown Phoenix (City of Phoenix 2016:4).

Figure 16. City of Phoenix Staff Report of General Sales Company. Photos of north and west, main entrance façades 2016.

**NEW GROCERY WAREHOUSE.** Largest of its kind in the Southwest is the new General Sales Co. wholesale grocery warehouse constructed at Fifth and Grant streets, Phoenix, by the Webb Company. Ground was broken in January, 1946, and the warehouse was occupied in mid-December after materials shortages delayed completion several months. Containing 1,603,000 cubic feet of space, the 300-by-220 foot building is a Class A fireproof structure with reinforced concrete walls, a steel roof carried on steel trusses and insulated, concrete floors and concrete stairs to the basement and the two-story central section. Offices are on the second story, together with a model grocery store where the latest retail merchandising fixtures are displayed, an employees cafeteria, rest rooms and other space units, all reached from a buyers lobby on the first floor. To right and left and in rear of this lobby extend vast stock sections where pacakged goods are stored for delivery over Arizona by the firm's fleet of 28 trucks, or loading in private trucks at the warehouse doors. Handling of stock from freight car onto the concrete loading ramp and to the stockpiles, or from stockpile to truck is mechanical. An Arizona concern, General Sales Co. is owned and operated by seven Phoenix men, Frank Brophy, Charles E. Orr, H. R. Keeton, George Hepburn, A. A. Hayes, Charles Atkerson and R. E. Nelson.

Figure 17. March 1947 article from Del Webb's newsletter the Webb Spinner announcing the opening of General Warehouse Company. Credit City of Phoenix 2016.

**Funding Details**

The request for funding, $250,000 by the property owner was for assistance to rehabilitate the property, specifically removal of the existing roofing, estimated to cost $71,700; and installation of new roofing, estimated at $381,590 for a total estimated cost

of $453,290. This was an example of funding being split evenly between Historic Preservation and Community & Economic Development, where each department provided $125,000. At the time of the request, there were not enough funds in the Historic Preservation Bond budget, so a solution to leverage funds was made. An overview of project grant funding criteria met can be found in Table 8.

The applicant more than matched the $250,000 in City grant funds, over $11 million in private funds was projected to complete rehabilitation of the property. The City of Phoenix received a 30-year conservation easement which also requires the historic character of the property to be preserved, insured and maintained in good condition (City of Phoenix 2016:6).

**Table 8. General Sales Warehouse & Threatened Building Criteria Met.**

| Selection Criteria Met | Eligible Improvements Met |
|---|---|
| Undertook a critically needed stabilization, preservation, restoration or reconstruction work; | Roof Repairs/Replacement |
| Implemented a comprehensive rehabilitation strategy to return a historic building to a viable use | Storefront Restoration |
| Activated a historic building (i.e., uses with human activity and which provide public access) | Masonry/Stucco Repairs |
| Provided maximum leverage of city funds through the use of private funds | Window and Door Rehabilitation and Weatherization Improvements |
| Contributed to community values, economic development goals, and where applicable to city downtown vision | Reversal of Previous Inappropriate Alterations |
| Was listed on the Phoenix historic Property Register | |

## Cost Per Square Foot Comparison

As a general comparison with Shipley's 2006 findings in Ontario cost per square foot of all four case study examples are outlined below (Table 9). An important caveat - all expenditures came from the HP Staff Reports and represent projected project costs. Detailed financial information is critical to compare variables like cost per square foot. HP Staff Reports have only the minimum financial information to qualify for the incentive program application.

Since Shipley's research was conducted in 2006 and reported in Canadian dollars, both exchange rates for the U.S. Dollar to Canadian Dollar were compared for all four case study examples (Table 10). Exchange rates are taken from a Google search as of December 29, 2006, an arbitrary date. As reported on that date, one U.S. dollar ($1.00 USD) was equal to $1.16 Canadian dollars (CAN) (Google). There is a relatively small difference when comparing cost per square foot between the projects in Shipley's 2006 study and the City of Phoenix incentive program examples, however both USD and CAN were added to the table for comparison followed by a summary.

Table 9. Cost per square foot of new construction and of renovation in Canadian dollars (CAN) as reported in Shipley et. al. (2006).

| Projects identified in Shipley et.al 2006 | Small < 18,000 ft² | Medium 18,000 – 50,000 ft² | Large >50,000 ft² |
|---|---|---|---|
| Cost per square foot new commercial construction (CAN) | $95 | $155 | $165 |
| Cost per square foot of renovation (CAN) | $111 | $169 | $102 |

Table 10. Cost per square foot of City of Phoenix incentive program case study examples.

| **O.S. Stapley** | | **Dud R. Day** | | **General Sales** | | **C.P. Stephens** | |
|---|---|---|---|---|---|---|---|
| Square Footage | Projected Owner Expenditures | Square Footage | Projected Owner Expenditures | Square Footage | Projected Owner Expenditures | Square Footage | Projected Owner Expenditures |
| 36,000 ft² | $2,080,000 | 20,000 ft² | $3,500,000 | 122,220 ft² | $11,250,000 | 14,000 ft² | $801,691 |
| $58/sf USD *($66 CAN)* | | $175/sf USD *($203 CAN)* | | $92/sf USD *($107 CAN)* | | $57/sf USD *($66 CAN)* | |

With the exception of the Dud R. Day project, cost per square foot in USD for the City of Phoenix case study examples came in in well under the cost of new construction per square foot for the respective size categories small ($95/sf), medium ($155/sf) and large ($165/sf). The Dud R. Day project remains at a higher cost per square foot, but as previously cautioned, may represent tenant fit costs included due to the specialized music venue layout.

In review of cost per square foot in CAN for the City of Phoenix case examples, the O.S, Stapley and C.P. Stephens projects still came in under the cost of renovation reported in Canada for medium ($169/sf) and small ($111/sf) categories respectively. General Sales came in five dollars higher per square foot than the large ($102/sf) as reported by Shipley et.al. for Canadian renovation.

Dud R. Day was higher cost per square foot for both USD and CAN new construction and renovation which, without a framework to compare it to, could be perceived as a poor return on investment if just cost square footage is considered. The higher investment risk would have been calculated into the project by the developer as part of the total project cost, but those inside details can't be evaluated without a post-project assessment.

When comparing several buildings, looking at just cost per square foot can be misleading for a specialized, non-retail commercial venue project like Dud R. Day. However, in terms of return on investment and under the very narrow lens of cost per square foot, the adaptively reused buildings from Phoenix could represent a good rate of return. Shipley et.al. had mixed results when comparing the cost of "heritage development" to new build (2006). Responses from his interviews with developers found a range of experiences,

where some claimed, “ROI was enhanced because of the savings involved in reusing existing buildings” and some claimed that reusing existing building generally represents a savings between 10-12% over building new (2006:511). Still others reported to Shipley that “some conversions can cost as much as twice that of a new building", and “heritage buildings are less efficient but not so much as to prevent a business plan from working (2006:511-512).

