

**COVERING THE COST OF HISTORIC
PRESERVATION IN AFFORDABLE HOUSING:**
Exploring the Adequacy of the Historic Rehabilitation Tax
Credit to Cover the Increased Development Cost of
Adaptive Reuse Projects for Affordable Housing

by

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EXECUTIVE SUMMARY

The adaptive reuse of historic buildings is promoted by preservation advocates as a financially successful and socially viable approach to meeting the need for affordable housing. However, as compared to other affordable rental housing production strategies like new construction, adaptive reuse is generally riskier and more complicated to develop. This complexity translates into greater overall project expense that ultimately must be either passed on to the tenant in the form of rent or covered by some sort of development subsidy. As with new construction or acquisition and rehab affordable housing projects, adaptive reuse projects do have available to them a number of sources for debt and equity financing. These sources are structured in such a way as to cover much of the cost of development so that this burden does not need to be passed on to residents, thereby promoting affordability.

Developers of affordable housing can access such equity through the Low Income Housing Tax Credit program, which is considered the most influential program in encouraging the production of affordable housing. Additionally, developers of adaptive reuse affordable housing projects have available to them an added layer of equity financing through the Historic Rehabilitation Tax Credit, which has been the main financial driver behind historic preservation of income-producing properties. It is this extra layer of subsidy available to adaptive reuse projects that is the subject of this study.

The following research question is explored in this study: Does the subsidy provided by the Historic Rehabilitation Tax Credit program sufficiently cover the increased development costs associated with adaptive reuse projects developed for affordable housing?

The study introduces the research question through a comprehensive literature review and then progresses to an analysis of the research question through a multiple-case study. The comparative case study pairs four adaptive reuse projects with four related new construction properties and compares development cost with tax credit equity at the per square foot level. All projects are located in North Carolina and were developed between 2000 and 2004. The comparative case study findings are assessed, followed by a discussion of interpretations and implications.

After the data analysis section, the paper progresses into a discussion of the main provisions set forth in the Community Restoration and Revitalization Act, a piece of pending federal legislation that aims to remedy the disincentives of combining the two tax credit programs for affordable housing production. The paper then moves to a consideration of the potential impacts of the changes proposed in this legislation on the number and financial feasibility of adaptive reuse projects utilized for affordable housing production.

Finally, the paper closes with a discussion of implications from the study as a whole and conclusions as related to adaptive reuse as a strategy for affordable housing production. Limitations and suggestions for future research are addressed in the final section of this study.

I. INTRODUCTION

Topic Context and Background

Scattered throughout this country are the casualties of what can only be identified as a cultural obsession with all things disposable. Left behind for the allure of the suburban shopping malls, off-shore manufacturing plants, and sprawling school campuses outside of town, thousands of older buildings in small towns and large downtowns alike stand vacant and unnoticed. As they rot, their formerly bright and bustling interiors serve only as pigeon roosts or hotspots for illegal activity while another group, also left behind, searches for an affordable place to call home. Though abandoned buildings from at least a half-century ago and lower wealth households of all ages, backgrounds, and origins seem an unlikely partnership, each can provide the solution for the other: a new use for a forgotten building, a new home for a family in need.

With housing costs escalating and the percentage of household income dedicated to covering these costs ever increasing, the need for affordable housing is only expected to continue to rise sharply. For this reason, communities are looking for proven strategies to confront this growing need for affordable homes and decent workforce housing within their jurisdiction while promoting responsible growth, advancing economic development goals, supporting neighborhood revitalization, preserving neighborhood character, and protecting existing affordability from gentrification. The use of historically significant buildings for affordable housing production, known as adaptive reuse, is promoted by housing and preservation advocates as a financially successful and socially viable approach to meeting this need for affordable housing, as well as advancing community and economic development objectives.

However, the adaptive reuse of historic buildings, while quite beneficial to tenants and the surrounding community alike, can also be quite costly and is generally riskier and more complicated to develop as compared to other affordable rental housing production strategies like new

construction. This risk and complexity translates into greater overall project expense that ultimately must either be passed on to the tenant in the form of rent or covered by some sort of development subsidy. For this reason, the federal government provides two programs—the Low Income Housing Tax Credit (LIHTC) and the Historic Rehabilitation Tax Credit (HRTC or “Rehab Credit”)—to promote by financial incentive the development of adaptive reuse projects for affordable housing. Each program supplies tax credits to a qualifying project which can be converted into a source of equity capital for the adaptive reuse project through the sale of these tax credits to interested investors. This infusion of capital into the project from these paired programs is intended to cover much of the cost of development so that this burden does not need to be passed on to residents, thereby promoting affordability.

Research Question

Unfortunately, adaptive reuse is often not the choice development strategy for the production of affordable housing because of the increased costs associated with undertaking such a development, which can exceed by 15 percent or more the cost of a similarly-targeted new construction project (Werwath, 1998). Further, while adaptive reuse projects have an additional layer of federal and state subsidy available to them through the Historic Rehabilitation Tax Credit, it is unclear whether this extra source of equity actually compensates for the additional 15 percent development cost. For the affordable housing developer, this cost-coverage uncertainty translates to higher risk, higher risk can quickly diminish project feasibility, and concerns over project feasibility can lead developers to look at other less risky strategies. Hence, the little understood relationship between the HRTC subsidy and the increased cost of adaptive reuse projects may actually be driving developers away from the use of historic buildings for affordable housing and toward new construction. With this consequence in mind, this paper will attempt to address the following

research question: Does the subsidy provided by the Historic Rehabilitation Tax Credit program sufficiently cover the increased development costs associated with adaptive reuse projects developed for affordable housing?

Paper Overview

The relevance of the research question will be introduced first through a broad literature review that covers the need for affordable housing and the many facets of using adaptive reuse to meet this need. The paper then describes the main tenets of two federal and state tax credit equity programs (LIHTC and HRTC) responsible for low income housing production and historic rehabilitation activity respectively, covering also the combination of the two in producing affordable housing using historically significant buildings. It then moves to an analysis of the research question through a multiple-case study, comparing four adaptive reuse projects with four related new construction properties. All projects are sited in North Carolina and developed between 2000 and 2004. The case study findings are then presented and a discussion of interpretations of findings ensues.

The paper progresses into a discussion of the Community Restoration and Revitalization Act, a piece of pending federal legislation that aims to remedy the disincentives of combining the two tax credit programs for affordable housing production. Following this section, the potential impacts of this legislation on the number and financial feasibility of adaptive reuse projects utilized for affordable housing production is considered. Finally, the paper closes with a discussion of implications from the study as a whole and conclusions as related to adaptive reuse as a strategy for affordable housing production.

Methodology

This study explores the juncture between historic preservation and affordable housing production by comparing historic adaptive reuse project costs and subsidies with those of new construction using a comparative case study approach utilizing multiple cases and project-level data to explore the research question (Yin, 2003). The study makes use of project development cost data for four adaptive reuse projects and four comparable new construction developments selected from Low Income Housing Tax Credit allocation records years 2000-2004 and obtained from the North Carolina Housing Finance Agency. These projects were then arranged in pairs comprised of one affordable adaptive reuse project and a comparable affordable new construction development. The research question is specifically fleshed out by evaluating and comparing replacement cost, which controls for land cost and other ineligible costs, and equity amounts for the four project pairs and their relevant sets of data. The focus of the study is the state of North Carolina, but findings will be generalized to the field of historic preservation in affordable housing as a whole whenever possible.

A more detailed discussion of the methodology and its components, including the variables used to select the project pairs and their relative importance, can be found in Chapter Four following the case study introduction.

II. LITERATURE REVIEW

Demonstrated Need for Affordable Housing

As the nation's wealth gap continues to widen and wage adjustments fail to keep up with ever-increasing inflation rates and housing costs, the need for affordable housing has never been greater nor does it seem that the demand for this necessity will decline any time soon (HUD Affordable Housing Needs, 2005). According to a 2006 study on rental housing by the Joint Center for Housing Studies at Harvard University, the number of rental households is projected to increase by 1.8 million in only a ten year period from 2005 to 2015 (America's Rental Housing, 2006). The increasing demand for affordable rental housing has been fueled in large part by immigration in the late 1990s and the early part of this century. Additionally, current trends in immigration should continue to drive the need for affordable rental units.

The Joint Center's study also credited baby boomers, now nearing retirement and considering downgrades from larger single-family homes to more manageable rental units, with contributing to the forecasted demand for rental homes (ibid). The parents of the baby boomers and those individuals with failing health or disabilities are already facing affordable housing shortages. A 2002 study by the Commission on Affordable Housing and Health Needs for Seniors projected that by 2020, over 700,000 more rent-assisted units would be required in order to house persons age 65 and older with housing affordability problems (Libson, 2006). However, it is not just the needs of the elderly that affordable rental housing can meet. Now, even teachers, police officers, nurses, factory workers and others in the US workforce must spend an ever increasing percentage of household income to cover rising housing costs (Rypkema, 2004). In fact, housing costs exceed 30 percent of income for one in every three working families. Another 12 percent of the working population spends over 50 percent of their monthly income on housing expenses (Workforce Housing, 2006).

Adaptive Reuse as a Solution for Affordable Housing

The adaptive reuse of historic buildings can be a viable solution to the growing need for affordable rental housing. Adaptive reuse, as one approach to housing development, involves “the conversion of older structures built for other uses into residential space” (Goody, 2005), though it can be used for commercial and industrial purposes as well. This type of development, especially when targeted towards low-income families and senior citizens, can accomplish several important socially-driven goals at once: decent and fair housing, community building and social services provision, and preservation of the built environment. Adaptive reuse provides a safe, comfortable, and affordable place to call home while surrounding tenants with historic detailing and craftsmanship that would be far too costly to include in an affordable development with today’s specialized labor costs (Delvac, 1995; Escherich, 1996). Residents also benefit from the organized social activities and impromptu conversations that spring up in the community gathering spaces often included in adaptive reuse projects, like the old auditorium converted to a community center in an old school or an old courtyard turned community garden in a former industrial complex.

The historically significant buildings used for adaptive reuse projects are often located near areas with attractive amenities; as a result, the rehabilitation of these structures as affordable housing can place residents closer to the services they require. The central location of many of these developments affords quick and easy access to public transit, schools and daycares, retail options, health facilities, recreational opportunities, banking services, and other important amenities. This proximity to needed services can be of particular value to those residents who cannot afford a vehicle, children and teens who walk to school or can access nearby community activities without a car, or elderly persons who can no longer drive (Escherich, 1996). Adaptive reuse projects, because they are often sited in older neighborhoods or even historic districts, can situate residents much closer to centers of employment. In fact, according to Donovan Rypkema in his article, *Historic*

Preservation and Workforce Housing: The Missed Connection, more than “40 percent of residents in older neighborhoods live within five miles of work,” while fewer than “one resident in four in newer housing is that close to their place of employment” (2004). Adaptive reuse of historic structures for affordable housing can provide a great benefit to the residents who live within the walls of the development and can preserve a valued building within a community, giving it new life and a greater purpose.

Community Benefits of Adaptive Reuse

In addition to supplying much needed affordable housing units, adaptive reuse projects can also provide a number of benefits to the surrounding community. Through construction activities associated with historic preservation, these projects can benefit the local economy through increased expenditures for labor and the purchasing of materials. Historic preservation also helps to expand local employment opportunities by creating “20 percent more jobs than [are] created by the same expenditure for new construction” (Delvac, 1995). Subsequently, when laborers and merchants spend this income earned from historic preservation-based employment within the local community, the result is what the authors of *The Contributions of Historic Preservation* characterize as the “multiplier effect” (Listokin, 1998). The multiplier effect also extends to an increase in tax revenue generated at the local, state, and federal levels, while the rehabilitated historic structure can positively impact surrounding home and property values (ibid). Such preservation activity can also prompt neighbors to reinvest in their own properties and homes, which can help stabilize a declining neighborhood or begin the revitalization process in one that has been entirely neglected (Listokin, 1998). Adaptive reuse can also serve as a strategy to change attitudes and stereotypes that often accompany affordable housing development (Escherich, 1996). By restoring a valued structure within the community, these projects can help the surrounding community view affordable housing as an asset

instead of a detriment. Further, adaptive reuse of historic buildings for affordable housing can increase community pride as it increases nearby property values.

Adaptive reuse can further contribute to downtown revitalization efforts by restoring a unique sensibility and lost character to the heart of a city. By rejuvenating old buildings in the downtown district, the cities' story can be retold to a new audience (Moulton, 1999). Adaptive reuse can also work to preserve the character of a community by saving local landmarks and other significant structures (Rombouts, 2003; Thaler, 2002). Another benefit of adaptive reuse is its promotion of sustainable development and "building recycling" (Cassidy and Ausburn, 2003). By reusing existing buildings, the energy and resources originally used to build the structure are not wasted (Thaler, 2002). Further, saving such a building from demolition also spares local landfills from additional construction waste (Rypkema, 2006). Adaptive reuse can also impact the tax base, both by reusing existing infrastructure as a savings to a community and by generating new tax income from formerly vacant or underused buildings (Escherich, 1996).

Challenges to Using Adaptive Reuse for Affordable Housing

Despite the many positive contributions of adaptive reuse, these developments are not without considerable drawbacks that can profoundly challenge project feasibility and potentially threaten the subsequent affordability of the surrounding neighborhood. One of the most demanding aspects of an adaptive reuse project is the lengthy predevelopment process. Developers must deal with zoning regulations, planning and historic district commissions, special use permits, and any opposition from members of the local community or affected neighborhood. Further, if a developer wishes to take advantage of the Historic Rehabilitation Tax Credit, an incentive program offered by the federal government and most state governments for the rehabilitation of historically significant buildings, he or she must carefully follow a rigorous set of program standards that

stipulate how the redevelopment and rehabilitation process must be carried out (Delvac, 1995). Developers must apply to use this program and then submit all plans for rehabilitation, but timing in all development phases—from market studies to tax credit applications to permitting to subcontracting—is critical for project success. The longer it takes to develop these projects, the greater the risk and the higher the cost (Oliver, 2005; Hunter, 2007).

Finally, according to Peter Werwath with the former The Enterprise Foundation (now Enterprise Community Partners), “historic preservation requirements [can] add as much as \$10,000 per dwelling unit, or up to 15 percent extra, to rehabilitation costs” (1998). These additional costs can render an adaptive reuse project undoable unless the project receives sufficient funding to cover the added expense of historic preservation in affordable housing. Otherwise, the affordability of this project may be compromised as the developer must pass off development costs to the tenants in the form of higher rents, which may not meet federal requirements for affordable housing.

Ironically, the reclamation of a historically significant but vacant or underused building for affordable housing can hasten the gentrification of the surrounding neighborhood. This reinvestment, while it provides a decent and reasonably priced place to live for some, can inadvertently displace others around it as it causes property values to increase and demand for housing in the area to rise (Listokin, 1998; Werwath, 1998). As communities witness this result of historic preservation around them and hear of people in their same position getting priced out of the market, resistance to new adaptive reuse projects—even those for affordable housing—may be met, understandably, with hesitation and suspicion. However, it must be noted that planners, housing and community development professionals, and economic development practitioners do have within their arsenal certain measures that can be implemented to preserve existing affordability for surrounding homeowners and renters (Listokin, 1998). Though a discussion of these tools is beyond the scope of this study, they represent tangible strategies that planners can employ to help

fight gentrification within redeveloping neighborhoods while capitalizing on the many benefits of historic preservation within a community.

