THE ATHENS LAND TRUST: THE REUSE OF FAILED SUBDIVISIONS FOR AFFORDABLE HOUSING

by

SARAH ELIZABETH MCQUADE

(Under the Direction of JACK CROWLEY)

ABSTRACT

This paper examines the reuse of a failed subdivision as affordable housing by the Athens Land Trust (ALT). In 2010 ALT acquired a foreclosed parcel of land through federal HOME funds to develop the property for low-to-moderate individuals. Prior to their ownership the property had been subdivided and had the majority of the infrastructure installed. Through the grant ALT will construct 15 single family homes for low-to-moderate income individuals through a community land trust (CLT) model. Using such a model will allow ALT to provide high quality design at an affordable price. This paper examines the processes ALT and the College of Environment & Designs Public Service & Outreach office, the Center for Community Design & Preservation (CCDP), completed to make this project a reality. The final product, include as Appendix A, is a design program that examines the reuse of the site and its development at the community, site, lot, and built levels. Additionally, the larger implications of this project will be discussed as they pertain to the nation as a whole.

INDEX WORDS: Affordable housing, Athens Land Trust, Community Land Trust, Foreclosed Properties, Failed Subdivision, Low-to-Moderate Income Housing, PVC Farms, Redevelopment of Foreclosed Properties, Sustainable Design Practices

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SARAH ELIZABETH MCQUADE

AB, ANTHROPOLOGY, THE UNIVERSITY OF GEORGIA, 2006

A Practicum Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment of

the Requirements for the Degree

MASTER OF ENVIRONMENTAL PLANNING & DESIGN

ATHENS, GEORGIA

2011

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SARAH ELIZABETH MCQUADE

Major Professor: Committee: Jack Crowley Douglas Pardue Heather Benham Pratt Cassity

Electronic Version Approved:

Maureen Grasso Dean of the Graduate School The University of Georgia August2011

ACKNOWLEDGEMENTS

I would like to thank my friends, family, and mentors who all assisted me greatly throughout this process. Whether it was listening to me talk endlessly about different ideas I had, or assisting me with edits and still more edits, or simply being there for me when I needed to take a break I couldn't have done it without you. I hope each of you understands how much I appreciate your assistance and guidance over the past eight months.

TABLE OF CONTENTS

	Page
ACKNOWL	EDGEMENTSIV
CHAPTER	
1	INTRODUCTION1
	NATIONWIDE1
	REGIONAL
	PROJECT DESCRIPTION5
	COMMUNITY LAND TRUST MODEL7
	GREATER IMPLICATIONS9
2	PROJECT COMPONENTS 11
	WHO WAS THERE?11
	WHAT IS A CHARRETTE?
	WHERE: SITE CONTEXT 12
	WHY: PROJECT SCOPE 13
	HOW: THE PROCESS
3	POLICY & SOCIAL ELEMENTS
	COMMUNITY BUILDING 17
	SITE MAINTANENCE
4	SITE ELEMENTS
	INTEGRATION OF COMMUNITY & THE NATURAL ENVIRONMENT
	ENERGY-EFFICIENT & AFFORDABLE HOUSING

37
39
39
44
48
53
56
56
66
70
83
85
85
87
90
94
95

CHAPTER 1

INTRODUCTION

NATIONWIDE

Over the past decade the crashing of the US housing market has led to a surplus of failed subdivision and vacant properties across the nation. Failed subdivisions, frequently referred to as "PVC farms", and vacant properties often lead to increases in crime within an area due to the lack of human presence. (Kane, 2009) PVC farms earned their nickname because of the stubbed polyvinyl chloride plastic (PVC) pipes marking existing infrastructure on vacant lots. Without the watchful eyes of residents, these vacant properties become a target for thieves, "who strip them of anything valuable, including copper piping, appliances, lighting fixtures and even kitchen cabinets." (Kane, 2009)

Much of this stems from increases in foreclosures on both constructed and unconstructed properties. The foreclosure process is complicated and varies between states, but in the most general term foreclosure can occur when the mortgage holder defaults on their loan. In a 2007 report for Congress, generated by the Government and Finance Division on understanding mortgage foreclosures, foreclosure is defined as "the process of [a lender] recovering losses by repossessing and selling the property." Although lenders have incentives to try to solve the default through an alternative loss mitigation option, often times those experiencing foreclosure are likely to not follow that route. (Getter, 2007) The report explains:

"Foreclosures are, however, more likely to occur when homeowners have little (10% or less) equity in their homes. Moreover, if the value of a house falls below the value of the mortgage, or if very little or no down payment was used to purchase the home, the borrower may have a financial incentive to walk away and not take the necessary steps to avoid foreclosure." (Getter, 2007)

Homeowners who fall in this category have often secured a subprime loan. Subprime home purchase loans (loans made to individuals who have a higher risk of defaulting than typical borrowers) have increased by over 250% between the years of 2001 and 2004. (Immergluck, 2009) Typically, when a loan defaults a bank can recover 75% to 80% of the mortgage by foreclosing upon the property and reselling the home. Due to the foreclosure crisis though, banks currently only recover about 40% of the original mortgage. (Kane, 2009) In extreme situations, such as Detroit, it can be as low as negative 10%, giving the banks little incentive to actually foreclose on the property if they will lose profit in doing so. Instead, the banks file foreclosure notices but never follow through and complete the process. (Kane, 2009) Kermit Lind, a professor of Law at Cleveland State University who studies urban development and housing, calls this result "toxic titles,' because a house is left empty, no one claims responsibility, and the city has to pay to clean it up." (Kane, 2009) Further, the current outlook of the housing market remains poor, with the number of bank foreclosures expected to rise as unemployment numbers remain high suggesting that the future will hold more foreclosure and defaulted loans. (Donsky, 2009)

This results in vacant and foreclosed properties becoming a safety issue with which many localities are ill-equipped to address. Within planning and redevelopment fields this condition is often referred to as blight. The American Planning Association, in a 2003 report entitled *Policy Guide on Public Redevelopment*, defines blight as "impairments on the physical fabric (buildings, properties, public improvements, etc.) on community structure and social fabric (neighborhood vitality, security, public health and welfare, etc.) or on the economy (property values, tax base, facility obsolescence, employment base, etc.)." (American Planning Association, 2003)

Prior to the failure of the housing market municipalities rarely had to consider the maintenance or security of foreclosures. To address this situation some local governments are in the process of creating new legislation that will permit code enforcement officials to issue property owners with a notice of violation. These notices can be issued if their property if it is not in compliance

with the local code of ordinances. Once the property owner has been notified, and after an allotted period of time, the municipality can levy monetary penalties against property owners until the blight is removed. In municipalities where the ordinance has been enacted fines can be up to \$1,000 per day which the property remains out of compliance. (Oltmanns, 2011) Steep fines such as these will require attention by both small and large property owners. Prior to the implementation of monetary fines, municipalities often had difficulties enforcing maintenance and security of foreclosed properties from large banks and mortgage lenders, who became owners after foreclosure proceedings and are located out of state. (Oltmanns, 2011) As these companies are profit driven, they are more likely to comply with code violations if their noncompliance results in financial losses.

REGIONAL

This foreclosure crisis is both a national and local trend. In 2009, metro Atlanta had a staggering 150,000 vacant housing lots. At current absorption rates those lots would supply metro Atlanta with housing for more than a decade. (Donsky, 2009) The cities and counties hardest hit by the housing crisis are those on the fringe of metro Atlanta, who often have a large supply of vacant properties but very little demand for housing. Recently, as the housing market and economy decline, and gas prices continue to rise, very few individuals are moving to the outskirts of the metro area, they are instead choosing to remain in their current housing.

Financially, Georgia banks have been some of the hardest hit throughout the country. 55 banks have failed to date, the majority of them closed as the result of residential real estate losses. (Nelson, 2011) According to Smart Numbers, a Marietta company that tracks the local real estate market, the median sale price for empty lots has fallen from \$57,000 at the height of the housing boom in 2007 to \$30,000 in 2009. (Donsky, 2009) Georgia did not fare any better in 2010, with the number of foreclosed properties increasing as much as 20% in some of the state's metro areas. (Cutts, 2011)

For Athens-Clarke County (ACC) the situation is the same. According to the 2000 Census, there were 2,420 vacant housing lots within ACC, representing 5.7% of total housing. (Athens-Clarke County, 2008) In the decade since, the number of vacancies has more than doubled to 5,654 vacant properties, accounting for 11.1% of housing within the county. (U.S. Census Bureau) Of these, 4.1% are homeowner vacancies, calculated "by dividing the total number of vacant units "for sale only" by the sum of owner-occupied units, vacant units that are "for sale only," and vacant units that have been sold but not yet occupied; and then multiplying by 100." (U.S. Census Bureau) Additionally, there is a 10.6% vacancy rate for rental units, which is calculated in a similar manner to the vacant homeowner properties, "by dividing the total number of vacant units "for rent" by the sum of the renter-occupied units, vacant units that are "for rent" by the sum of the renter-occupied units, vacant units that are "for rent" by the sum of the renter-occupied units, vacant units that are "for rent" by the sum of the renter-occupied units, vacant units that are "for rent" by the sum of the renter-occupied units, vacant units that are "for rent" by the sum of the renter-occupied units, vacant units that are "for rent," and vacant units that have been rented but not yet occupied; and then multiplying by 100." (U.S. Census Bureau)

Complicating this issue is the student population at the University of Georgia (UGA). In an analysis of housing affordability in Athens-Clarke County completed by the Department of Human and Economic Development (HED) it was found that the University of Georgia's student population is a significant driver in the local rental housing market, representing one-third of ACC's total population. (Athens-Clarke County, 2002) While the University requires the majority of freshmen to reside on campus during the first year, they are unable to provide housing for the entire student population, meaning the majority of the students occupy rental units within ACC upon reaching the second year of their undergraduate program. In the fall of 2005 there were 33,600 students attending the University, with approximately 73% of the undergraduates living off campus that increases ACC's rental market by at least 24,528 individuals. (Athens-Clarke County, 2006)

This demographic has lead much of the rental market to be geared towards student rentals and allows landlords to charge rental prices that, on average, are higher than 30% of an individual's average median income (AMI). This is significant because according to the federal office of Housing and Urban Development (HUD), housing is considered affordable if a household pays no more than 30 percent of its total income on housing costs. These costs include a household's rent or mortgage and utilities or household expenses expended by the renter or property owner. Significantly, "Census 2000 reports that 49.5% of renter households [within ACC] have Gross Rent > 30% of household income, classifying them as overburdened". This is in comparison to "only 18.2% of owner occupied households are classified as overburdened." (Athens-Clarke County, 2002) Current 2010 census results for this data are not currently available, but it is likely that the disparity between these two figures has only increased in the decade since. With at least 11.1% of housing in the county vacant, access to affordable housing is the issue, not whether there are available dwelling units. This practice results in nonstudent, low-to-moderate income individuals having limited affordable housing choices.

PROJECT DESCRIPTION

The foreclosure crisis provides Athens-Clarke County, local non-profit organizations, and community development programs an opportunity to make use of these properties through redevelopment as affordable housing. The Athens Land Trust (ALT), a nonprofit organization, strives to "promote quality of life through integrations of community and the natural environment by preserving land, creating energy-efficient and affordable housing, and revitalizing neighborhoods in Athens-Clarke County." (Athens Land Trust)

In 2010 the Athens Land Trust received federal HOME funds from HED allowing them to purchase a foreclosed piece of property in northeastern Athens-Clarke County. A component of HUD, the HOME Investment Partnership Program provides grants to State and local governments. HOME is "designed exclusively to create affordable housing for low-income individuals." (HUD, HOME Investment Partnership) According to the website for the HOME Investment Partnership, "the program was designed to reinforce several important values and principles of community development:

> HOME's flexibility empowers people and communities to design and implement strategies tailored to their own needs and priorities.

- HOME's emphasis on consolidated planning expands and strengthens partnerships among all levels of government and the private sector in the development of affordable housing.
- HOME's technical assistance activities and set-aside for qualified community-based nonprofit housing groups builds the capacity of these partners.
- HOME's requirement that participating jurisdictions (PJs) match 25 cents of every dollar in program funds mobilizes community resources in support of affordable housing."

The parcel ALT purchased had been subdivided, platted, and "flipped" several times before it went into foreclosure in February 2009. Prior to going into foreclosure, the property was sold by the original owner in November 2005 to Dawg Country Properties, INC. for \$157,000.In October 2006 the property was again sold, this time by Dawg County Properties, INC. to Davis Mark at the price of \$315,000. Seven month later the property was transferred from Davis Mark to Mad Holdings INC. for \$0. Shortly thereafter, in October 2007, Mad Holdings INC. transferred the property to Classic City Real Estate Holdings, LLC through a quitclaim deed. (A quitclaim deed is typically used when transferring property between family members, and through the transfer the grantor, or property owner, terminates their right and claim to the property and allows the claim to be transferred to the grantee, recipient of the sale.) (Barber) Classic City Real Estate Holdings, LLC maintained ownership of the property until February 2009, at which point the property went into foreclosure and was purchased for \$1 by Northeast Georgia Bank. In February 2010 the parcel was sold by Northeast Georgia Bank to Dawg County Properties, INC. for \$135,000. According to the ACC Board of Tax Assessors, the property was purchased on the same day by the Athens Land Trust Properties, INC for \$172, 000. Throughout the sale process the property was subdivided to contain 15 lots and much of the infrastructure was installed. (Athens-Clarke County Board of Tax Assessors)

The property is zoned RS-5, requiring a minimum lot average of 5,000 square feet. As a condition of the grant ALT received to develop the property, the site design must remain as it has already been platted, with 15 single-family units. These residences must be available for purchase by

low-to-moderate income first-time homebuyers, with ALT hoping to have the first five homes completed by the end of 2012.

After the purchase, ALT finished the infrastructure that had been partially completed by the previous owners. Typically, ALT redevelops existing homes or constructs new dwellings as infill development within existing neighborhoods. This property is their first opportunity to develop a neighborhood and, as a result, ALT is committed to involving that community in this process. To engage the community ALT partnered with the UGA's College of Environment & Design's (CED) office of Public Service & Outreach, the Center for Community Design & Preservation (CCDP). Beginning in December of 2010 ALT and CCDP began this process through a community input session and design *charrette*.

The results of those sessions have been developed into a design program that examines the reuse of a failed subdivision through a community land trust model. Further, the design program provides recommendations on social, site, landscape, and architectural elements to potential designers interested in assisting ALT with the development of this property, renamed Cottages at Cannontown by ALT, in honor of the original landowners. While some people may question the need to involve a community with a development at such a small scale, the results of this process will not only provide existing community members with a sense of pride and responsibility towards the new development, but also assist new community members in feeling welcomed and accepted within their new neighborhood. Ultimately, the CCDP and ALT hope that this process can be applied at a larger scale throughout the nation to address foreclosed subdivision by providing a mechanism for the development of thoughtful, community engaged, affordable housing design.

COMMUNITY LAND TRUST MODEL

Increasingly, the issue of affordable housing and access to services are becoming topics faced by a greater number of urban areas. While not necessarily a new issue, inner city neighborhoods continue to see people who choose to reside in city centers as opposed to living in the suburbs. This trend will likely increase as the price of gas rises and inner city neighborhoods are being redeveloped to attract diverse residents. This process often has a positive economic impact on the area as new residents bring new investment and spending power. (Aka, 2010) One negative result is the displacement of lower income residents who often have historic ties to the community.

This gentrification happens as a result of a more affluent population arriving in neighborhoods, often resulting in increased property values. It is significant to note that while these individuals are of higher-income groups, it is often only by a marginal amount, and they often relocate from areas within the city. (Aka, 2010) Additionally, much of the reason they move to a gentrifying area is because the home prices are more affordable and they recognize the opportunity to increase the home value through self-improvements. (Aka, 2010) Business and property owners capitalize on the new community members by increasing rental costs and providing more expensive retail options.(Aka, 2010) Additionally, abandoned and vacant properties are often purchased by land speculators, redeveloped and returned to the market as more expensive residential and commercial properties, which leads to an overall increase in the community's property taxes.(Aka, 2010)

The Community Land Trust (CLT) model has increasingly been used as a mechanism to retain affordable housing within gentrifying communities. A CLT is "a private, non-profit organization created to acquire and hold land for the benefit of a community and provide secure affordable access to land and housing for community residents." (Homestead Community Land Trusts) The affordable housing component of the Athens Land Trust utilizes a community land trust model. The United States Code defines a community land trust as:

"the term "community land trust" means a community housing development organization...(1) that is not sponsored by a for-profit corporation; (2) that is established to carry out activities under paragraph (3); (3) that it: (a) acquires parcels of land, held in perpetuity, primarily for conveyance under long-term ground leases; (b) transfers ownership of any structural improvements located on such leased parcels to the lessees; and (c) retains a preemptive option to purchase any such structural improvement at a price determined by formula that is designed to ensure that the improvement remains affordable to low-and moderate-income families in perpetuity; (4) whose corporate membership that is open to any adult resident of a particular geographic area specified in the by-laws of the organization; and (5) whose board of directors includes a majority of members who are elected by the corporation membership; and is composed of equal numbers of (i) lessees pursuant to paragraph (3)(B), (ii) corporate members who are not lessees, and (iii) any other category of persons described in the by-laws of the organization. (42 U.S.C.A. SECTION 12773) (Benham, 2003)

Through a CLT, speculation and absentee ownership of land is prohibited, which helps preserve the long-term affordability of housing. (Kelly, 20100) This is achieved through a dual ownership model, in which the ownership of the land is separated from the ownership of the home. The homeowner owns their home and any improvements made to it but leases the land on which the home is built from the land trust, often through a 99-year ground lease. CLTs use the ground lease model to give the homeowner the same security of tenure that homeowners with a fee simple title enjoy. (Kelly, 2010) A fee simple title is regarded as an absolute title to the land, although it is still subject to four powers of government; taxation, eminent domain, police power and escheat. (Barber) In his paper *Homes Affordable for Good: Covenants and Ground Leases as Long-Term Reseal-Restriction Devices*, James Kelly writes that:

"the CLT Legal Manual posits that the CLT approach of separating ownership of land and ownership of the improvements reflects the reality that while the homeowner is responsible for the value of his property to the extent it is impacted by the quality of the house on it, much of the owner's equity depends on the desirability of the surrounding community as a place to live. (Kelly, 2010)

The CLT model provides community and governmental organizations with a mechanism to ensure the continued affordability of their community. When an owner of a CLT home decides that they would like to sell, it is the ground lease process that enables the partnering land trust to ensure the property will remain affordable. Often within the ground lease are terms that address the resale and appreciation value the seller will gain from the property. (Benham, 2003) Most CLTs stipulate that the land trust has the first refusal right to purchase the home. If the CLT chooses not to purchase they will typically facilitate the resale of the home to another low-to-moderate income individual.

GREATER IMPLICATIONS

With the amount of large, vacant, and financially troubled properties available, it would seem logical for community development groups to acquire these types of foreclosed properties for redevelopment through a community land trust model. But this is not as easy as it sounds. Kathe Newman, an Urban Studies professor at Rutgers University, has found that often it is difficult for organizations to determine who owns the property, if it is in foreclosure, and how to contact them once that has been determined. (Kane, 2009) Further, actually financing the purchase is another problem. Foreclosed properties and Real Estate Owned (REO) holdings (distressed properties that are not yet foreclosed or on the market) are selling at such reduced rates that larger organizations with significant financial assets are able to purchase the properties more quickly than smaller community groups. Many of these purchases end up back on the market, flipped for quick sale with little thought put into development and how it affects the community as a whole.

Through funding sources such as HUDs HOME Investment Partnership community organizations such as ALT have greater opportunities to pursue this type of model. What is important to note is that this is not an isolated problem; communities across the country are faced with how to address the issue of foreclosed subdivision. Often, for safety measures, communities simply close the roads that lead into these areas to prevent vandalism, drug related activities, and dumping on the grounds. While in certainly in some situations this may work, it also is a missed opportunity for communities to redevelop these parcels as affordable housing.

More importantly though is the community involvement process that took place through the partnerships ATL made with the CCDP. Engaging the community was an instrumental component of this project, and without that engagement the outcome would have been vastly different. By meeting with community members ALT and the CCDP were able to identify and resolve components of the project that they would have otherwise been unaware. Although this project is small in scale, one of the benefits of such a model is that it can be applied to any project, regardless of the size, if the participating community and governmental organizations choose.

CHAPTER 2

PROJECT COMPONENTS

Who Was There?

During the last weekend in January, 2011 21 students and 13 faculty and design professionals met at the CCDP to explore innovative design techniques for affordable housing through a design *charrette*. A component of the College of Environment &Design, the CCDP provides public service and outreach opportunities to communities and non-profits in need of high quality design services that lack the funds to hire private design firms. The CCDP's mission is to provide service-learning experiences for students in landscape architecture, historic preservation and environmental planning. By utilizing a mix of faculty, professional staff and students to produce professional quality design and planning work. By partnering with Athens Land Trust (ALT), the CED has a unique opportunity to conduct innovative research that will investigate the effectiveness of site design for affordable housing.

What is a Charrette?

Charrette is a French word that translates "little cart". At the leading architecture school in the 19th century, the *Ecole des Beaux-Arts* ("School of Fine Arts") in Paris, students were assigned tough design problems to complete under time pressure. They would continue sketching as fast as they could, even as the little carts (*charrettes*) carried their drawing boards away to be judged and graded. Today the word "*charrette*" describes a rapid, intense, and creative work session, in which a design team focuses on a particular design problem and arrives at a collaborative solution.

The *charrette* process is a way of evaluating resources through new eyes. Fresh ideas are what help communities maintain and build their vitality. With the report and supporting materials, readers will experience the enthusiasm and commitment which comes from a broad-based group of students, faculty, practitioners, and the public.

Where: Site Context



Figure 1: An aerial photograph depicting the site and the greater surrounding area. The site is outlined in orange in the upper middle portion of the image. Source: Leah Graham Stewart

The Cottages at Cannontown development is proposed as an "infill" subdivision in Athens, Georgia. Located off of North Avenue on Bray Street, it is within walking distance of downtown Athens and many local services. The property had been subdivided and platted by a developer and "flipped" several times before it was foreclosed last year. ALT purchased the property and has finished the infrastructure improvements partially constructed by past owners. The finished development will have 15 single-family homes available to purchase by low-tomoderate income first-time home buyers; the target for completion of the first five homes is the end of 2012. The project is less than a half mile from a local elementary school, Boys and Girls Club, a city park, a job center, pharmacies, a grocery store, and many other retail shops. Two bus lines stop within a block of the site, and two major centers of employment, the downtown district and an industrial park, are within a one mile radius from the site.

Why: Project Scope

Many design components play a role in the success of an affordable housing development. Poor design decisions can lead to unexpected construction expenses, or inefficient residential units. By contrast, a project that is well-designed can balance the economic realities of constructing affordable housing with the advantages that sustainable design offers future homeowners. Through this project, academic research will contribute to greater understanding of how to achieve successful design for affordable housing and new solutions which can be transferred to other similar situations.

The Cottages at Cannontown *charrette* process illustrates that good design decisions increase attractiveness, functionality and sustainability. The project will prescribe a process to create a neighborhood rather than just a place to stay. The project also provides a rare opportunity for affordable housing to exist in an area that has been rapidly developing as an area for housing that is not considered affordable. Pressure on intown neighborhoods that are near the University to gentrify is a common occurrence when land-use decisions are based on the highest and best use. This project can help avoid gentrification through home ownership.

This project also provides Athens Land Trust with a set of guidelines for potential architects and designers to use when developing individual units in Cottages at Cannontown. The goal is to inform and encourage designers to create design diversity and utilize community derived building components and practices, while not limiting design creativity or inadvertently creating monotonous designs. The program synthesizes feedback and site conditions to offer guidance for architecture, landscape, and policy elements.

Importantly, the design guidelines integrate ALT's mission – to promote quality of life through integration of community and the natural environment by preserving land, creating energy-efficient and affordable housing, and revitalizing neighborhoods into the recommendations. The site, landscape, and architectural design elements of the program will each be connected to the organization's mission.

How: The Process

In December 2010 and January 2011 Athens Land Trust, through a partnership with the University of Georgia's Center for Community Development and Preservation, held a community input session and conducted a *charrette* in which potential home owners, local designers, and students from UGA addressed design problems and developed a set of recommendations and guidelines for Cottages at Cannontown. *Charettes*, specifically community input and feedback, allows the public to have a voice in the process. In many development scenarios, this component is missing.