Comparisons between Shipley’s 2006 study and the HP Staff Reports used in this research present limited, generalized information spanning several projects, making the case for a framework by which to compare accepted parameters and post-project review with actual costs. Yes, as reported in Shipley, some “conversion may cost twice as much as a new building,” but we don’t have enough information to understand why they differ, e.g. shell/core reuse or new fitting? Post-project assessment and a framework to compare like-projects to like-projects would be useful to quantify and qualify the different levels of renovation beyond square footage and projected expenditures.

# Chapter 4

## Interviews

Having followed four case examples of how the City of Phoenix incentive program works, how easy it to implement? During research, Michelle Dodds suggested contacting the following people who have been closely connected to the HP Bonds programs in one way or another:

- Terry Goddard (Former Mayor and "Father of Preservation" in Phoenix)
- Mark Briggs (of the 2006 Bond Fund Committee)
- Mark Abromovitz (Recipient of grant funds- latest grant fund project was for the O.S. Stapley Buildings where Tuft & Needle is now located)
- Sherry Rampy (Worked on the Van Buren grant project)
- Christine Mackay (City of Phoenix Community Economic Development Director)

Given the high email and phone requests for state government employees, a response from everyone was not anticipated. However, I was able to conduct phone interviews with Mark Abromovitz, Michelle Dodds and Mark Briggs in May of 2018 to focus on questions that related to how the Bond program worked from their perspectives.

### Mark Abromovitz Interview:

Mark Abromovitz is an adaptive reuse developer in Phoenix who used Demonstration Project grant funds for the O.S. Stapley Buildings, located on corner of Grand Ave. and Van Buren Street, in 2012. When asked why he selected the O.S. Stapley Buildings over

new construction he responded that “adaptive reuse can cost as much or more than new build it just depends, but the O.S. Stapley Buildings building were unique and had a timeless quality.” Regardless of the aesthetics of a building, Mr. Abromovitz mentioned the natural risk of developing older buildings “It’s never a sure thing that you will get outside funding, I did my due diligence on the building to make sure it was structurally stable. But you never know what’s hiding behind those walls. You take your chances with old buildings.” Based on City of Phoenix HP O.S. Stapley Grant Report, there was a four-month turnaround on funds and rezoning for a Historic Preservation overlay after the initial Demonstration Project application request for $500,000 in February 28, 2012. Approval for the application came in on March 12, 2012. Abromovitz had begun improvements on the O.S. Stapley Buildings with the understanding re-roofing and minor stabilization could not wait but improvements would remain eligible for reimbursement from the grant. Total anticipated renovations and re-stabilization costs for the project came to $2,382,598. In this case, the HP Demonstration Bond funds facilitated almost one quarter of the total rehabilitation cost for the building.

Mr. Abromovitz noted he appreciates the “rehabilitation process along the way” and prefers historic buildings and adaptive reuse projects over new construction when feasible. Looking for quality historic buildings to rehabilitate is vastly different that just working with old buildings. Rising prices of historic building stock occurs after successful adaptive reuse projects go in, such as the O.S. Stapley Buildings, effectively make it no longer feasible to rehabilitate commercial buildings for most. Grand Ave was used as an example, “where there are no speculators, just sellers.” This is a good example where gentrification discourages further development. But he added that other prospects,

like room for well-planned infill among historic properties is a positive addition to revitalize downtown areas and cited London, Denver, CO and Culver City, CA as good examples.

One of the consistent messages in historic preservation literature is that local purchases from wholesale and retail is higher with adaptive reuse projects as well as the use of more skilled labor than new construction (Rypkema 2017, Allison and Peters 2011). I asked Mr. Abromovitz if this was true for the O.S. Stapley Building project and he agreed "yes to some extent the use of local masons and carpenters was evident" but could not confirm That would entail knowing were subcontractors source their construction materials and labor. This is an important detail to when researching the sustainability aspect of adaptive reuse, the need to verify through contractor documentation what labor specifically was dedicated to the skilled labor pool and how much of the work can be attributed to skilled labor like qualified mason or adobe contractors.

In closing, Mr. Abromovitz said adaptive reuse is a win-win for everyone, but zoning issues such as parking regulations will hinder developers from choosing some buildings, such as some warehouse spaces with limited parking or buildings that run lot line to line with no parking relief. Research & Policy Lab has parking as number two on their Strategies List for good reason, zoning has always been done in a "piece-meal fashion" or case by case, and it's far too complex a subject to fix within the context of Historic Preservation Planning or economic incentives programs.

**Michelle Dodds Interview:**

Michelle Dodds is the City of Phoenix Historic Preservation Officer and has a long-standing position with the city's historic preservation program. Referencing Research & Policy Labs eight strategies as question guidelines from *Untapped Potential* we spoke about zoning and other strategies that the Historic Preservation department uses to keep up with the development and planning in a large city such as Phoenix. Untapped Potential suggests "updating zoning codes to meet 21st-century needs" as a top strategy, so I asked when the last time the City of Phoenix had updated its zoning codes. Ms. Dodds explained the codes were amended in 2004 and have annual text amendments which are incremental and address changes needed. She further explained the process of rewriting zoning codes is extremely complicated, and she referenced Chapter 8 of the Historic Preservation Ordinance of City of Phoenix which cites "the protection, enhancement and preservation of properties and areas of historical, cultural, archaeological and aesthetic significance are a matter of public policy and it the interest of the heath, prosperity and welfare of the people of the city of Phoenix" which translates that zoning in the form of historic districts encourages retention and adaptive use of historic properties (PreservePHX2015:29).

Leveraging data and mapping tools to understand reuse opportunities was first on the list of top strategies to promote building reuse, and Dodds confirmed the city uses GIS to track all National Register and those properties eligible for the National Register as well as the Phoenix Historic Preservation Listed Parcels and provided the shapefile of properties and districts currently listed on the Phoenix Historic Property Register for this study. Untapped Potential recommended eliminating, reducing or recalibrating parking

requirements as a top strategy. Ms. Dodds explained that parking lies entirely within realm of zoning and is not directly connected to the Historic Preservation department. Thus, parking requirements to meet needs for potential development are met through zoning which requires approval form the City Council.