Further, as compared to other affordable rental housing production strategies like new construction, adaptive reuse is generally riskier and more complicated to develop. Because these projects are more time and management intensive than the standard new construction project, the construction practices that must be followed in order to comply with the Standards for Rehabilitation can also increase the cost of adaptive reuse, as can code and regulation compliance (Hunter, 2007). This complexity translates into greater overall project expense that ultimately must either be passed on to the tenant in the form of rent or covered by some sort of development subsidy. With market demand as it is for historic properties for the development of high-end condos and Class-A office space, the added complexity of these factors along with the difficulty of combining the two tax credit programs could, in fact, drive developers away from the production of affordable housing and entice them to the private, unsubsidized market where costs can more easily be passed on to future tenants.

One further criticism levied against both adaptive reuse projects for affordable housing and LIHTC-alone projects themselves is that they neglect the poorest of the poor by requiring rents that are still too high for this population to pay. Since affordable adaptive reuse projects must comply with LIHTC-stipulated rent restrictions, this criticism may be understood more appropriately an indictment against the goals and targeting policies of the Low Income Housing Tax Credit program rather than the use of historic properties for affordable housing itself. Nevertheless, housing advocates and developers alike must be aware that this type of housing development may not reach those with the most desperate housing needs (Khadduri, 2004).

Financing Adaptive Reuse for Affordable Housing

Like any real estate development project, the adaptive reuse of historically significant buildings for affordable housing requires multiple layers of financing in order for the project to work. Adaptive reuse projects have available to them a number of sources for debt and equity financing. Generally, affordable housing developers try to secure debt financing (below market-rate when possible) that provides a lower interest rate, as generous a term as they can find, and a longer amortization period to reduce monthly payments. Equity sources are structured in such a way as to cover much of the cost of development so that this burden does not need to be passed on to residents, thereby promoting affordability. When the combination of debt and equity does not cover the full cost of the project, developers are forced to look for “gap financing” in the form of grants, forgivable loans, or subsidies often from non-profit or government sources, which is generally more difficult to secure (Delvac, 1995). Consequently, this study is concerned with two particular tax credit programs that provide sellable tax credits to projects that match their respective program goals—the sale of these credits can then be invested into the project during construction and development as equity capital. Specifically, these programs are the aforementioned Low Income Housing Tax Credit (LIHTC) and the Historic Rehabilitation Tax Credit (HRTC) programs.

The next chapter will discuss the particulars of both of these tax credit programs. It will also provide information on the federal and state arm of both the LIHTC and HRTC programs. The chapter concludes by considering the benefits and challenges of combining the two programs for the purpose of affordable housing production using historically significant buildings.

III. AVAILABLE FEDERAL AND STATE TAX CREDIT PROGRAMS

Federal Low Income Housing Tax Credit (LIHTC) Program

The Low Income Housing Tax Credit program, an indirect subsidy based in federal tax code (LIHTC Handbook, 2005), is considered the most influential program in encouraging the production of affordable housing. The program was introduced by the Tax Reform Act of 1986 to “promote the development of housing for low-income families, without requiring a lot of government involvement in day-to-day operations” (Showers, 2005). The program essentially offers a limited “incentive for private developers and investors to provide more affordable rental housing” through new construction or the rehabilitation of existing structures (LIHTC Handbook, 2005). While the federal government initiated the program, laid out its design, and set forth certain programmatic mandates including how credits are disbursed to individual states, it granted to the states the authority to actually administer this program and distribute credits within their respective borders (*ibid*). For this reason and by federal mandate, each state then sets forth annually a Qualified Allocation Plan, which outlines the state’s housing needs, priorities, selection criteria for credit-eligible projects, and application requirements (Primer, 2007).

The Low Income Housing Tax Credit program is like any federal program—complex in both its design and implementation. Since the program is based in tax code, IRS provisions govern, among other program facets, how the credits are allocated to states by the federal government on an annual basis, and further, in what denominations the credit is available to developers and investors. Each year, the federal government allocates a certain number of credits to each state based on a Congressionally-set rate multiplied times the state’s population (LIHTC Handbook, 2005; Showers, 2005). Starting in 2003, the rate applied to states, or “LIHTC cap or ceiling” as it is called, adjusts each year with inflation (LIHTC Handbook, 2005). For 2008, the rate is the greater of \$2.00 per state resident or \$2,325,000 (IRS, Rev. Proc. 2007-66).

The general credit program itself is divided into two distinct credits with different rates: the 70 percent and 30 percent credits, otherwise known as the 9 percent and 4 percent credits, respectfully. These later percentages are only “approximate and are adjusted monthly” by the federal government using a discount rate set by the Treasury in order to “maintain the present value of the 10 years of credits at 70 percent of the cost of new construction or substantial rehabilitation and 30 percent of the acquisition cost” (McClure, 2000). The main difference between the two programs is this: if a project receives any other federal or tax-exempt funding, it is ineligible for the 70 percent credit and can access only the 30 percent credit instead (Delvac, 1995). Both credits are calculated as a percentage of the project’s qualified basis. The qualified basis is derived from the total number of affordable units in the project and the total development costs of the project, known as the eligible basis. If all units in the project are affordable, meaning that rent has been set so that those with an income of 60 percent or less of the Area Median Income can afford to live there, then the eligible basis is multiplied by 100 percent yielding the maximum qualified basis (Delvac, 1995; Showers, 2005).

As mentioned above, the state administers the federal LIHTC program within its borders so any developer wishing to utilize these credits for an eligible project must apply to the state regulatory body responsible for the LIHTC program, usually the housing finance agency (LIHTC Handbook, 2005). This process is quite competitive as the state only has a fixed number of credits to dole out to developments that most closely fit the goals set forth by the state for low income housing production (Showers, 2005). Developers can increase the number of housing tax credits they are eligible to receive by developing a project in certain areas targeted for improvements known as Qualified Census Tracts (QCT) or Difficult to Develop Areas (DDA). If a project is located in a QCT or DDA—as determined by the US Department of Housing and Urban Development—then the project will receive a “basis boost,” whereby the eligible basis is increased by 130 percent to

compensate for increased cost associated with these areas and to provide an incentive to locate the project there (Delvac, 1995). This tactic also amplifies the impact of the credit by bringing development and investment to an overlooked or underserved community, hopefully spurring further economic interest in the area.

Once a developer receives a credit allocation, he or she can syndicate the credits to raise equity pay-ins from their sale to investors. This equity flows into the project during the development process to help offset the cost that must be passed on to residents as rent (Primer, 2007). The tax benefits related to the Low Income Housing Tax Credits can flow to investors for 10 years, beginning in the year the building is placed-in-service. Credits are subject to recapture in the case that the investor leaves the project before the 15 year compliance period is passed, as stipulated by the IRS (Showers, 2005).

North Carolina State Low Income Housing Tax Credit (STC) Program

Since 1999, the State of North Carolina has provided a state tax credit to be used in conjunction with the federal housing tax credit program for projects that meet additional income targeting restrictions. The amount of credits allocated to and the income restrictions required of the project depend on the economic condition of the county where it is sited. The state credit was originally structured much like the federal credit program and provided sellable credits to developers of qualified affordable housing projects in order to generate additional equity into the development phase. This was one way of further subsidizing the production of affordable housing in the state. In 2002, faced with broad inefficiencies including federal taxes that reduced the value by 35 percent, limited syndication opportunities, and low credit prices (Mayo, 2008), the NC General Assembly modified the state low income housing tax credit program. These modifications replaced syndication with a direct subsidy to the project. Formerly, investors had received the tax-offsetting

benefits of the credit in exchange for supplying equity to an eligible project (NC QAP, 2008). Instead, the restructured state credit provides targeted project assistance through two avenues: a “direct refund” (or “grant”) or an “Agency loan” (ibid). Each project team chooses how it will receive the credit, though “no [State Tax Credit] flows from the LLC/LP to its members/partners” unlike the pre-2003 credit. Both credit options supply funding “that can be efficiently invested directly in Housing Credit properties through the North Carolina Housing Finance Agency” (NCHFA “Facts,” no date).

The direct refund or grant option allows a project development entity to essentially return to the Agency any allocated state tax credits (STC) in exchange for a “refund of the STC amount” directly to the project (NC QAP, 2008). The funds are actually placed in an Agency-held escrow account and released upon the completion of certain pre-agreed project milestones. However, if a project fails to comply with relevant statutory requirements and applicable QAP provisions, the development entity may face various penalties and the amount of the credit will be recaptured by the Agency. This option also “result[s] in federal taxable income recognition for partners” and members of the project development entity, which is either a Limited Liability Corporation (LLC) or Limited Partnership (LP) (ibid). However, according to the North Carolina Qualified Allocation Plan for 2008, no entity has ever chosen this grant option.

The other available option, the Agency loan, provides debt to the development entity at zero percent interest for a 30 year term. A balloon payment is expected at the full maturity of the term loan. By choosing the Agency loan, the entity is not at risk for any recapture of the credits but must comply with all underwriting standards included in the loan agreement. This option is also exempt from federal income tax as the IRS recognizes this below-market transaction “as a direct state loan to the recipient” (NC QAP, 2008). The Agency stipulates that the funds provided by this loan option can only be used to pay back any construction financing already in place, while the IRS

requires that the “ownership entity reasonably expects to repay the full amount of the loan in accordance with its terms” in order to secure an exemption from the federal income tax (ibid).

The North Carolina state housing credit has set more stringent eligibility and selection requirements than the federal LIHTC in order to push affordable housing developers in this state to produce a great number of units affordable to households with income levels at 50 percent, 40 percent, and even 30 percent of the area median income. In this way, the state credit can better address the needs of the families with the greatest need than can the federal housing credit (ibid).

Historic Rehabilitation Tax Credit (HRTC) Program

Administered by the National Park Service (NPS) in the US Department of the Interior, the Historic Rehabilitation Tax Credit program began in 1976 as a partnership between the US Internal Revenue Service and State Historic Preservation Offices to provide an attractive incentive to preserve and rehabilitate historic structures across the country (NPS, online). This program is considered “one of the Federal government's most successful and cost-effective community revitalization programs” (NPS, online). It has also been the main financial driver behind historic preservation of income-producing properties, providing a source of equity to qualifying projects like adaptive reuse developments (ibid).

The Rehab Credit, as this program is often abbreviated, actually offers two separate credits. The first is a 20 percent credit available to “certified historic structures,” which means that the property either has been placed on the National Register of Historic Places or it has been deemed to contribute to the historic significance of a registered historic district by the National Park Service (NPS, online; Delvac, 1995). The 20 percent credit applies to residential—both private homes and income-producing properties—and commercial uses alike. The second credit offered is a 10 percent

credit available to non-residential structures placed-in-service prior to 1936 that are not considered historically significant or a contributing structure (Delvac, 1995).

Both the 10 percent and the 20 percent credits are derived as a percentage (depending on the credit a project is eligible to take) of total “qualified rehabilitation expenditures (QREs),” which includes any interior or exterior work or services rendered that contribute to the rehabilitation of the structure. Legal fees, architectural and engineering services, and construction-related expenses, among others, can be included in the project basis, but any costs related to site acquisition, new construction or expansion, interior furnishings, parking and landscaping, or tax-exempt uses of the building are disqualified (NPS, online; Delvac, 1995). In order to receive the credit, QREs must exceed the adjusted basis of the building within a measuring period of 24 months (ibid).

When taking advantage of the 20 percent credit offered, developers must stringently follow the guidelines for preservation and “Standards for Rehabilitation” set forth by the Secretary of the Interior in order to receive the Historic Rehabilitation Tax Credit (Cohn, 2001). Further, if the subject building is not already on the National Register of Historic Places, it must first receive such designation in order to be eligible for any portion of the historic tax credit subsidy (Rombouts, 2003). This citation as a “certified historic structure” is the first step in the three-part Historic Preservation Certification Application necessary to claim the Rehab Credits. In the second part, developers must submit the rehabilitation plans for the building and must clearly demonstrate that all work will follow the Standards for Rehabilitation in order to preserve the historic character and contributing features of the building. The completed rehabilitation work is submitted for official approval in the third and final section of the application (NC SHPO, online).

The entire application is first reviewed by the State Historic Preservation Office and then forwarded to the National Park Service with a recommendation for action (NPS, online; Delvac, 1995). The NPS has the final say regarding the application, but provides an appeals process for

those dissatisfied with the result. Once all work is completed, “Part 3” of the Rehab Credit application is then granted and rehabilitated building is placed-in-service. At this point, the Historic Rehabilitation Tax Credits can begin to flow to the developer or investors who may have purchased the credits to help offset taxable income. Credits are only allowed in the year that the newly rehabilitated structure is placed-in-service (Delvac, 1995). While this credit application process can cause a substantial delay to the overall project timeline as can the need for significant rehabilitation work, it is necessary in order to be eligible for the tax benefit flowing from the historic tax credit (Oliver, 2005). Like the Low Income Housing Tax Credits, Rehab Credits can also be sold to investors and the resulting proceeds invested as equity into the project during development.

North Carolina State Historic Rehabilitation Tax Credit Program

In addition to screening Historic Register applications before forwarding them to the National Park Service for approval, the State Historic Preservation Office also administers the state Rehab Credit. State program stipulations closely follow those of the federal historic credit program concerning the 20 percent credit for income-producing properties. In fact, if a property is eligible and certified to receive federal Rehab Credits then the property is automatically qualified to receive the state Rehab Credit as well (NC SHPO, online). According to the NC State Historic Preservation Office, when the 20 percent state Rehab Credit is combined with the federal, the resulting combination can “reduce the cost of a certified rehabilitation of an income-producing historic structure by 40 [percent]” (ibid). These state credits can also be syndicated and the proceeds poured back into the project as equity. Though not available to affordable housing projects, the state also offers a 30 percent credit for non-income producing historic properties, which applies to owners of historic homes. As long as these non-income producing historic properties are “certified historic structures,” comply with all rehabilitation standards, and undertake a significant rehabilitation

project, these structures are eligible for a 30 percent tax credit from the state on the cost of the rehabilitation work (ibid).

Combining the LIHTC and HRTC Programs

Since the Tax Reform Act of 1986, developers have had access to both the Low Income Housing Tax Credit program and the Historic Rehabilitation Tax Credit when developing a building of historic significance for affordable housing. Approximately 86,000 affordable residential units nationwide have resulted from this federal program partnership (Leith-Tetrault, 2007). By “piggybacking” these two programs, developers have been able to access greater levels of subsidy for the production of affordable housing using adaptive reuse, which translates into quality housing with at a below-market rent for people with incomes of 60 percent of the area median income or below (Listokin, 1998). Further, the combination of the two programs can drum up substantial interest from corporate investors when these credits are syndicated (Delvac, 1995). However, when these two programs are combined, current tax law stipulates that the LIHTC basis must be reduced by the full dollar-for-dollar amount of historic tax credits the project is eligible to receive. This requirement is known as the “basis adjustment” and is considered a major disincentive to producing affordable housing using historically significant structures (Lally, 2005).