On December 11, 2010 individuals from ALT, the CCDP, the local design community, potential home buyers, and members of Springfield Baptist Church met at the church to begin the *charrette* process. Designers were tasked to listen to the community and to let the community guide the discussion. The result was a very broad, but very clear description of what potential home buyers desired.

Next, students from UGA participated in a *charrette* over a weekend in January. They were tasked with taking the results from the community input session, vetting and focusing them to help develop viable alternatives that ALT could use for their development. 21 undergraduate and graduate students worked with professionals from UGA and the Athens community and focused the suggestions into three distinct categories—architecture, landscape, and social. Each group examined the results of the community input session, spoke with potential homeowners and local designers.

This input, team synthesis and individual ideas about design and development helped frame the final recommendations.

The architecture team developed four potential building footprints, ranging in size from 860 ft² - 1300 ft², recommended potential building materials, and suggested certain building features. The landscape team considered site features, street plantings, and how to incorporate stormwater management features into the project as a shared resource. Finally, the social team considered different social and community issues such as how to maintain the shared property of the space, whether there should be a homeowners association, and appropriate public identity issues. Additionally they recommended how to select the designers who will be doing work for ALT and how to connect Cottages at Cannontown to the larger community.

CHAPTER 3

POLICY & SOCIAL ELEMENTS

During the *charrette*, a group of students examined the policy & social elements related to the development of Cottages at Cannontown. While the end results of this project will be physical, the students involved in the group understood that the intangible components of the development will play a significant role in the success of the project, both for ALT and the community. To focus and direct their research, a vision statement was created which centered on developing "a model for design that builds a strong, sustainable community."

The group began by understanding that ALT currently develops affordable housing through infill or redevelopment projects. As a result many of their homes exist in areas which have strong established community support. ALT has not had to focus their energy on creating communities until now. With Cottages at Cannontown, ALT will be redeveloping a failed subdivision and creating 15 affordable housing homes. Many community resources already exist within a half-mile walk of the development and taking advantage of the established connections is vital.

Through the development of Cottages at Cannontown, ALT will be adding 15 first time homeowners to the neighborhood who have a vested interest in the neighborhoods success. These new homeowners will play an instrumental role in integrating the development into the larger community.

The group examined and provided recommendations on the following policy and social elements for ALT and Cottages at Cannontown:

- Community building
- Connectivity to neighborhood resources

- Site maintenance of the public realm
- Community Garden
- Neighborhood name
- Design competition framework

COMMUNITY BUILDING

As a tool for community building, the group recommends that ALT help facilitate asset

mapping within the Cottages at Cannontown. Part of community building is building relationships,

and asset mapping can be used as a launching point for developing the community's identity as a part

of the neighborhood and the larger community. Asset mapping is the process of taking an inventory

of the capital available in community stakeholders. It can be at an individual or organizational level.

Capital includes tangible resources such as funds, buildings, or equipment, or it could be intangible

assets such as expertise, talent, or folk knowledge. Often times this is done through a cognitive

mapping process.

WHAT IS COGNITIVE MAPPING?

- Visual representation of priorities in relationship-building
- Valuable tool for mapping environment
- Useful and effective exercise in developing internal relationships
- Positive, optimistic ways to solve problems rather than focusing on needs and weaknesses
- Identifies resources and prioritizes them according to potential value and need

HOW DOES IT BUILD COMMUNITY FROM WITHIN?

- Collaborative effort that harnesses collective energies and talents
- Shapes group processes and develops group dynamics
- Collectively identify and develop consensus on strengths and weaknesses
- Develop shared goals and strategies for community

HOW DOES IT BUILD RELATIONSHIPS WITHIN THE LARGER COMMUNITY?

- Makes first contact with potential stakeholders
- First step in the relationship-building process
- Community raises awareness of its existence and its power by advocating for itself

POTENTIAL PITFALLS

- Time commitment
- May cost money or use other resources
- Less effective where there is a lack of cohesion
- Potential for conflict in nebulous, developing groups
- Requires commitment to process



Figure 2: This is an example of an asset map. The center grey box represents the traits and assets that the individuals possess. The next level examines potential ways to utilize their skill sets. These skills are then applied to the next level, in this example, a citizen association. These assets are then connected to the larger community as a whole. Source: Author

One component of asset mapping is gaining an understanding of the resources that are currently available within the community. This can help community members gain better idea of what kinds of relationships are needed to build a strong sustainable community in the area. A database was compiled by identifying organizations that provide services such as:

- Organizations for funding and resources
- Community building organizations
- Health and Human Service agencies
- Emergency Medical Services
- Education services
- Community garden partners
- Transit and mobility services
- Economic justice (anti-poverty) organizations

Relationships are only useful if you have access to them. Next the group examined transit and

other systems that facilitate mobility in the community. They thought about how design can facilitate

further connections to strengthen relationships within the community. From the 15 lot site, the following uses can be reached by a half-mile walk or less:

- 1882 Gospel Pilgrim Cemetery
- Bonnie Lane Community Center
- Boys & Girls Club of Athens
- East Athens Park
- Georgia Department of Labor
- Howard Stroud Elementary School
- Piggly Wiggly Grocery Store
- Springfield Baptist Church

In Figure 3, found on the following page, students in the Policy & Social Elements group mapped different connectivity patterns in relation to community resources and the Cottages at Cannontown site. As mentioned above, there are a number of commercial and governmental services within a halfmile walk of the site.



Figure 3: This map reflects different connectivity patterns and community resources. The site is located center left, outlined on orange. There are many services located within a half-mile of Cottages at Cannontown for residents to utilize, including a grocery store, the Boys & Girls Club of Athens, and local, state, and federal governmental services. The orange dashed line denotes roads with sidewalks; the purple hash mark line denotes the Athens Transit bus route. Source Elizabeth Brighton

One of the major themes which emerged from the residents during the public input session

was a desire to have a space for community interaction, often described as a community garden.

Athens Land Trust defines a community garden as a "park-like area in the neighborhood where several

families can grow vegetables and flowers together on their own garden plots."

ALT has identified 13 different benefits associated with the use of a community garden. They include:

- Improves the quality of life for people in the garden
- Provides a catalyst for neighborhood and community development
- Stimulates social interaction
- Encourages self-reliance
- Beautifies neighborhoods
- Produces nutritious food
- Reduces family food budgets
- Conserves resources
- Creates opportunity for recreation, exercise, therapy, and education
- Reduces crime
- Preserves greenspace
- Creates income opportunities and economic development
- Reduces city heat from streets and parking lots
- Provides opportunities for intergenerational and cross-cultural connections

During the *charrette* members of the policy & social elements group embraced this desire as the benefits of a community garden would be multifaceted for Cottages at Cannontown. In addition to being a source of affordable, fresh, and healthy produce, a community garden provides a framework for community interaction and communication. Through the community garden ALT would have a way to keep a regular, vested interest in the maintenance of the area without needing a maintenance supervisor.

In an effort to incorporate a community garden at Cottages at Cannontown, the policy & social elements team examined the site, including the stormwater retention area, looking for a suitable area for such a space. While the stormwater management area seemed like a space that could be utilized for a community garden, in actuality the stormwater basin is steep, and most of the slopes are oriented away from the sun. Further, what level ground exists is small and would not be suitable for a place for community interaction. Fortunately, there are many nearby organizations with better land.

With the collaboration of the Boys & Girls Club, Howard B. Stroud Elementary School and Springfield Baptist Church, a garden could form a true community.

During the community input session held at Springfield Baptist Church, it became apparent community members were not in support of the development being called Springfield Village, the name the original owner had given the subdivision. When ALT took over the property they decided to keep the same name as it paid homage to the church, one of the pillars of the community. After learning about this situation, the members of the policy & social elements team thought it was important to consider different options for a new name. They felt that while a name is just a name, they wanted the name of this subdivision to connote home and be significant and sensitive to both the needs of ALT and the new community.

Ideally, community members would choose the new neighborhood name. However this is not possible as there is not yet a defined community to make this decision. At the moment, ALT has a waiting list of potential homeowners. Generally ALT does not sell homes preconstruction so they do not know who on that list will be living in Cottages at Cannontown. This is a complicated situation because legally, before the homes can be built, the subdivision must be platted with an official and everlasting name.

Even without community input, the name can and should hold meaning. From research conducted during the *charrette* the policy and social elements team compiled the names of prominent local African American individuals as candidates for the subdivision name, to honor the history of the future neighborhood. The following people are interred in the nearby Gospel Pilgrim Cemetery:

- Madison Davis—former slave, senator in the Georgia legislature during Reconstruction and first African American postmaster in Athens
- Charles Lyons—school principal, already honored at Burney-Harris-Lyons Middle School
- Monroe Bowers Morton—of Morton Theatre fame, most known for his work in entertainment commerce
- Harriet Powers—a nationally recognized folk artist

Another local and inspirational candidate, who, research revealed is not buried in Gospel Pilgrim Cemetery, but would be an appropriate name for the development is Ida Mae Hiram. She was the first African American female dentist in Athens-Clarke County. Alternatively, this could be an appropriate time to honor ALT's first homeowner, Brenda Crawford. Ultimately, ALT decided to name the new development Cottages at Cannontown, in homage to the original owners of the property which they are developing, the Cannons.

Another imperative piece of creating community is design that is intentional and socially aware. This sort of thoughtful design can be instrumental in creating community. To encourage this sort of design, the policy & social elements team established a framework for a design competition to encourage high-quality sustainable design for the selection of house designs. This furthers ALT objectives and also helps keep the project affordable.

The group hopes that the design competition can generate good building development in accordance with Earthcraft standards (and possibly beyond) and can encourage/build relationships with the design community in Athens. All of these designs will be built to the minimum landscape and architecture standards which will be elaborated upon in the other sections of this design program.

SITE MAINTENANCE

The public realm of Cottages at Cannontown needs to be defined in order to understand who will be responsible for maintenance and upkeep of different areas of the site. Often, the public realm is defined as the public interface in the subdivision; the outdoor area that is under the responsibility and jurisdiction of a potential homeowners association. Following this definition, the group established 3 options for the public realm of Cottages at Cannontown:

OPTION 1:

Only the street—the traditional interpretation of the public realm

OPTION 2:

The street and the stormwater management area—because stormwater is a community problem and because the detention pond can be transformed into a community asset

OPTION 3:

The street, the stormwater lot and all of the front yards—because front yards are visible from the public road and directly influence neighborhood character, and subsequently property values

Careful consideration needs to be given to option three. While including the front yards of the homes as part of the public realm would reduce the responsibility of yard maintenance for homeowners, and allow ALT to ensure proper upkeep of the property, it may also result in less community building than anticipated. Part of homeownership includes yard maintenance and many people take pride in the design and hard work they put into their yard. Removing that task may result in homeowners feeling as though the property is not truly theirs and led to less community involvement and interaction. For these reasons, it is recommended that ALT define the public realm as the street and stormwater management area.



Figure 4 (left), Figure 5 (middle), and Figure 6 right): The levels of public realm within the site are depicted to the right. Figure 4 depicts the traditional public realm, which is comprised of the street, Cannon Drive. This traditional understanding of the public realm does not provide residents with any community open space. Figure 5 integrates the stormwater management area into what is considered public space, providing community members with a potential place to interact and convene. Figure 6 incorporates the front yards of the housing lots as well, creating a semi-public realm which further encourages community interaction. Source: Leah Graham Stewart



Figure 7: The current state of the stormwater management feature. Source: Author

Another reason to facilitate connections and relationships is the need for the neighborhood to be capable of long term management of common spaces beyond construction, such as the stormwater management facility. Traditionally, subdivisions manage public spaces (landscaping for the common areas, maintenance and upkeep of the subdivision's amenities etc) through a homeowners association. These tasks are typically paid for through set yearly fees, which the homeowner agrees to upon purchasing a home within the community. Fees vary depending on the amenities and services provided.

ALT needs to carefully consider how they are going to address the management of the public realm since they are developing this project for low-income homeowners. Instituting a homeowners association with fees may not be financially feasible for some homeowners. The *charrette* students examined two viable options for the management of the public realm:

OPTION 1:

Athens Land Trust could accept responsibility for long-term maintenance into perpetuity as a continuation of the goal to build affordable, quality homes.

OPTION 2:

A neighborhood association to manage the appearance and upkeep of the common spaces. **PROS:**

Gives the power of choice to the people living in the homes, and the necessary meetings provide the foundation for a sense of community in the new subdivision. **CONS:**

Even in market rate subdivisions, much less in affordable housing, homeowners associations frequently fall apart, due to lack of interest and/or financial support.

After considering the two options, the *charrette* recommends pursuing Option 2 for management of the street and stormwater feature. Through the creation of a homeowners association ALT will instill in community members a sense of responsibility about the decisions associated with the maintenance and upkeep of the shared community spaces. Socially, Option 2 provides a formal framework for this idea of community while allowing homeowners to self-regulate and modify the input as needed. While Option1 would be the simplest solution for ALT, realistically the organization does not have the resources or intentions to provide long-term maintenance.

For a homeowners association to function properly ALT will need to establish a fee system to generate funding for the management of the public spaces. Again, the *charrette* students considered two different methods for the fee system to operate.

OPTION 1:

A fee of \$20-\$30 per month per home, to pay a third party maintenance company so someone else maintains the greenspace.

PROS:

A simple, easy and even division of responsibility. **CONS:**

More expensive, and without the side benefits—community building and education.

OPTION 2:

A fee nominal per month per home, with the expectation that people living in the community will provide the labor for the maintenance

PROS:

A cheaper option that provides an opportunity for education. On-site maintenance would become a cash-generating plan, instead of a long-term cash-siphoning plan. **CONS:**

There is a greater chance for inequitable division of labor/energy input.

It is important to note that in every long-term management option, ALT will need to support and/or subsidize the common greenspace maintenance until full occupancy.



Figure 8: Stormwater management area, charrette drawing. Source: Diane Silva and Yifan Sun



SITE ELEMENTS

INTEGRATION OF COMMUNITY & THE NATURAL ENVIRONMENT



Figure 9: A site plan detail of the stormwater management area. Source: Leah Graham Stewart

Integration of Community and the Natural Environment is one of the key tenants of the Athens Land Trust mission. The site consists of 2.68 acres which have been subdivided into 15 lots, ranging in size from 3354–5423 sq. ft. (.077-.124 acres). Due to these constrained conditions there is very little open space for ALT to develop as community space.

This presents a difficulty because, during the design *charrette* process, community members expressed a desire to have an area where they could congregate, start a community garden, or have a
play area for their children. Due to restrictions in the grant ALT received to redevelop this property, they cannot change the number of lots or the general lay out of the site.

That leaves the stormwater management area, and potentially the front yards of the individual housing lots, to be used as community space. While in many ways the small site limits what ALT can do to create community space, it also presents them with an opportunity to creatively develop the stormwater management area in a manner different from many traditional subdivision developments.

The stormwater management area presents both an opportunity and challenge for ALT as they try to integrate the community with the natural environment and also attempt to meet the needs and desires of potential community members.

Currently the stormwater management area acts only as a detention pond. During a storm event the detention pond will collect the drainage from the entire site and hold the water temporarily to prevent site flooding. The infrastructure for the detention pond is complete but no other improvements to the area were completed prior to ALT purchasing the property.

Since it was never planted or well-maintained prior to ALT's ownership substantial work needs to take place in this area. Through creative design and correct planting, ALT can create an area for residents and community members to experience nature.



Figure 10: The existing conditions of the stormwater management area. Source: Author

To further achieve this integration of community and the natural environment ALT should utilize native planting throughout the site. Using native plants throughout the site will benefit residents in multiple ways.

Utilizing native plantings will be a cost saving technique. Since the plants are already established within the local ecosystem, they should grow predictably and not require watering (except during establishment), keeping water costs low for residents. Also, the costs for installing a natural landscape are comparable to traditional methods, but because the natural landscape essentially takes care of itself, there is little to no lifetime maintenance costs. The Environmental Protection Agency estimates the maintenance costs for a traditional lawn to be approximately \$700/yr.

Because native plants already exist within the local ecosystem, maintenance should be tremendously low in comparison to traditional planting methods. Residents should not need to water or care for native species, no raking, mowing, or weeding is required. Because these plants evolved with the local ecosystem, when leaves fall they act as a natural fertilizer while also suppressing weeds.

Native plants provide familiar sources of food and habitat for native wildlife, bringing songbirds and other animals to the site. As our towns and suburbs become more developed, natural habitat is lost and wildlife displaced. Planting species of native grasses, wildflowers, shrubs, and tress will provide a place for native wildlife. This further helps ALT achieve their goal of integrating the community with the natural environment.

The suggested local plants and figures can be found on the following pages.

SUGGESTED NATIVE GRASSES:

- Chapman's Goldenrod (Solidago odora chapmanii)
- Eastern Gamagrass (Tripsacum dactyloides)
- Indian Woodoats (Chasmanthium latifolium)
- Little Bluestem (Schizachyrium scoparium)
- Switchgrass (Panicum virgatum)





Figure 11 and Figure 12 : The recommended native grasses include Chapman's Goldenrod (left) and Eastern Gamagrass (right) Source: Figure 11, Ed Weislo; Figure 12, <u>http://www.tx.nrcs.usda.gov/technical/pmc/images/e_gama_3.jpg</u>



Figure 13, Figure 14, and Figure 15: The recommended native grasses include Indian Woodoats (left), Little Bluestem (middle), Switchgrass (right) Sources: Figure 13, <u>http://www.robsplants.com/plants/ChasmLatif</u>, Figure 14, <u>http://www.northcreeknurseries.com/_ccLib/image/plants/DETA-500.jpg</u> Figure 15, <u>http://www.finegardening.com/CMS/uploadedimages/Images/Gardening/Plants/panicum_virgatum_prairie_fire_awave_sq.jpg</u>,

SUGGESTED NATIVE SHRUBS:

- Ink Berry (Ilex glabra)
- New England Aster (Aster nova angliae)
- Possumhaw (*llex deciduas*)
- Red Buckeye(Aesculus pavia)
- Swamp Rose Bush (Rosa palustris)



Figure 16 and Figure 17 : Ink Berry (left) and New England Aster (right) Source: Figure 16<u>http://www.talltreesgroup.com/llex%20Glabra.jpg</u>, and Figure 17, <u>http://www.beautifulwildlifegarden.com/wp-content/uploads/2010/09/neaster.jpg</u>



Figure 18, Figure 19, and Figure 20: Suggested native shrubs include Possumhaw (left), Red Buckeye (middle), and Swamp Rose Bush (right) Source: Figure 18, http://2.bp.blogspot.com/ umHvYUgP HA/TOZ1YhNno3I/AAAAAAAAAAAABO8/vm6bO0YtR0o/s1600/1+P OSSUM+HAW+HOLLY.jpg, Figure http://2.bp.blogspot.com/-lcgoJHM-19, QIA/TcMEc280I1I/AAAAAAADFg/FZfrGQHDpyw/s1600/IMG 4308.JPG, and Figure 2http://cricket.biol.sc.edu/acmoore/herb/RR/Rosa_palustris2.jpg

SUGGESTED NATIVE TREES:

- Loblolly Pine (Pinus taeda)
- River Birch (*Betula nigra*)
- Winterberry Holly (*llex verticillata*)



Figure 21 (left) and Figure 22 (right): Suggested native trees include Loblolly Pine (left) and River Birch (right). Source: Robert O'Brien



Figure 23: The Winterberry Holly is one of the suggested native trees for site plantings. Source: http://www.my-photo-gallery.com/wp-content/uploads/2010/01/Winterberry-Holly.jpg

ENERGY-EFFICIENT AND AFFORDABLE HOUSING

Creating energy-efficient and affordable housing is the second component of ALT's mission. Examining the table below, the small lot sizes found within the site may be seen as a constraint for designers, but for ALT it helps achieve this portion of their mission. As the cost of living increases, homebuyers are seeking alternatives to traditional housing practices. Large lots and homes increase expenditures and, as a result, homebuyers are purchasing smaller pieces of property and homes with smaller square footages. By reducing both the lot and home size individuals are able to invest their money in other areas of their life.

Lot #	Total Sq. Ft.	Maximum House Footprint (sq. ft.)
1	3516	1170
2	3646	1235
3	4221	1721.5
4	3354	1242
5	3525	1337.5
6	4142	1689
7	5423	2310.5
8	5199	2091.5
9	5247	2115.5
10	4592	2156
11	5076	1776
12	4930	1703
13	3297	1341.5
14	3860	1458
15	5204	2030

Figure 24: Lot sizes & maximum house footprint for Cottages at Cannontown Source: Author

The existing infrastructure is a benefit as it reduces the cost ALT must expend in redevelopment of the vacant lots. When ALT purchased the property the majority of the infrastructure had already been completed. What had not been completed by the previous owners (the final layer of asphalt for Cannon Drive and other minor tasks) will be finished by ALT.

Although this also limits the redesign of the site, the existing infrastructure should be viewed as an asset, allowing ALT to invest money into other vital areas and making this development process truly affordable. If ALT had to finance, purchase, and develop the project from the start it would be impossible to construct a development of this size on a truly affordable level.



Figure 25: At the time of purchase the majority of the infrastructure had already been installed within the development. Source: Author

NEIGHBORHOOD REVITALIZATION

By connecting individuals and the natural environment through the preservation of land and the creation of energy-efficient and affordable housing, ALT helps foster neighborhood revitalization. Statistically, vacant and un-built development increases undesirable activities within an area. Easy access, lack of neighbors, and deserted streets can all be attributed to increased crime within a community with abandoned properties. Redeveloping vacant properties removes the access individuals have to vulnerable properties. Further, the neighborhood is strengthened through the



Figure 26: An aerial photograph showing the early stages of construction at Cottages at Cannontown. Source: GoogleMaps

addition of permanent homeowners who will care for and take pride in their investments. Additionally, through the community land trust (CLT) model, the ALT ensures that the properties will remain affordable and ensure that there will always be a community of consistent homeowners within the neighborhood.

By implementing connectivity measures through the sites redevelopment, it can help create and encourage connectivity within the greater community. In many urban situations, connectivity through means other than automobile transportation has not been a priority. As fuel prices continue to increase and alternative transportation methods are prioritized by the government, connectivity within communities is going to become increasingly important. Through implementing thoughtful connectivity choices in a redevelopment, ALT can help increase access to services, encourage alternative transportation, and provide safe routes for the community.

Cottages at Cannontown is located less than half a mile from the local elementary school, Boys & Girls Club, a city park, pharmacies, a grocery store, and other amenities. Additionally, two bus lines stop within a block of the site; with two major centers of employment (the downtown district and the industrial park) are both within a mile. Taking note of these connections and ensuring connectivity with the site will be vital to the success of the project.





Figure 27: A map representing neighborhood services found within close proximity to the site. These services include: A—Department of Labor Center; B—Cottages at Cannontown site; C—Springfield Village Church Parking Lot; D—Springfield Baptist Church; E—Boys & Girls Club of Athens; and F—Howard B. Stroud Elementary School. Source: Leah Graham Stewart

EXISTING SITE CONDITIONS

The Site:

- 2.68 acres
- 15 lots (3297 5423 sq. ft/lot)
- Maximum Lot Coverage: 1648.5 2711.5 sq. ft.
- Partially completed infrastructure
- Single cul-de-sac

The Outcome:

- 15 single – family homes available for purchase by low-to-moderate income first-time buyers.



Figure 28: A composite site plan for Cottages at Cannontown, created from student charrette work. Source: Author

CHAPTER 5

LANDSCAPE ELEMENTS

The landscape choices for Cottages at Cannontown will impact the overall design, sustainability, and usability of the development. Because the site was partially developed when ALT acquired the property there are certain existing conditions which will need to be mitigated and redeveloped into an asset for the site. These conditions include the diameter of the cul-de-sac, which, at 96' in diameter, is disproportionately large for such a small development, leading to a lack of human scale. A second design challenge is the stormwater management feature. In its current state it sits undeveloped and is a missed opportunity to provide a common and open space for community members to utilize. A final design challenge is the street and streetscape. The cartway is 36' wide leaving the area to feel out of scale. Additionally, the planting strips are noncontiguous, and with the large cartway, the streetscape feels unwelcoming.

