[RE] IMAGINING BROUGHTON

A REUSE STUDY OF HISTORIC BROUGHTON CAMPUS

TEAM

The Development Finance Initiative (DFI) at the UNC School of Government partners with governments in North Carolina to attract private investment for transformative projects by providing specialized finance and development expertise.

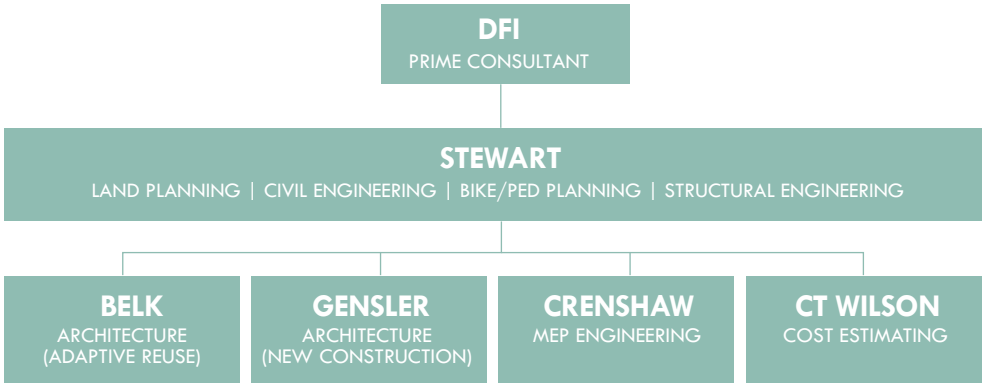
Stewart is a multi-disciplinary planning, design and engineering firm with over 170 employees located in Raleigh, Durham and Charlotte, N.C. and Richmond, Va. Stewart provides services in a variety of markets within the public and private sectors, both domestic and international.

Belk Architecture is a leading expert in the creative adaptive reuse of historic and neglected architecture. Their work includes award winning U.S. Secretary of the Interior Historic Tax Act renovations of sixty-two National Historic Register buildings.

Founded in 1952, C.T. Wilson Construction Company is a North Carolina based contractor with a specific expertise in complex, adaptive reuse construction projects. C.T Wilson works for both public and private sector clients.

Gensler is a leading planning, architecture, interiors, and strategic consulting firm with over 40 offices worldwide. For more than 50 years, Gensler has been a pioneer in creating great places that enhance the quality of work and life.

Founded in 1995, Crenshaw Consulting Engineers is a plumbing, mechanical, electrical, structural, fire alarm, fire protection and telecommunications engineering firm specializing in a wide range of project types including public, private and federal work. The firm provides Engineering Services in 31 States/territories.






For a digital copy of the report and appendices, go to sog.unc.edu/dfi/broughton

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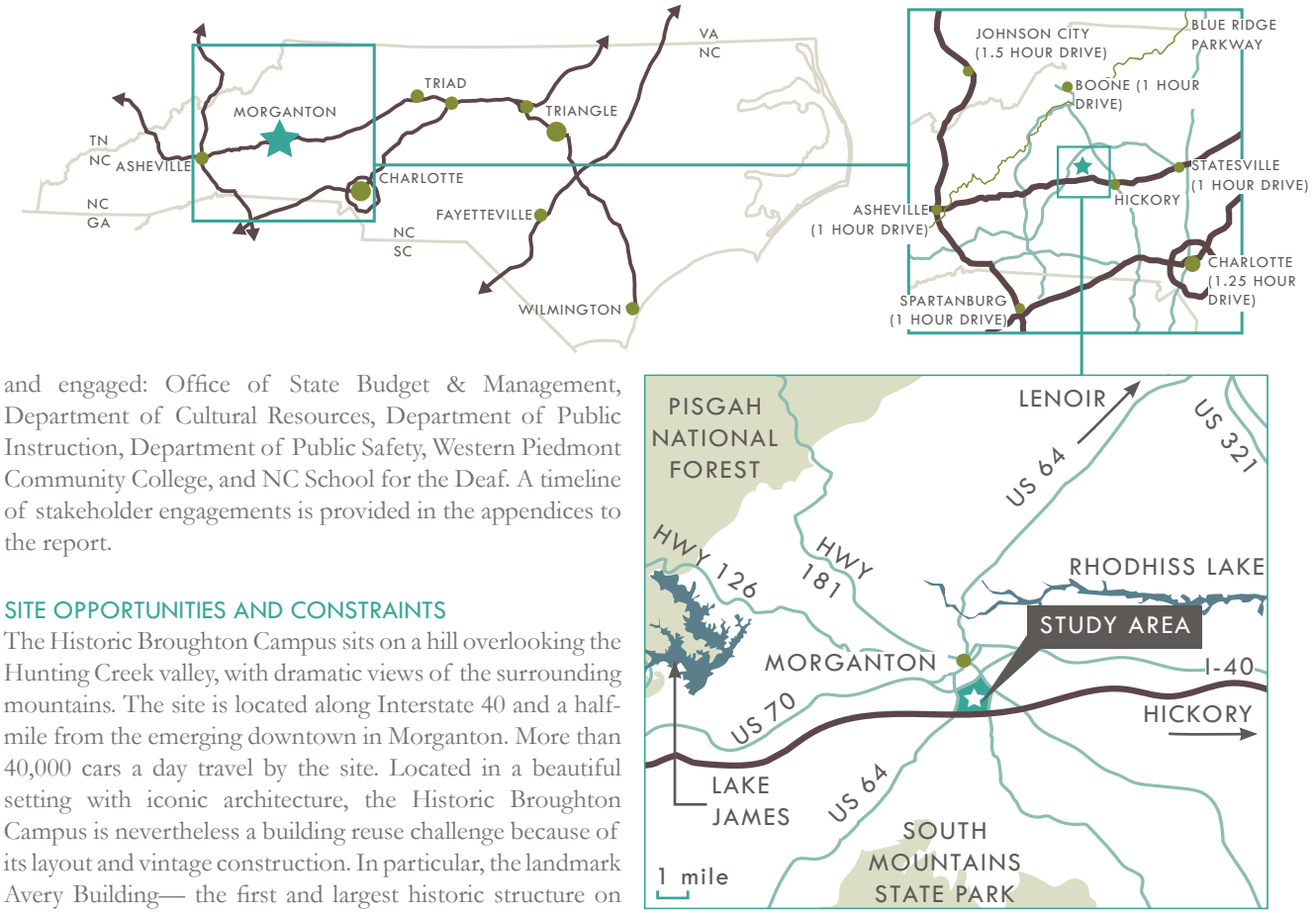
The hospital functions currently located at the historic Broughton Hospital Campus in Morganton, North Carolina, will soon move to a new facility on an adjacent property. When complete, the move will leave vacant approximately 800,000 square feet (SF) of space in centuries old and well-maintained historic buildings. In anticipation of this transition, the General Assembly enacted legislation in 2014, directing the Department of Commerce ("Commerce") to conduct a study of potential reuse opportunities for the roughly 50-acre historic campus and surrounding 750 acres of publicly owned land (in total, a roughly 800-acre study area). Specifically, the legislation directed Commerce—in conjunction with the Department of Health and Human Services (DHHS), the Department of Administration (DOA), the City of Morganton (City), and Burke County (County)—to study the costs and benefits to the public and private sectors of redeveloping the historic campus and adjacent property.

This report describes the results of that study, which determined that strategic public investment in the campus and adjoining properties can attract more than $152 million in private capital for a mixed-use district that reuses the entire historic campus after selectively demolishing structures with no historical significance. The public-private partnerships envisioned in this report require careful planning and coordination by the State and local community, but the outcome will attain returns for both the public and private sector while preserving a cultural legacy.

EXPERTS AND STAKEHOLDER ENGAGEMENT

To complete the study, Commerce engaged the Development Finance Initiative ("DFI") of the School of Government at the University of North Carolina at Chapel Hill. DFI assembled a team of private sector development experts—architects, land planners, engineers (civil, structural, mechanical, electrical, plumbing), and general contractors — to perform the analysis and produce this report. The team members and their areas of expertise are described on the inside cover of this report.

Throughout the study, the team was advised by a diverse set of stakeholders. The key stakeholders enumerated in the legislation—Commerce, DHHS, DOA, City, and County—were consulted regularly from the outset. Over the course of the study, additional stakeholders were identified and engaged: Office of State Budget & Management, Department of Cultural Resources, Department of Public Instruction, Department of Public Safety, Western Piedmont Community College, and NC School for the Deaf. A timeline of stakeholder engagements is provided in the appendices to the report.



SITE OPPORTUNITIES AND CONSTRAINTS

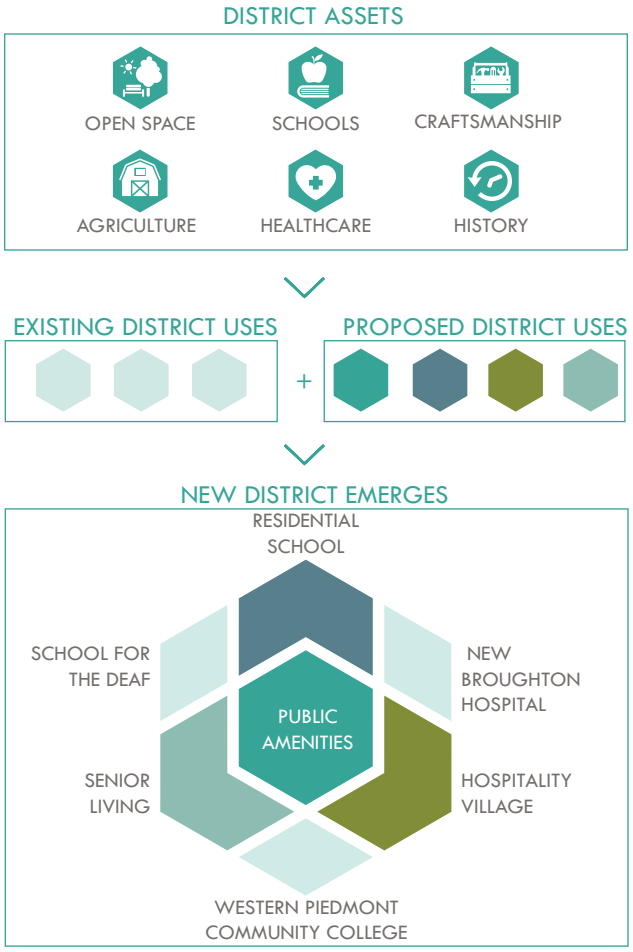
The Historic Broughton Campus sits on a hill overlooking the Hunting Creek valley, with dramatic views of the surrounding mountains. The site is located along Interstate 40 and a half-mile from the emerging downtown in Morganton. More than 40,000 cars a day travel by the site. Located in a beautiful setting with iconic architecture, the Historic Broughton Campus is nevertheless a building reuse challenge because of its layout and vintage construction. In particular, the landmark Avery Building— the first and largest historic structure on the campus—with its massive scale (337,000 gross square feet) and unyielding floor plan (12-foot wide corridors and small rooms divided by 1- to 2-foot thick masonry walls), constrains redevelopment options for the hospital campus as a standalone project. However, the surrounding property opens up additional possibilities.

MAKINGS OF A DISTRICT

At each corner of the study area sits a public institution: the western campus of the North Carolina School for the Deaf, Western Piedmont Community College, and the eventual New Broughton Hospital (currently one of the largest employers in the region). These institutions bring a specialized workforce and a talented student body to Morganton. Furthermore, the study area is dotted with historic buildings that provide an authentic sense of place and have adaptive reuse potential if they could be connected to a market opportunity. Interspersed among the institutional campuses are rolling meadows, old-growth tree stands, mountain vistas, and fertile bottomlands along Hunting Creek. These natural assets are an undiscovered amenity that can bring together the disparate pockets of activity on the site. By connecting the existing nodes of education and employment, the groundwork is laid for a comprehensive district approach to redevelopment that could drive private investor interest. DFI evaluated various redevelopment approaches during the study, and this report describes three of them: a comprehensive district approach to the entire 800-acre study area; a narrower approach focusing solely on the 50-acre historic campus; and a final approach that defers action.

STUDY FINDINGS

The study concluded that a comprehensive district approach makes private investment feasible and provides the greatest economic and social benefit to stakeholders. The recommended program draws on existing assets and centers on three interwoven development themes—land stewardship, wellness, and education—that integrate the institutions on the site with new uses, such as a residential school, senior living, multifamily housing, retail, and a hospitality village. This comprehensive approach also includes a greenway trail extension, gateway park to downtown, streetscape and roadway enhancements, and a stormwater basin that also creates a water feature for the district.



TODAY | HISTORIC BROUGHTON CAMPUS

TOMORROW | RESIDENTIAL SCHOOL

TODAY | UNDERUSED SCHOOL FOR THE DEAF PROPERTY

TOMORROW | SENIOR LIVING

TODAY | UNDERUSED COLLEGE AND COUNTY PROPERTY

TOMORROW | HOSPITALITY VILLAGE

COMPARATIVE ANALYSIS

COMPREHENSIVE DISTRICT APPROACH

A comprehensive district-wide strategy is anticipated to provide direct economic benefits through the sale of some public land for private development and incremental local tax revenues. Specifically, although the location of the western campus of N.C. School for Science & Mathematics (NCSSM) in Burke County has not yet been determined, the study estimated the impact of locating a state boarding school on the historic campus. Assuming that public investments of $140 million (including a boarding school) in the district are approved, private investment is estimated at approximately $152 million. This translates into approximately $700,000 to $900,000 in new property tax revenue per year for the City and $900,000 to $1.1 million per year for the County. In addition, the sale of public land could realize approximately $10 million to $12 million in sale proceeds for the public.

The comprehensive approach also serves other public interests, such as preserving historic structures in the historic campus as well as elsewhere in the district, accommodating the needs of special populations, and enhancing public access to the site's natural amenities. Upon full build-out of the comprehensive approach, the district should enhance housing options and the local quality of life, create a regional destination to complement downtown Morganton, and support job creation in Burke County as a hub for education and recreation.

NARROW APPROACH

A more narrow strategy that focuses solely on the 50-acre Historic Broughton Campus would meet fewer public interests and yield considerably less economic benefit to stakeholders. Moreover, a narrow approach would be less likely to attract private partners due to a lack of synergistic development and investment in public amenities. Assuming the narrower approach secures public investments of $95 million (including a boarding school) on the historic campus, private investment is estimated at approximately $25 million, yielding approximately $100,000 to $150,000 in new property tax revenue per year for the City and $150,000 to $200,000 per year for the County. In addition, the sale of public land could realize approximately $1 million to $3 million in sale proceeds for the public.

CONSEQUENCES OF DEFERRAL

If the State and its partners elect to defer action until some undetermined later date, there would nevertheless be ongoing expenses to maintain the vacant historic buildings following a relocation of hospital functions to the new facility. The cost of utilities and maintenance alone on the historic campus is estimated at $0.45/SF, or $300,000 per year. Furthermore, delay could decrease the likelihood of a successful redevelopment in the future due to deterioration of the assets and potential stigma associated with a vacant property if preventative measures are not taken. Thus, it is recommended for the State to mothball the structures at a cost comparable to complete demolition ($10/SF) in order to preserve the historic and cultural asset for an appropriate redevelopment opportunity in the future. In this case, no foreseeable private investment would be generated.

	COMPREHENSIVE	NARROW	DEFERRAL
STRATEGY	DISTRICT DEVELOPMENT	HOSPITAL CAMPUS ONLY	DEFER ACTION
ESTIMATED PRIVATE INVESTMENT	$152 MILLION	$25 MILLION	$0
ESTIMATED GROSS PUBLIC INVESTMENT*	$140 MILLION	$95 MILLION	$85 MILLION
LAND SALE PROCEEDS RECEIVED BY PUBLIC	$10 - $12 MILLION	$1 - 3 MILLION	NONE
CITY PROPERTY TAX REVENUE (ANNUAL)	$700,000 - $900,000	$100,000 - $150,000	NONE
COUNTY PROPERTY TAX REVENUE (ANNUAL)	$900,000 - $1,100,000	$150,000 - $200,000	NONE

*includes cost of constructing western campus of NCSSM, whether located within proposed district or elsewhere

NEXT STEPS

Should the State choose to pursue the comprehensive district approach to redevelopment, the following next steps are recommended to send a clear signal to the private sector:

1. *Establish unity of purpose among all state and local actors;*
2. *Empower the appropriate lead entity to guide plan development and execution;*
3. *Create a district plan and marketing strategy; and*
4. *Preserve public assets with reuse potential.*

Together, these next steps should maximize the value of publicly owned property and minimize the risk for the public sector by shortening the vacancy period for the Historic Broughton Campus.

PROPOSED ACTION TIMELINE:

END OF 2016 GA SHORT SESSION

- Executive and legislative action establishes unity of purpose among State and local actors and identifies State agency as lead development entity

SEPTEMBER 2016

- State engages prime consultant to assist lead development entity with managing master plan

DECEMBER 2016

- Lead development entity identifies surplus properties
- State evaluates need for mothballing vacant historic buildings targeted for redevelopment (e.g. Goodwin, Joiner, etc.) and initiates that investment

APRIL 2017

- Lead development entity completes due diligence

MAY 2017

- Lead development entity completes marketing strategy to attract private development partners
- City and County execute inter-local agreement for shared investments in public amenities

JUNE 2017

- City approves municipal service district

OCTOBER 2017

- Development entity coordinates execution of agreement with private development partner(s) for first phase

DECEMBER 2017

- Hospital relocates to new facility

Q1 2018

- First development phase of comprehensive approach breaks ground
- District management entity is established

PUBLIC AMENITIES

A set of public amenities - parks, trails, pond - will bind together the disparate pockets of development activity on the site along with the resurgent downtown in Morganton.

2 BACKGROUND

STUDY OVERVIEW

STUDY OBJECTIVE

The hospital functions currently located at the historic Broughton Hospital campus in Morganton and Burke County, North Carolina, are expected to move to a new facility on adjacent property before 2018. When complete, the move will leave vacant approximately 800,000 square feet (SF) of space in well-maintained historic buildings, some of which are over a century old. In anticipation of this transition, the General Assembly enacted Section 15.20 of Senate Bill 744 (Session Law 2014-100), which authorized the Department of Commerce ("Commerce"), in conjunction with the Department of Health and Human Services (DHHS), the Department of Administration (DOA), the City of Morganton (City), and Burke County (County), to conduct a study of potential redevelopment opportunities for the historic campus and surrounding 800 acres of publicly owned land. Specifically, the legislation directed Commerce to "examine all of the following:

1. *Potential uses of vacated Broughton Hospital facilities and development or redevelopment of adjoining State-owned properties;*
2. *Benefits to the State, local governments, and the private sector of each potential use identified in the study;*
3. *Costs to the State, to the City of Morganton, to Burke County, and to the private sector of each potential use identified in the study;*
4. *Opportunities to use the properties for public-private partnerships; and*
5. *Any other matters that the Department of Administration deems relevant to this study of potential economic benefits in the use of vacated Broughton Hospital facilities and properties."*

STUDY PARTNERS

The Department of Commerce contracted with the Development Finance Initiative (DFI) at the UNC School of Government (SOG) to complete the study of Historic Broughton Campus and adjoining properties comprising the study area. Commerce coordinated execution of the study with DHHS, DOA, the City and the County, with input from an advisory committee of additional state agencies (see below). The advisory committee met regularly throughout the study to review milestones and offer direction to the assessment and master planning. In addition, Commerce and DFI met regularly with local stakeholders, including the City, County, Burke Development Inc. and leadership of anchor institutions in the study area, such as Western Piedmont Community College (WPCC) and NC School for the Deaf (NCSD). A schedule of advisory committee and local stakeholder presentations is provided in an appendix to the report.

STUDY ADVISORY COMMITTEE

- *Department of Commerce, Rural Development Division*
- *Department of Health and Human Services, Division of Property and Construction*
- *Department of Administration*
- *Office of State Budget & Management*
- *Department of Cultural Resources, State Historic Preservation Office*
- *Department of Public Instruction (DPI)*
- *Department of Public Safety, Correction Enterprises (DPS)*

STUDY FUNDING

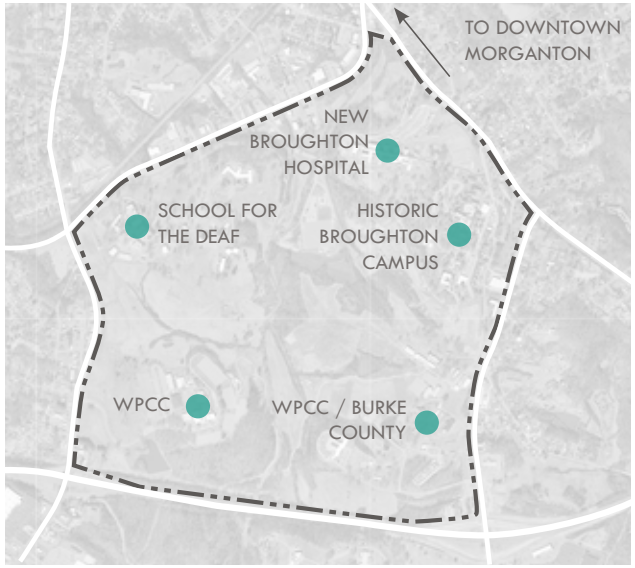
Funding for the study was provided by State of North Carolina and matched by the following partners:

- *City of Morganton*
- *Burke County*
- *Burke Development Inc.*
- *Appalachian Regional Commission*
- *AT&T North Carolina*
- *Carolinas Healthcare System Blue Ridge*
- *Duke Energy*
- *Golden LEAF Foundation*

STUDY TEAM APPROACH

The study was conducted between February 2015 and April 2016. To improve the chances that a diverse set of stakeholders could coalesce around a plan to redevelop the Historic Broughton Campus and adjoining properties, the study team took the following approach:

- *engaged public stakeholders throughout the process and brought new stakeholders on board as they were identified during the study;*
- *established guiding public interests as identified by those stakeholders;*
- *analyzed the historic value of the site and buildings and suitability for adaptive reuse and new construction;*
- *developed a vision for the site based on local assets and appropriate planning principles;*
- *employed iterative feasibility analysis to test different approaches to redevelopment of the site, ranging from comprehensive to narrow;*
- *crafted and refined a recommended comprehensive development program;*
- *described sub-optimal alternatives to the recommended program; and*
- *set forth next steps to be undertaken by State and local stakeholders in order to attract private investment and accomplish the recommended redevelopment program.*



STUDY AREA

The study area is defined as the Historic Broughton Campus (a core 50+ acre site), as well as the surrounding 750 acres of land and buildings comprising the "district" contemplated in this report.

DFI assembled a team of well-established land planning, architecture, engineering, and construction professionals experienced with mixed-use development and adaptive reuse of historic structures to help perform this comprehensive study (see description of study team on inside cover). The appendices to this report summarize the findings from individual components of the study.

REGIONAL OVERVIEW

STUDY AREA LOCATION

Broughton Hospital is located in the City of Morganton (2014 pop. 16,700), which is the county seat of Burke County (pop. 89,500) and part of the Hickory-Lenoir-Morganton metropolitan area (pop. 362,900). The gateway to "nature's playground," the Morganton area welcomes visitors to several popular outdoor attractions—Linville Gorge, South Mountains State Park, Lake James—for hiking, camping, fishing, canoeing, climbing, golf, and more. The area's farms, orchards and vineyards also draw agritourists.

Within an hour drive of Charlotte and Asheville, downtown Morganton is emerging with a cluster of craft breweries and farm-to-table restaurants that attract visitors seeking an authentic culinary experience. The adaptive reuse of several historic commercial buildings with new restaurants, shops and residences has breathed new life into the cozy downtown, which also hosts a first-run movie theater and an auditorium with a full slate of Broadway shows and national acts. The repurposing of the Premiere Mill into Morganton Trading Company—an award-winning, public-private partnership to transform a dilapidated textile plant into a mixed-use project, home to City Hall, event space, and 43-unit luxury apartment community—anchors one corner of downtown and has spurred new investment in surrounding blocks. A greenway extension is being established to connect downtown to the expansive Catawba Meadows park system.

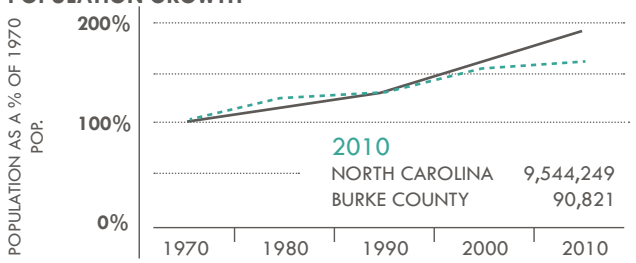
REGIONAL ECONOMY

The economic backbone of the region is its anchor institutions in education and health care services, as well as a resilient manufacturing base. The largest private employers in Burke County include Carolinas HealthCare System – Blue Ridge (health care), Case Farms (food processing), Valdese Weavers (textiles), Leviton (electrical component manufacturing), Continental (automotive manufacturing), and Viscotec (automotive textiles manufacturing). Both the healthcare and metal manufacturing sectors in Burke County are specialized and have a competitive advantage, as well as pay average wages that exceed a living wage standard. Legacy industries in furniture and textile manufacturing still maintain large workforces in the region and have spurred a cluster of specialized machining businesses that offer well-paying, skilled jobs and supply local industry as well as global clients.

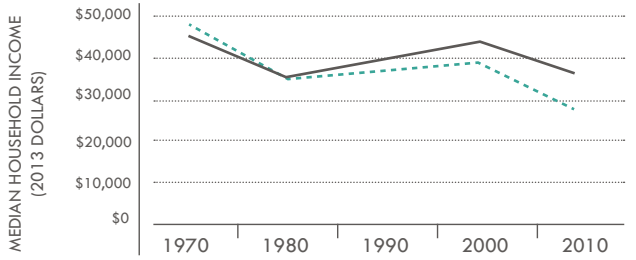
Industrial restructuring in manufacturing has slowed population growth in the region and led to declines in household incomes in real dollars. However, unemployment in the region is currently lower than the state and Morganton maintains post-secondary educational attainment levels similar to the state as a whole. See additional demographic and industry analysis in the appendices.

BURKE COUNTY — NORTH CAROLINA — HICKORY-LENOIR-MORGANTON MSA

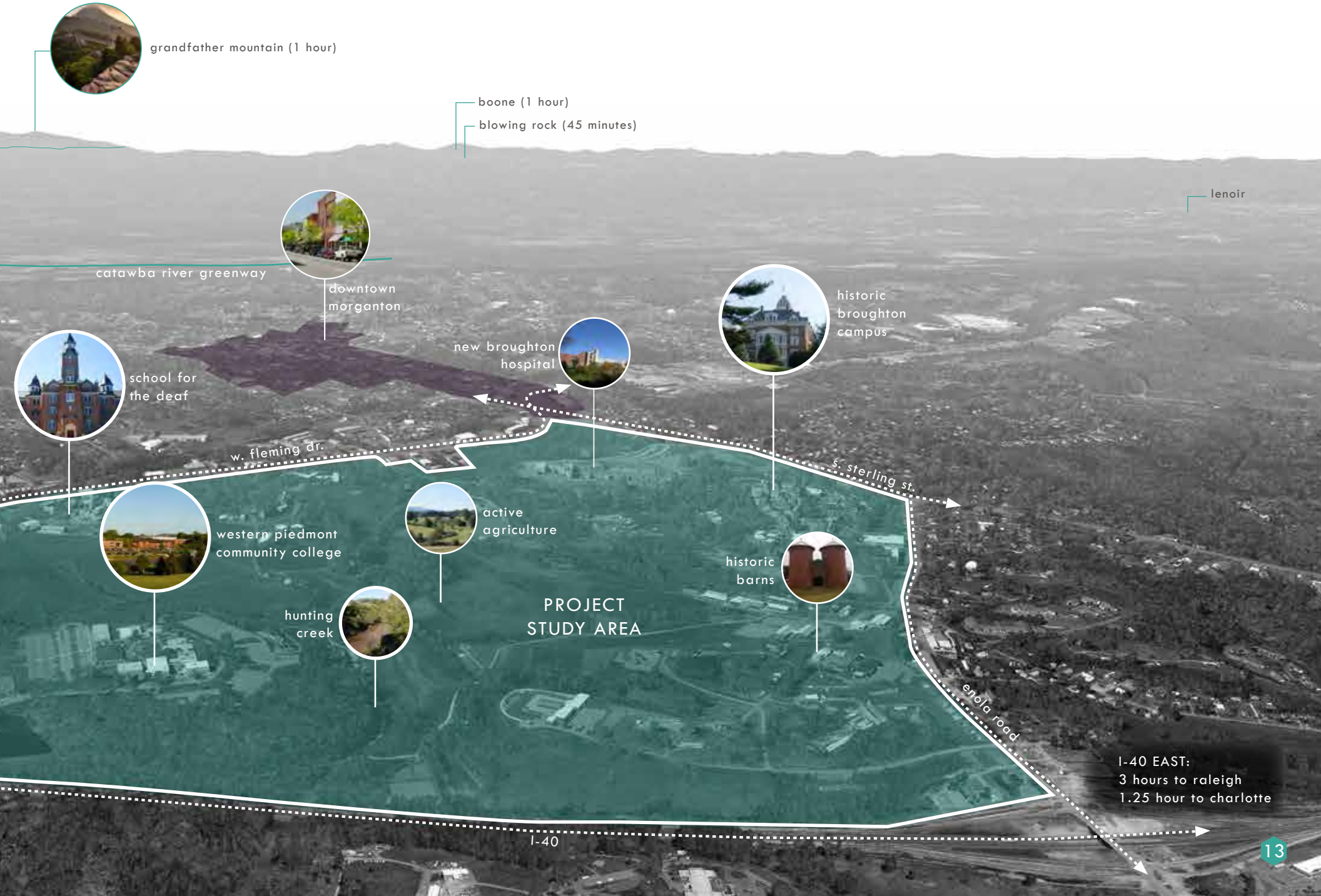
POPULATION GROWTH



MEDIAN HOUSEHOLD INCOME



UNEMPLOYMENT RATE


grandfather mountain (1 hour)
boone (1 hour)
blowing rock (45 minutes)
lenoir
catawba river greenway
downtown morganton
historic broughton campus
new broughton hospital
school for the deaf
w. fleming dr.
s. sterling st.
western piedmont community college
active agriculture
historic barns
hunting creek
PROJECT STUDY AREA
enola road
I-40 EAST:
3 hours to raleigh
1.25 hour to charlotte
I-40

HISTORIC ARCHITECTURE | TODAY

HISTORIC LANDSCAPE | TODAY

ACTIVE AGRICULTURE | TODAY

SOURCE: POSTCARD FROM BROUGHTON HOSPITAL

HISTORIC ARCHITECTURE | YESTERDAY

SOURCE: POSTCARD FROM BROUGHTON HOSPITAL

HISTORIC LANDSCAPE | YESTERDAY

SOURCE: WPCC

ACTIVE AGRICULTURE | YESTERDAY

BROUGHTON HOSPITAL HISTORY

North Carolina legislators voted in 1875 to construct an asylum in Morganton to serve the western part of the state to alleviate overcrowding at the state's first facility in Raleigh. The first structure on the campus—now known as Avery Building—was designed by Samuel Sloan, who was also the architect of the North Carolina executive mansion and the University of North Carolina at Chapel Hill's Memorial Hall. Sloan was personally recommended for the job by Thomas Kirkbride, a pioneer in the design of psychiatric facilities. The main wing was finished in late 1882 and patients were admitted by the end of March 1883. Rapid growth in the patient population drove expansion of the main building and campus for decades to come (additional history provided in the appendices). The asylum officially became a hospital in 1890, and in 1959 was renamed for former governor Melville Broughton.

Today, Broughton Hospital is on the cusp of a new era in its long history of providing mental health services to North Carolinians. The construction of a modern, $155-million replacement hospital adjacent to the historic campus is nearing completion. When current operations relocate to the new facility, they will leave behind nearly 800,000 square feet of physical assets that represent a centuries-long public investment and an irreplaceable symbol of the State's commitment to the care of its people.

REDEVELOPMENT OF PSYCHIATRIC HOSPITALS

Historic psychiatric hospital campuses provide great opportunities and challenges for the communities in which they are located. Around the country, successful reuse of these campuses, in a way that maximizes public interests while minimizing public risk, has been realized only when strong public leadership provides a coherent, long-term vision for the site, supported with strategic public investments.

For example, in Traverse City, MI—a city of roughly the same size as Morganton—a Kirkbride asylum that opened just two years after Broughton is currently undergoing redevelopment into a village that will be home to 1,000 residents and 800 workers upon full build-out. Though the hospital buildings sat vacant for decades, incurring substantial costs, they have ultimately re-emerged due to a public-private partnership with a master developer that took advantage of a range of development finance tools. A telling counter-example is that of Morris Plains, NJ, and the Greystone Park Hospital, which was demolished in the summer of 2015 after decades of disuse, neglect, and an inability for public and private actors to form a successful partnership.

Between these two cases are many other instructive examples of how leadership, a vision that transcends just one building to encompass an entire community, and public investments can make the difference between successful redevelopment and costly indecision (see additional cases in the appendices).

GUIDING PUBLIC INTERESTS

During the course of stakeholder engagement in this study, the following State and local public interests regarding the Historic Broughton Campus and surrounding property emerged:

- *Facilitate private investment in a (re)development program*
- *Re-use historic structures within constraints of financial feasibility*
- *Protect and leverage State's long-range $155+ million investment in new hospital*
- *Preserve and enhance public access to site amenities*
- *Create a regional destination and sense of place that complements the renaissance of downtown Morganton*
- *Tap into demographic segments that are strong and trending upward (e.g. students and seniors)*
- *Leverage existing industry specializations to support and grow Burke County as an education and employment hub*
- *Retain and recruit talent with modern, diverse housing options*
- *Accommodate the needs of special populations that will use the site (deaf, blind, mentally ill, intellectually disabled)*
- *Honor the site's unique history and long term contributions to the community*

SITE ANALYSIS

OVERVIEW

The study area is located in the foothills region of North Carolina. The 800-acre site is characterized by highly variable topography, significant agriculturally productive area, and a unique hydrologic system featuring Hunting Creek, a tributary of the Catawba River. The site is anchored by campuses of four institutions: Broughton Hospital, NCSD, WPCC, and Burke County. The site additionally has direct access to I-40 and is adjacent to Morganton's vibrant downtown. These features offer opportunities and challenges for redevelopment, which are discussed in detail below.

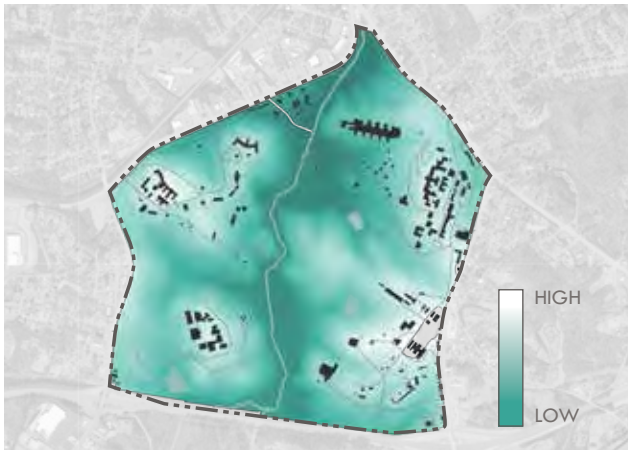
CONTEXT AND ZONING

The site is located along a stretch of I-40 between exits 104 and 105, which sees more than 40,000 cars a day. The northern portion of the site is approximately half a mile south of the center of downtown Morganton, along the major commercial corridors of Burkemont Avenue, W. Fleming Drive and S. Sterling Street. A complicated intersection of Fleming and Sterling currently makes walking to downtown from the site a challenge.

The entire 800-acre site is located within the city limits and is covered by two zoning districts: high intensity district (HID) and state institutional district (SID). Three overlay districts interact with this area: corridor overlay, flood damage prevention overlay, and the watershed protection overlay. Within HID and SID, a variety of residential and commercial land uses are permitted, as well as farming and livestock. There is a max density (with provisions) in HID of 20 dwelling units per acre and a max building height of 65 feet. There is no max density within SID and a max building height of 65 feet. These restrictions do not pose barriers to a market- and site-appropriate scale of new development.

TOPOGRAPHY AND ELEVATION

The topography of the site offers dramatic and picturesque views of the surrounding mountains. Historically, many of the highest elevations on the site have been built upon to take advantage of these viewsheds. North Carolina School for the Deaf and the Historic Broughton Campus are perched at elevations over 1200 feet. Hunting Creek, which has carved out a steep valley where slopes reach 55 degrees in some areas, has also directed much of the historic development on the site. These slopes essentially split the site into eastern and western sections, and limit connectivity between the two. A gravel connector road linking WPCC with the County services facilities and an access road near the Emergency Services Training Complex (ESTC) are the only roads or paths between the elements on the eastern and western halves of the site.



HYDROLOGY AND AGRICULTURAL PRODUCTIVITY

Hunting Creek flows from the south and reaches the Catawba River north of downtown Morganton. The most fertile land for agricultural development is found along Hunting Creek, due to seasonal flooding and sedimentation. WPCC has installed a 10-acre agricultural plot, as well as a model sustainable agricultural farm, in these bottom lands. Due to the potential for flooding, this land is best suited for agriculture or natural uses.

HISTORIC GROUNDS

The Historic Broughton Campus and NCSD were both developed over 100 years ago. Based on historical documentation and imagery research, many of the original elements of the grounds remain intact. In addition, large specimen gingko, catalpa, oak and other variety of trees have matured on each of the campuses and add to the historic and grand feel of the site. At the southern end of the Historic Broughton Campus is a 2.2 acre cemetery where many of the patients of the hospital in the late 19th century and early 20th century were buried.

BUILDING ANALYSIS

The 800-acre site features a collection of some of the most historically significant publicly funded structures in Western NC.

HISTORIC BROUGHTON

The Historic Broughton Campus has 20 major buildings, as well as several sheds, houses, and barns totaling 800,000 built square feet. Many of the ancillary buildings on the former farming colony of the hospital are now the property of WPCC. The Broughton Hospital Historic District was listed in the National Register of Historic Places in 1987, based on 60 contributing buildings built between 1875 and 1940.