I asked about other strategies that keep the Historic Preservation program moving forward. Ms. Dodds detailed there is a high volume of Section 106 responsibilities and design review that her office addresses every day in addition to working with bond program applicants. The Historic Preservation department has four planners dedicated to Section 106 projects and design review process as required by being a Certified Local Government. An example of having a complete preservation plan with streamlined guidance in place, the expedited Section 106 process does not go through the State Historic Preservation Office (SHPO), allowing city projects to go through faster but with due process.

Funds from the four bond programs are dwindling down, but Ms. Dodds said bond elections will be coming and are not necessarily on a given schedule. Previous elections where bond funds were on the ballot were held in 1989, 1999 and 2006. In cases where bond funds were not sufficient, Dodds' program recently partnered with Christine Mackay, the City of Phoenix Community Economic Development Director, fund many of our rehabilitation projects. Economic development funds come from downtown reinvestment such as funds from leased property.  While it was not possible to get a hold of Ms. Mackay directly for more information on the economic development funds, Ms. Dodds did reference the use of Government Property Lease Excise Tax (GPLET) as a tax incentive agreement which is negotiated between a private party and a local government.

It was established by the State of Arizona in 1996 as a way to stimulate development in commercial districts by temporarily replacing a building's property tax with an excise tax. Such a lease agreement can last up to 25 years (Arizona Department of Revenue).

**Mark Briggs Interview:**

Mark Briggs was the 2006 Bond Fund Committee Chair and gave a "Bond 101" overview that illustrated the detail and process that goes into getting general obligation bonds on the ballot which require two-thirds or 55 percent voter approval. The economic perspective of devoting funds to historic preservation comes from public acceptance that paying for preservation is a good community investment.

The Bond committee is made of citizens and there are many sub-committees on a given bond that parse out the priorities of a given bond title. Historic Preservation bonds were one sub-committee. There is an executive committee that decides on the size of the bond. There are always more needs than money, so the job of the bond committee to determine the capacity of the bond, then match the bond to the needs by whittling down and prioritizing. In the end the Historic Preservation Commission allocates funds, but bases decisions on what the citizen committee prioritized. For example, in the 2006 election one of the subcategories was to fund low income grants for residential historic housing repair and structural stabilization. The Low-Income Historic Housing Rehabilitation Program was partially funded based on the allocation of funds and the principle that partial funding is better than no funding, and got the program started.

What voters don't get to see is the citizen framework that comprises the bond committee, and the effort that goes into balancing what Briggs called the "grey areas" that come up

during the assessment and fine tuning of bond priorities. Grey areas represent how to “be true to the citizen committee and best mimic how and where they wanted to see funds spent.” In this case the Warehouse and Threatened Building bond fund program was designed to catch those structures at risk from demolition.

# Chapter 5

## Conclusions and Recommendations

Historic preservation incentive programs play a supporting role between a developer and a municipality. Incentive programs help a developer equalize their risk in developing an older building, but incentive program funding is not a deciding factor in selecting a building for reuse because funding is not guaranteed. However, historic preservation incentive funding at the local level is an important type of funding for adaptive reuse projects because historic preservation regulations are triggered when using incentive program funding, such as design criteria and conveying conservation easements which maintain the building in good condition and retain historic attributes. This is an important lens to begin to frame how adaptive reuse is regarded as "successful" because it involves both private and public funding which sets in motion the economic and cultural values inherent in adaptive reuse.

The City of Phoenix has had great success with general obligation bond initiatives, which first entail voter approval at the local level and a public commitment to community preservation goals. However, without a working historic preservation staff and a cohesive historic preservation plan which is integrated into a city's master plan, preservation funding loses its framework for moving preservation toward long term planning and preservation goals. The bond funds still represent only a fraction of city funded allocation with respect to the total cost of rehabilitation or renovation of historic properties (Table 11). The public got a very good return in the investment of grant funds invested by the City of Phoenix HP Program.

The four City of Phoenix cases study examples collectively exhibited substantial investment on the part of the developer and private funding projected in excess of $16 million dollars, while the city investment of public funding from general obligation bonds was $1 million for four buildings and gaining 30-year conservation easements for each property (Table 11). Additional benefits not discussed in this research included property taxes and sales tax revenue the city receives from the businesses created from previously vacant building stock. Dollars kept in the local economy by use of local labor are presumed based on Rypkema's detailed work, however the use of specialized craftsman cannot be captured without full disclosure of who was hired at the contractor and subcontractor level. The four adaptively reused buildings continue to contribute to Phoenix's historic cultural landscape long-term planning goals and have provided good use of public funds at the community level.

Table 11. Summary of City of Phoenix commercial bond fund allocation and conservation easement for the four case study examples.

| **Demonstration Program Pays up to 50% of eligible costs** | | **Warehouse & Threatened Building Program Pays up to 100% of eligible costs** | |
|---|---|---|---|
| O.S. Stapley Company Buildings | Dud. R. Day Phoenix Motor Company | C.P. Stephens DeSoto Six Dealership Building | General Sales Company Warehouse |
| Owner request for funds $500,000 | Owner request for funds $250,000 | Owner request for funds $250,000 | Owner request for funds $250,000 |
| Developer Eligible items: $1,015,916 | Developer Eligible items: $486,969 | Developer Eligible items: $286,049 | Developer Eligible items: $453,290 |
| City HP Incentive Program funded $300,000 | City HP Bonds funded $75,000, Economic Development added $125,000 for a total funding of $200,000 | City HP Bonds funded $250,000 | City HP Bonds evenly split funding of $125,000 with Economic Development for a total funding of $250,000 |
| Developer non-eligible items addition cost $2,080,000 | Developer non-eligible items addition cost of $3, 500,000 | Developer non-eligible items addition cost: $126,464 | Developer non-eligible items addition cost over $11,000,000 |
| 30-year conservation easement | 30-year conservation easement | 30-year conservation easement | 30-year conservation easement |

- Projected owner investment for all four case study examples = $16,706,464
- Total City funds obligated across all four case study examples = $1,000,000

## Recommendation: Create an Adaptive Reuse Framework

What is missing from preservation planning is a baseline framework from which to compare adaptively reused projects beyond price per square foot, and which considers a city's historic preservation program – the infrastructure behind an adaptive reuse project – in the research. An adaptive reuse framework must be an integrated framework that considers the needs of both historic preservation and economic development. Creating a framework requires identifying the similarities and differences between adaptive reuse projects of similar scale, condition and environment. Criteria cannot be defined if all the steps in the process are not identified.

