Carl Vinson **Institute of Government**

The University of Georgia

**CITY OF SAVANNAH AFFORDABLE HOUSING STUDY**

In support of the City of Savannah's effort to address concerns with affordable housing, the "Affordable Housing and Regulatory Reform Task Force" commissioned this study by the Carl Vinson Institute of Government to state a definition of affordable housing as well as identify its supply and location, existing demand, and project future demand within a 10 and 15 year window. This was accomplished through acquisition of data from the City of Savannah Housing Department, Development Services, the Metropolitan Planning Commission (MPC), and the U.S. Census Bureau.

A review of best practices produced a model utilized by the Shimberg Center for Affordable Housing at the University of Florida. This model allows for greater control in projection error by utilizing both extrapolative and ratio techniques to average high and low estimates. It also allows for the inclusion of local area data from the MPC as a means to utilize more precise data. Data was also included from the National Low Income Housing Coalition (NLIHC) as a means to provide a comparative assessment between Savannah and other cities in Georgia.

While definitions of affordability remain debatable based upon the perspectives of developers, housing professionals, and consumers, this study utilizes the standard HUD definition defining cost burden as a person paying more than 30% of their gross earnings on housing costs. According to the NLIHC, the Savannah Metropolitan Statistical Area (MSA) has the third
highest required hourly wage necessary to afford a two-bedroom apartment at the fair market rate. Only Atlanta and Gainesville ranked higher in the state of Georgia.

The area median income for the MSA is approximately $54,800. This is substantially higher than the median household income for Savannah ($29,050), thus, affordability calculations are made specifically on the city of Savannah so as to produce the clearest insight into local housing dynamics.

While the recent significant increase in housing foreclosures indicate a wide spread affordability problem, the populations with the greatest challenge to accessing affordable housing are those characterized as 'Extremely Low Income' and 'Very Low Income'. According to custom tabulations from U.S. Census Bureau data, 'Extremely Low Income' households have an average cost burden of 74% and 'Very Low Income' households have an average cost burden of 48%. This is significantly higher than the 30% standard. Nearly 35% of those households making less than the median income are paying more than 30% of their income on housing. As a result of the consistent demand for housing, as indicated by vacancy rates, the market will most likely continue to place pressure for higher housing rates.

To help off-set this challenge, there are currently 7,233 units available in Savannah where some form of subsidy is applied. However, based upon market conditions, there are still approximately 20,000 households paying more than 30% of their gross income for housing costs. The effects of this need manifest in the built environment as many of these households with lower incomes locate in sub-market areas with lower costs. Eventually, these concentrations of extremely and very low-income households require other public expenditures which compound the social costs associated with a lack of affordable housing. As the City of Savannah and its region continue to grow in population, the demand for housing will expand. The projection model indicates

that by 2018 and 2023 total population in Savannah will increase to approximately 166,534 and 168,983 respectively. However, minus the institutional population, the projection is for approximately 140,000 residents. Thus, the projected need for the year 2018 is 24,513 units (12,811 Owner and 11,702 Rental). The project need for the year 2023 is 25,208 units (13,132 Owner and 12,076 Rental Units).

A review of the data clearly indicates that as income decreases, affordability problems increase. And, low income residents tend to need affordable rental opportunities and higher income residents require affordable homeownership opportunities. Additionally, household formation rates indicate that a substantial number of households with affordability challenges are being produced by younger residents.

According to the barriers identified by the 'Task Force', the primary issue influencing the production of affordable housing is cost. Thus, this research considered some of the challenges associated with new in-fill development and housing rehabilitation. Challenges associated with new in-fill development include financing and the availability of land. Challenges with rehabilitating existing housing include financing and also the unpredictable nature of undiscovered collateral damage (e.g. termites, water, and structural).

The cost issues associated with in-fill and rehabilitation were explored through the use of a linear costing model and by data provided by the City of Savannah Housing Department. Evidence exists to indicate that the rehabilitation policy regarding development should be considered as part of a broader strategy to produce affordable housing. In addition, the

following specific steps should be undertaken to address affordable housing needs:

- Increase the number of market rate units for rental and ownership, (with particular emphasis on two-bedroom apartments and low cost three-bedroom units)

- Encourage development of affordable units in Savannah's outer-lying areas (e.g. New Hempstead and Godly)

- Develop mechanisms to measure and mitigate the increased competition produced by rising levels of institutional populations (e.g. SSU and SCAD)

- Develop strategies to reduce the household formation rates of younger low-income households

- Build the resources, technical abilities and capacity of the local non-profit housing development industry

- Explore the potential of initiating and supporting a non-profit housing developer targeting the city of Savannah

- A steering committee of private/public firms must be established to identify strategic frameworks

- Consideration should also be given to the establishment of a "worst case scenario' contingency fund to mitigate the risk associated with pro-forma changes

In conjunction with the U.S. Department of Housing and Urban Developments National Call to Action for Affordable Housing through Regulatory Reform, the Mayor and Aldermen of the City of Savannah established the Affordable Housing & Regulatory Reform Task Force for the purpose of reviewing local, state and federal regulations that may contribute to barriers to affordable housing development and provision in Savannah.

To support this goal, the Task Force commissioned a study of affordable housing in Savannah for the purpose of identifying the full spectrum of issues regarding affordable housing including:

1. defining affordable housing
2. identifying the existing supply and location of affordable housing
3. ascertaining existing demand for affordable housing
4. projecting future (10 and 15 year) demand for affordable housing
5. determining affordable housing barriers and solutions in collaboration with the City of Savannah's Affordable Housing & Regulatory Reform Task Force

To achieve this end, cooperation in the form of data provision was provided by the City of Savannah Housing Department, Development Services Department, Housing Authority of Savannah, Georgia Legal Services, the Metropolitan Planning Commission, and the U.S. Census Bureau.

Initially, the affordable housing task force held several focus groups with community stakeholders. The thematic results in tandem with HUD regulations were utilized to develop definitions of affordability from the perspectives of consumers, housing professionals and developers. To identify and explore the affordable characteristics of housing affordability in Savannah, a sample of households was obtained from the U.S. Census Bureau. This facilitated the development of customized tabulations not as accessible in standard census data. Statistical procedures were then utilized to make inferences to the broader population. Validity was ensured by comparing sample statistics to the standard tabulations for Savannah.

Data was also utilized from the Housing Authority of Savannah and other groups to identify the quantity and location of existing affordable housing (including locations of Section 8 voucher use). While this was effective in identifying subsidized units, an index was developed that considered household income. This allowed for the identification of households based upon whether or not they could afford to purchase a home at the median sales price for Savannah over the past two years.

