



IMAGE: Nicole Steele, 2017.

COMMUNITY

MAKING THE CASE

As with any endeavor, a well-developed plan and feasibility analysis is essential. Endeavors such as community developments are long-term commitments of both time and finances. The risk is greater than short-term projects because of the potential risks. Market preferences may shift direction or the economy may be more volatile. How can a developer strive to be as forward-thinking and progressive as possible without jeopardizing their investment?

The Gore Family Grissettown Tract is exploring options for a new community focused around conservation. No other community in the area have been constructed with this approach so it is questionable as to whether the market will support it or not. Case studies of similar communities constructed with a conservation theme and market analysis of real estate trends help validate the opportunity for success. Research of the perceived financial risks and low absorption rates (the amount of time a property is on the market) conclude that conservation development techniques are more economical and more efficient. Results suggest that conservation developments will surpass traditional developments in return on investment and support from the community.

EVALUATION

DESIGN

CONSTRUCTION

OPERATIONS

FINANCIAL

Developer Equity

Literature Review

Market & Economic Analysis

Public Policy Evaluation

Capital Availability Evaluation

FEASIBILITY

Ordinance + Zoning Modifications

Flexible Design Policy

Elected Official Collaboration + Support

Project Approval

Permitting

Community Supported Agriculture

Community Supported Agriculture

Low-Impact Design

Low-Impact Design

Public Interest Design

Public Interest Design

Branding

Marketing Campaigns

Builder + Real Estate Broker Selection

Lot Sales + Lease Contracts

DESIGN

LEGAL

MARKETING

Sales Proceeds

Rental Income

Construction Costs

Operations + Management Costs

Taxes & Fees

Non-Profit Partnerships

Land Trust

Tax Credits + Incentives

Tax Credits

Public Grants + Subsidies

Direct Subsidies

Grants

Loans

Construction Loan

Long-Term Loan

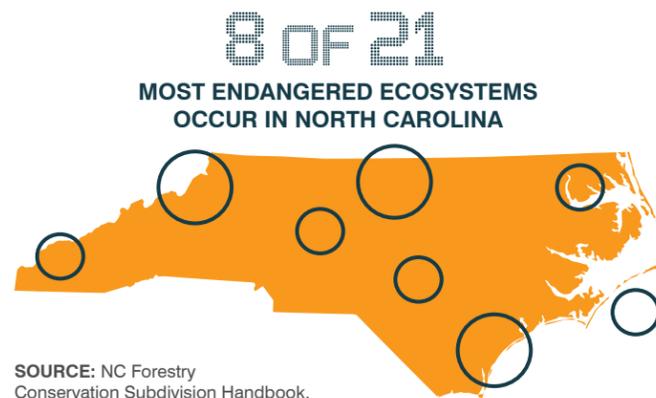
A CONSTANTLY EVOLVING PROCESS

The process for a development has several components that occur in every project and others that set it apart. Five basic areas of focus are feasibility and risk assessment, the legal process, financing and cash flow, marketing and sales, and design and planning. Each of these areas will begin and end at different points throughout the process. A feasibility and risk assessment will be completed first to inform a projected pro forma followed by securing financial resources, methods for offsetting costs, and researching potential legal challenges alongside initial design and site planning. Marketing will be key to establishing a brand identity and implementing successful campaigns to engage consumers and potential clients.

As the design moves through the legal approval process and construction documents, financing options may change or become available as the site is established. Upon completion, the site will move into the operations and management phase. The plan must be flexible enough to allow for shifts in scheduling due to unforeseen challenges, such as an extended permitting process or dwindling financial resources. For community developments, public-private partnerships can be extremely beneficial in offsetting costs, adding value to the proposed community culture, and then in maintaining the culture beyond construction build-out.

LAND DEVELOPMENT TRENDS & UNINTENDED CONSEQUENCES

As the population in the United States has increased, so has the need for land to be converted from its natural state to one that supports human life. The expansion of cities into the landscape is often called “urban sprawl”, and in recent years, “suburban sprawl”, due to the singular focus on monotonous residential construction. There is also an increase in demand for agriculture land to grow crops or raise livestock to feed the additional population. The issue that faces society today is not necessarily the increase in population but the disproportionate increase in land development and population growth. For example, when suburban sprawl was at its highest in the late 1900s, the metropolitan area around Chicago experienced a 4% increase in population with a 33% increase in land development in a twenty-year span from 1970 to 1990 (1). Subsequently, Washington County saw a 7% difference in land development over population increase from 1990 to 2000 (2). In recent years, North Carolina has topped the charts for fastest growth compared to other states. Brunswick County is also experiencing a surge of growth and is one of the fastest growing counties in North Carolina.