Thesis research did not stem from coursework on adaptive reuse, in fact the research was because there was no comparable coursework on adaptive reuse available. There is no accepted textbook on adaptive reuse planning, so as a student in historic preservation you inevitably must ask - how do people plan an adaptive reuse project? In casual pre-thesis conversations with HP professionals, I found that adaptive reuse is primarily driven by those who understand it due to experience gained over time. Shipley noted in his work with developers that "it is impossible to have the experienced professionals and trade workers necessary for success without at some point employing those who do not have such familiarity…to continue with the sports metaphor [sic] – everyone has to start as a rookie" (20016:517). An initial basic framework with research questions that literally start at the beginning of an adaptive use project will capture the iterative process of the beginning to the end of a project. This initial framework does not claim to address all the possible questions needed to design a framework that will lead to a template for best

practices in adaptive reuse projects. City planning and HP experts would need to be involved as subject matter experts as well as developers and building owners. Identifying the processes of multiple adaptive reuse projects overseen by practiced professionals is as controlled an effort as one can get when dealing with multi-step processes that will vary from city department to city department. Creating a framework requires identifying the similarities and differences and understanding why they exist and at what level. Ranking risk factors allows for a quantitative analysis, but you must first name the risk factors and pinpoint them along a projects path.

This recommended framework is based on the review of works cited and is certainly not exhaustive. The three steps outlined below that capture the most basic requirements of what would be a long-term multidisciplinary research project. Big data provides a large-scale perspective that can't be gained without a statistical framework. Adaptive reuse happens on a small scale, building by building, and is controlled by factors only understood at the city planning level, and we must start there to find best practices for an adaptive reuse template.

**Adaptive Reuse Framework**

1. Identify several city historic preservation programs that have delineated criteria for adaptive reuse projects within a regional context that captures all scales of reuse with comparable materials, architecture and environmental conditions.

2. Identify experienced developers whose primary work is with adaptive reuse projects and who are willing to share financial project data (pro forma/cost benefit) and return on investment data.

3. Determine an appropriate sample size of projects to review

Recommendation for creating an adaptive reuse framework is first based on the foundation of identifying qualified city historic preservation programs to work with. The City of Phoenix case study examples illustrate the detailed regulatory steps required of property owners and developers to use bond funds, which created a regulatory framework that can be consistently applied and documented. These regulatory steps were born out of years of experience by the historic preservation and planning staff and will improve with each iterative process as the city redefines redevelopment areas and historic preservation goals. Cities that are also Certified Local Governments (CLG) like the City of Phoenix would also standardize historic preservation criteria and have the common thread of not just a state's Register of Historic Places but bring in the Secretary of Interiors standards.

There is no one size fits all approach to building an adaptive reuse program, however there are guidelines, strategies and successful case study examples to follow such as those outlined by reports like *Untapped Potential* and *Older, Smaller Better.* Before an adaptive reuse program or historic preservation incentivization can be applied in a structured way that benefits long term planning, a city must have, or be working towards, a comprehensive building inventory and historic context research that identifies a buildings significance within the history of the city or town. Prioritizing which building

stock is significant on a local, state and national level allows for good adaptive reuse decision making. The added framework of an integrated historic preservation and general management plan means adaptive reuse projects are part of the long-term plan along with new construction and infill.

A critical element of a identifying qualified city historic preservation programs would be finding HP staff that is integrated with, and supported by, the city planning department. This was a foundational aspect of The City of Phoenix Historic Preservation Incentive programs, which included city government and city council support. There is a necessary interdisciplinary thread that must be part of the long-term planning that would be difficult to implement within a city that is hesitant to change the way business is done such as updating zoning codes or reduce parking requirements. Economic incentives will need to continue to evolve as historic preservation adapts to bigger and bigger inventories of historic building stock just as regulations and zoning will need to change in order to handle a bigger inventory.

The second step in creating an adaptive reuse framework would be to identify experienced developers whose primary work is with adaptive reuse projects and who are willing to disclose financial project data (pro form/cost benefits analyses) and post project costs including the actual return on investment of a given project. Developers are a critical competent in adaptive reuse. As developer Mark Abromovitz suggested and big data has proven, there is that “subtle vibe” that lends itself to the feeling of a unique building or historic district that makes people want to put money into development and support local businesses in older buildings. Shipley’s research confirms that experienced

developers who work primarily with adaptive reuse have a risk-taking but visionary skill set that proves to be a critical element in the heritage development industry (2006:517). The lack of research on how developer's approach adaptive reuse projects is a big gap in the literature. If a framework is to be created on what successful adaptive reuse looks like, experienced developers must be not just part of the research but help define the research questions.

Finally, determining an appropriate sample size of projects to review would need to be evaluated after preliminary outreach to establish how many city historic preservation programs fit the requirements as qualified historic preservation programs as well as identifying a contributing amount of developers willing to share their expertise and detailed financial information.

Ultimately, identification of all steps in the process eliminates the often-stated complexity or "unknown" of adaptive reuse projects and makes the process transparent to financial lenders and historic building owners.

# APPENDIX A

## Historic Preservation Program Geospatial Analysis and Methodology

The City of Phoenix HP Department shared shapefile coverage of properties and districts currently listed on the Phoenix Historic Property Register (Table A1). The HP department also shared their Easement spreadsheet identifying all current HP Bond programs. From the Easement spreadsheet, Demonstration and Warehouse & Threatened Building grant projects were filtered to narrow down HP Bond Programs to only the Commercial Programs. Next a relational join was made between the filtered Demonstration and Warehouse & Threatened Building grant projects to the City of Phoenix HP Listed Parcels shapefile attribute table in GIS. This join combined spatial and attribute data to the four case study examples and enabled direct comparison of both incentive programs. Specifics on the relational join methodology are further detailed below. Underscore spacing format (HP_Attribute_Name) was kept to clarify naming conventions found in the geospatial and Easement Spreadsheet data. Table formatting also differs from the body of the thesis document to keep data better organized.

Properties that did not have a name or address correlation in the GIS join have ‘no match’ under the HP_Attribute_Name column.