As a means to make an effective projection of the affordable housing need over the next 10 and 15 years, a review of multiple affordable housing reports was performed along with their methods of analysis. As a result of this review, a specific model was produced that matches the environment of the city of Savannah, including customized tabulation from U.S. Census Bureau Data. A basic methodological component of making population projections consists of the viability of base-line data. Typically, historical trends in population changes are accounted for over-time and multiple methods can then be utilized to extrapolate those changes over future projection periods. This historical base line data typically consists of census data. Thus, any

errors contained in the census data can be exacerbated in the projection process.

While census data provides the most viable picture of long term population dynamics, counts of Savannah's population have been disputed based upon building permit and traffic zone projections produced by the Metropolitan Planning Commission. In these instances, averaging is utilized to mitigate potential errors. As population projections are not an exact science[1], this is an appropriate mechanism to increase estimate validity.

Projection techniques tend to fall within two categories: extrapolation and ratio. Extrapolative methods utilize a base period (e.g. 1990 or 2000), and use historical changes to predict future population levels. Ratio methods consider an area's spatial population as a proportion of a larger spatial unit (e.g. county, region, state). In an extrapolation, the strength of projection is reliant upon the accuracy of the numbers in the base period. Accordingly, ratio methods are reliant upon the accuracy of the numbers in both the target area and the comparative larger spatial unit. Symptomatic data (e.g. vital statistics, housing units, traffic patterns, etc.) tends to be the most useful in identifying changes and trends in overall population. This type of data that serves as an indicator of shifting demographics is provided by the Metropolitan Planning Commission and is considered in the overall population projection. The absence of a specific standard method can produce widely varied results. Thus, the methods utilized in this projection utilize averaging to minimize errors associated with projections that are significantly larger or smaller.

Additionally, while the accepted standard utilized to assess affordability is 30%, this standard does not effectively capture all the dimensions of how cost burden may affect families.[2] In summary, some households may choose to actually pay over 30% based upon housing preferences, older households may have significantly less flexibility in mitigating the 30% cost burden, and larger households generally have higher costs on other items indicating a descent quality of life that may make the 30% non descriptive of the affordability problem.

These are issues highlighted in an alternative view of housing cost burden put forth by Shelter Poverty advocates.[3] Shelter Poverty challenges the generally accepted thought that the standard for affordability should be 30%. This implies that many households whose housing costs are below 30% are actually still burdened with high housing costs as a result of the many other costs that determine a good quality of life. These issues should be kept in mind while considering the implications of this housing study.

Traditionally, housing affordability is determined by assessing what percentage of an individual's income must be paid to cover housing costs. Access to affordable housing has been a perpetual socio-economic issue and remains a significant local and national policy issue. While perspectives may vary on the best approach to making housing more affordable, a general consensus does exist that it is a problem with the most significant impact at lower income levels (although it effects individuals at many income levels.) The National Low Income Housing Coalition (NLIHC) along with

[1] Shimberg Center for Affordable Housing, University of Florida

[2] Pelletiere, Danilo, Treskon, Mark, Crowley, Sheila. (2005) Who's Bearing the Burden? Severely Unaffordable Housing. National Low Income Housing Coalition. Washington, D.C.
[3] Stone, Michael. (1993). Shelter Poverty. Temple University Press. Philadelphia, PA.

the U.S. Bureau of Census release periodic reports illustrating the extent of this problem.

ranks 3rd highest in the state regarding hourly wage needed to afford a 2BR apartment at the fair market rate.

### Table 1: Affordability of Two-Bedroom Apartments in Selected Georgia Metropolitan Areas

| Metropolitan Areas | Hourly Wage Necessary to afford 2BR FMR | Two Bedroom FMR | Income Needed to Afford 2BR FMR | Full-time jobs at minimum wage needed to afford 2BR FMR | Annual AMI | Rent Affordable at AMI | 30% of AMI | Rent Affordable at 30% of AMI | % of total households (2000) | Estimated Mean Renter Hourly Wage (2005) |
|---|---|---|---|---|---|---|---|---|---|---|
| Georgia | 13.05 | $679 | $27,144 | 2.5 | $58,203 | $1,455 | $17,461 | $437 | 33% | $12.30 |
| | | | | | | | | | | |
| Atlanta/Sandy Springs /Marietta | 14.98 | $779 | $31,160 | 2.9 | $68,100 | $1,703 | $20,430 | $511 | 33% | $14.39 |
| Gainesville | 14.50 | $754 | $30,160 | 2.8 | $58,300 | $1,458 | $17,490 | $437 | 29% | $11.24 |
| **Savannah** | **13.52** | **$703** | **$28,120** | **2.6** | **$54,800** | **$1,370** | **$16,440** | **$411** | **36%** | **$10.24** |
| Athens/Clark County | 12.79 | $665 | $26,600 | 2.5 | $52,900 | $1,323 | $15,870 | $397 | 43% | $9.38 |
| Warner Robins | 11.88 | $618 | $24,720 | 2.3 | $58,900 | $1,473 | $17,670 | $442 | 31% | $914 |
| | | | | | | | | | | |
| Chatham County | 13.52 | $703 | $28,120 | 2.6 | $54,800 | $1,370 | $16,440 | $411 | 40% | $10.38 |

Generally, a market can be gauged by the expense associated with renting a two bedroom apartment. The NLIHC calculates a housing wage to measure affordability in housing markets. The housing wage is the amount a household must earn in order to afford an apartment at the fair market rate. Of all 50 states, Georgia ranks 26th in two-bedroom housing wage.[4] While this does take into consideration local wages and local housing costs, the persistence of poverty and economic gaps must also be considered in the southern region. Thus, Georgia ranks 17th in the number of minimum wage jobs needed per household. As illustrated in Table 1[5], the Savannah MSA

## FOCUS OF STUDY

Housing that is reasonably priced and targeted towards households that meet specific income guidelines is considered affordable. More specifically, housing is considered affordable if the household pays 30% or less of its monthly income to secure the housing and to pay its associated costs. Housing costs can include taxes, insurance, and sometimes utility bills for owners and renters. Many federal programs determine income limits on the basis of area median incomes for the area surrounding a particular location.[6]

[4] National Low Income Housing Coalition – Out of Reach 2007 - 2008
[5] National Low Income Housing Coalition – Out of Reach 2007 - 2008

[6] U.S. Department of Housing and Urban Development: Office of Policy Development and Research. (December 2005). *Affordable housing needs: a report to congress on the significant need for housing: annual compilation of a worst case housing needs survey*

While the Area Median Income for the Savannah Metropolitan Statistical Area is $54,800, the median income for Savannah is utilized so as to illustrate a clearer picture of local affordability issues. The annual median household income for the City of Savannah is substantially lower at $29,050 dollars. To gain a better understanding of affordable housing needs in relation to householder income, the U.S. Department of Housing and Urban Development provides the following income categories:

- Extremely Low Income, Individual households in this group make 30% less than the area median income.