The conversion of natural areas to developed property is an ongoing challenge and threat to the stability of the environment and ecosystems. Several of these consequences include: increased habitat fragmentation, loss of biodiversity, disruption of natural landscape processes, degradation of water resources, increased flooding, non-point-source pollution, and increased expenses for servicing disbursed development (1). According to the NC Forestry Conservation Subdivision Handbook, forty different plant and animal species in North Carolina were listed at a federal level as endangered or threatened and over 200 species were listed at the state level (3). While researchers are diligently studying to determine the effects that humans have on the environment, it is nearly impossible to predict the full effect and unintended consequences of decreased natural land on the resources required for human life as it is today.

SOLUTIONS & BARRIERS

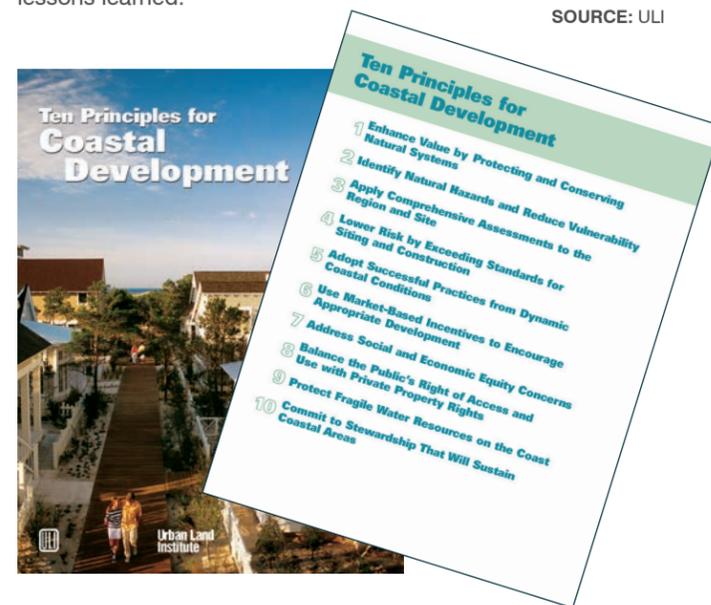
Hundreds of organizations and researchers are striving to find solutions to repair damaged environments to restore the disrupted natural processes and ecosystem functions. The Urban Land Institute (ULI) is a leading organization and

profession network predominately for real estate developers and has a mission to “provide leadership in the responsible use of land and in creating and sustaining communities worldwide” (4). ULI continuously publishes tips and best practices in real estate development to encourage more responsible and sustainable construction that will also create a greater return on investment. Ten years ago, ULI issued a publication on the Ten Principles of Coastal Development (5). These principles are to:

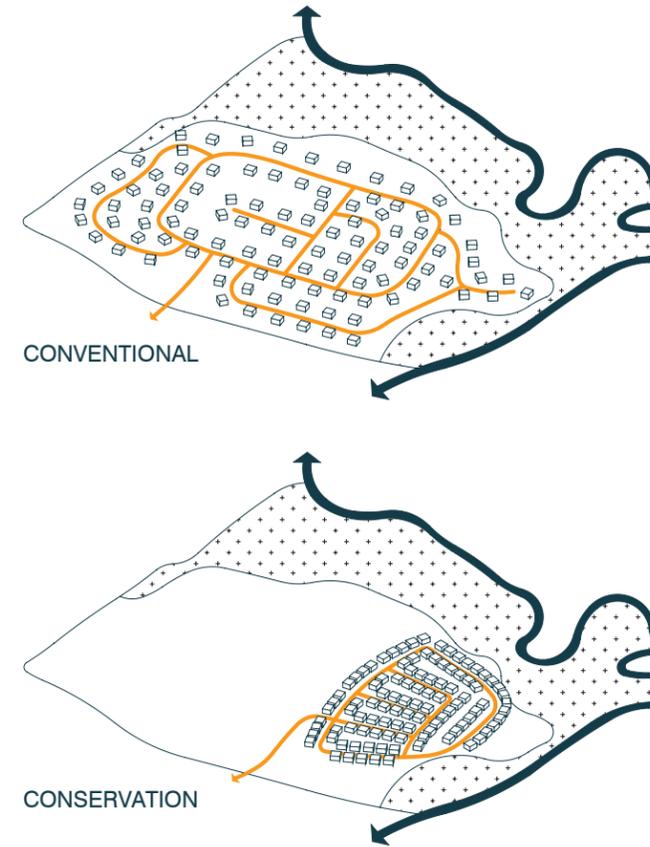
- Enhance value by protecting and conserving natural systems.
- Identify natural hazards and reduce vulnerability.
- Apply comprehensive assessments to the region and site.
- Lower risk by exceeding standards for siting and construction.
- Adopt successful practices from dynamic coastal conditions.
- Use market-based incentives to encourage appropriate development.
- Address social and economic equity concerns.
- Balance the public’s right of access and use with private property rights.
- Protect fragile water resources on the coast.
- Commit to stewardship that will sustain coastal areas.