Architectural analysis finds that the bulk of buildings are in excellent condition with strong reuse potential. The Avery building, the grand main entrance to the Historic Broughton Campus, is approximately 337,000 gross square feet, but has very low floor area efficiency (only 50% net square footage). It features 1- to 2-foot thick load-bearing interior masonry walls dividing small (80-sq. ft.) patient rooms off a wide 12-foot corridor, posing challenges for adaptive reuse. Avery and several other Broughton buildings are connected to centralized heating and cooling systems via a network of underground steam tunnels. The bulk of buildings systems (mechanical, electrical, fire alarm, plumbing) would need to be replaced. Detailed architectural and engineering assessments are provided for the Broughton buildings and site in the appendices.

SCHOOL FOR THE DEAF

The NCSD campus has approximately 19 major buildings, as well as several small former residences, and many sheds and maintenance buildings, comprising approximately 470,000 built square feet. The NCSD Historic District was listed in the National Register of Historic Places in 1989, based on 14 contributing structures constructed circa 1891 through 1939.

A few of the historic structures on the NCSD campus grounds have fallen into disrepair and have been fenced off from the campus for safety concerns. The architectural and engineering assessments found that Goodwin Hall (circa 1907) and Joiner Hall (circa 1930)—the two primary historic structures of concern on the campus—are sound and do have the potential for preservation and adaptive reuse. These buildings were primarily used as classrooms and lounge space, featuring large open rooms with wide expanses of windows and glazing.

WESTERN PIEDMONT COMMUNITY COLLEGE

WPCC has operated on the southwest portion of the study area since its first facilities opened in the late 1960s. The college has approximately 13,000 enrolled students and over 200 full-time employees. WPCC maintains an active organic farming and animal husbandry operation in the valley of the site, as well as several facilities in the southeastern corner of the site associated with its sustainable agriculture and building trades educational programs. WPCC also operates the Emergency Service Training Complex (ESTC) adjacent to the new hospital site. Most of the over 40 buildings on the WPCC site were built in the last 50 years and are not historic, though several structures that are now on the site were originally built as part of Broughton Hospital, and were listed as contributing structures in the hospital's historic district nomination.

The Colony Building and the adjacent Abattoir Building both functioned as critical components to the self-sustaining Broughton Hospital campus in the early 20th century. These buildings are boarded up but have been assessed by the team of architects and engineers and were found to be sound and of sufficient historic value to warrant adaptive reuse. In addition, WPCC currently utilizes a collection of historic agricultural barns and silos for storage and workshop space. Similarly, these structures were assessed and found to have strong adaptive reuse potential.

BURKE COUNTY

The County operates several facilities on the site, including an agricultural cooperative extension facility that provides educational programs and community gardening plots, a sheriff's office, and a detention center currently shared and jointly operated with Catawba County. These facilities are clustered in the southeast portion of the study area. Burke County has negotiated to buy out Catawba County's share of the detention center.

DEVELOPMENT THEMES

The existing assets of the site and region combined with the guiding public interests led the study team to pursue a development program anchored by three themes:

LAND STEWARDSHIP

Development supporting the heritage of a hospital colony and the future of the active agriculture on the site that would enhance access and visibility to these activities and bring resources to protect and preserve Hunting Creek and open spaces for the enjoyment of the community.

WELLNESS

Development leveraging the opportunity for outdoor recreation and access to the wholesome products of local farms and restaurants close at hand, within a setting that is anchored by institutions of modern healthcare and therapy.

EDUCATION

Development that fosters and consolidates ties between workforce development needs of local industry, and the science, technology, engineering and mathematics (STEM) and advanced manufacturing focus of curricula at NCSD and WPCC, as well as giving greater exposure to the resurgence of craftsmanship that is behind private ventures in construction, cuisine, and brewing/distilling.

Together, these themes support several development opportunities for the 800-acre site that embed the Historic Broughton Campus within a coherent vision for a district that can be more than the sum of its parts.

3 THE VISION

A NEW DISTRICT

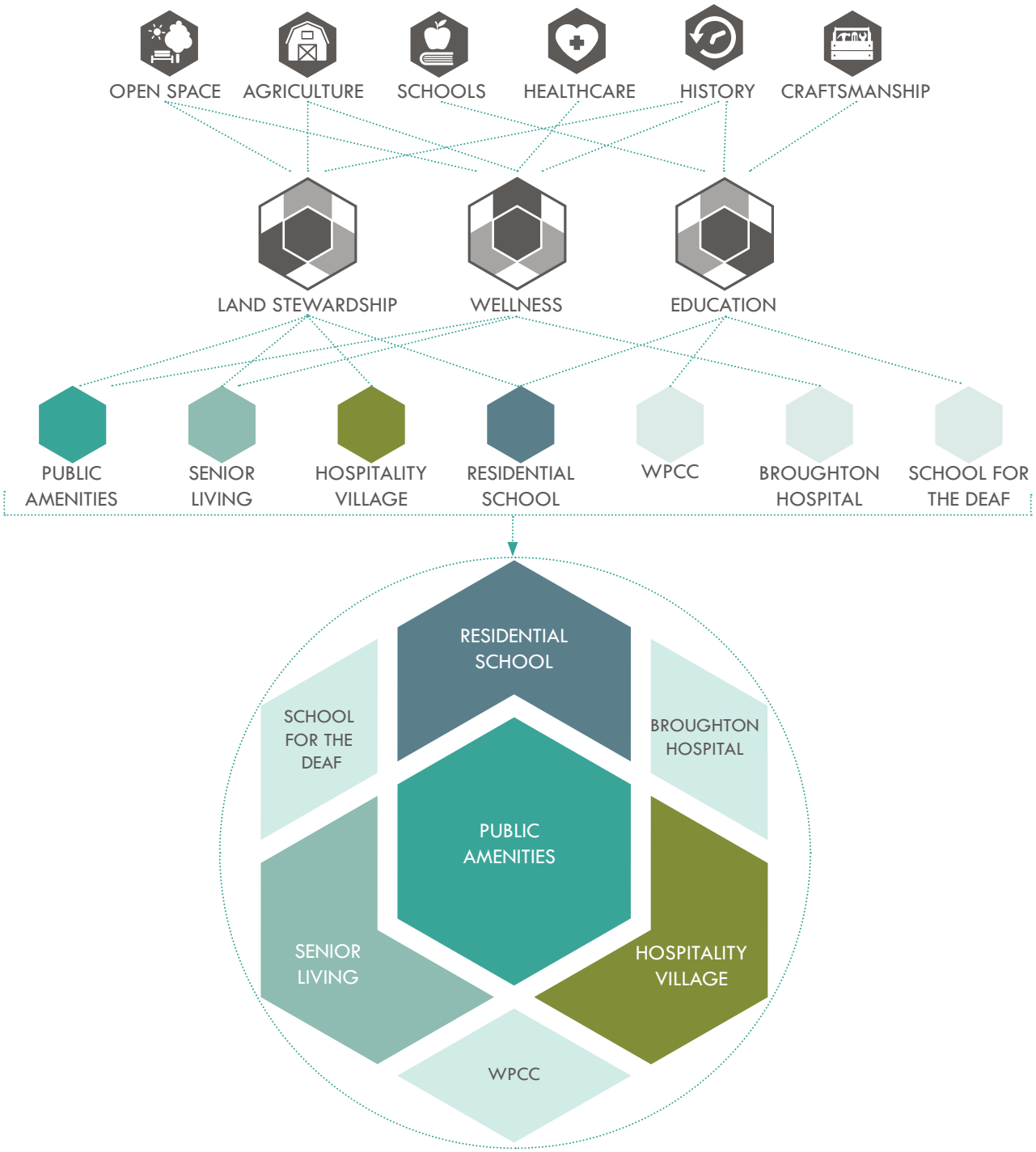
Historically, as the home of an asylum, farm, and a public boarding school for deaf children, the site has been a refuge—a resource-rich pocket of natural beauty that served residents locally and around the state. The reinvention of the Historic Broughton Campus builds off its legacy as a place of care and repose and focuses the site going forward as a place that uniquely fuses culture and innovation. Ambitious students and active seniors, healthcare professionals and educators, food entrepreneurs and organic farmers all breathe life into a cluster of adaptively reused historic buildings and site-specific new construction that draws on the region's assets. The carefully-crafted, centuries-old architecture define an authentic sense of place for present-day activities of work, study, healing, and play. Walking trails connect schools, homes, restaurants, a hospital, and a hotel as they weave through stands of mature trees, around working farms, along a quiet creek, and ultimately into a vibrant downtown.

DEVELOPMENT PROGRAM

A vision that is adaptable will be more likely to succeed than a vision with a single path to execution. Accordingly, this report offers two comprehensive development programs for the new district, guided by a set of principles for site planning and deal structuring that are described on the following pages. The two programs are differentiated primarily by the proposed reuse of the Historic Broughton Campus as either 1) a residential school or 2) a hotel. After assessing and comparing the programs, the team arrived at the following recommendation for accomplishing the district vision:

- *Historic Broughton Campus (northeast site): a residential school and market-rate residential;*
- *Northwest site: a senior living community featuring independent and assisted living units, neighboring the North Carolina School for the Deaf.*
- *Southeast site: an upscale hotel, multifamily residential, and a retail village anchored by a brewery and a collection of restaurants and shops;*

The impact of this proposed program on existing users of the site and local infrastructure has been reviewed by DHHS, DPI, DPS, City, County, WPCC, and NCSD. Furthermore, the State Historic Preservation Office (SHPO) has reviewed the conceptual plans and found them to be compatible with the parameters of the historic districts (see SHPO letter in the appendices).



PLANNING PRINCIPLES | SITE

RESPECT | SHARED RESOURCES

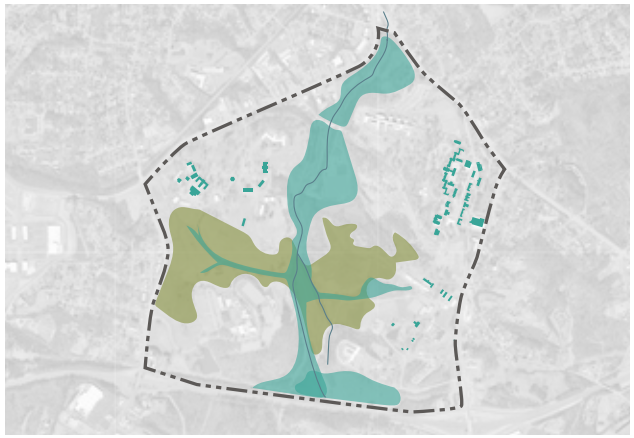
The iconic architecture on hilltops is oriented inwards to the Hunting Creek valley where the land should be left largely untouched for passive enjoyment and available for active agriculture in the floodway and meadows, with outdoor recreation woven into the site along a buffer around the creek.

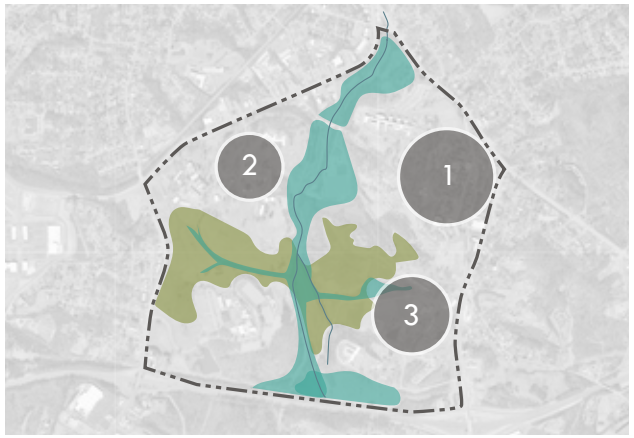
INTERJECT | DEVELOPMENT PROGRAMS

The topography lends itself to development at the more elevated and level areas in the corners of the site where vacant, soon-to-be vacant, and underutilized buildings and property lie. Residential, educational, and hospitality developments are compatible with existing assets and can repurpose historic structures while contributing new construction at a compatible scale.

CONNECT | A NEW DISTRICT

Situated at one of the most connected corridors in the community, the site currently lacks internal physical connections to complement the view sheds and to facilitate access between anchor institutions, as well as a user-friendly pedestrian path to nearby downtown.





PLANNING PRINCIPLES | DEAL STRUCTURE

FINANCIAL FEASIBILITY

The feasibility of attracting private capital to execute the development programs was assessed based on modeling the financial performance of each plan as constrained by capital market and real estate market realities. A feasible investment is based on meeting or exceeding the hurdle rate of return to private investors. Two common measures are internal rate of return and equity multiple:

- *Internal rate of return (IRR): the average total return to equity investors accounting for the timing of cash flows*
- *Equity Multiple: the ratio of the total cash returned to equity investors over the initial investment*

When evaluated together, these two measures provide a good picture of the investment performance for different investor profiles. In general, higher risk types of real estate development have higher return hurdles than lower risk investments. In this study, when the base case returns for a project with conventional debt and equity did not meet or exceed the hurdle for risk-adjusted returns to investors, public participation tools were incorporated according to the following protocol until the hurdle was met:

- *Public investment in public infrastructure and amenities from which private development will benefit (e.g. green space, trails, parking, roads) with costs assigned to the stakeholder that currently exercises control over that property, which can be shared subject to agreement;*
- *Tax credit programs that leverage additional private equity, including State and Federal Historic Preservation Tax Credits (the study area includes two districts on the National Register of Historic Places) and New Market Tax Credits for job-creating projects (the study area is in a qualified census tract that is prioritized for NMTC investments)*
- *Public investment in preparing public land for sale to private investors (i.e. demolition, grading, utilities)*
- *Subordinate lending at market interest rates to the private development*
- *Tax deferment on the improved value of historic buildings through local historic landmark designation*
- *Subordinate lending at below-market interest rates to the private development*

RISK MANAGEMENT

In addition, the development programs and deal structures were evaluated and compared on how they addressed the following fundamental risks of real estate development:

- *Site control risk: can enough property be controlled, at a fair price point, in a reasonable time frame to build a project that will address a market gap?*
- *Market risk: will demand and competing supply support property incomes sufficient to generate the return on the investment necessary to deliver the space?*
- *Financing risk: will the availability and cost of capital (debt and equity) to fund the project persist at expected levels?*
- *Construction risk: will the project be built in the established budget and schedule on which marketing and financing decisions are based?*

Public-private partnerships can yield mutual benefits by addressing development risks for both parties.

DISTRICT PLAN | RECOMMENDED PROGRAM

1. RESIDENTIAL SCHOOL
2. MULTI-FAMILY RESIDENTIAL
3. CRAFT BREWERY + ARTISAN VILLAGE
4. HOTEL + SPA
5. WPCC
6. GREENWAY
7. SENIOR LIVING COMMUNITY
8. SCHOOL FOR THE DEAF
9. STORMWATER POND
10. PARK AND ATHLETIC FIELDS
11. NEW BROUGHTON HOSPITAL
12. GATEWAY PARK
13. FUTURE INTERSECTION DESIGN
14. DOWNTOWN MORGANTON
15. ACTIVE AGRICULTURE

W. FLEMING DR.

S. STERLING ST.

BURKEMONT AVE.

I - 40

ENOLA RD.

PUBLIC AMENITIES

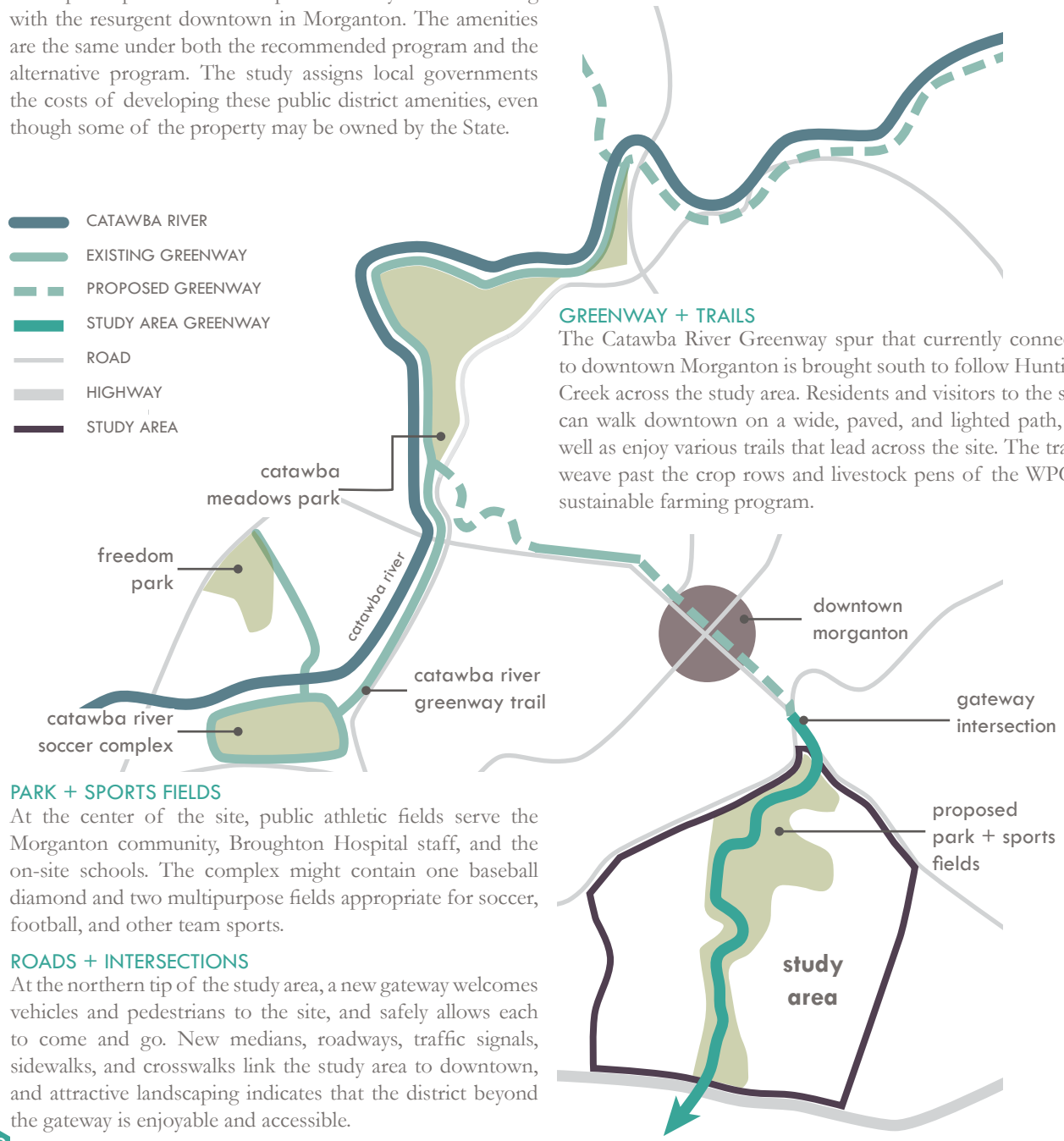
RESIDENTIAL SCHOOL

SENIOR LIVING COMMUNITY

HOSPITALITY VILLAGE

PUBLIC AMENITIES

A set of public amenities described below will bind together the disparate pockets of development activity on the site along with the resurgent downtown in Morganton. The amenities are the same under both the recommended program and the alternative program. The study assigns local governments the costs of developing these public district amenities, even though some of the property may be owned by the State.



GREENWAY + TRAILS

The Catawba River Greenway spur that currently connects to downtown Morganton is brought south to follow Hunting Creek across the study area. Residents and visitors to the site can walk downtown on a wide, paved, and lighted path, as well as enjoy various trails that lead across the site. The trails weave past the crop rows and livestock pens of the WPCC sustainable farming program.

PARK + SPORTS FIELDS

At the center of the site, public athletic fields serve the Morganton community, Broughton Hospital staff, and the on-site schools. The complex might contain one baseball diamond and two multipurpose fields appropriate for soccer, football, and other team sports.

ROADS + INTERSECTIONS

At the northern tip of the study area, a new gateway welcomes vehicles and pedestrians to the site, and safely allows each to come and go. New medians, roadways, traffic signals, sidewalks, and crosswalks link the study area to downtown, and attractive landscaping indicates that the district beyond the gateway is enjoyable and accessible.

BROUGHTON POND

THE GREENWAY SPUR AND SEVERAL WALKING TRAILS CONVERGE IN THE MIDDLE OF THE STUDY AREA AT AN 11-ACRE STORM WATER RETENTION POND PROVIDING A WATER FEATURE FOR THE COMMUNITY. DURING THE WEEKDAYS, THE POND DRAWS WALKERS AND JOGGERS; ON THE WEEKENDS, FAMILIES PICNIC ALONG THE SHORE. DURING PERIODS OF HEAVY RAIN, THE POND SERVES AS A SUSTAINABLE RUNOFF MANAGEMENT TOOL. YEAR-ROUND, THE POND IS A BEAUTIFUL AND PURPOSEFUL DESTINATION AT THE HEART OF THE STUDY AREA.

TOMORROW | RESIDENTIAL SCHOOL

A residential high school is part of an attractive historic campus in the site's northeast corner. Students live and study in the stately main building, which opens to a central pedestrian quad, on which students socialize between classes under century-old gingko and catalpa trees. Dedicated science and technology labs, visual arts studios, and general classroom buildings line the quad, simultaneously connecting students with critical skills for the future and the state's history and famous natural beauty, exemplified by the striking campus architecture and views of the Blue Ridge Mountains.

RESIDENTIAL SCHOOL OPPORTUNITY

North Carolina is seeking to diversify and broaden the impact of the innovation economy beyond the clusters found around the Raleigh, Durham, and Charlotte metropolitan areas. The Hickory-Lenoir-Morganton metro area (and western North Carolina more broadly) has a concentration in advanced manufacturing that provides a critical link to industry required in the innovation value chain. In addition, education leaders are recognizing the need to reinvigorate science, technology, engineering, and math (STEM) learning in schools at early ages in order to cultivate the next crop of talent that will pursue the technician, engineer, and researcher career paths on which this sector is built. A STEM school with a boarding component would extend the opportunity for focused, high-quality education to a broader swath of North Carolina students in the regions of the state where workforce demands are great and access to specialized training is more limited. Such a school would complement the focus that WPCC has in mechatronics at the post-secondary level, and leverage the State and local investments in STEM extracurricular offerings by the NC School for the Deaf and Burke County Public Schools.

TODAY | HISTORIC BROUGHTON CAMPUS

PUBLIC VS. PRIVATE SCHOOL

The State has proposed to create a western campus of the North Carolina School for Science and Mathematics (NCSSM) at a yet-to-be-determined location in Burke County. The DFI-led study team used the facility parameters from the State's 2014 feasibility study for this western campus to test its fit with the Historic Broughton Campus buildings. Should the State allocate funding to a western NCSSM campus, then this could likely be a quick path to reusing the historic Broughton Hospital campus. However, the NCSSM facility program—targeting 300-400 boarding students—is not the only residential school model that could repurpose Broughton. There are independent and charter schools—such as the SEED Schools and CATS—that are opening new boarding school campuses because of the opportunity to create an immersive and transformative learning and life enriching experience. An iconic campus setting such as Broughton is a draw for schools seeking to differentiate their brands.

PROGRAM

The Avery Building is a natural fit for student and residence advisor accommodations, with groupings of rooms into two- and four-person suites adjoining a common restroom (see diagram). In addition, the wide corridors—which are typically preserved for historic value and must be preserved by any private educational organization that wishes to take advantage of historic preservation tax credits—could be programmed with additional meeting/lounge spaces that extend the learning experience beyond the classroom and into these common areas to make productive use of the corridors. The portico entrance to the domed Avery—overlooking the pond, campus trails, and arboretum—creates that grand welcome to the central lobby and administrative offices that academic institutions desire. Meanwhile, the adjacent Historic Broughton Campus buildings provide opportunities for flexible reuse as classroom, laboratory, dining, student union, and faculty housing spaces. See the diagram of the test fit that illustrates how these facilities fit neatly into the Historic Broughton Campus buildings.

The development would likely occur in two phases. An initial phase would serve approximately 150-200 students, while enrollment was established, with approximately 40% of the Avery building renovation staged for housing another 150-200 students in the future. At full build-out, 400 boarding students could attend the school, with all the student housing, faculty housing, classrooms, labs, dining facilities, assembly hall, and a gym, comprising 250,000 net square feet centered around a quad on the upper half of the current Broughton campus. To create this campus environment, four existing structures would be razed—Jones, Thomas, Moran, and Carpenter—and some unnecessary building appendages would be demolished to restore their historic architectural character (see diagram).

SCHOOL DEAL STRUCTURE

The residential school program is estimated to cost $73.9 million, including building demolition, site work, and building rehabilitation. If phased, as suggested above, an additional $1.2 million in expense would be incurred for remobilization of the construction effort for the second phase. The total cost is comparable, if not slightly less than the State's estimate of the per pupil cost of new construction for an equivalently sized western campus of NCSSM. As an

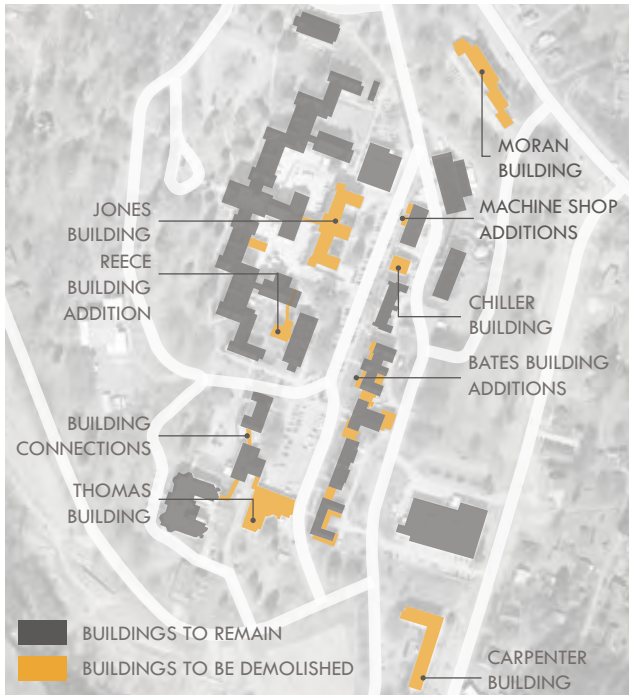
adaptive reuse project, the school may have slightly higher operating expenses due to inefficiencies in air tightness of historic buildings. Study team engineers estimate that these inefficiencies would result in a 5% (or $0.08/SF per year) increase in utility expenses compared to new construction.

It is possible that a private school or charter school could be recruited to occupy the historic campus. Funding strategies for private and charter schools are diverse—ranging from endowments, to charitable contributions, to Community Reinvestment Act-motivated lending and investing, to corporate sponsors. However, the real estate development impact for the site and the community would likely be similar: a tax-exempt user would replace the State as the owner; preserving the historic buildings but not necessarily generating incremental tax revenues for the City and County.

A possible alternative would involve private ownership of the school buildings and campus by a for-profit entity, with a commercial lease of the property to a school operator. A for-profit developer could leverage historic tax credits and potentially New Markets Tax Credits to raise private equity and debt for the redevelopment. The resulting property would therefore be taxable and could generate additional property tax revenue for the City and County. However, the study team believes the likelihood of this scenario occurring is low. Accordingly, the alternative private owner scenario that is presented in this study involves a hotel (see Alternative Program p. 44).

DEVELOPMENT BUDGET (400 STUDENTS)	
BUILDING DEMOLITION	$2,265,000
SITE WORK	$4,103,000
BUILDING REHAB	$67,545,000
REMOBILIZATION	$1,200,000
TOTAL	$75,113,000 ($188,000/PUPIL)

DEMOLITION PLAN



MULTI USE VILLAGE OPPORTUNITY AND DEAL STRUCTURE

Just south of the school campus, and connected to it via sidewalks and landscaping, a market-rate multi-family housing village of 73 apartments bustles in the morning and evening as residents walk to and from work at the new hospital where they serve patients as physicians, nurses, therapists, and staff. Visiting physicians and handfuls of interns are able to take up home in the village for 6- to 12-months at a time, filling the hospital's need for readily available, quality short-term housing. Meanwhile, other professionals in the community—including teachers at the new school, NCSD, and WPCC—also enjoy the historic apartments in close proximity to their places of work and become longer-term residents. The village attracts families and retired persons, as well. All enjoy the campus setting and outdoor amenities in a short distance from downtown Morganton.

There is a dearth of quality multi-family residential housing options in the Morganton community. Since 2011 through the first half of 2015, Burke County has seen the creation of approximately 1600 jobs, which is 4 jobs for every housing unit that received a building permit. Only about a fifth of those units permitted were multifamily. The largest apartment communities in Morganton are more than 30 years old. Meanwhile, the success of the recently renovated downtown apartments at the fully-leased Morganton Trading Company and The Lofts @ Morganton Station points towards the demand for multi-family housing with quality and character.

This portion of the site is privately-owned, and therefore the redevelopment is able to leverage conventional debt and equity with historic preservation tax credits, and seller financing for the acquisition price of the property. The scattered buildings that create a village feel also enable the developer to phase delivery of the units as feasible based on market absorption. Commercial leasing of the historic South Building and the Hooper Building create an opportunity for additional community amenities for the village and the school. These might include community gardens tied to an outpost of the Cooperative Agriculture Extension Service in the renovated South Building, as well as greenhouses and food processing center for the WPCC sustainable farming program that could make effective use of the Hooper building's loading docks and commercial kitchens.

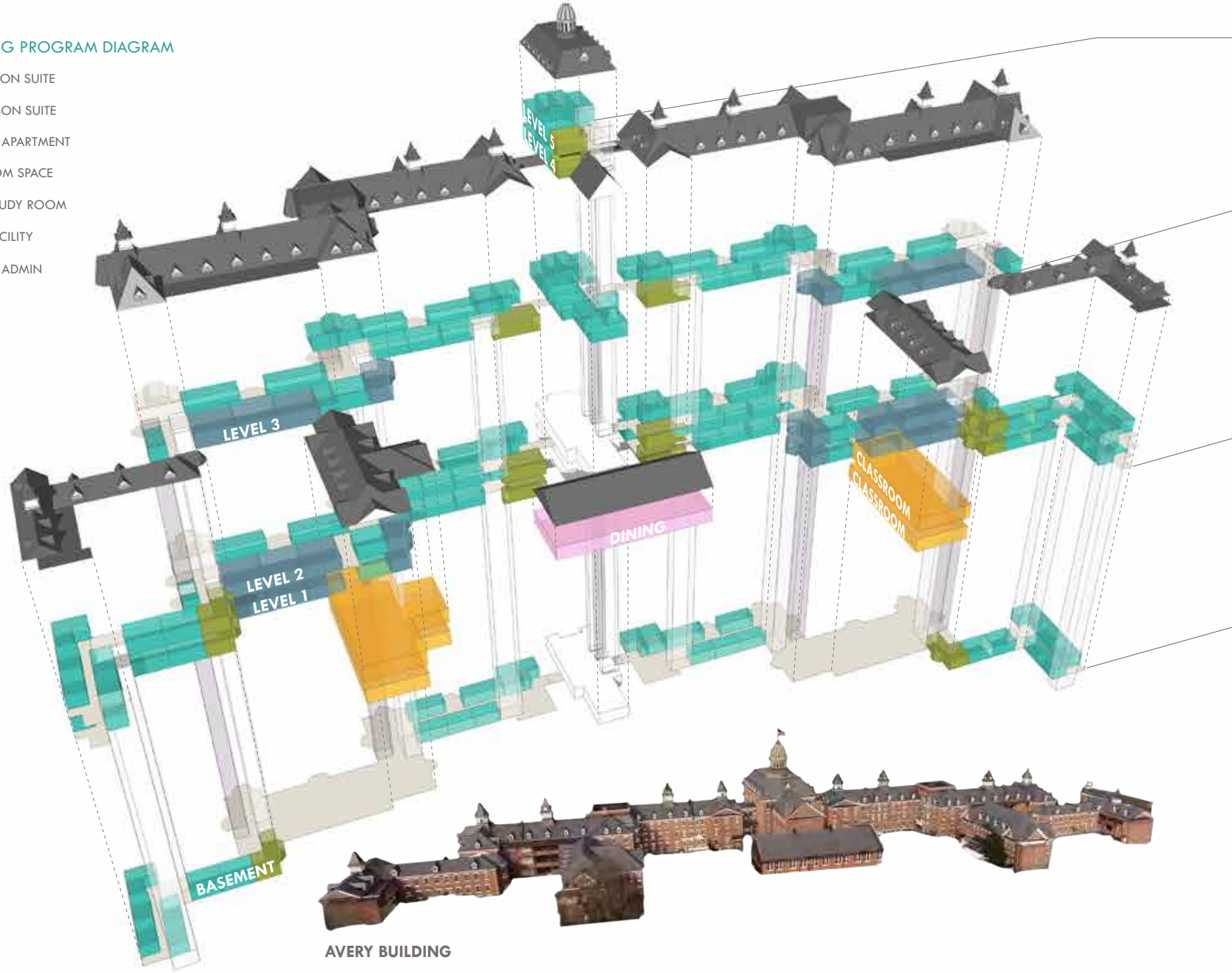
DEVELOPMENT BUDGET		
ACQUISITION	$1,800,000	9%
HARD COSTS	$14,416,000	74%
SOFT COSTS	$1,831,000	9%
OTHER COSTS	$1,472,000	8%
TOTAL	$19,519,000	

CAPITAL SOURCES		
INVESTOR EQUITY	$2,442,000	13%
DEVELOPER EQUITY	$180,000	1%
HTC EQUITY	$4,787,000	25%
SELLER NOTE	$1,800,000	9%
PERMANENT MORTGAGE	$10,310,000	53%
TOTAL	$19,519,000	

MIXED USE VILLAGE PERFORMANCE OVER 6 YEAR HOLD	PRO FORMA
AVG. RESIDENTIAL RENT PER SF PER MONTH	$1.10 / SF
COMMERCIAL RENT PER SF PER YEAR	$15 / SF
EXIT CAP RATE	6.5 - 7.0 %
EQUITY IRR	12 - 17 %
EQUITY MULTIPLE	1.8X - 2.2X

AVERY BUILDING PROGRAM DIAGRAM

- TWO PERSON SUITE
- FOUR PERSON SUITE
- TEACHING APARTMENT
- CLASSROOM SPACE
- GROUP STUDY ROOM
- DINING FACILITY
- FACULTY / ADMIN



AVERY BUILDING

LEVEL 4 + 5

- 12 TWO PERSON SUITES (PER FLOOR)
- 1 TEACHING APARTMENT (PER FLOOR)

LEVEL 3

- 38 TWO PERSON SUITES
- 8 FOUR PERSON SUITES (PER FLOOR)
- 2 TEACHING APARTMENTS
- 2 GROUP STUDY ROOMS

LEVEL 1 + 2

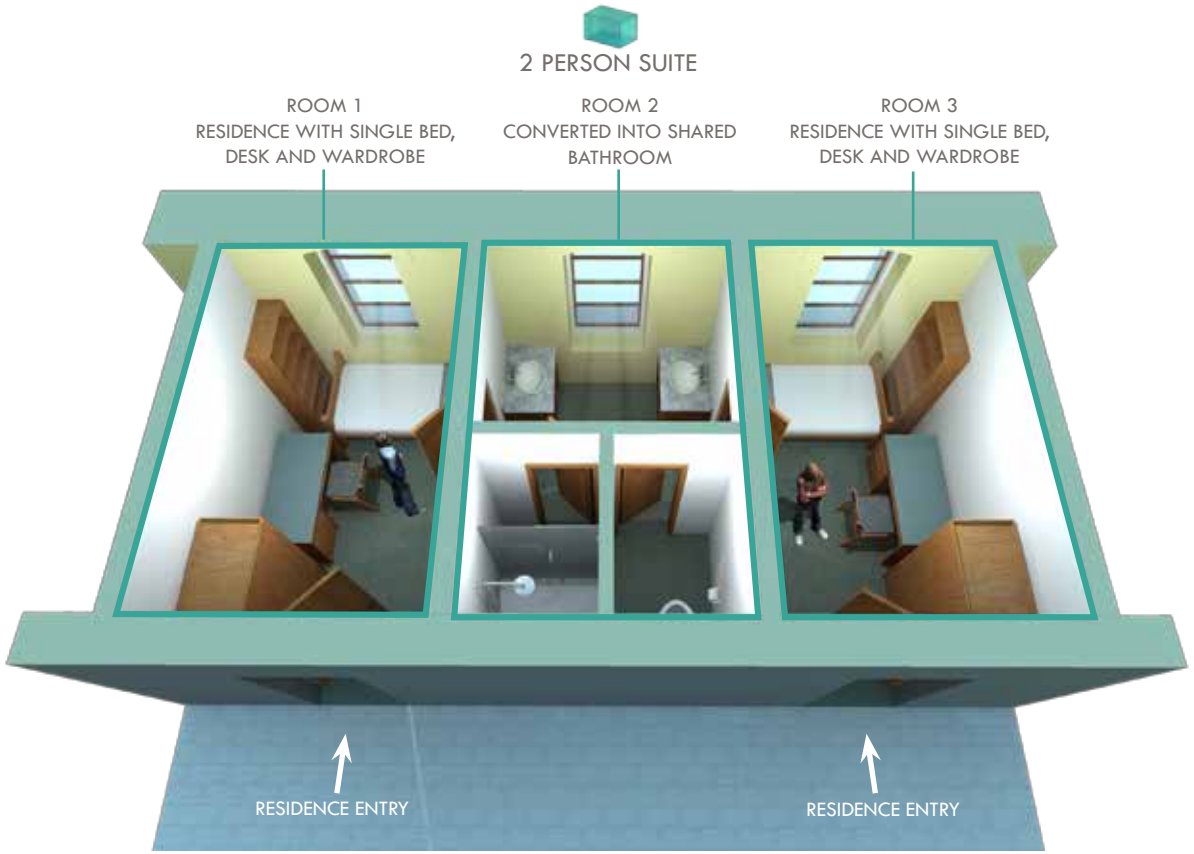
- 40 TWO PERSON SUITES (PER FLOOR)
- 8 FOUR PERSON SUITES (PER FLOOR)
- 4 TEACHING APARTMENTS (PER FLOOR)
- 29,500 GROSS SF CLASSROOM SPACE
- 2 GROUP STUDY ROOMS (PER FLOOR)
- 9,250 GROSS SF DINING FACILITY (LEVEL 1)
- 13,200 GROSS SF FACULTY / ADMIN

BASEMENT

- 28 TWO PERSON SUITES
- 2 TEACHING APARTMENTS
- 6,600 GROSS SF FACULTY / ADMIN

ADAPTIVE REUSE OF AVERY BUILDING

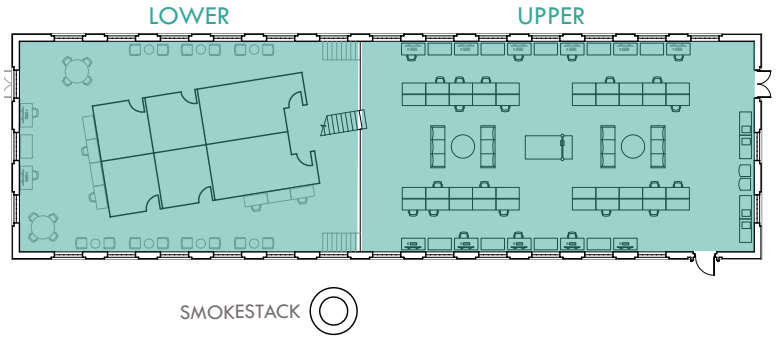
The Avery Building presents some challenges to adaptive reuse due to exceptionally wide historic corridor width and small patient room sizes. However, each room has clean and durable finishes, including plaster walls and terrazzo floors, with large windows that let in ample daylight. For a residential school, every three patient rooms on these corridors can be combined into inviting double-occupancy suites while preserving the integrity of the corridor: two single-bed rooms with a shared restroom in between. The necessary penetrations between demising masonry walls would have reinforced openings and lateral force resisting systems (a common approach for historic building renovations). Where the building has sun porches built onto the rear facades of two wings, the porches could be enclosed to form four-person suites. The transition areas between wings could also be used for larger, corner residential advisor apartments. The wings of the Avery also provide natural groupings of rooms that are helpful for organizing the dormitory by grade level or student gender. Well-lit bays at the ends of each wing provide excellent congregating space for study lounges. The Avery Building also has branches with open floor plans that could be subdivided into classrooms, and a fully functional cafeteria that could be the central dining facility for the school.