- Very Low Income, Individual households in this group bring home at least 30% of the area median income, but not more than 50%.

- Low Income, Individual households in this group earn between 50% and 80% of the area median income.

- Middle Income, Individuals in this group earn between 80% and 100% of the area median income.

Additionally, the connection between income levels, employment type, and housing cost burden often go unnoticed. To understand the impact of housing affordability, perceptions must go beyond just considerations for the persistently poor, but also to those who are considered a vital part of the local area workforce. Examples of occupations/types of jobs associated with specific wage levels are listed as follows (see Table 2):

Table 2: Wage and Employment Type

| Wage Category | | Employment Type |
|---|---|---|
| Extremely Low Income | <$8,175 | Food Prep/Service, Wait Staff, Service Attendants |
| Very Low Income | $8,176 - $14,525 | Retail Workers, Nurse Aids, Home Health Workers, Child Care Workers |
| Low Income | $14,526 - $23,240 | Human Service Professional Assistants, Medical Clerks, Data Entry Personnel |
| Middle Income | $23,241 - $29,050 | Elementary School Teacher, Social Service Providers, Medical Information Techs |
| Above Median Income | > $29,050 | Close to Median: Entry Level Police Officers, City Workers, Lab Techs |

The Savannah Housing Market is generally considered as consisting of Bryan, Chatham and Effingham counties. However, for purposes of this study, the specific area of focus is on the City of Savannah. The median income for the broader housing market or the Savannah Metropolitan Statistical Area is significantly larger than that for the City of Savannah's. Thus, the income and derived cost burden characteristics for the broader SMA would be significantly different than those of the City of Savannah proper. This could provide miscalculations on the extent of the cost burden calculated for the City of Savannah. Table 3 illustrates the income and associated cost burden for households in the city of Savannah and Chatham County.

Cost burden is determined through consideration of the percentage of income spent for mortgage/rent costs. Housing is generally considered to be affordable if the household pays less than 30 percent of their income on housing. Any cost over 30 percent is considered a cost burden. As illustrated, lower income households tend to have higher levels of cost burden. Households in Savannah have higher average levels of cost burden than Chatham County. Additionally, while the proportion of households with cost burden is similar, households in Savannah generally have higher levels of cost burden.

Table 3: Savannah/Chatham County Income Categories and Cost Burden

| Savannah | Income Category | Range | # of Households | Average % Cost Burden | CI Lower Level | CI Upper Level | Average % of Income (Gross Rent) | Average % of Income (Selected Monthly Owner Costs) |
|---|---|---|---|---|---|---|---|---|
| Extremely Low Income | 0 – 30% | < $8,715 | 6,372 | 74% | 71% | 78% | 78% | 73% |
| Very Low Income | 31 – 50% | $8,715 - $14,525 | 5,977 | 48% | 45% | 51% | 49% | 48% |
| Low Income | 51 – 80% | $14,526 - $23,240 | 8,724 | 34% | 32% | 36% | 36% | 33% |
| Middle Income | 81 – 100% | $23,241 - $29,050 | 4,615 | 26% | 24% | 28% | 27% | 26% |
| Above Median Income | > 100% | > $29,050 | 25,688 | 17% | 17% | 18% | 18% | 18% |

| Chatham | Income Category | Range | # of Households | Average % Cost Burden | CI Lower Level | CI Upper Level | Average Percentage of Income (Gross Rent) | Average % of Income (Selected Monthly Owner Costs) |
|---|---|---|---|---|---|---|---|---|
| Extremely Low Income | 0 – 30% | < $11,475 | 11,569 | 66% | 63% | 69% | 69% | 67% |
| Very Low Income | 31 – 50% | $11,475 - $19,125 | 10,359 | 40% | 38% | 42% | 43% | 40% |
| Low Income | 51 – 80% | $19,126 - $30,599 | 15,538 | 30% | 28% | 31% | 30% | 30% |
| Middle Income | 81 – 100% | $30,600 - $38,249 | 8,072 | 24% | 22% | 25% | 22% | 25% |
| Above Median Income | > 100% | > $38,250 | 44,327 | 16% | 16% | 17% | 16% | 17% |

Further examination of the data provides much clearer insight into the total demand for affordable housing in both Chatham county and the City of Savannah at multiple income levels. Utilizing point estimates, it is estimated that 40% of households in Savannah and 29% of households in Chatham county are paying over 30% of their income on housing costs. As observed in Tables 4 and 5, as household income increases the number and percentage of households with cost burden generally decreases.

While concentrations of poverty tend to be associated with the city of Savannah, the data indicates that a notable number of households that are extremely low income also reside outside of the Savannah city limits but within Chatham county. Housing market dynamics in the broader region also influence local housing markets. Low-income households tend to concentrate in areas most affordable to them.

The lack of opportunity to acquire affordable housing in the broader region can force households to then concentrate in economically depressed areas with lower housing costs. Thus, fewer opportunities in the county mean more households will concentrate in the city if those opportunities are available. Limited access to affordable housing for extremely low and low income households tends to manifest in the physical environment through concentrations of poverty.

However, affordability problems for middle and above median income households physically manifests through local economies. An absence of economic diversity can ultimately make it difficult to produce sustainable communities. This includes producing housing affordable to individuals who have positions that provide a benefit not exclusively economic. These benefits can include the social networking that improves community sustainability through the close proximity of housing for police officers, fire department personnel, governmental employees, and school teachers, etc.

Table 4: % of Savannah Households with Cost Burden

| Savannah | # of Households > 30% | % of Total Households |
|---|---|---|
| Extremely Low Income | 5,538 | 10.78% |
| Very Low Income | 5,987 | 11.65% |
| Low Income | 4,596 | 8.95% |
| Middle Income | 1,569 | 3.05% |
| Above Median Income | 2,735 | 5.32% |

Table 5: % of Chatham Households with Cost Burden

| Chatham | # of Households > 30% | % of Total Households |
|---|---|---|
| Extremely Low Income | 9,282 | 10.33% |
| Very Low Income | 6,390 | 7.11% |
| Low Income | 6,726 | 7.49% |
| Middle Income | 1,906 | 2.12% |
| Above Median Income | 3,139 | 3.49% |

The most recent data from the NLIHC and the American Community Survey assessing the local housing market takes into account rises in the minimum wage. These findings indicate that 54% of renters in the Savannah MSA are unable to afford the Fair Market Rate ($769) for a two-bedroom apartment (Area Median Income being $54,800). The continued challenge of accessing affordable housing can be determined through an analysis of the area vacancy rates.