In addition, they have established multiple centers with specific focuses like the Center for Sustainability and the ULI Greenprint Center for Building Performance to evaluate and provide insightful research from experienced professionals to apply lessons learned.

SOURCE: ULI



Understanding what the appropriate steps are to responsible and sustainable development is only one piece of the solution. Translating the recommendations to a specific site and navigating the financial and legal challenges can be a major deterrent for some developers. Edward Noonan, the developer of Tryon Farms in northern Indiana, states “Time is money, and developers default to conventional development patterns when regulations make conservation development too difficult” (1). Additional research supports this theory. NC Cooperative Extension found that restrictive zoning and lack of interest or support from elected officials deters developers (3). The three most notable deterrents, however, tend to be the unknown price premiums, investment costs, and absorption rates associated with conservation subdivision development (2).



IMAGES: Diagram of conventional vs. conservation development strategy (Lindsey Naylor & Travis Klondike, 2017).

Citizen support can play a huge role in reducing risks for investors if they are aware of and support the proposed development. For example, Salt Lake City was faced with a projected exponential increase in population and demand for real estate development. The citizens were invited to be part of a regional collaborative process to allocate the expected growth to certain areas which made them part of the decision on where and how future land development was managed (1). Engaging the public with the process helps generate support toward new development versus a “not in my backyard” attitude.

“Change is inevitable and people need to be educated about how change can make their community better.”

– James P. Siepmann,
President of Siepmann Realty Corporation
Waukesha, Wisconsin

UNDERSTANDING THE MARKET

The success of real estate development is highly dependent on an accurate market feasibility evaluation for a specific type of property and the expected target audience. Other contributing factors are public policy, capital, and land availability (7). A

developer must have a vision that is supported by a strong feasibility study and is appealing to investors. There is a delicate balance between perceived value and price to appeal to and penetrate the target market. Additional characteristics that contribute to the success of a development is in the quality and integrity of construction that respects the environment and reduces future costs for buyers.

One of the most prominent professionals and advocates for conservation planning, Randall Arendt, has multiple publications outlining the future of conservation subdivisions and how the market is shifting to support them. In a 2013 Community Preference Survey by The National Association of Realtors found that only 12% of future home buyers wanted the drivable, suburban, or fringe housing. Respondents preferred smaller yards if they are in a location that minimizes their commute and is within walking distance of schools, shops, restaurants, and parks. Almost 60% would opt for a smaller home if their commute time was reduced by twenty minutes or more. An overwhelming majority valued the quality and accessibility features of a neighborhood over size of the lot or unit.



80%

GOOD SCHOOLS & WALKABILITY

59%

LESS COMMUTE SIZE

88%

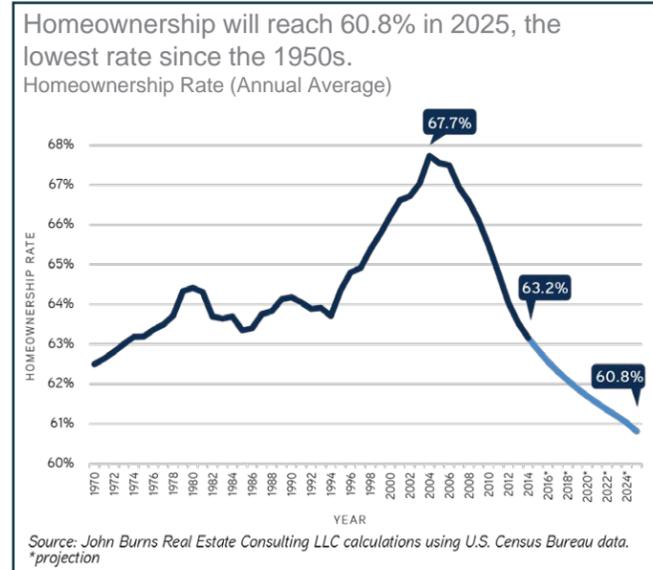
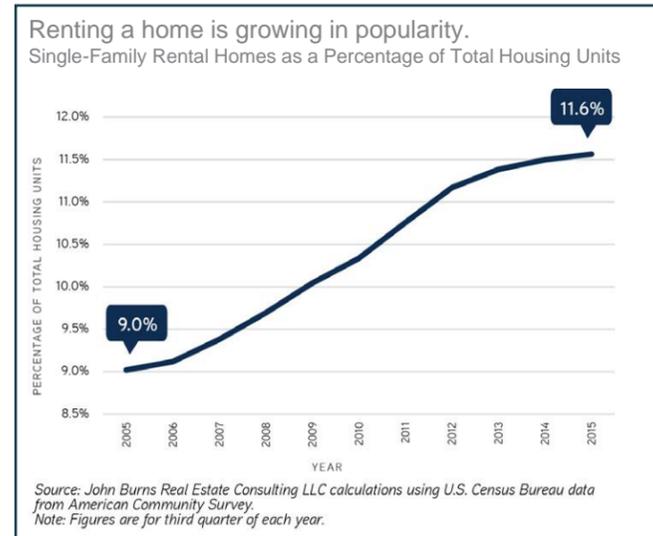
QUALITY SIZE

IMAGE: Purchase decision priorities (Nicole Steele, 2017). SOURCE: 2013 Community Preference Survey by the National Association of Realtors (Rural by Design, Arendt).