While the pairing of these programs has resulted in the successful production of a substantial number of affordable residential units, this combination of tax credit programs is really quite cumbersome for developers to negotiate. Restrictions, like the prohibited use of the 10 percent credit for residential purposes, may have actually hindered the conversion of a greater number of historic properties into affordable rental housing (Lally, 2005). Though the combination yields a higher overall credit amount, the required basis adjustment certainly creates a strong disincentive for developers to pair historic preservation with affordable housing, especially when considering the

complexity of the application processes and the uncertainty of receiving either credit. Additionally, administration of each tax credit is at the state level which could mean that the programs vary quite significantly from state to state, especially in reference to the targeting policies set in the state QAPs for the Low Income Housing Tax Credit. Finally, a level of uncertainty surrounds the combination of the two credits, especially concerning the Historic Rehabilitation Tax Credit and its ability to cover the increased cost associated with the development of historically significant properties for affordable rental housing.

The next section deals specifically with this uncertainty, addressing the question of cost coverage by the HRTC subsidy through a case study looking at paired adaptive reuse and new construction affordable housing projects.

IV. CASE STUDY AND LEVEL ONE DATA ANALYSIS

Introduction to the Case Study

This comparative case study focuses on the cost and equity comparisons between the use of historically significant buildings for affordable rental housing and the use of new construction for the same purpose. By using four pairs of project-development data, this case study attempts to answer the following research question: Does the subsidy provided by the Historic Rehabilitation Tax Credit program sufficiently cover the increased development costs associated with adaptive reuse projects developed for affordable housing? As set forth in the first chapter of this paper, the project selection and pairing process will be addressed first and then a description of the selected adaptive reuse and comparative new construction projects will follow. Next, the research question and its larger context will be revisited briefly before covering the data points selected for comparison in this study. The study findings, interpretations, and conclusions wrap up this data analysis section.

Project Selection and Pairing Process

As covered in the Methodology section, adaptive reuse projects were selected first from a list of projects receiving Low Income Housing Tax Credit allocations between the years 2000 to 2007. Only stabilized projects could be used in this analysis, which eliminated any project receiving an allocation in or after 2005. Of the adaptive reuse properties remaining and eligible for this study, the four projects ultimately selected were chosen primarily for their shared syndicator (Community Affordable Housing Equity Corporation) and the broad access to data and materials this arrangement provided to the researcher. Additionally, the four properties provided a discrete data set in that they were all elderly tenancy types, all former schools, all allocated in four separate years, and all located within a reasonable distance to a number of seemingly comparable projects. Both the North Carolina Housing Finance Agency (NCHFA) and Community Affordable Housing Equity

Corporation (CAHEC) provided all project-level data and property information for the ensuing case study and data analysis section. Table 3.1 lists the four adaptive reuse projects selected for this analysis, their locations, allocation years, total net square footage, and number of units each.

TABLE 3.1

Adaptive Reuse Project Name	Location	Allocation Year	Total Net Square Footage	Total Units
Grainger Place	Kinston, NC	2000	60,790	56
Dallas High School	Dallas, NC	2002	37,600	33
Randleman School Commons	Randleman, NC	2003	38,454	30
Cleveland High School	Clayton, NC	2004	38,073	25

New construction properties were also chosen from the allocation records provided by the North Carolina Housing Finance Agency. These properties were chosen as comparable projects to the selected adaptive reuse projects using several important variables, including allocation year, tenancy type, location and distance from adaptive reuse property, and access to data. Allocation year was determined to be the most important variable in setting up a legitimate comparison for the case study. Projects receiving tax credits in the same allocation year would be subject to the same application and review standards, the same project requirements as stipulated in the annual state Qualified Allocation Plan (QAP), and similar market conditions.

The tenancy type also proved to be important in choosing comparable new construction properties as it heavily influences the unit mix planned for a certain project. Projects intended for the elderly generally have a majority of one-bedroom apartments and fewer two-bedroom apartments, while developments targeted towards families must provide a greater number of multi-bedroom units. A project's unit mix can have a profound effect on projected cash flow both through rental income and projected vacancies, which can be lessened if the unit mix is tailored to meet the identified tenancy need of the local market area. Unit mix also affects the size and scope

of a project; thus, developments with similar tenancy requirements are more likely to align on other important projects characteristics.

Former use was also a consideration for adaptive reuse project selection. Adaptive reuse projects of similar former use likely share building and site characteristics, which would necessitate similar adaptations and rehabilitation work. This type of work would likely translate into similar development budget considerations among related projects, whether former mills, warehouses, or school buildings—the building type considered in the study at-hand.

Next, comparable new construction projects were identified from the same allocation years as the adaptive reuse cases. By choosing a new construction project from the same allocation year as the subject adaptive reuse property, both projects would have been under the same considerations when chosen for a LIHTC allocation and subject to similar general market conditions during the development phase. From the properties identified above, a comparable new construction property was then selected based on its total distance from the subject adaptive reuse project. This study utilized a 30 mile radius distance limit for the comparable property in order to confine to the same general market the labor, materials, and other development-related costs. The comparable property also needed to have the same occupancy requirements (elderly) as the selected adaptive reuse projects in order to better control for unit mix, amenity provision, and design considerations.

The study also took into account the distance from the nearest metropolitan area of both the adaptive reuse project and the comparable new construction deal. Finally, this study considered access to data and project materials as one last factor in selecting comparable new construction properties. Whenever possible, CAHEC-syndicated properties were selected for comparison; however, if another non-CAHEC project was identified as the best fit for the subject adaptive reuse project based on the variables discussed above, this property was chosen over the CAHEC project

and data and materials were solicited from NCHFA. Table 3.2 lists each comparable new construction property selected, its location, allocation year, net square footage, and number of units.

TABLE 3.2

New Construction Project Names	Location	Allocation Year	Total Net Square Footage	Total Units
Weatherstone Park	New Bern, NC	2000	31,460	44
Forest Glen Apartments	Shelby, NC	2002	29,488	36
Mountain View Senior Apts	Kernersville, NC	2003	48,130	50
Cedar Spring Apartments	Wendell, NC	2004	22,184	20

Based on the process detailed above, this study paired four new construction elderly affordable housing developments with four affordable elderly adaptive reuse projects in order to explore the implications of the research question. Below, Table 3.3 lists each adaptive reuse project and the corresponding new construction property, appropriately paired for comparison of development costs and tax credit equity contributions. In order to have an accurate point of comparison between subsidy and cost, the unit of measurement was set at the per-square foot level using the net square footage for the entire building. This per-square-foot measure yields the most uniform measure for comparison across developments of different sizes and locations, though both this measure and a per-unit measurement are utilized by states as an evaluation tool in their Qualified Allocation Plans (Gustafson and Walker, 2002).

TABLE 3.3

Pair	Project Names	Building Type	Total Cost of Development	Total Tax Credit Equity
Pair A				
	Grainger Place	Adaptive Reuse	\$ 5,098,043	\$ 4,368,891
	Weatherstone Park	New Construction	\$ 3,293,134	\$ 2,339,473
Pair B				
	Dallas High School	Adaptive Reuse	\$ 3,821,743	\$ 2,897,073
	Forest Glen Apartments	New Construction	\$ 2,934,949	\$ 1,855,849
Pair C				
	Randleman School Commons	Adaptive Reuse	\$ 3,719,254	\$ 2,709,322
	Mountain View Senior Apts	New Construction	\$ 4,093,927	\$ 2,317,707
Pair D				
	Cleveland High School	Adaptive Reuse	\$ 3,643,815	\$ 2,545,869
	Cedar Spring Apartments	New Construction	\$ 2,130,401	\$ 1,206,667

Finally, it is important to note that this study solely considers total equity amounts broken down by credit type, but does not specifically consider whether the tax credit subsidies came from federal- or state-level sources. Thus, the study can only remark on the efficacy of the overall tax credit programs (as a federal and state package together) and therefore cannot render judgment as to whether it was a federal or state program that proved most influential and effective to adaptive reuse project feasibility.

Limitations to the Data Set

Though the methodology was carefully construed and meticulously followed when assembling the data set, several important limitations do apply to the proceeding comparative case study and its resulting findings and interpretations.

Three of the four adaptive reuse projects were developed by the same North Carolina-based development company, which is perhaps the most crucial limitation and simply a consequence of what data was available. This company has made a name for itself as the premier developer of affordable adaptive reuse projects in this region. They are also equipped with an in-house general

contractor specializing in rehabilitation work, as well as an in-house management team. This seems to have afforded them the ability to reduce unnecessary project development costs and wasted time, which has a monetary value as well in the project development process.

Another limitation is that all of the adaptive reuse projects were the same type of former use and the same tenancy type. While this was an intentional element in the research design, it admittedly does limit the ability to generalize the results of this study to other affordable housing and historic preservation projects in North Carolina as a whole or beyond this state's borders. Further, former schools present far fewer barriers to rehabilitation and lend themselves well to apartment construction with their classroom layout. This serves to reduce the actual cost of preparing the building for its new residential use, which may not hold true for other historically significant buildings converted to housing.

A final limitation results from a change made to the North Carolina state low income housing tax credit program in 2002. In that year, the state legislature changed the credit, which was modeled on the federal LIHTC program, to a more versatile program allowing either a direct refund option or an Agency loan. Two of the adaptive reuse projects used in this study received the traditional credit for pre-2003 allocations (Grainger Place and Dallas High School), while the remaining two opted to receive the state Agency loan as it was available starting in 2003 (Randleman School Commons and Cleveland High School). This credit change is an important limitation in that it reduces the amount of equity recorded as flowing from tax credit programs. Because it shows up as a loan in the project pro-forma, it is counted as such and not as tax credit equity. Thus, the 2000 and 2002 projects could appear to have received a higher percentage of total LIHTC equity than the 2003 and 2004 projects, but it is simply a function of a programmatic shift.

Property Profiles

The following information provides a brief background of each adaptive reuse and new construction property chosen for this study. The information is arranged by pair with the adaptive reuse property detailed first. A brief discussion of why the two properties were paired follows the new construction project description. None of these properties lie in Qualified Census Tracts, as designated by HUD. A general map showing all paired properties across the state and individual maps for each project pair are included in the Appendix.

PAIR A

Grainger Place: This former school, built in 1926 of brick construction, is located in Kinston, NC, and situated in the Grainger Hill historic district, a relatively stable, mostly residential older neighborhood. The 2.29 acre site overlooks Grainger Stadium where the Cleveland Indians' Class A farm team plays, is only a half-mile from the downtown, and affords easy access to businesses located along two major highways. The main classroom building was converted into 57 senior apartments after receiving an early allocation of Low Income Housing Tax Credits in 2000 to help offset the loss of affordable housing to Hurricane Floyd. With rents affordable to people with incomes of 60 percent AMI or less, all 51 one-bedroom and 6 two-bedroom apartments are open to income-eligible senior residents.

The former school auditorium was maintained for common area space and also houses room for supportive services for residents. Other site amenities include several day rooms, an exercise room, walking trails, passive recreation area, and a senior center. A gymnasium and adjacent industrial arts buildings not needed for the development are leased out to other entities. The project was developed by Landmark Asset Services of Winston-Salem, NC, a group with extensive affordable housing and historic redevelopment experience. Rehab Builders, Inc., an

affiliate of Landmark, served as general contractor, while Landmark Asset Services also undertook management of the project (Grainger ICR, 2000).

Weatherstone Park: This new construction senior apartment development is located in New Bern, NC, in the eastern part of the state. Like Grainger Place, Weatherstone Park also received an early LIHTC allocation from the state in order to help provide replacement housing in the wake of Hurricane Floyd. This greenfield development provides 44 units for income-eligible seniors on a 7.86 acre site characterized as “typical coastal pine flats” (Weatherstone Park ICR, 2000). The site utilizes a wheel quadplex design that situates each unit on a different elevation to “give residents a feeling to living in a detached unit” (ibid.). Eleven different quadplexes comprised of 32 one-bedroom units and 12 two-bedroom units total join a large office and community building also onsite. Other amenities include a picnic area, community garden, and extensive walkways.

The site is less than one half-mile from a number of commercial centers, a community college, and many major medical offices. It is also only one mile from the Department of Social Services. Adjacent to the site are two newer but stable single-family subdivisions; other land surrounding the property remains undeveloped. Weatherstone Park was developed by a joint venture of The Affordable Housing Group, Crosland Properties, and East Carolina Community Development, Inc. Crosland Contractors served as the general partner, and Community Management Corporation assumed management of the property (Weatherstone Park ICR, 2000).

Pairing Note: Grainger Place and Weatherstone Park are both located in the eastern part of the state in smaller cities. At approximately 29 miles apart, this study assumes that these properties shared similar market conditions during project development and similar market-based cost considerations.

Additionally, they both received early LIHTC allocations in year 2000 because of Hurricane Floyd and serve an elderly population.

PAIR B

Dallas High School: This former high school is located 25 miles northwest of Charlotte, NC, in Dallas, NC, which is part of the Charlotte-Gastonia-Rockhill metropolitan statistical area. Developers of this affordable senior development received a 2002 LIHTC allocation to convert the two-story brick building into 33 apartments for elderly persons with incomes 50 percent of the area median income or less. All 29 one-bedroom and 4 two-bedroom units have access to such site amenities as a community room, common area with kitchen, laundry area, activity room, dining room, various sitting rooms, and leasing office (Dallas HS NCHFA, 2002; Dallas HS ICR, 2002).

The .93 acre site is only one block south of Main Street in downtown Dallas, which affords residents easy access to various local shops, churches, services, and other nearby historic sites. Other surrounding neighborhood characteristics include a mix of older single family homes on smaller lots and nearby shopping centers along two local highways that access I-85. This property was developed by Redinger Housing Developments, Inc. and William B. Ferris, Inc. The general contractor for this project was Weaver-Cooke Construction, LLC. Volunteers of America of the Carolinas, Inc. served as the project management team (Dallas HS ICR, 2002).

Forest Glen Apartments: Located in Shelby, North Carolina, this 36 unit new construction property received a 2002 low income housing tax credit allocation from the state to provide affordable rental housing options to area seniors. Of the 30 one-bedroom apartments and 6 two-bedroom units, 18 are affordable to those with incomes 50 percent AMI or less while the remaining 18 units are

targeted to those with incomes 60 percent AMI or less. To insure fair access, 25 percent of the total units at Forest Glen are completely handicapped accessible.

The property includes such amenities as a large community building, garden spots, a picnic area, gazebo, and walking trails that connect the development to a new senior center adjacent to the site. Also nearby to the property is an adult daycare center, a home health agency, and several single-family homes; however, most of the land surrounding the property remains undeveloped farmland. This property was developed by a joint venture between The Council on Aging of Cleveland County, NC, Inc., and Housing Opportunities, Inc. Weaver-Cooke of Greensboro served as the general contractor, while Harris Brown Management of Greensboro assumed management of the property (Forest Glen NCHFA, 2002).