Vacancy data is provided by the 'Multi-Family' Housing Survey (2006) produced by the MPC for Chatham County. While the region of analysis is at the county level, it is still appropriate to illustrate rental dynamics in Chatham County as many of these units reside in the southern portion of the city. Additionally, the average commute time for workers in Savannah is 21 minutes, thus many renters are actually commuting into the city from these areas. In summary, the MPC study findings indicate:

- rent per month for multi-family units not subsidized ranged from $475 to $1,200 with an average rent per month of $840.

- One and two bedroom apartments have the lowest vacancy rates.

- The overall vacancy rate is approximately 3.0%.

- Rental rates have been increasing for all size of apartment units

Table 6: Reported Vacancies by Type of Unit
Chatham County

| Apartment Type | Number of Units | Vacancies by Unit Type | Vacancy Rate |
|---|---|---|---|
| One Bedroom | 5,347 | 149 | 2.8% |
| Two Bedroom | 7,702 | 61 | .8% |
| Three Bedroom | 2,091 | 237 | 11.3% |
| Four Bedroom | 245 | 18 | 7.3% |
| Total: | 15,385 | 465 | 3.02% |

A general measure on the implications of vacancy rates is indicated by the 5% benchmark. Vacancy rates above five percent generally indicate a supply of units high enough to produce more flexibility in pricing for consumers. A vacancy rate below five percent tends to indicate a lower supply of units thus less flexibility for consumers. As is indicated by Table 6, the most popular units (one and two bedroom units) have the lowest vacancy rates.

These low vacancy rates indicate a high level of demand for a limited number of units. This places upward pressure on rental prices making them more likely to be unaffordable for potential residents. Projections indicate that new potential growth will be located in the western portions of Chatham County. If affordability is not factored in to development considerations then this could lead to further socio-economic stratification and additional affordability challenges within the city limits. To illustrate the distributions and concentrations of affordability, the following graphics are provided.

Table 7: Section 8 Certificate and Affordable Units

| Section 8 Voucher Concentrations | # of Households |
|---|---|
| South Historic | 278 |
| Feiler Park | 105 |
| Lundhurst | 64 |
| Cuyler | 61 |
| West Savannah | 38 |
| Pine Gardens | 38 |
| Live Oak | 37 |
| Brookview | 36 |
| Eastside | 35 |
| Avondale | 34 |

| Affordable Units | # of Households |
|---|---|
| Hope VI | 154 |
| Savannah Public Housing Authority | 1,749 |
| Section 8 Vouchers and In-Place Units | 2,868 |
| Non-PHA Subsidized Units | 2,462 |
| Sub-total | 7,233 |
| | |
| Total Savannah Households | 51,375 |
| Affordable Households | 30,950 |
| | |
| **Un-met need in 2000 (estimate)** | **20,425** |
| | |
| **Un-met need in 2008 (estimate)** | **23,696** |

Figure 1: Section 8 Certificate and Affordable Unit Distribution
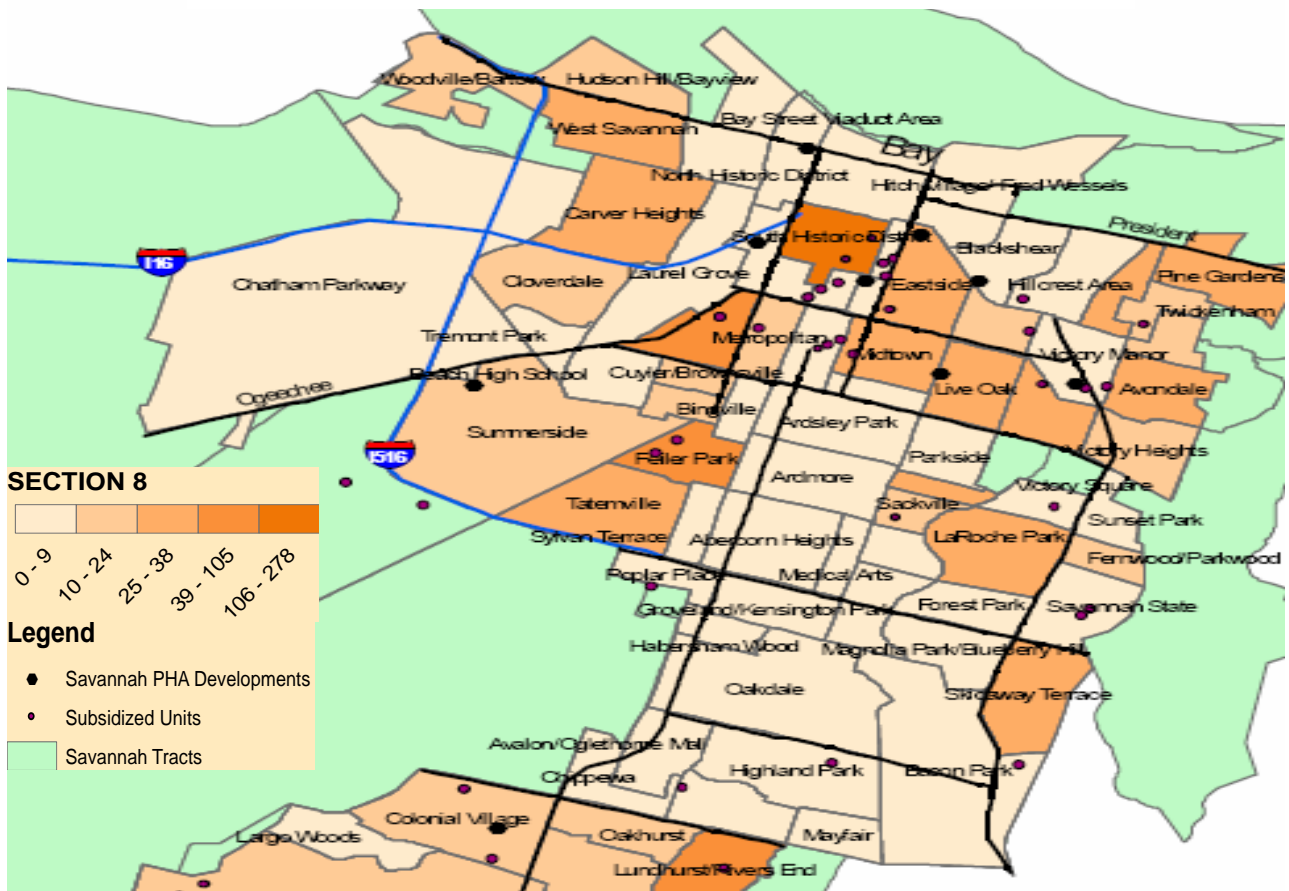
To determine the affordability of homeownership in the city of Savannah, a housing affordability index was created. The housing affordability index was produced by the National Association of Realtors and is calculated by dividing the household income by the qualifying income. In this instance, we are considering neighborhood classifications so the median household income for the corresponding census is utilized.