CUL-DE-SAC DESIGN



Figure 29: A panoramic view of the Cannon Drive cul-de-sac. Source: Author

Design Challenges:

- Cul-de-sac diameter (96')
- A lack of human scale

Requirements:

- One on street parking spot must be provided for each house on the cul-de-sac
- Center installation may not interfere with the drivelane or required on street parking

Design Solutions:

- Create a public art & play area
- Develop a planting area with a rain garden

With a diameter of 96 feet, the cul-de-sac of Cannon Drive seems disproportionately large and results in a space that seems to lack any human scale. These conditions present a unique challenge for ALT and potential designers. County regulations for subdivision design, requirements for on street parking, and international fire code dictate the size of the cul-de-sac. Even without the regulations it would be cost prohibitive to reduce in size. Two designs generated at the *charrette*, present possible mitigation methods.



Figure 30: This plan drawing, from the student *charrette*, shows a potential design for the cul-desac rain garden. Source: Diane Silva and Yifan Sun The first design solution proposes the installation of a rain garden within the center of the culde-sac. This will help mitigate stormwater runoff, create a more human scale for the space, and allow ALT to bring a more natural environment into the cul-de-sac design. This integration speaks to their desire to provide a more natural environment for community members.

Additionally, through the use of native and low or no maintenance plants, ALT can integrate more of the natural environment into this constrained site. Additionally, native and low or no maintenance plants should require little maintenance from community members or ALT. Through an innovative design such as this, ALT can humanize the scale of the cul-de-sac while also creating a mechanism to assist in stormwater management for the site.



Figure 31: This section from the student *charrette* examines how a rain garden would spatially work in the cul-de-sac. Source: Yuan Hong

Using the cul-de-sac as an area for public art and/or an area for children to play will create a sense of place for the community. Public art can enhance public spaces, transforming the areas where we live and play into places that encourage creativity and foster community engagement and interaction. The small scale of the site and other limiting factors leave neighborhood children with little space to play but developing the cul-de-sac as a play area will mitigate this constraint and provide a common community space.



Figure 32: This photomontage from the student *charrette* incorporates local Athens artist and designer Lou Kregel's Chrysanthemum stencil into the cul-de-sac center. Source: Lara Mathas

Developing the cul-de-sac as a space for the community to congregate and play brings up valid concerns regarding the safety of the space in relation to vehicular traffic. Cannon Drive is a short residential street with a low number of homes serviced. This combination allows ALT to consider nontraditional street uses, such as a Shared Street and the Netherlands woonerf. In a woonerf the standard street hierarchy is reversed. Motorists are limited to traveling at a speed no greater than a pedestrian and are legally required to yield the right of way to bicyclists and pedestrians. The Shared Street concept has evolved out of this idea although all users are considered equal. They aim to provide a better balance of the needs of all road users to improve safety, comfort, and livability.



Figure 33: This photomontage from the student *charrette* incorporates local Athens artist and designer Lou Kregel's Chrysanthemum stencil into the cul-de-sac center. Source: Lara Mathas

The Shared Street method works by eschewing many of the traditional roadway treatments such as curbs, signs, and pavement markings, resulting in the distinction between different transportation modes being blurred. This introduces a level of uncertainty amongst street users that heightens their sense of awareness and requires caution and interaction with one another. These factors help to create an environment that is more comfortable, particularly for vulnerable road users who benefit from slower motor vehicle travel speeds and more attentive motorists.

With the creative use of on street planters, road painting, and other visual cues, Cannon Drive can be transformed as an area for public art & and play. This transformation will help ALT with their mission of neighborhood revitalization, creating an area where the community can congregate and interact.

STORMWATER MANAGEMENT AREA

Design Challenges:

- Aesthetics, functionality, and safety of space
- Community desire for diverse uses in a small space

Requirements:

- Provide common space for community members
- Topography cannot be modified

Design Solutions:

- Attractive and functional plants for water retention area
- Low maintenance design (low cost for homeowners)
- Scalable design for common space



Figure 34: The disproportionate scale of the stormwater feature can be seen in relation to the person standing on the sidewalk near the cul-de-sac (top center). Source: Author

The stormwater management area is one of the few areas of the site which can be utilized by community members as open space. Currently though it functions solely as a stormwater management area and is a missed opportunity for use as an area for the community to congregate. Instead of being a community asset, it is a liability as it is being used for dumping of garbage. Through careful and thoughtful design ALT can redesign the stormwater feature into a common space for the community.



Figure 35: The stormwater management feature has been utilized as a dump site while the site remains undeveloped. Source: Author

Through the initial public workshop that informed the *charrette* process, potential community members expressed a desire for an area where they can interact with one another. Due to the lack of open space *charrette* participants sought to find a creative way to integrate the desire for community space within the stormwater feature.

This design utilizes the storm water detention facility already on site to provide a common area for residents as well as to create connections to the community. The rain garden is designed to have four components:

> A walking path circling the perimeter of the detention pond providing for exercise, seating, and views.

- A boardwalk to a deck in the center of the detention pond which can be used to view birds and other wildlife. The deck features a recessed area for seating. There is also a cut out in the middle of the deck to observe plant and wildlife from above.
- A deck projecting out from the slope in the back of the lot provides a large space, which can accommodate all residents comfortably. Seating is available and there is also potential to install raised planting beds to serve community garden needs.
- Along the side of the rain garden a path has been created to connect the development to 4th Street and the amenities available there.



Figure 36: Stormwater management area, plan view, *charrette* drawing. Source: Diane Silva and Yifan Sun



Figure 37 (left) and Figure 38 (right): In the drawing on the left, the *charrette* sketch shows a section view of center deck show the integration of community and nature desired by ALT. In this sketch from the *charrette*, the issue of privacy screening between lot 10 and the stormwater feature are addressed. Source: Diane Silva and Yifan Sun

Although interrelated, each part serves a unique function and is designed to be separated. Because of this one or more of the components may be developed depending on community needs and available funding. Plant selection and placement is based on a goal to achieve little to no required maintenance. It is also advised that affordable and low maintenance materials be explored (like Trex) for the construction of the decks.



Figure 39: This panoramic sketch from the *charrette* highlights how thoughtful landscaping and design can substantially change the use and feel of an area. Source: Diane Silva and Yifan Sun

<u>STREETSCAPE</u>

Design Challenges:

- Large cartway of 36 feet
- Noncontiguous planting strip

Requirements:

- Comply with Athens-Clarke County Tree Species
- Plantings of 1 tree per 30' of lot frontage

Design Solutions:

- Installation of additional planting strips on street
- Planting of street trees in the 15 foot front yard setback & utility easement. (Careful thought needs to be given to where the trees are planted, as they should not interfere with the underground utilities.)

The design of a street is directly related to how people will make use of the street and the space it provides. When considering the livability of a neighborhood, streets are one of the key components, as they provide access to community services and other community members. They are utilized by a large range of users, from pedestrians to fire trucks, and therefore they must be able to service these users adequately.

In a residential setting the street should provide a place for neighbors to interact, for children to play and serves as a way of connecting the community. These are the types of uses community members desire from their street but rarely receive. Often, residential streets are designed with other goals in mind; the amount of on street parking required, the ability of emergency service vehicles to quickly reach a destination, and the ease at which other large vehicles, like school buses or delivery trucks, can maneuver the road. While these are vital services and concerns, there needs to be a better balance between the regulations and the desires of residents.

Cannon Drive is cul-de-sac which is 400 feet in length and has a cartway of 36 feet in areas where there is no planting strip and 24 feet where one exists. The existing planting strips only occur along the first one and a half lots of the street, leaving the majority of the street feeling extremely wide, and as a result, unwelcoming.



Figure 40: The addition of movable play equipment, like this basketball hoop pictured to the left, provides not only an area for children to play, but also acts as a visual cue to vehicles that the roadway is a shared space. Source: http://smartgrowthusa.files.wordpress.com/2010/10/bellevuecollectionbasketballhoop.jpg

In an effort to humanize the street, while meeting the regulations for on street parking, the *charrette* identified three additional places planting strips could be installed. Further, the *charrette* suggested planting additional trees in the front yard setback and utility easement where planting strips do not exist. The front yard plantings need to be carefully considered and the best spots located as to not interfere with underground utilities.

Streets are the vein of a community, providing the structure around which the community is formed. The short length of Cannon Drive, combined with the wide road width leaves the road feeling cold and unwelcoming. To mitigate this feeling, the *charrette* determined that adding 3 additional planting strips along the roadway will help to break up the asphalt and bring the street back to a more human scale. Further, continuing the planting of trees in the front yard setback and utility easements of lots without a planting strip further lessens the barren appearance of the street.

This effort, combined with the modification to the cul-de-sac, will transform the streetscape into a place where neighbors interact and children play. The benefits of this are twofold, play space for children can be realized and the street is transformed into a welcoming environment. One of the pieces of information learned during the *charrette* was that potential community members desired a space for their children to play. Due to the small size of the original parcel, no proper play space could be incorporated, but by reclaiming the steetscape and making it not just a place for vehicular travel, children can have an area in which they can play.



Figure 41: Streetscape planting strips and on street parking plan, charrette drawing.



Figure 42 (left) and Figure 43 (right): Street Cross Section, Charrette Drawing. Source: Yaun Hong

The suggested street trees found on the following page comply with the Athens-Clarke County Tree Species List. When selecting appropriate trees, the recommended use, fall leaf color, and if the tree is native to Athens should be taken into consideration. The Fall Leaf Color classification of BR (bronze or brown) MU, (multi-colored: maroon, red, orange, yellow), RE (red) and YE (yellow) were selected as well as trees that are appropriate for street and yard road frontage. The ACC Tree Species List is intended to support the development code, site planning and design activities for tree conservation and establishment, and tree maintenance planning and decision-making. The suggestions provided below are not all encompassing and should serve as a guide with the above mentioned classifications being met.



Figure 44: Photographic representation of tree species with fall foliage similar to the BR, MU, RE, and YE classifications. Source:

http://www-personal.umich.edu/~jensenl/visuals/album/2009/fall/IMG 5414.jpg

Requirements:

- Maximum distance apart: 30'
- Fall leaf color classification of MU (multi-colored), RE (red), or YE (yellow)

Cannon Drive:



Figure 45: American Hornbeam *Carpinus caroliniana*



Figure 46: Overcup Oak Quercus lyrata



Figure 47: Southern Red Oak *Quercus falcate*

Figures 96-102 source: Robert O'Brien



Figure 48: Willow Oak Quercus phellos



Figure 49: Winged Elm *Ulmus alata*

Bray Street:



Figure 50: Southern Sugar Maple Acer barbatum



Figure 51: Southern Red Oak *Quercus falcata*

YARD DESIGN

Front Yard:

Suggested Ground Cover:

- Flower beds at the base of house
- Grass or mulch lawns
- Low to no maintenance when possible



Figure 52 (left), Figure 53 (middle), and Figure 54 (right): All three of these images utilize different methods of low to no required maintenance planting. Figure 52 (left) takes advantage mulch and low required maintenance planting such as ferns, bushes, and monkey grass. The yard in the right (Figure 54) is more manicured, but still utilizes low required maintenance planting, and Figure 53, in the center, chose to leave the yard undisturbed from its natural state of hardwoods and pines. Source: Author

Side Yard:

Suggested Ground Cover:

- Low to no maintenance plants in conjunction with privacy plantings With Shared Driveway (Lots 2—9, 11, 12, 14, and 15)
 - Native shrubs line the house between the driveway and building footprint

Without Shared Driveway (Lots 3, 10, and 13)

- Buffers and screening plants to provide privacy between houses



Figure 55 (left), Figure 56 (middle), Figure 57 (right): All three of these images depict different methods for providing privacy screening when houses are sited close together. In the figures on the left and the middle, a combination of a fence and plantings provides attractive screening for both residences. The image on the right makes use of yard plantings to provide privacy. Source: Figure 55, Author, Figure 56, <u>http://www.flickr.com/photos/73836712@N00/473629451/in/photostream/</u>, Figure 57, Author

Rear Yard:

Suggested Ground Cover:

- Grass or mulch lawns
- Low to no maintenance if desired by home owner
- Trees or other planting combined with rear edge of property to provide privacy screening
- Use existing tree canopy where possible
- Select native trees where replanting is necessary



Figure 58 (left), Figure 59 (middle), Figure 60 (right): All three of these images depict different methods for the rear yard landscape. Utilizing fencing and creative plantings can provide necessary privacy screening from neighbors. Figure

58<u>http://www.flickr.com/photos/7282451@N02/4193339062/sizes/z/in/photostream/</u>, Figure 59, <u>http://www.flickr.com/photos/cutiemoo/4756091285/sizes/l/in/photostream/</u>, and Figure 60, <u>http://www.flickr.com/photos/christoc/7972676/sizes/l/in/photostream/</u>

The design of the driveways is as significant as the design of the lots. Permeable pavement and pavers are an ideal alternative to traditional methods of driveway paving. The permeable paving filters and drains stormwater back into the soil rather than creating stormwater runoff. Additionally, permeable pavement can help recharge groundwater supplies and filter pollutants on site rather than through stormwater treatments facilities. This helps keep water on the site and can reduce the amount of watering a homeowner must do for their lawn and planting.

Increasingly, municipalities and government agencies are recommending or requiring the use of permeable paving in new developments. Although the initial install of permeable paving and pavers is more expensive than traditional concrete or asphalt, the expense is recovered over the life of the paving system. Traditional concrete has a tendency to expand and crack in extreme temperatures



Figure 61 (left) and Figure 62 (right): On the left, pervious concrete allows water to seep through to the ground and can be used for driveways and low intensity streets. To the right, Grasspave2 porous pavement that performs the functions of asphalt or concrete while allowing you to park, drive, walk and ride on its surface. Source:

Figure 61<u>http://www.bcconcrete.com/index.php/engineersarchitects/pervious-concrete</u> and 62<u>http://www.invisiblestructures.com/images/gp2cross290.jpg</u>

because permeable pavers are install with space between them, they can expand and retract without

damage. Further, if a paver does become cracked that individual piece can be replaced.

Suggested Materials:

- Interlocking Concrete Pavers (<u>http://www.icpi.org/node/554</u>)
- Grasspave² (<u>http://www.invisiblestructures.com/grasspave2.html</u>)
- Pervious concrete (<u>http://www.concreteparking.org/pervious</u>)



Figure 63: Concrete pavers are used to create a permeable driveway to minimize stormwater runoff. Source: Author

CHAPTER 6

ARCHITECTURAL ELEMENTS

MASSING

Massing refers to a building's aspect ratio (relationship of height to width), size, and shape. Additionally, architectural elements such as building facade, fenestration choice, and rooflines, as well as interior floor plans can affect building mass. These components are influenced by the building's use, as well as the site constraints, both legal and physical (zoning height limitations, required setbacks, site topography, etc), as well as the scale of existing adjacent buildings.



Figure 64: The mixture of materials in this contempary cottage uses multiple massing techniques to provide ample natural light. Source: <u>http://rafirafi.com/wp-content/uploads/2009/12/modern-single-family-house.JPG</u>



Figure 65: The above diagram shows different methods of passive solar design. Source: <u>http://www.energysavers.gov/your_home/designing_remodeling/index.cfm/mytopic=10270</u>

Massing also refers to how a building's design can be used to optimize passive heating and cooling strategies and resource efficiency. Passive heating and cooling strategies can be implemented through the choice of building materials so that the space gradually absorbs heat throughout the day and releases the heat throughout the night. Massing can also be used to deflect prevailing winds or to optimize natural ventilation. Through careful consideration of these elements ALT can encourage affordable, creative, and sustainable housing for the residents of Athens-Clarke County.



Figure 66: The above graphic represents an ideal floor plan for a passive solar design home. Arranging the most utilized rooms in the suns path allows them to capture and store energy during the day and release it at night. Source: <u>http://www.house-energy.com/Landscape/Orientation.htm</u>

Using techniques like passive solar design can make a significant difference in the livability and energy costs associated with heating and cooling a home. According to the book <u>Sustainable</u> <u>Construction: Green Building Design and Diversity</u>, "passive solar design is the design of a building's heating, cooling, lighting, and ventilation systems relying on sunlight, wind, vegetation and other naturally occurring resources on the building site." This differs from active solar systems (such as solar panels) as passive solar systems do not involve the use of mechanical or electrical devices, fans, pumps, etc.



Figure 67: This ALT home utilizes passive solar design strategies to increase the affordability of the structure. By utilizing thoughtful fenestration, massing, and orientation choices, required energy expenditures for the homeowner are minimized. Source: Bork Architectural Design

The book continues to discuss the two major components of passive solar design as "1) the use of the building's location and site to reduce the building's energy profile and 2) the building

design itself—its orientation, aspect ratio, massing, fenestration, ventilation paths, and other measures."

Orienting the long side of a house on an east-west axis minimizes the amount of sunlight on the building surfaces, which in the south is especially important during the warmer months. Further, using a building aspect ratio where the building is longer than it is wide will minimize the exposure of east and west surfaces. This is coupled with few windows on these faces reducing exposure to high morning and afternoon solar loads.



Figure 68: The front porch is an important meeting place for community interaction. Source: Rural Studio, Auburn University

When applied appropriately, passive solar design can reduce energy costs as much as 30%. Sometimes it can be difficult to achieve the correct orientation in a pre-plotted subdivision. This is also an issue that smaller urban lots face where the street position and the tradition of housing fronting the street dictate the layout. ALT and Cottages at Cannontown are challenged with both these issues. The lots are small scale and because the site was pre-plotted before ALT acquired it, the lot configuration could not be changed.

In situations such as these it is especially important to utilize the other components of passive solar design, such as massing, fenestration, and ventilation paths to construct as efficient a building as possible. In doing so ALT will construct a community that emphasizes efficient, sustainable, and thoughtful design.

After World War II there was a shift in focus to the back of the house, the backyard, with its fences and screened in porches offering people privacy as they socialized with friends and family. The past few decades have seen a shift away from this model, with more homeowners and architects embracing the concept of the front porch once again. In a world that often revolves around technology and automobiles, a front porch is an area within a neighborhood that may facilitate interaction between community members.



Figure 69 (left) and Figure 70 (right): These above images represent unsuitable front porch designs as there is no room for individuals to congregate; it the porch serves as a front stoop. Source: <u>http://www.bradpostbuilder.com/maine-contractor-new-house.htm</u>

The front porch acts as a transitional area between the privacy of one's home to the public community outside their front door. The physical space of the porch is personal to the homeowner, while also welcoming to friends and strangers. People will sit on their front porch in order to interact with their neighbors as they come and go and its use serves as a way to connect individuals to the street and, as a result, the neighborhood and community in which they live.



Figure 71: The siting of the house and design of the porch play a pivotal role in facilitating community interaction. Siting the house too deep on the property, or design a porch that cannot be utilized for gathering will discourage interaction between neighbors. Source: http://library.byways.org/assets/76103

In order to facilitate this type of interaction, though, the porch must be constructed to be usable and welcoming as opposed to a front stoop which cannot comfortably accommodate seating or entertaining. Porches should be a minimum of 6 feet wide, be able to accommodate comfortable seating, and be oriented to the neighborhood. Each of the prototypes developed for the lots with ALT's subdivision include porches to this standard.

Fenestration is the design and arrangement of openings in a building envelope, such as windows, doors, and skylights. Their arrangement and size can have a substantial impact in both reducing energy costs and achieving physical and psychological benefits for the building occupants. Research in commercial and office buildings has shown that spending and productivity can increase anywhere from 10-30% with increased daylighting. While this research examines commercial and office spaces, the same logic can be applied to residential structures. Current research suggests that illnesses decrease and an improved sense of well-being occurs with appropriate daylighting and fenestration of a structure. This is achieved through innovative techniques designed to redirect sunlight or skylight to areas it is required without creating a glare.



Figure 72: This graphic show the manner in which different passive solar design techniques work together. Through utilizing operable windows and the clerestories in this model provide both natural daylight and ventilation. Source:

http://continuingeducation.construction.com/article.php?L=120&C=423&P=3

A balance must be achieved though between daylighting and trade-offs in energy efficiency. While adding additional natural light to a building is beneficial, there should not be an increase in energy expenditures to cool the building as a result. Additionally, skylights, windows, and other lighting features in comparison to traditional construction can be more expensive, and should be taken into consideration during the design process. The ultimate goal is to build high quality affordable housing.

ACC design standards require that all walls facing public right-of-way provide a minimum of 20% fenestration, defined as both window and door openings. This requirement will affect the front facade for all lots and housing prototypes as well as the western side elevations of lots 1 and 15.



Figure 73: The above graphic shows how a house can be oriented to take advantage of the suns natural light. By orientating the house on an east-west axis building receives maximum sunlight morning, noon, and night. Source:

http://www.google.com/url?sa=t&source=web&cd=1&ved=0CBYQFjAA&url=http%3A%2F%2Fphobo s.ramapo.edu%2F~bmakofsk%2Fenergysociety%2FPassive%2520Solar%2520Design.ppt&ei=-0ruTcaGGZSjtgfjr72cCQ&usg=AFQjCNGxM2r7_VVjrqziaD6SGJteYR57Dg

Clerestories are any high window above eye level which allows natural light into a space.

Clerestories are able to provide ample light to a room and typically reduce the need for traditional

lighting during the day. Further, the height of clerestories works to their benefit. They provide natural light to a room while restricting views, which can be helpful for sites that do not have pleasant surroundings as well as providing privacy for the user.

Economically, clerestories help in solar heat gain, which results in savings in energy expenditures, and are often used in passive solar design. Often, the south side of the building receives the most sunlight and therefore maximizing south-facing windows aids this process. During the day the sun shines through the clerestories, heating the walls and floors of the house. During the night the heat that was absorbed is slowly released providing the house with heat when it is most needed.

For southern locations, having too much sunlight during the summer months can be an issue, luckily there are many design features to keep passive solar designs cool during these times. For instance, overhangs can be designed to shade the windows when the sun is high in the summer. For this site west facing clerestories should be avoided. Additionally, they are more suitable for the singlestory prototypes in which solar gains may be more efficiently maximized.



Figure 74 (left) and Figure 75 (right): This modern infill on the left utilizes both clerestories and roofline overhangs in its design. The clerestories increase natural light within the interior of the house, while the overhangs provide shade and prevent excess heat during the summer. On the right, the interior of this room is lit by natural light from the clerestories, thereby reducing electrical costs. Source: Figure 74, Author and Figure 75, Bork Architectural Design.
The roofline of a house serves as a major structural and architectural design element and helps to define the structure. A variety of rooflines are permitted and encouraged within the development but must be consistent with Athens-Clarke County regulations, which prohibit flat roofs on the primary structure; establish a maximum building height of 30 feet; and increase minimum rear setback by 1 foot for every foot over 20 feet. Specifically, lots 3, 4, 5, 6, 11, and 13 all need to be closely watched for the 20 foot maximum height as these lots are the smallest in width. Overhangs or deep eaves are encouraged on appropriate prototypes as they provide essential shade and can be aesthetically pleasing. When possible, designers should tuck the second story into the roofline.



Figure 76: The roofline of the Patrick House is both creative and cost effective, as breaks are minimized. Source: http://www.flickr.com/photos/samuelmockbeedotcom/3902552696/sizes/m/in/photostream/

Additionally, a variety of rooflines within the cul-de-sac will help differentiate the various housing prototypes, providing the neighborhood with a more organic and natural design pattern, preventing the cookie-cutter feeling that many new subdivisions possess. While a variety of rooflines

is encouraged, consideration needs to be given to the increased cost implications associated with a more complex roof. Sometimes, simple front and side gables, as well as a single shed roof, are the most logical designs to pursue from a cost perspective. That being said, designers are encouraged to be creative with their designs and explore ways to increase variety while keeping the costs affordable.