Michigan Transportation Research Institute found that the number of 20-24 year olds with driver’s licenses has declined over the last few decades (6). This immediately suggests that housing in a more walkable and accessible location will be in more demand than the sprawling properties that have dominated our land development practices in recent decades.

In 2016, the Urban Land Institute Terwillinger Center for Housing published Demographic Strategies for Real Estate, a document outlining results of a demographic research study and projections of how this will influence the real estate market demand. They project that 58% of new households will be

renters. Rental demand for small-lot detached housing and townhouses will increase while homeownership will reach it's lowest rate since the 1950s.



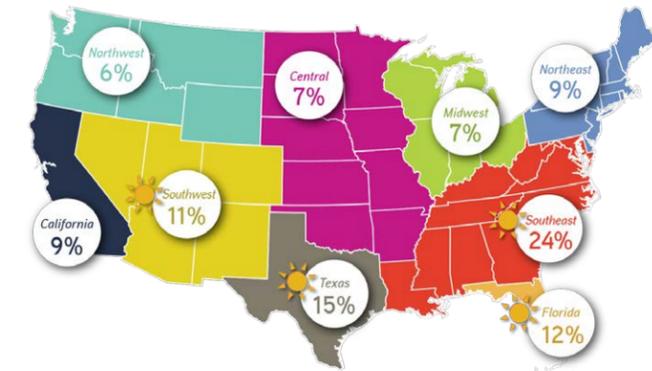
SOURCE: ULI Demographic Strategies for Real Estate, 2016.

Additionally, there is a shifting age demographic with an increase in the country's population of retirees, women in the workforce, immigrants, and young adults. These groups will influence lifestyle choices and real estate demand to meet those choices in both the residential and commercial sectors. The increasing number of retirees provides a significant opportunity for age-in-place residential areas that are highly walkable. Women now make up almost half of the workforce, are in leadership roles, carry the primary income of the household, and are delaying traditional family until later in life. They are now in positions to make decisions on office space and private living space selections. Fifteen percent of Americans are foreign born and play a vital role in America's life and economy. Their culture brings a new behavior in the marketplace that real estate

developers will need to learn. Young adults will also change the traditional schedule for household formation and develop slower than previous generations.

Employment environments are shifting toward flexible work lives through technology affording many more opportunities for e-commuting and taking advantage of shared workspaces. With more affordable rates in states with low-income tax, the south will continue to see an increase in population.

62% of the household growth will be in the South, where 42% of households are in warm, affordable areas. Estimated Share of Household Growth, 2016–2025



Source: John Burns Real Estate Consulting LLC.

SOURCE: ULI Demographic Strategies for Real Estate, 2016.

DISSOLVING BARRIERS

Research repetitively supports that conservation-oriented development is just as successful if not more successful than traditional development. The myths of price premiums, investment costs, and absorption rates are debunked.

Perceived barriers to conservation	Mean
Lack of incentives for developers	3.5
Perception that CSDs are more expensive to build	3.4
Lack of interest from elected officials	3.2
Smaller lot sizes	3.1
Restrictive zoning	3.1
Management of open space	2.9
Lack of consumer demand	2.9
Lack of interest by realtors	2.8
Lack of model ordinance language	2.8
Lack of resources to rewrite ordinances	2.7

SOURCE: NC State University Conservation Subdivision Handbook.

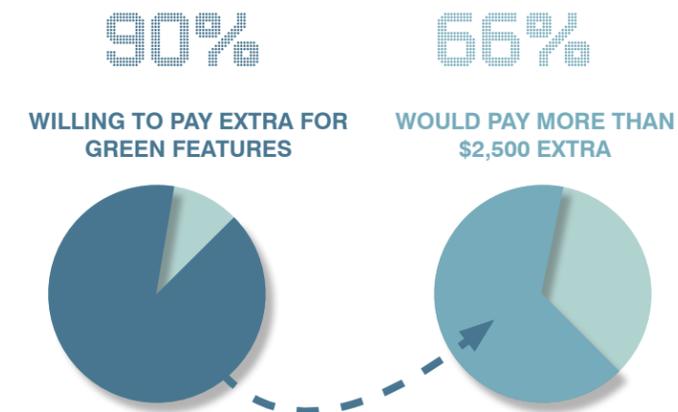
“Conservation subdivisions are ‘twice green’ because they succeed both environmentally and economically.”

– Randall Arendt

Results from a 2000 survey by the Professional Builder magazine found that nearly 90% of buyers said they would pay extra for green features and of those respondents, 66% would pay \$2,500 or more.