ACADEMIC FACILITIES

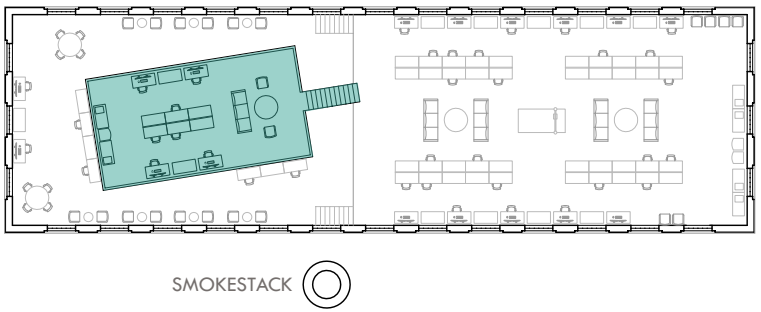
The Steam Plant—once emptied of its obsolete boilers—would offer a one-of-kind academic space with some double-height spaces and mezzanines for experimental and fabrication labs surrounded by two-story windows. Within this "industrial" environment, students could use conventional and modern equipment and materials to engage in hands-on learning. This high-value space could also be leveraged by other academic institutions in the community, and could serve as a venue for educational and workforce development partnerships with local industry. In the same vein, the Chapel on Historic Broughton Campus could continue to serve as a shared assembly space for both the school, new Broughton Hospital, and community functions.

TODAY | BROUGHTON HOSPITAL STEAM PLANT



LEVEL 1 (SPLIT LEVEL)

3,787 SF (UPPER)
3,277 SF (LOWER)
4 OFFICES (LOWER)
2 RESTROOMS(LOWER)
72 WORK STATIONS
LOUNGE AREAS
FABRICATION EQUIPMENT



MEZZANINE

1,025 SF
10 WORK STATIONS
SMALL GROUP BREAKOUT SPACES


OLD SMOKESTACK
REMAINS AS A
CAMPUS LANDMARK
ADAPTIVE REUSE OF STEAM
PLANT TO ACADEMIC SPACE
FABRICATION LAB FOR
HANDS ON LEARNING
TOOLS AND TECHNOLOGY FOR
INNOVATION AND CREATION

TOMORROW | SENIOR LIVING

SENIOR LIVING

A senior living community looks out over acres of rolling hills, creekside walking trails, and sustainably-managed farmland. Residents enjoy the best of the country and the city. A greenway effortlessly connects the pastoral neighborhood to a revitalized downtown filled with shops and restaurants. The site is located less than a mile from I-40, which puts Asheville, Charlotte, and Greensboro—and family members in those cities—within a short drive.

Active seniors choose their residence among independent living apartments and villas, all of which are new construction. For those residents who require more care, the historic Joiner Hall and a new annex building house assisted living apartments. Dining, social, and recreation activities take place in the renovated, historic Goodwin Hall and at one-of-a-kind event spaces at the cattle barn, with commanding views of the entire site. New walking and cycling paths to

TODAY | UNDERUSED SCHOOL FOR THE DEAF PROPERTY

the community college make life-long learning classes easily accessible. In addition, the specialized services for the deaf and hearing-impaired embedded at NCSD next door are a unique amenity for aging residents of the community.

SENIOR LIVING OPPORTUNITY

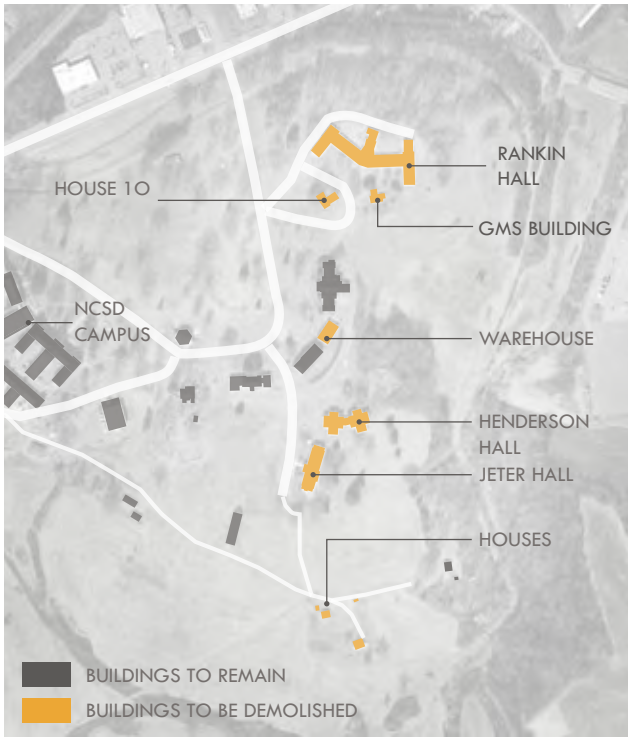
The development taps into the continuing interest in active aging-in-place options in the North Carolina mountains. The population of seniors in Burke County (65 years and older) is projected to increase from 16 percent of the population in 2010 to 20 percent in 2020 and up to 25 percent in 2030. Furthermore, North Carolina's western communities are increasingly attractive for retirees relocating to the area from outside of the state. The immediate proximity to recreation opportunities such as greenways and nature trails, a thriving downtown, and a major interstate highway make the development unique and attractive to seniors who seek a relaxing but fun location in which to retire. Seniors and their families appreciate the closeness to several major metropolitan areas and airports.

A rental fee-based senior community can provide a spectrum of housing options from independent to assisted living and a suite of services included in the base rent—on-site dining, housekeeping, recreation, education, and basic healthcare. Higher operating expenses for these high-service properties are offset by higher rents relative to typical multi-family residential communities. Such a product type could target a niche in a regional market for senior housing with an existing entry-fee based continuing care retirement community.

SENIOR LIVING DEAL STRUCTURE

More than 95 percent of independent and assisted living rental communities are owned and operated by for-profit entities. The proposed senior living community could attract $80 million in private investment, expanding the local property tax base. The full build-out of all phases of the community—villas, apartments, and assisted living units—would likely span several years. The deal would leverage private equity capital with conventional debt and historic tax credits. A market-rate seller's note from the State for the amount of the property acquisition rounds out the financing. In addition, the State would invest in preparing the site for development through the demolition of 95,000 SF of vacant or underutilized buildings that are not contributing historic structures. Local investment would support the upgrade and extension of utilities and greenway trails to the site. These site preparation investments by the public would only occur at the time of an agreement to execute the senior living development with a private partner.

DEMOLITION PLAN



SENIOR LIVING PROGRAM	
INDEPENDENT LIVING APARTMENTS	216 UNITS, 210,000 SF
INDEPENDENT LIVING VILLAS	70 UNITS (25 DUPLEXES), 68,000 SF
ASSISTED LIVING APARTMENTS	40 UNITS, 30,000 SF
DINING, FITNESS, SERVICES	48,000 SF
EVENT SPACE	6,000 SF
TOTAL	362,000 SF

DEVELOPMENT BUDGET		
ACQUISITION	$4,968,000	6%
HARD COSTS	$63,501,000	79%
SOFT COSTS	$6,632,000	8%
OTHER COSTS	$5,733,000	7%
TOTAL	$80,834,000	

CAPITAL SOURCES		
INVESTOR EQUITY	$18,817,000	23%
DEVELOPER EQUITY	$751,000	1%
HTC EQUITY	$3,960,000	5%
SELLER NOTE	$4,968,000	6%
FIRST MORTGAGE	$52,338,000	65%
TOTAL	$80,834,000	

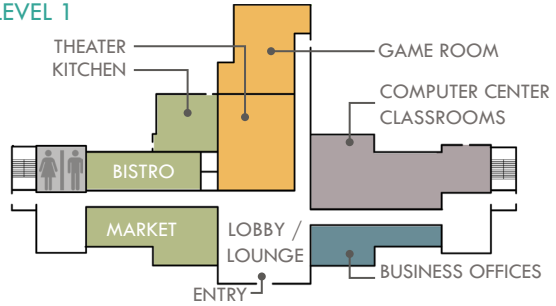
SENIOR LIVING PERFORMANCE OVER 6-YEAR HOLD	PRO FORMA
AVG. MONTHLY FEE PER UNIT	$3,150 (INDEPENDENT); $4,500 (ASSISTED)
EXIT CAP RATE	7.25%-7.75%
EQUITY IRR	14%-17%
EQUITY MULTIPLE	2.1X-2.5X

GOODWIN HALL ADAPTIVE REUSE

Goodwin Hall is one of the larger historic structures on the NCSD campus after the Main Building. Built circa 1907, Goodwin Hall greets visitors to the school as they approach along the entrance drive. At one time it supported classroom and student lounge space for the school. It sits prominently on a hill overlooking Hunting Creek and the ESTC facility, and directly across the valley from the Historic Broughton Campus. On the upper floor a porthole window perfectly frames the dome of the Avery Building in the distance. However, Goodwin Hall and Joiner Hall next to it have sat vacant for several years due to the reduction in enrollment at NCSD and contraction of school operations towards the core of the historic campus. The masonry construction and architectural detail of both buildings make them worthy to adaptively reuse despite years of deferred maintenance and neglect.

As the proposed club house and central services hub for the senior living community, Goodwin Hall's arched pavilion and balustrade balcony create a grand entry to the building that gives the entire property an identity. A flexible internal floor plan allows for planning dedicated spaces in each wing for fitness and spa facilities, on-site medical station and drug store, classrooms, a theater, and multiple dining options. The rear of the building opens onto a patio overlooking the pond and greenway trails. Enclosed walkways connect Goodwin Hall to the newly constructed independent living and assisted living apartments that flank it.

LEVEL 1



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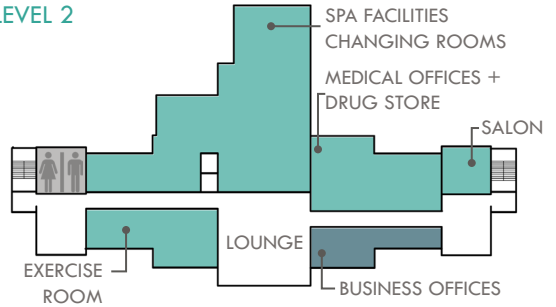

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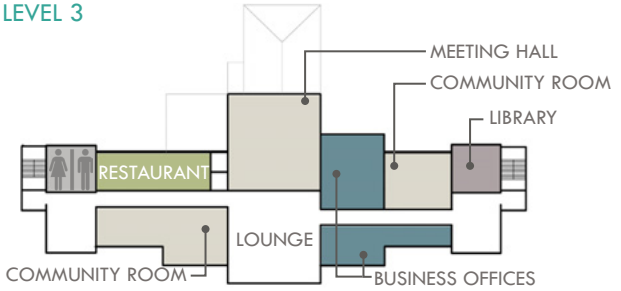
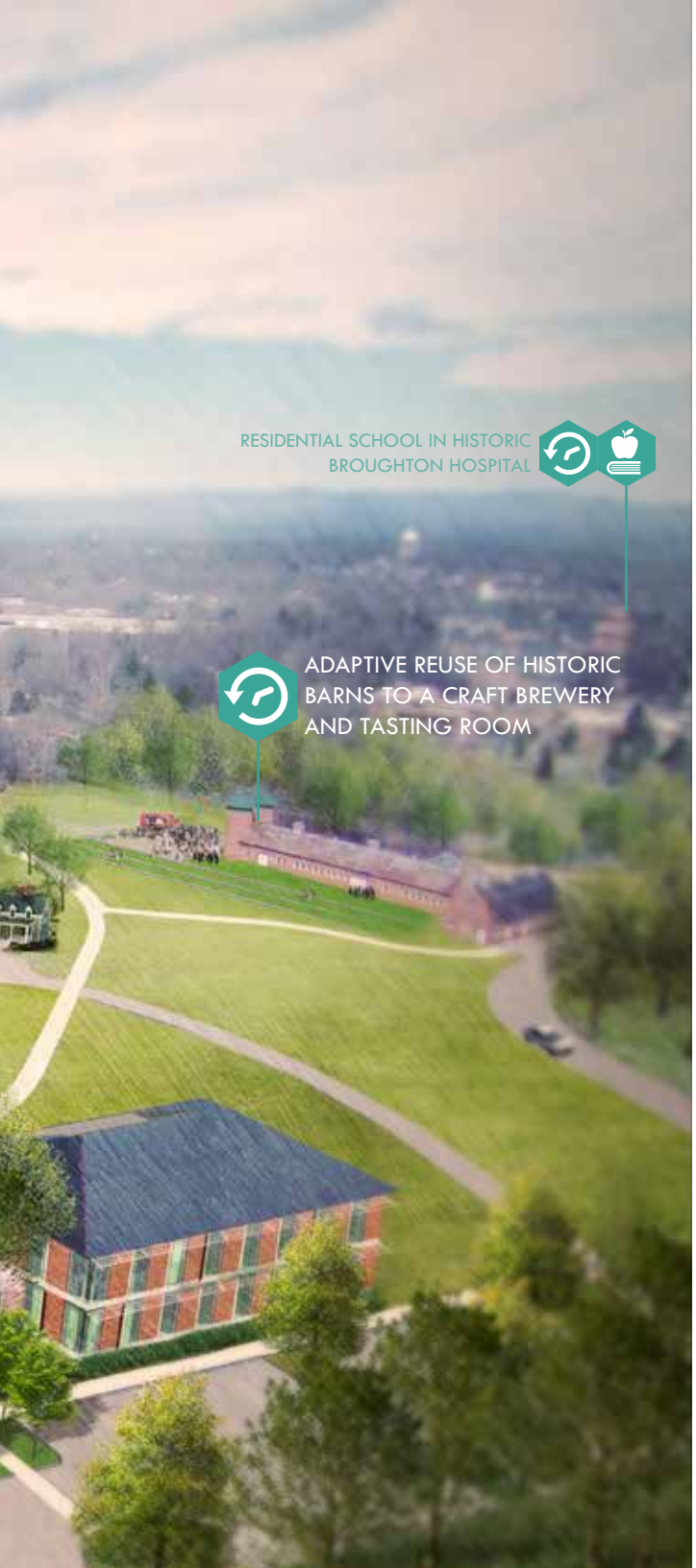


TOMORROW | HOSPITALITY VILLAGE

An upscale, full-service hotel, just seconds off the I-40 exit, looks out over the site from the southeast, with views of the rolling hills and Table Rock Mountain in the distance. Whether staying in the 100-key main buildings or one of 20 cottage rooms, guests take advantage of the spa and fitness center; the adjacent artisan village, with restaurants, a brewpub, and shops; and the district's walking trails. They come to this property for its relaxing, country-like setting just minutes from downtown; well-appointed rooms; and on-site amenities.



HOSPITALITY VILLAGE

Guests come for the proximity to regional recreation destinations such as Linville Gorge and Lake James and charming downtown Morganton, an enjoyable walk from the main lodge along the greenway past active agriculture and the pond. Some are visiting family members who live in the senior living community on site, attend the residential school, or are patients at Broughton Hospital. Others are visiting Morganton on business, for continuing education, or for a getaway from the city. In addition to the hotel and artisan village, the site contains 100 multifamily residential units. Residents enjoy easy access to downtown, as well as the simple drive to Asheville or Hickory. After work, many residents stroll over to the artisan village for dinner. As they sip a hyperlocal brew in the beer garden, they watch the sunset dip below the western ridgeline.

HOTEL OPPORTUNITY

Morganton requires additional lodging options to capture demand from transient tourists and business travelers seeking higher quality accommodations. The area is currently served by four limited service hotels located at I-40 interchanges, the most recent of which was constructed in 2001. Occupancies among the top-performing properties in 2015 are in excess of 65%, which is on par with the national average among limited-service properties in this size and rate class. However,

TODAY | UNDERUSED COLLEGE AND COUNTY PROPERTY

the age of these properties combined with the lower service level presents an opportunity for a destination hotel to serve group travelers with amenities not currently offered in the market and on an unparalleled site. While not at the same altitude as destination hotels like Grove Park (Asheville, NC), The Homestead (Hot Springs, VA), or Primland (Meadows of Dan, VA) that offer a mountain resort experience, this property would provide accommodations and amenities similar to that of Blackberry Farm (Walland, TN) at a more affordable price point and within close reach of major metro areas.

As a potential anchor of the artisan village, a local craft brewery in the 12,000-SF iconic silo barns would give Morganton's award-winning, small-scale brewers a platform from which to expand their production capacity. At the same time, it provides a setting that builds an authentic brand and ties in with the local farm-to-table restaurant scene and WPCC's active, sustainable farming operation in the valley. For examples of this development genre, see brewery campuses created by Sierra Nevada in Fletcher, NC and by New Belgium in Asheville, NC.

HOTEL DEAL STRUCTURE

This hospitality cluster would generate approximately $35 million in new private investment that would spur the creation of jobs, as well as incremental property, occupancy, and sales tax revenues for the community. Attracting a new hotel to anchor this cluster requires a deal structure that demonstrates private financial returns worthy of the significant risks inherent in this type of development. The hotel deal would leverage private capital in the form of conventional debt, historic tax credits, and New Market Tax Credits. The New

HOTEL DEAL STRUCTURE (CONTINUED)

Market Tax Credits program is not a permanent tax credit and is allocated based on a competitive application process. Many hotel developments in emerging markets have been supported by this tax credit, especially when twinned with historic tax credits. However, this source of capital may not be available at the time of executing a transaction in Morganton, in which case other forms of subordinate debt would be required. A market-rate seller's note from the State for the amount of the land acquisition rounds out the financing. In addition, the State and local governments would invest in preparing the site for development through the demolition of 165,000 SF of State, County and community college structures, many of which are obsolete and underutilized; the relocation of ongoing functions from these structures; and the upgrade and extension of utilities and greenway trails to the site. Surface parking shared by the hotel, retail village, and a trail head for the greenway would be a local government investment in return for a long-term lease of parking spaces required by the hospitality developer. These site preparation investments by the public would only occur at the time of an agreement to execute the hospitality development with a private partner.

DEMOLITION PLAN

DEVELOPMENT BUDGET		
ACQUISITION	$3,485,000	10%
HARD COSTS	$26,030,000	74%
SOFT COSTS	$3,778,000	11%
OTHER COSTS	$1,665,000	5%
TOTAL	$34,958,000	

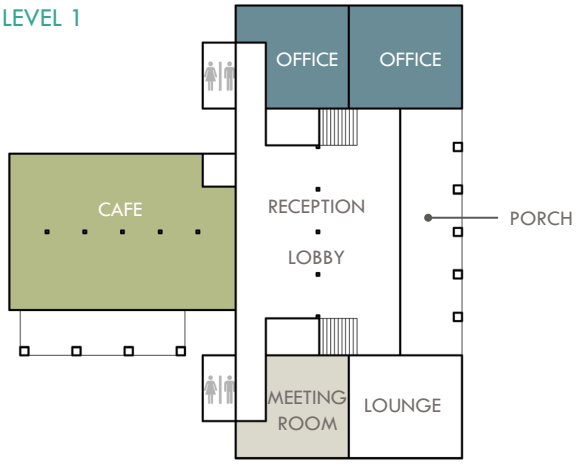
CAPITAL SOURCES		
INVESTOR EQUITY	$2,653,000	8%
DEVELOPER EQUITY	$333,000	1%
HTC EQUITY	$2,980,000	25%
SELLER NOTE	$3,485,000	10%
NMTC LOAN	$7,600,000	22%
FIRST MORTGAGE	$17,907,000	51%
TOTAL	$34,958,000	

HOTEL PERFORMANCE OVER 7-YEAR HOLD	PRO FORMA
ROOM RATE (ADR)	$220 FOR INN, $250 FOR COTTAGE
EXIT CAP RATE	7.75%-8.25%
EQUITY IRR	19%-25%
EQUITY MULTIPLE	3.4X-5.1X

COLONY BUILDING ADAPTIVE REUSE

Built circa 1905, the Colony Building (also called the "North Colony" Building) is central to the Southeastern corner of the district, overlooking the Hunting Creek valley. Its two-story, brick façade and porch is a focal point for the hotel and creates an arrival point for guests coming up the welcome driveway or from the greenway trails. With new construction added to the back of the structure, the first floor is transformed into a lobby that stretches into a café with a balcony opening onto a lawn that hosts outdoor events. On the second floor, three corporate apartments claim part of the expansive porch; two of the apartments also have views back towards the valley. Across the hall are two conference rooms located above the café with windows looking onto the surrounding landscape.

LEVEL 1



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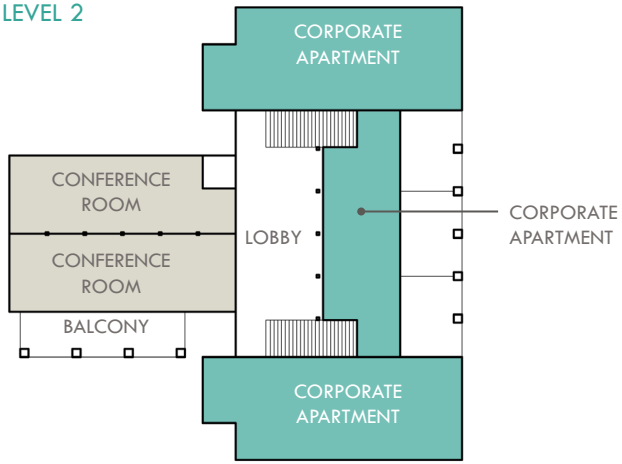


RESIDENTIAL OPPORTUNITY & DEAL STRUCTURE

A vibrant community requires a diversity of housing options and price points. As discussed above in the section on mixed-use development on the Historic Broughton Campus, there is a need for apartments and condos with amenities and character to fill a market gap in Morganton as the community seeks to attract and retain young professionals.

The $12-million new construction apartments adjacent to the hotel would offer a mix of 1- and 2-bedroom units with Class A finishes in a garden-style apartment community with architectural details and landscaping to mirror the feel of the hospitality cluster. The site and the finished quality of the product would merit premium rents in the market. The deal would leverage conventional debt financing and a seller's note from the State for the land acquisition after the site was prepared by the State and local governments.

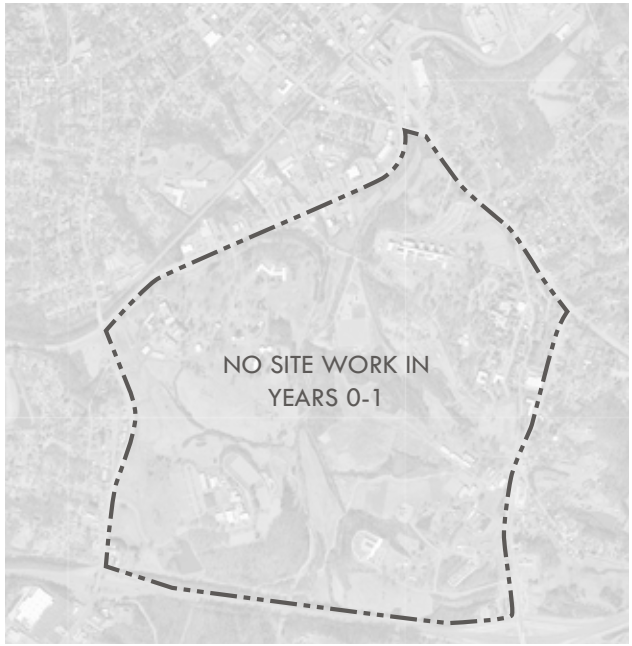
DEVELOPMENT BUDGET		
ACQUISITION	$473,000	4%
HARD COSTS	$9,419,000	79%
SOFT COSTS	$1,062,000	9%
OTHER COSTS	$895,000	8%
TOTAL	$11,849,000	

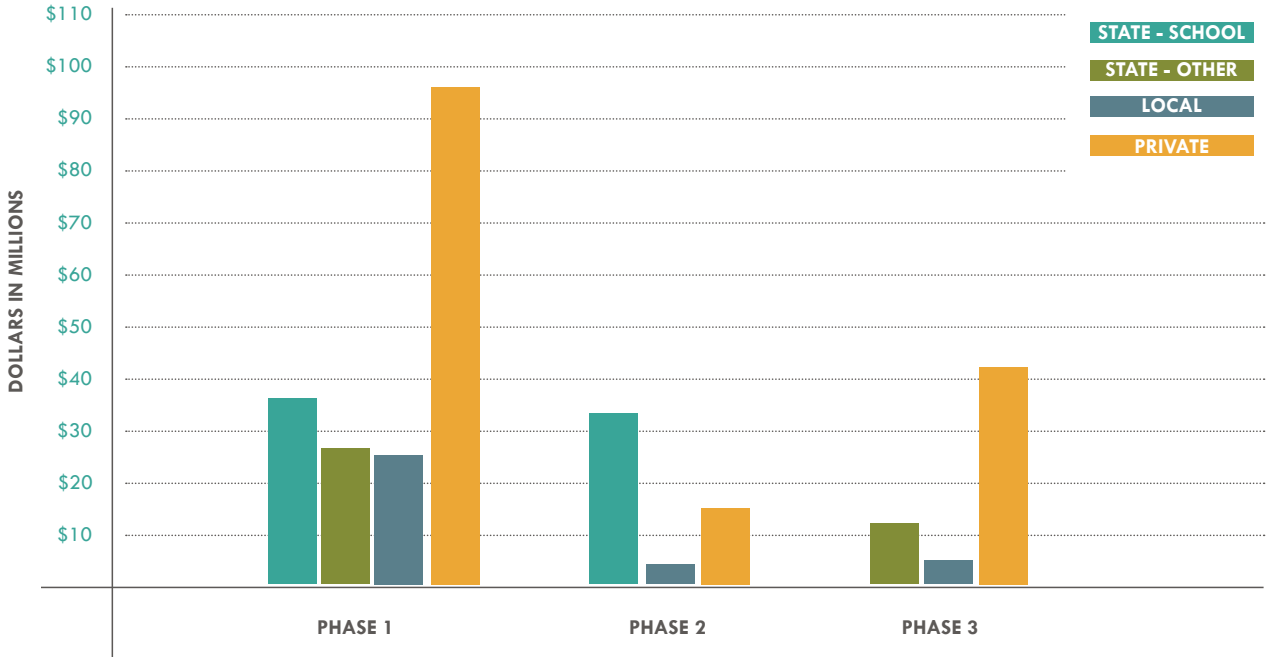
CAPITAL SOURCES		
INVESTOR EQUITY	$2,293,000	19%
DEVELOPER EQUITY	$110,000	1%
SELLER NOTE	$473,000	4%
FIRST MORTGAGE	$8,973,000	76%
TOTAL	$11,849,000	

RESIDENTIAL PERFORMANCE OVER 5-YEAR HOLD	PRO FORMA
AVG. RENT PER SF PER MONTH	$1.15/SF
EXIT CAP RATE	6.5%-7.0%
EQUITY IRR	13%-17%
EQUITY MULTIPLE	1.8X-2.2X

PHASING | RECOMMENDED PROGRAM

The execution of a master plan for redeveloping the 800-acre site is a long-range project. While delivery of individual components of the master plan could play out in numerous ways, a likely approach would involve a three-phase, 10-year development timeline designed to build on and nurture existing assets of the site and community to strengthen the draws for new private investment. Proposed private development is phased to accommodate market absorption and mitigate the risk for private investors of carrying property for several years before it is ready to be developed. Public investment in site preparation and amenities is phased so that it occurs only when necessary to catalyze significant private investment. The 10-year plan would begin to roll out once an agreement was reached between the public agencies invested in the site to consolidate site control and manage the orderly disposition of surplus properties to the private sector.





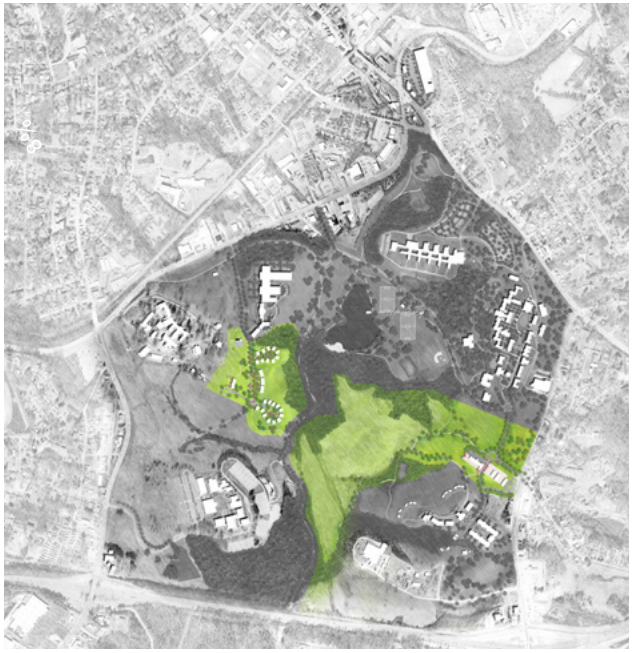
PRE-DEVELOPMENT - YEARS 0-1

IDENTIFY LEAD DEVELOPMENT ENTITY AND EXECUTE AGREEMENTS

A State agency serving as lead development entity would exercise site control over all parcels in the district through legislative or executive directives and through agreements among various stakeholders. Once site control and unity of purpose are established, the lead entity would then invest further in design and marketing to line up joint venture and capital partners for individual projects. Simultaneously, the public agencies would begin identifying sources of capital (for example, development finance mechanisms such as bond financing, special assessment districts, and municipal service districts) to deliver the public amenities and infrastructure called for in the master plan. During this phase, additional due diligence on the land would be undertaken to establish the existing conditions and a fair market value for each parcel. Vacated historic buildings would be "mothballed" to prevent deterioration. "Mothball" costs could be minimized if the timing of the pre-development process aligns with the State's schedule for relocating the hospital functions to the new facility, thereby minimizing the period of vacancy in the historic structures.

PHASE I - YEARS 2-5
SCHOOL, SENIOR LIVING AND PARK AMENITIES

The first phase of the residential school involves the rehabilitation of more than half of the Avery Building to serve 150 students. This investment in the school is complemented by private investment in the adaptive reuse of adjacent hospital buildings into residences and the apartment phase of the senior living community. Supporting that private development are public investments in site connectivity: internally via access roads and the main greenway spine, and externally to downtown through the intersection redesign of Fleming Drive and Sterling Street. Public investment would also construct a stormwater pond, replacing the WPCC ESTC pad with a water feature anchoring a gateway park. These public investments are crucial pieces to tie the district together. In order to realize the full value of the district, a municipal service district and management entity would be established to cultivate the district brand and execute programming that will generate public engagement with the site. Demolition would be limited to the select buildings needed to make way for this development and would happen at the beginning of the phase. Likewise, the State and WPCC functions being displaced would need to have replacement facilities sited and built to allow for a seamless transition of users.



PHASE II - YEARS 6-8
SCHOOL AND SENIOR LIVING EXPANSIONS AND DESTINATION RETAIL

The second phase of rehabilitation of the Avery Building would expand the school from 150 to a maximum capacity of 400 boarding students. In addition, the villas phase of the senior community on the Northwest site would be built during this time frame. Meanwhile, supported by the additional demand for retail resulting from the residential communities developed in Phase I, the southeastern site is transformed from abandoned barns and silos into the artisan village anchored by a craft brewery and restaurant. Vacated State and WPCC buildings would be demolished on this site. An expansion of the greenway connector trails will be constructed to link these developments with the trail system developed in Phase I.

PHASE III - YEARS 8-10
HOSPITALITY AND NEW RESIDENTIAL

The final phase will establish the district as a regional hospitality destination with the construction of a 120-key upscale hotel and spa, coupled with a new market-rate apartment community. These two elements are sited adjacent to the artisan village in the southeastern corner, which by this point has begun to define a live, work, and play district that draws traffic off of the Interstate towards downtown. The cluster of shops helps anchor the hotel and residential community to a destination that is already in the making. The State and local governments would need to relocate the WorkSource West facilities, as well as finalize the internal network of greenway trails during this phase.

INVESTMENT SCHEDULE | RECOMMENDED PROGRAM

		TOTAL SHARE			
COMPONENT	**TOTAL COSTS**	**STATE - SCHOOL**	**STATE - OTHER**	**LOCAL**	**PRIVATE**
AMENITIES					
ACCESS ROAD	$1,244,593			$1,244,593	
GATEWAY PARK/INTERSECTION	$7,605,481			$7,605,481	
POND	$2,993,474			$2,993,474	
GREENWAY SPINE	$1,286,644			$1,286,644	
ATHLETIC FIELDS	$557,555			$557,555	
GREENWAY PATHS	$2,518,920			$2,518,920	
MOTHBALLING					
BROUGHTON (NONE DUE TO IMMEDIATE REUSE AS SCHOOL/MIXED USE)					
NCSD (GOODWIN & JOINER)	$621,100		$621,100		
COLLEGE/COUNTY AREA (BARNS, COLONY, ABATTOIR)	$427,620		$427,620		
DEMOLITION					
BROUGHTON	$2,265,310		$2,265,310		
NCSD	$1,220,436		$1,220,436		
COLLEGE/COUNTY AREA	$934,682			$934,682	
ESTC	$7,500			$7,500	
REPLACEMENT (EXCLUDING LAND PURCHASE COSTS)					
DHHS - BROUGHTON	$10,886,000		$10,886,000		
DPS (BROUGHTON SHARE OF NEW FACILITY)	$7,700,000		$7,700,000		
COLLEGE - ESTC	$11,301,675			$11,301,675	
DHHS - WORKSOURCE WEST	$11,745,000		$11,745,000		
SITEWORK					
BROUGHTON - SCHOOL AND MIXED-USE	$4,102,884		$4,102,884		
HOSPITALITY VILLAGE	$4,212,179			$4,212,179	
NEW RESIDENTIAL	$664,624			$664,624	
CONSTRUCTION					
BROUGHTON - SCHOOL (PHASE 1 - HALF OF AVERY + ACADEMIC BUILDINGS)	$35,798,899	$35,798,899			
BROUGHTON - SCHOOL (PHASE 2)	$32,946,193	$32,946,193			
BROUGHTON - RESIDENTIAL	$19,519,118				$19,519,118
BROUGHTON - COMMERCIAL	$5,228,161				$5,228,161
SENIOR LIVING (PHASE 1 - IL/AL APARTMENTS)	$71,134,648				$71,134,648
SENIOR LIVING (PHASE 2 - VILLAS)	$9,700,179				$9,700,179
HOSPITALITY VILLAGE - RETAIL (BREWERY/RESTAURANT)	$4,992,130				$4,992,130
HOSPITALITY VILLAGE - HOTEL	$29,965,931				$29,965,931
NEW RESIDENTIAL	$11,902,200				$11,902,200
	$293,483,137	**$68,745,092**	**$38,968,350**	**$33,327,327**	**$152,442,368**

RISK MITIGATION | RECOMMENDED PROGRAM

SITE CONTROL RISK

The scale of contiguous publicly owned land in the study area (800 acres) and the potential for inter-agency cooperation on a phased disposition of surplus property minimize the risk to a private developer of not securing the necessary site control. Meanwhile, the public sector can maximize the value of its property by broadening the pool of interested buyers with a large site and a clear disposition and partnership strategy.

MARKET RISK

The public amenities created as part of the first phase of the vision will tap into existing assets of a previously undiscovered destination. The market in Morganton and Burke County is already calling for additional residential development. In the case of the recommended program, public investment in a school creates a source of jobs and traffic to the site that bolster demand for residential and commercial development. This enables quicker private investment in adjacent historic hospital buildings and other parts of the site to recoup public investment in amenities. It also lowers the carrying cost of a vacant Historic Broughton Campus for the public sector. Meanwhile, the hotel (highest-risk type of development) is delivered when the district brand is established, and the hotel site plan and new construction elements allow for a staged delivery of rooms to match market absorption, as needed.

FINANCING RISK

Tied up with market risk is financing, because lenders and investors need to be convinced of the market potential of the program to underwrite the cost of their capital and commit funds. The phased delivery of the private development program is designed to match supply with market demand and build the story for the district so that riskier investments in new construction of residential and hospitality follows a successful demonstration.

CONSTRUCTION RISK

Construction risk is managed the same way as in any development: recruiting a design team (architecture and engineering) and builders with a track record in the proposed type of development, negotiating detailed budgets and schedules, and supervising the team closing. The cost of budget and schedule overruns is often shared with the construction team to align interests.

DISTRICT PLAN | ALTERNATIVE PROGRAM

Within the vision for the Hunting Creek district, an alternative program involves greater risk and is therefore sub-optimal. However, it nonetheless presents a possible path for redevelopment of the site. In this alternative program, the Avery Building is redeveloped into a luxury hotel. The hotel would anchor a hospitality and residential development across the Historic Broughton Campus and would extend to the southeastern site. Around the grand hotel, a restaurant and brewery, as well as local shops, create a destination for hotel guests as well as local residents. The remaining historic buildings surrounding the hotel are remodeled into one-of-a-kind residences that also enjoy the proximity to the artisan village.