Figure 77: The Harris House, Rural Studio, 1996—1997 Source: http://ephemeralspaces.blogspot.com/2008/01/harris-butterfly-house-rural-studio.html

RECOMMENDED MATERIALS

Building Façade:

- Siding Choice
 - 80—90% should be of durable material with a 30 year warranty
 - No masonite, synthetic stucco, or vinyl

	MATERIALS	PROS	CONS	SUSTAINABILITY CONSIDERATIONS
		1. Extremely	1. Low recycled	1. Use locally
1	Fiber Cement Siding	durable	content	produced products
		2. Low	2. Non-certified	
		3 Weather	imported wood	
		resistant	3. High embodied	
		4. Relatively low	energy	
		cost	4. CO2 produced	
			in manufacturing	
2	Hardboard/ Engineered Siding	1. High recycled	1. Durability can be	1. FSC certified
		content	an issue with	products available
		2. Renewable	some products	2. Investigate
		resource	2. Potential off-	Component materials
		3. Relatively low	gassing	for toxicity and
		cost	3. Possible VOC	recycled content.
			pollution during	
		1. D	manufacturing	
3	Wood Siding	I. Renewable	1. Requires frequent	1. Specify FSC certified
		resource	maintenance or	materials
		2. Locally	replacement	2. Use reclaimed or
		available	2. Relatively nigh	salvaged
		5. Relatively low	COSIS	
		COSL		possible
		1. Very durable	1. CO2 produced in	1. Confirm recycled
		2. Relatively low	manufacturing	content of metal lath
4	Cement Stucco/ Metal Lath	cost	2. High embodied	2. Fly ash can be added
			energy	to reduce Portland
				cement content and
				CO2 production
5	Metal Siding	1. Very durable	1. High embodied	1. Confirm recycled
		2. High recycled	energy	content
		content	2. Water and air	
		available	pollution created	
			in manufacturing	
		I. Kenewable	1. Durability can be	1. INO FSC Certified
6	Plywood Siding	2 Relatively low	an issue	2 Look for
		2. Relatively low	2. Orien contains	2. LOOK IOF
		2 Dimonsionally	phenoliormaldenyde	free products
		s. Dimensionally	2 Uses more mature	nee products
		SLODIE	5. Uses more mature	
			uees	

Figure 78: The chart depicts different siding choices, ALT's preference, and the pros and cons of each. Source: Author



Figure 79: The use of corrugated metal as siding on this modern shotgun by Auburn University's Rural Studio is both cost effective and durable. Source: <u>http://www.architecture-view.com/2010/09/04/interesting-rural-studio%e2%80%99s-green-design/rural-studio-simple-design/</u>

The material choice for the roof of a house not only an aesthetic choice but also has both economic and environmental implications. Traditional asphalt shingles need to be replaced every 12-20 years. Not only are asphalt shingles costly to replace, but they cannot be recycled. Further, according to the National Association of Homebuilders Research Center, 20 billion pounds of asphalt shingles are disposed of in U.S. landfills each year.

An alternative to traditional roofing material is a metal roof. Metal roofing has historically been used in the southeast and has both environmental and economic benefits. While the initial cost of a metal roof is more expensive than other roofing materials in the long run the homeowner saves money. This is because a metal roof has a true warranty of 30 to 50 years. Additionally, modern metal roofs are typically comprised of recycled metals and can actually reduce heating and air conditioning costs as they are excellent insulators.



Figure 80: The tin roof of this home is durable and a suggestion for ALT new construction. While the initial cost is high that money will be earned back over the roofs lifetime in both energy and repair savings. Source: Author

Metal roofs come in a variety of colors and styles. Light colored roofs are encouraged, as they will reflect more sunlight. In order to keep costs to a minimum, consider the roofing material while designing the roofline. The fewer breaks there are in the roofline, the more affordable a metal roof will be.

HOUSING PROTOTYPES

Prototype 1

Building Setbacks:

- Front—15' (Front porch cannot encroach due to utility easement)
- Side—0' (10' adjacent to street)
- Rear—10' (+1 ft/foot of building height over 20')

Building Features:

- Envelope—Approximately 24' x 42'
- Square feet—Approximately 860 sq. ft.
- Stories—1
- Bedrooms—2
- Bathrooms—2 minimum
- Accessibility—Full (Universal Design)
- Floor plan—open floor plan for living spaces



Figure 81 (left) and Figure 82 (right): Developed at the design *charrette*, the building footprint, left, and the front elevation, right for prototype 1 are shown above. Source: Architectural Elements Group Architectural precedents:



Figure 83 Source: http://www.tndtownpaper.com/Volume9/katrina_cottage_ramp.jpg



Figure 84 Source: http://www.oxfordmississippi.com/popping-in-puddin-place-bed-breakfast/

Figures 83 and 84: Although larger than a typical Katrina Cottage, the concept of prototype 1 is to provide a font porch for community interaction and fully accessible universal design for homeowners. Both lots 11 and 14 are long and narrow and well suited for this design.



Figure 85: Recommended lots for prototype 1. Source: Author

Lot Information:

Lot 11

- Size—Large (5076 sq. ft.)
- 50% lot coverage—2538 sq. ft.
- Shape—Atypical (Triangular)
- Driveway—762 sq. ft.
- Maximum house footprint—1776 sq. ft

Lot 14

- Size—Small (3860 sq. ft.)
- 50% lot coverage—1930 sq. ft.
- Shape—Typical (Quadrilateral)
- Driveway—472 sq. ft.
- Maximum house footprint—1458 sq. ft

Prototype 2

Building Setbacks:

- Front—15' (Front porch cannot encroach due to utility easement)
- Side—0' (10' adjacent to street)
- Rear—10' (+1 ft/foot of building height over 20')

Building Features:

- Envelope—Approximately 24' x 40'
- Square feet—Approximately1300 sq. ft.
- Stories—1.5
 - Ground floor: 960 sq. ft.
 - Additional floor: 340 sq. ft.
- Bedrooms—3
- Bathrooms—2 minimum
- Accessibility—ADA compliant desired on first floor
- Floor plan—Master bedroom downstairs and two bedrooms upstairs. One bathroom on each floor. Includes dormer.



Figure 86 (left) and Figure 87 (right): Developed at the design *charrette*, the building footprint, left, and the front elevation, right for prototype 2 are shown above. Source: Architectural Elements Group

Architectural precedents:



Figure 88 Source: Athens-Clarke County Infill Study



Figure 89 Source: Author

Figures 88 and 89 represent architectural precedents for prototype two. This style cottage allows for an additional half floor, either in the form of a walk-out basement or loft.



Figure 90: Recommended lots for prototype 2. Source: Author

Lot Information:

Lot 2

- Size—Small (3646 sq. ft.)
- 50% lot coverage—1823 sq. ft.
- Shape—Typical (Rectangular)
- Driveway—588 sq. ft.
- Maximum house footprint—1235 sq. ft

Lot 6

- Size—Medium (4142 sq. ft.)
- 50% lot coverage—2071 sq. ft.
- Shape—Atypical (Triangular)
- Driveway—382 sq. ft.
- Maximum house footprint—1689 sq. ft

Lot 12

- Size—Medium (4930 sq. ft.)
- 50% lot coverage—2465 sq. ft.
- Shape—Typical (Quadrilateral)
- Driveway—762 sq. ft.
- Maximum house footprint—1703 sq. ft

Lot 15

- Size—Large (5076 sq. ft.)

- 50% lot coverage—2538 sq. ft.
- Shape—Typical (Quadrilateral)
- Driveway—572 sq. ft.
- Maximum house footprint—1703 sq. ft

Prototype 3

Building Setbacks:

- Front—15' (Front porch cannot encroach due to utility easement)
- Side—0' (10' adjacent to street)
- Rear—10' (+1 ft/foot of building height over 20')

Building Features:

- Envelope—Approximately 24' x 40' with 6' x 18' offset in two opposite corners
- Square feet—Approximately1300 sq. ft.
- Stories—2
 - Ground floor: 968 sq. ft.
 - Additional floor: 332 sq. ft.
- Bedrooms—3
- Bathrooms—2 minimum
- Accessibility—ADA compliant desired if master bedroom is on entry level
- Floor plan—One bedroom on each of the two floors with master bedroom on the entry level.
 If there is a walkout basement, the entrance is on the top floor. If it is a true 2 story building the entrance is on the bottom floor.



Figure 91 (left) and Figure 92 (right): Developed at the design *charrette*, the building footprint, left, and the front elevation for lots 7 and 9 (right), for prototype 3 are shown above. Source: Architectural Elements Group



Figure 93: Developed at the design *charrette* this sketch shows the front elevation of prototype 3 recommended for lots 8 and 10. Source: Architectural Elements Group

Architectural precedents:



Figure 94: Source: http://www.moma.org/interactives/exhibitions/2010/smallscalebigchange/images/projects/house vii i daves house/3/Slideshow/1.jpg



Figure 95: Source: Bork Architectural Design



Figure 96: Recommended lots and building orientation for prototype 3. Source: Author

Lot Information:

Lot 7

- Size—Large (5423 sq. ft.)
- 50% lot coverage—2711.5 sq. ft.
- Shape—Typical
- Driveway—401 sq. ft.
- Maximum house footprint—2310.5 sq. ft

Lot 8

- Size—Large (5199 sq. ft.)
- 50% lot coverage—2599 sq. ft.
- Shape—Typical
- Driveway—508 sq. ft.
- Maximum house footprint—2091.5 sq. ft

Lot 9

- Size—Large (5247 sq. ft.)
- 50% lot coverage—2623.5 sq. ft.
- Shape—Atypical
- Driveway—508 sq. ft.
- Maximum house footprint—2115.5 sq. ft

Lot 10

- Size—Medium (4592 sq. ft.)
- 50% lot coverage—2465 sq. ft.
- Shape—Typical
- Driveway—309 sq. ft.
- Maximum house footprint—2156 sq. ft

Prototype 4

Building Setbacks:

- Front—15' (Front porch cannot encroach due to utility easement)
- Side—0' (10' adjacent to street)
- Rear—10' (+1 ft/foot of building height over 20')

Building Features:

- Envelope—Main section approximately 18' x 36', first floor expansion approximately 16' x 18'
- Square feet—Approximately1300 sq. ft.
- Stories—1
- Bedrooms—3
- Bathrooms—2 minimum
- Accessibility—Full (Universal Design)
- Floor plan—Open floor plan for living spaces



Figure 97 (left) and Figure 98 (right): Developed at the design *charrette*, the building footprint, left, and the front for prototype 4 are shown above. Source: Architectural Elements Group



Architectural precedents:

Figure 99 Source: Author



Figure 100 Source: Athens-Clarke County Infill Study

In Figures 99 (top) and 100 (bottom): The L-shaped floor plan of this house allows increased square footage while providing a suitable location for a front porch, an important component of community interaction.



Figure 101: The recommended lots and building orientation for prototype 4. Source: Author

Lot Information:

Lot3

- Size—Medium (4221 sq. ft.)
- 50% lot coverage—2110.5 sq. ft.
- Shape—Typical
- Driveway—389 sq. ft.
- Maximum house footprint—1721.5 sq. ft

Lot 4

- Size—Small (3354 sq. ft.)
- 50% lot coverage—1667 sq. ft.
- Shape—Typical
- Driveway—435 sq. ft.
- Maximum house footprint—1242 sq. ft

Lot 5

- Size—Small (3525 sq. ft.)
- 50% lot coverage—1762.5 sq. ft.
- Shape—Typical
- Driveway—425 sq. ft.
- Maximum house footprint—1337.5 sq. ft

Lot 13

- Size—Small (3297 sq. ft.)
- 50% lot coverage—1762.5 sq. ft.
- Shape—Typical
- Driveway—307 sq. ft.
- Maximum house footprint—1341.5 sq. ft

Lot 1:

Building Setbacks:

- Front—15' (Front porch cannot encroach due to utility easement)
- Side—0' (10' adjacent to street)
- Rear—10' (+1 ft/foot of building height over 20')

Building Features:

- At designers discretion to fit the difficult lot.

Lot information:

- Size—Small (3516 sq. ft.)
- 50% lot coverage—1758 sq. ft.
- Shape—Typical
- Driveway—588 sq. ft.
- Maximum house footprint—1170 sq. ft



Figure 102 (left) and Figure 103 (right): The site can be seen in the image on the left and the lot location for lot 1 can be seen on the right. Source: Author

INTERNAL FEATURES

Materials

Floors:

- Hardwood Floors:
 - Suggested #1 common commercial grade red oak flooring
 - Bedrooms when appropriate
 - Kitchens when appropriate (open floor plans)
 - Main living space
- Tile floors
 - Suggested ceramic tile AO 8" x 8" white
 - Bathroom
 - Kitchen when appropriate
 - Laundry room

Walls:

- Gypsum Board:
 - Thickness ¹/₂ inch; maximum permissible length
 - Standard Type: Paper faced, tapered edges
 - Moisture Resistant Type: Moisture resistant type (AMST C630, often called green board). Provide at walls in all bathrooms.
- Paint:
 - Acceptable manufactures or equal: Sherwin Williams Harmony
 - Allow for four interior wall colors
 - Color: As selected by Owner from manufacture's standard range
 - Finish: Satin (semi-gloss in bathrooms)
 - All indoor paint to contain no V.O.C.s

Appliances:

- Electric range/oven and cord
 - Range backsplash
- Microwave hood (vent to exterior)

- Dishwasher (EnergyStar)
- Refrigerator/Ice maker (EnergyStar)

Room Sizes:

- Bedrooms:
 - Master bedroom should be 14' x 14'
 - Walk-in closet in master should be at least 50 sq. ft.
 - Additional bedrooms: 11' x 11'
 - Closets: 2'4" x 6
- Bathrooms should be 5' x 8'
- Coat/hall closet should be 2.5' x 4'
- Hallways, where needed, should be 4' wide
- Kitchens should be approximately 120 sq. ft.

Other Considerations:

- Ceilings should be a minimum of 9'
- Include a kitchen pantry when appropriate
- Kitchen & bathroom sizes should be as close to recommendations as possible to keep building costs down.
- Living/dining areas can range from 160 sq. ft. to 396 sq. ft. depending on the housing prototype.
- Stackable laundry room should be 3' x 3' or larger in accessible floor plans.
- The bedroom sizes should be considered a minimum size when possible.

CHAPTER 7

CASE STUDIES

HOMESTEAD COMMUNITY LAND TRUST—WOLCOTT HOMES—SEATTLE, WASHINGTON



Figures 104 (left) and Figure 105 (right): Wolcott Homes, a 22 lot subdivision located in southern Seattle, was partially built-out before it went into foreclosure in 2009. The Homestead Community Land Trust was able to purchase the foreclosed property and is in the process of redeveloping the development as affordable housing for low to moderate income, first-time homebuyers. Sources: Figure 104, BingMaps; Figure 105<u>http://www.redfin.com/WA/Seattle/8133-Wolcott-Ave-S-</u> <u>98118/home/22717363</u>)

Homestead Community Land Trust (HCLT) was established in 1992 as a volunteer organization working from a grassroots level that partnered with Seattle's neighborhoods to ensure affordable housing within the diverse communities in the city. (City of Seattle, 2008)The HCLT hired their first part-time staff member in 1999 and the Trust had its first homeowner in 2002. Since that time the Trust has sold 28 homes and has set a goal of growing at a rate of 100 affordable homes each year by 2015. (Homestead CLT History)

To be eligible for a HCLT home, individuals can earn up to 80% of the communities AMI. A single buyer should earn up to \$41,700 where a family of four could earn up to \$59,600. (City of Seattle, 2008) The HCLT then provides the homebuyer with \$100,000 in grants towards the purchase and leases the land for \$35 a month under a 99-year lease. When the homeowner is ready to sell, the property value is recalculated (appreciation value is limited to 1.5%) and HCLT allows the homeowner to add a share of that to the original price, giving consideration to how long they lived in the home.

In September of 2010, the HCLT began to work with the Federal Deposit Insurance Corporation (FDIC) to purchase the Wolcott Community in Rainier Beach. That property was a partially complete, but foreclosed upon subdivision located in southern Seattle, Washington. The Wolcott Homes development began in 2007 and was planned to contain 22, 3 to 4 bedroom homes for sale at a target price of around \$300,000. The developer was able to complete 12 of the 22 homes and sold 7 of them before the housing bubble burst and the bank foreclosed on the property. Currently, there are 7 occupied homes, 5 vacant houses, 2 partially complete homes, and 8 vacant lots. (Heffter, 2010)

HCLT, in conjunction with the City of Seattle and the US Department of Housing and Urban Development (HUD), purchased the failed parcel and are developing the vacant properties as affordable housing. To finance the purchase and the remaining construction costs, HCLT has received funding through a combination of local, state, and federal sources. The Seattle Housing Levy fund (a \$145 million affordable-housing levy voters approved in 2009) provided the land trust with a \$1.45 million loan to purchase the foreclosed property. The City of Seattle has provided \$150,000 in grant funding for the development of the site, while an additional \$600,000 has come from the HUD Neighborhood Stabilization Fund. The Washington State Housing Trust fund contributed a further \$80,000 and the Federal Home Loan Bank has provided an additional \$12,000. In total HCLT has received approximately \$2.24 million in funding to complete the development.

Once construction is complete, the homes will be sold to low-to-moderate income, first-time homebuyers for approximately \$190,000. HCLT will continue developing the project in phases,

focusing first on finding homeowners for the 5 homes which are currently vacant. Once those homes are occupied, they will complete construction of the 2 homes that were left partially built and find homeowners for those properties. The final 8 homes will be completed in two separate phases, with half of the homes being built and sold before the final 4 homes are developed. The phasing process allows the land trust to mitigate any risks they may encounter in the still unstable housing market.

Most importantly, by finishing the development and selling the homes to permanent homeowners, the Wolcott Community will be able to avoid many of the negative consequences associated with vacant and foreclosed properties, such as theft and vandalism. Sheldon Cooper, Executive Director of Homestead Community Land Trust points out that the HCLT is "transforming a community liability of vacant houses and vacant lots into a community asset" by ensuring that each home" will stay owner-occupied and permanently affordable, offering security and pride of ownership to many generations to come." (Cohen, 2010)

MADISON AREA COMMUNITY LAND TRUST—TROY GARDENS—MADISON, WISCONSIN



Figure 106 (left) and Figure 107 (right): The Troy Gardens master plan, left, combines both clustered residential homes of mixed-income housing, greenspace, and community gardens. On the right is an aerial photograph showing the completed project. Sources: Figure 106, http://www.troygardens.net/documents/maps assets/TG-PUD-site-map-nov-2005.pdf, Figure 107: BingMaps

The Madison Area Community Land Trust was founded by Sol Levin in 1991 as he anticipated housing prices in Madison would rise beyond the means of long term residents living within the community. Between 1991 and 2005 the median price of a home in Madison, rose from \$83,000 to \$250,000. Similar to other community land trusts, the Madison Area Community Land Trust provides affordable housing for current and future generations. It is possible for them to keep the property available as affordable housing in perpetuity through the dual ownership, 99-year ground lease model of a community land trust.

The Madison Area Community Land Trust sold its first home in 1994 and has continued to provide residents of Madison with affordable housing in both the area of single-family homes and larger planned developments. In 1995 the State of Wisconsin placed a 15 acre piece of land on the State's surplus list, intending to sell the site to a private developer. (Land Use Policy Article) The city encountered unexpected resistance from local residents who had been using approximately 5 acres of the land for gardening over the past 15 years. Much of the other 10 acres had been utilized as a park-like space for bird watching, dog walking, and other activities. The proposed sale led the gardeners, other neighborhood residents, and the Northside Planning Council (NPC) to join together with several nonprofit agencies, including Madison Area Community Land Trust, Urban Open Space Foundation (UOSF), and Community Action Coalition of South Central Wisconsin, Inc. to form the Troy Gardens Coalition.

In 1996 the State added an additional 16 acres of landlocked, undeveloped property that abutted the site to the north, bringing the total amount of land for sale to 31 acres. The coalition spent the following year developing a mixed housing and open space plan which was accepted by community residents. In 1997 the State of Wisconsin agreed to take the entire 31 acre site off the state surplus list. Further, the State agreed to provide the Troy Gardens Coalition a 16-year lease for them to use the land as they saw fit. This lease was later extended to a 50 year lease with a provision stating that Madison Area Community Land Trust could acquire full title to the land, with a conservation easement to be held by UOSF. What these agreements did was remove the conventional development pressure often associated with residential developments containing open space. With these types of developments there is typically pressure to maximize the residential development, increasing profit margins, at the expense of open space. Through the land lease with the State of Wisconsin, and later under the conservation easement between the State and UOSF this development pressure was removed.

From this effort Troy Gardens, a 31 acre mixed-income homeownership and open space development was born. What is unique about the development is that there are two land trusts in operation on the property. The Madison Area Community Land Trust is responsible for the mixedincome housing portion of the property, 5 acres in total, and the UOSF manages the conservation easement on the remaining 26 acres of land. The 5 acres used for housing are organized as a condominium, containing 30 units, 20 of which are priced below the market value for low-tomoderate income individuals following the community land trust model, providing residents with low-to-moderate income housing in perpetuity. The remaining 26 acres is permanently protected green space containing community gardens, an organic farm run as a Community Share Agreement (CSA), restored prairie land, and nature trails.

The affordable housing units are sold to individuals based on their AMI, with 14 of the units sold to individuals earning 51-80% of the AMI of Madison; 4 units are sold to individuals earning 35-50% AMI, and the remaining two are sold to individuals earning ≤35% of the AMI. Further, all of the homes have been designed in accordance with the American Disability Act, with the first floors fully handicap accessible. Basements are fully finished adding additional live-in accommodations. Further, all of the homes in Troy Gardens are built to be energy efficient in order to minimize operating costs, increasing affordability, while also meeting Wisconsin Energy Star standards. The condominiums are designed so they front onto a common green space, with the front doors and porches oriented towards the common area, encouraging community interaction.



ATLANTA LAND TRUST COLLABORATIVE & PITTSBURG COMMUNITY LAND TRUST—A TLANTA, GEORGIA

Figure 108 (left) and Figure 109 (right): On the left, a context map from the Pittsburgh Neighborhood Master Plan, and on the right an aerial photograph showing the neighborhood. Sources: Figure 108 and 109, Pittsburgh Neighborhood Master Plan RFP

In the fall of 2008 30 different public, private nonprofit, and community organizations worked together, in conjunction with The BeltLine Partnership, Inc, to create a framework for the Atlanta Land Trust Collaborative (ALTC) to "maintain affordability in neighborhoods at risk of gentrification and displacement due to the BeltLine and throughout the City of Atlanta." (Atlanta Land Trust Collaborative, 2010) In 1999 Ryan Gravel, a Georgia Tech graduate wrote his master's thesis entitled, *"Belt line - Atlanta : design of infrastructure as a reflection of public policy"* which proposed "a transit line or collection of lines that access the neighborhoods immediately surrounding downtown and midtown along the historic belt lines." (Gravel, 1999) Over the past decade the both city officials and residents have become inspired by his thesis and is in the process of being implemented. The project has expanded over the years and has grown to include more than just a transit line. Once complete

the BeltLine will include "transit, parks and trails, neighborhood preservation and revitalization, mixed use development, affordable housing, clean air, and an improved tax base." (Atlanta BeltLine)

The ALTCs goals are to: "provide access to land and housing to low- and moderate-income residents; increase long-term community control of neighborhood resources; empower residents through involvement and participation in the organization; and preserve the affordability of housing permanently." (Atlanta Land Trust Collaborative, 2010)

The ALTC further strives to create a hybrid model under which the neighborhood-based, resident-controlled CLTs would be combined with a "Central Server" which would support the development and operation of CLTs throughout the city of Atlanta. Additionally, the centralization of the CLTs will help to introduce a degree of standardization into the ways in which CLT projects are funded, taxed, financed, and marketed in Atlanta. (Atlanta Land Trust Collaborative, 2010) This method of organization is unique to the ALTC and could set a precedent for current and future CLTs across the nation. Its organization will allow the ALTC to educate industries and stakeholders about the community land trust model while allowing the individual land trusts to work at the community level. Further, the ALTC will be able to advocate for CLTs at the local and state level and take care of many of the legal components, such as ground-leases.

Anthony Pickett was selected as the executive director of the ALTC in January of 2011. During its first three years, Pickett and ALTC will focus on three goals: "create a favorable climate for CLT development by promoting public policy, community engagement, and fund-raising; encourage the formation of at least two neighborhood-based, resident-controlled CLTs; and perform the stewardship functions of a CLT in any neighborhoods where the local capacity does not currently exist to carry out these functions." (Atlanta BeltLine Partnership Announces Atlanta Land Trust Collaborative, 2011) Both of the land trusts created will be an important component of the central server concept, with each having a representative present on the ALTC board. The land trust themselves will have a third

of the board comprised of community members, the second third being nonprofits, and the final third business members. (Atlanta BeltLine Partnership Announces Atlanta Land Trust Collaborative, 2011)

Maria Saporta is a former business columnist for the Atlanta Journal-Constitution. She currently writes "The Saporta Report" for the Atlanta Business Chronicle. In November of 2010 she wrote in her column the ALTC had secured funding from a variety of sources, including \$125,000 from the Home Depot Foundation, \$25,000 from both Wells Fargo and NCB Capital, and an additional \$50,000 from Atlanta's United Way. One of the first neighborhood based CLTs is the Pittsburgh Community Land Trust, which combines the efforts of ALTC, the Atlanta Housing Association of Neighborhood-based Developers, and the Annie E. Casey Foundation.