SOURCE: ULI Land Use Policy Forum Report, 2002.



SOURCE: 2000 Professional Builder Magazine. ULI Land Use Policy Forum Report, 2002.

The Prairie Crossing community in Grayslake, Illinois preserved 60% open space for community use and as a result, their price premium more than doubled from initial sales to now (1). A client of Randall Arendt was able to add \$20,000 in value to each lot while retaining the full development density just by shifting the approach to conservation. Another client cut grading costs by 83% by using Arendt's cluster development strategy over conventional engineering (8). Similarly, the National Association of Homebuilders also found an average decrease of 34% in construction costs (3).

In an extensive study on the barriers, researcher Rayman Mohamed found that in an evaluation of price premiums, improvement costs, and absorption rates, conservation subdivisions surpassed conventional subdivisions each time (2).

	AVERAGE IMPROVEMENT COSTS (in \$1,000s)	AVERAGE SALE PRICE (in \$1,000s)	AVERAGE ABSORPTION RATE (in months)
CONSERVATION	18.7	123.0	9.1
CONVENTIONAL	26.1	108.3	17.0
	-7.4	+14.7	-7.9

SOURCE: Conservation Subdivisions, Rayman Mohamed, 2006.



IMAGE: Lack of appropriate environmental consideration for new development (Travis Klondike, 2017). SOURCE: NC State University Conservation Subdivision Handbook, estimated by National Association of Home Builders and Enhancing Subdivision Value, Arendt. Data from Texas client for an 80-lot development.

“Higher selling prices should result from access to communal open space that makes full use of the natural landscape, superior aesthetic and environmental qualities, and a sense of higher socioeconomic standing. Lower construction costs should result from smaller lot sizes” states Mohamed.

The ULI Greenprint Center for Building Performance has collected data from over 5,000 properties in 39 countries to evaluate the value of installing advanced technology for performance. Results proved that environmental performance does not jeopardize economic performance and in most cases, supports economic success through tenant retention (9). Investors are also more inclined to support initiatives that include sustainability practices.

“Better buildings are better investments. Better retention rates. Better occupancy.”

– Charles Leitner, Berkshire Group

ULI GREENPRINT BUILDING PERFORMANCE

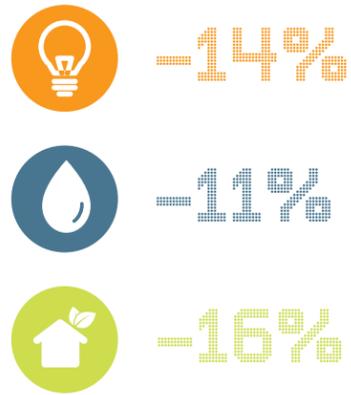


IMAGE: Diagram of public-private partnership. (Nicole Steele, 2017).

The legal and financial aspects of development have a bargaining relationship to each other. Initiatives by government entities, like tax credits or density bonuses, promote growth without a direct exchange of money. A well-known tax credit is the conservation credits obtained by preserving a specific amount of land indefinitely for open space. New market and low-income housing credits may also apply to provide incentives for the construction of affordable housing or a similar community need. A low-income housing credit could be valued at as much as 70% of the cost in credit or a Section 108 Loan could be guaranteed as an incentive (10).

SOURCE: ULI Greenprint Building Performance results. Greenprint Performance Report, Volume 7, 2015.

Specific design decisions are important to the success of open space as a community amenity. Some regulations require developers to set aside 30-70% of a parcel as open space. The lower percentages are found in more dense areas. This however is counteractive to creating an inclusive and welcoming space for all residents. "Peiser and Schwann (1993) found that strips of open space behind backyards simply encouraged residents on either side of the strip to consider portions as private, leaving a small communal greenbelt of little use. With their backyards effectively enlarged, there was little reason to value the remaining greenbelt" (2). If this space is intended for agriculture use, it actually has the potential to be a hindrance because it may not meet the spatial needs to operate effectively.



IMAGE: Diagram of the perception of communal open space as private space. (Nicole Steele, 2017). Base parcel map (Travis Klondike, 2017).

CHANGING THE STATUS QUO

Challenging and redefining the norm for development is a long and arduous process that requires the collaboration of many stakeholders. Decision makers and leaders in the legal system, the financial industry, non-profit or educational organizations, and customers must have a similar goal to change the status quo of traditional developments to create a more sustainable environment for future generations.