Pairing Notes: Dallas High School and Forest Glen Apartments are both situated outside of Charlotte, NC, in small, rural towns that are part of the Charlotte MSA. Both serve elderly populations and received 2002 LIHTC allocations. They are located approximately 21 miles from each other, and thus, this study assumes the existence of similar or shared market conditions during the project development phase for both properties.

PAIR C

Randleman School Commons: Located in the Triad region of North Carolina, this elderly adaptive reuse project is part of the small town of Randleman, which is north of Asheboro, southeast of High Point, and less than 20 miles south of Greensboro. This former three-story school building was constructed in 1904 with additions in both 1926 and 1937 and now houses 30 affordable rental units for income-qualified senior citizens, for which it received a LIHTC allocation from the state of North Carolina in 2003. Of the total number of units, 23 are one-bedroom apartments while the

remaining 7 units offer two-bedrooms each. Residents have access to such onsite amenities as a computer room, fitness room, sitting room, laundry room, and multi-purpose facility housed in the former school auditorium. The space that once held the school's administrative offices now serves as the property leasing and management office.

This 2.2 acre property sits at the edge of downtown Randleman. Across from the property is the City Hall and Annex, which houses the Fire Department and Police Station. Just to the west of the site is the Richard Petty Museum in an old furniture building. Parking and undeveloped property lies just to the rear of the former school, while single-family homes occupy several nearby lots. An existing senior center is located within the same block as the Randleman School Commons, while various local retail stores, churches, services, and restaurants are within one mile of the site. The surrounding neighborhood appears well-established and stabilized. This property was developed by Archetypes, LLC., an affiliate of Landmark Asset Services, in partnership with several other entities, including Sari and Company, Rural Initiative Project, Inc., and Wainman Homes. Rehab Builders, a Landmark affiliate, served as general contractor, and Landmark Services, Inc., assumed property management responsibilities (Randleman ICR, 2003).

Mountain View Senior Apartments: Located in a quiet residential area in Kernersville, North Carolina, Mountain View Senior Apartments provide 50 new and comfortable garden apartments to local seniors with incomes at or below 60 percent of the area median income. In fact, this 2003 LIHTC allocation recipient specifies that 25 percent of the total units will be affordable to elderly persons with incomes 30 percent or less than the area median income. Further, 40 percent of the total units will be accessible to those with income levels at 50 percent AMI or less. Five of the units are fully handicapped accessible. The seven acre site provides many amenities and recreational opportunities to residents, including a large gathering space with TV, library, computer room,

exercise room, exam room, screened-in porch, terrace, learning center, various sitting areas, walking trails, garden plots, a picnic area, and open and wooded areas.

The neighborhood surrounding the property contains a mix of established moderately-sized and new custom-built single-family homes. Neighborhood shops and restaurants are a short walking distance away, while other larger commercial areas, shopping, services, and medical offices can be easily reached by a short car trip. The site is also close to the Shephard's Center, which provides several social services to area seniors. The Mountain View Senior Apartments were developed by Lennis Loving of Loving Development, LLC. Harold K. Jordan, Inc., served as the general contractor, while GEM Management was selected as the project management company (Mountain View NCHFA, 2003).

Pairing Notes: In Pair C, both properties are located in the Piedmont Triad region of North Carolina; Randleman sits south of Greensboro, while Mountain View is situated between Winston-Salem and Greensboro. The two properties are both 2003 LIHTC allocations, and they both serve elderly low-income populations. This study makes the assumption that at approximately 26 miles apart, these paired properties also shared similar market conditions during the development of their respective rental housing projects.

PAIR D

Cleveland High School: This former school, built in 1927 and operated until 1999, is located in Clayton, North Carolina. Just to the southeast of Raleigh, Clayton is part of the Triangle region of the state and located in Johnston County. Though the Cleveland High School site is itself seemingly rural at this point, this area is projected to significantly develop in the coming years as a bedroom community for Raleigh and to support a growing workforce in the region. Clayton is also located

within 15 miles of other North Carolina localities, including Garner, Smithfield, Benson, and Fuquay-Varina.

This project received an allocation of low income housing tax credits from the state of North Carolina in 2004 to provide 25 affordable apartments to local seniors. The brick three-story former school was converted to include 19 one-bedroom and six two-bedroom units. The third-floor auditorium was maintained as a community room and common area. Other building amenities include a fitness area, tenant storage, laundry room, technology center, library and reading room, second community room on the ground floor, and an outdoor courtyard.

The 1.8 acre site situated next to the former school gym is now owned by Johnston County and operated by the local YMCA. Two convenience/mini-grocery stores are located directly across the road from the Cleveland School site, while former school athletic fields now operated by the Cleveland Athletic Association are located just behind the property. A satellite campus of the Johnston County Community College is also located nearby, and a new strip center has been constructed on an adjacent parcel. A fire and rescue station is also close by to the property. Other larger commercial shopping areas, including a Food Lion grocery store, are located over three miles away near I-40. This project was developed by Archetypes, LLC, a Landmark affiliate, and other partnering entities, including Sari and Company, Fitch Development Group, and the MidAtlantic Foundation. The general contractor was Rehab Builders, also an affiliate of Landmark. Landmark Services assumed management of the site (Cleveland HS ICR, 2004).

Cedar Spring Apartments: Located in Wendell, North Carolina, this new construction senior development lies just 15 miles east of Raleigh and is part of the so-called Triangle region of the state. The project received a LIHTC allocation in 2004 to construct one two-story building containing 20 residential units. Half of these units are one-bedroom apartments, while the other ten have two

bedrooms. Two units are specifically targeted to people with disabilities. The 1.26 acre site has a variety of amenities including a game and craft room, exercise room, picnic area, gazebo, gardening spot, computer center, TV room, laundry facilities, vending room, exam room for visiting medical staff, reading room, and porte cochere.

Land uses adjacent to the site include several storage warehouses, brick duplexes owned and operated by the Wake County Housing Authority, the Cedar Trace Apartment complex, and single-family residential area. Some older and some newly constructed single-family homes occupy the residential area, while tobacco warehouses not currently in use also dot the surrounding landscape. The Cedar Spring Apartment site is within walking distance to several local shops and services in downtown Wendell. The East Wake Senior Center and the Wendell Public Library are each located directly across from the subject property. Cedar Spring was developed by Lyle Gardner and Timothy Morgan of Evergreen Construction Company in Raleigh, NC. Evergreen also served as both the general contractor and the property management entity, as well (Cedar Spring ICR, 2004).

Paired Notes: Cleveland High School and Cedar Spring Apartments are both situated directly outside the capital city of Raleigh in the Triangle region of North Carolina. These two properties received Low Income Housing Tax Credit allocations in the same year (2004) and both provide affordable rental apartments to elderly residents. At only 11 miles in distance from one another, these distinct projects would have most certainly relied on the same market for labor and materials and experienced similar cost conditions during site development and building construction.

Data Analysis Organization

This comparative case study aims to determine whether or not the equity flowing from the Historic Rehab Tax Credit is actually enough to cover the increased cost of an adaptive reuse project

over the cost of a comparable new construction. The study utilized four pairs of project data in order to explore the research question. For each project, the following data points were pulled from overall project data in order to carry out this analysis: total replacement cost, total net square footage for the entire building, total square footage for all units, total number of units, total equity flowing into the project, total LIHTC equity, and total HRTC equity. In order to standardize findings across the multi-case study, the unit of measurement was set at the per square foot level for all projects.

From this data, the following measures were calculated for the purpose of comparison (all measures use net square footage unless otherwise noted): replacement cost per square foot, total equity per square foot, total LIHTC equity per square foot, total HRTC equity net square foot, percent increase between total unit square footage and total net square footage, total equity cost coverage ratio, total LIHTC equity cost coverage ratio, total HRTC equity cost coverage ratio, cost to equity gap ratio, and the difference between the actual replacement cost per square foot and the amount of total equity per square foot. Comparisons between data analysis points were conducted at the pair level and recorded. These pair records were then averaged together across data pairings for an overall measure of data comparison. Data for all projects was supplied by Community Affordable Housing Equity Corporation and the North Carolina Housing Finance Agency.

Findings and Interpretations

Before the actual cost-coverage abilities of the Rehab Credit can be addressed, this study must first explore the actual cost of the use of historically significant buildings for affordable housing. After discussing the findings concerning comparative adaptive reuse cost, the study will explore the total amount of equity provided to the subject adaptive reuse projects by the combined tax credit programs as compared to the total equity provided to the paired new construction

properties. The study will then progress into a more detailed look at the equity breakdown and cost coverage ratios between the Low Income Housing Tax Credit and the Historic Rehabilitation Tax Credit programs, exploring how the relationship between the two practically affects the feasibility of the adaptive reuse projects isolated in this study. Interpretations of the study findings will conclude each sub-section. While each Findings section contains any pertinent tables, a detailed matrix of all project-level data can be found in the Appendix.

Finding: Cost

This study reveals that adaptive reuse projects are indeed more costly than comparable new construction projects, as was postulated by the research question and supported by the literature review. For each project data pair, this study isolated both the total replacement cost figure and total net square footage for each building and then divided the cost figure by the square footage to determine the replacement cost per square foot. By comparing replacement costs on the per-square-foot level, a cost differential percentage was derived for each project data pair. These results were then averaged across the four pairs to establish an overall difference in cost between the adaptive reuse and new construction projects studied here. Refer to Table 3.4 below.

TABLE 3.4

Pair	Project Names	Total Replacement Cost	Total Net Square Feet	Replacement Cost/Sq. Ft.	Cost Differential %
PAIR A					
	Grainger	4,988,968	60,790	82.07	-15.3%
	Weatherstone	3,047,909	31,460	96.88	
PAIR B					
	Dallas	3,630,608	37,600	96.56	5.9%
	Forest Glen	2,688,274	29,488	91.17	
PAIR C					
	Randleman	3,586,626	38,454	93.27	19.2%
	Mountain View	3,764,900	48,130	78.22	
PAIR D					
	Cleveland	3,336,961	38,073	87.65	-2%
	Cedar Spring	1,984,401	22,184	89.45	
AVERAGE COST DIFFERENTIAL PERCENTAGE					7.8%

As Table 3.4 shows, when compared at a per-square-foot level, only two of the four pairs (Pairs B and C) show a positive increase of adaptive reuse cost over that of the paired new construction project. The other two pairs, Pairs A and D, actually reveal that for these particular compared projects the adaptive reuse properties actually cost less to develop than the new construction deals. Despite the cost dichotomy within the data set, Table 3.4 does show that averaged across the pairs, the mean replacement cost per square foot of an adaptive reuse project is actually 7.8 percent higher than that of the comparable new construction.

Interpretation: Cost

While this study demonstrates that adaptive reuse projects are on average 7.8 percent more expensive than new construction (according to the data set studied), this number is significantly less than the 15 percent cost overage projected by Peter Werwath of the Enterprise Foundation, now Enterprise Community Partners (1998). This result is likely due to the small sample size of projects used in this study and the fact that three of the four adaptive reuse projects were developed by the same North Carolina-based development company, which is a recognized industry leader across this region in this type of historic affordable development. The company's experience, technical expertise, and affiliated general contracting and management services likely account for this lesser average cost.

However, it is important to note in regard to cost that with all of their experience and expertise, this company was only able to bring adaptive reuse cost down to 7.8 percent more than new construction. So it stands to reason that if another developer with much less experience in this field was to undertake such a development, her costs likely would be much more in line with the 15 percent estimated by Enterprise. If this was the case, the HRTC would not be sufficient to cover the increased cost of an adaptive reuse project since the average cost coverage by the Rehab Credit in this study was only approximately 13 percent. Thus, due to the limited scope of this study and for

the aforementioned reasons, this particular cost percentage of 7.8 percent found here should not be generalized to other adaptive reuse affordable housing projects in this state and region. However, the following broad conclusion can be drawn from this study and generalized to other similar projects state- and region-wide: on average, adaptive reuse project costs exceed the development costs related to new construction projects.

Finding: Total Equity

As with the cost analysis above, this study compared total equity amounts for adaptive reuse projects and new construction properties on the per square foot basis. For each project data pair, the total amounts of equity flowing from both the Low Income Housing Tax Credit and the Historic Rehabilitation Tax Credit programs were added together to determine the total amount of new equity from tax credit syndication. This figure was then divided by the total net square footage for each building, resulting in the total equity per square foot, which was subsequently compared within and across pairs. The average amount of equity per square foot is also shown in Table 3.5.

TABLE 3.5

Pair	Project Names	Total Tax Credit Equity	Total Net Square Feet	Total Equity/Sq. Ft.	Equity Differential %
PAIR A					
	Grainger	4,368,891	60,790	71.87	-3.4%
	Weatherstone	2,339,473	31,460	74.36	
PAIR B					
	Dallas	2,897,073	37,600	77.05	22.4%
	Forest Glen	1,855,849	29,488	62.94	
PAIR C					
	Randleman	2,709,322	38,454	70.46	46.3%
	Mountain View	2,317,707	48,130	48.16	
PAIR D					
	Cleveland	2,545,869	38,073	66.87	22.9%
	Cedar Spring	1,206,667	22,184	54.39	
AVERAGES				65.76	22.05%

Table 3.5 reveals that in general, adaptive reuse projects receive a higher overall amount of equity per square foot. Though Pair A shows 3.4 percent less equity for the adaptive reuse project than the new construction, Pairs B, C, and D all demonstrate significantly higher equity amount per square foot for the historic properties. On average, adaptive reuse projects receive 22.05 percent more total equity per net square foot from tax credit programs than do new construction projects.

Table 3.6 shows for each project pair how much cost is covered by the total amount of equity provided (all on the per square foot basis). The total cost coverage ratio of project equity is derived by dividing total equity per net square foot by total replacement cost per net square foot. In every pair, the adaptive reuse project experiences greater cost coverage than does the new construction. The adaptive reuse projects average 79.8 percent cost coverage by total equity and experience only a mean 20.2 percent gap that must be covered by other funding sources, which is likely to be debt or a deferred developer's fee. The equity going to the new construction projects covers an average of 67.05 percent of the cost per square foot, leaving 32.95 percent of the cost to be funded by debt and other sources. Adaptive reuse projects experience 12.8 percent greater cost coverage by tax credit equity than do new construction projects.

TABLE 3.6

Pair	Project Names	Total Equity / Sq. Ft.	Total Replacement Cost/ Sq. Ft.	Total Equity Cost Coverage Ratio	Total Cost Gap
PAIR A					
	Grainger	71.87	82.07	87.6%	12.4%
	Weatherstone	74.36	96.88	76.8%	23.2%
PAIR B					
	Dallas	77.05	96.56	79.8%	20.2%
	Forest Glen	62.94	91.17	69.0%	31.0%
PAIR C					
	Randleman	70.46	93.27	75.5%	24.5%
	Mountain View	48.16	78.22	61.6%	38.4%
PAIR D					
	Cleveland	66.87	87.65	76.3%	23.7%
	Cedar Spring	54.39	89.45	60.8%	39.2%
AVERAGES					
Adaptive Reuse				79.8%	20.2%
New Construction				67.0%	33.0%
TOTAL				12.8%	12.8%

Interpretation: Total Equity

This total equity analysis at the per square foot level of the subject data pairs reveals that adaptive reuse projects do receive more equity from tax credit programs than do new construction properties. Thus, the crux of the research question can be addressed by comparing the cost and equity coverage averages for the adaptive reuse projects. With an average boost in equity of 12.8 percent and an average increase in cost of 7.8 percent, the adaptive reuse projects in this study obviously receive enough equity to cover the increased cost of development associated with this type of project. According to the findings of this study, the subject adaptive reuse projects receive an additional 5 percent of equity coverage over and above the actual cost increase of adaptive reuse when compared to new construction. Though the research question has been answered in part by the discovery that the increased cost of an adaptive reuse project is indeed covered by additional infused equity, a determination must be made of which tax credit program provides this increased

equity so that the sufficiency of the Rehab Credit can be appropriately evaluated. This particular inquiry will be addressed in the two *Findings* sections to follow.