Table A1. Demonstration Bond Properties found in the HP Easement Spreadsheet

| **Demonstration Bond Properties found in the HP Easement Spreadsheet** | | | |
|---|---|---|---|
| **Property_Address** | | **Historic_District_Name** | **HP_Attribute_Name** |
| 1 | 11 W Jefferson Street | Luhrs Block | Luhrs Building |
| 2 | 45 W Jefferson Street | Luhrs Block | Luhrs Tower |
| 3 | 801 N 1st Avenue | Stoddard_Harmon House | Stoddard-Harmon House |
| 4 | 701 S 9th Avenue | Dunbar School | Dunbar (Paul Laurence) School |
| 5 | 40 N 1st Street | Hanny's Department Store | Hanny's |
| 6 | 1714_1718 W Van Buren Street | Bobby Brown Café | Bobby Brown Café |
| 7 | 717 E Southern Avenue | Neighborhood Congregation Church _dba S. Mt. Community Church | No match |
| 8 | 302 W Portland Street | Roosevelt | No match |
| 9 | 1301 Grand Avenue | Bragg's Pie | Bragg's Pies, Inc. |
| 10 | 1103 N 5th Street | Brockway Bungalows Brockway House | No match |
| 11 | 1105 N 5th Street | Brockway Bungalows Brockway House | No match |
| 12 | 506 E Portland Street | Brockway Bungalows Brockway House | Brockway (Dr. George M.) House |
| 13 | 1650 N 10th Street _was 937 E Coronado Road | Coronado | No match |
| 14 | 2222 W Washington Street | Norton House | Norton (William R.) House |
| 15 | 800 W Adams Street | Grace Court School | Adams School |
| 16 | 420 W Roosevelt Street | Kenilworth Apts | No match |
| 17 | 112 N 1st Avenue _114 W Adams Street | Title and Trust | Title and Trust Building |
| 18 | 1117_1123 N 5th Street | Fennemore Duplex | No match |
| 19 | 501 E Moreland Street | Fennemore House | Fennemore (Harry M.) House |
| 20 | 507 E Moreland Street | Nevitt House | Nevitt (Guy P.) House |
| 21 | 5009 E Washington Street | Stockyards Restaurant | Tovrea Land and Cattle Co. Admin. Bldg. |
| 22 | 2501 E Baseline Road | Strong Residence | Strong (Walter) Residence |
| 23 | 304 W Roosevelt Street | Fontenelle Apartments | No match |
| 24 | 1001 N 3rd Avenue | Gold Spot Marketing Center | No match |
| 25 | 942 E Coronado Road | Coronado | No match |
| 26 | 767 E Moreland Street | Pieri_Elliot House | Pieri-Elliot House |
| 27 | 618 N 5th Avenue | Fifth Avenue Court | No match |
| 28 | 100 W Roosevelt Street | Trinity Cathedral | No match |

| Demonstration Bond Properties found in the HP Easement Spreadsheet | | | |
|---|---|---|---|
| **Property_Address** | | **Historic_District_Name** | **HP_Attribute_Name** |
| 29 | 1121 W McDowell Road _1115 W McDowell Road and 1127 W McDowell Road | F.Q. Story | F.Q. Story Historic District |
| 30 | 946 E Coronado Road | Coronado | No match |
| 31 | 402 W Monroe Street | First Presbyterian Church | First Presbyterian Church |
| 32 | 110 W Roosevelt Street | Bishop Atwood House | Agren-Taylor House |
| 33 | 632 N 3rd Avenue | Harry E Peirce House | Pierce (N. Clyde) House |
| 34 | 801 E Camelback Road | Faith Lutheran Church | Faith Lutheran Church |
| 35 | 1120 N 3rd Avenue | LDS 2nd Ward Church | Phoenix 2nd Ward L.D.S. Church |
| 36 | 331 N 1st Avenue | Board of Education Bldg. | Phoenix Elementary School Dist No.1 Admin. Bldg. |
| 37 | 415 E Grant Street | Carver High School | Carver (George Washington) High School |
| 38 | 1210 N 5th Avenue | Kenilworth School | Kenilworth School |
| 39 | 812 N 2nd Avenue | Las Antiguas | No match |
| 40 | 2214 N Central Avenue | El Encanto Apartment Building | El Encanto Apartment Building |
| 41 | 101 E Jackson Street | Wern Wholesale Drug Co. | Western Wholesale Drug Company Warehouse |
| 42 | 202 N Central Avenue | Hotel San Carlos | Hotel San Carlos |
| 43 | 1721 S 7th Avenue | Montgomery Homestead | Kunz-Carbajal House |
| 44 | 1645 W McDowell Road _1625 W McDowell Road _ 1414 N 16th Drive | Franklin School | Franklin School |
| 45 | 902 E McKinley Street | First Missionary Church | No match |
| 46 | 122 E Culver Street | Temple Beth Israel | Temple Beth Israel |
| 47 | 113 N 6th Street _113_115 N 6th Street | Rosson House _Heritage Square _Teeter House | No match |
| 48 | 429 W Jackson Street | Storage Warehouse _Ice House | Storage Warehouse |
| 49 | 1008 E Buckeye Road | Jones_Montoya House _ Webb Grocery | Jones-Montoya House |
| 50 | 1317 W Jefferson Street | Smurthwaite House | No match |
| 51 | 1021 E Washington Street | Swindall Tourist Inn | Swindall Tourist Inn |
| 52 | 20 S 8th Street | Tanner Chapel AME Church | Tanner Chapel African Methodist Episcopal Church |
| 53 | 733 Grand Avenue 723 & 735 Grand Avenue | O.S. Stapley Co. | Stapley (O.S.) Block |

| Demonstration Bond Properties found in the HP Easement Spreadsheet | | | |
|---|---|---|---|
| **Property_Address** | | **Historic_District_Name** | **HP_Attribute_Name** |
| 54 | 2400 E Missouri Avenue | Arizona Biltmore | Arizona Biltmore Resort |
| 55 | 5001 E Washington Street | Farmers _ Stockmens Bank | Farmers and Stockmens Bank |
| 56 | 617 N 7th Street | Garfield | No match |
| 57 | 909 E Washington Street | Immaculate Heart of Mary Church | Immaculate Heart of Mary Church |
| 58 | 750 Grand Avenue | Quebedeaux Chevrolet Building | No match |
| 59 | 805 W S Mountain Avenue | Stoughton Estate | Stoughton (Ralph H.) Estate |
| 60 | 341_345 W Van Buren Street | Welnick Arcade Market _ Liefgreen Seed Company Building | Welnick Arcade Market |
| 61 | 302 W Monroe Street | First Baptist Church | First Baptist Church |
| 62 | 401_447 W Van Buren Street | Dud R. Day Motor Company _ Phoenix Motor Company | Day (Dud R.) Motor Company |

*Note: 19 out of 62 (30%) Demonstration Program properties were unable to be matched due to different naming conventions between the GIS data and the Easement Spreadsheet data.