The creation of this CLT is significant as the Pittsburg neighborhood is one of the historic African-American neighborhoods in Atlanta. Located to the west of Pryor Street and Interstate 75/85 in southwest Atlanta, the Pittsburgh neighborhood dates back to shortly after the Civil War. With its close proximity to the rail yards to the northeast, Pittsburgh earned its nickname from the Pennsylvania city due to smoky haze that covered the neighborhood. By the 1960's many of the middle-class families were moving away from the neighborhood in favor of the suburbs. As a result, Pittsburgh's population dropped by half over the next 30 years. (Youngblood, 2011)

As the housing market boomed during the 1990s and 2000s, Pittsburgh experienced a period of growth and recovery as younger individuals began to move into the neighborhood. This brought new development as well as increased housing costs and taxes, displacing more long-term historic residents. Local leaders recognized the need for neighborhood involvement and created the Pittsburgh Community Improvement Association (PCIA), a community development corporation.

In 2008 the national housing bubble burst and Pittsburgh experienced much of the mortgage fraud that characterized both the Atlanta and national lending markets. In a study conducted by the Annie E. Casey Foundation, an estimated 40% of mortgages owed by Pittsburgh residents were underwater. Homeowners owed more than their property was worth. 50-70% of the default notices in the neighborhood resulted in the borrower losing the property. Of the foreclosures, 31% were new construction and in total, the mortgage fraud and foreclosures led to over 50% of Pittsburgh's 1800 parcels being vacant. As a result the PCIA created the Pittsburgh Community Land Trust (PCLT). Currently at least 100 vacant houses have been acquired for redevelopment as affordable housing by the PCLT. With development pressure increasing as a result of the BeltLine development, it will be interesting to see how the ALTC and the PCLT grow in the coming years.

CHAPTER 8

CONCLUSION

The previous pages outline the results of a *charrette* that used the needs and wants of the community and Athens Land Trust to guide both students and design professionals through the redevelopment of Cottages at Cannontown. Through the community land trust model, ALT has found an innovative and plausible way to reuse failed subdivisions as a mechanism for affordable housing.

This development will not only help revitalize the greater neighborhood, by providing longterm homeowners, but it can provide a way for ALT to apply all portions of their mission to the community. While limiting in some ways, the already completed infrastructure and platting of lots allows ALT to focus on providing energy efficient and affordable housing rather than spending their limited funds on the design and layout of the community. Further, through thoughtful development of the stormwater management feature and street and yard plantings, ALT can better integrate the community with the natural environment with the planting of native grasses, shrubs, and trees. Finally, the redevelopment itself will help revitalize the neighborhood by removing a vacant and unused property and replacing it with thoughtful, energy-efficient, and affordable housing for Athens-Clarke County community members.

This program is provided to help potential designers better understand the process that has taken place prior to their involvement. While not meant to be limiting, designers are encouraged to take advantage of the information provided in the previous pages as they develop designs for Athens Land Trust.

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APPENDEX A

ATHENS LAND TRUST: A DESIGN PROGRAM FOR AFFORDABLE HOUSING







In collaboration with Athens Land Trust and the University of Georgia's Center for Community Design and Preservation at the College of Environment and Design

January 28 - 30, 2011

College of Environment & Design
TABLE OF CONTENTS

P A G E	INTRODUCTION		LANDSCAPE ELEMENTS		ARCHITI
04	WHO	30	CUL-DE-SAC DESIGN	55	PROTO
05	WHAT	30	CHALLENGES	56	СОМІ
06	WHERE	31	SOLUTIONS	57	
07	WHY	33	STORMWATER MANAGEMENT AREA	57	
08	HOW	33	DESIGN CHALLENGES	57	LUTI
		35	DESIGN SOLUTIONS	58	LOTS
	POLICY & SOCIAL FLEMENTS	35	STREETSCAPE	59	RECOM
09		36	DESIGN CHALLENGES		
10		37	DESIGN SOLUTIONS		CONCLU
10	ASSET MAPPING	38	SUGGESTED STREET TREES	()	
13	CONNECTIVITY	39	YARD DESIGN	60	FINAL
14	COMMUNITY GARDEN	40	DRIVEWAY CONSIDERATIONS	61	IMAGE
15	NEIGHBORHOOD NAME				
16	DESIGN COMPETITION		ARCHITECTURAL FLEMENTS		
17	SITE MAINTENANCE	41	MASSING		
17	DEFINING THE PUBLIC REALM	42	OVERVIEW		
18	MANAGEMENT OF THE PUBLIC REALM	43	BUILDING ORIENTATION		
		44	FRONT PORCH		
	SITE ELEMENTS	46	FENESTRATION		
20	COMMUNITY & NATURAL ENVIRONMENT	47	ROOFLINE VARIETY		
20	STORMWATER MANAGEMENT AREA	49	RECOMMENDED MATERIALS		
21	PLANTINGS: NATIVE GRASSES	49	PROTOTYPE RECOMMENDATIONS		
22	PLANTINGS: NATIVE SHRUBS	40	PROTOTYPE 1		
23	PLANTINGS: NATIVE TREES	50			
24	ENERGY-EFFICIENT & AFFORDABLE HOUSING	50			
24	SMALL LOT SIZE	51			
25	EXISTING INFRASTRUCTURE	51	PROTOTYPE 2		
26	NEIGHBORHOOD REVITALIZATION	52	COMPONENTS & PRECEDENTS		
26	REDEVELOPMENT OF FAILED SUBDIVISION	53	LOT SPECIFICATIONS		
27	CONNECTIVITY	53	PROTOTYPE 3		
28	SURROUNDING AREA	54	COMPONENTS & PRECEDENTS		
29	EXISTING SITE CONDITIONS	55	LOT SPECIFICATIONS		
	ALL	<i></i>			



A DESIGN PROGRAM FOR AFFORDABLE HOUSING

ECTURAL ELEMENTS (CONT)

OTYPE 4 PONENTS & PRECEDENTS SPECIFICATIONS

SPECIFICATIONS 1MENDED MATERIALS & ROOM SIZES

SION

THOUGHTS CREDITS

TABLE OF CONTENTS

page|3

INTRODUCTION <u>WHO</u>|WHAT|WHERE|WHY|HOW

WHO WAS THERE?

PROFESSIONAL SUPPORT CENTER FOR COMMUNITY DESIGN AND PRESERVATION

PROFESSOR PRATT CASSITY, director JENNIFER MARTIN LEWIS, project coordinator

ATHENS LAND TRUST

HEATHER BENHAM, director

DESIGN PROFESSIONALS TEAM ARCHITECTURE

LORI BORK, bork architecture TODD HUTCHISON, bork architecture PROFESSOR DOUGLAS PARDUE, ced faculty

TEAM LAND

KATE AUSTIN, alt community garden coordinator PROFESSOR DALE HALL, ced faculty LARA MATHAS, ced faculty/uga architects

TEAM POLICY

LEAH GRAHAM STEWART, former athens-clarke county city planner CHRISTY MARLOW, athens-clarke county planning commission PROFESSOR RON THOMAS, ced faculty



During the last weekend in January, 21 students and 13 faculty and design professionals met at the University of Georgia's Center for Community Design & Preservation (CCDP) to explore innovative design techniques for affordable housing through a design charrette. A component of the College of Environment and Design, the CCDP provides Public Service and Outreach for communities in need of high quality design services without the funds to hire private design firms. The CCDP's mission is to provide service learning experiences for students in landscape architecture, historic preservation and environmental planning and by utilizing a mix of faculty, professional staff and students, professional quality design work is produced.

STUDENT PARTICIPANTS **TEAM ARCHITECTURE**

CAROL FLAUTE, masters of environmental planning & design STEPHANIE GOODRICH, masters of historic preservation KUO GUO, masters of landscape architecture JUAN GUZMÁN-PALACIOS, bachelors of landscape architecture ANN NGUYEN, bachelors of landscape architecture KIEU CHI VU NGUYEN, bachelors of landscape architecture DARREN ZHANG, masters of landscape architecture

By partnering with Athens Land Trust (ALT) – whose mission is to promote quality of life through integration of community and the natural environment by preserving land, creating energy-efficient and affordable housing, and revitalizing neighborhoods - the CCDP has a unique opportunity to conduct innovative research that will investigate the effectiveness of site design for affordable housing.

TEAM LAND



Figure 1 - Policy Team leaders Leach Graham Stewart and Christy Marlow discuss the site during ground truthing exercise on the first day of the charrette

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

ANNA GORE, masters of environmental planning & design CARSON HALE, bachelors of landscape architecture YUAN HONG, masters of landscape architecture CHEN JIACHENG, bachelors of landscape architecture WRIGHT MONTGOMERY, bachelors of landscape architecture DEEPALI PAVNASKAR, masters of environmental planning & design DIANE SILVA, masters of landscape architecture YIFAN SUN, masters of landscape architecture

TEAM POLICY

LILLI AGEL, bachelors of landscape architecture ELIZABETH BRIGHTON, bachelors of landscape architecture ELIZABETH BERNARD, masters of nonprofit management & womens studies NATALIE DANIELS, masters of landscape architecture LEAH GRAHAM STEWART, masters of environmental planning & design SARAH MCQUADE, masters of environmental planning & design DAVID THOMPSON, masters of environmental planning & design

INTRODUCTION WHO

INTRODUCTION WHO WHAT WHERE WHY HOW

WHAT IS A CHARRETTE?



Source: National Charrette Institute http://www.charretteinstitute.org



Charrette is a French word that translates "little cart". At the leading architecture school in the 19th century, the Ecole des Beaux-Arts ("School of Fine Arts") in Paris, students were assigned tough design problems to complete under time pressure. They would continue sketching as fast as they could, even as the little carts (charrettes) carried their drawing boards away to be judged and graded.

Today the word "charrette" describes a rapid, intense, and creative work session, in which a design team focuses on a particular design problem and arrives at a collaborative solution.

The charrette process is a way of evaluating resources through new eyes. Fresh ideas are what help communities maintain and build their vitality. With the report and supporting materials, readers will experience the enthusiasm and commitment which comes from a broadbased group of students, faculty, practitioners, and the public.



Figure 2 - Carson Hale, Wright Montgomery, and Todd Hutchinson consider the site features during the ground truthing exercise

ATHENS LAND TRUST

A DESIGN PROGRAM for AFFORDABLE HOUSING



the charrette



Figures 4 (left) and 5 (right) - Yifan Sun and Wright Montgomery work on sketches for Team Land and Team Architecture, respectively.

Charrettes are product-oriented and fast becoming a preferred method to solve planning challenges confronting American cities.

Figure 3 - Team Architecture discusses housing types with community members on the second day of

INTRODUCTION WHAT

INTRODUCTION WHO|WHAT|WHERE|WHY|HOW

SITE CONTEXT

Cottages at Cannontown is proposed as an "infill" subdivision in Athens, Georgia. Located off of North Avenue on Bray Street, it is within walking distance of downtown Athens and many local services. The property had been subdivided and platted by a developer and "flipped" several times before it was foreclosed last year. ALT purchased the property and has finished the infrastructure improvements partially constructed by past owners.

The finished development will have 15 single-family homes available to purchase by low-to-moderate income first-time home buyers; the target for completion of the first five homes is the end of 2012. The project is less than a half mile from a local elementary school, Boys and Girls Club, a city park, a job center, pharmacies, a grocery store, and many other retail shops. Two bus lines stop within a block of the site, and two major centers of employment, the downtown district and an industrial park, are within a one mile radius from the site.



Figure 6 - An aerial photograph of the site with the site plan overlaid on top





ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING



INTRODUCTION WHERE

INTRODUCTION WHO|WHAT|WHERE|<u>WHY</u>|HOW **PROJECT SCOPE**

Many design components play a role in the success of an affordable housing development. Poor design can lead to unexpected construction expenses, or inefficient residential units. By contrast, a project that is well-designed can balance the economic realities of constructing affordable housing with the advantages that sustainable design offers future homeowners. Through this project, the CCDP will undertake research to better understand how to achieve successful design for affordable housing and new design solutions can be applied for various affordable housing developments in other parts of the city and across the state.

Through this charrette, Cottages at Cannontown will become a model of what affordable housing should be: a place that good design is the rule rather than the exception to the rule and properties increase rather than decrease. The project will prescribe a process that creates a neighborhood rather than just a play to stay. The project also provides a rare opportunity for affordable housing to exist near services in an area that has been rapidly gentrifying. Pressure on in-town neighborhoods that are near the university to gentrify is a common occurrence when based on "highest and best use." This project anchors Cottages at Cannontown and avoids gentrification through home ownership.

Further, this project will provide Athens Land Trust with a set of guidelines that will present potential architects and designers with parameters for the design of Cottages at Cannontown. The goal is to inform and encourage designers to create design diversity and utilize best practices, while not limiting design creativity or inadvertently creating monotonous designs. The program synthesizes feedback and site conditions to offer guidance for architectural, landscaping, and policy elements.

Importantly, the design guidelines integrate ALT's mission – to promote guality of life through integration of community and the natural environment by preserving land, creating energy-efficient and affordable housing, and revitalizing neighborhoods in Athens-Clarke County - into the recommendations. The site, landscape, and architectural design elements of the program will each be connected to the mission tenants.



ATHENS LAND TRUST



Figures 8 (left) and 9 (right) - Athens Land Trust is a non-profit organization helps low to moderate income first-time home buyers purchase their first home.



Figures 10 (left) and 11 (right) - The Center for Community Design & Preservation provides public outreach and services for communities in need of design assistance



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

INTRODUCTION WHY

INTRODUCTION WHO|WHAT|WHERE|WHY|<u>HOW</u> THE PROCESS

In December 2010 and January 2011 Athens Land Trust (ALT), through a partnership with the University of Georgia's (UGA) Center for Community Development and Preservation (CCDP), held a community input session and conducted a weekend charrette in which potential home owners, local designers, and students from UGA worked through design problems to create a set of recommendations and guidelines for Cottages at Cannontown. This unique and special practice allowed community members to have a voice in this process; something that often times is lost and unheard.

On December 11, 2010 individuals from ALT, the CCDP, the local design community, potential home buyers, and members of Springfield Baptist Church met at the church and began the charrette process. Designers were tasked to listen to the community and to let the community guide the discussion. The result was a very broad, but very clear description of what potential home buyers desired.

Next, students from UGA participated in a weekend charrette in late January, 2011. They were tasked with taking the results from the community input session and vetting and focusing them into viable suggestions that ALT could use for their development. Approximately 21 undergraduate and graduate students worked with professionals from UGA and the Athens community and focused the suggestions into three distinct categories-architectural, landscape, and social.

At the end of the weekend each group had examined the results of the community input session, spoke with potential homeowners and design professionals, and synthesized their own ideas about the design, development, and implantation of this piece of property.

The architectural developed four potential building footprints, ranging in size from ~900 ft² - 1300 ft², recommended potential building materials, and suggested certain building features. The landscape group considered site features, street planting, and how incorporate the stormwater feature into the site as a shared community space. Finally, the social group considered different social and community issues that the development may encounterthey considered how to maintain the shared property of the space, whether there should be a homeowners association fee, and what would be appropriate if there were, different names the community may have, how to select the designers who will be doing pro-bono work for the site, and how to connect the neighborhood to the greater community



Figure 12 - This word map represents terms used during the community input session by community members to describe different components of a home, neighborhood and community.



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING



INTRODUCTION HOW

During the charrette in January, a group students examined the policy & social elements related to the development of Cottages at Cannontown. While the end results of this project will be physical, the students involved in the group understood that the intangible components of the development will play a significant role in the success of the project, both for ALT and the community at large. To focus and direct their research, a vision was created which centered on developing "a model for design that builds a strong, sustainable community."

The group began by understanding that ALT currently develops affordable housing through infill or redevelopment projects. As a result of this model many of their homes exist in areas which have strong established community support, meaning ALT has not had to focus their energy on growing communities until now.

With Cottages at Cannontown, ALT will be redeveloping a failed subdivision and creating 15 affordable housing homes. This project is distinctly different from what ALT has done in the past and, as a result, consideration must be given to the implications of adding 15 new homes to an established community. Many community resources already exist within a half-mile walk of the development and taking advantage of the established connections is vital.

Through the development of Cottages at Cannon town, ALT will be adding 15 first time homeowners to the neighborhood who have a vested and constant interest in the neighborhoods success. These new homeowners will play an instrumental role in integrating the development into the greater community as a whole.

The group examined and provided recommendations on the following policy and social elements for ALT and Cottages at Cannontown:

- Community building
- Connectivity to neighborhood resources
- Site maintenance of the public realm
- Community Garden
- Neighborhood name
- Design competition framework



Figure 13 - Elizabeth Brighton and Leah Graham Stewart examine connectivity patterns of the neighborhood





Figure 15 - The group (left to right, Elizabeth Brighton, Katie Goodrum, Figure 16 - Team leader and College of Environment & Design faculty Natalie Daniels, Lilly Agel, Ron Thomas, Leah Graham Stewart, David member Ron Thomas, discusses different components of community Thompson, and Elizabeth Bernard) discuss final outcomes as the charrette approaches the end



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Introduction



Figure 14 - Natalie Daniels (front left) and Elizabeth Bernard (second from left) talk with potential homeowners about maintenance of the



POLICY & SOCIAL ELEMENTS INTRODUCTION

ASSET MAPPING

As a mechanism for building community, the group recommends that ALT help facilitate asset mapping within the Cottages at Cannontown. Part of building community is building relationships, and asset mapping can be used as a launching point for developing the communities identity as a part of the neighborhood and the larger community.

Asset mapping is the process of taking an inventory of the capital available in community stakeholders. It can be at an individual or organizational level. Capital includes tangible resources such as funds, buildings, or equipment, or it could be intangible assets such as expertise, talent, or folk knowledge. Often times this is done through a cognitive mapping process.

WHAT IS COGNITIVE MAPPING?

- Visual representation of priorities in relationship-building
- Valuable tool for mapping environment
- Useful and effective exercise in developing internal relationships
- Positive, optimistic way to solve problems rather than focusing on needs and weaknesses
- Identifies resources and prioritizes them according to potential value and need

HOW DOES IT BUILD COMMUNITY FROM WITHIN?

- Collaborative effort that harnesses their collective energies and talents
- Shapes group processes and develops group dynamics
- Collectively identify and develop consensus on strengths and weaknesses
- Develop shared goals and strategies for community
- How does it build relationships within the larger community?
- Makes first contact with potential stakeholders
- First step in the relationship-building process
- Community raises awareness of its existence and its power by advocating for itself

POTENTIAL PITFALLS

- Time commitment
- May cost money or use other resources
- Less effective where there is a lack of cohesion
- Potential for conflict in nebulous, developing groups
- Requires commitment to process



ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING



Figure 17 - This is an example of an asset map. The center grey box represents the traits and assets that the individuals possess. The next level examines potential ways to utilize their skill sets. These skills are then applied to the next level, in this example citizen associations. These assets are then connected to the larger community as a whole.

Community Building

POLICY & SOCIAL ELEMENTS COMMUNITY BUILDING ASSET MAPPING

p a g e | 1 0

IDENTIFYING RESOURCES

One component of asset mapping is understanding the resources that are currently available within the community. This can help community members gain better idea of what kinds of relationships are needed to build a strong sustainable community in the area. A database was compiled by identifying organizations that provide services such as:

- Organizations for funding and resources
- Community building organizations
- Health and Human Service agencies
- Emergency Medical Services
- Education services
- Community garden partners
- Transit and mobility services
- Economic justice (anti-poverty) organizations



Gospel Pilgrím Cemetery

Figure 19, 20, 21, 22, 23, and 24 - The different logos on this page represent services available within the community

Google docs Orgs for Strategic partnerships Private to me + 1 more

			≝▼≣₹₽₽	2 • 11	
	A	В	С	D	E
1	Organization	Туре	Applicability	Address	Phor
44	HUD *not mapped	Govt/Public	HHS		
45				150 Townon Drive	
	Iglesia de Cristo Misionera (Pentecostal)	FBO	Community building	Athens, GA 30601	(706) 613-6
46				130 Berlin Street	
	Jehovah's Witnesses	FBO	Community building	30601-2202	(706) 369-7
47		100	Community building	2300 Danielsville	(100)000-1
				Road	
	J.J. Harris Elementary Charter School	Govt/Public	Education	Athens GA 30601	(706) 357-5
48	Neighborhood Watch				
	ACC Police Department – Crime				706-613-33
	Prevention Unit *not mapped	СВО	Community building		230
49	Neighborhood Notification Initiative (email	CRO	Community building		706 612 25
50	istserve) not mapped	СВО	Community building	305 Research	700-013-33
~				Drive	
				Athens, GA	
	Northeast Georgia Regional Commission	CBO	Community building	30605-2725	706-369-56
51				1150 Oglethorpe	
		0.15.11		Avenue	(200) 540 0
50	Oglethorpe Avenue Elementary School	Govt/Public	Education	Athens GA 30606	(706) 549-0
52				1240 S. Lumpkin	
				Athens Georgia	
	OneAthens *not mapped	CBO	Economic justice	30602	
53	PLACE (Promoting Local Ag and Cultural			P.O. Box 1924	
	Experience) *not mapped	FBO	Community garden	Athens, GA 30603	

Figure 18 - The above image shows a screenshot of the Google docs spreadsheet that was created to catalogue the different organizations and services around the community. The logos below are organizations found on that list.

Figure 23 PLACE Promoting Local Agriculture & Cultural Experience



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Community Building

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e	Website	Point People	PP Contact Info		
385					
550	watchtower.org				
203		Principal: Xernona Thomas			
68 ext.					
5	accplanning.com				
50	www.negrc.org				
62		Principal: Dr. Scarlett C. Dunne			
	http://www.proc	loo Wherton			
	nttp://www.prospero	Joe Whorton			
	localplace.org	Craig Page	craigp@localplace.o		
			Economic justico		
			Economic jusice		



POLICY & SOCIAL ELEMENTS COMMUNITY BUILDING **ASSET MAPPING**

page | 11

Figure 25 - This map represents potential resources developed by researching the nearby organizations in the previous page. The map is limited in that it mostly considered public and nonprofit formal entities. The private sector, individuals, and informal entities such as community groups should also be taken into consideration. The challenge is that some of these things cannot be mapped, especially informal community groups that change locations, which is why a cognitive map as shown on the "asset mapping" slide is also critical.





A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Community Building



Figure 26 - Historical marker for the Gospel Pilgrim Cemetery, located on Fourth Street



Figure 27 - The Boys & Girls Club of Athens, located on Fourth Street



Figure 28 - The Department of Labor building, located on Evelyn C Neely Drive

POLICY & SOCIAL ELEMENTS COMMUNITY BUILDING ASSET MAPPING

p a g e | 1 2

CONNECTIVITY

Relationships are only useful if you have access to them. Next the group examined transit and other systems that facilitate mobility, in the community. They then thought about how design can facilitate further connections to strengthen relationships with in the community.

From the 15 lot site, the following uses can be reached by a half-mile walk or less

- -1882 Gospel Pilgrim Cemetery
- -East Athens Park
- -Bonnie Lane Community Center
- -Piggly Wiggly
- -Boys and Girls Club
- -Howard Stroud Elementary School
- -Springfield Baptist Church

The orange dashed line denotes roads with sidewalks; the purple hash mark line denotes the Athens Transit bus route.



Figure 29 - The Piggly Wiggly, located on North Avenue, is within walking distance of the site, which is important as community members will have access to food



Figure 30 - This map reflects different connectivity patterns and community resources. The site is located center left, outlined on orange. There are many services located with in a half-mile of Cottages at Cannontown.



ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Community Building



Figure 31 - The Boys & Girls Club of Athens, located on Fourth Street



Figure 32 - Springfield Baptist Church, located on Fourth Street



Figure 33 - The Georgia Department of Labor building, located on Evelyn C Neely Drive

POLICY & SOCIAL ELEMENTS COMMUNITY BUILDING CONNECTIVITY

page|13

COMMUNITY GARDEN

One of the of the major themes which emerged from the residents during the public input session was a desire to have a space for community interaction, often described as a community garden. Athens Land Trust defines a community garden as a "park-like area in the neighborhood where several families can grow vegetables and flowers together on their own garden plots."

During the charrette members of the policy & social elements group embraced this desire as the benefits of a community garden would be multifaceted for Cottages at Cannontown. Outside of being a source of affordable, fresh, and healthy produce, a community garden provides a framework for community interaction and communication. ALT, by using the framework that the community gardens establishes as a method for contained community interaction. Through the community garden ALT would have a way to keep a regular, vested interest in the maintenance of the area without needing a maintenance supervisor. This is important because one of the main reasons that homeowners associations are not successful is a lack of interest and consistent communication.

In an effort to realize this desire the policy & social elements group examined the site, including the stormwater retention area, looking for a suitable area for such a space. While the stormwater management area, in theory, seemed like a space that could be utilized for a community garden, in actuality stormwater basin is steep, and most of the slopes are not oriented to take advantage of the sun. Further, what level ground exists is small and would not be suitable for a place for community interaction. Fortunately, there are many nearby organizations with better land. With the collaboration of the Boys & Girls Club, Howard B. Stroud Elementary School and Springfield Baptist Church, a garden could form a true community.



Figure 34 - The Brooklyn Community Garden was established in 2003 by neighborhood residents with the help of ALT and GreenFest volunteers. There has enough raised beds to accommodate 20 families



Figure 35 - The Pinewoods Estates North Community Garden opened this summer with help from residents, volunteers, and UGA Professor David Berle's horticulture students.

- Improves the quality of life for people in the garden
- Stimulates social interaction
- Encourages self-reliance
- Beautifies neighborhoods
- Produces nutritious food
- Reduces family food budgets
- Conserves resources
- Reduces crime
- Preserves greenspace
- Reduces city heat from streets and parking lots



provides to teach local children about growing food.

a community garden isn't crucial because it produces food, but because it reinforces community



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Community Building

COMMUNITY GARDEN BENEFITS

- Provides a catalyst for neighborhood and community development

- Creates opportunity for recreation, exercise, therapy, and education

- Creates income opportunities and economic development - Provides opportunities for intergenerational and cross-cultural connections

Figure 36 - The Brooklyn Community Garden displaced a vacant lot where drugs were being sold. Long-time residents of the neighborhood are glad to have the garden and the opportunity it

POLICY & SOCIAL ELEMENTS COMMUNITY BUILDING COMMUNITY GARDEN

page | 14

Neighborhood Name

During the community input session held in January at Springfield Baptist Church, it was learned that the community members were not in support of the development being called Springfield Village, the name the original owner had given the subdivision. When ALT took over the property they decided to keep the same name as it paid homage to the church, one of the pillars of the community. After learning about this situation, the members of the policy & social elements group thought it was important to consider different options for a new name. They felt that while a name is just a name, they wanted the name of this subdivision to connote home and be significant and sensitive to both the needs of ALT and the greater community.

Ideally, community members would choose the new neighborhood name. This is now possible though because there is not yet a defined community through which this decision can be made. At the moment, ALT has a waiting list of potential homeowners, as generally ALT does not sell homes preconstruction but they do not know who will be living in Cottages at Cannontown. This is a complicated situation because legally, before the homes can be built, the subdivision must be platted with an official and everlasting name.

Even without community input, the name can and should still hold meaning. With some research, we would like to present the names of prominent local African American individuals as candidates for the subdivision name, to honor the history of the future neighborhood.

The following people are interred in the nearby Gospel Pilgrim Cemetery:

- Madison Davis—former slave, senator in the Georgia legislature during Reconstruction and first African American post master in Athens
- Charles Lyons—school principal, already honored at Burney-Harris-Lyons Middle School
- Monroe Bowers Morton- of Morton Theatre fame, most known for his work in entertainment commerce
- Harriet Powers-a nationally recognized folk artist

Another local and inspirational candidate, that by our research are not necessarily buried in Gospel Pilgrim:

- Ida Mae Hiram- first African American female dentist

Alternatively, this could be an appropriate time to honor ALT's first homeowner, Brenda Crawford.



ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Ultimately, ALT decided to name the new development Cottages at Cannontown, in homage to the original owners of the property which they are developing, the Cannons.



Community Building

Figure 37 - Gospel Pilgrim Cemetery, located across Fourth Street from the development, was founded in 1882 by the Gospel Pilgrim Society, as a place for funerals and burials for Athens-area African Americans. Many important African American figures from Athens history are buried there. Members of the charrette thought that inspiration for a new name could be taken from the historical figure interred there.

POLICY & SOCIAL ELEMENTS COMMUNITY BUILDING NEIGHBORHOOD NAME

p a g e | 1 5

DESIGN COMPETITION FRAMEWORK

Another imperative piece of creating community is design that is intentional and socially aware. This sort of thoughtful design can be instrumental in creating community.

To encourage this sort of design, the policy & social elements group members established a framework for a design competition to encourage high-quality sustainable design. This furthers ALT objectives and also helps keep the project affordable.

The group hopes that the design competition can generate good building development in accordance with Earthcraft standards (and possibly beyond) and can encourage/build relationships with the design community in Athens. All of these designs will be built to the minimum landscape and architecture standards which will be elaborated upon in the other sections of this design program.



Figure 38 - Proposed layout for lot prototypes



ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

ATHENS LAND TRUST COTTAGES AT CANNONTOWN CHALLENGE

BACKGROUND

Athens Land Trust (ALT) has acquired a property which been subdivided and platted by a developer and flipped several times before it was foreclosed on last year. After the purchase, ALT has been finishing the infrastructure that had been partially completed by the previous owners. The final design is intended to have 15 single-family homes available for purchase by low-to-moderate income first-time buyers, with the first five homes completed by end 2012. The project is located less than a half mile from the local elementary school, Boys and Girls Club, a city park, pharmacies, a grocery store, and other amenities. Two bus lines stop within a block of the site, and two major centers of employment (the downtown district and the industrial park) are within a mile of the site.

ALT has received a grant intended to assist in the development of the site as an affordable housing community. To identify the best possible creative ideas and solutions, ATL intends to offer a design challenge, with architectural and site standards, criteria provided as guides to participants in the challenge. The goal is to make the neighborhood a model of what good affordable housing can be: a place that is not known as "affordable" based on poor design, cheap materials, and neglected properties, but one that is an asset to our community because of the quality design, excellent location, desirable features, great neighbors, while being affordable. The project will provide a rare opportunity for affordable housing in a rapidly-gentrifying area. There is a great deal of pressure on in-town neighborhoods near the university from investors wishing to create properties for student rentals. This project would counter this by including a neighborhood with a number of homeowners.

OBJECT/SUBPROGRAM

Athens Land Trust Cottages at Cannontown Challenge is to create architectural designs for one to three housing types that would be affordable, energy-efficient, and socially attentive while working within the site's existing constraints. The houses built from these designs will be occupied by individuals and families who, without assistance, would be unable to afford them. Figure 40 -

Community Building

POLICY & SOCIAL ELEMENTS COMMUNITY BUILDING DESIGN COMPETITION

page | 16

DEFINING THE PUBLIC REALM

The public realm of Cottages at Cannontown needs to be defined in order to understand who will be responsible for maintenance and upkeep of different areas of the site. Often, the public realm is defined as the public interface in the subdivision; the outdoor area that is under the responsibility and jurisdiction of a potential homeowners association. Following this definition, the group established 3 options for the public realm of Cottages at Cannontown:

OPTION 1:

Only the street—the traditional interpretation of the public realm

OPTION 2:

The street and the stormwater management area—because stormwater is a community problem and because the detention pond can be transformed into a community asset

OPTION 3:

The street, the stormwater lot and all of the front yards—because front yards are visible from the public road and directly influence neighborhood character, and subsequently property values

Careful consideration needs to be given to option three. While including the front yards of the homes as part of the public realm would reduce the responsibility of yard maintenance for homeowners, and allow ALT to ensure proper upkeep of the property, it may also result in less community building than anticipated. Part of homeownership includes yard maintenance and many people take pride in the design and hard work they put into their yard. Removing that task may result in homeowners feeling as though the property is not truly theirs and led to less community involvement and interaction. For these reasons, it is recommend that ALT define the public realm as the street and stormwater management area.



Figure 39 - This figure represents the third option listed to the left. Here, the traditional public realm (the street), the stormwater management area, and the semipublic realm (front yards) are included as part of the communities public realm.



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Site Maintenance

POLICY & SOCIAL ELEMENTS SITE MAINTENANCE DEFINING THE PUBLIC REALM

page | 17

MANAGEMENT OF THE PUBLIC REALM

Another reason to facilitate connections and relationships is the need for the neighborhood to be capable of long term management of common spaces beyond construction, such as the stormwater management facility.

Traditionally, subdivisions manage public spaces (landscaping for the common areas, maintenance and upkeep of the subdivision's amenities etc) through a homeowners association. These tasks are typically paid for through set yearly fees, which the homeowner agrees to upon purchasing a home within the community. Fees vary depending on the amenities and services provided.

ALT needs to carefully consider how they are going to address the management of the public realm since they are developing this project for low-income homeowners. Instituting a homeowners association with fees may not be financially feasible for some homeowners.

Figures 41 (left), 42 (middle), and 43 (right) - The levels of public realm within the site are depicted to the right. Figure 41 (left) depicts the traditional public realm, which is comprised of the street, Cannon Drive. This traditional understanding of the public realm does not provide residents with any community open space. Figure 42 (middle) integrates the stormwater management area into what is considered public space, providing community members with a potential place to interact and convene. Figure 43 (right) incorporates the front yards of the housing lots as well, creating a semi-public realm which further encourages community interaction.





Figure 40- The current state of the stormwater management feature



OPTION 1:

Athens Land Trust could accept responsibility for long-term maintenance into perpetuity as a continuation of the goal to build affordable, guality homes. Realistically ALT does not have the resources or intentions to provide long-term maintenance. Also, socially, it provides a formal framework for this idea of community while allowing homeowners to self regulate and modify the input as needed

OPTION 2:

A neighborhood association to manage the appearance and upkeep of the common spaces.

PROS:

Gives the power of choice to the people living in the homes, and the necessary meetings provide the foundation for a sense of community in the new subdivision.

CONS:

Even in market rate subdivisions, much less in affordable housing, homeowners associations frequently fall apart, due to lack of interest and/or financial support.



Figure 41 - Traditional Public Realm



Figure 42 - Traditional Public Realm & Stormwater Management Area

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Site Maintenance

The charrette students examined two viable options for the management of the public realm:



Figure 43 - Traditional Public Realm, Semi-public Realm, & Stormwater Management Area

POLICY & SOCIAL ELEMENTS SITE MAINTENANCE MANAGEMENT OF THE PUBLIC REALM

MANAGEMENT OF THE PUBLIC REALM

After considering the two options on the previous page, the charrette recommends pursuing option two for management of the street and stormwater feature. Through the creation of a homeowners association ALT will instill in community members a sense of responsibility about the decisions associated with the maintenance and upkeep of the shared community spaces.

For a homeowners association to function properly ALT will need to establish a fee system to generate funding for the management of the public spaces. Again, the charrette students considered two different methods for the fee system to operate.

OPTION 1:

A fee of \$20-\$30 per month per home, to pay a third party maintenance company so someone else maintain greenspace.

PROS:

A Simple, easy and even division of responsibility.

CONS:

More expensive, and without the side benefits—community building and education.

OPTION 2:

A fee of \$5 per month, with the expectation that people living in the community will provide the labor for the maintenance

PROS:

A cheaper option that provides an opportunity for education. These skills could then be peddled around the larger neighborhood. On site maintenance would become a cash-generating plan, instead of a long-term cashsiphoning plan.

CONS:

There is a greater chance for inequitable division of labor/ energy input.

Finally, in every long-term management option, ALT will need to support and/or subsidize the common greenspace maintenance until full occupancy.



ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING





Site Maintenance



POLICY & SOCIAL ELEMENTS SITE MAINTENANCE MANAGEMENT OF THE PUBLIC REALM

page|19

STORMWATER MANAGEMENT AREA

Integration of **COMMUNITY &** the **NATURAL ENVIRONMENT** is one of the key tenants of the Athens Land Trust mission. The site consist of 2.68 acres which have been subdivided into 15 lots, ranging in size from 3354 - 5423 sq. ft. (.077-.124 acres). Due to these constrained conditions there is very little open space for the Athens Land Trust to develop as community space.

This presents a difficulty because, during the design charrette process, community members expressed a desire to have an area where they could congregate, start a community garden, or have a play area for their children. Due to restrictions in the grant the Athens Land Trust received to redevelop this property, they cannot change the number of lots or the general lay out of the site.

That leaves the stormwater management area, and potentially the front yards of the individual housing lots, to be used as community space. While in many ways the small site limits what the Athens Land Trust can do to create community space, it also presents them with an opportunity to creatively develop the stormwater management area in a manner different from many traditional subdivision developments.



Figure 47 - Site plan detail of the stormwater management area

Figure 46 - The existing conditions of the stormwater management area



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

The stormwater management area presents both an opportunity and challenge for the Athens Land Trust as they try to integrate the community with the natural environment and also attempting to meet the needs and desires of potential community members.

Currently the stormwater management area acts only as a detention pond. During a storm event the detention pond will collect the drainage from the entire site and hold the water temporarily to prevent site flooding. The infrastructure for the detention pond is complete but no other improvements to the area were completed prior to the Athens Land Trust purchasing the property.

Since it was never planted or well maintained prior to the Athens Land Trust's ownership substantial work needs to take place in this area. Through creative design and correct planting, the Athens Land Trust can create an area for residents and community members to experience nature.

Integration of Community & Natural Environment



Figure 48 - Aerial photograph of the stormwater management area

SITE ELEMENTS COMMUNITY & NATURAL ENVIRONMENT STORMWATER MANAGEMENT AREA page 20

PLANTINGS: NATIVE GRASSES

To further achieve this integration of community and the natural environment the Athens Land Trust should utilize native Suggested Native Grasses planting throughout the site. Using native plants throughout the site will benefit residents in multiple ways.

Cost saving:

Since the plants are already established within the local ecosystem, they should grow predictably and not require watering (except during establishment), keeping water costs low for residents. Also, the costs for installing a natural landscape are comparable to traditional methods, but because the natural landscape essentially takes care of itself, there is little to no lifetime maintenance costs. The Environmental Protection Agency estimates the maintenance costs for a traditional lawn to be approximately \$700/yr.

Low to no maintenance :

Because native plants already exist within the local ecosystem, maintenance should be tremendously low in comparison to traditional planting methods. Residents should not need to water or care for native species, no raking, mowing, or weeding is required. Because these plants evolved with the local ecosystem, when leaves fall they act as a natural fertilizer while also suppressing weeds.

Natural habitat for wildlife:

Native plants provide familiar source of food and habitat for native wildlife, bringing songbirds and other animals to the site. As our towns and suburbs become more developed, natural habitat is lost and wildlife displaced. Planting species of native grasses, wildflowers, shrubs, and tress will provide a place for native wildlife to return to. This further helps the Athens Land Trust achieve their goal of integrating the community with the natural environment.

Figure 50 - Eastern Gamagrass



Figure 49 - Chapman's Goldenrod



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Figure 51 - Indian Woodoats





- Switch Grass (Panicum virgatum)

Integration of Community & Natural Environment

• Chapman's Goldenrod (Solidago odora chapmanii) • Eastern Gamagrass (Tripsacum dactyloides) • Indian Woodoats (Chasmanthium latifolium) • Little Blue Stem (Schizachyrium scoparium)

Figure 53 - Little Blue Stem

SITE ELEMENTS **COMMUNITY & NATURAL ENVIRONMENT** NATIVE GRASSES page 21

SITE ELEMENTS PLANTINGS: NATIVE SHRUBS

Suggested Native Shrubs

- Ink Berry (*llex glabra*)
- New England Aster (Aster nova angliae)
- Possumhaw (*Ilex deciduas*)
- Red Buckeye (*Aesculus pavia*)
- Swamp Rose Bush (Rosa palustris)

Figure 54 - Ink Berry

Figure 55 - New England Aster

Figure 56 - Possumhaw

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Integration of Community & Natural Environment

Figure 57 - Swamp Rose Bush

SITE EL COMMUNITY & NATURAL ENVIRONMENT NATIVE SHRUBS page 22

SITE ELEMENTS PLANTINGS: NATIVE TREES

Suggested Native Trees

- Loblolly Pine (*Pinus taeda*)
- River Birch (*Betula Nigra*)
- Winterberry Holly (*llex verticillata*)

Figure 59 - Loblolly Pine

Figure 60 - Winterberry Holly

Integration of Community & Natural Environment

Figure 61 - River Birch

SITE ELEMENTS COMMUNITY & NATURAL ENVIRONMENT NATIVE TREES page 23

SMALL LOT SIZES

Figure 62 - Modern Shotgun, created by Auburn University's Rural Studio utilizes local materials and is constructed to be energy efficient VS.

Creating ENERGY-EFFICIENT&AFFORDABLE HOUSING is the second component of the Athens Land Trust's mission.

The small lot size (Table 1) may be a constraint for designers but it actually helps the ALT achieve this portion of their mission.

As the cost of living increases, homebuyers are seeking alternatives to traditional housing practices. Large lots and homes increase expenditures and, as a result, homebuyers are purchasing smaller pieces of property and homes with smaller square footages.

By reducing both the lot and home size individuals are able to invest their money in other areas of their life.

		5
Lot #	Total Sq. Ft.	Maximum House Footprint (sq. ft.)
1	3516	1170
2	3646	1235
3	4221	1721.5
4	3354	1242
5	3525	1337.5
6	4142	1689
7	5423	2310.5
8	5199	2091.5
9	5247	2115.5
10	4592	2156
11	5076	1776
12	4930	1703
13	3297	1341.5
14	3860	1458
15	5204	2030

Figure 64 - lot sizes & Maximum house footprint

Figure 63 - This "McMansion" Style home does not embody energy efficient design strategies

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Energy-Efficient & Affordable Housing

EXISTING INFRASTRUCTURE

Across the nation failed subdivisions are a blight with which many localities struggle. "PVC farms" (nicknamed because of the stubbed PVC pipes marking existing infrastructure on vacant lots) and vacant properties often lead to increased crime within an area. The lack of human presence allows vacant properties to become targets for thieves, who take advantage of the deserted nature of these areas and strip them of valuables, such as copper piping, appliances, lighting fixtures, most anything. Luckily, Cottages at Cannontown have not yet been developed, and for Athens Land Trust, this can be used to their benefit.

The existing infrastructure is a benefit-as it reduces the cost Athens Land Trust must expend in redevelopment of the vacant lots. When ALT purchased the property the majority of the infrastructure had already been completed. What had not been completed by the previous owners (the final layer of asphalt for Cannon Drive and other minor tasks) will be finished by ALT.

Although this also limits the redesign of the site the existing infrastructure should be viewed as an asset, allowing the Athens Land Trust to invest money into other vital areas and making this development process truly affordable. If ALT had to finance, purchase, and develop the project from the start it would be impossible to construct a development of this size on a truly affordable level.

Figure 66 - At the time of purchase the majority of the infrastructure had been installed within the development

Figures 67, 68, 69, and 70 (left to right) - show the existing sidewalk, verge and the PVC pipes marking where different utilities have been installed making it possible for Athens Land Trust to redevelop the subdivision for affordable housing

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Energy-Efficient & Affordable Housing

SITE ELEMENTS ENERGY-EFFICIENT & AFFORDABLE EXISTING INFRASTRUCTURE page 25

Redevelopment of Failed Subdivision

SITE ELEMENTS

REDEVELOPMENT OF FAILED SUBDIVISION

By connecting individuals and the natural environment through the preservation of land and creating energy-efficient and affordable housing, the Athens Land Trust helps foster **NEIGHBORHOOD REVITALIZATION.**

Statistically, vacant and unbuilt development increases undesirable activities within an area. Easy access, lack of neighbors, and deserted streets can all be attributed to increased crime within a community with abandoned properties.

Redeveloping vacant properties removes the access individuals have to vulnerable properties. Further, the neighborhood is strengthened through the addition of permanent homeowners who will care for and take pride in their investments.

Additionally, through the community land trust (CLT) model, the ALT ensure that the properties will remain affordable and ensure that there will always be a community of consistent homeowners within the neighborhood.

Figure 71 - An aerial photograph showing the early stages of construction at Cottages at Cannontown

A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Figure 72 - Conceptual site plan for Cottages at Cannontown

SITE ELEMENTS NEIGHBORHOOD REVITALIZATION REDEVELOPMENT OF FAILED SUBDIVISION page|26

CONNECTIVITY

By implementing connectivity measures through the sites redevelopment, it can help create and encourage connectivity within the greater community.

In many urban situations, connectivity through means other than automobile transportation has not been a priority. As fuel prices continue to increase and alternative transportation methods are prioritized by the government, connectivity within communities is going to become increasingly important.

Through implementing thoughtful connectivity choices in a redevelopment, the Athens Land Trust can help increase access to services, encourage alternative transportation, and provide safe routes for the community.

Figure 73: Site context in relation to the built environment

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Neighborhood Revitalization

SITE ELEMENTS NEIGHBORHOOD REVITALIZATION CONNECTIVITY page 27

SURROUNDING AREA

Figure 75 - Neighborhood services map

Figure 76 - Springfield Baptist Church Parking Lot (C)

Figure 77 - Springfield Baptist Church (D)

The project is located less than half a mile from the local elementary school, Boys and Girls Club, a city park, pharmacies, a grocery store, and other amenities.

Two bus lines stop within a block of the site, with two major centers of employment (the downtown district and the industrial park) are both within a mile.

Taking note of these connections and ensuring connectivity with the site will be vital to the success of the project.

igure 78 - Department of Labor Career Center (A)

Figures 76 - 81 (left to right, top to bottom) - represent different community service found within a half mile walking distance of the site. The letters in parentheses correspond to the letters on the large aerial map

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Neighborhood Revitalization

Figure 79 - The Site (B)

SITE ELEMENTS NEIGHBORHOOD REVITALIZATION SURROUNDING AREA page 28

SITE DESCRIPTION

THE SITE:

- 2.68 acres
- 15 lots (3297 5423 sq. ft./lot)
- Maximum Lot Coverage: 1648.5 27115 sq. ft.
- Partially completed infrastructure
 Single cul-de-sac road network

THE OUTCOME:

FINAL DESIGN: 15 single-family homes available for purchase by low-to-moderate income first-time buyers

Figure 82 - An aerial photograph of the site overlaid with the site plan

Figure 83

Figure 85 Figure 86 Figures 83 - 88 (left to right, top to bottom) - Photographs representing different site conditions at the time of the charrette

Figure 84

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Existing Site Conditions

SITE ELEMENTS EXISTING SITE CONDITIONS

SITE SPECIFIC

DESIGN CHALLENGES

- Cul-de-sac diameter (96') - A lack of human scale

REQUIREMENTS

- One on street parking spot must be provided for each house on the cul-de-sac

DESIGN SOLUTIONS

- Create a public art & play area

- Develop a planting area with a rain garden

With a diameter of 96 feet the cul-de-sac of Cannon Drive seems disproportionately large and results in a space that seems to lack any human scale.

These conditions present a unique challenge for the ALT and potential designers. County regulations for subdivision design, requirements for on street parking, and international fire code dictate the size of the cul-de-sac. Even without the regulations it would be cost prohibitive to reduce in size. Two designs generated at the charrette, present possible mitigation methods.

Figure 88 - The lack of human scale of the cul-de-sac is evident in this image in which the cars and individuals are dwarfed by the 96' diameter.

Figure 87 - Cannon Drive cul-de-sac detail.

ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Cul-de-sac Design

Figure 89 - Panoramic view of Cannon Drive cul-de-sac taken from the stormwater detention area looking towards Bray Street.