Qualifying income was determined assuming median sales value of $165,000 at 7% interest with a 10% down payment and the estimated mortgage payment being no greater than 25% of gross household income. The residual between 25% and 30% accounting for additional household costs

(e.g. taxes, utilities, etc.). Household income is utilized versus family income because family income may overestimate a household's ability to meet monthly mortgage expenses.

A higher number on the index indicates a household is more likely to be able to afford a home at the median sales price. A lower number indicates a household is less likely to be able to afford a home at the median sales price. If the number is below 100, the household has less income than what is necessary to afford a home at the median sales price. Correspondingly, numbers above 100 indicate a household may have more than what is required to afford the median sales priced home.

Figure 2: Housing Affordability Index
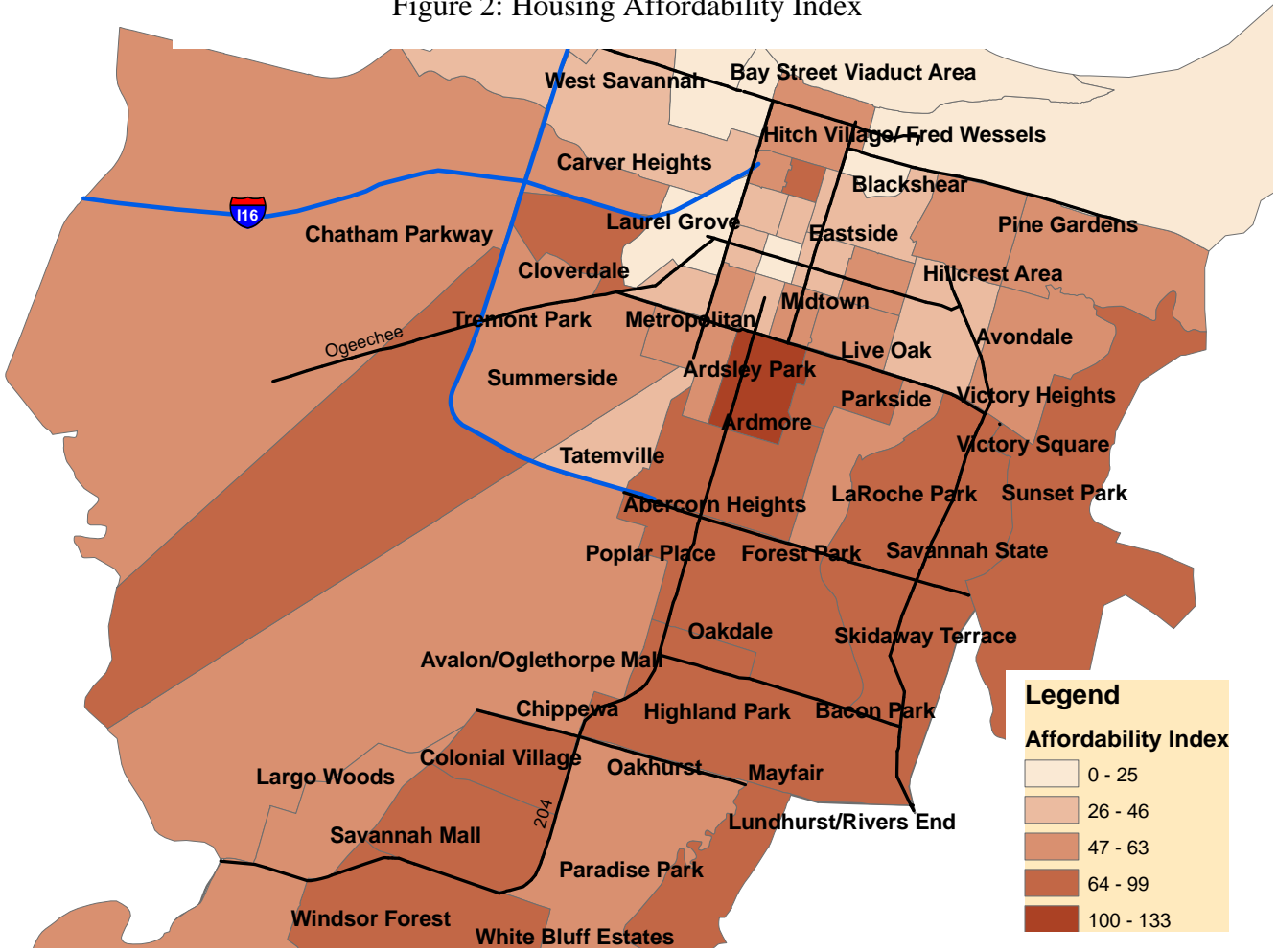
As mentioned in data considerations, extrapolative or ratio methods are generally utilized to make population projections. Once a population projection is made, then an estimate of affordable housing needs can be formed. To identify the most appropriate method, a review of 'Best Practices' was performed as a means to identify the most relative mechanism for predicting affordable housing needs. While multiple methods exist that can make an overall estimation of need, there is generally no set standard or best method of projection. Thus, the most effective methods can then be assumed to be the one that best mitigates the error associated with the projection (e.g. least prone to over or under-estimation). This review of studies and methods included:

  i. Georgia Coast 2030: Population Projections for the 10-County Coastal Region. Georgia Tech (2006)

  i. An Evaluation of Population Projections by Age. Stanley Smith and Jeff Tayman (2003)

  i. An Evaluation of Population Projection Errors for Census Tracts. Stanley Smith and Mohammad Shahidullah (1995)

  i. A Short Method for Projecting Population by Age from One Decennial Census to Another. C. Hamilton and Joseph Perry (1962)

  i. Affordable Housing Needs Assessment. Shimburg Center for Affordable Housing (2006)

A review of methods resulted in the selection of the "Affordable Housing Estimation Model" developed by the Shimburg Center for Affordable Housing. This method is implemented by first identifying the base year population from which the projections will be made; the projection is then made for the target years; utilizing Hamilton-Perry Ratios, the projection is then broken down to identify age group proportions; this allows for the identification of headship rates (head of household formation by age group); then, based upon the cost burden/other characteristics of each household, household formation rates can be applied to determine the affordable housing needs for the target projection years.