Table A12. Warehouse &Threatened Building Properties found in the HP Easement Spreadsheet

| Warehouse & Threatened Building Properties found in the HP Easement Spreadsheet | | | |
|---|---|---|---|
| **Property_Address** | | **Historic_District_Name** | **HP_Attribute_Name** |
| 1 | 605 E Grant Street | SW Cotton Company _ Karlson Machine Works | Southwest Cotton Company |
| 2 | 22 E Jackson Street | Arizona Hardware Supply | Arizona Hardware Supply Company Warehouse |
| 3 | 438 N 17th Avenue _436 N 17th Avenue | Oakland | No match |
| 4 | 617 N 7th Street | Garfield | No match |
| 5 | 621 N 5th Avenue | Morin House | No match |
| 6 | 525 S Central Avenue | Anchor Manufacturing | Anchor Manufacturing Co. |
| 7 | 1001 E Fillmore Street _519 N 10th Street | Burgess Hadsell House | No match |
| 8 | 54 W Mariposa Street | Pierson Place | Pierson Place Historic District |
| 9 | 96 W Mariposa Street | Pierson Place | Pierson Place Historic District |
| 10 | 50 W Mariposa Street | Pierson Place | Pierson Place Historic District |
| 11 | 915 N Central Avenue _913-917 N Central Avenue | C.P. Stephens DeSoto Six Dealership | Stephens (C.P.) DeSoto Six Motor Cars |
| 12 | 215 E Grant Street _702-706 S 3rd Street | Phoenix Linen _ Towel Supply Company _Bentley Projects | Phoenix Linen and Towel Supply Co. |
| 13 | 411 S 2nd Street | Phoenix Seed _ Feed Company Warehouse | Phoenix Seed and Feed Company Warehouse |
| 14 | 2956 E Southern Avenue | Vernacular Farm Residence | Vernacular Farm Residence |
| 15 | 515 E Grant Street | General Sales Company Warehouse | General Sales Company Warehouse |
| 16 | 1826 W McDowell Road | Arizona Fairgrounds | No match |
| 17 | 605 E Grant Street | SW Cotton Company _ Karlson Machine Works | Southwest Cotton Company |
| 18 | 22 E Jackson Street | Arizona Hardware Supply | Arizona Hardware Supply Company Warehouse |

*Note: 5 out of 18 (27%) Warehouse & Threatened Building Program properties were unable to be matched due to different naming conventions between the GIS data and the Easement Spreadsheet data.

## Relational Join Methodology

The initial join had some limitations due to different naming conventions between the Easement Spreadsheet and the HP Listed Parcels shapefile data. The GIS attribute table had three columns devoted to name (Name, Name2, and Name3) to cover different names attributed to the buildings over time. The Easement Spreadsheet had only one name column called 'Historic District or Name' which matched some but not all the GIS 'Name' field. To rectify this, a new field called 'HP_Attribute_Name' was created in a new worksheet of the excel Easement Spreadsheet using the same values in the HP Listed Parcels attribute data field called 'Name.' Still using filtered data for both the Demonstration Bond program and the Warehouse and Threatened Building Bond program, the HP Listed Parcels GIS Name was matched to the address in the Easement Spreadsheet and cross referenced with the Easement Spreadsheet 'Historic District or Name' field creating a new HP_Attribute_Name that would be used to join the Easement Spreadsheet and the HP Listed Parcels attribute data.

The new HP_Attribute_Name field joined more records, but not all despite cross referencing street address and Name2 and Name3 fields. Other variables outside of naming conventions are likely the reason why properties did not join but naming conventions in large datasets will always be a source of error in data analysis, particularly where data is created in more than one department. The join was successful in capturing the four case study examples and a representative sample of both Demonstration Projects and Warehouse sand Threatened Building.

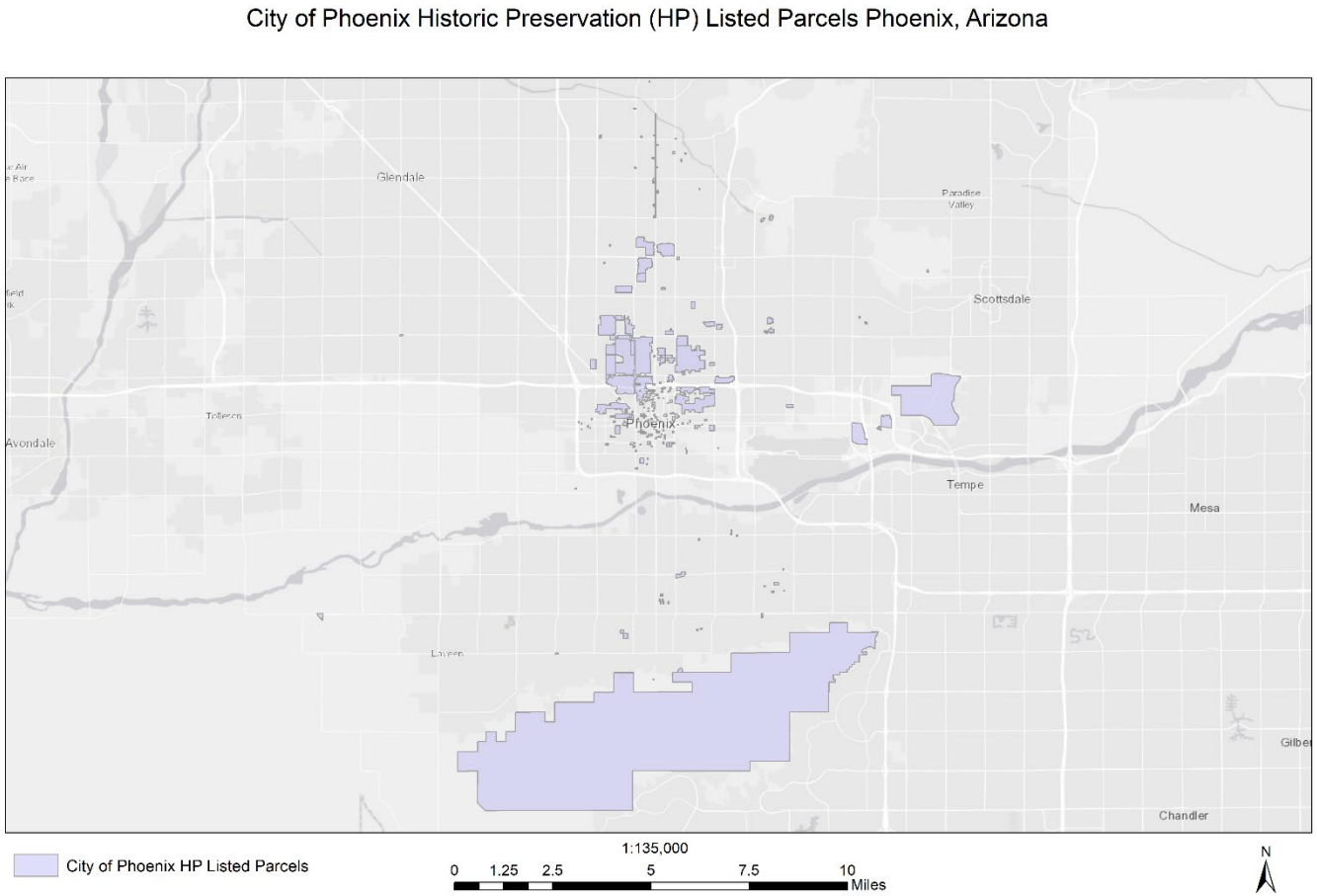


Figure 18. City of Phoenix Historic Preservation Listed Parcel map.