The neighborhood extends south, into newly constructed multifamily residential units that complement the bucolic nature of the site in scale and design. Between residents, hotel guests, and other community members, the site is full of activity: the restaurants, shops, and walking trails bring people together to enjoy the district's mix of history, architecture, and natural beauty. For those that live on the site and those just visiting, the district is both convenient and special.

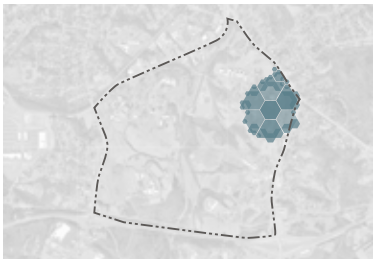
As in the recommended program, a senior living community with multifamily and villa-style residences claims the ridgeline next to the School for the Deaf, overlooking Hunting Creek and the pond. A residential school is not located on the site in the alternative program; however, if new construction were contemplated for a school, such a facility might be located adjacent to the School for the Deaf and share some facilities (e.g. athletic field and gym). The following section highlights the key differences between the alternative and recommended program, in terms of scale and mix of uses, deal structures, phasing and risk.

RECOMMENDED PROGRAM

ANCHORED BY A RESIDENTIAL SCHOOL ON HISTORIC BROUGHTON CAMPUS

PUBLIC AMENITIES

RESIDENTIAL SCHOOL



SENIOR LIVING COMMUNITY

HOSPITALITY VILLAGE

ALTERNATIVE PROGRAM

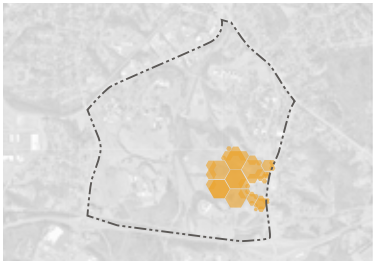
ANCHORED BY A HOTEL ON HISTORIC BROUGHTON CAMPUS

PUBLIC AMENITIES

HOSPITALITY VILLAGE

SENIOR LIVING COMMUNITY

MULTI-FAMILY RESIDENTIAL



DISTRICT PLAN | ALTERNATIVE PROGRAM

1. HOTEL + SPA
2. MULTI-FAMILY RESIDENTIAL
3. CRAFT BREWERY + ARTISAN VILLAGE
4. MULTI-FAMILY RESIDENTIAL
5. WPCC
6. GREENWAY
7. SENIOR LIVING COMMUNITY
8. SCHOOL FOR THE DEAF
9. STORMWATER POND
10. PARK AND ATHLETIC FIELDS
11. NEW BROUGHTON HOSPITAL
12. GATEWAY PARK
13. FUTURE INTERSECTION DESIGN
14. DOWNTOWN MORGANTON
15. ACTIVE AGRICULTURE

SHIFT IN SCALE OF USES | ALTERNATIVE PROGRAM

HOTEL

The luxury hotel has 165 guest rooms spread throughout the wings of the Avery building; pushing the limits of market demand with 45 more keys (+38%) than in the recommended program for the new construction hotel in the southeastern corner of the district. To adapt the inefficient Avery floorplate to lodging, demising walls between former patient rooms would be opened up to create larger guest rooms. Furthermore, as with the recommended school program, an addition would be constructed on the rear façade of the building to accommodate more square footage while preserving the interior historic corridors.

The hotel spa would be developed in the current truss-roofed cafeteria, and a hotel restaurant would be created in what is the current Avery Chapel, with the recommendation to remove the current infill floor to re-establish the full height volume in the chapel. Meanwhile, a brewery and tasting room would reuse the Steam Plant after the obsolete boilers are extracted, and the surrounding buildings (Marsh, Machine Shop, and Laundry) would support retail shops. This artisan village would create an additional attraction on site for hotel guests, while also being a destination for the community at large, with excellent visibility from Sterling Street.

This rehabilitation is significantly more costly per key than the new construction project, due to the floor plan inefficiencies of the historic buildings, and the need for greater investment in furnishings to transform an institutional environment into a luxury experience. However, these investments and the grandeur of the property would be expected to support higher room rates than the new construction. The hotel project would leverage conventional debt and equity with historic preservation tax credit equity, New Markets Tax Credit loan, and market-rate mezzanine financing.

Supporting this private investment would be public investment in site preparation (building demolition, hazardous materials abatement, grading, utilities) and public parking infrastructure with a portion of spaces leased back to the hotel. A market-rate seller's note from the State to the developer and additional grant funding (from any source) would be required to push the project into an acceptable range of returns to attract a private investor. The property would also benefit from a 50% tax deferment on the improved value of the Avery Building as an already designated local historic landmark; provided the exterior renovations are approved by the local historic preservation commission.

DEVELOPMENT BUDGET		
ACQUISITION	$4,118,000	5%
HARD COSTS	$63,246,000	79%
SOFT COSTS	$7,790,000	10%
OTHER COSTS	$4,735,000	6%
TOTAL	$79,889,000	

PERMANENT SOURCES		
INVESTOR EQUITY	$4,767,000	6%
DEVELOPER EQUITY	$751,000	1%
HTC EQUITY	$14,566,000	18%
SELLER NOTE	$4,118,000	5%
NMTC LOAN	$14,250,000	18%
MEZZANINE LOAN	$5,000,000	6%
PERMANENT MORTGAGE	$33,937,000	43%
GRANT	$2,500,000	3%
TOTAL	$79,889,000	

HOTEL PERFORMANCE OVER 7-YEAR HOLD	
ROOM RATE (ADR)	$275
EXIT CAP RATE	7.75%-8.25%
EQUITY IRR	17%-24%
EQUITY MULTIPLE	2.6X-4.0X

NEW MULTI-FAMILY RESIDENTIAL

A new multifamily residential community stretches across the ridge line in the southeastern corner of the site. The 200-unit program can be developed in multiple phases. The historic Colony Building becomes the management office and club house with a fitness center and swimming pool deck that—along with the vistas—attract potential residents from the entire region given the site's excellent access to transportation corridors. Other historic farm buildings are preserved around the grounds of the site, providing entertainment venues and guest houses for the residents. Public investment supports the preparation of the site (building demolition, grading, utilities), as well as the construction of public parking, some spaces of which are leased back to the residential complex while the others serve as trailhead parking for the district's greenway. A market-rate loan by the State to the developer for the value of the land acquisition rounds out the public participation in the project.

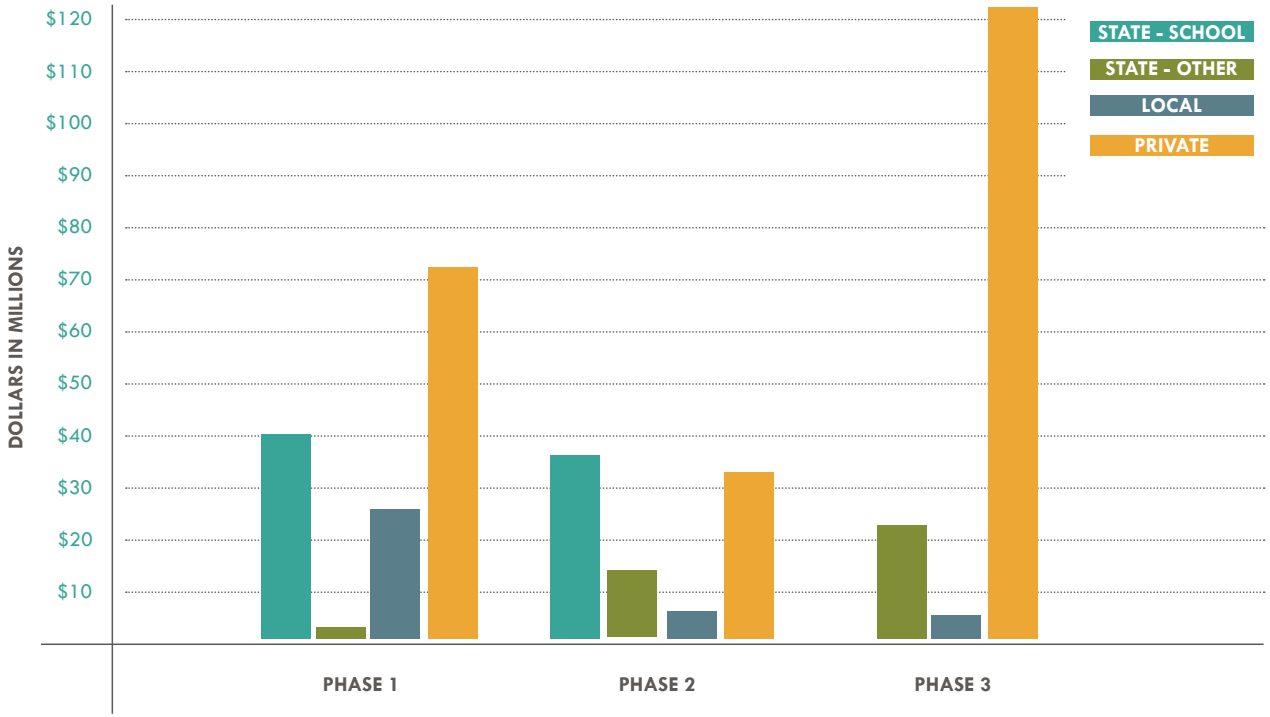
DEVELOPMENT BUDGET		
ACQUISITION	$1,200,000	5%
HARD COSTS	$17,336,000	78%
SOFT COSTS	$1,929,000	9%
OTHER COSTS	$1,847,000	8%
TOTAL	$22,312,000	

CAPITAL SOURCES		
INVESTOR EQUITY	$3,800,000	17%
DEVELOPER EQUITY	$205,000	1%
SELLER NOTE	$1,200,000	5%
PERMANENT MORTGAGE	$17,107,000	78%
TOTAL	$22,312,000	

RESIDENTIAL PERFORMANCE OVER 5-YEAR HOLD	
AVG. RENT PER SF PER MONTH	$1.15/SF
EXIT CAP RATE	6.5%-7.0%
EQUITY IRR	16%-23%
EQUITY MULTIPLE	2.0X-2.7X

PHASING | ALTERNATIVE PROGRAM

The alternative program development would roll out in a similar fashion to the recommended program, with the hotel as the last piece of the vision to be realized. The larger scale of the hotel program and the inability to phase it mean that the private sector will likely not redevelop the Avery Building until the district brand is well established and other parts of the master plan prove successful. It is presumed that the State would build a new residential school in another location, thus the Historic Broughton Campus stays vacant longer in the alternative program.



RISK MITIGATION | ALTERNATIVE PROGRAM

SITE CONTROL RISK

This risk is mitigated in the same way as in the recommended program. The scale of contiguous publicly owned land in the study area (800 acres) and the potential for inter-agency cooperation on a phased disposition of surplus property minimize the risk to a private developer of not securing the necessary site control. Meanwhile, the public sector can maximize the value of its property by broadening the pool of interested buyers with a large site and a clear disposition and partnership strategy.

MARKET RISK

The public amenities created as part of the vision will tap into existing assets of a previously undiscovered destination. However, the alternative program presents the challenge of a hotel repurposing the Avery Building to deliver 165 keys at one time. Although a beautiful piece of architecture, a vacant Avery Building would forestall any redevelopment of the adjacent hospital buildings into residential or commercial. Thus, the public sector would carry the entire Historic Broughton Campus property longer and the campus would remain as a void in the district plan that detracts from the value of the other sites while they are redeveloped first. There is also the risk that the vacant Historic Broughton Campus might taint the rest of the area for private investment given its scale and prominence in the district. If the Avery Building must be the first domino to fall to convince developers to risk investments in other parts of the district, then the master plan could take much longer to realize while waiting for a hotel.

FINANCING RISK

Due to the market risk for the alternative program, the financing risk is heightened for the private sector due to greater uncertainty surrounding the hotel investment in a repurposed Avery Building and its potential spillover effects on the other parts of the vision. Thus, the cost of private capital could be higher and the path to closing deals could be longer.

CONSTRUCTION RISK

Construction risk is managed the same way as in the recommended program: recruiting a design team and builders with a track record in the proposed type of development, negotiating detailed budgets and schedules, and supervising the team closing. The cost of budget and schedule overruns is often shared with the construction team to align interests.

AVERY BUILDING | CAMPUS ANCHOR

THE AVERY BUILDING ON THE HISTORIC BROUGHTON CAMPUS IS AN ANCHOR TO ANY DEVELOPMENT IN THE STUDY AREA DUE TO ITS SIZE, PROMINENT LOCATION, AND ARCHITECTURAL DETAILS. ONCE VACATED, A SUCCESSFUL REPURPOSING OF THE AVERY BUILDING WILL BE CRITICAL TO ATTRACTING PRIVATE INVESTMENT TO CAMPUS AND SURROUNDING PROPERTY AND COMMUNITY.

4 CONCLUSIONS

REDEVELOPMENT APPROACHES

COMPREHENSIVE APPROACH

The study team evaluated two comprehensive scenarios—a recommended program and an alternative—for the redevelopment of the Historic Broughton Campus and surrounding property comprising the new district. Both scenarios encompass a vision for a district that would drive new private investment, expand public amenities, and create a destination that could be transformative for the region. As presented in this report, the recommended redevelopment program would anchor the Historic Broughton Campus with a residential school, while an alternative program would locate a hotel on the campus. In both cases, the surrounding properties lining Hunting Creek would support a mix of complementary residential, hospitality, and retail development. And the recommended and alternative programs—plus other potential variations of the scale and siting of the uses—could be explored in parallel until a deal to develop the district is executed. However, these comprehensive redevelopment approaches would require cooperation among state agencies, local governments, and private developers.

NARROW APPROACH

The comprehensive approach to redeveloping the wider district can be compared, in terms of costs, benefits and risks, to a narrower approach of redeveloping the Historic Broughton Campus alone without the other elements (see table below). If the narrow approach is pursued, the most viable reuse for the historic Broughton facility would be a publicly funded residential school with some ancillary, multi-family residential marketed to school faculty and hospital staff. For any private development entity—including a private residential school or hotel—the underutilized properties surrounding Historic Broughton Campus and the lack of a regional draw, such as the draw that could be created by strategic investment in the parks and trails on the site, would discourage the kind of investment that could transform the site into a destination for top students or hotel guests willing to pay premium rates. Even for a publicly funded residential school, such as the North Carolina School of Science and Mathematics (NCSSM), the isolation that would result without a strong connection to compatible development elsewhere on the site could be inconsistent with the school's strategy of creating a world-class education and life-enriching experience.

DEFERRAL

The State has the option to defer action on the Historic Broughton Campus when it relocates the hospital to a new facility. However, locking the doors and walking away from the campus would lead to a blighted property. At a minimum, to delay the deterioration of the historic buildings, it is advised that "mothballing" of the structures be done according to the National Park Service standards at a cost of approximately $10/SF, a total of approximately $6.6M for the contributing historic buildings. However, such interventions will not eliminate the ongoing economic and public safety liability of an abandoned 800,000-SF campus at the doorstep of the new $155M+ hospital and gateway to Morganton. Delays in putting the buildings into productive use through an intentional public-private partnership strategy could increase the costs of redevelopment in the future—as in the case of the Buffalo State Asylum in Buffalo, New York—or could risk the complete loss of the buildings—as in the case of Greystone Park in Morristown, NJ (see appendix for case study write-ups). A recent appraisal commissioned by the Department of Administration of the 50.4-acre core Historic Broughton Campus property recommended pursuit of adaptive reuse of the facility because the cost of demolishing the Broughton Hospital structures (approximately $6/SF for a total of $4.38M, not including abatement of hazardous materials that would be required, which is estimated to cost at least $4/SF, or an additional $2.9M) outweighs the value of the land (approximately $75,000/acre for a total of $3.78M). Accordingly, a "do nothing" approach is likely to result in demolition of the buildings and sale of the land at a net loss to the State. Thus, the minimalist approach might be to mothball the structures at a cost comparable to complete demolition (approximately $10/SF) yet still preserving the historic and cultural asset for an appropriate redevelopment opportunity in the future.

RISK ASSESSMENT

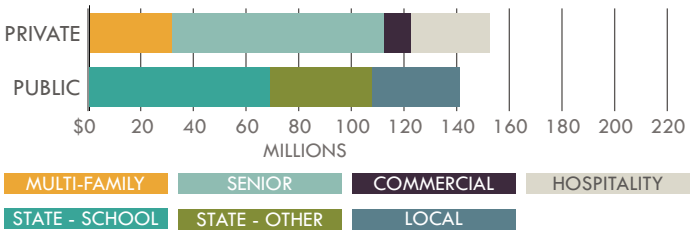
The vision for the Historic Broughton Campus and wider district seeks to mitigate development risks for the public and private sectors through a comprehensive redevelopment strategy. However, the recommended and alternative programs within the vision differ somewhat in their fulfillment of that goal. The recommended program allows for a phasing strategy that can reduce market and financing risk for the private sector more effectively than the alternative program. Consequently, the public sector's risk of carrying a vacant Historic Broughton Campus and attracting private investment to the district is also lowered in the recommended program. Meanwhile, the narrow approach and deferral approach do not avoid risk by lowering the development's ambitions. Rather, the narrow approach relies on public investment and places at risk the opportunity to leverage private capital later, and deferral carries opportunity cost by losing the present moment in time to transform the site before it becomes stigmatized as a vacant psychiatric hospital. A comprehensive approach engaging all the key public stakeholders and early private adopters creates a confidence model that draws in the additional capital to arrive at the transformative outcome.

SCENARIO COMPARISONS

COMPREHENSIVE APPROACHES

RECOMMENDED PROGRAM | *ANCHORED BY A RESIDENTIAL SCHOOL ON HISTORIC BROUGHTON CAMPUS*

FINANCIAL INVESTMENTS & BENEFITS

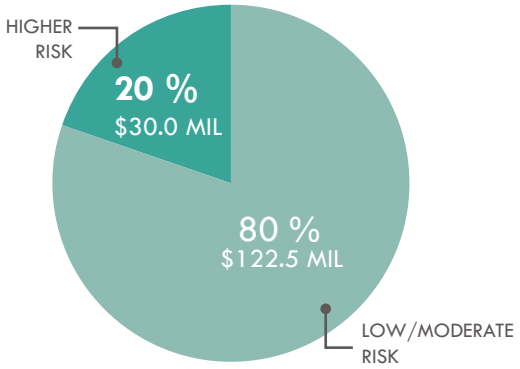


Land sale proceeds received by public: **$11 million**

Incremental local property tax revenue (annual):
- City: **$800,000**
- County: **$1 million**

Risk-adjusted returns that meet private investor hurdles (as shown in individual development scenarios)

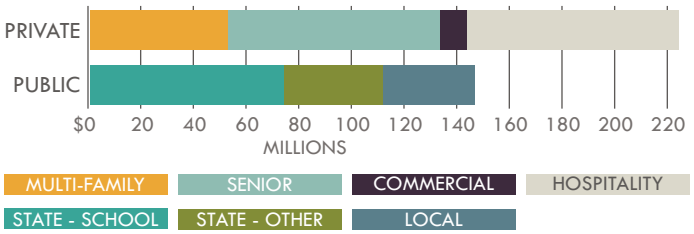
PRIVATE INVESTMENT RISK PROFILE



- Private investor risk is based on the real estate product type and timing of investments.
- Public risk of attracting private investment for redevelopment depends on private investor view of risk. See risk discussion on page 43

ALTERNATIVE PROGRAM | *ANCHORED BY A HOTEL ON HISTORIC BROUGHTON CAMPUS*

FINANCIAL INVESTMENTS & BENEFITS

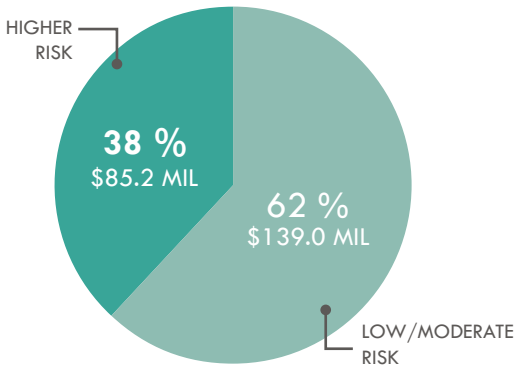


Land sale proceeds received by public: **$12 million**

Incremental local property tax revenue (annual):
- City: **$1 million**
- County: **$1.3 million**

Risk-adjusted returns that meet private investor hurdles (as shown in individual development scenarios)

PRIVATE INVESTMENT RISK PROFILE



- Private investor risk is based on the real estate product type and timing of investments.
- Public risk of attracting private investment for redevelopment depends on private investor view of risk. See risk discussion on page 48

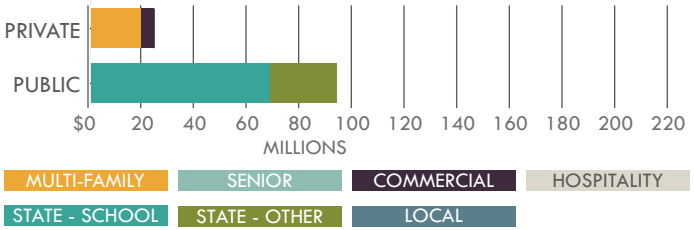
PUBLIC INTERESTS SERVED

- Facilitate private investment in a (re) development program
- Re-use historic structures within constraints of financial feasibility
- Protect and leverage State's long-range $155+ million investment in new hospital
- Preserve and enhance public access to site amenities
- Create a regional destination and sense of place that complements the renaissance of downtown Morganton
- Tap into demographic segments that are strong and trending upward (e.g. students and/or seniors)
- Leverage existing industry specializations to support and grow Burke County as an education and employment hub
- Retain and recruit talent with modern, diverse housing options
- Honor the site's unique history and long term contributions to the community.

LIMITED APPROACHES

NARROW | *RELIANT ON LOCATING STATE-FUNDED RESIDENTIAL SCHOOL*

FINANCIAL INVESTMENTS & BENEFITS

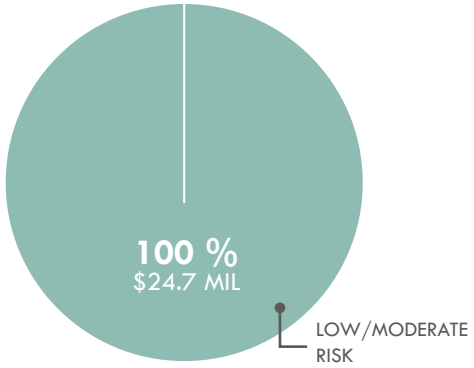


Land sale proceeds received by public: **$2 million**
Incremental local property tax revenue (annual):

- City: **$130,000**
- County: **$170,000**

Questionable that risk-adjusted returns on residential or retail adjacent to school would meet investor hurdles due to absence of other site amenities and demand drivers (senior living and hospitality) that would connect with the Historic Broughton Campus and downtown.

PRIVATE INVESTMENT RISK PROFILE



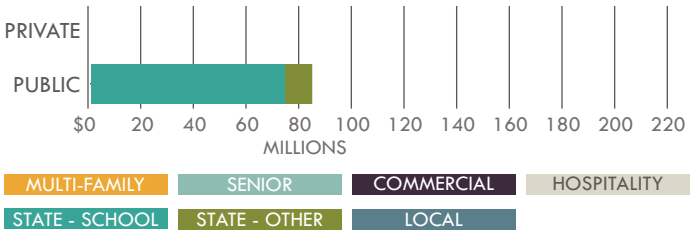
- Private investor risk is based on the real estate product type and timing of investments.
- Public risk of attracting private investment for redevelopment depends on private investor view of risk. See risk discussion on page 51

PUBLIC INTERESTS SERVED

- Facilitate private investment in a (re)development program (limited)
- Re-use historic structures within constraints of financial feasibility
- Retain and recruit talent with modern, diverse housing options (limited)

DEFERRAL | *MOTHBALLING*

FINANCIAL INVESTMENTS & BENEFITS



Land sale proceeds received by public: **None**

Incremental local property tax revenue: **None**
Private sector returns: **None**

PRIVATE INVESTMENT RISK PROFILE

- No private investment pursued.
- Public risk of missed opportunity; and indefinite carrying costs for Historic Broughton campus of approximately $300,000 per year (utilities and repairs alone).

PUBLIC INTERESTS SERVED

- Preserve opportunity for future reuse

NEXT STEPS

Should the State and community choose to pursue a comprehensive approach to the redevelopment of Historic Broughton Campus and the wider district, the following next steps are recommended in order to minimize long-term costs to the public sector and mitigate risks for the State, local governments, and prospective private partners:

1) ENACT STATE LEGISLATION AND/OR ISSUE CLEAR EXECUTIVE DIRECTIVES TO FACILITATE THE COOPERATION OF STATE ENTITIES IN SUPPORT OF A COMPREHENSIVE APPROACH

Currently there is an informal nexus of redevelopment interests among the cooperating public agencies on the site that would be facilitated by clear legislation and/or directives in support of the approach. The State (and its various agencies), the county, and the community college are all property owners within the study area. A significant source of uncertainty—and thus, risk—for private investors is whether every public partner will support the comprehensive approach. A defection by one public partner puts the entire comprehensive approach at risk. The goal of the legislation would be to establish unity of purpose among all state and local actors, sending a clear signal to the private sector about the direction of the district in a way that reduces or eliminates any perceived risk.

2) EMPOWER A LEAD DEVELOPMENT ENTITY TO ACT AS "QUARTERBACK" FOR THE SITE CONTROL AND DISPOSITION STRATEGY

To coordinate the numerous state agencies involved with a comprehensive approach, a State agency must be empowered and funded as the lead development entity to effectuate the comprehensive approach and facilitate inter-agency cooperation. This lead development entity would be responsible for site control and disposition: In other words, defining the assemblage of publicly owned parcels for redevelopment and managing the process of conveying those properties to private development partners in a negotiated sale. The lead development entity would retain master development and asset management expertise on staff (or contract for such services) in order to continue to refine the master plan for the comprehensive approach, including the nuances of relocation and replacement of functions that would be displaced; to develop budgets for expected public investments and site carrying costs; to define strategies for funding public amenities and infrastructure improvements that would precede private development; to establish an asset management framework for decision-making about current site and facilities issues related to property targeted for future redevelopment; and to pursue private development partners with the expertise and access to capital that would be required to engage the public sector effectively in executing the comprehensive approach. Once agreements have been executed with private developers, the lead entity for the public sector should stay engaged to ensure adherence to development agreement requirements.

3) ENGAGE A PRIME CONSULTANT TO ASSIST LEAD DEVELOPMENT ENTITY WITH PREDEVELOPMENT

The State is not likely to find a single private developer who will be willing to acquire site control of all developable district property at once and privately fund all necessary predevelopment functions, such as further site planning and identifying specialized developers for each component of the district. Accordingly, the State will likely need to play that coordinating role. Because this is not a function typically undertaken by a state agency, the State may find it necessary to retain consultants to assist with the predevelopment process, including master development and asset management functions.

The master development function would orchestrate the performance of additional design and engineering services to complete a district master plan, community engagement regarding the plans, as well as due diligence studies on the areas targeted for redevelopment and public amenities, such as surveys, appraisals, environmental assessments, and soil testing. In addition, a master development consultant would help the State track public interests while creating and executing a strategy to market the targeted development parcels to project-specific private investment partners in a phased approach that aligns with the district vision.

During the time that the State and local partners own the district property, the asset management function would work across the multiple agency owners to advise on the timing and amount of investment in the stabilization, mothballing, and repairs and renovations to specific structures targeted for redevelopment. Asset management balances the need to minimize expenses while sustaining current operations, preserving the long-term value of the buildings, and protecting redevelopment options for the property. Furthermore, asset management could assist with coordinating shared facility uses, the timing of move-outs, and the provision of replacement space as the buildings are prepared to be conveyed for redevelopment.

While master development and asset management are two distinct functions, it is advantageous to the client for a single firm to perform both. Given the interplay between immediate, property-level decisions and long-term district planning, it is critical that both functions be in constant coordination in order to maximize the value of the public assets while helping drive the project toward a coherent vision. This is best achieved if master development and asset management are housed in the same firm (the prime consultant).

The most critical phase of pre-development work for the State and local partners to fund is the planning through the execution of the first phase of the district development (approximately 5 years). Additional phases beyond the first will bring new resources to help cover the costs of further design, planning and project management. The State and local partners could reasonably expect to spend approximately $3.0M to $3.5M over the next 5 years (or roughly $600,000 to 700,000 per year) on the necessary master development, asset management and additional design, engineering, and legal professional services to carry the project through the first phase of the district vision. During pre-development, the private and public elements of the district would continue to be master-planned together by the prime consultant in order to ensure coherence of the vision as conceptual plans are refined. For the ultimate construction of the public and private elements, the lead entities (whether public or private) for each element would have leadership over those final design activities in alignment with the district master plan. Additional detail about the pre-development fees is provided in the appendices.

4) EXECUTE AN INTER-LOCAL AGREEMENT BETWEEN CITY OF MORGANTON AND BURKE COUNTY

The City and County leaders should define each government's responsibilities for the costs of capital improvements and maintenance of the public infrastructure and public amenities identified in the master plan. These responsibilities should be memorialized with an inter-local agreement between the City and County, before the State pursues disposition of surplus property, for two reasons. First, the State should not make significant expenditures in pursuit of the comprehensive approach until the City and County have agreed to invest in the supporting infrastructure and related improvements. Second, the City and County contributions are crucial to attracting private investment. So, a binding, written agreement is necessary to demonstrate to the private sector that all key public stakeholders will deliver on their share of the master plan.

5) MOTHBALL ABANDONED HISTORIC STRUCTURES TARGETED FOR REDEVELOPMENT

Several contributing historic structures in the study area have already been vacated and should be stabilized and mothballed to prevent deterioration of these public assets. Key structures include the South Building on Broughton's main campus, the Colony Building and silo barns on the southeastern site, and Goodwin Hall and Joiner Hall at NCSD. The study assessment has identified these properties as salvageable and attractive for private investment. An estimate for the cost of mothballing these currently vacant structures is approximately $1.05M ($10/SF). In addition, the historic Broughton buildings that the State will vacate when it transitions to the new hospital should be mothballed after the vacancy to preserve their redevelopment value while a redevelopment plan and subsequent deal negotiations are completed. Once mothballed, the historic buildings should be kept up, which involves some carrying costs (approximately $0.45/SF for utilities and repairs, or $300,000 per year for Historic Broughton Campus). The magnitude of this upfront mothballing and carrying cost can be minimized by shortening the vacancy period through the punctual execution of a redevelopment strategy. For instance, if development partners are identified for the Historic Broughton Campus prior to the hospital's relocation—such as the residential school in the recommended program—then mothballing of the currently occupied buildings may be unnecessary because a new use will quickly follow.

6) ESTABLISH A MUNICIPAL SERVICE DISTRICT OVER THE PROJECT AREA

A municipal service district (MSD) for urban area revitalization could be created pursuant to N.C.G.S. § 160A-536(c) for the district. Creating an MSD—also commonly referred to as a business improvement district—would enable the City of Morganton to provide dedicated services to the area identified as the MSD for the construction and maintenance of capital improvements, such as parks, trails, infrastructure, and parking. The MSD allows the City to levy a property tax on the district, as needed, to help pay for these services. A district management entity representing the taxpayers within the MSD would be created to manage common amenities and engage in marketing and promotional events for the district in a way that will maximize the value of the entire district in accordance with the vision.

7) CREATE A BRAND TO EXTRACT THE FULL VALUE OF THE DISTRICT

One of the strengths of the Historic Broughton Campus and wider district is the potential to promote complementary development in different corners of the site that connect thematically and physically and create an extension of downtown Morganton. To capture that potential requires giving the area a distinct identity—a brand—that can support marketing, design standards, and event programming to help residents, visitors, shoppers, and commercial tenants recognize the district that they are enjoying and to which they are contributing. Identifying the brand that will be most successful for this area would require deeper market research and testing, which should be pursued as part of the process of identifying private development partners—the first audience that needs to recognize the value of the district brand.

A GAME PLAN

The recommended next steps should be pursued deliberately but with due haste to minimize the exposure to the State of carrying a vacant Historic Broughton Campus for years following the move to the new hospital facility. The following is a proposed "game plan" for what actions should be pursued in the near term and set of roles and authorities for the lead development entity and other actors in the process to efficiently execute on the timeline.

TIMELINE

END OF 2016 GA SHORT SESSION
- Executive and legislative action establishes unity of purpose among State and local actors and identifies State agency as lead development entity

SEPTEMBER 2016
- State engages prime consultant to assist lead development entity with managing master plan

DECEMBER 2016
- Lead development entity identifies surplus properties
- State evaluates need for mothballing vacant historic buildings targeted for redevelopment (e.g. Goodwin, Joiner, etc.) and initiates that investment

APRIL 2017
- Lead development entity completes due diligence

MAY 2017
- Lead development entity completes marketing strategy to attract private development partners
- City and County execute inter-local agreement for shared investments in public amenities

JUNE 2017
- City approves municipal service district

OCTOBER 2017
- Lead development entity coordinates execution of agreement with private development partner(s) for first phase

DECEMBER 2017
- Hospital relocates to new facility

Q1 2018
- First development phase of comprehensive approach breaks ground
- District management entity is established

AGENCY ROLES & AUTHORITIES

The designated lead development entity for the State should be assigned responsibility for executing the recommendations for development contained in this report on the proposed timeline above. The lead development entity should coordinate and direct the activities of State and local agencies (the public agencies). The key public agencies include the Department of Commerce, the Department of Administration, the Department of Health and Human Services, the Department of Public Instruction, the Department of Public Safety, the Department of Natural and Cultural Resources, the North Carolina Community College System, the UNC Board of Governors, the City of Morganton, and Burke County.

The lead development entity should be authorized to direct or perform the following functions related to executing the chosen development approach, with the assistance of a prime consultant with expertise in performing these functions:

- Define the assemblage of publicly owned parcels designated as surplus for development of private projects, public amenities, and new public facilities (the Sites);
- Conduct master planning of new uses for the Sites, involving schematic designs of buildings and other on-site improvements, as well as roadway and off-site improvements required by the on-site uses;
- Conduct land and building assessments, potentially involving destructive testing of building materials, soil sampling, borings, and other intrusive investigations of the Sites;
- Coordinate, negotiate and enter into development agreements between State entities and local governments and/or other public or private entities regarding development of the Sites;
- Establish an asset management framework for decision-making about State-owned assets on the Sites, including land and facilities, in coordination with supporting public agencies that exercise control over said land and facilities;
- Direct and assist with the execution of asset management decisions and related activities, such as (but not limited to) performing or deferring maintenance, relocating uses, and stabilizing or mothballing vacant buildings, to include estimating costs and submitting detailed budget requests to appropriate legislative and executive authorities for timely and efficient completion of said activities;
- Negotiate directly and enter into agreements with federal, state, and local government regulatory authorities with jurisdiction over aspects of the master planning process and development of the Sites;
- Engage in other activities as necessary to carry out the comprehensive district development approach.

For a digital copy of the report and appendices, go to sog.unc.edu/dfi/broughton

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APPENDIX

[RE]IMAGINING BROUGHTON

1 TEAM MEMBER BIOS

dfi

The project team at the Development Finance Initiative at the UNC School of Government was composed of Tyler Mulligan, Michael Lemanski, Peter Cvelich, Eric Thomas, and Andrew Trump. Additional contributions were made by Christy Raulli, Marcia Perritt, and Julianne Stern.

Tyler Mulligan, Principal Investigator
Tyler Mulligan joined the School of Government in 2007, where he counsels state and local government officials and their partner organizations regarding development finance, community economic development, and revitalization efforts. Mulligan launched the School's Development Finance Initiative (DFI), which assists local governments with attracting private investment for transformative development projects, and now serves as faculty advisor for the initiative. Prior to joining the School of Government, he practiced law with Womble Carlyle Sandridge & Rice, PLLC, in Raleigh, where he represented investors and syndicators in structuring investments in real estate and related investment funds, and he represented corporations and local governments in site location and economic development incentive matters. He is a member of the North Carolina State Bar. He earned a BA in public policy studies, summa cum laude, Phi Beta Kappa, from Duke University and a JD from Yale Law School, where he was awarded the Yale University Elm-Ivy Award.

Michael Lemanski, Director
Michael Lemanski joined the School of Government in 2011. He has more than 15 years of experience using innovative finance mechanisms to complete complicated real estate development projects. Michael manages a team of development and planning professionals that lead community, economic development, and revitalization projects for state and local governments and their partner organizations. He is the founding director of the Development Finance Initiative (DFI), which assists local governments with attracting private investment for transformative redevelopment projects. His redevelopment portfolio includes over 2 million square feet of vacant real estate where he has attracted over $500 million dollars of new investment into some of the most distressed downtown areas. Michael is also the founder of Greenfire Real Estate Holdings and is a founding member of the Investors' Circle NC local network. He graduated with honors from NC State University with degrees in chemical engineering and environmental science, and received an executive MBA from UNC-Chapel Hill.

Peter Cvelich, Project Manager
Peter Cvelich is a Project Manager with the Development Finance Initiative (DFI), which is a program of the School of Government. Peter delivers DFI's market research, financial feasibility modeling, and pre-development advisory services to communities of various sizes. Peter has managed and advised on $130M of revitalization projects in various stages of development. Prior to graduate school, Peter worked at RTI International, where he supported the international development consulting practice through market research, strategic communications, and business development. Peter has also worked in tax credit syndication, underwriting Low-Income Housing, Historic Rehabilitation, and New Markets tax credit transactions on behalf of equity investors. Peter holds an MBA from UNC's Kenan-Flagler Business School and a Master's of City and Regional Planning from UNC-Chapel Hill.

Eric Thomas, Design Advisor
Eric Thomas is a Design Advisor and Project Manager with the Development Finance Initiative (DFI), which is a program of the School of Government. Eric works the on the development of mixed-use urban infill and town center projects and advises all DFI projects in site analysis and design. During graduate school, Eric assisted in the conceptual design, program definition and site analysis on DFI projects located in Shallotte, Kannapolis, Kinston and the Broughton State Hospital in Morganton. Prior to graduate school, Eric worked as a Community Planner within Washington DC's Office of Capital Projects and Planning and was involved in the District's first public-private partnership dedicated to the creation of public open space. Eric holds dual Master's degrees in City and Regional Planning from UNC-Chapel Hill and Landscape Architecture from North Carolina State University.