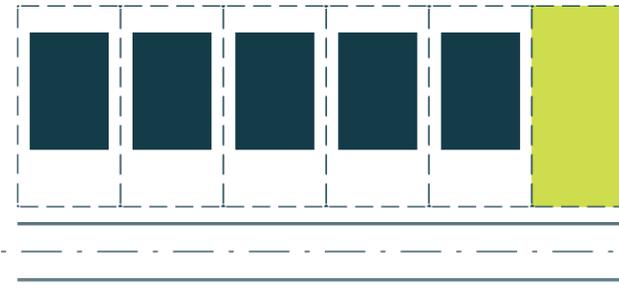
NO MORE THAN
60%
OF MEDIAN INCOME



MEDIAN INCOME
50%
OR LESS

SOURCE: ULI Creative Financing for Smaller Communities

Regulations and zoning often deter creative development options and support from elected officials, leadership, and the public is needed to make amends to these rules. Density bonuses increase the number of units per acre and while most shy at high-density areas, research suggests that most "Americans can be comfortable with higher density subdivisions if other environmental, aesthetic, and communal concerns are addressed" (2). Inclusionary zoning and reduced parking requirements further encourage a diverse and dense community culture and in some cases, reduce infrastructure costs.



ZONING CLASSIFICATION R-6000 FOR PLANNED DEVELOPMENTS (WITH 20% DENSITY BONUS)

IMAGE: Sam Burner, 2017

Funding can come from many sources. Most developers rely on 50-40% of their equity and 50-60% in loans for the construction period. Loans may then shift to long-terms loans and financing may be supported by equity investors looking for a specific return on investment. Affordable housing might be cross-subsidized, meaning that market-rate rents offset the difference in affordable rent rates (7). Conservation areas can be managed and/or owned by non-profits or land trusts to reduce developer and consumer expenses while ensuring proper care and maintenance of the community amenities (11). Not only does this remove responsibility from the developer, it reduces the land taxes paid by homeowners for a large common area if it is owned by a non-profit and increases the appeal and price premium of the property.

Developments do not have guaranteed success without an authentic identity. Creating a compelling brand and campaign is an essential foundation for marketing. However, the real estate broker is often the only point of contact for the consumer and the message they convey to prospective buyers or tenants is extremely important. Developers should strategically select brokers that believe in the product and the lifestyle and can articulate what it means to live in an environmentally sensitive, culturally rich, and resource efficient community.

"Several participants remarked that developers should not assume that real estate brokers understand or have positive feelings about green development, and uninformed brokers can cause problems. Successful developers keep brokers in the loop and help them understand the value of conservation development. Marketing and messages should appeal at both the emotional and intellectual levels, participants said. Green building is premium building: it saves money, saves time, and provides a more healthful environment and a better quality of life than conventional building, they said." – Jeff Kingsbury, VP of Sales and Marketing, McStain Neighborhoods in Boulder, CO

Environmental awareness and programming can play a key component in generating a culturally rich community atmosphere. The site itself is an invaluable resource to demonstrate the importance of the environment through how it is constructed and functions. Maximizing low-impact development features such as using energy-efficient building technology, proper waste disposal, pervious surfaces for parking, or preserving significant natural features increases the public's interaction, understanding, and awareness of environmental impacts.



SOURCE: NC Cooperative Extension Conservation Subdivision Handbook

The NC Cooperative Extension Conservation Subdivision Handbook boasted research results of a 38% reduction in runoff and pollutant load from a 13% reduction in impervious surfaces. Additionally, partnerships or collaborations with local educational initiatives or organizations will add value. Located near the coast with a large amount of land for conservation, the Gore Family Grissetown Tract can host summer camps, guided trail walks, wildlife observation, and connect users with the paddle trails to the coast.

The 842-acre tract strategically located at an important crossroads along the southern coastline of North Carolina will become a landmark and foundation for future developments locally, regionally, and nationally to aspire to. The idea of corporate responsibility is quickly being replaced with sustainability as something that all individuals, businesses, and organizations should integrate into their lifestyles (12). It is imperative that current and future generations become stewards of the Earth and have an emotional responsibility and connection with nature. The Grissetown Tract has countless possibilities to create opportunities for environmental, social, and economic growth and equity.

“Society grows great when old men plant trees whose shade they know they will never sit in.”

– Greek Proverb

Literature Review: "Making the Case for Conservation Development" Nicole Steele, 2017.



NOTHING BUT A
BETTER
MATTERS

PREDICTING SUCCESS

As previously stated, one of the most difficult challenges to real estate development is accurately projecting future market demand. Market analysis studies are essential to gain a better understanding of overarching trends throughout the country and local trends. Surveys are often used to help gain information about potential users from a specific geographic region or niche interest. In the case of the Gore Family Grissettown Tract, users and stakeholders include participants in the golf, ecotourism, and agriculture industries, affluent retired households, low- to middle-income workforce households, students or seasonal workers, and more.

A method for evaluating proposed site designs and components against market demand will assist in determining appropriate functions and features in the development to ensure absorption and engagement from the community.