## APPENDIX B

### Application Procedures for Demonstration and Warehouse and Threatened Building Incentive Programs

Adapted from: "Historic Preservation Demonstration Project Program, 2018" "Warehouse and Threatened Building Program, 2018" webpages.

1. The applicant must provide evidence that sufficient funds are available to complete the project at time of project application, including financial commitments from investors and lending institutions, and a description of the proposed financing. The applicant must notify the city if funding circumstances change after application for the demonstration funds is made.

2. The applicant must agree to execute required legal agreements, including a program agreement and conservation easement, with the city as a condition of funding. Also, prior to entering into a program agreement, the city requires all lien holders on the property to sign consent agreements.

3. The city will only accept applications which propose funding for future work items. No retroactive funding will be considered for work commenced prior to making application with the city.

4. The applicant must agree to execute a conservation easement as specified below based on the following levels of city participation: $50,000 or less, 20 years; $50,001 to $100,000, 25 years; $100,001 to $400,000, 30 years; $400,001 and above, 40 years.

5. The applicant must sign all required agreements with the city within six (6) months after receiving City Council approval for a project and initiate work within six (6) months after executing agreements, or risk losing the funding.

6. Owners are required to obtain a Certificate of Appropriateness or Certificate of No Effect from the HPO prior to finalizing legal agreements. City building permits may also be needed prior to initiating work.

7. No construction activity on work items approved for funding may occur until City Council approval is obtained and all required city agreements are fully executed.

8. The city will only provide funding for completed project work. To receive payment, the City of Phoenix Historic Preservation Office must first certify that the work was completed as agreed and that it meets required historic preservation standards. In addition, for Warehouse and Threatened Building projects the owner has expended an equal or greater amount of funding on other necessary work items not eligible for reimbursement under this program (e.g., plumbing, electrical, etc.) also applies.

9. Applicants need to complete all approved work in at least 24 months once work has started, or risk losing the funding. Applicants can request a one-time six (6) month extension from the HPO in writing using a form provided by the city. Additional time extensions may be provided on a case-by-case basis.

10. Properties must be listed on the Phoenix Historic Property Register prior to city reimbursement of funding for any grant-funded work items.

11. The city may hold back up to 10 percent of the total amount awarded until all work items in the Program Agreement are completed, or until the project receives a Certificate of Occupancy/Completion. In addition, for Warehouse and Threatened Building projects must be part of a larger plan to rehabilitate and occupy the historic property.

**Works Cited**


Advisory Council on Historic Preservation
2011 *Managing Change: Preservation and Rightsizing in America*. Washington, D.C.

Allison, Eric W. and Lauren Peters.
2011 *Historic Preservation and the Livable City*. Wiley; 1 edition.

Arizona Department of Revenue website
https://azdor.gov/businesses-arizona/government-property-lease-excise-tax-gplet?CountyID=4&CityID=0 Accessed October 21, 2018.

Boschmann, E.E. and J.N. Gabriel.
2013 *Urban sustainability and the LEED rating system: case study examples on the role of regional characteristics and adaptive reuse in green building in Denver and Bolder Colorado.* The Geographic Journal, 179:221-233.

Bullen, P., & Love, P.
2011 A new future for the past: A model for adaptive reuse decision-making. In *Built Environment Project and Asset Management, 1*(1), 32-44. doi:http://dx.doi.org.ezproxy1.library.arizona.edu/10.1108/20441241111143768

City of Phoenix Planning & Development Department Historic Preservation Office
2012a *Staff Report: Z-12-12-7*. City of Phoenix Planning & Development Department Historic Preservation Office. June 27, 2012, pp. 1-17.

2012b *Staff Report: Z-11-12-8*. City of Phoenix Planning & Development Department Historic Preservation Office. June 27, 2012, pp. 1-21.

2014 Preservation Philosophy. *Excerpt from Historic Homes of Phoenix: An Architectural & Preservation Guide,* Planning & Development Department Historic Preservation Office. Revised 12/2014. https://www.phoenix.gov/pddsite/Documents/HP/pdd_hp_pdf_00071.pdf Accessed 4/7/2018

2015 Preserve Historic Phoenix [PHP]. A resolution Adopting PreserveHistoricPhoenix [sic] An Historic Preservation Plan for Phoenix. https://www.phoenix.gov/pddsite/Documents/HP/pdd_hp_pdf_00185.pdf Accessed April 30, 2018.

2016 *Staff Report: Z-31-8*. City of Phoenix Planning & Development Department Historic Preservation Office. July 26, 2016, pp. 1-18.

2017 *Staff Report: Z-2-17-7*. City of Phoenix Planning & Development Department Historic Preservation Office. March 2, 2017, pp. 1-18.

City of Phoenix Warehouse and Threatened Building Program Application
2012 C.P. Stephens De Soto Six Dealership Building. February 16, 2012.

Costanza, R
1980 Embodied energy and economic valuation. In *Science* 210, pp.1219-24.

Diehl, Allision
2018 Conversation with Allison Diel, Acting Historic Preservation Officer, City of Tucson Planning & Development Services. Personal Communication, February 2, 2018. Tucson, Arizona.

Elefante, Carl.
2007 The Greenest Building is …One That Is Already Built. In *Forum Journal. The Journal of the National Trust for Historic Preservation,* Volume 21, No. 4. Summer 2007.

Engeman, Jessica and Matthew Davis
2018 Understanding the "New" Historic Tax Credit. Architectural Resources Group Blog post. https://www.argsf.com/blog/new-historic-tax-credit/). Assessed May 20, 2018.

Fischler, Raphael
2018 North-American Zoning: Real Estate Regulation-Past, Present and Future. In *One Hundred Years of Zoning and the Future of Cities.* Springer International Publishing. Lehavi, Amnon (editor).

Fort Morgan Times
2018 Guest Editorial: Historic Preservation key strategy for community planning. Special to the Fort Morgan Times. Posted October 7, 2018. Accessed October 8, 2018. http://www.fortmorgantimes.com/fort-morgan-editorials/ci_32190411/guest-editorial-historic-preservation-is-key-strategy-community

Gewirtman, Dafna Fisher
2017 Adaptive Reuse Architecture Documentation and Analysis. Journal of Architectural Engineering Technology 05 no. 03. Assessed November 2017.