The subject adaptive reuse projects in this study experience better cost coverage by the amount of equity provided than do the new construction properties. As a result, the adaptive reuse projects experience a smaller gap between the cost per square foot and the amount of equity per square foot than is seen with the comparable new construction projects. This means that the new construction projects will have to look for additional funding through debt or other sources in order to cover their cost gap than must the adaptive reuse projects. As discussed in the literature review, the greater the amount of non-equity sources used to finance the project, the greater the cost that must be passed on to project tenants in the form of rent. Thus, a smaller gap resulting from the application of equity to the project translates to greater affordability for income-eligible residents.

Greater affordability in terms of monthly rents can help projects meet and even exceed the income targets set by the Low Income Housing Tax Credit program. This smaller gap could allow adaptive reuse projects to serve a wider population with some of the most pressing needs, which are those with incomes well below the LIHTC requirement of targeting households with incomes at or below 60 percent of the area median income. This ability to target even lower wealth families could address one of the main criticisms levied against adaptive reuse properties—that the rents in these developments are far above what those with the most dire housing needs can actually afford.

Finding: Low Income Housing Tax Credit Equity

Both the adaptive reuse and the new construction projects receive equity infusions from the Low Income Housing Tax Credit program. For each project pair, the total LIHTC equity figure (both federal and state level) was divided by the total net square footage for each building to determine the total amount of Housing Credit per square foot. Then the LIHTC per square foot figure was divided by total replacement cost per square foot. Across all pairs, the new construction

projects receive a greater percentage of equity from the LIHTC program than do the adaptive reuse projects. New construction projects average \$11.96 more in LIHTC equity per square foot than do adaptive reuse projects. The average amount of equity cost coverage by this particular tax credit subsidy is 67.0 percent for new construction projects and 53.5 percent for adaptive reuse properties. This is an average difference of 13.5 percent between the two properties types seen in Table 3.7.

TABLE 3.7

Pair	Project Names	Total LIHTC Equity	Total Net Square Footage	Total LIHTC / Sq. Ft.	Total LIHTC Cost Coverage
PAIR A					
	Grainger	2,991,093	60,790	49.20	60.0%
	Weatherstone	2,339,473	31,460	74.36	76.8%
PAIR B					
	Dallas	1,989,107	37,600	52.90	54.8%
	Forest Glen	1,855,849	29,488	62.94	69.0%
PAIR C					
	Randleman	1,766,528	38,454	45.94	49.3%
	Mountain View	2,317,707	48,130	48.16	61.6%
PAIR D					
	Cleveland	1,674,202	38,073	43.97	50.2%
	Cedar Spring	1,206,667	22,184	54.39	60.8%
AVERAGES					
Adaptive Reuse				48.00	53.5%
New Construction				59.96	67.0%
TOTAL				-11.96	-13.5%

Interpretation: Low Income Housing Tax Credit Equity

The 13.5 percent average cost coverage reduction in LIHTC equity for adaptive reuse projects can be explained by the mandatory reduction in the LIHTC basis by the amount of Rehab Credit equity. This reduction is required whenever a project is the beneficiary of both Low Income Housing Tax Credits and Historic Rehabilitation Tax Credits, which applies only to the adaptive reuse projects in this study. To address the research question, obviously the increased equity for adaptive reuse shown in the previous analysis does not result from the Low Income Housing Tax

Credit. In fact, as can be seen here, adaptive reuse projects are actually penalized by the LIHTC program through the basis reduction, whereas this is the only tax credit equity that the new construction projects are eligible to receive. Consequently, the increased tax credit equity received by the adaptive reuse projects must likely originate in the Historic Rehab Credit program. The next section will address this postulation.

Finding: Historic Rehabilitation Tax Credit Equity

As was postulated above, the Rehab Credit does indeed provide the extra infusion of tax credit equity for the adaptive reuse projects in this study. For each project data pair, the total equity resulting from the Historic Rehabilitation Tax Credit was divided by the total number of square feet in each building to derive the total amount of Rehab Credit per square foot for the eligible adaptive reuse projects. The total HRTC cost coverage ratio was obtained by dividing the total HRTC per square foot by the total replacement cost per square foot. In each pair, the Rehab Credit program provides at least an additional 25 percent of equity coverage, with an average of 26.3 percent. It also supplies \$23.56 on average in additional equity per square foot to these projects, as Table 3.8 shows.

TABLE 3.8

Pair	Project Names	Total HRTC Equity	Total Net Square Footage	Total HRTC / Sq. Ft.	Total HRTC Cost Coverage
PAIR A					
	Grainger	1,377,799	60,790	22.67	27.6%
	Weatherstone	-	31,460	-	-
PAIR B					
	Dallas	907,966	37,600	24.15	25.0%
	Forest Glen	-	29,488	-	-
PAIR C					
	Randleman	942,794	38,454	24.52	26.3%
	Mountain View	-	48,130	-	-
PAIR D					
	Cleveland	871,667	38,073	22.90	26.1%
	Cedar Spring	-	22,184	-	-
AVERAGES					
Adaptive Reuse				23.56	26.3%

Interpretation: Historic Rehabilitation Tax Credit Equity

Though the Rehab Credit provides an average of 26.3 percent equity coverage per square foot for the adaptive reuse project, the basis reduction required by the Low Income Housing Tax Credit cuts into the actual cost coverage capacity of this historic-only tax credit by 13.5 percent. The effect of the basis reduction can be seen in Table 3.7. This leaves only 12.8 percent of the Rehab Credit remaining to cover the increased cost associated with adaptive reuse projects. However, in this study the adaptive reuse development cost increases by only 7.8 percent over that of the comparable new construction projects, so the additional 12.8 percent infusion of tax credit equity covers the entire increased cost percentage leaving an additional 5 percent to be applied to the cost-coverage gap discussed in the section above.

Summary of Findings and Interpretations

The central finding of this study is that the Historic Rehabilitation Tax Credit provides enough equity to cover the increased costs associated with the production of affordable housing using historically significant buildings. While adaptive reuse projects require on average an additional 7.8 percent in development cost expenditures than do new construction projects, they receive 13.5 percent less in LIHTC equity coverage than comparable new construction deals. However, this deficit in LIHTC equity is balanced out by an additional 26.3 percent in cost coverage from equity provided by the Historic Rehabilitation Tax Credit program. This amount not only compensates for the 13.5 percent LIHTC basis reduction required for adaptive reuse deals, it covers the entirety of the 7.8 percent development cost increase while provided an additional 5 percent equity to be applied toward overall project costs. The added equity helps to reduce the remaining cost coverage gap to just over 20 percent for the adaptive reuse projects in this study. In comparison, the new construction projects in this study experience an average cost coverage gap of

nearly 33 percent. Any cost not covered by equity must be covered through alternative funding sources, generally debt financing or a deferred developer fee.

As discussed in this study, the greater the debt used to finance a project, the greater the development costs that must be passed on to residents in the form of rent. Thus, project feasibility and affordability are directly related to the overall amount of equity available to the development. By establishing that adaptive reuse projects do indeed receive enough equity from the HRTC program to cover their increased development costs, this study demonstrates that adaptive reuse projects are a financially viable, socially responsible, and generally desirable means of addressing the need to affordable housing within our communities. Further, if increasing the number of affordable housing units available to low- and moderate-income households is a policy priority in North Carolina, then the HRTC is an efficient and worthy use of public dollars since it helps to meet this objective.

The next section discusses the main policy proposals set forth in the Community Restoration and Revitalization Act and then considers their potential impacts on the feasibility of adaptive reuse projects utilized for affordable housing production.

V. CURRENT LEGISLATION TO CHANGE THE HRTC PROGRAM

Proposed Changes to HRTC Program in Pending Federal Legislation

Over the past three years, advocates of preservation and proponents of affordable housing have urged Congress to enact a piece of legislation known as the Community Restoration and Revitalization Act (CRRRA), which would amend several sections of the Internal Revenue Code governing the federal Rehabilitation Tax Credit. This legislation aims to render the partnership between the Rehabilitation Credit and the Low Income Housing Tax Credit more advantageous and user-friendly for non-profit and for-profit developers alike by addressing recognized barriers to adaptive reuse. While this legislative action has not been met with success in previous years, proponents are optimistic that the reintroduction of this Act in February 2007 in the both the House and the Senate will lead to passage before the close of the second session of the 110th Congress (Lessons, 2007).

The Community Restoration and Revitalization Act of 2007 sets forth a number of distinct policy provisions that amend portions of the Internal Revenue Code of 1986 dealing with the federal Rehabilitation Tax Credit and Low Income Housing Tax Credit (S.584, 2007). One intention of this legislation is to more closely align the application of this historic rehabilitation tax credit program with its mission of spurring economic reinvestment and community revitalization through the reuse of underutilized or neglected buildings. This legislation also proposes several changes to current policy that would work to simplify the coupling of the Rehab Tax Credit with the Low Income Housing Tax Credit, thereby furthering the production of affordable housing (National Trust, 2007; Lally, 2005).

The main policy provisions and their potential impacts are as follows:

Policy Provision 1: Reduction of Basis Adjustment

In order to boost the feasibility of certain development projects targeting low income areas, the IRS allows the combination of specific tax credit programs. When the federal Rehabilitation Tax Credit is combined with the New Markets Tax Credit, for example, the developing entity is entitled to the full number of credits offered by each program according to their respective stipulations (Lessons, 2007). However, when the Rehab Credit and the Low Income Housing Tax Credit are used together, current tax law stipulates that the LIHTC basis must be reduced by the full dollar-for-dollar amount of historic tax credits the project is eligible to receive. This weakens the overall impact of the LIHTC on the financial feasibility of affordable housing development by lessening the number of housing tax credits a project can receive. Consequently, this condition may actually create a serious disincentive for developers of affordable rental housing to use historic buildings for this purpose (Lally, 2005; National Trust, 2007).

In order to better maximize the impact of both tax credit programs on affordable housing production, this particular policy provision aims to decrease the amount by which the LIHTC basis must be reduced when Rehab Credits are also involved, thereby increasing the number of LIHTCs available to the project (Lally, 2007). This would potentially yield a greater equity investment from the syndication of these tax credits, lessening the costs that the developer must finance through debt and consequently pass on to tenants in the form of rent. The expanded number of available tax credits could ultimately translate into greater affordability for low and moderate income residents.

Policy Provision 2: Increased Amount of Rehabilitation Credit for Certain Small Projects

As currently structured under the federal Rehabilitation Tax Credit program, all projects involving historically significant properties are only eligible for the “20 percent” credit, which is calculated based on the project’s qualified rehabilitation expenditures. The transaction costs, passive

loss limitations, and at-risk rules associated with the Rehab Credit, as well as the time involved in receiving all needed approvals for utilization of the credit, often preclude smaller developers from participating. Conversely, larger deals, which are better able to absorb these additional costs, can more easily take advantage of this available federal subsidy (Lessons, 2007; Lally, 2005).

With this disparity in mind, this policy provision of the Community Restoration and Revitalization Act proposes to raise the credit rate from the current 20 percent for all projects to a new credit rate of 40 percent for only those projects with qualified rehabilitation costs under \$2,000,000 dollars. Projects eligible for this increased credit rate are defined as “small projects” by this legislation. However, only the first \$1,000,000 of such projects would be eligible for the 40 percent credit rate (S.584, 2007). This provision could open up more moderately-sized adaptive reuse projects to the possibility of affordable housing development.

Policy Provision 3: 10 percent Credit Permitted for Residential Purposes

In addition to the 20 percent credit for historically significant buildings 50 years old or older, the federal Rehabilitation Tax Credit program includes a lesser credit of 10 percent for any non-historic building placed-in-service prior to 1936. Unlike the 20 percent credit, the 10 percent credit does not require the eligible building to comply with the Secretary of Interior’s Standards for Rehabilitation, but it cannot be used for residential use and must maintain commercial status (National Register, 2007). The Community Restoration and Revitalization Act would lift this ban on residential use for non-historic, pre-1936 building. This one change—permitting buildings eligible for the 10 percent credit to be used for residential purposes—would dramatically increase the number of properties that could be developed for affordable housing (Leith-Tetrault, 2007). By using these non-historic structures, housing could be developed in a manner less costly and less time intensive than that of a full redevelopment of a property with historic significance. This particular

policy, especially when coupled with the next, could have a significant impact on the production of affordable rental housing by expanding the number of properties eligible for both the federal Rehabilitation Tax Credit and the Low Income Housing Tax Credit (Lessons, 2007).

Policy Provision 4: Augmented Placed-In-Service Date for 10 Percent Credit

As noted above, the federal Rehabilitation Tax Credit program offers a lesser credit of 10 percent for any non-historic building placed-in-service “before 1936,” as expressly stipulated in the Internal Revenue Code of 1986 (S.584, 2007). At the time of its enactment, the stipulation of “1936” properly represented the desired 50 year building age cutoff date for use of this credit by developers of non-historic buildings. However, twenty years after its passage, continuing to use this specific date is neither an accurate nor an efficient policy provision (Lessons, 2007). Hence, this legislation would strike “1936” from IRC and replace it instead with language allowing non-historic buildings placed-in-service “no less than 50 years prior to the year in which qualified rehabilitation expenditures are taken into account” to be eligible for this 10 percent credit (Update, 2007). This simple modification of the language used in the Internal Revenue Code to quantify the age of a non-historic building would greatly increase the number of properties eligible for rehabilitation under the 10 percent credit (Lessons, 2007).

Policy Provision 5: Enhanced Rehabilitation Tax Credit in High-Cost or Disinvested Areas

At present, the Low Income Housing Tax Credit provides a “basis boost” of 130 percent when a development project receiving said credits is located in a Qualified Census Tract (QCT) or a Difficult to Develop Area (DDA). These Difficult to Develop Areas are recognized by the US Department of Housing and Urban Development as areas with “high construction, land, and utility costs relative to its Area Median Gross Income” (Lessons, 2007). This extra boost in eligible basis

creates a strong incentive for developers to locate projects in these areas since it automatically increases the number of tax credits that projects are eligible to receive. This can significantly impact the affordability of a housing development.