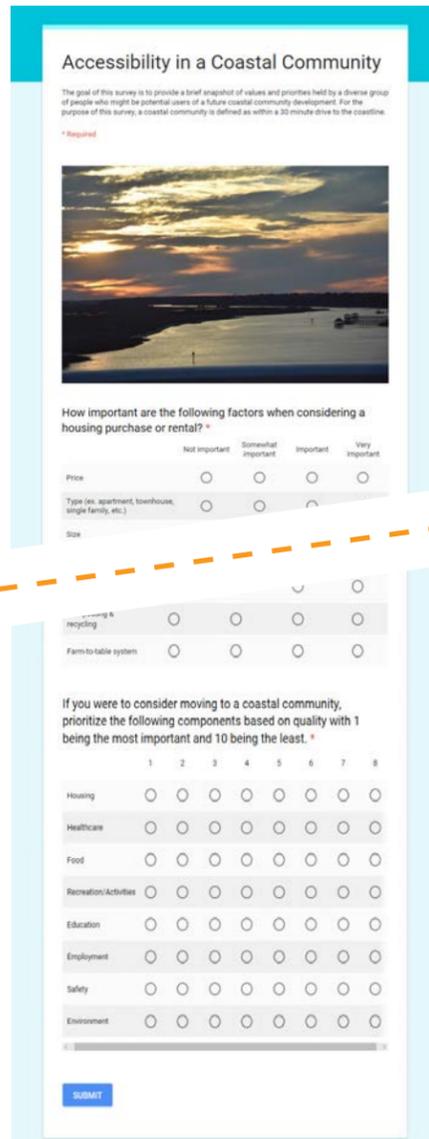
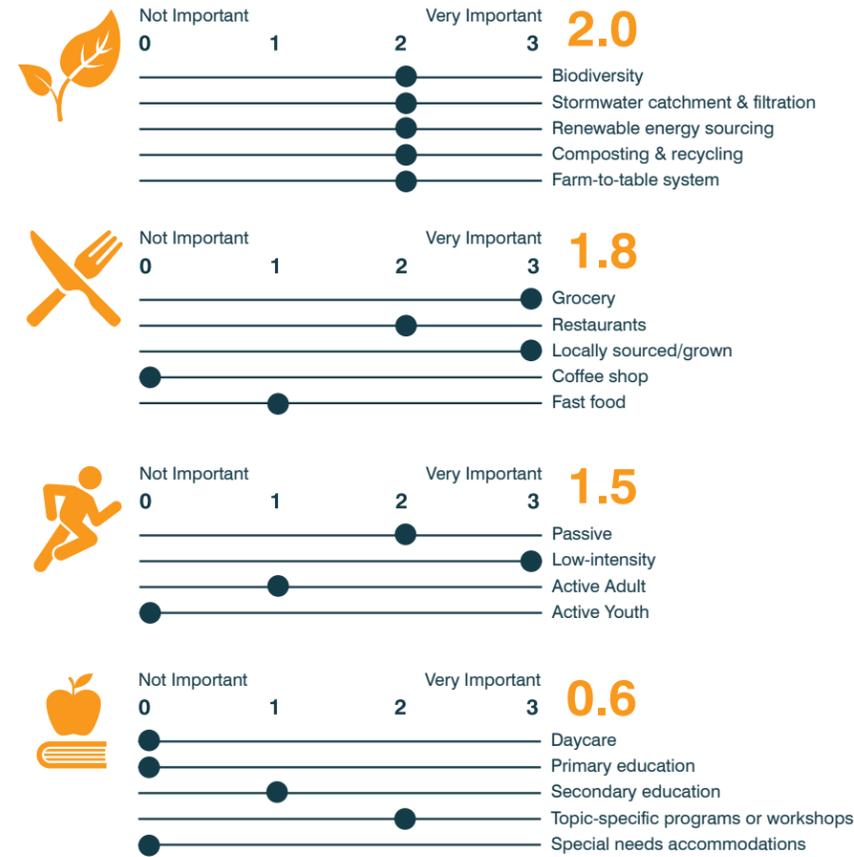
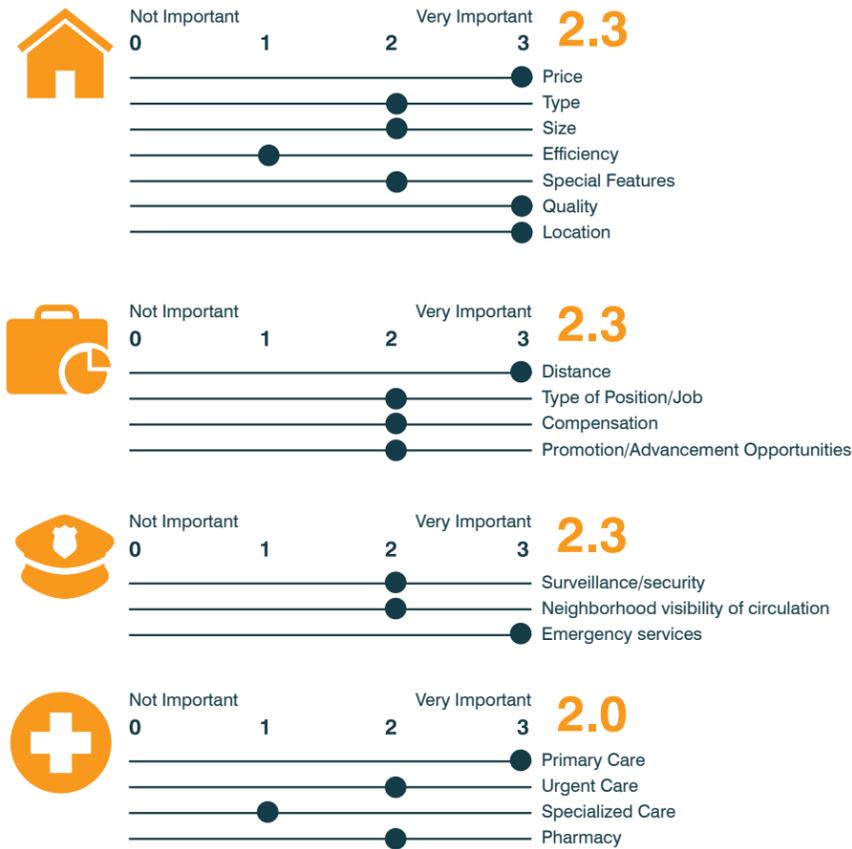