The method focuses on identifying affordable housing needs excluding the institutional populations (e.g. prison, college students, and military personnel). Thus, the numbers will differ significantly from the findings of other methods where the institutional population has not been removed. This poses a particular challenge in identifying accurate numbers of need as many of the individuals in the institutional population also compete with residents for affordable housing (e.g. SSU and Indigo Point, and SCAD and downtown savannah.

The estimation model provides a prediction of gradual population increases over the target period (see Table 8). This is in line with the projected increases associated with the south eastern region of the United States in addition to Chatham County being a retirement destination. Although many of the retirement communities are outside of the Savannah city limits, moderate increases are indicated. The population differences

from 2018 to 2023 appear to be moderate, but changes in household formation are driven by age related household formation (see Table 9). The addition of the institutional population is projected to drive more substantial growth.

While the population projections are an essential component, identifying the rate of household formation by age group is necessary to estimating future demand. Household formation rates are assumed to be constant over time and are produced by dividing the number of householders in each age/tenure group by the total population of that age group (see Table 10).

### Table 8: Population Projections

| Average Projection for Year: | Total Population |
|---|---|
| Target Year 1: 2018 | 138,934 |
| Target Year 2: 2023 | 139,783 |

### Table 10: Household Formation

| Age | Owner | Renter |
|---|---|---|
| 15 – 24 | 2.15% | 21.47% |
| 25 - 34 | 15.12% | 42.72% |
| 35 - 44 | 28.99% | 33.70% |
| 45 - 54 | 40.90% | 26.73% |
| 55 - 64 | 50.44% | 22.04% |
| 65 - 74 | 58.36% | 20.34% |
| 75+ | 52.35% | 24.76% |

### Table 9: Projections by Age

| Age | 2018 | 2023 |
|---|---|---|
| 0 – 4 | 12,374 | 12,548 |
| 5 - 9 | 13,194 | 13,379 |
| 10 - 14 | 9,479 | 9,914 |
| 15 – 19 | 11,784 | 12,384 |
| 20 - 24 | 10,841 | 10,434 |
| 25 - 29 | 10,351 | 10,215 |
| 30 - 34 | 9,645 | 9,608 |
| 35 - 39 | 8,038 | 8,073 |
| 40 - 44 | 7,717 | 7,832 |
| 45 – 49 | 6,738 | 6,530 |
| 50 - 54 | 6,724 | 6,428 |
| 55 – 59 | 6,689 | 6,613 |
| 60 - 64 | 6,702 | 6,808 |
| 65 – 69 | 5,353 | 5,566 |
| 70 – 74 | 4,348 | 4,590 |
| 75+ | 8,957 | 8,863 |

Then by considering a comparable rate for housing tenure, age, and cost burden, an estimate of need is produced for each projection year (see Table 11).

### Table 11: Projection of Affordable Housing Need

| Age Categories | Owner 2018 | Renter 2018 | Owner 2023 | Renter 2023 |
|---|---|---|---|---|
| 15 – 24 | 2,394 | 4,727 | 2,518 | 4,972 |
| 25 - 34 | 1,526 | 1,922 | 1,553 | 1,956 |
| 35 - 44 | 1,741 | 1,632 | 1,787 | 1,674 |
| 45 - 54 | 1,934 | 922 | 1,953 | 931 |
| 55 - 64 | 2,226 | 1,014 | 2,267 | 1,033 |
| 65 - 74 | 1,710 | 702 | 1,787 | 734 |
| 75+ | 1,281 | 785 | 1,268 | 777 |

Based upon these estimates, the total projected need for 2018 is 24,513 units (12,811 Owner Units and 11,702 Rental Units).  The projected need for 2023 is 25,208 units (13,132 Owner Units and 12,076 Rental Units).  A review of the distribution of need indicates that older householders generally have higher needs for owner-occupied housing, and younger householders have higher needs for rental housing.  It must be noted that these numbers are not comparable to the 2000 findings as those figures include the institutional population.

### AFFORDABILITY - APPRAISAL AND SALES VALUE

A key component to the development of affordable housing resides in the acquisition of developable property.  The primary issue in property acquisition is the cost associated with developing site control or purchase price.  Multiple methods exist to identify these costs.  Comparable sales in a local market can be utilized to identify costs, and appraisal data can be used to get a general idea of what those costs would be.  Sales prices are specifically determined by what the market will pay; however, the appraisal model does provide consistency in determining property valuation over time but does not necessarily provide the value that the market will pay to acquire the property.

Utilizing a combination of sales prices and appraised value over time can be used to produce a model to predict sales prices based upon appraisal value.  This linear model is a multi-variate technique that uses the appraised value to explain variation in sales data. A linear regression was  implemented to identify the relationship between sales price and appraised value (see Table 12).

Table 12: Multiple Regression Findings

| | Statistic |
|---|---|
| Multiple Correlation Coefficient | .892 |
| Coefficient of Variance: $R^2$ | .768 |

The 'Multiple Correlation Coefficient' is an indicator of the magnitude of the relationship between appraisal value and sales value.  The statistic of .892 indicates a very strong association exists between appraisal value and sales value and that knowledge of the appraisal value provides highly significant insight into the actual sales value.

The Coefficient of Variation as indicated by the $R^2$, explains the amount of variance explained by the appraised value.  It is also used to describe the magnitude of the variation explained by the appraisal value.  This statistic of .768 also indicates a very strong association exists in the ability of the appraised value to explain variation in sales data.  This indicates that a model can be effectively developed that effectively predicts sales value from appraisal value.  This predicted value is produced from the regression equation of $Y' = a + b(x)$; where Y' is the estimated sales value, a is the constant, and b equals the y intercept.  Thus, the regression equation is:

$$Y' = \$6.440.35 + 1.076\,(x)$$

By utilizing this equation, the appraisal value for a parcel can be placed into the equation as (x).  Once the operations of the equation are performed then Y' represents the predicted sales value of the appraised parcel.  This then allows for an effective estimate to be made on the acquisition costs associated with

establishing site control of parcels targeted for affordable housing development.