Andrew Trump, Graduate Fellow
Andrew Trump is a Project Manager with the Development Finance Initiative (DFI), which is a program of the School of Government. Prior to joining DFI as a Project Manager, Andrew contributed to the Broughton Hospital study as a DFI Graduate Fellow, performing market research, creating financial models, and drafting final report content. His past work includes economic development consulting and managing a community-based education and workforce development program. Andrew holds dual Master's degrees in City and Regional Planning and Public Administration from UNC-Chapel Hill.

STEWART

The project team at STEWART was composed of George Stanziale, Michael Batts, Corey Mason, Scott Simmons, Tim Summerville, and Craig Fisher.

George Stanziale, PLA, ASLA, CLARB - President | Director of Deisgn
George is President and Director of Design at Stewart. As President, George has overall responsibility of implementing Stewart's strategic vision and is accountable for the firm's performance and business development. George also oversees the performance and growth of the Charlotte and Richmond offices as well as Corporate Marketing. He also serves as the firm-wide Director of Design, responsible for the marketing and development of significant and unique projects in the areas of higher education, healthcare, mixed use, corporate, commercial and park design. In doing so, George utilizes the diverse resources and talents of the firm to design and implement these projects to meet the goals and objectives of our clients. With 40 years of experience, George has built his reputation on the design and implementation of complex projects for public, private, university and medical center clients. He has earned the reputation for developing consensus between city and county appointed and elected officials, as well as developers and stakeholders, resulting in successful entitlements for complex projects.

Michael Batts, PLA, LEED AP-
Manager of Landscape Architecture
As Manager of Landscape Architecture, Michael is in charge of the day to day management of Stewart's landscape architects and serves as a design leader for the Land Planning and Design studio. Michael is a landscape architect with experience in a range of project scopes, from master planning to detailed design. Michael utilizes a strategic design approach and an awareness of sustainable principles to create spaces and places that balance the needs of the users, clients and the environment. Michael is based out of the Raleigh office. Michael holds a Bachelor of Landscape Architecture from North Carolina State University.

Corey Mason, PLA - Project Manager
Corey is a Landscape Architect with over 12 years of experience in ideation, land analysis and construction. Corey has focused his efforts on the development of complex design projects in resorts, hospitality, arts and transportation sectors. He has completed significant projects which include corridor vision plans as well as hotels and resorts from the Northern skies of Alaska to the Carolinas. As project manager for Stewart, he brings strong design leadership to the firm while implementing the goals of our clients. Corey holds a Masters of Landscape Architecture and a Bachelors of Science in Agricultural Development from Texas A&M University.

Scott Simmons, EI - Landscape Designer II
Scott is a landscape designer with seven years of experience including both civil engineering and landscape architecture. He has experience in urban design, master planning, commercial landscape design, university landscape design, neighborhood design, and way finding design. He is an expert in graphic communications including hand graphics, photo-realistic digital graphics, and 3D graphics. Scott has extensive software skills including AutoCAD Civil 3D, the Adobe Creative Suite, SketchUp Pro and an array of other visualization tools. He has served as associate professor for the Site Grading and Development Systems class at North Carolina State University. Scott holds a Master's of Landscape Architecture and a Bachelor of Science in Civil Engineering from North Carolina State Univiersty.

Timothy Summerville, PE - Civil Project Engineer II
Timothy is a civil engineer with over eleven years of experience working in both the public and private sectors. His experience includes two years with a municipal Road Commission where he monitored the survey, design, and construction of multiple roadway improvement projects, as well as six years working for private civil engineering and survey firms. Throughout his career, Tim has worked on projects that included surveying, construction inspection, water and sewer design, stormwater analysis and design, site design and roadway improvements design. Tim holds a Bachelor of Science in Civil Engineering from Michigan State.

J. Craig Fisher, PE - Associate Vice President | Manager of Structural Engineering
Craig is responsible for the overall management of Structural Engineering to include oversight and management of projects, client development and retention, financial profitability, personnel and general administrative management.

The management and supervision of the staff includes setting overall goals and objectives. Basic operations include determining the appropriate staff mix and developing processes to screen, interview, hire, train, and maintain the technical competency of Structural Engineering staff. The supervision also includes monitoring staff performance, delegating responsibilities to staff, and mentoring staff. Management of the Quality Assurance and Quality Control procedures are also supervised by Craig. Overall supervision of the Standards Committee, Revit/CAD Committee, and Training program help ensure that Quality Assurance and Control procedures are followed. Craig also serves as Project Manager on larger and more complex projects including institutional, educational, and health care buildings. Craig holds a Masters of Civil Engineering and a Bachelor of Science in Civil Engineering from North Carolina State University.

BELK architecture

The project team at Belk Architecture was composed of Eddie Belk and Andy Shull. Additional contributions from Belk Architecture were made by Joe Fitzsimons, Michael Spangenberg, David Cera, Mas Sato, and Chris Bozzelli.

Eddie Belk, Architect
G. Edwin Belk (Eddie) FAIA LEED AP is the founder and principal of Belk Architecture, an architectural practice in Durham, North Carolina that specializes in adaptive re-use and tax-credit rehabilitation of historic buildings. Eddie has owned and managed his own architectural practice since 1982, overseeing millions of square feet of adaptive reuse and ground-up construction projects across the Southeastern United States. In addition to addressing the demands of running a successful business, Eddie retains an active role in all aspects of the firm's work, including design, working directly with clients, and overseeing many of the firm's construction projects. Eddie received a Bachelor of Architecture from the School of Design at North Carolina State University in 1972, and in 2010 was elevated as a Fellow within the American Institute of Architects in recognition of his overall body of work.

Andy Shull, Senior Project Manager
Andy Shull is a Senior Project Manager and Project Designer with Belk Architecture. Andy joined Belk Architecture in 2006. Since then, Andy has acted as Project Designer and Project Manager on the delivery of numerous projects, guiding many of them through Federal Historic Tax-Credit, Housing and Urban Development, and North Carolina Housing Finance Agency guidelines. Projects range from modest historic home additions to large tenant upfits in some of Belk Architecture's flagship mixed-use adaptive re-use projects in Durham and Greensboro. Currently Andy is acting as Project Architect for the renovation of two Historic North Carolina Textile Mills into multi-family apartments in Hillsborough and Graham. Andy received a Master of Architecture from the North Carolina State University College of Design in 2002.

The project team at CT Wilson was composed of Charles T Wilson, III and Kyle Ramsey.

Charles T Wilson, III (Charlie)
General Contractor Project Executive
Charles T Wilson, III has been the Vice President of CT Wilson Construction Company since 2005. Charlie started in the construction industry as a field laborer early on in his life, spending summers working for the family business. Charlie received his Engineer in Training Certification after receiving his Bachelor's degree in Civil Engineering from North Carolina State University in 1993. The following year he completed his Master's Degree at the University of Texas at Austin where he worked for a General Contractor specializing in medical facilities. Charlie joined CT Wilson Construction in 1999 and has been managing the company's largest contracts including the $20 million dollar mill renovation and adaptive reuse project at Revolution Mill in Greensboro. In addition to Project Management, his current responsibilities include new client acquisition and managing existing client relationships.

Kyle Ramsey
Estimator
Kyle Ramsey started at CT Wilson Construction while attending North Carolina State University. In 2008, Kyle graduated with a Bachelor's Degree in Construction Engineering and Management. Prior to transitioning into his current position as an Estimator, Kyle worked in both Superintendent and Project Management roles. His current responsibilities include subcontractor and supplier pricing procurement, material quantifying, preliminary budgeting, comprehensive cost estimating, value engineering, and constructability reviews. Kyle has extensive experience pricing jobs up to $25 million.

Gensler

The project team at Gensler was composed of Michael Wagner.

Michael Wagner, Architect
Michael Wagner is a project architect in the Raleigh, N.C. office of Gensler, a global design firm specializing in architecture and interiors. Michael works across several of the firm's 33 practice areas including retail centers, commercial office building developments, mixed-use, aviation, life sciences, financial services and education. His projects have ranged from 16,000 square foot full building renovations to master planning large-scale mixed-use retail and residential developments. In addition to working as a practicing architect, Michael teaches a second-year architecture studio in the College of Design at North Carolina State University and serves on both graduate and undergraduate design juries. Prior to architecture, Michael worked as a newspaper reporter in New Orleans, New York and Raleigh. He holds a Bachelor of Arts in journalism from American University in Washington, D.C., and a Master's in Architecture from North Carolina State University.

The project team at Crenshaw Consulting Engineers was composed of Brett Mabe, Rick Copeland and Danny Brush.

Brett Mabe, PE
Senior Mechanical Department Manager
Brett Mabe has been the Senior Mechanical Department Manager for Crenshaw Consulting Engineers (CCE) for the past 14 years and has over 25 years experience in the consulting engineering field. Brett is responsible for the management of CCE's Mechanical Department and for making sure they are meeting customer's needs with cost effective, innovative and cutting edge solutions. Brett has a wide range of experience on commercial, educational, institutional, industrial, military and residential projects. Brett has also been involved in many LEED projects and has extensive energy modeling experience.

Rick Copeland, PE, LEED AP BD+C, CxA
Electrical Project Engineer
Rick Copeland has been a Electrical Project Engineer for Crenshaw Consulting Engineers (CCE) for the past 11 years. Rick is responsible for Electrical Engineering Design and Project Management and is the lead for CCE's Commissioning Department. Rick has a wide range of experience on commercial, educational, institutional, industrial and residential projects. Rick has extensive knowledge of power distribution, lighting, generator/UPS, photovoltaic, fire alarm and life safety system design.

Danny Brush, PE, LEED AP BD+C
Plumbing Project Engineer
Danny Brush has been a Project Engineer for Crenshaw Consulting Engineers (CCE) for the past year and has over 13 years experience in the consulting engineering field. Danny is responsible for Plumbing and Mechanical Engineering Design and Project Management. Danny has a wide range of experience on commercial, educational, institutional, industrial, military and residential projects. Danny has extensive knowledge of domestic water, waste and vent, grease waste, medical gas, compressed air and gas piping design.

2 PROCESS SUMMARY

ENABLING LEGISLATION

N.C. Senate Bill 744 (Session Law 2014-100)

STUDY FUTURE USE OF BROUGHTON HOSPITAL FACILITIES

SECTION 15.20. (a) Upon the Department of Commerce's raising the sum of two hundred thousand dollars ($200,000) in non-State funds for the study described in subsection (b) of this section, the Department shall use those funds, together with the sum of two hundred thousand dollars ($200,000) in nonrecurring funds appropriated in this act to the Department of Commerce for the 2014-2015 fiscal year, to conduct the study described in subsection (b) of this section.

SECTION 15.20. (b) The Department of Commerce shall, in conjunction with the Department of Health and Human Services, the Department of Administration, the City of Morganton, and the County of Burke, use the funds described in subsection (a) of this section to study potential uses for vacated Broughton Hospital facilities and potential development or redevelopment of adjoining State-owned properties to ascertain the economic benefits of use, development, and redevelopment.

The study required by this section shall examine all of the following:
(1) Potential uses of vacated Broughton Hospital facilities and development or redevelopment of adjoining State-owned properties.
(2) Benefits to the State, local governments, and the private sector of each potential use identified in the study.
(3) Costs to the State, to the City of Morganton, to the County of Burke, and t the private sector of each potential use identified in the study.
(4) Opportunities to use the properties for public-private partnerships.
(5) Any other matters that the Department of Administration deems relevant to this study of potential economic benefits in the use of vacated Broughton Hospital facilities and properties.

SECTION 15.20.(c) No later than December 31, 2014, the Department of Commerce shall submit an interim report on the study to the Chairs of the Joint Legislative Oversight Committee on Health and Human Services, to the Chairs of the Joint Legislative Committee on Economic Development and Global Engagement, and to the Chairs of the Joint Legislative Commission on Governmental Operations. No later than June 30, 2015, the Department of Administration shall submit a final report on the results of the study to the Chairs of the same committees.

SECTION 15.20.(d) The Department of Administration shall cooperate fully with the performance of the study required by this section and shall provide timely information about the facilities and other properties being evaluated as part of the study to the Department of Commerce.

SCHEDULE OF STAKEHOLDER MEETINGS

The following meetings were held in the planning, coordination and execution of the study; listed according to date with the location and invited participants noted.

2014 Meetings

March 17 (Morganton City Hall)
Commerce Sec. Sharon Decker, Asst. Sec. Dr. Patricia Mitchell, Sen. Warren Daniel, Rep. Hugh Blackwell, Golden Leaf Executive Director Dan Gerlach, Burke County Commission Chair Johnny Carswell, Morganton Mayor Mel Cohen, County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson, Burke Development, Inc. Director Scott Darnell

May 6 (Morganton City Hall and Broughton Tour)
Asst. Sec. Dr. Patricia Mitchell, NC Governor Office Western Representative April Riddle, DHHS - Director of Property/Construction Luke Hoff, Facilities Team Leader Laura White, Acting Broughton Co-CEO Dr. George Krebs, Acting Broughton Co-CEO Vivian Streater, Dixon Byrd, County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/ Design Director Lee Anderson, Morganton City Attorney Louis Vinay

August 28 (Morganton City Hall)
Asst. Sec. Dr. Patricia Mitchell, County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson, Burke Development, Inc. Director Scott Darnell, {Sen. Warren Daniel and Rep. Hugh Blackwell were present for a portion of the meeting)

September 29 (UNC School of Government)
Asst. Sec. Dr. Patricia Mitchell, County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson, UNC SOG - DFI Director Michael Lemanski, Senior Analyst Christy Raulli, Associate Professor of Public Law and Government Tyler Mulligan

October 22 (Conference Call on Brownfields possibility) - Asst. Sec. Dr. Patricia Mitchell, County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson

November 12 (Conference Call on Golden Leaf application)

Asst. Sec. Dr. Patricia Mitchell, County Manager Bryan Steen, City Manager Sally Sandy

December 22 {Assistant Secretary Mitchell's Office)

Luke Hoff, DHHS Director of Property/Construction, Speros Fleggas, Deputy Secretary Department of Administration, and Asst. Sec. Dr. Patricia Mitchell

2015 Meetings

January 29 (Morganton City Hall)

County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson, Burke Development, Inc. Operations Director Hope Hopkins, DFI – Director Michael Lemanski, Project Manager Peter Cvelich

February 4 (Department of Commerce)

Asst. Sec. Dr. Patricia Mitchell, General Counsel John Hoomani; Luke Hoff, DHHS Director of Property/Construction, Speros Fleggas, Deputy Secretary Department of Administration; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

February 20 (Morganton City Council Workshop)

City of Morganton Council, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson, County Manager Bryan Steen, DFI – Director Michael Lemanski, Project Manager Peter Cvelich, Graduate Fellow Julianne Stern; Other City and County public officials and citizens

March 3 (web conference)

County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson, Burke Development, Inc. Operations Director Hope Hopkins, DFI – Project Manager Peter Cvelich, Graduate Fellow Julianne Stern

March 5 (DHHS)

Asst. Sec. Dr. Patricia Mitchell, General Counsel John Hoomani; Luke Hoff, DHHS Director of Property/Construction, Speros Fleggas, Deputy Secretary Department of Administration,; DFI – Director Michael Lemanski, Project Manager Peter Cvelich, Graduate Fellow Julianne Stern

April 22 (UNC School of Government)

Asst. Sec. Dr. Patricia Mitchell, General Counsel John Hoomani; Luke Hoff, DHHS Director of Property/Construction; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich, Graduate Fellow Julianne Stern

April 29 (Dept. of Administration)

Luke Hoff, DHHS Director of Property/Construction, Speros Fleggas, Deputy Secretary Department of Administration; DFI – Director Michael Lemanski, Project Manager Peter Cvelich

May 7 (Morganton City Hall)

County Manager Bryan Steen, City Manager Sally Sandy, Asst. City Manager Scott Hildebran, City Development/Design Director Lee Anderson, City Attorney Louis Vinay, Burke Development Inc. President/CEO Alan Wood, DFI – Director Michael Lemanski, Project Manager Peter Cvelich, Graduate Fellow Andrew Trump

August 6 (NC School for the Deaf)

NCSD Advisory Council; DFI Project Manager Peter Cvelich

August 13 (web conference)

WPCC President Dr. Michael Helmick, WPCC CFO Sandy Hoilman, DFI Project Manager Peter Cvelich

August 17 (Department of Public Instruction)

Deputy State Superintendent Dr. Rebecca Garland, Superintendent NC Governor Morehead School Dr. Barbria Bacon, Director NC School for the Deaf Dr. Audrey Garvin, Chief Financial Officer Philip Price, School Planning Consultant Ken Phelps, DPI Architect Ron Collier; DFI – Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

August 19 (UNC School of Government)

Office of State Budget & Management Special Projects Director John LaPenta; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

August 24 (Department of Commerce)

Asst. Sec. Dr. Patricia Mitchell, General Counsel John Hoomani, Luke Hoff, DHHS Director of Property/Construction, Speros Fleggas, Deputy Secretary Department of Administration, Department of Natural and Cultural Resources Director of Historical Resources Ramona M. Bartos, State Historic Preservation Office Environmental Review Coordinator Renee Gledhill-Earley, Office of State Budget & Management Special Projects Director John LaPenta; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

September 2 (Department of Natural and Cultural Resources)

Department of Natural and Cultural Resources Secretary Susan Kluttz, Director of Historical Resources Ramona M. Bartos; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

November 3 (Morganton; various locations)

Meetings with local stakeholder groups: County Manager Bryan Steen, Burke Development Inc. President/CEO Alan Wood, NCSD Director Audrey Garvin, NCSD Advisory Council, City Manager Sally Sandy, City Development/Design Director Lee Anderson, City Attorney Louis Vinay, WPCC President Dr. Michael Helmick, WPCC President's Assistant Kathy Durham, WPCC Vice President for Academic Affairs Rhia Crawford, WPCC Vice President for Student Development Atticus Simpson, WPCC Vice President for Administrative Services / Chief Financial Officer Sandy Hoilman, DFI – Director Michael Lemanski, Project Manager Peter Cvelich, Design Advisor Eric Thomas

November 5 (Department of Commerce)

Asst. Sec. Dr. Patricia Mitchell, General Counsel John Hoomani; Luke Hoff, DHHS Director of Property/Construction, Speros Fleggas, Deputy Secretary Department of Administration, Superintendent NC Governor Morehead

School Dr. Barbria Bacon, DPI Architect Ron Collier, Office of State Budget & Management Special Projects Director John LaPenta; Director of Historical Resources Ramona M. Bartos, State Historic Preservation Office Environmental Review Coordinator Renee Gledhill-Earley; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich, Design Advisor Eric Thomas

December 18 (Department of Natural and Cultural Resources)
Director of Historical Resources Ramona M. Bartos, State Historic Preservation Office Environmental Review Coordinator Renee Gledhill-Earley, State Historic Preservation Office Survey & National Register Branch Supervisor Claudia Brown, State Historic Preservation Office Senior Preservation Architect and Income-producing Tax Credit Coordinator Tim Simmons; DFI Project Manager Peter Cvelich; Belk Architecture Founder/Principal Eddie Belk

December 28 (Department of Public Safety)
Asst. Sec. Dr. Patricia Mitchell; DPS Deputy Commissioner of Administration Joseph Prater, NC Correction Enterprises Director Karen Brown, NC Correction Enterprises Director of State Laundries Ron Young; DFI Project Manager Peter Cvelich

2016 Meetings

January 8 (N.C. School for Science and Mathematics)
NCSSM Chancellor Todd Roberts, NCSSM Vice Chancellor for Student Life Terry Lynch, NCSSM Vice Chancellor of Distance Education and Extended Programs Melissa Thibault; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

January 13 (Morganton)
County Manager Bryan Steen, Burke Development Inc. President/CEO Alan Wood; City Manager Sally Sandy, Asst. City Manager Sonja Marston, City Development/Design Director Lee Anderson, City Attorney Louis Vinay; DFI – Director Michael Lemanski, Project Manager Peter Cvelich, Design Advisor Eric Thomas

January 20 (Department of Commerce)
Asst. Sec. Dr. Patricia Mitchell, General Counsel John Hoomani; Luke Hoff, DHHS Director of Property/Construction, Speros Fleggas, Deputy Secretary Department of Administration, Superintendent NC Governor Morehead School Dr. Barbria Bacon, DPI Architect Ron Collier, Office of State Budget & Management Special Projects Director John LaPenta; Director of Historical Resources Ramona M. Bartos, State Historic Preservation Office Environmental Review Coordinator Renee Gledhill-Earley, DPS Deputy Commissioner of Administration Joseph Prater, NC Correction Enterprises Director Karen Brown; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich, Design Advisor Eric Thomas

February 4 (web conference)
WPCC President Dr. Michael Helmick, WPCC President's Assistant Kathy Durham, WPCC Vice President for Academic Affairs Rhia Crawford, WPCC Vice President for Student Development Atticus Simpson, WPCC Vice President for Administrative Services / Chief Financial Officer Sandy Hoilman, DFI Project Manager Peter Cvelich

February 12 (web conference)
NCSD Director Audrey Garvin, NCSD Advisory Council, DFI Project Manager Peter Cvelich

March 7 (Department of Commerce)
Secretary John Skvarla, Asst. Sec. Dr. Patricia Mitchell, General Counsel David Efird, Chief Economic Development Liaison Susan Fleetwood; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

March 22 (Department of Commerce)
Asst. Sec. Dr. Patricia Mitchell, General Counsel David Efird; Luke Hoff, DHHS Director of Property/Construction, Rod Davis, DHHS CFO, Dale Armstrong, Deputy Secretary for Behavioral Health and Developmental Disability Services, Laura White, Hospital Team Leader, Division of State Operated Healthcare Facilities, Vivian Streater, CEO of Broughton Hospital, Trey Hatcher, Facility Engineering Director, Superintendent NC Governor Morehead School Dr. Barbria Bacon, DPI Architect Ron Collier, Deputy Secretary of Administration, Asset Management John LaPenta; State Historic Preservation Office Environmental Review Coordinator Renee Gledhill-Earley, State Historic Preservation Office Senior Preservation Architect and Income-producing Tax Credit Coordinator Tim Simmons, DPS Deputy Commissioner of Administration Joseph Prater, NC Correction Enterprises Director Karen Brown; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

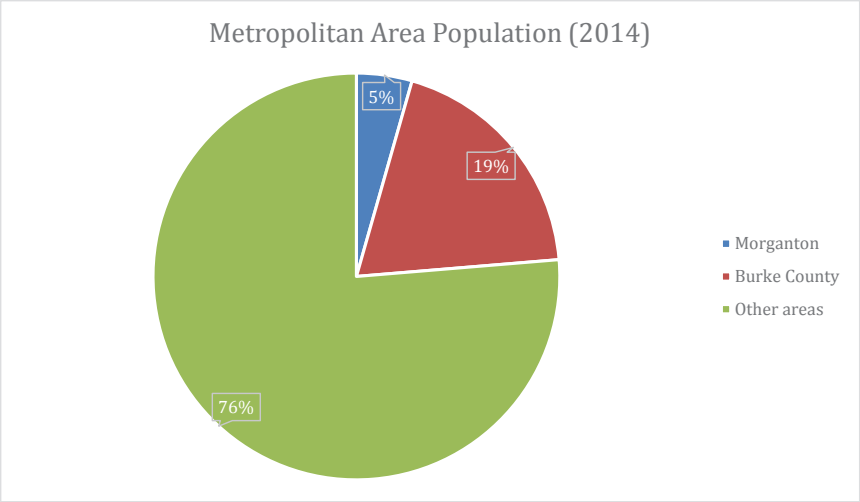
March 28 (Morganton)
Asst. Sec. Dr. Patricia Mitchell; Burke County Board of Commissioners; Morganton City Council; County Manager Bryan Steen, Burke Development Inc. President/CEO Alan Wood; City Manager Sally Sandy, Asst. City Manager Sonja Marston, City Development/Design Director Lee Anderson, City Attorney Louis Vinay; DFI Project Manager Peter Cvelich, Graduate Fellow Andrew Trump; members of general public

May 5 (Department of Commerce)
Secretary of Commerce John Skvarla, Asst. Sec. Dr. Patricia Mitchell, Chief of Staff Cecilia Holden; Secretary of Health and Human Services Rick Brajer, DHHS Director of Property/Construction Luke Hoff; Secretary of Administration Kathryn Johnston, Deputy Secretary of Administration, Asset Management John LaPenta; State Budget Director Drew Heath; DFI – Director Michael Lemanski, Principal Investigator Tyler Mulligan, Project Manager Peter Cvelich

3 DEMOGRAPHIC AND SECTOR ANALYSIS SUMMARY

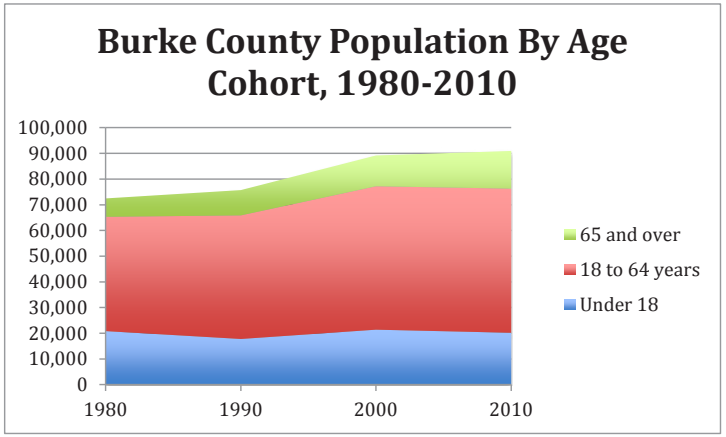
Demographic Analysis

The City of Morganton is the seat of Burke County and a part of the Hickory-Lenoir-Morganton metropolitan area. As of 2014, Morganton had a population of nearly 17,000 people. The county had an estimated population of 90,000; the metropolitan area over 360,000.



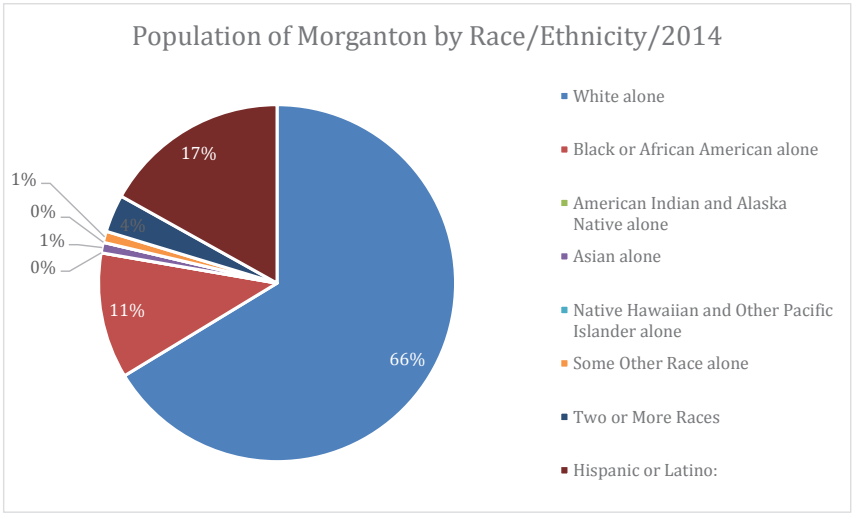
Source: American Community Survey 2014 (5-Year Estimates)

Morganton has a higher proportion of seniors and a slightly lower proportion of adults aged 25 to 64 than North Carolina as a whole. Nineteen percent of the population of Morganton is 65 years or older, compared with approximately 14 percent of North Carolina residents. About 50 percent of the Morganton population is between the ages of 25 and 64, compared with nearly 53 percent of the state as a whole. This area has had a higher proportion of seniors than the state for several decades. While the senior population of Morganton has grown at a similar rate as the senior population of the state, the proportion of seniors in Burke County has steadily increased in recent decades: seniors (65 years and over) made up just under 10 percent of the county population in 1980 and made up slightly over 16 percent in 2010.

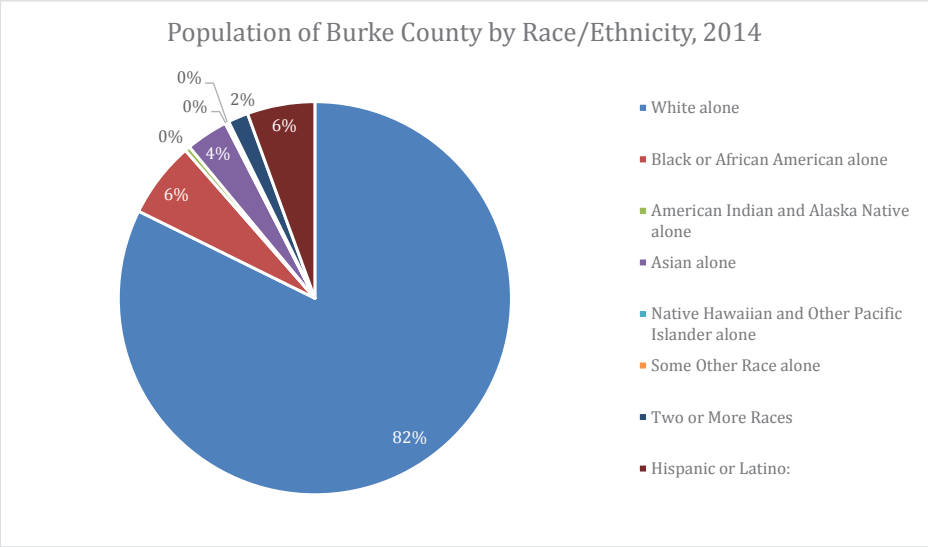


US Census

In 2014, approximately two-thirds of Morganton residents and over eight in ten Burke County residents identified as white (non-Hispanic).

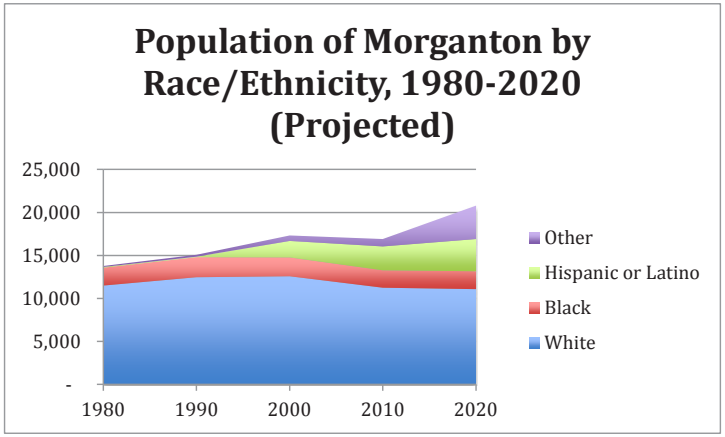


Source: American Community Survey 2014 (5-Year Estimates)



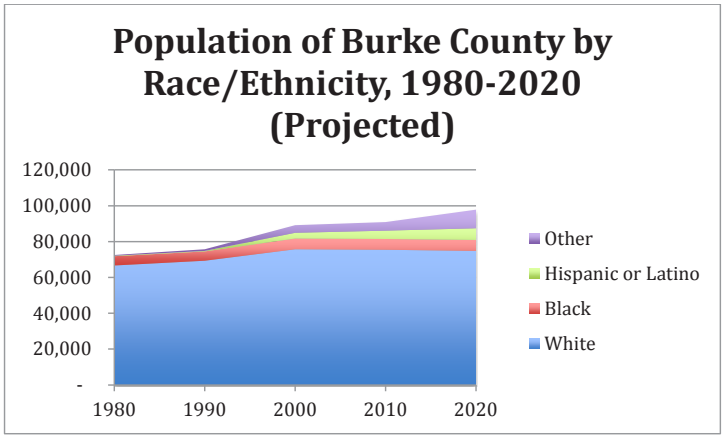
Source: American Community Survey 2014 (5-Year Estimates)

In Morganton since 1980, the number of white and black residents has remained relatively stable. Since the 1990s, the Hispanic/Latino population in the city has grown strongly, from less than 100 in 1990 to nearly 3,000 in 2014. The presence of other groups has increased as well, including those identifying as two or more races, a category not available in 1980.



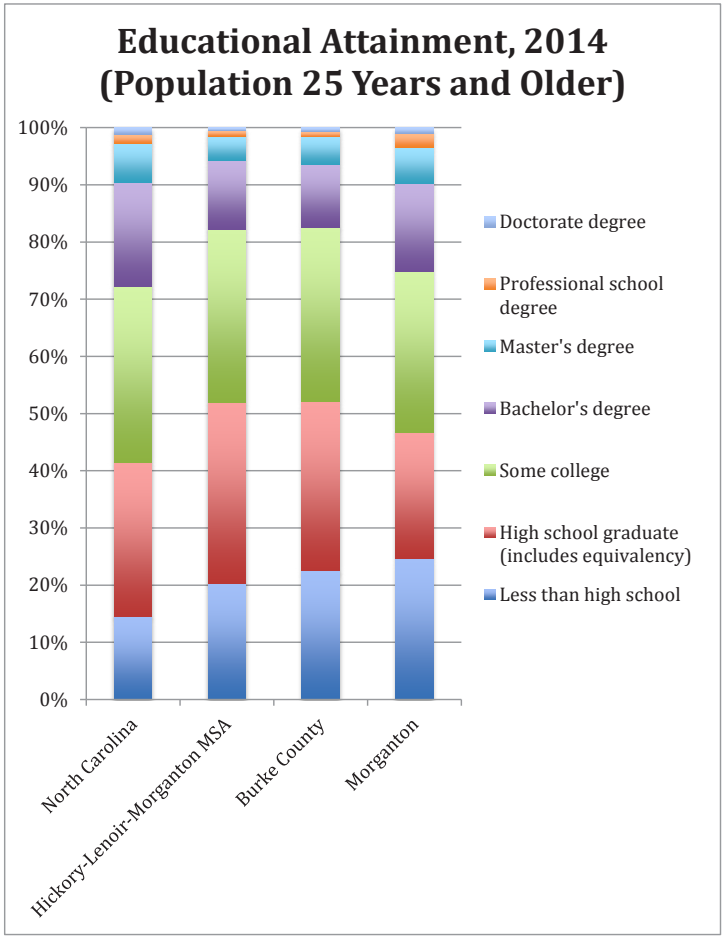
Census, ACS, Esri BAO projections

In Burke County, while both the white and black population have grown respectively by only about seven and nine percent since 1990, both the Hispanic/Latino and Asian populations have grown strongly in that time period: the Hispanic/Latino population grew by well over 1300 percent, from less than 500 residents to 5,000; the Asian population grew by nearly 300 percent, from less than 800 to more than 3,000 residents.



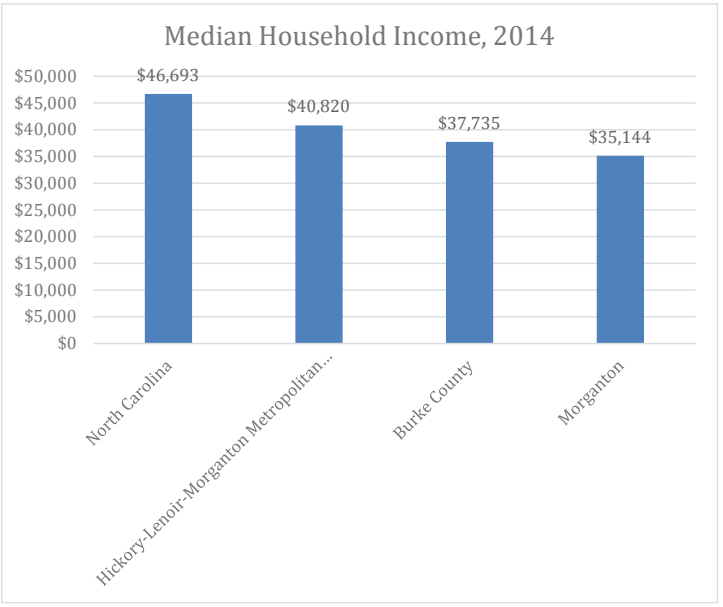
Census, ACS, Esri BAO projections

Morganton and Burke County residents have overall lower education attainment levels than statewide residents. Though Morganton has a similar share of residents with undergraduate and graduate degrees as the state as a whole, approximately a quarter of its residents did not finish high school, compared with 15 percent of residents statewide. In Burke County, about 23 percent of residents do not have high school diplomas; only 17 percent of residents have a bachelor's degree or higher, compared to 28 percent statewide.



Source: American Community Survey 2014 (5-Year Estimates)

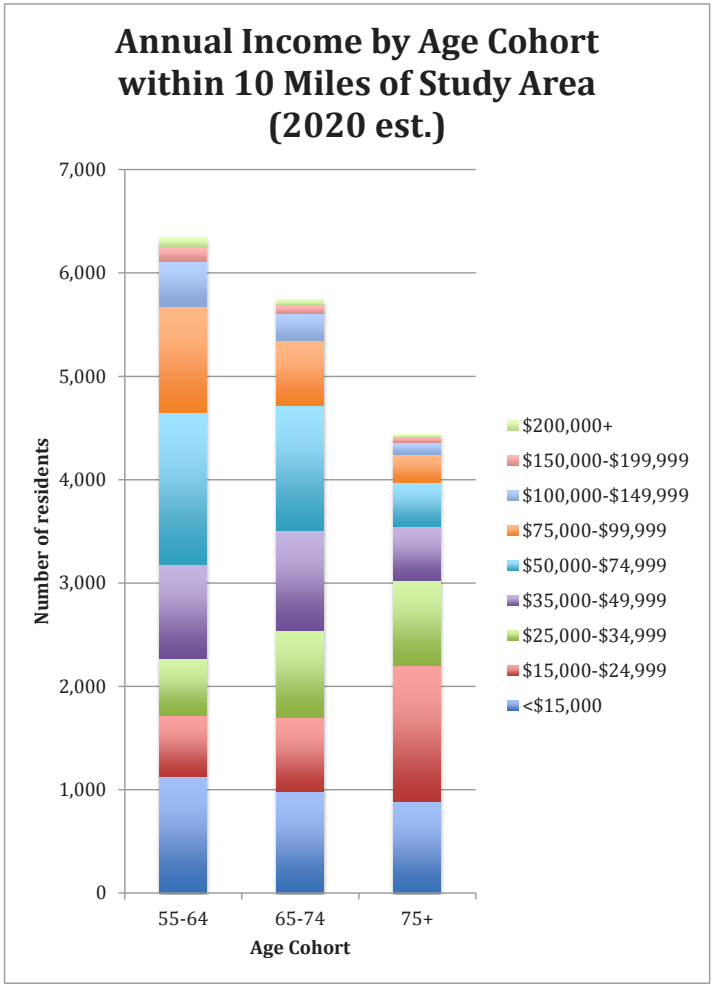
The local median household income is well below the state median. Morganton households had only three-quarters the income of a typical North Carolina household. Household income increases in Burke County and the larger metropolitan area.