LANDSCAPE ELEMENTS CUL-DE-SAC DESIGN CHALLENGES

p a g e | 3 0

SITE SPECIFIC

DESIGN CHALLENGES

- Cul-de-sac diameter (96')
- A lack of human scale

REQUIREMENTS

- Any center installation may not interfere with the drivelane or required on street parking spaces

DESIGN SOLUTION

- Develop a planting area with a rain garden

The first design solution proposes the installation of a rain garden within the center of the cul-de-sac. This will help mitigate stormwater runoff, create a more human scale for the space, and allow ALT to bring a more natural environment into the cul-desac design. This integration speaks to their desire to provide a more natural environment for community members.

Through the use of native and low or no maintenance plants, ALT can integrate more of the natural environment into constrained sited. Additionally, native and low or no maintenance plants should require little maintenance from community members or ALT.

Through an innovative design such as this, ALT can humanize the scale of the cul-de-sac while also creating a mechanism to assist in stormwater management for the site.

de-sac in Redmond, WA changes the scale of the space and makes it.

Figure 90 - The installation of a garden in the center of this cul- Figure 91 - This section from the student charrette examines how a rain garden would spatially work in the cul-de-sac.

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Cul-de-sac Design

-igure 92 - This plan drawing, from the student charrette, shows a potential design for the rain garden.

Figure 93 - This rain garden, located in Lucas County, Ohio, drains approximately 1.2 acres including driveways, front yards, and the roadway. Runoff is introduced through one of four curb cuts that are set equidistant around the perimeter of the rain garden.

LANDSCAPE ELEMENTS CUL-DE-SAC **DESIGN SOLUTIONS**

SITE SPECIFIC

DESIGN CHALLENGES

- Cul-de-sac diameter (96') - A lack of human scale

REQUIREMENTS

- Any center installation may not interfere with the drivelane or required on street parking spaces

- If used as a play area safety issues must be addressed

DESIGN SOLUTION

- Create a public art & play area

Using the cul-de-sac as an area for public art and an area for children to play will create a **sense** of **place** for the community. Public art can enhance public spaces, transforming the areas where we live and play into places that encourage creativity and foster community engagement and interaction. The small scale of the site and other limiting factors leave neighborhood children with little space to play but developing the cul-de-sac as a play area will mitigate this constraint and provide a common community space.

Developing the cul-de-sac as a space for the community to congregate and play brings up valid concerns regarding the safety of the space in relation to vehicular traffic. Cannon Drive is a short residential street with a low number of homes serviced. This combination allows ALT to consider nontraditional street uses, such as a Shared Street and the Netherlands woonerf. In a woonerf the standard street hierarchy is reversed. Motorists are limited to traveling at a speed no greater than a pedestrian and are legally required to yield the right of way to bicyclists and pedestrians. The Shared Street concept has evolved out of this idea although all users are considered equal. They aim to provide a better balance of the needs of all road users to improve safety, comfort, and livability.

The Shared Street method works by eschewing many of the traditional roadway treatments such as curbs, signs, and pavement markings, resulting in the distinction between different transportation modes being blurred. This introduces a level of uncertainty amongst street users that heightens their sense of awareness and requires caution and interaction with one another. These factors help to create an environment that is more comfortable, particularly for vulnerable road users who benefit from slower motor vehicle travel speeds and more attentive motorists.

The creative use of on street planters, road painting, and other visual cues Cannon Drive can be transformed as an area for public art & and play. This transformation will help ALT with their mission of neighborhood revitalization, creating an area where the community can congregate and interact.

Figure 94 - This photomontage from the student charrette incorporates local Athens artist and designer Lou Kregel's Chrysanthemum stencil into the cul-de-sac center.

Figure 95 - This photomontage from the student charrette shows how the space could be utilized as a play area for children and community members.

Figure 96 - Located in the Beaumont Wilshire neighborhood of Portland Oregon, this intersection uses local art to change the scale and call attention to the intersection.

A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Cul-de-sac Design

LANDSCAPE ELEMENTS CUL-DE-SAC DESIGN SOLUTIONS

p a g e | 3 2

SITE SPECIFIC

DESIGN CHALLENGES

- Aesthetics, functionality, and safety of space
- Community desire for diverse uses in a small space

REQUIREMENTS

- Provide common space for community members
- Topography cannot be modified

DESIGN SOLUTIONS

- Attractive and functional plants for water retention area
- Low maintenance design (low cost for homeowners)
- Scalable design for common space

Figures 97 (below) and 98 (right) - These images depict the current condition of the stormwater management feature. In the image to the right, it can be seen that the detention pond is currently being used as a dumping site for trash and unwanted construction materials. Below, the scale of the stormwater feature can be seen in relation to the person standing on the sidewalk near the cul-de-sac (top center). These images call attention to the need for thoughtful design to mitigate the current conditions, which could persist if not addressed appropriately.

ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Stormwater Management Area

LANDSCAPE ELEMENTS STORMWATER MANAGEMENT AREA DESIGN CHALLENGES

p a g e | 3 3

SITE SPECIFIC

DESIGN CHALLENGES

- Aesthetics, functionality, and safety of space
- Community desire for diverse uses in a small space

REQUIREMENTS

- Provide common space for community members
- Topography cannot be modified

DESIGN SOLUTIONS

- Attractive and functional plants for water retention area
- Low/ no maintenance design (no cost for homeowners)
- Scalable design for common space

The stormwater management area is one of the few areas of the site which can be utilized by community members as open **space**. Currently though it functions solely as a stormwater management area and is a missed opportunity for use as an area for the community to congregate. Through careful and thoughtful design ALT can redesign the stormwater feature into a common space for the community.

Through the initial public workshop that informed the charrette process, potential community members expressed a desire for an area where they can interact with one another. Due to the lack of open space charrette participants sought to find a creative way to integrate the desire for community space within the stormwater feature.

Figure 99 - Existing condition of the stormwater management area

Figures 100 (left), 101 (middle), and 102 (right) - The levels of public realm within the site are depicted to the right. Figure 94 (left) depicts the traditional public realm, which is comprised of the street, Cannon Drive. This traditional understanding of the public realm does not provide residents with any community open space. Figure 95 (middle) integrates the stormwater management area into what is considered public space, providing community members with a potential place to interact and convene. Figure 96 (right) incorporates the front yards of the housing lots as well, creating a semi-public realm which further encourages community interaction.

Figure 100 - Traditional Public Realm

Figure 101 - Traditional Public Realm & Stormwater Management Area

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Stormwater Management Area

Figure 102 - Traditional Public Realm, Semi-public Realm, & Stormwater Management Area

LANDSCAPE ELEMENTS STORMWATER MANAGEMENT AREA DESIGN CHALLENGES

SITE SPECIFIC

This design utilizes the storm water detention facility already on site to provide a common area for residents as well as to create connections to the community. The rain garden is designed to have four components:

- A walking path circling the perimeter of the detention pond providing for exercise, seating, and views.

- A boardwalk to a deck in the center of the detention pond which can be used to view birds and other wildlife. The deck features a recessed area for seating. There is also a cut out in the middle of the deck to observe plant and wildlife from above.

- A deck projecting out from the slope in the back of the lot provides a large space, which can accommodate all residents comfortably. Seating is available and there is also potential to install raised planting beds to serve community garden needs.

- Along the side of the rain garden a path has been created to connect the development to 4th Street and the amenities available there.

Although interrelated, each part serves a unique function and is designed to be separated. Because of this one or more of the components may be developed depending on community needs and available funding. Plant selection and placement is based on a goal to achieve little to no required maintenance. It is also advised that affordable and low maintenance materials be explored (like Trex) for the construction of the decks.

Figure 104 - This panoramic sketch from the charrette highlights how thoughtful landscaping and design can substantially change the use and feel of an area.

Figure 105 - In this charrette sketch, a section view of center deck show the integration of community and nature desired by ALT.

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Stormwater Management Area

Figure 106 - In this sketch from the charrette, the issue of privacy screening between lot 10 and the stormwater feature are addressed.

LANDSCAPE ELEMENTS STORMWATER MANAGEMENT AREA DESIGN SOLUTIONS

SITE SPECIFIC

DESIGN CHALLENGES

- Large cartway of 36 feet
- Noncontiguous planting strip

REQUIREMENTS

- Comply with Athens-Clarke County Tree Species
- Plantings of 1 tree per 30' of lot frontage.

DESIGN SOLUTIONS

- Installation of additional planting strips on street
- Planting of street trees in the 15' front yard setback & utility easement. (Careful thought needs to be given to where the trees are planted, as they should not interfere with the underground utilities.)

Figure 107 - Cannon Drive cul-de-sac viewed from lot 12

Figure 108- Cannon Drive cul-de-sac viewed from Bray Street

Figure 109 - Cannon Drive planting strips

Figure 110 - Cannon Drive sidewalk and verge

The design of a street is directly related to how people will make use of the street and the space it provides. When considering the livability of a neighborhood, streets are one of the key components, as they provide access to community services and other community members. They are utilized by a large range of users, from pedestrians to fire trucks, and therefore they must be able to service these users adequately.

In a residential setting the street should provide a place for neighbors to interact, for children to play and serves as a way of connecting the community. These are the types of uses community members desire from their street but rarely receive.

Often, residential streets are designed with other goals in mind; the amount of on street parking required, the ability of emergency service vehicles to guickly reach a destination, and the ease at which other large vehicles, like school buses or delivery trucks, can maneuver the road. While these are vital services and concerns, there needs to be a better balance between the regulations and the desires of residents.

Cannon Drive is cul-de-sac which is 400 feet in length and has a cartway of 36 feet in areas where there is no planting strip and 24 feet where one exists. The existing planting strips only occur along the first one and a half lots of the street, leaving the majority of the street feeling extremely wide, and as a result, unwelcoming.

In an effort to humanize the street, while meeting the regulations for on street parking, the charrette identified three additional places planting strips could be installed. Further, the charrette suggested planting additional trees in the front yard setback and utility easement where planting strips do not exist. The front yard plantings need to be carefully considered and the best spots located as to not interfere with underground utilities.

ATHENS LAND TRUST

A DESIGN PROGRAM for AFFORDABLE HOUSING

Streetscape

LANDSCAPE ELEMENTS STREETSCAPE **DESIGN CHALLENGES**

SITE SPECIFIC

Streets are the vein of a community, providing the structure around which the community is formed. The street through the site, Cannon Drive, stretches 400 feet in length and has a cartway of 36' for its majority. This short length combined with the wide road width leaves the road feeling cold and unwelcoming. To mitigate this feeling, the charrette determined that adding 3 additional planting strips along the roadway will help to break up the asphalt and bring the street back to a more human scale. Further, continuing the planting of trees in the front yard setback and utility easements of lots without a planting strip further lessens the barren appearance of the street.

This effort, combined with the modification to the cul-de-sac, will transform the streetscape into a place where neighbors interact and children play. The benefits of this are twofold, play space for children can be realized and the street is transformed into a welcoming environment. One of the pieces of information learned during the charrette was that potential community members desired a space for their children to play. Due to the small property, no proper playspace could be incorporated, but by reclaiming the steetscape and making it not just a place for vehicular travel, children can have an area in which they can play once again.

Figure 113 - Streetscape planting strip and on street parking plan, charrette drawing

ATHENS LAND TRUST

A DESIGN PROGRAM for AFFORDABLE HOUSING

Figure 112 - Street Cross Section, Charrette Drawing

CARTWAY

Figure 114- Detail of streetscape planting strip and on street parking plan, charrette drawing

page|37

SITE SPECIFIC

SUGGESTED STREET TREES:

Cannon Drive: - Maximum distance apart: 30'

American Hornbeam, Carpinus caroliniana

BRAY STREET:

- Maximum distance apart: 30'
- Fall leaf color classification of MU (multi-colored), RE (red), or YE (yellow)

Southern Sugar Maple, Acer barbatum

Southern Red Oak, Quercus falcata Graphics created by Robert O'Brien

Overcup Oak, Quercus lyrata

Figures 115, 116, 117, 118, 119, 120, 121 (left to right, top to bottom) - These suggested street trees comply with Athens-Clarke County (ACC) Tree Species List. When selecting appropriate trees, the recommended use, fall leaf color, and if the tree is native to Athens should be taken into consideration. The Fall Leaf Color classification of BR (bronze or brown) MU, (multi-colored: maroon, red, orange, yellow), RE (red) and YE (yellow) were selected as well as trees that are appropriate for street and yard road frontage. The ACC Tree Species List is intended to support the development code, site planning and design activities for tree conservation and establishment, and tree maintenance planning and decision-making. The suggestions provided below are not all encompassing and should serve as a guide with the above mentioned classifications being met.

Southern Red Oak, Quercus falcata

Willow Oak, Quercus phellos

Figure 122 - Photographic representation of tree species with fall foliage similar to the BR, MU, RE, and YE classifications.

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Streetscape

Winged Elm, Ulmus alata

LANDSCAPE ELEMENTS STREETSCAPE SUGGESTED STREET TREES
LANDSCAPE ELEMENTS

LOT SPECIFIC

FRONT YARD

SUGGESTED GROUND COVER:

- Grass or mulch lawns
- Low to no maintenance when possible
- Flower beds at the base of the house

Figure 123 (left), 123 (middle), 125 (right) - All three of these images utilize different methods of low to no required maintenance planting. Figure 118 (left) takes advantage mulch and low required maintenance planting such as ferns, bushes, and monkey grass. The yard in the right (figure 120) is more manicured, but still utilizes low required maintenance planting, and figure 119, in the center, chose to leave the yard undisturbed from its natural state of hardwoods and pines.

SIDE YARD SUGGESTED GROUND COVER:

- Low to no maintenance plants in conjunction with privacy plantings

WITH SHARED DRIVEWAY (LOTS 2 - 9, 11, 12, 14, & 15): - Native shrubs line the house between the driveway and building footprint

WITHOUT SHARED DRIVEWAY (LOTS 3, 10, AND 13): - Buffers and screening plants to provide privacy between houses

REAR YARD

SUGGESTED GROUND COVER:

- Grass or mulch lawns

- Low to no maintenance if desired by home owner

- Trees or other plantings combined with fencing should line the rear edge of property to provide privacy screening - Use existing canopy where possible

- Select native trees where replanting is necessary







Figure 126 (left), 127 (middle), 128 (right) - All three of these images depict different methods for providing privacy screening when houses are sited close together. In the figures on the left and the middle, a combination of a fence and plantings provides attractive screening for both residences. The image on the right makes use of yard plantings to provide privacy.







Figure 129 (left), 130 (middle), 131 (right) - All three of these images depict different methods for the rear yard landscape. Utilizing fencing and creative plantings can provide necessary priovacy screening from neighbors.



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Yard Design



LANDSCAPE ELEMENTS YARD DESIGN SUGGESTED PLANTINGS page|39

LANDSCAPE ELEMENTS

LOT SPECIFIC

BENEFITS OF PERMEABLE PAVEMENT:

Permeable pavement and pavers are an ideal alternative to traditional methods of driveway paving. The permeable paving filters and drains stormwater back into the soil rather than creating stormwater runoff. Additionally, permeable pavement can help recharge groundwater supplies and filter pollutants on site rather than through stormwater treatments facilities. This helps keep water on the site and can reduce the amount of watering a homeowner must do for their lawn and planting.

Increasingly, municipalities and government agencies are recommending or requiring the use of permeable paving in new developments. Although the initial install of permeable paving and pavers is more expensive than traditional concrete or asphalt, the expense is recovered over the life of the paving system. Traditional concrete has a tendency to expand and crack in extreme temperatures because permeable pavers are install with space between them, they can expand and retract without damage. Further, if a paver does become cracked that individual piece can be replaced.

SUGGESTED MATERIALS:

Interlocking Concrete Pavers (http://www.icpi.org/node/554) Grasspave² (http://www.invisiblestructures.com/grasspave2.html) Pervious concrete (http://www.concreteparking.org/pervious)



Figure 132 - Concrete grid pavers allow grass to grow between the pavers and are strong enough to support vehicles



Figure 133 - An example of concrete gird pavers being used for a parking lot.



Figure 134 - Grasspave2 porous pavement that preforms the functions of asphalt or concrete while allowing you to park, drive, walk and ride on its surface.



Figure 135 - Pervious concrete allows water to seep through to the ground and can be used for driveways and low intensity streets





runoff



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Figure 137 - Here, concrete pavers are used to create a permeable driveway to minimize stormwater

LANDSCAPE ELEMENTS DRIVEWAY SUGGESTED MATERIALS

EXTERNAL FEATURES

Massing refers to a building's aspect ratio (relationship of height to width), size, and shape. Additionally, architectural elements such as building facade, fenestration choice, and rooflines, as well as interior floor plans can affect building mass. These components are influenced by the building's use, as well as the site constraints, both legal and physical (zoning height limitations, required set backs, site topography, etc), as well as the scale of existing adjacent buildings.

Massing also refers to how a building's design can be used to optimize passive heating and cooling strategies and resource efficiency. Passive heating and cooling strategies can be implemented through the choice in building materials so that the space gradually absorbs heat throughout the day and releases the heat throughout the night. Massing can also be used to deflect prevailing winds or to optimize natural ventilation.

Through careful consideration of these elements ALT can encourage affordable, creative, and sustainabile housing for the residents of Athens-Clarke County.



Figure 138 - The nontraditional massing of the Antioch Baptist Church in Perry County Alabama, was designed and built by Auburn University's Rural Studio in 2002. 75% of the original churches material were reused (including roof and floor joists, tongue and groove paneling, and corrugated metal). Further, the design utilized the different building material creating a structure with unique massing and ample natural lighting.



Figure 139 - The creative use of materials in the above image allows a wall to double as a patio.









ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Massing: Overview



Figure 141 - The mixture of materials in this contempary cottage uses multiple massing

ARCHITECTURAL ELEMENTS OVERVIEW

SITE FACTORS



Figure 142 - This ALT home utilizes passive solar design strategies to increase the affordability of the structure. By utilizing thoughtful fenestration, massing, and orientation choices, required energy expenditures for the homeowner are minimized.

Using techniques like passive solar design can make a significant difference in the livability and energy costs associated with heating and cooling a home. According to the book Sustainable Construction: Green Building Design and Diversity, "passive solar design is the design of a building's heating, cooling, lighting, and ventilation systems relying on sunlight, wind, vegetation and other naturally occurring resources on the building site." This differs from active solar systems (such as solar panels) as passive solar systems do not involve the use of mechanical or electrical devices, fans, pumps, etc.

The book continues to discuss the two major components of passive solar design as "1) the use of the building's location and site to reduce the building's energy profile and 2) the building design itself—its orientation, aspect ratio, massing, fenestration, ventilation paths, and other measures"

Orienting the long side of a house on an east-west axis minimizes the amount of sunlight on the building surfaces, which in the south is especially important during the warmer months. Further, using a building aspect ratio where the building is longer than it is wide will minimize the exposure of east and west surfaces. This is coupled with few windows on these faces reducing exposure to high morning and afternoon solar loads.

When applied appropriately, passive solar design can reduce energy costs as much as 30 percent. Sometimes it can be difficult to achieve the correct orientation in a pre-plotted subdivision. This is also an issue that smaller urban lots face where the street position and the tradition of housing fronting the street dictate the layout. The ALT and Cottages at Cannontown are challenged with both these issues. The lots are small scale and because the site was pre-plotted before the ALT acquired it, the lot configuration could not be changed.

In situations such as these it is especially important to utilize the other components of passive solar design, such as massing, fenestration, and ventilation paths to construct as efficient of a building as possible. In doing so ALT will construct a community that emphasizes efficient, sustainable, and thoughtful design.



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Massing: Building Orientation



Figure 143 - The above diagram shows different methods of passive solar design.



Figure 144 - The orientation, roof overhang, and large windows all increase the efficiency of this house.



Figure 145 - The above graphic represents an ideal floorplan for a passive solar design home. Arranging the most utilized rooms in the suns path allows them to capture and store energy during the day and release it at night.

> **ARCHITECTURAL ELEMENTS BUILDING ORIENTATION** PASSIVE SOLAR DESIGN

EXTERNAL FEATURES

After World War II there was a shift in focus to the back of the house, the backyard, with its fences and screened in porches offering people privacy as they socialized with friends and family. Within the past few decades there has started to be a shift away from this model, with more homeowners and architects embracing the concept of the front porch one again. In a world that often revolves around technology and automobiles, a front porch is an area within a neighborhood that may facilitate interaction between community members.

The front porch acts as a transitional area between the privacy of one's home to the public community outside of their front door. The physical space of the porch is personal to the homeowner while also welcoming to friends and strangers. People will sit on their front porch in order to interact with their neighbors as they come and go and its use serves as a way to connect individuals to the street and, as a result, the neighborhood and community in which they live.

In order to facilitate this type of interaction, though, the porch must be constructed to be usable and welcoming as opposed to a front stoop which cannot comfortably accommodate seating or entertaining. They should be a minimum of 6', be able to accommodate comfortable seating, and be oriented to the neighborhood. Each of the prototypes developed for the lots with ALT's subdivision include porches to this standard.





Figure 146 Figure 146, 147, 148, 149, 150, 151 - As discussed above, the front porch can facilitate community engagement and interaction. The figures on this page represent both correct and incorrect porch forms. In the two figures (146 and 147) above represent unsuitable front porch designs as there is no room for individuals to congregate, it instead serves as a front stoop. The four images (148-151) to the right all



provide room for seating and are oriented towards the neighborhood.

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING



Figure 148



Figure 149



Massing: Front Porch



ARCHITECTURAL ELEMENTS MASSING FRONT PORCH page 43

EXTERNAL FEATURES

Fenestration is the design and arrangement of openings in a building envelope, such as windows, doors, and skylights. Their arrangement and size can have a substantial impact in both reducing energy costs and achieving physical and psychological benefits for the building occupants. Research has show that in commercial and office buildings spending and productivity can increase anywhere from 10-30% with increased daylighting. While this research examines commercial and office spaces, the same logic can be applied to residential structures as well. Further, current research suggests that ill nesses decrease and an improved sense of well-being occurs with appropriate daylighting and fenestration of a structure. This is achieved through innovative techniques designed to redirect sunlight or skylight to areas it is required without creating a glare.

A balance must be achieved though between daylighting and trade-offs in energy efficiency. While adding additional natural light to a building is beneficial, there should not be an increase in energy expenditures to cool the building as a result. Additionally, skylights, windows, and other lighting features in comparison to traditional construction can be more expensive, and should be taken into consideration during the design process. The ultimate goal is to build high guality affordable housing.

ACC design standards require that all walls facing public right-of-way provide a minimum of 20% fenestration, defined as both window and door openings. This requirement will affect the front facade for all lots and housing prototypes as well as the western side elevations of lots 1 and 15.







funcitional, providing ample natural light to the interiors of the homes.

ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Massing: Fenestration



Figures 152 - This graphic show the manner in which different passive solar design techniques work together. Through utilizing operable windows and the clerestories in this model provide both natural daylight and ventilation.

> **ARCHITECTURAL ELEMENTS FENESTRATION** NATURAL LIGHTING

EXTERNAL FEATURES

Clerestories are any high window above eye level which allow natural light into a space. Clerestories are able to provide ample light to a room and typically reduce the need for traditional lighting during the day. Further, the height of clerestories works to their benefit, they provide natural light to a room while restricting views, which can be helpful for sites that do not have pleasant surroundings as well as providing privacy for the user.

Economically, clerestories help in solar heat gain, which results in savings in energy expenditures, and are often used in passive solar design. Often, the south side of the building receives the most sunlight and therefore maximizing south-facing windows aids this process. During the day the sun shines through the clerestories, heating the walls and floors of the house. During the night the heat that was absorbed is slowly released providing the house with heat when it is most needed.v

For southern locations, having too much sunlight during the summer months can be an issue, luckily there are many design features to keep passive solar designs cool during these times. For instance, overhangs can be designed to shade the windows when the sun is high in the summer. For this site west facing clerestories should be avoided. Additionally, they are more suitable for the single-story proptypes in which solar gaines may be more efficiently maximized.



Figure 157 - This modern infill utilizes both clerestories and roofline overhangs in its design. The clerestories increase natural light within the interior of the house, while the overhangs provide shade and prevent excess heat during the summer.



Figure 158 - By including clerestories in this room natural lighting increased and electrical costs should be reduced, a the need for artificial light is limited to nighttime hours.



orientating the house on an east-west axis building receives maximum sunlight morning, noon, and night.

ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Massing: Fenestration



ARCHITECTURAL ELEMENTS FENESTRATION CLEARSTORIES

EXTERNAL FEATURES

The roofline of a house serves as a major structural and architectural design element and helps to define the structure. A variety of rooflines are permitted and encouraged within the development but must be consistent with Athens-Clarke County regulations, which prohibit flat roofs on the primary structure; establish a maximum building height of 30'; and increase minimum rear setback by 1' for every foot over 20'. Specifically, lots 3, 4, 5, 6, 11, and 13 need to be closely watched for the 20' maximum height as these lots are the smallest in width. Overhangs or deep eaves are encouraged on appropriate prototypes as they provide essential shade and can be aesthetically pleasing. When possible, tuck the second story into the roofline.

Additionally, a variety of rooflines within the cul-de-sac will help differentiate the different housing prototypes, providing the neighborhood with a more organic and natural design pattern, preventing the cookie-cutter feeling that many new subdivisions possess. While a variety of rooflines is encouraged, consideration needs to be given to the increased cost implications associated with a more complex roof. Sometimes, simple front and side gables, as well as a single shed roof, are the most logical designs to pursue from a cost perspective. That being said, designers are encouraged to be creative with their designs and explore ways to increase variety while keeping the costs affordable.

Figures 155 - 159 - Auburn University's Rural Studio course, offered through the School of Architecture challenges undergraduate students to improve the living conditions in rural Alabama while imparting practical experience to students. architecture Many of the materials are either found or reused from existing structures. Through this process, creative and unique buildings have been constructed for lowincome families in rural Alabama.



Figure 159 - Harris House (back), Rural Studio, Mason's Bend, AL, 1996





Figure 160 - Harris (Butterfly) House, Rural Studio, Mason's Bend, AL, 1996



Figure 162 - Patrick House, Rural Studio, Newbern, AL, 2004



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Massing: Roofline Variety

Figure 161 - \$20K House IV, Rural Studio, Newbern, AL, 2009



Figure 163 - \$20K House IV/Pattern Book House, Greensboro, AL, 2008

ARCHITECTURAL ELEMENTS ROOFLINE VARIETY

ARCHITECTURAL ELEMENTS EXTERNAL FEATURES

BUILDING FACADE:

- Siding Choice:
 - 80-90 % should be of durable material with a 30 year warranty
 - No masonite, synthetic stucco, or vinyl



Figure 164





Figures164, 165, and 166 - Siding choice says a lot about a home. Thoughtful decisions should be made to ensure affordability and durabilitiy.

ALT RIORITY	MATERIALS	PROS	CONS	SUSTAINABILITY CONSIDERATIONS
1	Fiber Cement Siding	 Extremely durable Low maintenance Weather resistant Relatively low cost 	 Low recycled content Non-certified imported wood High embodied energy CO2 produced in manufacturing 	1. Use locally produced products
2	Hardboard/ Engineered Siding	 High recycled content Renewable resource Relatively low cost 	 Durability can be an issue with some products Potential off- gassing Possible VOC pollution during manufacturing 	 FSC certified products available Investigate component materials for toxicity and recycled content.
3	Wood Siding	 Renewable resource Locally available Relatively low cost 	 Requires frequent maintenance or replacement Relatively high costs 	 Specify FSC certified materials Use reclaimed or salvaged materials if possible Use local source if possible
4	Cement Stucco/ Metal Lath	 Very durable Relatively low cost 	 CO2 produced in manufacturing High emboided energy 	 Confirm recycled content of metal lath Fly ash can be added to reduce Portland cement content and CO2 production
5	Metal Siding	 Very durable High recycled content available 	 High embodied energy Water and air pollution created in manufacturing 	1. Confirm recycled content
6	Plywood Siding	 Renewable resource Relatively low costs Dimensionally stable 	 Durability can be an issue Often contains phenolformaldehyde binder Uses more mature trees 	 No FSC certified products available Look for formaldehyde-free products

Figure 165

Figure 167 - This chart shows different siding choices, ALT's preference, and the pros and cons of each



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Recommended Materials

ARCHITECTURAL ELEMENTS BUILDING FACADE SIDING CHOICE

EXTERNAL FEATURES

The material choice for the roof of a house not only an aesthetic choice but also has both economic and environmental implications. Traditional asphalt shingles need to be replaced every 12-20 years. Not only are asphalt shingles costly to replace, but they cannot be recycled. Further, according to the National Association of Homebuilders Research Center, 20 billion pounds of asphalt shingles are disposed of in U.S. landfills each year.

An alternative to traditional roofing material is a metal roof. Metal roofing has historically been used in the southeast and has both environmental and economic benefits. While the initial cost of a metal roof is more expensive than other roofing materials in the long run the homeowner saves money. This is because a metal roof has a true warranty of 30 - 50 year. Further, metal roofs are typically comprised of recycled metals and can actually reduce heating and air conditioning costs as they are excellent insulators.

Further, metal roofs come in a variety of colors and styles. Light colored roofs are encouraged, as they will reflect more sunlight. Further, to keep costs to a minimum, consider the roofing material while designing the roofline, the less breaks there are the more affordable a metal roof will be.



Figure 168 - \$20K House II/Frank's House, Rural Studio, Greensboro, AL, 2006



Figure 169 - Stephen Dynia Architecture, Jackson, Wyoming,



Figure 171 - Traditional Infill Home, Athens, Georgia

styles.



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Recommended Materials



Figure 170 - This roof, by SteelMaster Buildings, combines different metals in this roofing system.

Figures 168, 169, 170, and 171 - As these images show, there are a variety of choices for metal roofing to suite different architectural

ARCHITECTURAL ELEMENTS RECOMMENDED MATERIALS Metal Roofing

ARCHITECTURAL ELEMENTS HOUSING PROTOTYPES



Figure 172 - Prototype 1

Building Setbacks:

Front—15' (Front porch cannot encroach due to utility easement) Side—0' (10' adjacent to street) Rear—10' (+1 ft./foot of building height over 20')

Building Features:

Envelope—Approximately 24' x 42' Square feet—Approximately 860 sq. ft. Stories—1 Bedrooms—2 Bathrooms—2 minimum Accessibility—Full (Universal Design) Floor plan—Open floor plan for living spaces



suited for this design.



Figure 174



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Figure 175

Figures 174 - 176 - Although larger than a typical Katrina Cottage, the concept of prototype 1 is to provide a font porch for community interaction and fully accessible universal design for homeowners. Both lots 11 and 14 are long and narrow and well



ARCHITECTURAL ELEMENTS PROTOTYPE 1 DESIGN COMPONENTS & PRECEDENTS

HOUSING PROTOTYPES

Lot 11

Size—Large (5076 sq. ft.) 50% lot coverage—2538 sq. ft. Shape—Atypical (Triangular) Driveway—762 sq. ft. Maximum house footprint—1776 sq. ft.

Lot 14

Size—Small (3860 sq. ft.) 50% lot coverage—1930 sq. ft. Shape—Typical (Quadrilateral) Driveway—472 sq. ft. Maximum house footprint—1458 sq. ft.



Figure 177 - The lots that have been recommended for prototype 1



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Prototype 1

ARCHITECTURAL ELEMENTS **PROTOTYPE 1** LOT SPECIFICATIONS









Figure 180



or loft. ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Figures 180 - 182 - These houses represent architectural precedents for prototype 2. This style cottage allows for an additional half floor, either in the form of a walk-out basement

> ARCHITECTURAL ELEMENTS **PROTOTYPE 2 DESIGN COMPONENTS & PRECEDENTS**

HOUSING PROTOTYPES

Lot 2

Size—Small (3646 sq. ft.) 50% lot coverage—1823 sq. ft. Shape—Typical (Rectangular) Driveway—588 sq. ft. Maximum house footprint—1235 sq. ft.

Lot 6

Size—Medium (4142 sq. ft.) 50% lot coverage—2071 sq. ft. Shape—Atypical (Triangular) Driveway—382 sq. ft. Maximum house footprint—1689 sq. ft.

Lot 12

Size—Medium (4930 sq. ft.) 50% lot coverage—2465 sq. ft. Shape—Typical (Quadrilateral) Driveway—762 sq. ft. Maximum house footprint—1703 sq. ft.

Lot 15

Size—Large (5204 sq. ft.) 50% lot coverage—2602 sq. ft. Shape—Typical (Quadrilateral) Driveway—572 sq. ft. Maximum house footprint—1703 sq. ft.



10'rear setback ò 14 13 10'rear setback -10 parking

Figure 183 - The lots that have been recommended for prototype 2



Prototype 2



ARCHITECTURAL ELEMENTS PROTOTYPE 2 LOT SPECIFICATIONS





ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Figure 186 -Front elevation

Prototype 3







ARCHITECTURAL ELEMENTS PROTOTYPE 3 DESIGN COMPONENTS & PRECEDENTS

HOUSING PROTOTYPES

Lot 7

Size—Large (5423 sq. ft.) 50% lot coverage—2711.5 sq. ft. Shape—Typical Driveway—401 sq. ft. Maximum house footprint—2310.5 sq. ft.

Lot 8

Size—Large (5199 sq. ft.) 50% lot coverage—2599.5 sq. ft. Shape—Typical Driveway—508 sq. ft. Maximum house footprint—2091.5 sq. ft.

Lot 9

Size—Large (5247 sq. ft.) 50% lot coverage—2623.5 sq. ft. Shape—Atypical Driveway—508 sq. ft. Maximum house footprint—2115.5 sq. ft.

Lot 10

Size—Medium (4592 sq. ft.) 50% lot coverage—2465 sq. ft. Shape—Typical Driveway—309 sq. ft. Maximum house footprint—2156 sq. ft.



Figure 190 - The lots that have been recommended for prototype 3

gdjacent street setback

14

10'rear setback

10'_à,



13

parking

<u>1</u>0'rear setback

5

Prototype 3



ARCHITECTURAL ELEMENTS PROTOTYPE 3 LOT SPECIFICATIONS



Figure 191 - Prototype 4

Floor plan—If ADA compliant, master bedroom downstairs and two bedrooms upstairs. Includes dormers.







Figure 193



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Figure 194

Figures 191 - 195 - The L-shaped floor plan of this house allows increased square

ARCHITECTURAL ELEMENTS PROTOTYPE 4 DESIGN COMPONENTS & PRECEDENTS

Lot 3

Size—Medium (4221 sq. ft.) 50% lot coverage—2110.5 sq. ft. Shape—Typical Driveway—389 sq. ft. Maximum house footprint—1721.5 sq. ft.

Lot 4

Size—Small (3354 sq. ft.) 50% lot coverage—1667 sq. ft. Shape—Typical Driveway—435 sq. ft. Maximum house footprint—1242 sq. ft.

Lot 5

Size—Small (3525 sq. ft.) 50% lot coverage—1762.5 sq. ft. Shape—Typical Driveway—425 sq. ft. Maximum house footprint—1337.5 sq. ft.

Lot 13

Size—Small (3297 sq. ft.) 50% lot coverage—1648.5 sq. ft. Shape—Typical Driveway—307 sq. ft. Maximum house footprint—1341.5 sq. ft.



Figure 196 - The lots that have been recommended for prototype 4

setback

15

14

10' rear setback .

³Cent street

ò



<u>10'rear setback</u>

off street

parking

10

Prototype 4



ARCHITECTURAL ELEMENTS PROTOTYPE 4 LOT SPECIFICATIONS

HOUSING PROTOTYPES

Building Setbacks:

Front—15' (Front porch cannot encroach due to utility easement) Side—0' (10' adjacent to street) Rear—10' (+1 ft./foot of building height over 20')

Building Features:

At designer's discretion to fit the difficult lot

Lot Information:

Size—Small (3516 sq. ft.) 50% lot coverage—1758 sq. ft. Shape—Typical Driveway—588 sq. ft. Maximum house footprint—1170 sq. ft.



Figure 197 - The constrained nature of Lot one is visible in this photograph



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

З

narking

10'rear setback

Lot 1



<u>1</u>0'rear setback

ARCHITECTURAL ELEMENTS LOT 1 DESIGN **COMPONENTS & PRECEDENTS**

ARCHITECTURAL ELEMENTS INTERNAL FEATURES

Floors:

Hardwood floors:

- Suggested #1 common commercial grade red oak flooring
- Bedrooms when appropriate
- Kitchen when appropriate (open floorplans)
- Main living space

Tile floors:

- Suggested ceramic tile AO 8"x8" white
- Bathroom
- Kitchen when appropriate
- Laundry room

Walls:

Gypsum Board:

- Thickness ¹/₂ inch; maximum permissible length
- Standard Type: Paper faced, tapered edges.
- Moisture Resistant Type: Moisture resistant type
- (ASTM C630), (often called green board). Provide at walls in all bathroom.

Paint:

- Acceptable manufacturers or equal: Sherwin Williams Harmony

- Allow for four interior wall colors
- Color: as selected by Owner from
- manufacturer's standard range.
- Finish: satin (semi-gloss in baths)
- All indoor paint to contain no V.O.C.s



ATHENS LAND TRUST A DESIGN PROGRAM for AFFORDABLE HOUSING

Bedrooms:

- Master bedrooms should be 14' x 14'
- Additional bedrooms: 11'x 11' - Closets: 2'4" x 6'
- Bathrooms should be 5' x 8'
- Coat/hall closet should be 2.5' x 4'
- Hallways, where needed, should be 4' wide

Appliances:

- Electric Range/Oven and cord
- Range Backsplash
- Microwave Hood (Vent to Exterior)
- Dishwasher (Energy Star)

Other Considerations:

- on the housing prototype.
- floor plans.
- possible.

Recommended Materials & Room Sizes

- Walk in closets in master should be at least 50 sq. ft.

- Kitchens should be approximately 120 sq. ft.

-Refrigerator/Ice Maker (Energy Star)

- Ceiling should be a minimum of 9' - Include a kitchen pantry when appropriate - Kitchen & bathroom sizes should be as close to recommendations as possible to keep building costs down. - Living/dining can range from 160 sq. ft. to 396 sq. ft. depending - Stackable laundry room should be 3' x 3' or larger in accessible

- The bedroom sizes should be considered a minimum size where

ARCHITECTURAL ELEMENTS INTERNAL FEATURES **RECOMMENDED MATERIALS** & ROOM SIZES page 58

CONCLUSION

The previous pages outline the results of a charrette that used the needs and wants of the community and Athens Land Trust to guide both students and design professionals through the redevelopment of Cottages at Cannontown. Through the community land trust model, ALT has found an innovative and plausible way to reuse failed subdivisions as a mechanism for affordable housing.

This redevelopment will not only help revitalize the greater neighborhood, by providing long-term homeowners, but it can provide a way for ALT to apply all portions of their mission to the community. While limiting in some ways, the already completed infrastructure and platting of lots allows ALT to focus one providing energy efficient and affordable housing rather than spending their limited funds on the design and layout of the community. Further, through thoughtful redevelopment of the stormwater management feature and street and yard plantings, ALT can better integrate the community with the natural environment with the planting of native grasses, shrubs, and trees. Finally, the redevelopment itself will help revitalize the neighborhood by removing a vacant and unused property and replacing it with thoughtful, energy-efficient, and affordable housing for Athens-Clarke County community members.

This programs is provided to help potential designers better understand the process that has taken place to their involvement. While not meant to be limiting, designers are encouraged to take advantage of the information provided in the previous pages as they develop designs for Athens Land Trust.



Figure 199 - This word map represents terms used during the community input session by community members to describe different components of a home, neighborhood and community. The larger words were mentioned more frequently and should be given more consideration when designing potential houses for Cottages at Cannontown.



ATHENS LAND TRUST A DESIGN PROGRAM FOR AFFORDABLE HOUSING

Final Thoughts

CONCLUSION FINAL THOUGHTS

CONCLUSION

FIGURE 1	Sarah McQuade	FIGURE 37	http://georgiainfo.galile
FIGURE 2	Sarah McQuade		gospelpilgrimcemetery
FIGURE 3	Sarah McQuade	FIGURE 38	Sarah McQuade
FIGURE 4	Sarah McQuade	FIGURE 39	Leah Graham Stewart
FIGURE 5	Sarah McQuade	FIGURE 40	Sarah McQuade
FIGURE 6	Leah Graham Stewart	FIGURE 41	Leah Graham Stewart
FIGURE 7	Leah Graham Stewart	FIGURE 42	Leah Graham Stewart
FIGURE 8	Athens Land Trust	FIGURE 43	Leah Graham Stewart
FIGURE 9	http://athenslandtrust.org/archive.htm	FIGURE 44	Diane Silva and Yifan Su
FIGURE 10	Center for Community Design & Preservation	FIGURE 45	Yuan Hong
FIGURE 11	Center for Community Design & Preservation	FIGURE 46	Sarah McQuade
FIGURE 12	Wordle Created by Sarah McQuade	FIGURE 47	Williams and Associates
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FIGURE 18	Google Doc created by Policy & Social Elements Group	FIGURE 51	http://www.robsplants.
FIGURE 19	http://www.clarke.k12.ga.us/		ChasmanthiumLatifoliu
FIGURE 20	http://portal.hud.gov/portal/page/portal/HUD	FIGURE 52	http://www.finegarden
FIGURE 21	https://www.facebook.com/photo.php?bid=		Gardening/Plants/panio
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FIGURE 25	Google Map created by Policy & Social Elements Group		AAAAAAAAEO8/vm6b0
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FIGURE 35	http://athenslandtrust.org/communitygardens.htm		2010/09/Rural-Studio-S
FIGURE 36	http://athenslandtrust.org/communitygardens.htm	FIGURE 63	http://www.treehugger



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CONCLUSION FINAL THOUGHTS

CONCLUSION EIGURE 64 Sarah McQuade

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FIGURE 65	Sarah McQuade
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FIGURE 67	Sarah McQuade
FIGURE 68	Sarah McQuade
FIGURE 69	Sarah McQuade
FIGURE 70	Sarah McQuade
FIGURE 71	Google Maps
FIGURE 72	Sarah McQuade
FIGURE 73	Leah Graham Stewart
FIGURE 74	Elizabeth Brighton
FIGURE 75	Leah Graham Stewart
FIGURE 76	Leah Graham Stewart
FIGURE 77	Leah Graham Stewart
FIGURE 78	Leah Graham Stewart
FIGURE 79	Leah Graham Stewart
FIGURE 80	Leah Graham Stewart
FIGURE 81	Leah Graham Stewart
FIGURE 82	Leah Graham Stewart
FIGURE 83	Sarah McQuade
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FIGURE 90	https://picasaweb.google.com/tobylou3/Home
	AndGarden2009#5407758425014480450
FIGURE 91	Yuan Hong
FIGURE 92	Yuan Hong
FIGURE 93	http://www.raingardeninitiative.org/images/Pilot%20
	Project%20Photos/Deer%20Valley/IMG_0009_640.jpg
FIGURE 94	Lara Mathes
FIGURE 95	Lara Mathes
FIGURE 96	http://www.portlandground.com/archives/2007/05/i
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FIGURE 9/	Sarah McQuade
FIGURE 98	Sarah McQuade
FIGURE 99	Sarah McQuade



A DESIGN PROGRAM FOR AFFORDABLE HOUSING

FIGURE 100	Leah Graham Stewart
FIGURE 101	Leah Graham Stewart
FIGURE 102	Leah Graham Stewart
FIGURE 103	Diane Silva and Yifan S
FIGURE 104	Diane Silva and Yifan S
FIGURE 105	Diane Silva and Yifan S
FIGURE 106	Diane Silva and Yifan S
FIGURE 107	Sarah McQuade
FIGURE 108	Sarah McQuade
FIGURE 109	Sarah McQuade
FIGURE 110	Sarah McQuade
FIGURE 111	http://smartgrowthusa
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FIGURE 112	Yaun Hong
FIGURE 113	Landscape Group
FIGURE 114	Yuan Hong
FIGURE 115	Robert O'Brien, http://
FIGURE 116	Robert O'Brien, http://
FIGURE 117	Robert O'Brien, http://
FIGURE 118	Robert O'Brien, http://
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FIGURE 123	Sarah McQuade
FIGURE 124	Sarah McQuade
FIGURE 125	Sarah McQuade
FIGURE 126	Sarah McQuade
FIGURE 127	http://www.flickr.com/
FIGURE 128	Sarah McQuade
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FIGURE 131	http://www.flickr.com/
FIGURE 132	http://www.heartstone
FIGURE 133	http://www.icpi.org/no
FIGURE 134	http://www.invisiblest
FIGURE 135	http://www.icpi.org/no
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FIGURE 137	Sarah McQuade

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CONCLUSION FINAL THOUGHTS

CONCLUSION

FIGURE 138	http://archiculturefilm.com/director/wp-content/
	uploads/2009/10/25culturedspan583.jpg
FIGURE 139	Diarmuid Gavin, homefront in the garden
FIGURE 140	http://www.flickr.com/photos/speakingoffaith/
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FIGURE 141	http://rafirafi.com/wp-content/uploads/2009/12/modern-single-family-house.JPG
FIGURE 142	Bork Architectural Design
FIGURE 143	http://www.energysavers.gov/your_home/
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FIGURE 148	http://www.1500oxmoor.com/
FIGURE 149	http://www.realsalisbury.com/105_ohara_dr_salisbury.html
FIGURE 150	Sarah McQuade
FIGURE 151	http://www.cameronkfield.com/clean-home-sweet-home/
FIGURE 152	http://continuingeducation.construction.com/article.php?L=120&C=423&P=3
FIGURE 153	http://rafirafi.com/wp-content/uploads/2009/12/Modern-Single-
	Family-House-Design-by-Johnston-Architects-PLLCArchitect-1.JPG
FIGURE 154	Diarmuid Gavin, homefront in the garden
FIGURE 155	http://cdn.arkinet.com/p/images/000/000/027/ruralstudios-cardboard_medium.jpg
FIGURE 156	http://www.google.com/url?sa=t&source=web&cd=1&ved=0CBYQFjAA&url=
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FIGURE 157	Sarah McQuade
FIGURE 158	Bork Architectural Design
FIGURE 159	http://4.bp.blogspot.com/_9-gdRnvNAK0/R57dlPF3Gfl/
	AAAAAAAAAjg/SJUkCtrjvl0/s400/Rural5Small.JPG
FIGURE 160	http://www.cadc.auburn.edu/rural-studio/Gallery/Projects/1996/butterflyharrishouse/1.jpg
FIGURE 161	http://www.cadc.auburn.edu/rural-studio/Gallery/Projects/2009/20kversion4/18.jpg
FIGURE 162	http://www.cadc.auburn.edu/rural-studio/Gallery/Projects/2004/patrickhouse/1.JPG
FIGURE 163	http://www.cadc.auburn.edu/rural-studio/Gallery/Projects/2008/patternbookhouse/
	080607_drew-80%20copy.jpg
FIGURE 164	Sarah McQuade
FIGURE 165	Sarah McQade

- FIGURE 166 Bork Architectural Design
- FIGURE 167 Adapted from http://www.aiacbcgreen.org/siding.php



A DESIGN PROGRAM FOR AFFORDABLE HOUSING

FIGURE 168 FIGURE 169 FIGURE 170 FIGURE 171 FIGURE 172 FIGURE 173 FIGURE 174 FIGURE 175	http://www.cadc.auburn.edu/rural-studio http://www.jetsongreen.com/2008/09/sm http://www.flickr.com/photos/steelmaste Sarah McQuade Architectural Elements Group Architectural Elements Group http://www.tndtownpaper.com/Volume9 http://www.oxfordmississippi.com/poppi
IGURE 176	http://www.cadc.auburn.edu/rural-studio
-IGURE 177	Sarah McQuade
IGURE 178	Architectural Elements Group
IGURE 179	Architectural Elements Group
IGURE 180	Sarah McQuade
FIGURE 182	http://www.athensclarkecounty.com/Doc
FIGURE 183	Sarah McQuade
FIGURE 184	Architectural Elements Group
-IGURE 185	Architectural Elements Group
IGURE 186	Architectural Elements Group
IGURE 187	Bork Architectural Design
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IGURE 189	Bork Architectural Design
-IGURE 190	Sarah McQuade
-IGURE 191	Architectural Elements Group
IGURE 192	Architectural Elements Group
IGURE 193	http://www.athensclarkecounty.com/Doc
IGURE 194	Sarah McQuade
IGURE 195	Sarah McQuade
IGURE 190	Sarah McQuade
IGURE 197	Sarah McQuade
IGOVE 190	Salah wiliyudue

FIGURE 199 Wordle created by Sarah McQuade

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CONCLUSION FINAL THOUGHTS