Green Technology
2018 Green Technology -What is it? Website. Assessed October 20, 2018 https://www.green-technology.org/what.htm

Hargrave, Brittany
2014 Phoenix plans to get "gun ho" on historic preservation. November 5, 2014 azcentral.com. https://www.azcentral.com/story/news/local/phoenix/2014/11/04/phoenix-plans-position-historic-preservation-proactive/18481943/ assessed 4/28/2018

Hasenfus, Erika L.
2013 *Measuring the Capital Energy Value in Historic Structures.* Thesis, MS Historic Preservation University of Pennsylvania.

Historic Preservation Demonstration Project Program
2018 Retrieved from https://www.phoenix.gov/pddsite/Pages/historicincentiveshpdemproj.aspx

H.R. 6081 Historic Tax Credit Enhancement Act of 2018
https://www.congress.gov/bill/115th-congress/house-bill/6081 Assessed Nov 25, 2018

Jacobs, Jane.
1961 *The Death and Life of Great American Cities.* Modern Library, 50th Anniversary edition.

Jackson, Mike.
2005 Embodied Energy and Historic Preservation: A Needed Reassessment. In *APT Bulletin.* Vol 36, No. 4, pp. 47-52.

Hirt, Sonia A.
2018 Split Apart: How Regulations Designated Populations to Different parts of the City. In *One Hundred Years of Zoning and the Future of Cities.* Springer International Publishing. Lehavi, Amnon (editor).

Mabry, Johnathan
2018 Conversation with Jonathan Mabry, Former Tucson Historic Preservation Officer. City of Tucson Planning & Development Services. January 18, 2018.Tucson, Arizona.

Meeks, Stephanie and Kevin C. Murphy
2016 The Past and Future City, How Historic Preservation is Reviving America's Communities. National Trust for Historic Preservation.

Motley Design Group, LLC
2012 A Brief Building Condition Assessment of the C.P. Stephen Desoto Six Dealership Phoenix, Arizona. Prepared for Select Credit & Leasing, LLC. Spokane, WA.

National Historic Preservation Act, Section 1 (16 U.S.C 470) 1966
https://www.nps.gov/history/local-law/nhpa1966.htm. Assessed October 20, 2018.

National Housing & Rehabilitation Association
2018 *Bipartisan Legislation Introduced to Enhance the Historic Tax Credit, Support Needed*. June 20, 2018 Federal Agency News, Historic Rehabilitation. https://www.housingonline.com/2018/06/20/bipartisan-legislation-introduced-to-enhance-the-historic-tax-credit-support-needed/ Assessed Nov.25, 2018

National Park Service
2018 *Federal Tax Incentives for Rehabilitating Historic Buildings*. Technical Preservation Series. National Park Service, U.S. Department of the Interior.

2017 The Secretary of the Interior's Standards for the Treatment of Historic Properties. Revised by Anne E. Grimmer. U.S. Department of the Interior National Park Service Technical Preservation Services, Washington, D.C. https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf

National Renewable Energy Laboratory website,
https://www.nrel.gov/lci/ accessed December 2017.

Novogradac & Company
2018 Historic Tax Credit Center. *About the Historic Tax Credit*. https://www.novoco.com/resource-centers/historic-tax-credits/htc-basics/about-historic-tax-credit. Assessed Nov 25, 2018.

Pela, Robert L.
2018 *Preservationist Confusion and Skepticism Swirl Amid Historic Building Sales on Grand Ave,* Phoenix New Times. April 25, 2018. http://www.phoenixnewtimes.com/arts/grand-avenue-paper-heart-tuft-and-needle-10363258

Plake, Sarah
2018 Kansas City, Kansas rolling our new registry to track down negligent property owners. Posted September 18, 2018 KSHB 41 Kansas, City News. Accessed Oct 7, 2018 https://www.kshb.com/news/local-news/kansas-city-kansas-rolling-out-new-registry-to-track-down-negligent-property-owners

Powe, Michael, Jonathan Mabry, Emily Talen & Dillon Mahmoudi
2016 Jane Jacobs and the Value of Older, Smaller Buildings, *Journal of the American Planning Association*, 82:2, 167-180, DOI: 10.1080/01944363.2015.1135072. Accessed 4/8/2018.

Preservation Green Lab (now called Research & Policy Lab)
2016 *Older, Smaller, Better in Tucson: Measuring how the character of buildings and blocks Influences urban vitality in a Southwestern city.* National Trust for Historic Preservation.

2017 *Untapped Potential: The Why and How of Building Reuse.* https://forum.savingplaces.org/viewdocument/untapped-potential-strategies-for Assessed June 2018.

Rypkema, Donovan D.
2014 *The Economics of Historic Preservation A Community Leader's Guide*. Place Economics.

2018 Rypkema, Donovan D. Facebook page. Accessed October 7, 2018.

Shipley, Robert, Steve Utz, and Michael Parsons
2006 Does Adaptive Reuse Pay? A Study of the Business of Building Renovation. in Ontario, Canada. In *International Journal of Heritage Studies* Vol. 12, No. 6, November 2006. Pp. 505-520.

Tackenberg, William D.
2000 Historical Note. From *MS 1166 Tucson Planning & Zoning Commission 1920-1969 (Bulk 1958-1969)*, Arizona Historical Society Collection. Tucson, Arizona. Assessed April 25, 2018.

Thornton, William
2014 Bring back the state parks Heritage Fund. Azcentral.com. Published April 5, 2014. Assessed October 8, 2018. https://www.azcentral.com/story/opinion/op-ed/2014/04/06/arizona-state-parks-heritage-fund/7321861/

Towne, Douglas
2016 Phoenix history: a "Grand" Building Reborn: O.S. Stapley Hardware. Azcentral.com. Published Nov 3, 2016. https://www.azcentral.com/story/news/local/phoenix-history/2016/11/03/phoenix-history-grand-building-reborn-os-stapley-hardware/92863048/ Assessed November 25, 2018.

U.S. Green Building Council (USBGC)
Building life-cycle impact reduction. LEED BD+C: Healthcare v4-LEED v4. www.usgbc.org/credits/healthcare/v4-draft/mrc1. Assessed December 10, 2018.

Warehouse and Threatened Program
2018 https://www.phoenix.gov/pddsite/Pages/historicincentiveshpthreatened.aspx

Wong, Liliane.
2016 *Adaptive Reuse: Extending the Lives of Buildings.* Kluwer Academic Publishers.