Source: American Community Survey 2014 (5-Year Estimates)

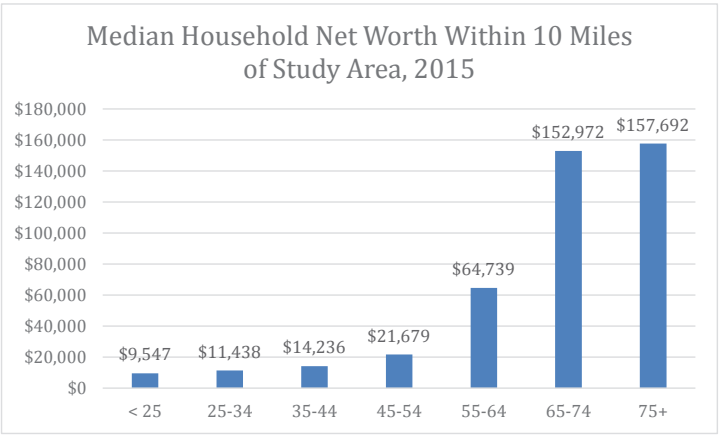
Though median household income is low, there are still many households with considerably higher incomes. In 2015, Esri estimates that over 1,200 households within five miles of the study area had annual incomes exceeding $100,000; that number increases to over 2,500 within 10 miles of the study area.

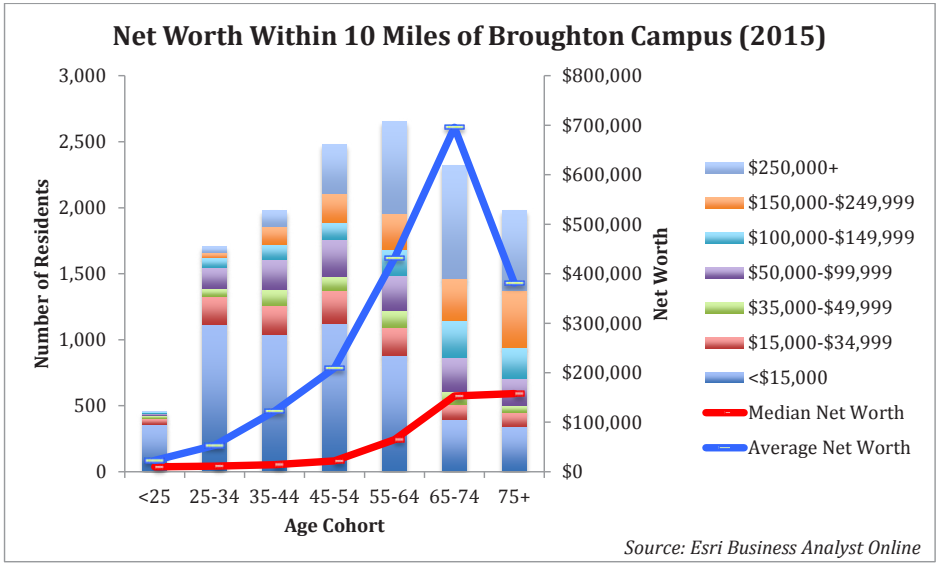
Many senior households near the study area have much higher incomes. Esri estimates that in 2020, nearly 3,200 senior households within 10 miles of the study area will have annual income in excess of $75,000. Over 400 senior households are projected to have annual income of $150,000 or more.



Source: Esri Business Analyst Online

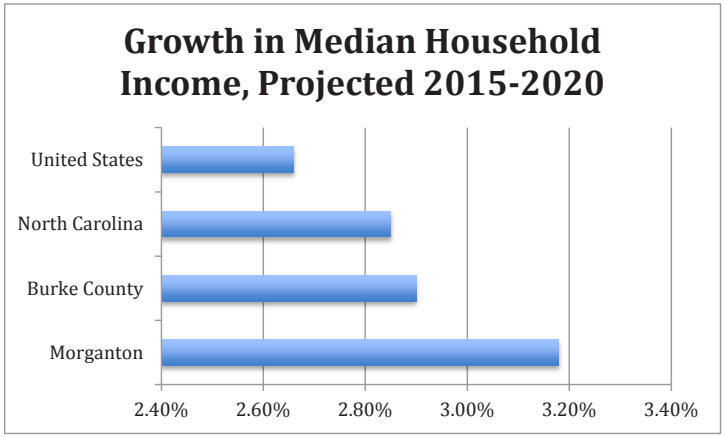
Median household net worth among seniors near the study area is markedly higher than among non-seniors, as well. In 2015, the median net worth of households in which the householder was 65 years and over was over $150,000.



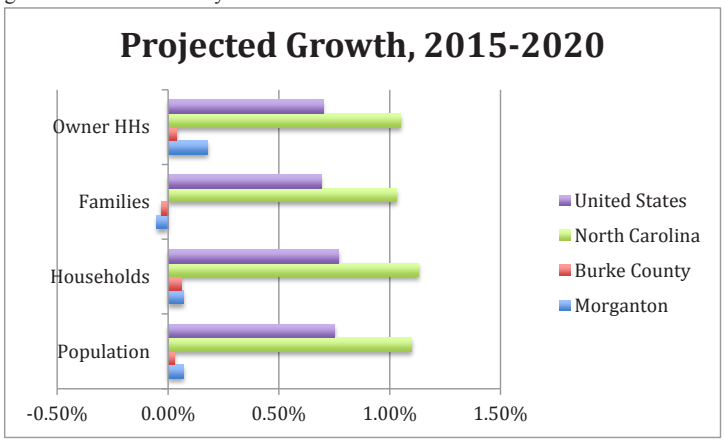


Source: Esri Business Analyst Online

Esri projects that median household income will grow at a faster rate locally than at the state or national level between 2015 and 2020.



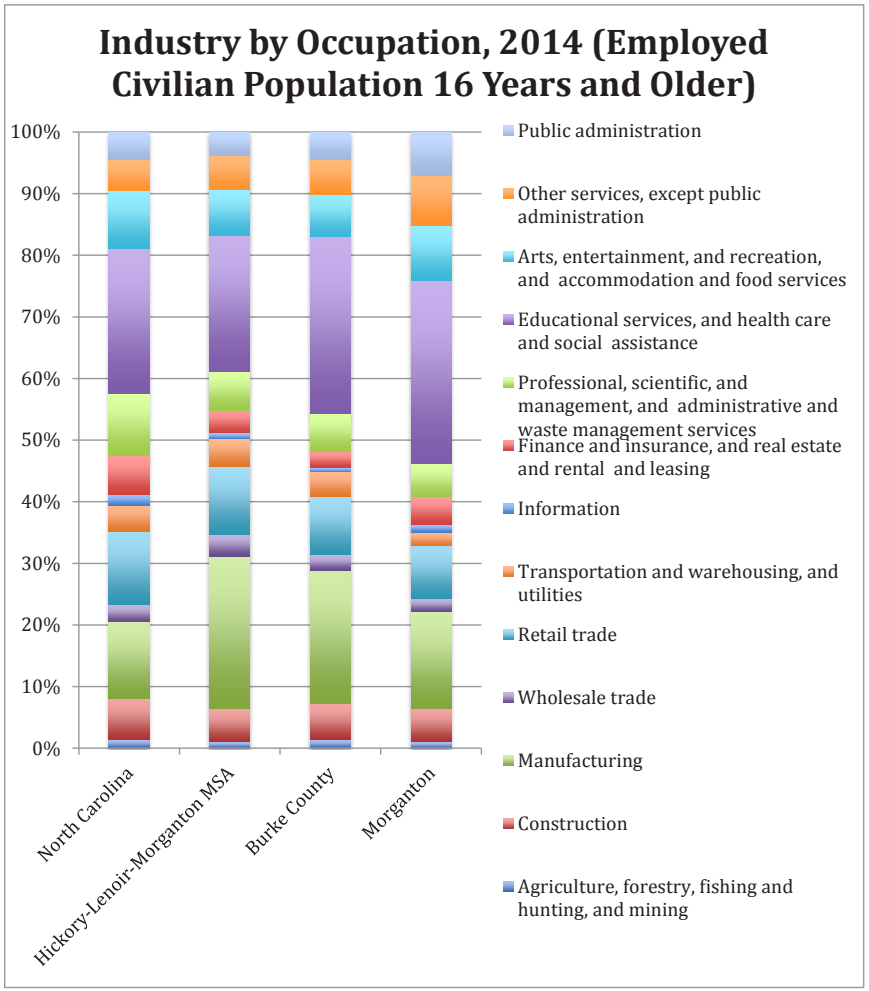
General growth projections are less pronounced: population, as well as households, are projected to barely grow over the next five years.



Esri BAO

Sector Analysis

Morganton workers were more likely to be employed in public administration and educational services and health care than their statewide counterparts. Residents in the county and metropolitan area were also more likely to work in manufacturing occupations, which was also true, though less pronounced, in Morganton.



ACS

Between 2004 and 2014, Burke County lost 3,600 jobs, or 14 percent. Though some sectors, such as health care and social assistance and accommodation and food services saw slight increases, most saw small decreases. Manufacturing, which was by far the largest industry in the county in 2004, with nearly 11,000 jobs, was the hardest hit: the county lost over one-quarter of these jobs over the next 10 years.

Specialization

Location quotients (LQs) are ratios that show the relative share of local jobs in an industry or occupation compared to the share of national jobs in that industry/occupation. A location quotient (or LQ) greater than or equal to 1.3 generally means an industry or occupation is highly concentrated (or "specialized") in the study area. Location quotients in the Hickory-Lenoir-Morganton MSA and Burke County—based on employment data from the Bureau of Labor Statistics—reveals that the overwhelming specializations of the MSA and County are in manufacturing, especially furniture and textile manufacturing, although those sectors have experienced employment decline. Metal manufacturing is also highly specialized in the region, and these sectors are experiencing moderate to strong employment growth. Relative to some of the largest employment nodes in the state of North Carolina, Burke County also has high specialization in healthcare industries.

REGIONAL INDUSTRY SPECIALIZATION: HICKORY-LENOIR-MORGANTON MSA

Focus industries: Healthcare | Metal manufacturing | Textile & furniture manufacturing

NAICS Code	Industry	2013 employment	1993-2013 % change	2013 LQ
337	**Furniture and Related Product Manufacturing**	**14,331**	-58%	**37.82**
313	**Textile Mills**	3,404	-74%	**27.56**
335	**Elec. Equipment, Appliance & Component Mfg.**	3,027	-51%	**7.66**
322	**Paper Manufacturing**	1,776	11%	**4.46**
326	**Plastics and Rubber Products Manufacturing**	2,888	-21%	**4.16**
315	**Apparel Manufacturing**	621	-93%	**4.09**
321	**Wood Product Manufacturing**	892	-47%	**2.38**
327	**Nonmetallic Mineral Product Manufacturing**	825	-16%	**2.10**
484	**Truck Transportation**	2,720	-7%	**1.88**
424	**Merchant Wholesalers, Nondurable Goods**	3,713	-1%	**1.77**
921	**Executive, Legislative, and Other Gen. Gov't**	5,136	31%	**1.63**
331	**Primary Metal Manufacturing**	648	**71%**	**1.55**
311	**Food Manufacturing**	2,159	15%	**1.39**
332	**Fabricated Metal Product Manufacturing**	1,971	**15%**	**1.31**

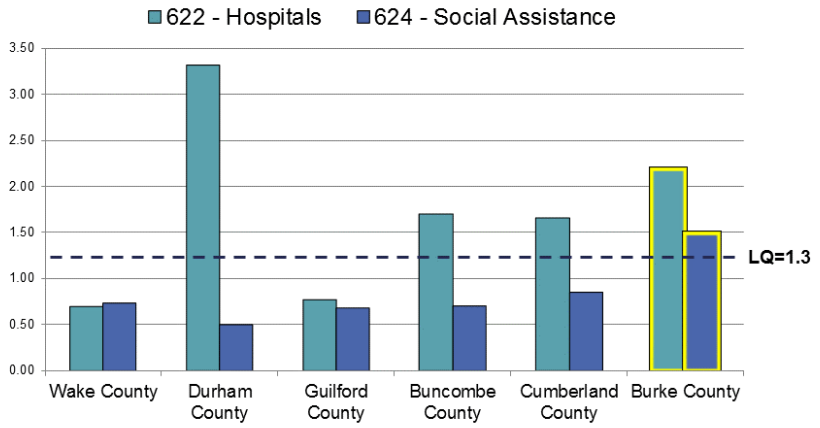
1

LOCAL INDUSTRY SPECIALIZATION: BURKE COUNTY

Focus industries: Healthcare | Metal manufacturing | Textile & furniture manufacturing

NAICS Code	Industry	2013 employment	1993-2013% change	2013 LQ
313	**Textile Mills**	1,273	-60%	**41.07**
337	**Furniture and Related Product Mfg**	1,433	-70%	**15.07**
335	**Electrical Equipment and Appliances**	827	-45%	**8.34**
315	**Apparel Manufacturing**	240	-94%	**6.30**
321	**Wood Product Manufacturing**	214	-42%	**2.28**
336	**Transportation Equipment Manufacturing**	907	8%	**2.21**
622	**Hospitals**	**3,508**	-5%	**2.18**
332	**Fabricated Metal Product Manufacturing**	684	**38%**	**1.81**
921	**Executive, Legislative, & Gen Government**	1,176	24%	**1.49**
624	**Social Assistance**	1,334	**313%**	**1.48**

HEALTH LQ'S: COMPARISON

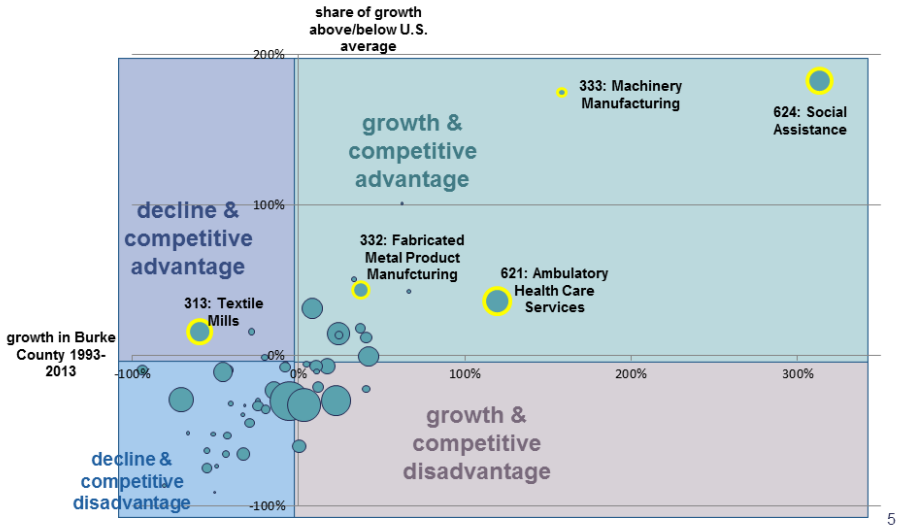


Competitiveness

Specialization metrics are static and do not give us a picture of which direction employment is moving in those industries, and what might be causing those shifts. A shift-share analysis breaks down regional employment change by industry into three components: a component due to overall employment shift in the United States, a component due to the overall employment shift in that industry, and a residual component that is attributed to effects of the local economy on that industry. We label this last component the competitive component because it explains in some measure the unique characteristics of a region that make it out-perform or under-perform other locations. This is the region's competitive advantage. In Burke County, a shift-share analysis for the period 1993-2013 reveals that Metal Manufacturing and

Healthcare industries are both growing and have a competitive advantage.

SHIFT SHARE ANALYSIS



5

Wages

In addition to employment growth and the specialization and relative competitiveness of local industry, the quality of employment for the local workforce is important to the health of the regional economy. For workers, job quality is determined by several factors, but one of the most significant (and easiest to quantify) is the level of pay. A living wage to sustain a family is one threshold for measuring good pay.

WAGES BY INDUSTRY

Top-Paying Industries (Employment > 50), Burke County, 2013

NAICS Code	Industry	2013 Employment	2013 Avg. Weekly Wage
621	Ambulatory Health Care Services	1,560	$1,028.00
336	Transportation Equipment Manufacturing	907	$962.00
333	Machinery Manufacturing	155	$952.00
522	Credit Intermediation & Related Activity	240	$935.00
335	Electrical Equipment and Appliances	827	$895.00
332	Fabricated Metal Product Manufacturing	684	$878.00
424	Merchant Wholesalers, Nondurable Goods	191	$809.00
926	Administration of Economic Programs	117	$808.00
622	Hospitals	3,508	$782.00
541	Professional and Technical Services	405	$777.00
313	Textile Mills	1,273	$730.00
423	Merchant Wholesalers, Durable Goods	198	$711.00
337	Furniture and Related Product Mfg	1,433	$683.00

Adult + 1 child living wage ($735/week)

Single adult living wage ($356/week)

Source: MIT Living Wage Calculator

Focus industries: Healthcare | Metal manufacturing | Textile & furniture manufacturing

6

Both healthcare and metal manufacturing sectors are highly concentrated in Burke County and pay good wages on average (i.e. above the living wage for an adult taking care of one child). Meanwhile, wages in legacy manufacturing in furniture and textiles fall below that same living wage threshold for the County on average.

In conclusion, Burke County has a specialization in hospitals, but employment has declined slightly over the last 20 years. Burke County has a competitive advantage and has seen strong growth in ambulatory health care and social assistance. Furniture and textiles manufacturing are shrinking, but are still by far the most specialized industries in the county and MSA. Textile manufacturing has declined but maintains a competitive advantage in Burke County. The emergence of well-paying jobs in the Metal Manufacturing sector represents a source of resilience in the local industrial base. Though this sector currently represents a small portion of total local employment, its growth and competitiveness point to future opportunities for the regional economy.

4 SITE AND BUILDING ANALYSES

BROUGHTON HOSPITAL SUITABILITY ANALYSIS

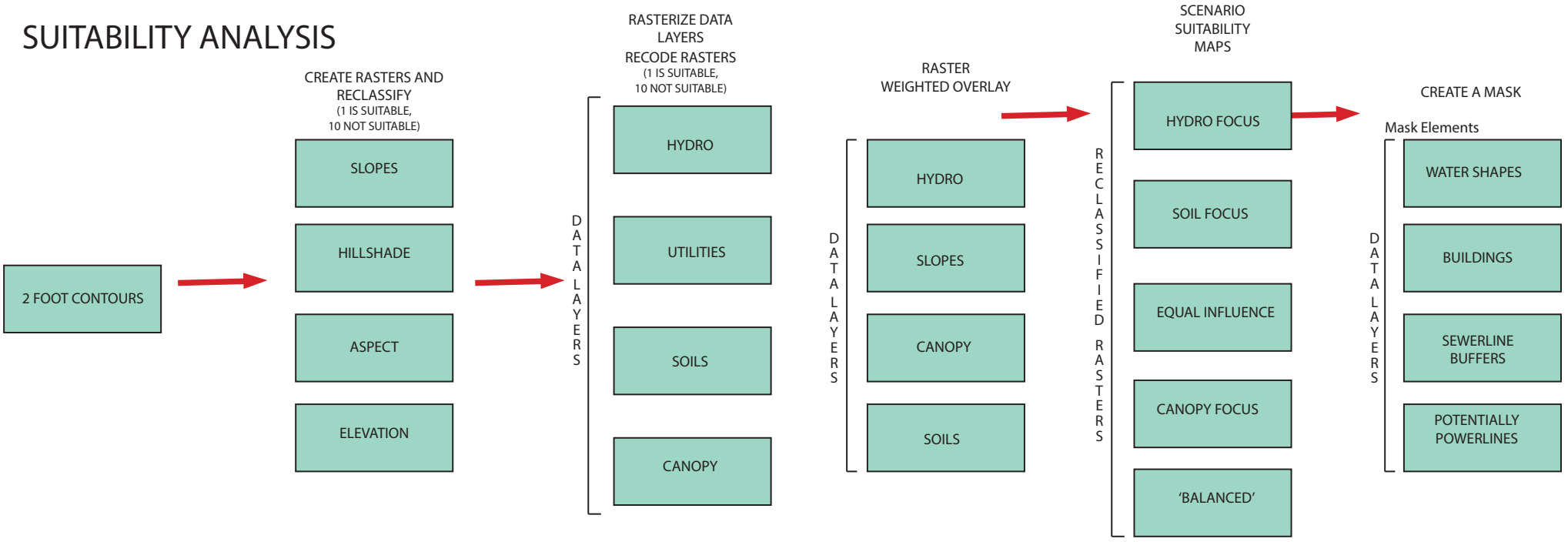
DEVELOPMENT FINANCE INITIATIVE ERIC THOMAS MARCH 27, 2015

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- EXISTING CONDITIONS

DEVELOPMENT FINANCE INITIATIVE ERIC THOMAS MARCH 27, 2015

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- PROCESS DIAGRAM

SUITABILITY ANALYSIS

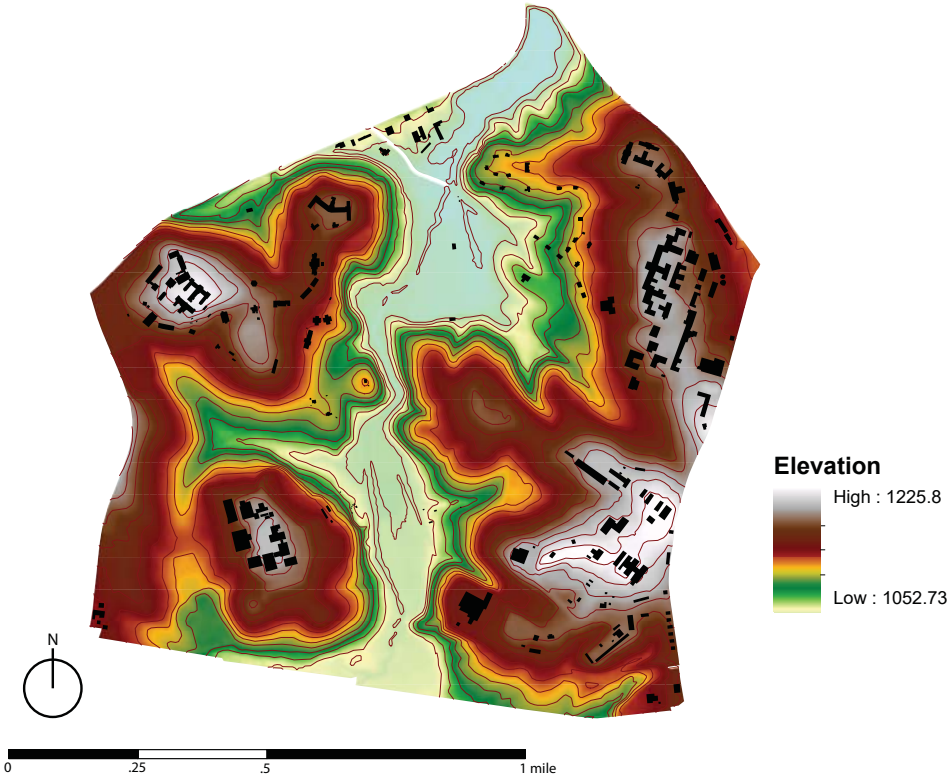


Reclassifcation of Data Based Upon Jenks Natural Breaks Classifcation

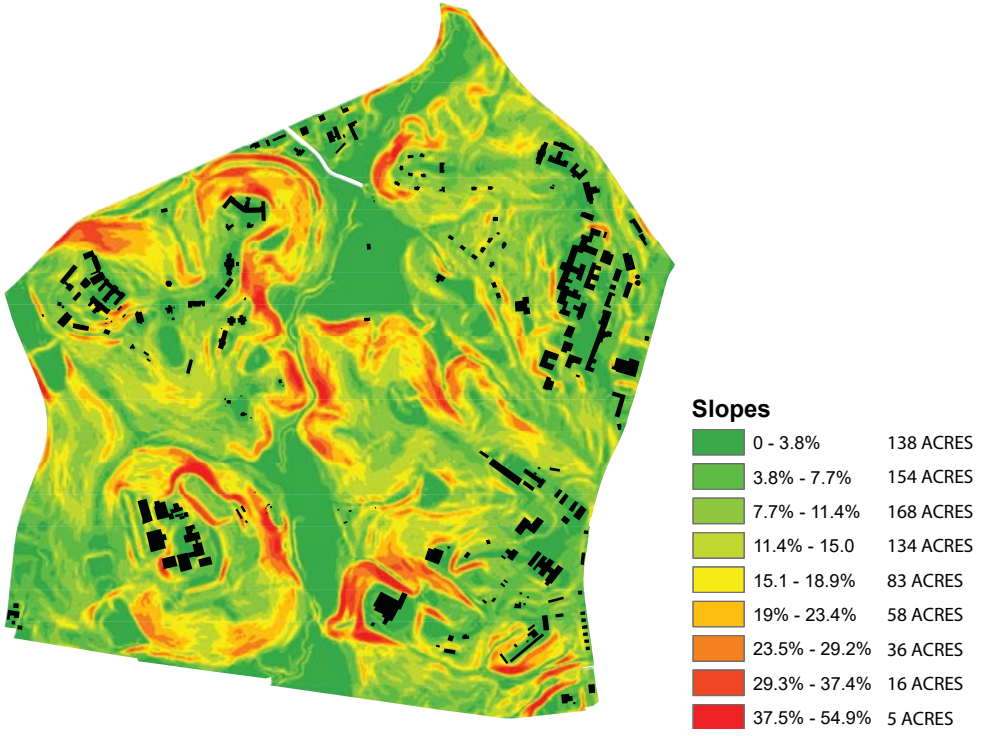
the method seeks to reduce the variance within classes and maximize the variance between classes

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- INDIVIDUAL COMPONENTS

ELEVATION ANALYSIS

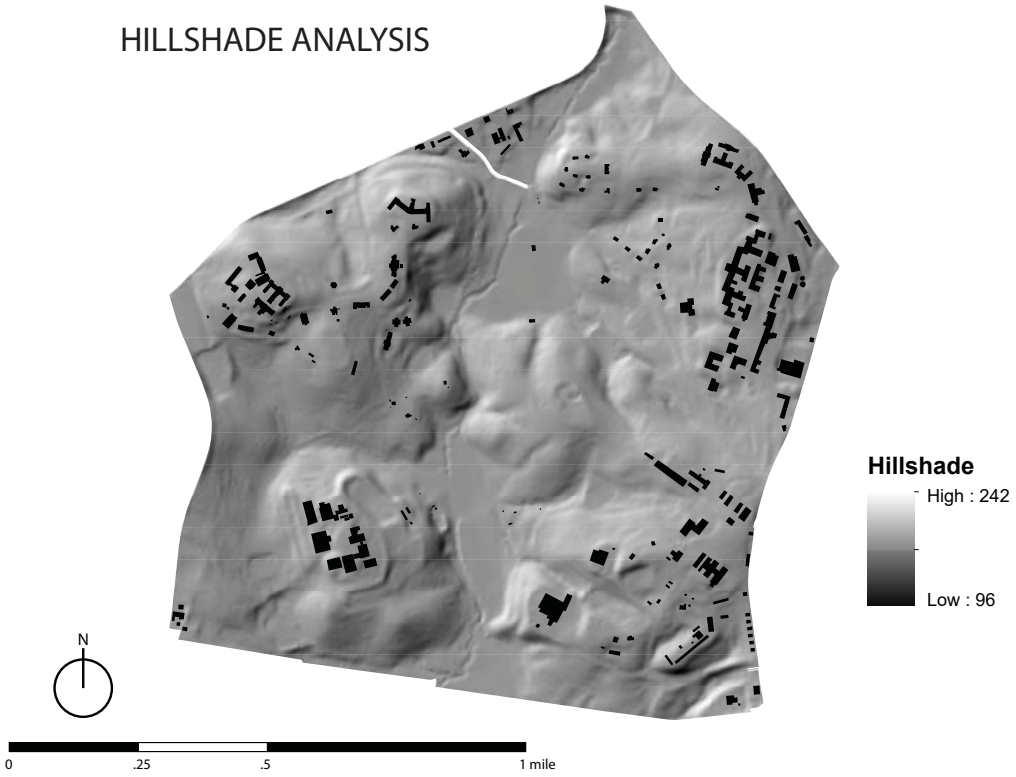


SLOPE ANALYSIS



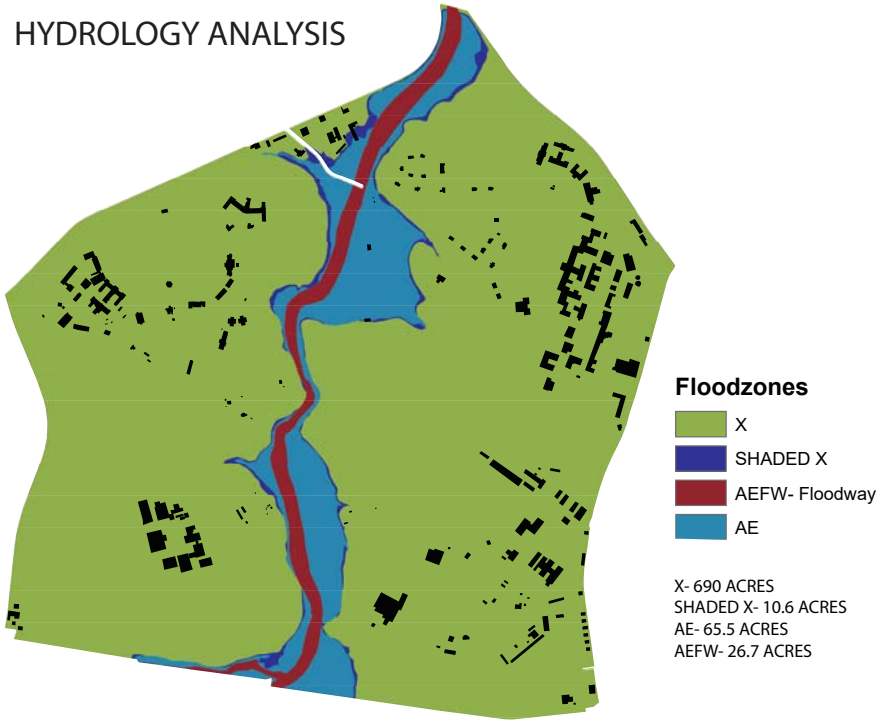
BROUGHTON HOSPITAL SUITABILITY ANALYSIS- INDIVIDUAL COMPONENTS

HILLSHADE ANALYSIS



Hillshade values display the intensity of light from a source (the sun) at each raster cell, from 0 (dark) to 255 (light).

HYDROLOGY ANALYSIS



X- 690 ACRES
SHADED X- 10.6 ACRES
AE- 65.5 ACRES
AEFW- 26.7 ACRES

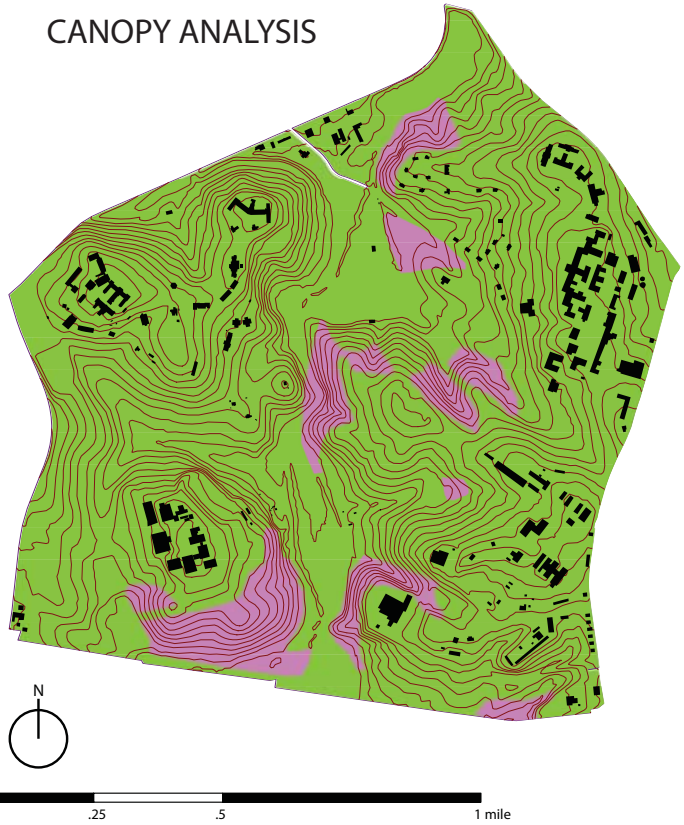
HYDROLOGIC DEFINTIONS

X- These properties are outside the high-risk zones.
SHADED X- Area of moderate flood hazard. This flood risk is reduced, but not removed. Flood insurance is not required in this zone
AE- High flood risk. Base flood elevations have been determined. Flood insurance is mandatory and local floodplain development codes apply.
AEFW- Floodway- channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood

Source: http://www.clark.wa.gov/publicworks/flood/documents/zone_definitions.pdf

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- INDIVIDUAL COMPONENTS

CANOPY ANALYSIS

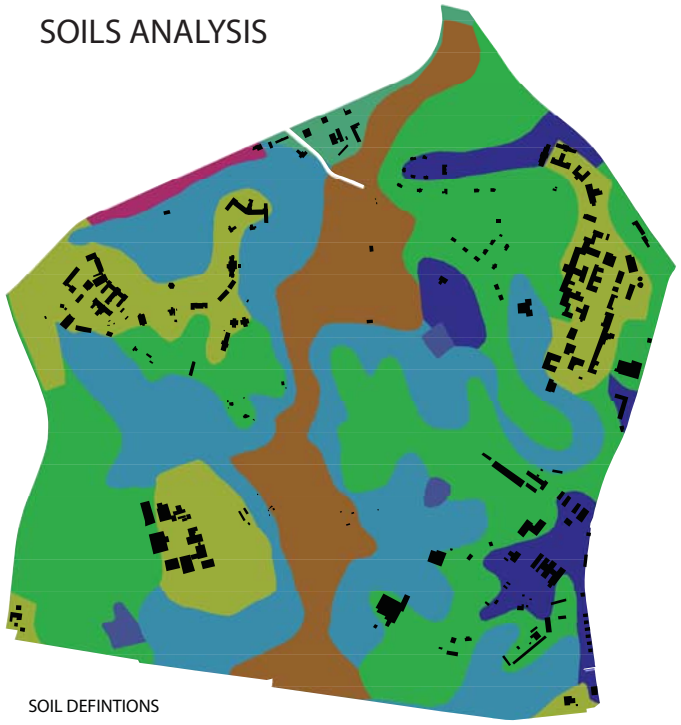


Canopy

Canopy	82.8 ACRES
No Canopy	710 ACRES

Canopy data was geo-referenced using the ArcGIS base-map orthoimagery.