Despite the benefits gained from a basis boost, the federal Rehabilitation Tax Credit provides no such incentive for locating a project in an area of greater poverty or higher costs, even when it is coupled with the Low Income Housing Tax Credit in such an area (Lessons, 2007). Thus, this policy provision would amend the Rehab Tax Credit program to include a 130 percent boost of qualified rehabilitation expenditures when an eligible project is located within either a Difficult to Develop Area or a Qualified Census Tract (Update 2007). This modification to the HRTC program would better target those neighborhoods with the greatest identified need for revitalization by spurring housing and economic investment while further strengthening the partnership between the federal Rehabilitation and Low Income Housing Tax Credit programs.

Policy Provision 6: Eliminated Recapture Clause for Condo Conversion

Current policy prohibits the use of Rehab Credits for condominium development projects. The Internal Revenue Code of 1986 also includes a recapture clause where all Rehab Credits must be repaid in full by the developer in the case where a project developed using these credits is sold or converted into condominiums within five years of receiving the credits. (Update, 2007; Lessons, 2007). Under the Community Restoration and Reinvestment Act, this policy provision would eliminate the recapture clause, which has “significantly limited the credit’s use” (Update, 2007). Supporters of the elimination of this clause claim that the “condo provision” is a vital economic development tool, which could spur a significant increase in downtown redevelopment and rehabilitation. One proponent even claimed that this policy of allowing the credit to be used for

condominium development could result in “much needed workforce housing within the urban core” (Lessons, 2007).

Potential Impacts and Implications of the Community Restoration and Revitalization Act

Despite the shortcomings associated with the combination of the Low Income Housing Tax Credit and Historic Rehabilitation Tax Credit programs, the Community Restoration and Revitalization Act could help improve this tax credit partnership. Policy provisions included in the legislation could work to increase affordable housing production using historic preservation. Changes to the 10 percent credit would mean, first of all, that residential uses would be permitted and secondly, many more buildings would be available for conversion to affordable housing. Developers could feasibly produce affordable housing projects using historically significant buildings of a smaller scale with a “small projects” credit rate increase (Lally, 2005).

Since many historic buildings appropriate for adaptive reuse for housing purposes are located in low income neighborhoods (or Qualified Census Tracts) and areas with higher development costs (or Difficult to Develop Areas), this legislation would create a stronger incentive for developers to site affordable housing development projects there. This provision would not only provide needed affordable housing units, but it could also serve as a catalyst for economic reinvestment for which some of these areas have been searching. Such reinvestment of capital and interest in areas that have been largely neglected or forgotten is certainly an important social goal of this tax credit partnership (Lessons, 2007 ; Lally, 2005).

Further, with the reduced basis adjustment in place, adaptive reuse projects could likely rely on fewer grants and subsidies to fill in financing gaps since a greater number of credits would be available to the project through the Low Income Housing Tax Credit. The elimination of the basis reduction would impact adaptive reuse for affordable housing projects of all sizes and could have a

tangible effect in reducing the rental rates paid by tenants. Of all the policy changes proposed, this broad provision could have perhaps the most widespread and immediate impact on the use of adaptive reuse projects for affordable housing production. This modification could significantly and immediately increase the number of housing units produced using both the LIHTC and the HRTC from the measly seven percent recorded in 2003 to a figure much higher and more representative of the real impact adaptive reuse projects have on the surrounding community (Lally, 2005).

However, it must be noted that as beneficial as this legislation purports itself to be, several potential unintended consequences could result from the enactment of this legislation. The reduction of the basis adjustment could lead to a more competitive LIHTC application process since adaptive reuse projects would be eligible to receive a greater number of credits. Ultimately, fewer projects could be awarded low income housing tax credits. By removing the condominium recapture clause, this legislation could easily steer developers away from the complicated path of affordable housing production since they could now use the Rehab Credit to turn historically-significant buildings into market-rate condo from the inception of the project. Instead of further spurring the development of workforce housing as the proponent quoted above believes, the elimination of this provision could instead work to further exclude low and moderate income people from developing downtowns and residential opportunities near job centers. Yet despite these shortcomings, many of these policy provisions could plausibly pad a developer's bottom line enough to further reduce the costs passed on to residents in the form of rent. This cost reduction could potentially lead to better targeting of the poorest of the poor, who are often left out of LIHTC and adaptive reuse development especially where rent may be closer to the 60 percent AMI threshold.

When considering these potential policy changes in light of the case study just discussed, several interesting implications emerge. In the case study above, the equity flowing from the Historic Rehabilitation Tax Credit was sufficient to cover the average 7.8 percent cost increase of

the adaptive reuse projects over the cost of the comparable new construction deals. If this proposed legislation had been in place at the time of these deals and the basis reduction was eliminated, these projects would have shown even greater feasibility. Such a basis reduction elimination could have allowed the developer to cover an even greater percentage of the development cost with equity and thus lessen the debt load carried by the project and reduce any deferred developer fee. This, in turn, would have affected the amount of annual debt service due, lessening the annual costs necessary for project income to cover. With fewer demands on yearly property cash flows, the developer and management team could potentially lower rents and make the apartments affordable to an even greater percentage of low-income households.

In the case study above, the historic tax credit actually provided more equity than was necessary to cover the additional costs of historic preservation. By eliminating the basis reduction, this legislation would increase the amount of low income housing tax credits available to the adaptive reuse project. When combined with the Rehab Credits and syndicated at the current market price, this amount of incoming equity could allow the developer of an adaptive reuse project to cover much more of the project cost than could a similarly situated developer of a new construction affordable housing development. This very positive effect on adaptive reuse project feasibility could be viewed by some as political favoritism of historic preservation over new construction as a solution for affordable housing.

On the other hand, if “smart growth” sprawl containment or the preservation of rural undeveloped land were policy goals, then increasing the incentive to develop historically-significant buildings for affordable rental housing production through the elimination of the basis reduction could help to achieve this goal by making redevelopment much more feasible. If, unlike the case study discussed here, the cost of adaptive reuse did indeed turn out to be around 15 percent, as purported by Peter Werwath of Enterprise Community Partners, then the roughly 13 percent

additional equity provided by the historic credit would not be enough to cover the increased cost associated with adaptive reuse (1998). In that case, the policy changes proposed in this legislation would allow an adaptive reuse project access to a greater number of credits and put it on more equal footing with a new construction project.

VII. CONCLUSIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Conclusions and Implications of the Study

So, why does this study matter to the field of planning and those within that field concerned with affordable housing? Advocates of and planners with an affinity for historic preservation are often quick to promote the merits of the adaptive reuse of historic buildings as an approach to affordable housing. From this study, we can see that it has many social, cultural, community, and economic benefits while efficiently using the public funds at its disposal to cover the increased cost of development and maintain affordability. In fact, the increased cost associated with this type of project is not as significant at 7.8 percent as was originally estimated by the Enterprise Foundation, which figured a 15 percent increase for projects of this type. The proven cost-coverage capacity of this extra layer of subsidy coupled with the benefits to the residents of these developments, the surrounding community, and the local economy eliminates any question as to whether this type of housing should be developed or not. As such, adaptive reuse must be treated as an effective, efficient, and equitable alternative to the standard new construction response to the need for affordable rental housing in this state and the country as a whole.

This study proves that planners can in good conscience promote the use of historically significant buildings for affordable housing of all kinds. Here, the projects were all senior apartments, but adaptive reuse projects for affordable housing can provide healthy and safe places to live for families, those with special needs, and a growing number of working professionals who serve our communities but whose salaries haven't kept pace with escalating housing costs. However, we must keep in mind that though this study suggests that the Historic Rehabilitation Tax Credit more than sufficiently covers the increased cost of adaptive reuse and appears to actually overcompensate for the reduction in the LIHTC basis, these conclusions were drawn from a very limited sample of

four adaptive reuse cases in North Carolina and must therefore be tempered by this and other limitations of the study.

The policy proposals set forth in the Community Restoration and Revitalization Act do address many of the shortcomings of the Historic Rehab Tax Credit and its combination with the Low Income Housing Tax Credit. However, this study alone does not demonstrate a need to increase the equity benefits flowing from this program to adaptive reuse projects since the increased amount of development is already covered by the existing credit program. Yet, as it has been noted already, this unexpectedly low 7.8 percent increase in adaptive reuse costs over those costs associated with new construction can likely be attributed to the expertise of the developer of three of the four adaptive reuse projects used in this study. In this case, the basis reduction elimination and other policy augmentations proposed in the CRRRA could have a significant impact on the feasibility of other adaptive reuse projects with less developer experience where costs could easily exceed the 13 percent additional equity coverage provided by the Rehab credit.

Though this study does not clearly demonstrate a need for the enactment of the CRRRA, it does establish that adaptive reuse projects are in reality more expensive than the comparable new construction deals. This study also clearly answers the research question that the subsidy provided by the Historic Rehabilitation Tax Credit is indeed sufficient to cover the increased cost associated with the development of an adaptive reuse property for affordable housing needs. Indeed, the Historic Rehabilitation Tax Credit is a vital and effective funding source in the development of adaptive reuse projects for affordable housing.

Suggestions for further research

This study raises several questions and issues that could be explored through further research in the future. Issues to consider include the long-term operating costs for adaptive reuse

projects and how a greater historic rehab credit subsidy could reduce operating expenses and therefore lower rents. Researchers could also explore the impact of the federal and state tax credit programs for both the LIHTC and HRTC, focusing on what influence each has and which is a more influential contributor to the feasibility of a project to determine which level of subsidy is most effective. Future researchers could also undertake a quantitative analysis of how the policy changes in the proposed legislation would affect adaptive reuse project feasibility. Because the adaptive reuse properties in this study had more than enough tax credit equity to cover the increased cost of adaptive reuse project development, the application of these proposed changes here would have proven nothing about the legislation's ability to increase feasibility. Instead, it would have only served to increase exponentially the feasibility of these projects to a point beyond what would likely be considered reasonable or fair. In order to really test the efficacy of this legislation on adaptive reuse project feasibility, the study would need to include other adaptive reuse projects with deficient Rehab tax credit equity (in comparison to the percentage of cost increases over new construction). Finally, further research could be conducted on the core factor of adaptive reuse projects and how it can skew development cost when compared to a new construction property, as well as how it can add to rent cost for long-term operations of the historic property.

WORKS CITED

- Cassidy, M. and Ausburn, J. (2003). Market Trends: Cities Provide Incentives to Increase Urban Multifamily Development. *CIRE Magazine*. Certified Commercial Investment Member Institute. Retrieved online 10/15/2007 from: http://www.ciremagazine.com/article.php?article_id=166.
- Cohn, J. (2001). Financing Focus: Federal Historic Tax Credit Aids Adaptive Reuse Developers. *CIRE Magazine*. Certified Commercial Investment Member Institute. Retrieved online 10/15/2007 from: http://www.ciremagazine.com/article.php?article_id=345&format=print
- Community Affordable Housing Equity Corporation. (2000). Grainger Place Investment Committee Report. Acquisitions and Underwriting Department. Raleigh, NC.
- . (2000). Weatherstone Park Investment Committee Report. Acquisitions and Underwriting Department. Raleigh, NC.
- . (2002). Dallas High School Investment Committee Report. Acquisitions and Underwriting Department. Raleigh, NC.
- . (2003). Randleman School Commons Investment Committee Report. Acquisitions and Underwriting Department. Raleigh, NC.
- . (2004). Cleveland High School Investment Committee Report. Acquisitions and Underwriting Department. Raleigh, NC.
- . (2004). Cedar Spring Apartments Investment Committee Report. Acquisitions and Underwriting Department. Raleigh, NC.
- Delvac, W., Escherich, S., and Hartman, B. (1995). Affordable Housing Through Historic Preservation: A Case Study Guide to Combining Tax Credits. US Department of the Interior: National Park Service, Cultural Resources, Preservation Assistance, and the National Trust for Historic Preservation. Washington, DC.
- Escherich, S., Farneth, S. and Judd, B. (1996). Affordable Housing Through Historic Preservation: Tax Credits and the Secretary of the Interior's Standards for Historic Rehabilitation. US Department of the Interior: National Park Service, Cultural Resources, Preservation Assistance, and the National Trust for Historic Preservation. Washington, DC.
- Goody, Clancy and Associates, Robert Chandler, et al. (2005). *Building Type Basics for Housing*. John Wiley and Sons. Hoboken, NJ.
- Gustafson, J. and Walker, J.C. (October 2002). Analysis of State Qualified Allocation Plans for the Low-Income Housing Tax Credit Program. US Department of Housing and Urban Development. Office of Policy Development and Research. Washington, DC.
- HUD. (2005). Affordable Housing Needs 2005: Report to Congress. US Department of Housing and Urban Development. Office of Policy and Research. Washington, DC.

Hunter, P. (2007). Saving Time and Money with Adaptive Reuse Projects. *Design Cost Data Magazine*. Retrieved online 10/15/2007 from: http://www.dcd.com/insights/insights_jf_2007.html

Internal Revenue Service. (2007). Revenue Procedure 2007-66. Washington, DC. Retrieved online 3/11/2008 from: http://www.novoco.com/low_income_housing/resource_files/irs_rulings/revenue_procedures/proc_07-66.pdf.

Joint Center for Housing Studies of Harvard University. (2006) America's Rental Housing: Homes for a Diverse Nation. Cambridge, MA.

Khadduri, J. and Rodda, D. (2004). Making the Best Use of Your LIHTC Dollars: A Planning Paper for State Policy Makers. HUD: Office of Policy Development and Research. Washington, DC.

Lally, P. (March/April 2005). Community Restoration and Revitalization Act: Improving the Rehab Tax Credit. Forum News. 11(4). National Trust for Historic Preservation. Retrieved online 11/30/2007 from: http://www.nationaltrust.org/housing/HR_3159_Forum_News.pdf.

Leith-Tetrault, J. (May 24, 2007). Testimony: Hearing on Tax Incentives for Affordable Housing. Subcommittee on Select Revenue Measures: House Ways and Means Committee.

Listokin, D., Listokin, B. and Lahr, M. (1998). The Contributions of Historic Preservation to Housing and Economic Development. *Housing Policy Debate*. 9(3). Fannie Mae Foundation.

Libson, N. (Winter 2005-2006). The Sad State of Affordable Housing for Older People. *Generations Magazine*. American Association of Retired Persons. Washington, DC.

Mayo, G. (2007-2008). Ongoing Project Consultation. *Community Affordable Housing Equity Corporation*. Raleigh, NC.

McClure, K. (2000). The Low-Income Housing Tax Credit as an Aid to Housing Finance: How Well Has It Worked? *Housing Policy Debate*. 11(1). Fannie Mae Foundation.

Moulton, J. (October 1999). Ten Steps to a Living Downtown. Center on Urban and Metropolitan Policy: The Brookings Institution. Washington, DC.

National Park Service. (ND). Historic Preservation Tax Incentives. US Department of the Interior: National Park Service, Technical Preservation Services. Retrieved online 12/08/2007 from: <http://www.nps.gov/history/hps/tps/tax/brochure1.htm#intro>.

National Trust for Historic Preservation. (2007). The Community Restoration and Revitalization Act: Enhancing the Historic Rehabilitation Tax Credit for Housing and Neighborhood Reinvestment. Washington, DC. Retrieved online 12/3/2007 from: http://www.nationaltrust.org/housing/HR_3159_National_Trust_Summary.pdf.