### REHABILITATION VS. IN-FILL HOUSING DEVELOPMENT

The costs for rehabilitation can be unpredictable because of collateral damage, while costs associated with in-fill housing development tend to be more predictable. Thus, resource constraints such as the availability of land or other economic development strategies may justify the use of a two-pronged strategy where in-fill and rehabilitation are combined. A portfolio such as this can be structured to provide economic and market balance while addressing costs for development.

Costs to rehabilitate property tend to increase because of conditional issues (e.g. water damage, compromised structures, asbestos and lead paint abatement). Conditional issues arise as a result of buildings not being maintained at an up-to-standard level over time. While the neglect of properties can cause many conditions, the most common that are problematic to developers are those that unexpectedly inflate costs.

Generally, these conditions are collateral damage associated with termites. Water damage from compromised seals is also a common factor. Water seepage that takes place in non-visible areas leads to structural deterioration. In addition, multiple factors can compromise the structural integrity of the building as indicated by shifting and leaning. The full extent of the damage is unable to be determined until physically exploring the property. Thus, costs for infill development are much easier to predict; however, there are standard costs also

associated with property rehabilitation. HUD and the City of Savannah (COS) establish these costs as follows:

Table 13: Estimated Rehabilitation Costs

| Building Condition | HUD Estimates | COS Estimates |
|---|---|---|
| Minor | $ 9,924 | $ 18,200 |
| Moderate | $35,025 | $ 53,200 |
| Major | $93,401 | $106,400 |

An accurate estimate of costs is dependent upon the ability to identify the full extent of building conditions and of any collateral damage. Often times the existence of unseen conditions can't be identified until a physical interior inspection is performed or once the work has started. A key component of project development is the formulation of the pro-forma. Unexpected collateral damage ultimately results in an unforeseen inflation of costs, with the net effect being a project that has become unprofitable and therefore unattractive. Reserve figures that may have been projected to be 10 – 15% can escalate significantly during the rehabilitation.

Once it is perceived that this local market is not profitable then it becomes unattractive to developers. Property values then may become stagnant, and affordable housing portfolios can then go into decline making their sustainability all the more difficult. Because there is then little to no appreciation of the property value, loans can not be acquired to then address funding shortfalls.

To explore the costs of affordable housing through both rehabilitation and in-fill development, pricing characteristics were considered as determined by HUD rehabilitation cost standards, predicted prices from a the linear estimation model, estimates by local developers, and cost estimates provided by the City of Savannah Housing Department. To illustrate differences, four neighborhoods, with higher amounts of vacant units, and one selected by the Housing Department (Feiler Park) were selected.

Under the linear projection model, rehabilitation costs for units requiring minor or moderate repair are estimated to generally cost less than in-fill housing. However, COS estimates indicate that rehabilitation of units requiring moderate repair can provide moderate cost savings in specific scenarios. The linear model considers the development of two-bedroom units while the COS projection estimates units with square footage, lot sizes

and number of bedrooms according to neighborhood. The linear model also has its averages influenced by the consideration of all lots in each neighborhood. This could have the effect of skewing the averages in a downward trend. However, it does account for variations in the appraisal format. All three models do have validity, based upon their mutually exclusive considerations. With the average housing sales price for the city of Savannah over the past two years being approximately $165,000, discretion must me be utilized when assessing price validity within the context of neighborhood characteristics.

As mentioned, the primary challenge in producing affordable housing is cost. While the models provide variations in estimated costs, the potential costs savings yield validity for consideration of more flexible policies.

Table 14: Rehabilitation and In-Fill Average Cost Matrix

| Metropolitan | Linear Projection | COS Projection #1 | COS Projection #2 |
|---|---|---|---|
| Minor | $101,689 | $180,500 | $197,500 |
| Moderate | $89,544 | $173,000 | $195,000 |
| Major | $137,803 | $150,250 | $199,250 |
| Vacant In-Fill | $161,127 | | $177,600 |
| **Midtown** | | | |
| Minor | $61,982 | $147,500 | $158,500 |
| Moderate | $86,504 | $132,250 | $138,250 |
| Major | $136,429 | $142,000 | $159,000 |
| Vacant In-Fill | $109,104 | | $142,680 |
| **Cuyler Brownsville** | | | |
| Minor | $53,156 | $128,000 | $139,000 |
| Moderate | $61,909 | $132,500 | $138,500 |
| Major | $126,743 | $137,250 | $154,250 |
| Vacant In-Fill | $122,066 | | $142,000 |
| **West Savannah** | | | |
| Minor | $42,888 | $128,750 | $120,750 |
| Moderate | $69,877 | $118,250 | $110,250 |
| Major | $135,577 | $130,500 | $119,500 |
| Vacant In-Fill | $105,302 | | $105,990 |
| **Feiler Park** | | | |
| Minor | n/a | $122,600 | $124,600 |
| Moderate | n/a | $114,600 | $106,600 |
| Major | n/a | $130,000 | $120,850 |
| Vacant In-Fill | | | $118,980 |

As a consideration for implementation, it should be noted that these costs represent averages. An average can be greatly influenced by extreme high or low costs. In this case, these figures were projected by Housing Department staff to serve as a base-line for cost considerations. Additionally, variability in projections were produced through the linear estimation model and local developers. While this serves as a baseline estimate, a specific market study should be performed in order to acquire data that supports actual decision making.

The variation in costs may appear to be nominal or moderate in some instances; however, more detailed analysis could identify specific instances where this variation is indicative of the opportunity for major cost savings. Specifically, developers who can specifically benefit from cost savings techniques to strengthen their profit line should participate in the development of cost estimates.

### IMPLICATIONS

The findings indicate that there is a considerable demand for affordable housing in the Savannah. Within the historical context of the high poverty rates, the challenge of finding affordable housing has been a persistent challenge for Savannah families. Savannah ranks third amongst Georgia cities in hourly wage, annual income and number of full-time jobs at minimum wage necessary to afford a two bedroom apartment. This most likely will only become more critical as a result of the following:

- projected population increases will continue to boost demand for existing units. Unless new units are built at

rates that off set demand, the market will continue to place pressure for higher prices.
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- insufficient amounts of two-bedroom apartments, creates market pressure for these units. Thus, prices for two-bedroom units as well as three and four bedroom units may be artificially high. A vacancy rate of .8% (benchmark for a balanced market averages approximately 5%) for two-bedroom units indicates these units are not available in sufficient numbers to produce more market balance. This is an additional indicator of how demand and a low availability of these units will keep prices higher.