SOILS ANALYSIS



Soils

CvA	103 ACRES
FaB2	47 ACRES
FaC2	277.8 ACRES
FaD2	219.8 ACRES
FeC	6.2 ACRES
Ud	122 ACRES
Ur	11.2 ACRES
W	5.9 ACRES

SOIL DEFINTIONS

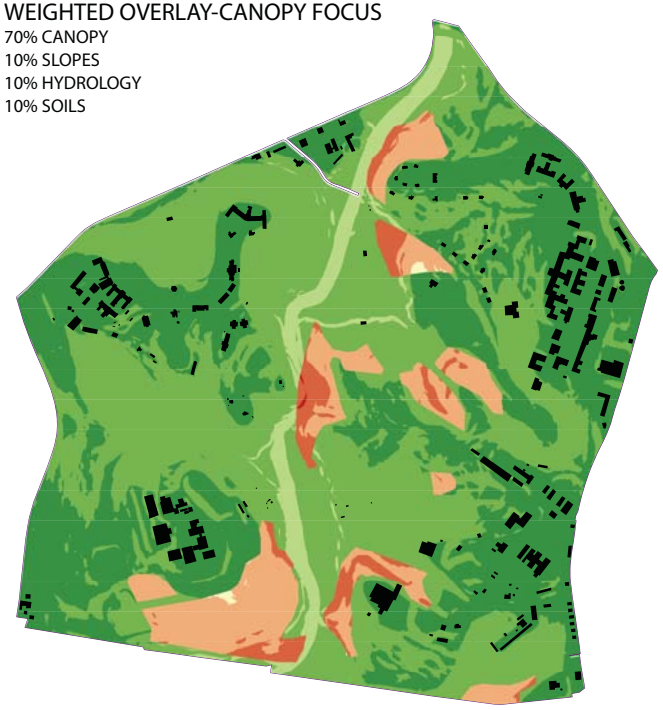
CvA- Colvard Sandy Loam- 0-3%, occasionally flooded.
FaB2- Fairview sandy clay loam- 2-8% slopes, moderately eroded.
FaC2- Fairview Sandy Clay Loam- 8-15 % slopes, moderately eroded.
FaD2- Fairview Sandy Clay Loam- 15-25% slopes, moderately eroded
FeC- Fairview Urban Land Complex- 8-15% slopes
Ud- Udorthents, loamy
Ur- Urban Land
W- Water

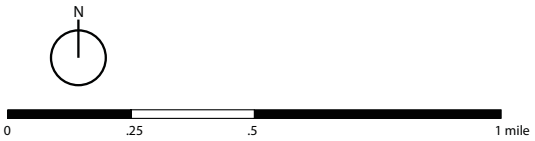
Source: http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/north_carolina/NC023/0/Burke.pdf

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY-CANOPY FOCUS

70% CANOPY
10% SLOPES
10% HYDROLOGY
10% SOILS





Weighted Overlay Rating
2 is poor 10 is excellent

2	20.1 ACRES
3	61.7 ACRES
4	.9 ACRES
5	-
6	-
7	-
8	30.6 ACRES
9	366.9 ACRES
10	312.6 ACRES

WEIGHTED OVERLAY- SOIL FOCUS

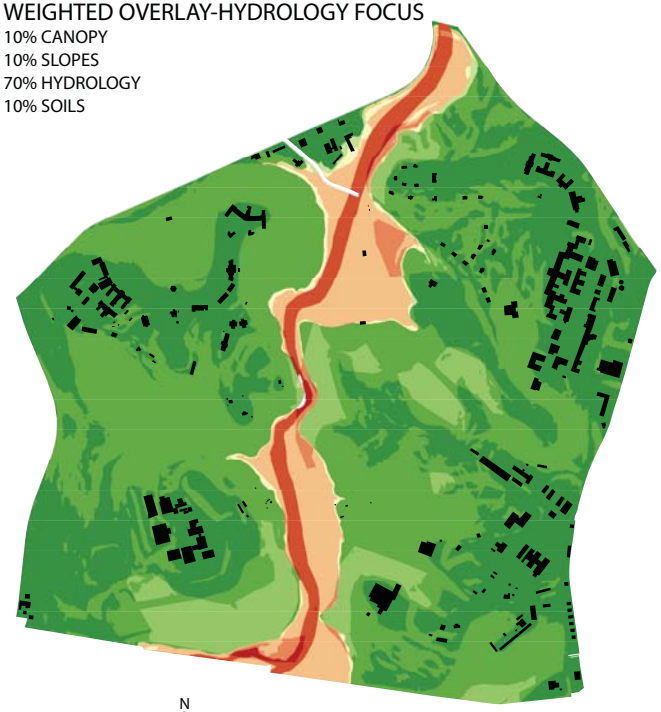
10% CANOPY
10% SLOPES
10% HYDROLOGY
70% SOILS

Weighted Overlay Rating
2 is poor 10 is excellent

2	.07 ACRES
3	.4 ACRES
4	3.4 ACRES
5	22.8 ACRES
6	77.2 ACRES
7	181.8 ACRES
8	194.4 ACRES
9	232.4 ACRES
10	80.3 ACRES

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

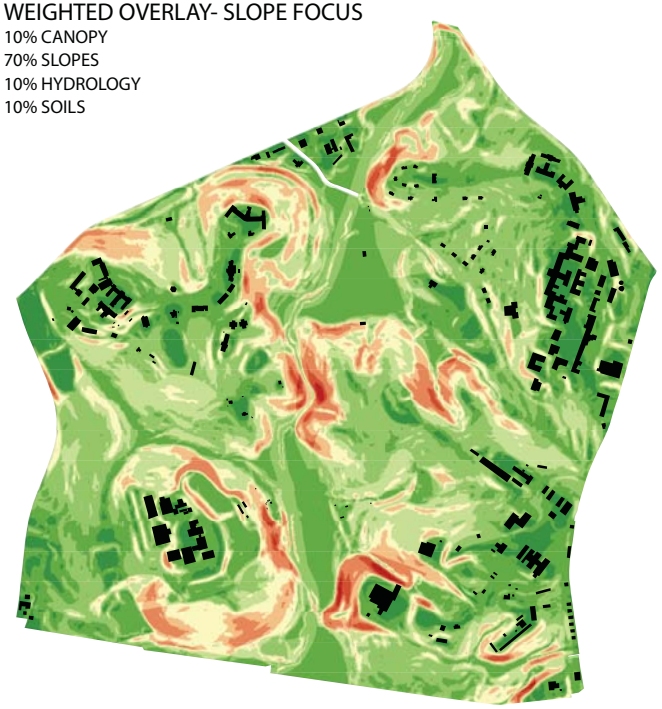
WEIGHTED OVERLAY-HYDROLOGY FOCUS
10% CANOPY
10% SLOPES
70% HYDROLOGY
10% SOILS



Weighted Overlay Rating
2 is poor 10 is excellent

2	2.9 ACRES
3	23.7 ACRES
4	8.2 ACRES
5	57.3 ACRES
6	8.0 ACRES
7	2.8 ACRES
8	58.8 ACRES
9	319.3 ACRES
10	311.8 ACRES

WEIGHTED OVERLAY- SLOPE FOCUS
10% CANOPY
70% SLOPES
10% HYDROLOGY
10% SOILS



Weighted Overlay Rating
2 is poor 10 is excellent

2	1.2 ACRES
3	5.9 ACRES
4	25.7 ACRES
5	49.7 ACRES
6	79.4 ACRES
7	136.5 ACRES
8	222.4 ACRES
9	209.2 ACRES
10	62.7 ACRES

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY-EQUAL INFLUENCE

25% CANOPY
25% SLOPES
25% HYDROLOGY
25% SOILS

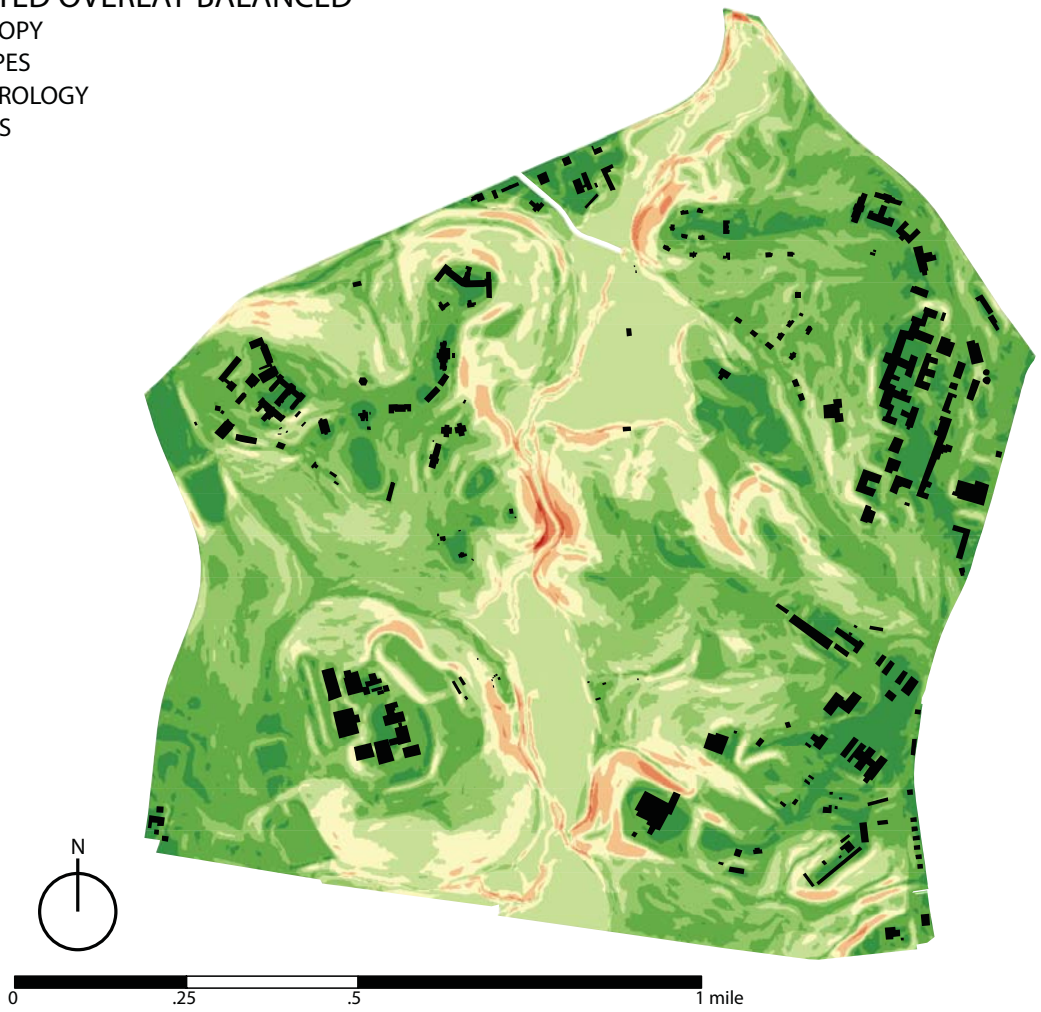
Weighted Overlay Rating
2 is poor 10 is excellent

2	.3 ACRES
3	2.8 ACRES
4	11.7 ACRES
5	45.0 ACRES
6	56.8 ACRES
7	117.3 ACRES
8	175.6 ACRES
9	283.0 ACRES
10	100.2 ACRES

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY-BALANCED

10% CANOPY
50% SLOPES
30% HYDROLOGY
10% SOILS



Weighted Overlay Rating
2 is poor 10 is excellent

2	.08 ACRES
3	.4 ACRES
4	3.4 ACRES
5	22.8 ACRES
6	77.2 ACRES
7	181.8 ACRES
8	194.4 ACRES
9	232.4 ACRES
10	80.3 ACRES

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY- EQUAL INFLUENCE WITH MASK

25% CANOPY
25% SLOPES
25% HYDROLOGY
25% SOILS

MASKED ELEMENTS-
BUILDINGS
FLOODWAY
PONDS
SEWERLINE BUFFERS

TOTAL ACREAGE- 73.2

Weighted Overlay Rating
2 is poor 10 is excellent

2	.02 ACRES
3	1.2 ACRES
4	10.4 ACRES
5	39.2 ACRES
6	36.2 ACRES
7	114.3 ACRES
8	167.8 ACRES
9	266.5 ACRES
10	83.9 ACRES

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- KEY FINDINGS

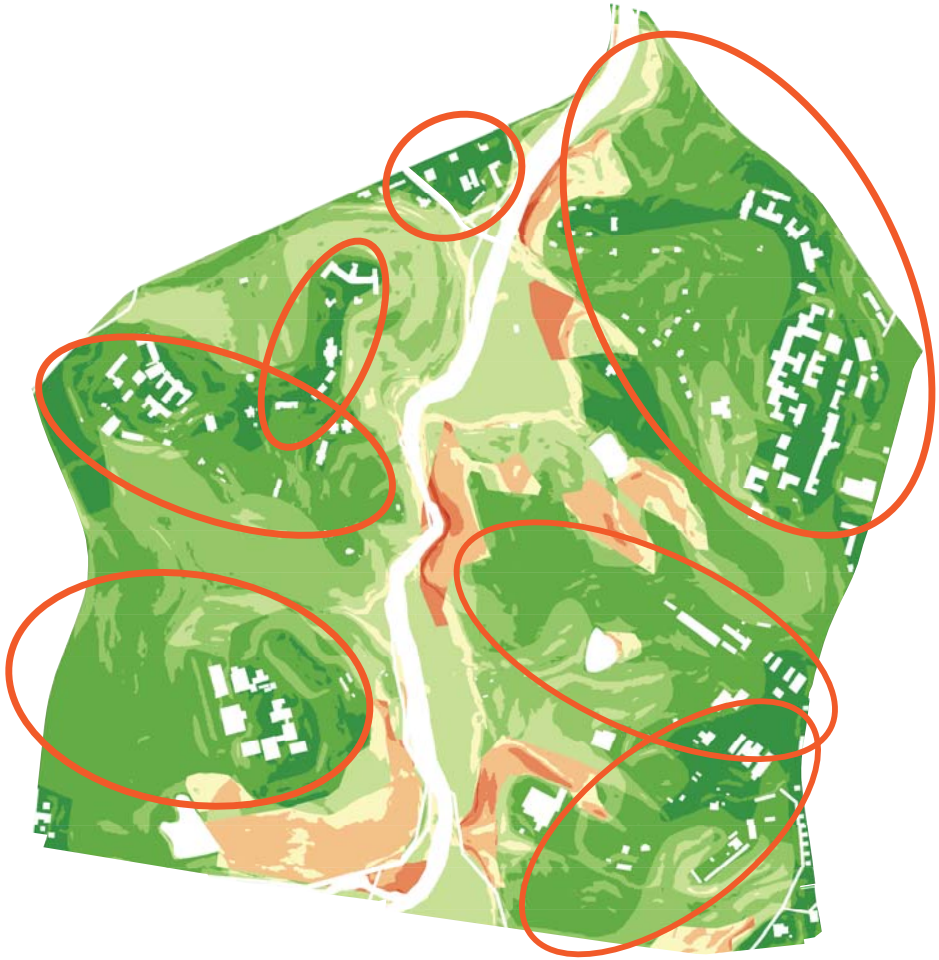
Previous Development on the site focused on the higher elevated portions of the site, and generally those are the optimal locations to build.

Many of the severe slopes on the site are located near the built structures, possibly due from grading of the site for those built structures.

Sewerline and powerline infrastructure is generally located outside of the most suitable land for development.

Undeveloped land is still located near some of the highest elevations on the site.

Most of the Overlay Scenarios identify very similar sections of the site with the highest weights of suitability- roughly circled to the right.



BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY- BUILDING SUITABILITY WITH MASK

33% CANOPY
33% SLOPES
33% HYDROLOGY

MASKED ELEMENTS-
BUILDINGS INCLUDING SURPLUS HOSPITAL PROPERTIES
NEW HOSPITAL BUILDING
PARKING LOTS
FLOODWAY
PONDS
SEWERLINE BUFFERS

TOTAL ACREAGE- 117.2 acres

Weighted Overlay Rating
suitable acreage

	Poor	76.1 ACRES
	Secondary	156.7 ACRES
	Primary	444.6 ACRES

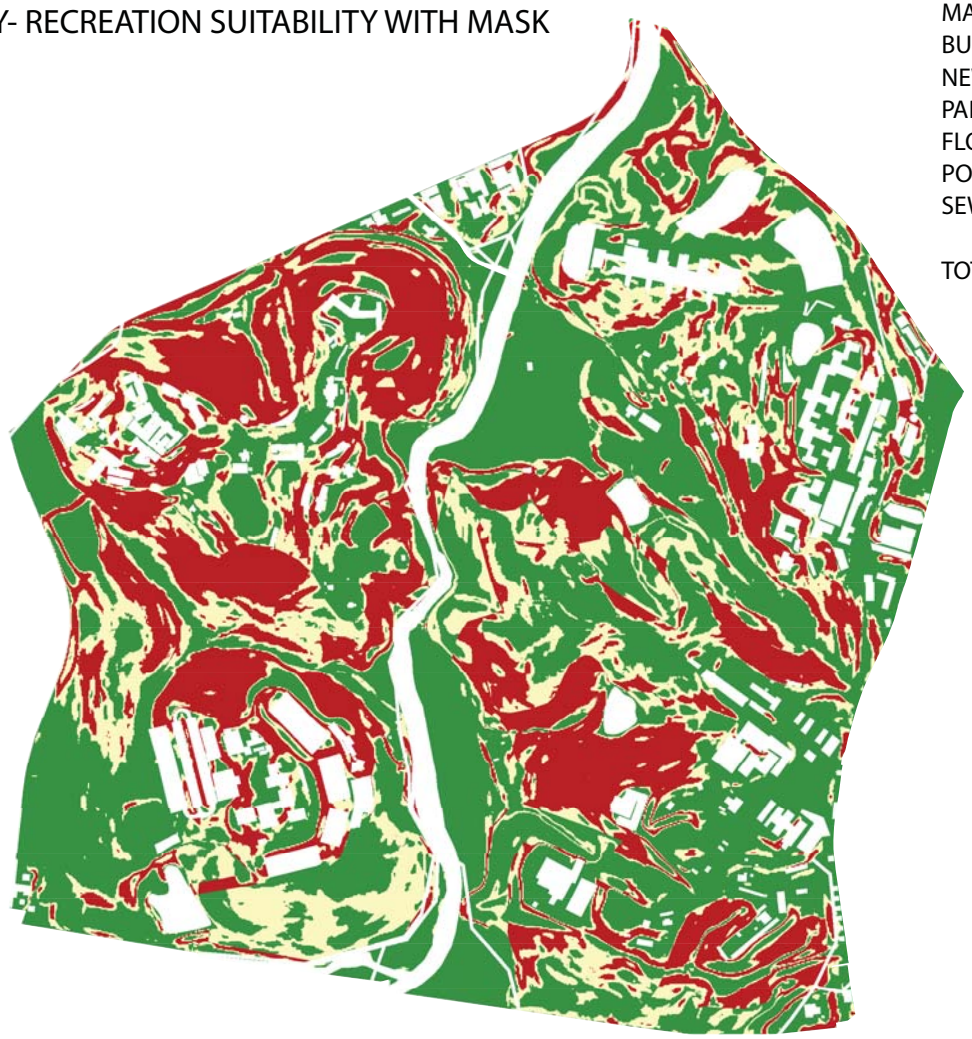
N

0 .25 .5 1 mile

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY- RECREATION SUITABILITY WITH MASK

45% SLOPES
35% CANOPY
10% HYDROLOGY
10% SOILS



MASKED ELEMENTS-
BUILDINGS INCLUDING SURPLUS HOSPITAL PROPERTIES
NEW HOSPITAL BUILDING
PARKING LOTS
FLOODWAY
PONDS
SEWERLINE BUFFERS

TOTAL ACREAGE- 117.2 acres

Weighted Overlay Rating
suitable acreage

	Poor	188.1 ACRES
	Secondary	155.8 ACRES
	Primary	333.5 ACRES

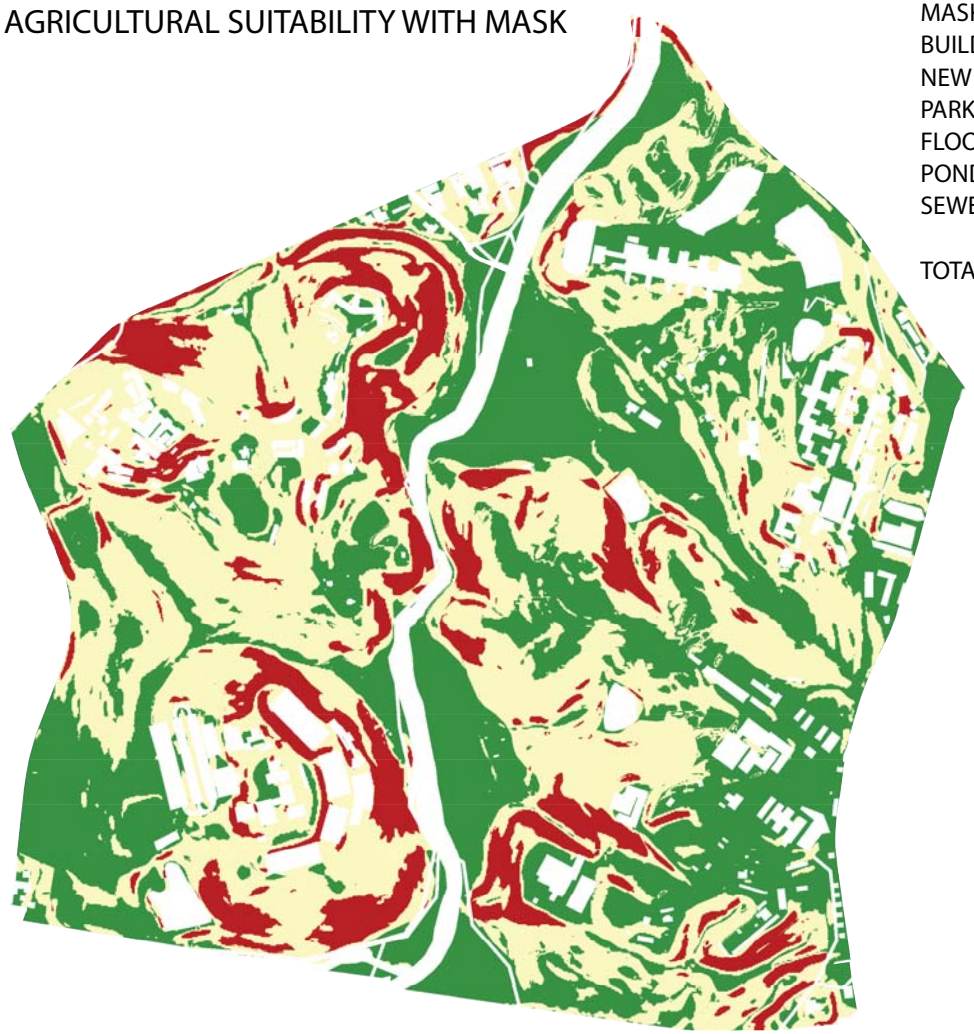
N

0 .25 .5 1 mile

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY- AGRICULTURAL SUITABILITY WITH MASK

30% HILLSHADE
30% SLOPES
30% SOILS
10% HYDROLOGY



MASKED ELEMENTS-
BUILDINGS INCLUDING SURPLUS HOSPITAL PROPERTIES
NEW HOSPITAL BUILDING
PARKING LOTS
FLOODWAY
PONDS
SEWERLINE BUFFERS

TOTAL ACREAGE- 117.2 acres

Weighted Overlay Rating
suitable acreage

	Poor	86 ACRES
	Secondary	314.6 ACRES
	Primary	276.5 ACRES

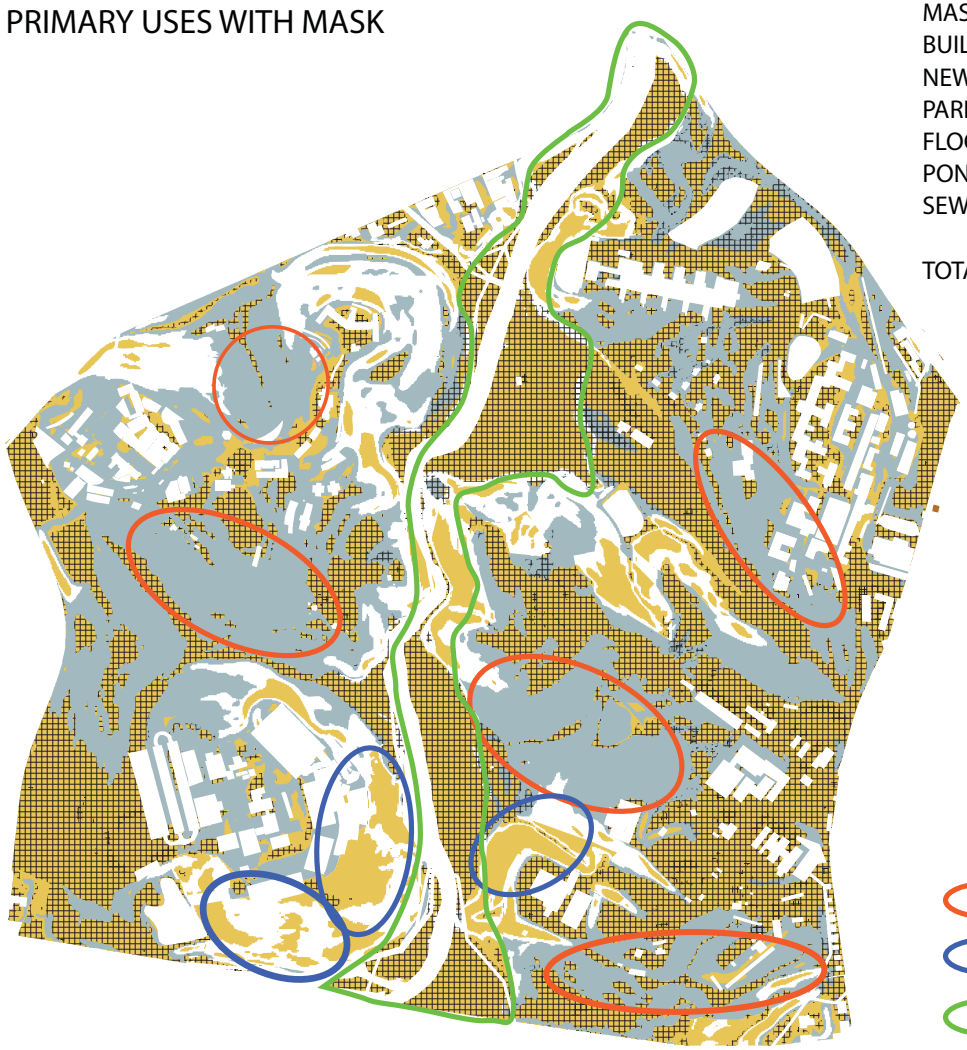
N

0 .25 .5 1 mile

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- WEIGHTED OVERLAY

WEIGHTED OVERLAY- PRIMARY USES WITH MASK

AGRICULTURE
BUILDABILITY
RECREATION



MASKED ELEMENTS-
BUILDINGS INCLUDING SURPLUS HOSPITAL PROPERTIES
NEW HOSPITAL BUILDING
PARKING LOTS
FLOODWAY
PONDS
SEWERLINE BUFFERS

TOTAL ACREAGE- 117.2 acres

Primary Use Legend

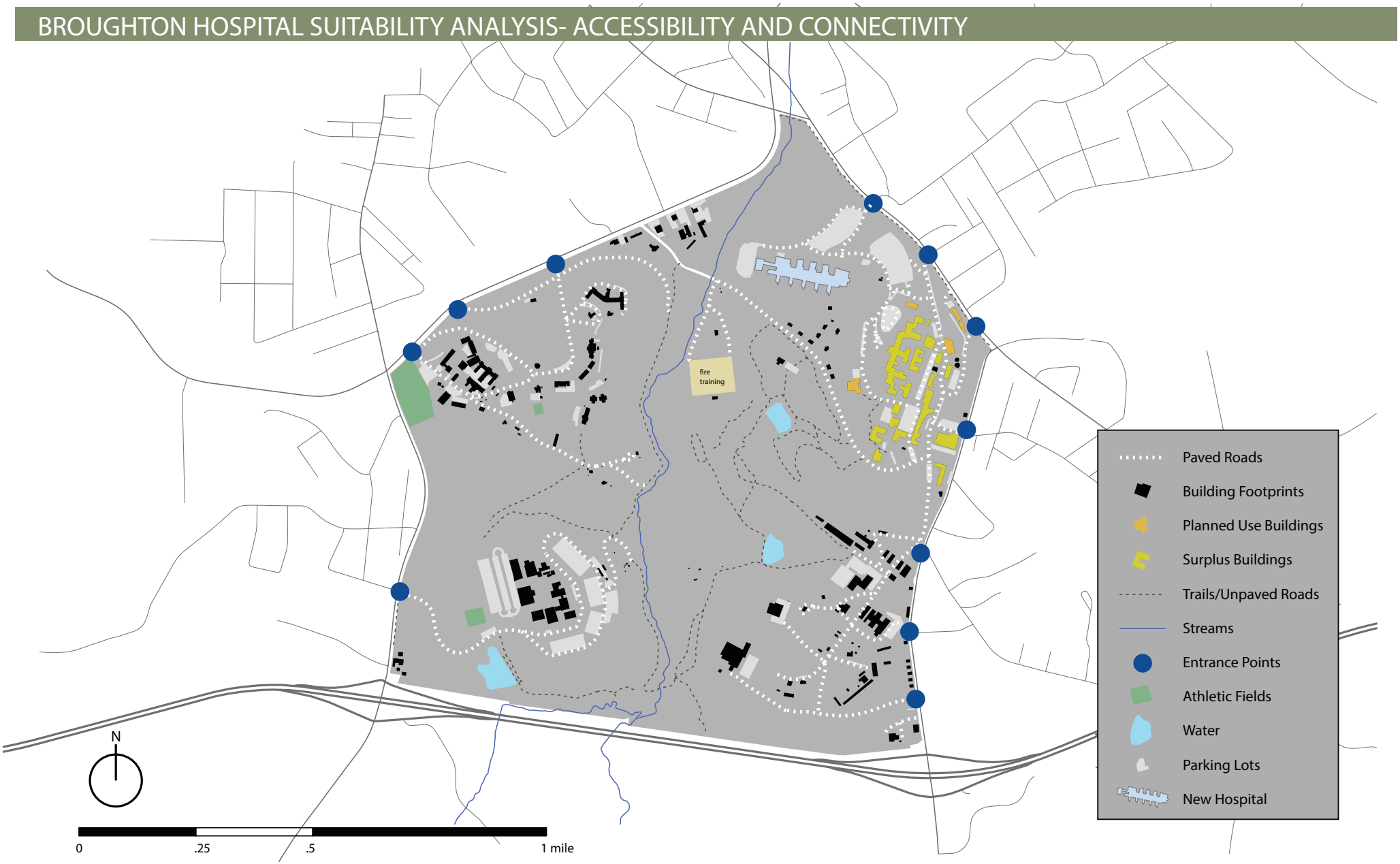
- Primary Buildable Land
- Primary Recreation Land
- Primary Agriculture Land
- Buildable Land with Little Conflicting Primary Uses
- Recreation Land with Little Conflicting Primary Uses
- *Agriculture and Recreation Land with Little Conflicting Primary Uses

* The agriculture and Recreation Primary land overlaps for much of the site with little to no conflict with the Primary Buildable Land.

N

0 .25 .5 1 mile

BROUGHTON HOSPITAL SUITABILITY ANALYSIS- ACCESSIBILITY AND CONNECTIVITY



DEVELOPMENT FINANCE INITIATIVE ERIC THOMAS APRIL 12, 2015

BELK architecture
Adaptive Reuse • Historic Preservation • Master Planning • Interior Architecture • Environmental Graphics • Sustainable Design
735 Ninth Street Durham, NC 27705 p: 919 .286 .2575 f: 919 .286 .1906 www.belkarchitecture.net

Broughton Campus Building Survey

Note: Building areas are calculated using materials provided by Broughton Facilities and are not field verified

AVERY (CONTRIBUTING)
Existing use: patient rooms
Existing building is in excellent condition. Multiple wing building with 3-4 full stories with large attic spaces over most wings. Central wing has 5 stories plus attic. Lower floor of all wings is partially below grade. Load bearing exterior masonry walls with load bearing interior corridor walls (18" thickness). Corridor widths are 11'-12' throughout building, with perimeter patient rooms averaging 10'-11' depths and 8' widths. Windows are single glazed, majority of floors are terrazzo with turned up terrazzo base. Building height exterior sun porch elements have been built onto rear facades of 2 wings. Most ceilings have been lowered to accommodate hvac (but pulled back from windows), historic ceilings are at 11'-12' with the exception of the lower level which is 9'. Building has partial sprinkler system. Potential for adaptability (residential, small office, educational) is good but will have some challenges, due to exceptionally wide historic corridor width and small patient room sizes.

BATES (CONTRIBUTING)
Existing use: storage, sewing, office
Existing building is in excellent condition, 1 primary floor with 2 sections having a second entire story. Building is built into hill with partial walk out lower level on east facade. Load bearing exterior masonry walls, few interior load bearing elements, mixed floor finishes, and single glazed windows. Many ceilings have been lowered to accommodate hvac (but pulled back from windows), historic ceilings are generally at 10'-12'. Patchwork of distinct buildings and intermediate connector elements. Sun porches (some enclosed) are on both the east and west facades of the building. Building does not have sprinkler system. Potential for adaptability (residential, office, assembly, retail) is good.

DINING (CONTRIBUTING)
Existing use: dining, recreation
Existing building is in excellent condition, 1-story, and is connected to the Thomas Building on its eastern façade and has a 1-story ramped addition (not ADA compliant) to Scroggs on its north façade. The primary volume is 48'x92', has interior columns, and is subdivided with non-structural partial height partitions. Historic ceiling height is 13'-6". Potential for building adaptability (office, retail, assembly) is good due to open plan of structural system and number of exterior windows.

HARPER (CONTRIBUTING)
Existing use: patient rooms
Existing building is in excellent condition. 3 full stories with a 4th smaller story. Building is built into hill with walk-out lower level on west façade. A 1-story addition on its northeast wing connects it with the dining building. Load bearing exterior masonry walls with load bearing interior corridor walls (18" thickness). Corridor widths are 11'-12' throughout building, with perimeter patient rooms averaging 10'-11' depths and 8' widths. Windows are single glazed, majority of floors are terrazzo with turned up terrazzo base. Building height exterior sun porch elements have been built onto perimeter facades. Most ceilings have been lowered to accommodate hvac (but pulled back from windows), historic ceilings are at 11'-6" on floors 2 and 3, and 9'-10' on floors 1 and 4. Building does not have sprinkler system. Potential for adaptability (residential, small office, educational) is good but will have some challenges, due to exceptionally wide historic corridor width and small patient room sizes.

HOOPER (NON CONTRIBUTING)
Existing use: storage, campus kitchen
Existing building is in excellent condition. 1-2 stories set into hill, lower story is walk-out.
F1 slab on grade, F2 cast concrete beams and joists, roof structure open web steel joists supported by steel beams, primarily open plan w/ columns, with the exception of some office area and a large

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commercial kitchen. Deep floor plan with windows and/or door openings on all elevations. Bottom of floor and/or roof deck is 12'-15' depending on location. Building has a partial sprinkler system. Potential for adaptability (educational, office, storage) is good but will have some challenges, due primarily to the depth of floor plan and difficulty getting natural light into center of building.

SAUNDERS (TB Ward) (did not tour) (CONTRIBUTING)

SCROGGS
Existing use: patient rooms
Existing building is in excellent condition. 3 stories (1st is partially below grade) with a smaller 4th story mechanical attic (36'x60') over central core of building. A 1-story addition on its south end connects it with the dining building. Load bearing exterior masonry walls with load bearing interior corridor walls (13" thickness). Corridor widths are 11'-12' throughout building, with central core patient rooms averaging 10'-11' depths and 7' widths, and larger activity rooms (22'x61') on the north and south ends of the building. Windows are single glazed, majority of floors are terrazzo with turned up terrazzo base. Exterior sun porch elements have been built onto central patient room facades on stories 2 and 3. Ceiling portions have been lowered to accommodate hvac (but pulled back from windows), historic ceilings are between 9' and 10' depending on floor. Building does not have sprinkler system. Potential for adaptability (residential, small office, educational) is good but will have some challenges, due to exceptionally wide historic corridor width and small central patient room sizes.

SOUTH (CONTRIBUTING)
Existing use: abandoned, could not gain access.
Existing building is in fair condition. 2-stories built into hillside with lower story walkout. Historic roof is collapsed in some areas due to water infiltration and wood rot. Exterior masonry walls appear to be in good condition, most historic windows remain intact. Location of building and apparent rationality of plan make potential adaptability very good, despite roof repairs (and likely some floor/structural) that would be required with a renovation.

THOMAS (CONTRIBUTING)
Existing use: wellness center, pharmacy
Existing building is in good condition, 1-story, and is connected to the dining building at its northwest corner. Historic roof has been removed and replaced with a flat roof, many historic windows have been replaced with modern window systems, only historic masonry walls and some historic windows remain. Interior consists of a wellness center (66'x40', 10'-6" hard ceiling ht.), a collection of smaller restroom and shower rooms, and a pharmacy (88'x40', 10' lay-in ceiling ht.). Potential for building adaptability (office, retail, assembly) is good due to open plan of structural system and number of exterior windows. Could have potential conflicts with site design (sits in potential campus axis). Much of building's historic fabric has been lost, making historic rehabilitation of this building potentially difficult.

JONES (NON CONTRIBUTING)
Existing use: Patient medical support, staff offices and limited patient rooms.
The existing building is in structurally sound shape with a flat rubber roof in good condition. The building is 104,000 SF and seven stories tall with the upper stories stepping back on the wings. The building is ca. 1950 and has outdated MEP systems. There is not a fire sprinkler system. The center corridor is 8 feet wide and has a low concealed spline ceiling with utilities above. This corridor ceiling chase is similar to the building's original design. The structure is steel frame with concrete floors and clay tile w/plaster interior partitions. The low floor to floor height will hamper new system installation. ADA code improvements will be required throughout. The exit stairs are not compliant with modern code requirements. Although reasonably adaptable to dormitory residential and/or office use, the building is non-contributing within the National Register Listing and sits tightly within the courtyard area at the center of Avery and hampers flexible improvements of the site core.

MARSH (CONTRIBUTING)
Existing use: Not currently in use.
The existing building is structurally sound and ca. 1920 with a flat rubber roof in good condition. The building is 15,800 sf and the original (load bearing) layout included a center core (original kitchen) with a monitor roof with clerestory windows. The center core is wrapped by a 24 feet wide open use room on three sides. A large screened porch is on the left side. All MEP systems appear outdated and the building does not have a fire sprinkler system. The floor layout provides flexible future use potential as event, recreational, support spaces.

REECE (CONTRIBUTING)
Existing use: Currently used as art, music, craft and other special activities.
The existing building is structurally sound and ca. 1913 with a hipped, slate tile roof. The floor layout has (within the original load bearing plans) large open rooms at each end of the building with smaller rooms (9 ft. x 11 ft.) lining the connecting 10 ft. wide corridors. The structural system is load bearing masonry walls with steel framing and concrete floors. All MEP systems need replacement and the building does not have a fire sprinkler system. Full ADA accessibility improvements must be put into place. The layout's large end room potential would allow adaptability as educational, office, and small event/training spaces.

LAUNDRY (CONTRIBUTING)
Existing use: Currently used by the NC Department of Corrections as an operating laundry/sewing facility
The existing one and one half floor, ca. 1939 building is structurally sound with functional MEP systems for the light industry activities. All new systems would be needed for any change of use. The laundry is fully equipped with relatively new equipment. The laundry and sewing operations are staffed with correctional department inmates. The building would be relatively adaptable for a range of uses and future site uses may find this operation of concern.

STEAM PLANT (CONTRIBUTING)
Existing use: This facility provides all steam needs for the full campus.
The existing ca. 1939 building is structurally sound and features art-deco details and very large multi-lite steel hopper windows. The interior is occupied by four ca. 1950 boilers within an open three story high room. If this facility is decommissioned and separate systems be installed across the campus, this dramatic space lends itself to a destination hospitality/recreation use.

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Broughton Preliminary Areas

	floor	GSF est.	NSF est.	Built
Avery	0	90,049	47,250	1875
	1	90,049	47,250	
	2	88,462	46,268	
	3	57,955	31,765	
	4	5,970	3,513	
	5	4525	2356	
Bates	1	32,657	26,125	1924
	2	15,062	11,171	
F2 Dining	1	7,347	5,877	
Harper	1	13,000	6,203	1903
	2	13,000	6,203	
	3	13,000	6,203	
	4	7,752	2,915	
Hooper	1	24,967	19,973	1960
	2	24,967	19,973	
Laundry	b	8,787	7,028	1939
	1	11,685	9,384	
Machine Shop	1	5,190	4,152	1939
Marsh	1	13,740	10,992	1935
Moran	b	8,621	6,896	1940
	1	8,621	6,896	
Nurses Dorm	1	12,377	7,180	1950
	2	12,377	7,180	
	3	12,377	7,180	
Reece	1	7,761	3,783	1913
	2	7,761	3,783	
Saunders	b	3,460	2,700	1939
	1	7,312	4,892	
	2	7,312	4,892	
Scroggs	1	6,292	3,714	1896
	2	6,292	3,714	
	3	6,292	3,714	
	4	2,215	969	
South	b	5,830	4,664	1906
	1	5,830	4,664	
Steam Plant	1	9,309	7,231	1939
TOTAL		658,203	398,653	

North Carolina School for the Deaf Campus Building Survey

Note: Building areas provided by NCSD and are not field verified

MAIN BUILDING (CONTRIBUTING)

86,167	52,259	1894
gross	net	built

SPRINKLERS

Similar to Goodwin. 4 story, load bearing masonry walls, interior columns, classroom subdivisions. Could be adapted to residential, corridors 7'-8', not as wide as Avery, better efficiency. Large Auditorium in central wing that would need to be preserved.