North Carolina Housing Coalition. (2007). Affordable Housing Primer. Raleigh, NC.

North Carolina Housing Finance Agency. (NO DATE). Facts on the State Housing Credit. Raleigh, NC. Retrieved online 2/28/2008 from: <http://www.nchfa.com/Forms/index.aspx>.

---. (2002). Dallas High School—Final Cost Cert (np). Raleigh, NC.

---. (2002). Forest Glen—Project Summary Exhibit A. Raleigh, NC.

---. (2003). Mountain View—LIHTC Application. Raleigh, NC.

---. (2008). The 2008 Low-Income Housing Tax Credit Qualified Allocation Plan for the State of North Carolina. Retrieved online 4/10/2008 from: <http://www.nchfa.com/Rental/RD2008qap.asp>.

North Carolina State Historic Preservation Office. (2008). North Carolina Historic Preservation State Tax Credits. *Department of Cultural Resources: Office of Archives and History*. Raleigh, NC. Retrieved online 3/11/2008 from: <http://www.hpo.dcr.state.nc.us/credits.htm>.

Novogradac, M., Krabbenschmidt, J. and Thesman, R. (2005). Low Income Housing Tax Credit Handbook, 2005 Edition. Clark Boardman Company and Thompson West.

Oliver, F. (October 20, 2005). A Less Taxing Endeavor: Making Adaptive Reuse Projects Affordable. HousingZone.com. Retrieved online 10/15/2007 from: <http://www.housingzone.com/index.asp?layout=articlePrint&articleID>.

Preservation Action. (2007). Thirty Years of Lessons. Preservation Action: Grassroots Preservation in our Nation's Capital. Washington, DC. Retrieved online 11/30/2007 from: <http://www.preservationaction.org/07lobbying/lessons.htm>.

---. (2007). Legislative Update. Preservation Action: Grassroots Preservation in our Nation's Capital. Washington, DC. Retrieved online 11/30/2007 from: <http://www.preservationaction.org/07lobbying/tax.htm>.

Rombouts, C. (2003). Promoting Preservation: Financing Incentives Help Brokers Restore and Reuse Historic Buildings. *CIRE Magazine*. Certified Commercial Investment Member Institute. Retrieved online 10/15/2007 from: http://www.ciremagazine.com/article.php?article_id=208.

Rypkema, D. (Spring 2004). Historic Preservation and Workforce Housing: The Missed Connection. Preservation North Carolina: Spring 2004 Newsletter. Raleigh, NC.

--. (Spring 2006). Historic Preservation as Sustainable Development. Preservation North Carolina: Spring 2006 Newsletter. Raleigh, NC.

Shelburne, Mark. (2007-2008). Ongoing Project Consultation. *North Carolina Housing Finance Agency*. Raleigh, NC.

Showers, S. (September 2005). The Low Income Housing Credit—Program Expansion and Investment Opportunities. *The Tax Credit Advisor*. Retrieved online 12/9/2007 from: http://goliath.ecnext.com/coms2/gi_0199-4684355/The-low-income-housing-credit.html.

Thaler, M. (October 18, 2002). Adaptive Reuse of Historic Buildings Makes Economic Sense. *The Business Review*. Albany, NY. Retrieved online 10/15/2007 from:
<http://albany.bizjournals.com/albany/stories/2002/10/21/focus4.html>

ULI—the Urban Land Institute. (2006). *Workforce Housing: Innovative Strategies and Best Practices*. Washington, DC.

U.S. Congress. Senate. (2007). The Community Restoration and Revitalization Act. 110th Cong., 1st sess., S. 584. Retrieved online 11/30/2007 from: <http://thomas.loc.gov/cgi-bin/thomas> (using bill number search).

Werwath, P. (1998). Comment on David Listokin, Barbara Listokin, and Michael Lahr's "The Contributions of Historic Preservation to Housing and Economic Development." *Housing Policy Debate*. 9(3). Fannie Mae Foundation.

Yin, R. (2003). *Case Study Research: Design and Methods*, 3rd ed. Sage Publications. Thousand Oaks, CA.

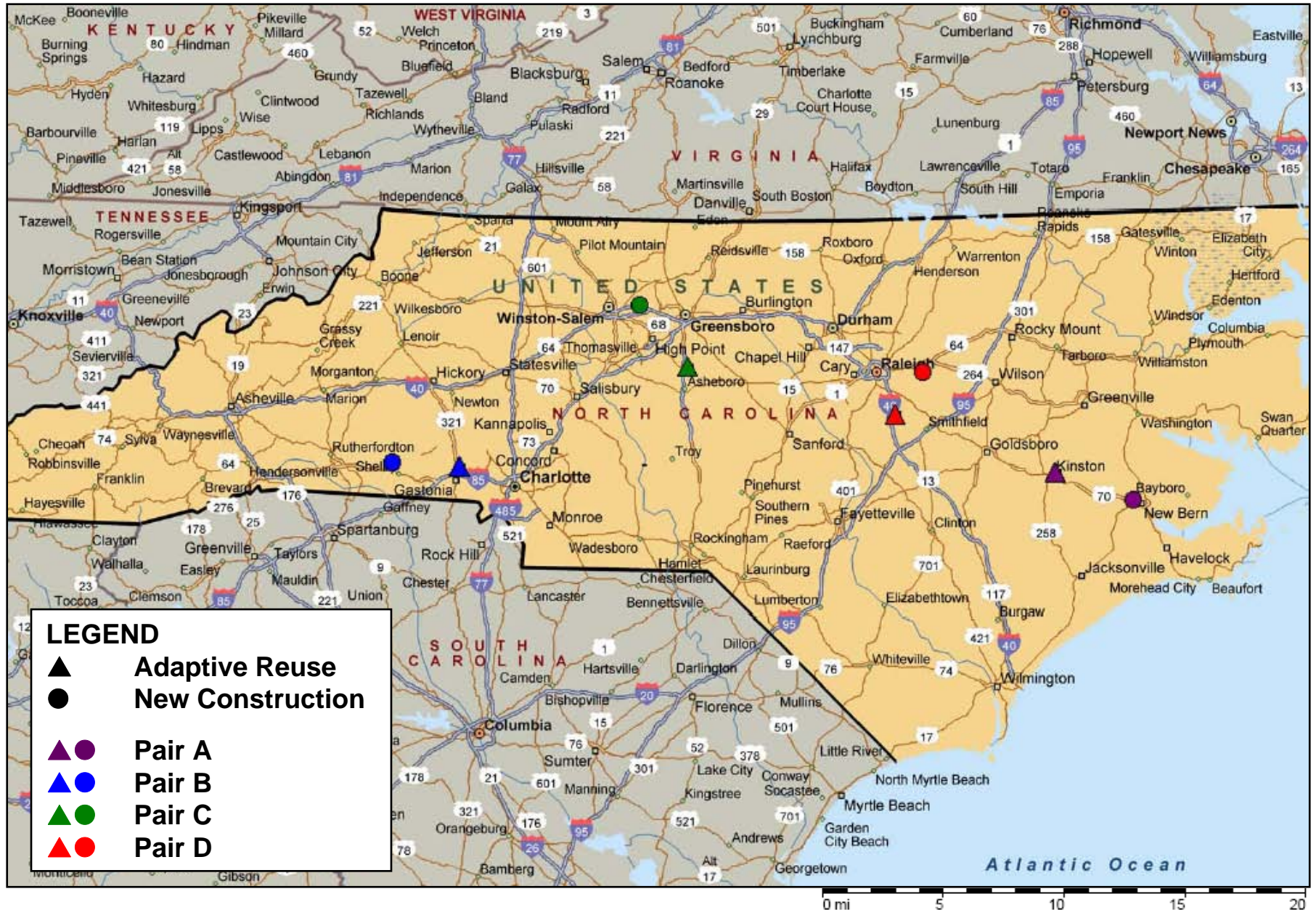
APPENDIX

Case Study Properties Map

Property Pairs Maps

Full Data Matrix for Case Study

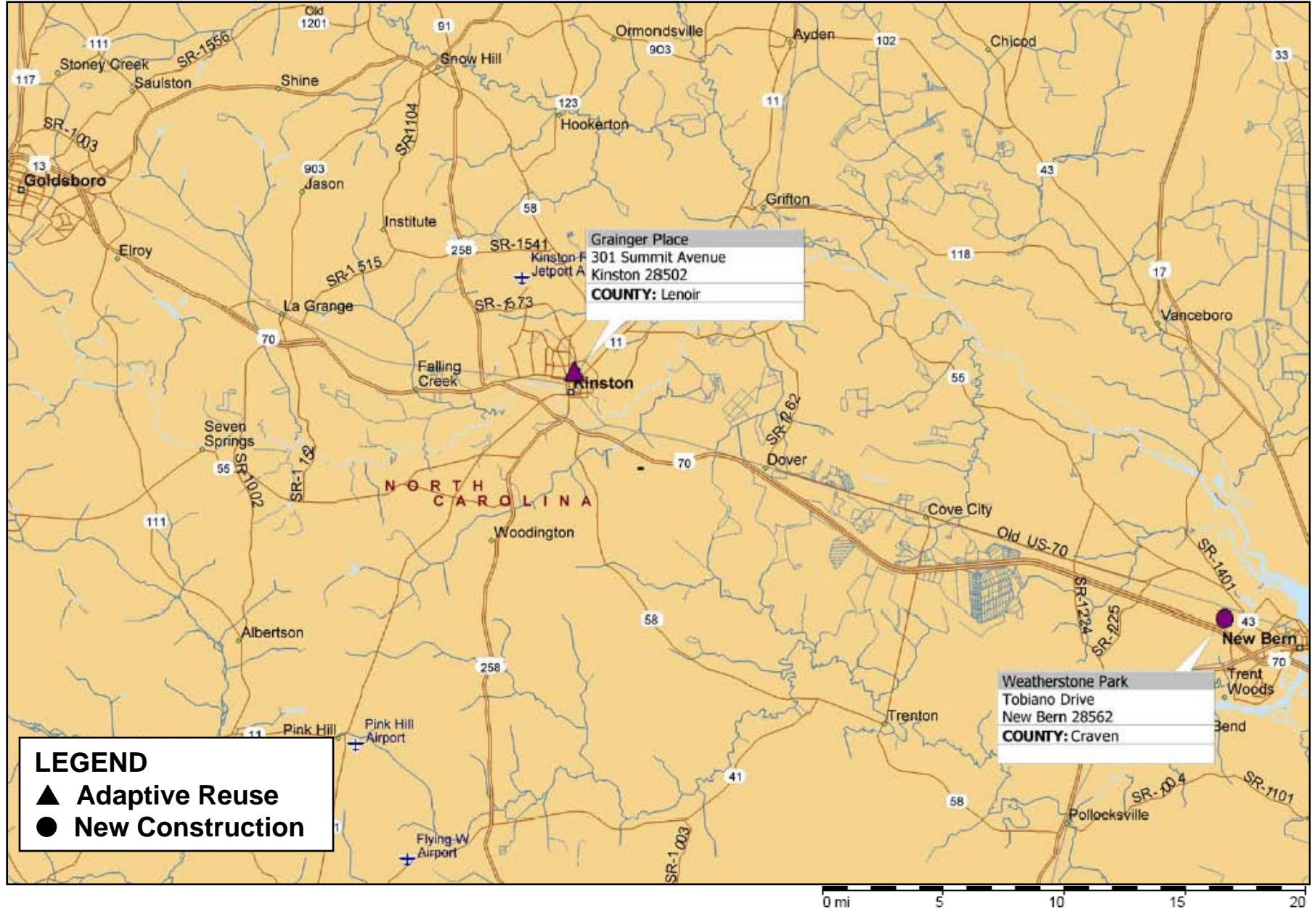
Paired Properties for Comparative Case Study