- growth in institutional population (e.g. SCAD, AASU, and SSU) where housing demands are not met by institutions, place non-residents in direct competition with residents for existing affordable housing.

- household formation rates for younger households will continue to remain constant. Since these households are more prone to have lower incomes, households in this category tend to make a major contribution to the persistence of poverty. When this combines with low high school graduation rates, household poverty rates tend to compound.

- absence of a major non-profit housing developer (with the exception of Mercy housing) who can produce housing at a scale sufficient enough to make an impact, will continue to exacerbate cost burden problems for extremely low and very low income households.

Some of this demand will be offset by annexations and new construction in peripheral areas outside of Savannah's urban core.  However, this may not address the increased demand for housing by the institutional population and could cause further

socio-economic isolation in sub-housing markets not able to compete with other areas in the city.  This is particularly an issue in those sub-areas directly adjacent to the downtown historic district.  Market demand may continue to keep housing prices out of reach for many Savannah residents, thus many of these households will either locate out of the city or migrate towards lower cost areas.  In the case of those neighborhoods in direct proximity to the historic district, these areas may then become further socio-economically.  Systemically, these areas add to the overall cost burden of the city as they become concentrated with poverty and further undermine the intended impact of the public school system on local economic development.  This increased socio-economic stratification also undermines the investment made by the city in neighborhood development and the socio-economic diversity reflective of healthy urban core areas.

The migration of upper income, over median, households to Savannah could reduce overall poverty rates.  If the total numbers of higher income households goes up while the number of impoverished households remain the same, then the overall poverty rates tend to go down.  However, the persistently poor, extremely low income or very low income households, tend to remain in place.  If these numbers were reduced as a result of a lower household formation rate, then the need for affordable housing would, at best, remain the same.  However, migration rates have tended to not

out pace the household formation rates of households with high amounts of cost burden.  Thus, it is projected that the amount of households with cost burden will increase significantly by the years 2018.  Considering the current economic situation, this projection is conservative.

An additional issue results from consideration of the area median income.  While the median household income for the Metropolitan Statistical Area (MSA) is $54,800, the median household income for Savannah is $29,050.  Utilization of the MSA household income can underestimate the challenges faced by Savannah residents when considering the affordability of both rental units and homeownership opportunities unless the goal is the draw in potential residents from areas outside of the city of Savannah.

This is highly significant as the median sales price of a home in Savannah over the past two years is approximately $165,000.  This price, at the minimum, requires a household income over $47,000 (assuming a 25% gross income cap).  While programs and services put in place have been effective, the overall combination of socio-economic and market factors makes housing affordability a persistent challenge.  The combination of increased demand coupled with institutional population growth, high household formation rates for impoverished households, low vacancy rates, and a local under-developed non-profit housing sector combines to make this pressing matter all the more significant.  This does not include the impact that concentrated poverty has on local economic development systems such as housing markets and school systems.

To address the factors contributing to the housing affordability problem, the following strategies should be implemented:

- Increase the production of market rate units, including two-bedroom apartments. This can move the supply closer to actual demand. Moving the vacancy rate closer to 5% will result in a more balanced supply and demand of units; thus, increasing the probability of alleviating pressure for higher rents. Consideration should also be given to increasing the supply of lower cost three-bedroom units since lower income families can tend to have higher household sizes.

- When increasing production, care must be exercised not to encourage production that results in the over-concentration of units in specific neighborhoods. Thus affordable housing must be encouraged in Savannah's outer-lying areas (e.g. New Hempstead and Godly).

- Develop mechanisms to measure and mitigate the increased competition produced by rising levels of the institutional population (e.g. SSU and Indigo Point; SCAD and the downtown market area).

- Develop strategies to reduce the household formation rates of younger uneducated households more likely to be in a state of poverty.

- Build the resources, technical abilities and capacity of the local non-profit housing development industry. This would include the provision of technical assistance, capitalization, and access to developable land.

- Explore the potential of initiating and supporting a non-profit housing developer targeting the city of Savannah. This developer should have technical expertise in complex multi-source funding mechanisms, in-fill development, rehabilitation, large multi-family as well as scattered site projects.

While these strategic considerations are important, they are secondary to a critical issue: cost. An effective way to deal with the level of funding required is to minimize costs in establishing control of development sites. While all the cost matrix projections have some validity, a primary component for initiating this type of strategy is the invested input of a separate development entity. Cost is a primary concern: however, there are multiple levels of issues that serve as challenges to the development of affordable housing. A 'Best Practice' for producing market mitigation strategies includes input from financiers, property managers, real estate brokers, developers, capital firms, lending agents, legal experts, and governmental agencies.

- A steering committee of private and public firms must be established to identify strategies to address each specific concern. This includes the establishment of site control for development, land banking, potential uses of eminent domain, title clearance and mitigation, private and non-profit development, as well as models for qualifying potential residents for homeownership.

- Consideration should also be given to the establishment of a "worst case scenario' contingency fund to mitigate the risk associated with pro-forma changes.

Additionally, consideration should be given to the benefits of utilizing housing rehabilitation in any strategic affordable housing development strategy. Estimates of property acquisition costs and rehabilitation showed variation in projected total costs; however, in some instances there is potential for significant cost savings. This cost savings can be even more pronounced considering the systemic costs associated with vacant and abandoned properties.[7] These costs tend to be hidden within overall city expenditures.

The substantial amount of resources potentially utilized to cover annual city servicing costs for vacant and abandoned properties is compounded by the cumulative lost property tax revenue to the city and school district. In areas where there are high concentrations of vacant and abandoned properties, the under-performance of the sub-housing market can result in lower levels of home equity, reduced sales prices and pockets of crime that further under-mine city programs, social viability, and community health.

The conversion of vacant and abandoned properties into affordable housing can, in-effect, address multiple concerns utilizing the same strategic development: expanding the affordable housing supply, increasing city and school district revenue through tax collections, triggering private market development as a result of city investments, and reducing pockets of poverty by improving the socio-economic environment of challenged neighborhoods. Housing cost burden is endemic to market based systems. Thus, taking a hands-off approach to its mitigation will generally result in the continuation of the problem. However, engaging market participants in issue resolution can strengthen the ability of private and non-profit firms in developing market.

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[7] Community Research Partners. 2008. $60 Million and Counting: The cost of vacant and abandoned properties to eight Ohio cities. Columbus, Ohio.