IMAGE: Questionnaire created and tested using Google Forms. (Nicole Steele, 2017).

SAMPLE MARKET QUESTIONNAIRE



WEIGHTED AVERAGE SCORE CALCULATION

Categories by Highest Score	Score	Weight
1. Housing	2.3	30%
2. Employment	2.3	25%
3. Safety	2.3	15%
4. Healthcare	2.0	10%
5. Environment	2.0	8%
6. Food	1.8	6%
7. Activities	1.5	4%
8. Education	0.6	2%

DESIRED ACCESSIBILITY SCORE BY CONSUMERS

2.15

MATCHING MARKET DEMAND THROUGH DESIGN

The sample questionnaire focuses on eight factors of living that can significantly influence the quality of a place. These factors are housing, employment, safety, healthcare, environment, food, recreation, and education. Accessibility to these factors creates a more sustainable and resilient community for all users. Surveys should be distributed through channels that prequalify respondents that either live or desire to live/visit a coastal region. Responses will help determine which factors and features are most important to the target audience. Design proposals will be evaluated for each of the listed features based on whether or not it is vehicle dependent to access. The result is an "accessibility score" for each plan that can be compared with the accessibility score calculated from survey responses.



ACCESSIBILITY EVALUATION FOR DESIGN PROPOSALS

2.25

WORKS CITED

1. ULI Land Use Policy Forum Report in Partnership with The Conservation Fund. "The Practice of Conservation Development: Lessons in Success." (2002).
2. Mohamed, Rayman. "The Economics of Conservation Subdivisions: Price Premiums, Improvement Costs, and Absorption Rates." (2006). Urban Affairs Review, Vol. 41, No. 3.
3. Allen, S. et al. "Conservation Subdivision Handbook." (2014). NC Cooperative Extension Service.
4. Urban Land Institute. "Mission & Priorities." (2017). <https://americas.uli.org/about-uli/mission-priorities/>
5. Pawlukiewicz, M., Gupta, P. K., Koelbel, C. "Ten Principles for Coastal Development." (2007). Urban Land Institute.
6. Arendt, Randall. "Rural by Design: Planning for Town and Country." Chicago (Ill.): American Planning Association, Planners, 2015. Print.
7. Stockton, W. et al. "The Economics of Inclusionary Development." (2016). Urban Land Institute.
8. Arendt, R. "Enhancing subdivision value through conservation design." (2001) On Common Ground.
9. ULI Greenprint Center for Building Performance. "Greenprint Performance Report Volume 7." (2016). Urban Land Institute.
10. Harris, J. "Reaching for the Future: Creative Finance for Smaller Communities." (2016). Urban Land Institute.
11. Wright, S. "Conservation Subdivisions." (2006). On Common Ground.
12. Cox, S., Graham, L. "Sustainability Measured: Gauging the Energy Efficiency of European Warehouses." (2010). Prologis.
13. ULI Terwillinger Center for Housing. "Demographic Strategies for Real Estate." (2016). Urban Land Institute.
14. ULI Greenprint Center for Building Performance. "Trends in Real Estate Sustainability: Perspectives from Industry Leaders." Webinar. March 22, 2017. <https://americas.uli.org/event/trends-real-estate-sustainability-perspectives-industry-leaders/>
15. Treehugger, "Will farms replace golf courses as the housing amenity of choice?" (2015). <http://www.treehugger.com/green-architecture/agriburbia-will-farms-replace-golf-courses-housing-amenity-choice.html>
16. Good, "Agriculture is the New Golf: Rethinking Suburban Communities." (2010). <https://www.good.is/articles/agriculture-is-the-new-golf-rethinking-suburban-communities>