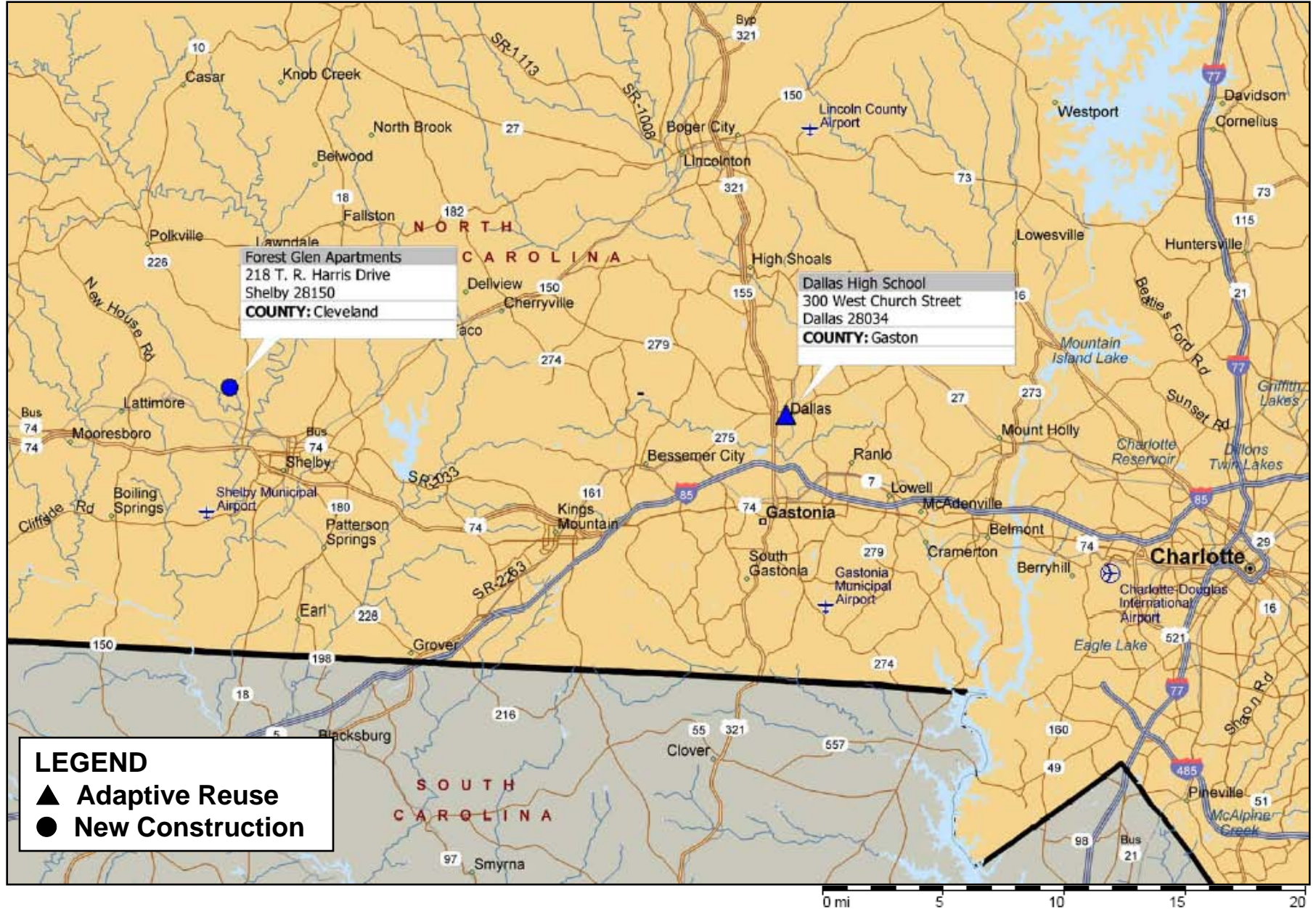
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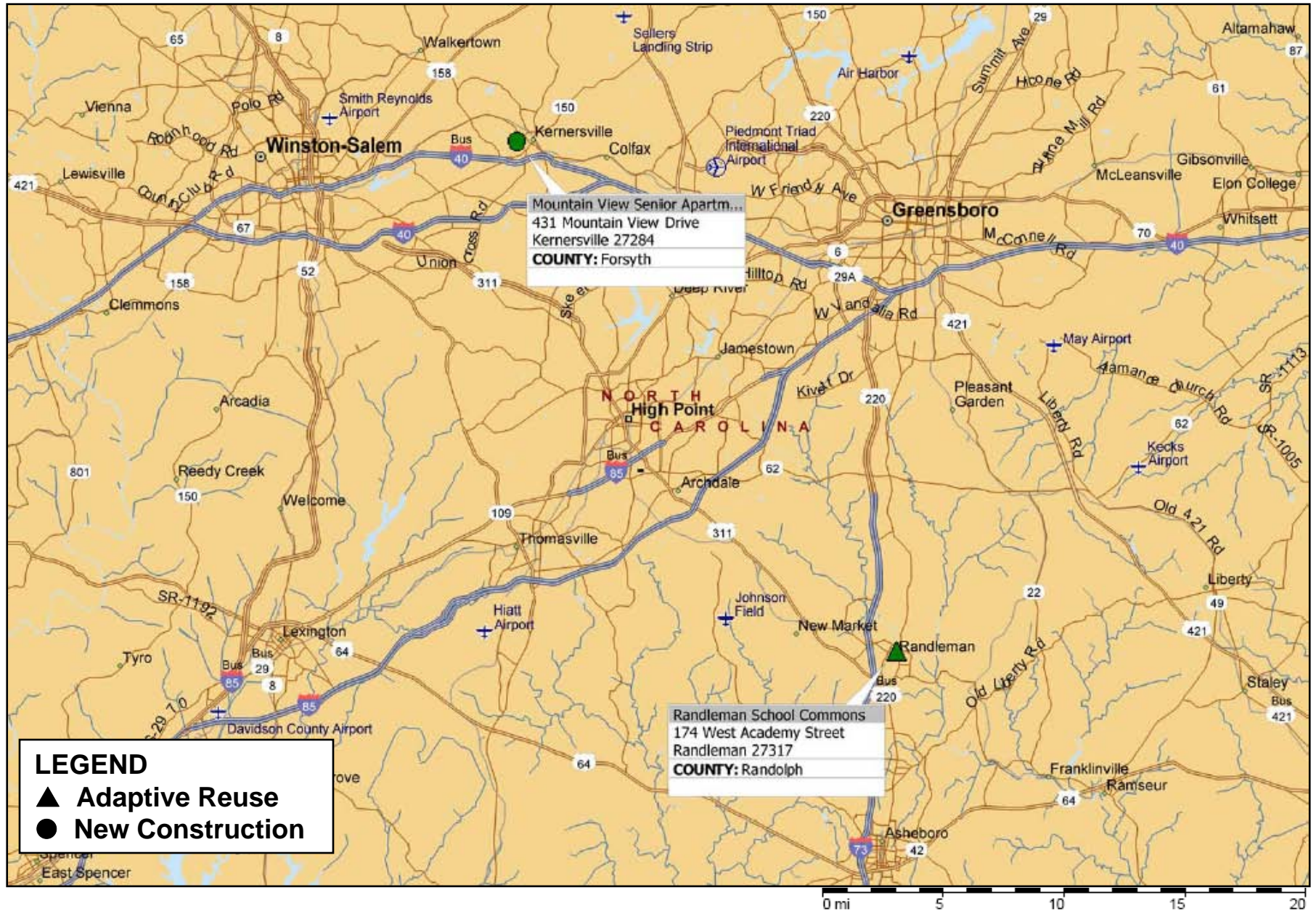
Pair A Properties



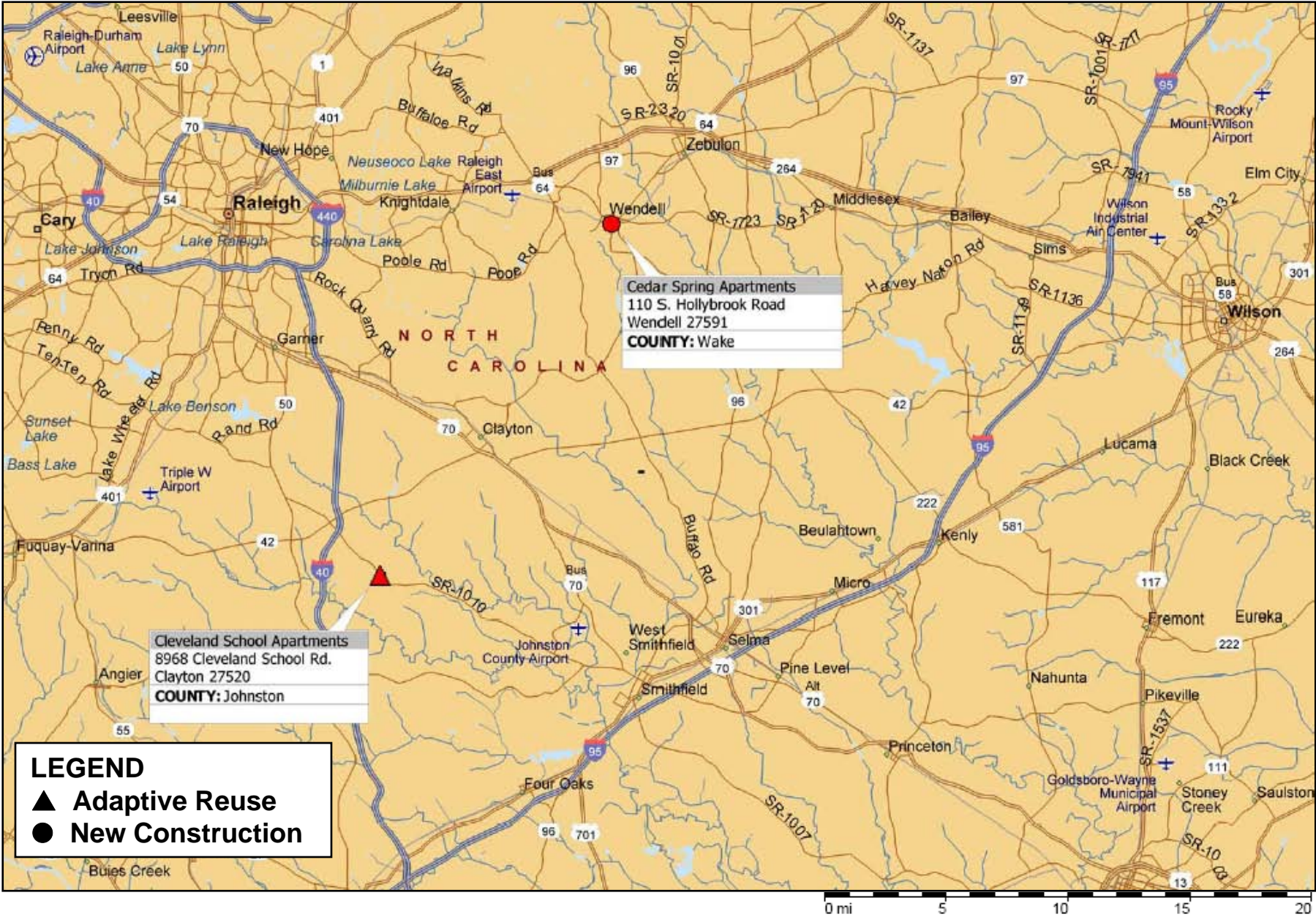
Pair B Properties



Pair C Properties



Pair D Properties



FULL DATA MATRIX FOR CASE STUDY

Organized by Property Pairs

Pair ID	Project	Construction Type	Allocation Year	# Units	Land Cost	Total Unit Square Footage	Total Net Bldg Square Footage	Total Development Cost
A-1	Grainger Place	Adaptive Reuse	2000	56	25,000	46,683	60,790	5,098,043
A-2	Weatherstone Park	New Construction	2000	44	157,348	29,948	31,460	3,293,134
B-1	Dallas High School	Adaptive Reuse	2002	33	77,000	21,750	37,600	3,821,743
B-2	Forest Glen Apartments	New Construction	2002	36	100,000	28,812	29,488	2,934,949
C-1	Randleman School Commons	Adaptive Reuse	2003	30	50,000	22,400	38,454	3,719,254
C-2	Mountain View Senior Apartments	New Construction	2003	50	206,730	38,546	48,130	4,093,927
D-1	Cleveland High School	Adaptive Reuse	2004	25	235,000	18,525	38,073	3,643,815
D-2	Cedar Spring	New Construction	2004	20	65,000	15,150	22,184	2,130,401

Note: Unless otherwise specified, "per square foot" refers to net square footage.

FULL DATA MATRIX FOR CASE STUDY

Organized by Property Pairs

Pair ID	Project	Total Replacement Cost	Total Construction Cost	Construction Cost Per Unit	Construction Cost Per Square Foot	Replacement Cost Per Unit	Replacement Cost Per Unit Square Foot
A-1	Grainger Place	4,988,968	4,156,276	74,219	80	89,088.714	106.869
A-2	Weatherstone Park	3,047,909	3,047,909	69,271	97	69,270.659	101.773
B-1	Dallas High School	3,630,608	2,722,642	82,504	72	110,018.424	166.925
B-2	Forest Glen Apartments	2,688,274	2,688,274	74,674	91	74,674.278	93.304
C-1	Randleman School Commons	3,586,626	2,467,615	82,254	64	119,554.200	160.117
C-2	Mountain View Senior Apartments	3,764,900	3,764,900	75,298	78	75,298.000	97.673
D-1	Cleveland High School	3,336,961	2,347,985	93,919	63	133,478.440	180.133
D-2	Cedar Spring	1,984,401	1,545,802	77,290	70	99,220.050	130.984

Note: Unless otherwise specified, "per square foot" refers to net square footage.

FULL DATA MATRIX FOR CASE STUDY

Organized by Property Pairs

Pair ID	Project	Replacement Cost Per Net Square Foot	Total Equity	Total LIHTC Equity	Fed LIHTC Equity	Price per Fed LIHTC Credit	State LIHTC Equity	Price per State LIHTC Credit	Total HRTC Equity
A-1	Grainger Place	82.069	4,368,891	2,991,093	2,572,623	0.800	418,470	0.520	1,377,799
A-2	Weatherstone Park	96.882	2,339,473	2,339,473	2,023,662	0.800	315,811	0.500	
B-1	Dallas High School	96.559	2,897,073	1,989,107	1,755,094	0.750	234,013	0.400	907,966
B-2	Forest Glen Apartments	91.165	1,855,849	1,855,849	1,626,535	0.810	229,314	0.460	
C-1	Randleman School Commons	93.271	2,709,322	1,766,528	1,766,528	0.820			942,794
C-2	Mountain View Senior Apartments	78.224	2,317,707	2,317,707	2,317,707	0.790			
D-1	Cleveland High School	87.646	2,545,869	1,674,202	1,674,202	0.840			871,667
D-2	Cedar Spring	89.452	1,206,667	1,206,667	1,206,667	0.880			

Note: Unless otherwise specified, "per square foot" refers to net square footage.

FULL DATA MATRIX FOR CASE STUDY

Organized by Property Pairs

Pair ID	Project	Fed HRTC Equity	Price per Fed HRTC Credit	State HRTC Equity	Price per State HRTC Credit	Total Equity per Unit	Total Equity per Square Foot	Total Equity Cost Coverage Ratio	Total LIHTC per Square Foot	Total LIHTC Equity Cost Coverage Ratio
A-1	Grainger Place	832,692	0.950	545,107	0.622	78,015.916	71.869	0.876	49.204	0.600
A-2	Weatherstone Park					53,169.852	74.363	0.768	74.363	0.768
B-1	Dallas High School	563,565	0.900	344,401	0.550	87,790.081	77.050	0.798	52.902	0.548
B-2	Forest Glen Apartments					51,551.361	62.936	0.690	62.936	0.690
C-1	Randleman School Commons	573,071	0.930	369,723	0.600	90,310.724	70.456	0.755	45.939	0.493
C-2	Mountain View Senior Apartments					46,354.140	48.155	0.616	48.155	0.616
D-1	Cleveland High School	536,854	0.930	334,812	0.580	101,834.772	66.868	0.763	43.973	0.502
D-2	Cedar Spring					60,333.366	54.394	0.608	54.394	0.608

Note: Unless otherwise specified, "per square foot" refers to net square footage.

FULL DATA MATRIX FOR CASE STUDY

Organized by Property Pairs

Pair ID	Project	Fed LIHTC per Square Foot	Total Fed LIHTC Equity Cost Coverage Ratio	State LIHTC per Square Foot	Total State LIHTC Equity Cost Coverage Ratio	Total HRTC per Square Foot	Total HRTC Equity Cost Coverage Ratio	Fed HRTC per Square Foot	Total Fed HRTC Equity Cost Coverage Ratio	State HRTC per Square Foot
A-1	Grainger Place	42.320	0.516	6.884	0.084	22.665	0.276	13.698	0.167	8.967
A-2	Weatherstone Park	64.325	0.664	10.038	0.104					
B-1	Dallas High School	46.678	0.483	6.224	0.064	24.148	0.250	14.988	0.155	9.160
B-2	Forest Glen Apartments	55.159	0.605	7.777	0.085					
C-1	Randleman School Commons	45.939	0.493			24.517	0.263	14.903	0.160	9.615
C-2	Mountain View Senior Apartments	48.155	0.616							
D-1	Cleveland High School	43.973	0.502			22.895	0.261	14.101	0.161	8.794
D-2	Cedar Spring	54.394	0.608							

Note: Unless otherwise specified, "per square foot" refers to net square footage.

FULL DATA MATRIX FOR CASE STUDY

Organized by Property Pairs

		Total State HRTC Equity Cost Coverage Ratio	Difference between Cost and Equity per Sq Foot	Cost to Equity Gap Ratio
Pair ID	Project			
A-1	Grainger Place	0.109	10.200	0.124
A-2	Weatherstone Park		22.519	0.232
B-1	Dallas High School	0.095	19.509	0.202
B-2	Forest Glen Apartments		28.229	0.310
C-1	Randleman School Commons	0.103	22.814	0.245
C-2	Mountain View Senior Apartments		30.068	0.384
D-1	Cleveland High School	0.100	20.778	0.237
D-2	Cedar Spring		35.058	0.392

Note: Unless otherwise specified, "per square foot" refers to net square footage.