HOEY BUILDING (CONTRIBUTING)

22,620	14,150	1939
gross	net	built

SPRINKLERS

3 story, load bearing exterior masonry walls, interior columns, classroom subdivisions. No major impediments outside of typical historical guidelines to repurposing as residential, generous large windows.

OLD GYM AND POOL (CONTRIBUTING)

11,692 10,800 1924

NO SPRINKLERS

3 story, load bearing exterior masonry walls, some subdivision for offices on floors 0 and 1, large room w/ existing pool. Plans in works to renovate into Therapy Rooms and support offices. Could be somewhat problematic renovating into all residential due to large pool room (should not subdivide in tax credit scenario).

RONDTHALER HALL (CONTRIBUTING)

12,765	11,165	1928
gross	net	built

NO SPRINKLERS

3 story, load bearing exterior masonry walls, interior column structure, non-bearing block partitions. Subdivided into large classrooms and support rooms. Would adapt well to residential, large windows. Cast concrete floor system could be problematic w/ introduction of apartments.

SERVICE BUILDING (LAUNDRY) (CONTRIBUTING)

27,054	24,699	1916
gross	net	built

NO SPRINKLERS

1 story (2-3-story wings on ends), load bearing exterior masonry walls, interior column and load bearing wall structure, some large open span rooms. Array of distinct structural bays (Laundry, IT, offices, boilers) and large mechanical attics. Could be repurposed into residential, flats and townhomes.

CATTLE BARN (CONTRIBUTING)

10,296	9,128	1940
gross	net	built

NO SPRINKLERS

Large gambrel roofed barn, 2 stories (basement typical ht, barn story 25-30' high). No plans, appears to be a mixture of masonry and wood structure with regular window openings on first level. Wood structure appears to be intact, some siding replacement needed. Roof overdue for replacement.

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Infirmary (ContributinG)

7,230	3,813	1969
gross	net	built

NO SPRINKLERS

No Plans, 2 stories w/ partial basement. Load bearing exterior masonry walls with mixture of load bearing interior walls and columns. Currently Audiology labs and offices, small to medium sized rooms off a central corridor. Would adapt well to residential or wellness center. Generous windows, but piecemeal floorplan may impact efficiency of residential due to lack of repetition.

JOINER HALL (CONTRIBUTING)

20,873	11,648	1930
gross	net	built

NO SPRINKLERS

3 story, no plans. Likely load bearing masonry walls, interior columns, classroom subdivisions. Large generous windows, would adapt well to residential use. Some exterior envelope damage due to water infiltration, will require some wall and window repair/replacement.

GOODWIN HALL (CONTRIBUTING)

41,237	27,731	1911
gross	net	built

NO SPRINKLERS

3 story, Load bearing exterior masonry walls with interior load bearing walls and columns. Apartment and large multi-bed dormitory rooms, support spaces, would adapt well to residential use.

RUSMISELL HOUSE (CONTRIBUTING)

7,495	7,227	1880
gross	net	built

No plans, unable to get inside, large residential house. Appears to be in good shape from outside inspection. Likely could preserve residential use w/ subdivision, or adaptable into wellness program.

STAFF HOUSE (CONTRIBUTING)
STORAGE 1 (CONTRIBUTING)
Storage 2 (ContributinG)

These small contributing buildings (south of Barn Road) are in poor shape and are likely beyond the point of successful rehabilitation.

NON-CONTRIBUTING BUILDINGS:

JOINER WAREHOUSE

4,469	4,034	1961
gross	net	built

No plans, 2 story. Likely load bearing masonry walls, interior columns. No windows.

MCCORD BUILDING

16,654	13,904	1967
gross	net	built

No Plans, Likely load bearing exterior masonry walls with mixture of load bearing interior walls and columns. No window openings, 300 spectators.

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CHAPEL

7,238	5,235	1974
gross	net	built

Load bearing exterior masonry walls with interior open span glulam beam structure and support spaces. Seating for 200.

UNDERHILL GYM

22,821	18,402	1953
gross	net	built

2 story, no plans. Likely load bearing exterior masonry walls with mixture of load bearing interior walls and columns, with large free-span gymnasium area.
400 spectators

NORTHCOTT HALL

16,766	12,756	1973
gross	net	built

NO SPRINKLERS
2 story, no plans. Load bearing exterior masonry walls with mixture of load bearing interior walls and columns. Relatively few window openings, garage bay doors opening to south.

CRUTCHFIELD HALL

13,766	8,991	1971
gross	net	built

Open floor plan with interior columns, some smaller perimeter rooms. 1 story masonry, windowless

HOFFMEYER HALL

38,780	26,584	1959
gross	net	built

3 story residence hall. Load bearing exterior masonry walls, interior column structure. Subdivided into dorm rooms support rooms.

STRUCTURAL ASSESSMENT

STEWART

Structural Narrative

Overview

Construction of the Broughton Hospital complex spanned several decades, and a multitude of buildings comprise those targeted for reuse. Accordingly, there is variation in framing techniques and materials used to construct the buildings. The key, contributing buildings to the Broughton Campus, however, are similar in composition.

Because of the number of buildings present, only general recommendations and observations can be made. Uniformly, all reuse of the current buildings must conform to the *2015 North Carolina Existing Building Code*, which extensively references the *2012 North Carolina State Building Code*. The *Existing Building Code* establishes tiers for addition, alteration, or change in use based on the magnitude of changes contemplated. The tier that a building is grouped into determine the level of conformity that the existing structure must achieve with the current building code. Where changes are extensive, the buildings' structures will need to meet all requirements of current codes. Conversely, where changes are minimal, all that may be required are repairs to damaged members.

Existing Construction

The majority of structures present on site that are slated for reuse were originally constructed with masonry bearing walls and wood floors. During the middle years of the Twentieth Century, the wood framing was largely replaced by concrete floors. The concrete was cast on metal lathe over open webbed, steel bar joists. It is unclear why this change was made. It is possible that the wood framing deflected downward in the five decades from the time of construction to the time of the reframing, and the wood was replaced for serviceability concerns. The State of North Carolina also adopted its first building code contemporaneously with the switch from wood to steel, and the change may have been an effort to house the hospitals' clients in, modern, non-combustible construction that met the newly adopted building code.

Suitability of Gravity Load Resisting Systems

Regardless of the rationale for the change in framing, the concrete and bar joist floors represent a relatively modern method of floor framing. While most areas are covered by finish materials, where it is possible to observe the floor system, the properties of the floors are determinable, and it's apparent that the structure was designed to accommodate those loads found in the first edition of the North Carolina Statewide Building Code. The visible portions of structure display few signs of distress or deterioration.

Building codes have advanced in the intervening years, but the gravity loads have remained largely consistent. Except for proposed areas of unusually heavy loading, it is likely that the existing steel and concrete floors are sufficiently robust to accommodate new uses.

Portions of the earliest buildings also contain some remnants of wood framing. Where extensive renovations are anticipated within a building, the wood framing will need to come into compliance with current building codes. Extensive investigations will be required to determine the framing geometry, the connection details, and appropriate material values for the woods used in the buildings. Portions of deficient framing will require augmentation.

Suitability of Lateral Load Resisting Systems

Where building codes have evolved most significantly is in the area of lateral force resistance. Lateral forces are generally generated from either wind loads or seismic events. As recently as 1991 when the State transitioned from the *1976 North Carolina State Building Code*, lateral loads were given only cursory attention in North Carolina.

Currently the buildings rely upon plain, meaning unreinforced, masonry shear walls. These shear walls have adequately resisted lateral loads to present. However, pending a site specific geotechnical investigation, these walls may not be a permissible lateral force resisting system under the current building code.

The masonry shear walls are also spaced very closely together. In Avery Building for example, the walls occur between each client room. The frequency of these walls would tend to make space difficult to allocate within the buildings, and removal of some of the walls should be anticipated.

Where alterations to the buildings are planned or where walls will be removed, the entire lateral system will need to be examined and brought up to current building codes. Although to date the shear walls have successfully served these buildings, it is unlikely that the walls could resist the forces prescribed by modern design codes.

New shear walls or braced frames may be inserted into the buildings' framing systems to accommodate the code loads. Allowance for new micro-piles foundations should be made below the new lateral force resisting elements. Micro piles should are anticipated because any new foundations must be unyielding, since the surrounding building is unlikely to settle further.

Summary

Although new lateral force resisting systems are anticipated, this is not an unusual occurrence where existing buildings are renovated. Each of the buildings will require extensive structural investigation and analysis, should the project advance. However, no condition observed to date would preclude the reuse of the buildings on the Broughton site.

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Broughton Hospital - PME Site Investigation

Site Visit: Monday, October 19, 2015
Mechanical: Brett Mabe, P.E.
Electrical: Rick Copeland, P.E.
Plumbing: Danny Brush, P.E.

General Campus Findings:

- Mechanical: The central steam plant serves the majority of the buildings on the Broughton Campus. Steam lines extend out from the plant through a network of tunnels to the buildings. Tunnel routing is well represented in the Fire Protection Waterline Project drawing set from 1984. There are three main chiller plants on campus. The first chiller plant is located between the steam plant and the Jones Building and it is dedicated to the Jones Building. The second is located at the North end of the Avery Building and it is dedicated to the Avery Building. The first two chiller plants have interconnecting piping in the tunnel between Avery and Jones which allows them to switch over if needed. The third chiller plant is located at the rear of F-2 Dining and it serves F-2 Dining, Thomas, Scroggs and Harper Buildings. Several buildings have stand alone systems that will be discussed under each building description.
- Plumbing: Buildings on Broughton Campus have similar plumbing systems throughout. Most systems are dated, including fixtures. Domestic cold water is distributed throughout the campus below grade and separate from the fire service. Domestic water pressure appears to be ample. 83 psi was displayed on a gage at the cooling tower adjacent to Saunders. Also, Jones, the tallest building on campus, does not have any pressure boosting system, indicating sufficient pressure to serve the highest fixtures. All buildings receive independent domestic cold water service, but not all buildings are currently served by a backflow preventor. Those that are have not been regularly tested and serviced. Domestic hot water is centrally produced at the steam plant and distributed to all buildings via the campus tunnel system. Sanitary waste serves all buildings separately and no grease interception exists. Fixtures generally are institutional or health care type fixtures with flush valves and manual faucets. Many of the fixtures would not meet today's ADA requirements. Piping that was accessible to observe was copper for water service and cast iron for sanitary waste. Insulation types varied, likely dependant on era of installation.

Power House Building Findings:

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- Mechanical: This building houses the steam boilers for the campus. There are four duel fuel, water tube boilers. The primary fuel source is natural gas and the secondary fuel source is #2 fuel oil. There are two existing fuel storage tanks with plans for a third. Two of the boilers were manufactured in 1950 and two were manufactured in 1953. One of the boilers is no longer in operation. Facilities personnel stated that one boiler could carry the campus unless outdoor conditions were extremely cold. Steam and condensate piping are aging and condensate piping has significant leaks.
- Electrical: This building is served by a 225 kVA, 480 V, PMT. There is an existing 800 amp service. A portion of this building is backed up by an optional standby Generator. The Generator is a Cummings, 275 kW, 480V unit that has a 400 amp output breaker. We understand that the state maintains the generator and ATS well and would assume these components would be fine for reuse. The existing main electrical panel and interior meter are relatively new and could easily be reused in the future. Most of the downstream equipment is old and we would likely recommend it be replaced- depending on the future use.
- Plumbing: This building is served by domestic cold water for steam makeup and domestic hot water production. The domestic hot water is produced via two steam powered hot water generators. Two end suction pipes serve the hot water system. The pumps and hot water generators appear to be advanced in age and likely at the end of their expected service life. Fixtures observed included floor drains, sinks, and water coolers.

Chiller Building (Jones) Findings:

- Mechanical: This building houses a single, water-cooled chiller manufactured by Carrier in 2013. The chiller has screw compressors, R-134a refrigerant and has a nominal capacity of 265 tons. Chilled water is distributed to the building in a primary/secondary pumping scheme with lead/lag pumps for each loop. Condenser water pumps are also lead/lag. All pumps were manufactured in 1999. The cooling tower for the chiller is located on a ground mounted pad at the rear of the Saunders building. The cooler tower is a crossflow, two-cell open tower manufactured by Marley in 1999. The tower has a nominal capacity of 600 tons. It appears that the tower was sized for a possible addition of a second chiller. There are also piping connections and space for a second chiller and pumps in the chiller building. All equipment appears to be in good working order.
- Electrical: This building is served by a 1000 kVA, 480 V, PMT. Meter number 077551417. There is an existing 1200 amp service panel, a 75 kva step-down transformer, a 500 amp motor control center, and 2-225A distribution panels. The existing electrical equipment is relatively new and could easily be reused in the future- depending on the future use. The

cooling tower has a 600 amp, 480 V, electrical service. We assume this is fed underground from one of the nearby PMTs- possibly shared with the Power House.

- Plumbing: Domestic water in this building serves makeup to the chilled water system. The building is served by an RPZ type backflow preventor. A pressure gage on the incoming domestic water displayed 55 psi. There are a number of domestic water drops to below slab that appear to prime the traps of various floor drains in the space. Fixtures observed include a service sink and floor drains.

Chiller Building (Avery) Findings:

- Mechanical: This building houses two, water-cooled chillers manufactured by Carrier. The first chiller was manufactured in 2002 and has centrifugal compressors, R-11 refrigerant and a nominal capacity of 454 tons. The second chiller was manufactured in 1983 and has centrifugal compressors, R-11 refrigerant and a nominal capacity of 250 tons. Chilled water is distributed to the building in a primary only pumping scheme. Condenser water pumps are dedicated to each chiller. Each chiller has it's own dedicated cooling tower located on the roof of the building. The first tower was manufactured by Baltimore Aircoil Company in 1989 and serves the 2002 chiller. The second tower was manufactured by Marley in 1983 and serves the 1983 chiller. Most equipment is well into or beyond it's normal service life with the possible exception of the 2002 chiller.
- Electrical: The Avery Chiller appears to be served by the nearby 1000 kVA, 480 V, PMT. Meter number 077551420.There is an existing 1200 amp, 480 V electrical service. The existing electrical equipment is old.
- Plumbing: Domestic water in this area serves makeup to the chilled water system.

Chiller Building (F-2 Dining) Findings:

- Mechanical: This building houses a single, water-cooled chiller manufactured by Carrier in 1973. The chiller has centrifugal compressors, R-11 refrigerant and has a nominal capacity of 250 tons. Chilled water is distributed to the building in a primary only pumping scheme. The cooling tower for the chiller is located on the roof of the chiller building. The cooler tower is a crossflow, single-cell, open tower manufactured by Evapco in 2002. The tower has a nominal capacity of 256 tons. The tower is in good shape but all other equipment is well beyond its service life.
- Electrical: There is a chiller plant near the building that has its own 600 amp, 480V service. We assume this is fed underground from one of the nearby PMTs.
- Plumbing: Domestic water in this area serves makeup to the chilled water system.

Avery Building Findings:

CRENSHAW CONSULTING engineers www.crenshawconsulting.com

- Mechanical: The Avery Building appears to have undergone a major mechanical renovation in 1989. The building is served by air handling units located in mechanical rooms on each floor. The units have ducted supply and return air. The units have chilled water and hot water coils. All units are provided with ventilation air. There are steam to hot-water converters located throughout the building along with chilled and hot water pumps. Facilities noted that they have significant moisture issues in the basement areas and several dehumidifiers were present in the unoccupied portions. Most systems appear to be in good working order.
- Electrical: The Avery Building has 3 electrical services: South, Central, and North electrical services as well as a separate service for the Avery Chiller. There is an existing Edwards fire alarm system in the building. The system is very old and fire alarm in the building does not meet today's code. We would recommend replacing the system.
  The South electrical service is served by a 300 kVA, 480 V, PMT. Meter number 077551414. There is an existing 1000 amp service, and ATS, and a 400 kva and a 150 kva step-down transformers. A portion of this building is backed up by a Generator. The Generator is a Cummings, 600 kW, 480V unit. We understand that the state maintains the generator and ATS well and would assume these components would be fine for reuse. The existing electrical equipment is old and we would likely recommend it be replaced-depending on the future use.
  The Central electrical service seemed to be fed from the South electrical service, though Bruce said it was a separate service. Further investigation would be required to be sure either way.
  The North electrical service is served by a 300 kVA, 208 V, PMT. There is an existing 1000 amp service, and ATS, and a 300 amp disconnect for the generator. A portion of this building is backed up by a Generator. The Generator is a Kohler, 80 kW, 208V unit. We understand that the state maintains the generator and ATS well and would assume these components would be fine for reuse. The existing main electrical equipment is relatively new and could easily be reused in the future.
- Plumbing: Plumbing fixtures were generally in fair condition, in occupied spaces, and varied from fair to poor in unoccupied areas. Fixtures included typical bathroom and break room type fixtures with tamper proof trim; flush valve water closets, urinals, lavatories, floor drains, sinks, and water coolers.

Employee Cafeteria Building Findings:

- Mechanical: We did not survey this building. We assume that it is conditioned similar to the Avery Building.

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- Electrical: We did not survey inside the Employee Cafeteria building but assume that the building is fed (electrically) from the Avery Building. We assume from Avery Central.
- Plumbing: We did not survey this building. Facilities personnel stated that there is no grease interception serving the commercial kitchens.

Commissary/Marsh Building Findings:

- Mechanical: The Marsh Building is served by a multi-zone air handling unit with steam and chilled water coils. The unit is not in operation and is in poor shape.
- Electrical: There is an existing 225 amp service panel and a 75 kva step-down transformer The existing main electrical equipment is relatively new and could easily be reused in the future- depending on the future use.
- Plumbing: The Marsh Building was not in service during the MEP walkthrough. Plumbing fixtures were generally in poor condition. Fixtures included typical bathroom and break room type fixtures, as well as group showers to suggest a locker room function at some time; flush valve water closets, urinals, lavatories, group showers, floor drains, sinks, and water coolers.

Bates Building Findings:

- Mechanical: This building has steam heat and chilled water cooling. Steam is provided from the central plant and chilled water is provided by a stand-alone, air-cooled, chiller. The chiller was manufactured by Trane in 1998 and has screw compressors, R-22 refrigerant and a nominal capacity of 80 tons. Multi-zone air handling units are located on each floor in mechanical rooms. There is an individual split-system unit for one portion of the building. The unit was manufactured by Trane in 2006 and has a nominal capacity of 10 tons.
- Electrical: The Bates Building has 2 electrical services: one is located in the center and one to the north: we will call these Bates Central and Bates North for purposes of this report. The building has 2 existing Pyrotronics fire alarm control panels. These are old, conventional systems that we would like recommend replacing. It is possible that they could be reused. Pyrotronics was bought out by Siemens in the late 90's.
  The Central electrical service is comprised of an existing 350 amp disconnect, a 112.5 kva step-down transformer, a 400 amp normal panel, a 400 amp ATS, and a 400 amp emergency panel. It is likely that this "service" is fed from the north electrical service. The main electrical equipment is relatively new and could easily be reused in the future- depending on the future use.
  The North electrical service is served by a 300 kVA, 480 V, PMT. Meter number 077551416. There is an existing 600 amp service panel, 400 amp disconnect, a 112.5 kva step-down transformer, a 400 amp ATS, and a 400 amp emergency panel. A portion of this service appears to be backed up by a Generator. The Generator is a Cummings, 230 kW, 480V unit. We understand that the state maintains the generator and ATS well and would assume these components would be fine for reuse. The main electrical equipment is old and we would likely recommend replacement. Some of the gear in the main electrical room is relatively new and could easily be reused in the future- depending on the future use. Again, it is likely that the North electrical service feeds the Central electrical "service" but further investigation would be required.
- Plumbing: Plumbing fixtures were generally in fair condition. Fixtures included typical bathroom and break room type fixtures; flush valve water closets, urinals, lavatories, floor drains, sinks, and water coolers.

Reece Building Findings:

- Mechanical: We did not survey this building. The building has steam radiators and no central cooling. Window mounted air conditioning units are used for cooling.
- Electrical: We did not survey inside the Reece building but were told by Bruce that the Reece building is fed (electrically) from the Avery Building. We assume from Avery South.
- Plumbing: We did not survey this building.

Harper Building Findings:

- Mechanical: This building is served by multi-zone air handling units with steam and chilled water coils. Units are located in mechanical rooms on each floor. Units are provided with ventilation air.
- Electrical: This building is served by a 500 kVA, 480 V, PMT. Meter number 077551384. There is an existing 400 amp disconnect, a 112.5 kva step-down transformer, a 400 amp ATS, and a 400 amp emergency panel. The service appears to be backed up by a Generator. The Generator is a Cat, 335 kW, 480V unit. We understand that the state maintains the generator and ATS well and would assume these components would be fine for reuse. The main electrical equipment is old and we would likely recommend replacement.
  The building has an existing Pyrotronics fire alarm control panel. This is an old, conventional systems that we would like recommend replacing. It is possible that it could be reused. Pyrotronics was bought out by Siemens in the late 90's.
- Plumbing: Plumbing fixtures were generally in fair condition. Fixtures included typical bathroom and break room type fixtures with tamper proof trim as well as healthcare type fixtures; flush valve water closets, urinals, lavatories, floor drains, sinks, water coolers, bath/shower systems, etc.

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Scroggs Building Findings:

- Mechanical:This building is served by multi-zone air handling units with steam and chilled water coils. Units are located in a central penthouse. Units are provided with ventilation air.
- Electrical: This building is served by a 75 kVA, 208 V, PMT. Meter number 077551418. There is an existing 600 amp service. The building has an existing Pyrotronics fire alarm control panel. This is an old, conventional systems that we would like recommend replacing. It is possible that it could be reused. Pyrotronics was bought out by Siemens in the late 90's.
- Plumbing: Plumbing fixtures were generally in fair condition. Fixtures included typical bathroom and break room type fixtures with tamper proof trim as well as healthcare type fixtures; flush valve water closets, urinals, lavatories, floor drains, sinks, water coolers, bath/shower systems, etc.

Jones Building Findings:

- Mechanical:This building is served by multi-zone air handling units with steam and chilled water coils. Units are located in mechanical rooms on each floor. Units are provided with ventilation air. Units utilize a return air plenum.
- Electrical: This building is served by a 500 kVA, 208 V, PMT. Meter number 077551422. There is an existing 2000 amp service main panel, a 1200 amp panel, a 600 amp ATS (delayed transfer), and a 400 amp ATS (emergency). The existing 1200 amp panel and ATSs are relatively new and could easily be reused in the future- depending on the future use. The 2000 amp panel is old and we would recommend replacement. There is an existing Caterpillar generator (225 kva?) that backs up portions of this building. The generator could also be reused. The building has an existing Simplex 4100 fire alarm control panel. This is an old, conventional systems that we would like recommend replacing. It is possible that it could be reused. The fire alarm system is proprietary.
- Plumbing: Jones, the tallest building on campus, does not have any active pressure boosting system, indicating sufficient pressure to serve the highest fixtures. The lowest level of Jones housed legacy pressure tanks and pumps for both domestic cold water and hot water systems. The tanks and pumps were no longer in service. In the same area, there is access to utility tunnels used for the domestic hot water system distribution. Plumbing fixtures were generally in fair condition. Fixtures included typical bathroom and break room type fixtures with tamper proof trim as well as healthcare and laboratory type fixtures; flush valve water closets, urinals, lavatories, floor drains, sinks, water coolers, stainless steel lab sinks, bath/shower systems, etc.

Hooper Building Findings:

- Mechanical: This building has steam heat but no central air conditioning system. Steam unit heaters are used for the storage areas. The kitchen is served by ventilation units with steam heat located in a penthouse. Individual split-system units are used to condition several office spaces.
- Electrical: This building is served by a 500 kVA, 208 V, PMT. Meter number 077551385. There is an existing 2500 amp service, an ASCO 7000 ATS, and a 1200 amp distribution section. This building is at least partially backed up by a generator. The enclosure was locked and we were unable to get an additional information on the generator. We understand that the state maintains the generator and ATS well and would assume these components would be fine for reuse. The main electrical panels are relatively new and could easily be reused in the future- depending on the future use. The building has an existing Simplex fire alarm control panel. This is an old, conventional systems that we would like recommend replacing. The fire alarm system is proprietary.
- Plumbing: Hooper houses the main kitchens on campus, and as such, has many commercial kitchen grade plumbing fixtures. All fixtures in use appear to be in good condition. Fixtures included typical bathroom and break room type fixtures as well as commercial kitchen type fixtures; flush valve water closets, urinals, lavatories, floor drains, floor sinks, sinks, water coolers, stainless steel stand alone work surfaces with integral kitchen sinks, three bowl sink, pre-rinse sprayer, commercial grade dish machines (both conveyor and hood type), bath/shower systems, etc.

Laundry Building Findings:

- Mechanical: This building has steam heat but no central air conditioning system. Steam unit heaters are used throughout. The building has it's own natural gas service.
- Electrical:This building is served by a 225 kVA, 208 V, PMT. There is an existing 800 amp service. Meter number 077551413. The existing electrical equipment is old and we would likely recommend replacing it. The building has an existing Simplex 4010 fire alarm control panel and 2080-9024 booster panel that could be reused. The fire alarm system is proprietary.
- Plumbing: The laundry building has significant plumbing systems serving the commercial washers. The laundry has a steam to hot water generator. There appears to be a preheat system utilizing waste heat from the laundry process. This preheats water fed into the hot water generator. Fixtures included typical bathroom and break room type fixtures as well as commercial laundry fixtures; flush valve water closets, urinals, lavatories, floor drains, service sinks, water coolers.

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Gym Building Findings:

- Mechanical: This building has steam heat but no central air conditioning system. Steam is provided through a stand-alone, steam boiler located in the basement. The steam boiler was manufactured by Peerless Boiler in 2011. The gym is served by steam unit heaters and ventilation fans. The classroom area are served by steam radiators.
- Electrical: This building is served by a 75 kVA, 208 V, PMT. Meter number 077551386. There is an existing 600 amp service that is old and we would likely recommend replacement.
- Plumbing: The domestic water service is protected by an RPZ type backflow preventor. Make-up water is provided to a dedicated boiler, including water conditioning. Plumbing fixtures were generally in poor to fair condition. Existing showers were not observable, as they have been blocked off to avoid patient use/tampering. Fixtures included typical bathroom and break room type fixtures with tamper proof trim; flush valve water closets, urinals, lavatories, floor drains, sinks, water coolers, bath/shower systems, etc.

PME Systems Matrix:

Building	Electrical Service	Fire Alarm Panel	Plumbing Systems	HVAC Systems
Power House	O	X	X	X
Chiller Building (Avery)	O	N/A	O	O
Chiller Building (F-2)	O	N/A	X	X
Avery	O	X	O	O
Employee Cafeteria	N/A	N/A	N/A	X
Marsh	O	X	X	X
Bates	O	O	O	O
Reece	N/A	N/A	N/A	X
Harper	X	O	O	X
Scroggs	O	O	O	X
Jones	O	O	O	O
Hooper	Y	O	Y	X
Laundry	X	O	O	X
Gym	X	X	O	O

X - System needs to be replaced
* For Electrical this means everything except the underground feeder into the building, the PMT, and Generator if applicable. For Fire alarm this means all equipment would need to be replaced.

O - Potential reuse of some system components is possible
* For Electrical this means some of the main distribution equipment and underground feeder into the building, the PMT, and Generator (if applicable) can be reused. All wiring devices and fixtures would be replaced. For Fire alarm this means the main panel could be reused (more information in write up) but likely all notification and SLC devices would need to be replaced.

Y - System easily adapted for reuse
* For Electrical this means all distribution equipment and underground feeder into the building, the PMT, and Generator (if applicable) can be reused. Some/All wiring devices and fixtures could be reused.

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CIVIL ASSESSMENT

STEWART

Civil Narrative

Historic Broughton Campus (Residential School)

The existing buildings to be rehabilitated in the Broughton Area are serviced by an existing 8-inch water main that provides fire protection and potable water. The existing building water supply will be used to provide potable water and the existing hydrants will provide fire projection.

The Broughton Area is serviced by an existing sanitary sewer network that outlets into the City of Morganton main located in S. Sterling Street. The existing sewer system will be utilized to provide sewer service to the rehabilitated buildings.

The existing stormwater infrastructure will be used or modified as necessary to collect stormwater and direct it away from roads and buildings. The site will be required to meet NPDES Phase II requirements and the City of Morganton Code of Ordinances in place at the time of development.

All existing roadways within the Broughton Area to be milled and overlaid with 1.5-inchs of asphalt. The proposed road connecting the Broughton Area to W Fleming Drive is to be designed and constructed per AASHTO and NCDOT specifications.

Southeast Site (Hotel)

New and existing buildings in the County Services area will be serviced by a new water main that will connect to the existing main in College Drive. Both domestic and fire services will be provided off of the new main. The existing fire hydrants along College Drive will be used for fire protection as well as new hydrants as necessary.

Sanitary Sewer service will be provided by extending the existing City of Morganton Sewer main located in Enola Road with a new 8-inch sewer main through the County Services Area.

There is some existing stormwater infrastructure located in the County Services Area but it is not adequate enough for the new development. The stormwater system will need to be upgraded and expanded to accommodate the development. The site will be required to meet NPDES Phase II requirements and the City of Morganton Code of Ordinances in place at the time of development.

The existing College Drive needs to be widened to accommodate two-way traffic. Proposed roads are to be designed and constructed to meet AASHTO and NCDOT specifications.

Northwest Site (Senior Living)

Water for the new Senior Living area is to be provided by extending the existing 12-inch that enters the site from W Fleming Dr. The City of Morganton does not have installation information on file and this line may need to be replaced after further investigations. The new waterline will extend through the Senior Living area to provide potable water and fire protection services.

The existing City of Morganton sewer main that is located adjacent to the stream is to be extended northward through the Senior Services area with a new 8-inch sewer main. The new buildings will be provided sewer service through the new main.

New stormwater infrastructure will be provided to collect runoff from the new impervious areas and directed to the existing creek. The site will be required to meet NPDES Phase II requirements and the City of Morganton Code of Ordinances in place at the time of development.

The existing drive off of W Fleming St. will need to be widened to accommodate two-way traffic and turn lanes. All new roads within the Senior Living Area will be designed and constructed to meet AASHTO and NCDOT specifications.

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STEWART

MEMORANDUM

DATE: 3/30/16

FROM: Michael Batts, Stewart
Brett Mabe, Crenshaw
Kyle Ramsey, CT Wilson
Eddie Belk, Belk Architecture

TO: Peter Cvelich, DFI

PROJECT: Broughton Master Plan

SUBJECT: Operating Expenses Clarification

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1. **Operating expenses of the historic Broughton campus as a mothballed, vacant campus**

   - Mothballing assumptions
     - Existing utility systems to remain moderately operational to provide ventilation and minor conditioning of interior space
     - All existing buildings would remain
   - Utility Operating Costs
     - **$0.33/SF per year to carry vacant buildings**
       - data provided by the NC Department of Energy Building Data Book
         - Chapter 3 - Chart shows the energy intensity average (EIA) by building activity.
         - The average for Education / Lodging / Office would be close to 92 kBtu/sf and the average for vacant is 21 kBtu/sf.
         - This leads us to using 21/92 or 23% of the current energy usage for a "mothballed" number.
       - utilities included in operating costs
         - gas
         - electric
         - water
   - Repairs/Maintenance Operating Costs
     - $0.12/SF which is 20% of operating costs for an operational school
     - Data provided by AS&U's 38th Annual Maintenance & Operations Cost Study for Schools

2. **Post-rehab operating expenses of the historic Broughton campus as a boarding school**

   - Utility Operating Costs
     - **$1.51/SF per year**
       - data provided by the NC Department of Energy Building Data Book
         - Chapter 3 - Table 3.3.10 - pg 131 - Chart breaks down energy expenditures by building vintage. May be good to estimate percentage changes from remodel / new.
         - A 5% additional cost was added due to the existing older building's inefficiencies in air-tightness
       - utilities included in operating costs
         - gas
         - electric
         - water
   - Repairs/Maintenance Operating Costs
     - **$0.57/SF per year**
     - Data provided by AS&U's 38th Annual Maintenance & Operations Cost Study for Schools

3. **New construction operating expenses of a boarding school**

   - Utility Operating Costs
     - **$1.43/SF per year**
     - data provided by the NC Department of Energy Building Data Book
       - Chapter 3 - Table 3.3.9 - pg 131 - Chart shows average energy expenditures per building type in dollars/sf
       - utilities included in operating costs
         - gas
         - electric
         - water
   - Repairs/Maintenance Operating Costs
     - **$0.57/SF per year**
     - Data provided by AS&U's 38th Annual Maintenance & Operations Cost Study for Schools

STRONGER BY DESIGN

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5 BROUGHTON HOSPITAL HISTORY

HOSPITAL HISTORY

North Carolina opened its first asylum, in Raleigh, in 1856.[1] That first asylum, which had been proposed by Governor John Motley Morehead in 1842, was not realized until Dorothea Dix appealed to state legislators in 1848, following 10 weeks observing the conditions of the mentally ill around the state.[2]

The Raleigh facility was soon overcrowded, and legislators voted in 1875 to construct a new asylum—the Western North Carolina Insane Asylum—to serve the western part of the state.[3] Though the cities of Statesville, Hickory, Asheville, and Morganton all tried to secure the facility, it was Morganton's offer of sufficient money and as much land as might be required that swayed the joint committee of the General Assembly into locating the asylum in Morganton.[4]

The main building, now known as Avery Building, was designed by Samuel Sloan. Sloan was an architect of national prominence who, in addition to several asylums around the country, designed the North Carolina executive mansion and the University of North Carolina at Chapel Hill's Memorial Hall. Sloan was personally recommended for the job by Thomas Kirkbride,[5] a pioneer in the design of psychiatric facilities.

Kirkbride designed asylums to facilitate such therapeutic treatment, and his plans valued both siting and layout. His asylums were to be grand buildings in beautiful areas. He favored building in rural, instead of urban, areas to give patients access to better airflow and cleaner air than they would have in congested cities. A rural setting, he believed, could also positively influence the spiritual and physical health of patients: siting an asylum atop a hill would encourage exercise and exertion.[6] All this counteracted the pressure inherent in urban living, which he and many other doctors saw as a cause of mental illness.

"Kirkbrides," as hospitals designed by Thomas Kirkbride have come to be called—and of which the Avery Building is one—had a linear layout. They featured a central building, often of five stories, with two wings, often of three stories each. The wings, laid out with double-loaded corridors, cascaded back from the center. The wards—each ward was one floor of a wing—were short to allow for ventilation, and also to allow the division of patients by degree of insanity. In addition, the loudest patients could be placed furthest from the central area. Men's and women's wards were typically in opposing wings.[7] One benefit of the layout was its ability to expand indefinitely; wings could be added to the facility without interfering with the daily management of the hospital.[8] Though the Kirkbride plan called for no more than 250 patients, many hospitals quickly grew beyond this number. Central to Kirkbride's design was the belief that insanity was often a temporary affliction cured in part by predictable routines and kind caregivers. [9]

Kirkbride's influence on Sloan's design is evident in the Avery Building, with its five-floor central area flanked by cascading, three-story wings. The main wing was finished in late 1882 and patients were admitted by the end of March 1883. The admittance of more than 250 patients between 1883 and 1885—most sent from Raleigh to relieve overcrowding there—soon overwhelmed the new building, and construction of an additional wing, to house another 150 patients, was completed in October 1886. It was designed by AG Bauer, a former assistant of Sloan's, who also went on to design the nearby School for the Deaf. The asylum officially became a hospital in 1890, and in 1959 was renamed for former governor Melville Broughton.[10]

Dr. Patrick Murphy, asylum superintendent for the institution's first 25 years,[11] strongly believed that work and exercise were effective forms of therapy for patients,[12] even as they beliefs lost broader appeal in the medical community and hospitals shifted to more custodial roles, often permanently housing large numbers of patients. [13] In Morganton, though, Murphy put patients to work: by 1886, 70 percent of patients worked on the grounds.[14] Females, who Murphy believed were not safe outdoors, cooked, cleaned, did laundry, and made clothing, mattresses, curtains, and other items for the hospital.[15] Males, owing to their largely agricultural backgrounds, worked on the farm and on the grounds. Those few with mechanical skills worked in shops on the site.[16]

In addition to the farm and shops that grew out of Murphy's emphasis on patient labor, several other elements of the hospital's current footprint are a result in changing views of patient care. As the patient population surged around the turn of the 20th century, Murphy believed that the continued growth of the main building would fail to effectively serve patients and staff. As a result, Murphy called for a "colony farm" of detached buildings away from the main building, which would provide house-like accommodations for patients that needed to be institutionalized but did not need medical care or close supervision. The idea had been used in Europe and elsewhere in the United States.[17]

Murphy envisioned patients keeping house, cultivating their own gardens, and relaxing. This would hasten their recuperation as well as ease the strain on the main hospital building. The first colony building was completed in 1903.[18] Ultimately, there were three colony groups, with a total of 10 buildings and 350 patients. Several colony-era buildings and barns exist south of the main hospital campus, on what is now the property of Western Piedmont Community College. Due to a more rigid shift in focus from custodial care to intensive treatment, the colony system was abandoned fully by 1950.[19]

Around the turn of the century, as the colony buildings grew to the south, the main campus expanded, as well. Many buildings from this time still stand, such as Harper, South, Reece, and F2 Dining. Several

[1]. Getz, "A Strong Man of Large Human Sympathy," 32.
[2]. National Register, "Broughton Hospital: Main Building."
[3]. Getz, "A Strong Man of Large Human Sympathy," 32.
[4]. CK Avery, "Broughton: New Ideas in Treating Mentally Ill," *News Herald* (Morganton, NC), May 1964.
[5]. National Register, "Broughton Hospital: Main Building."
[6]. Yanni, *Architecture of Madness*, 58.
[7]. Ibid., 59-61.
[8]. Ibid., 56.
[9]. Lynne Getz, "A Strong Man of Large Human Sympathy," 37.
[10]. National Register, "Broughton Hospital: Main Building."
[11]. Avery, "Broughton: New Ideas in Treating Mentally Ill."
[12]. Getz, "A Strong Man of Large Human Sympathy," 46.
[13]. Getz, "A Strong Man of Large Human Sympathy," 35.
[14]. Report of the Board of Directors of the Western North Carolina Insane Asylum at Morganton (From December 1, 1884 to November 30, 1886), 1887, Lynne Getz's Broughton Hospital Student Project, Appalachian State University Belk Library.
[15]. Ibid., 46.
[16]. Report of the Board of Directors of the Western North Carolina Insane Asylum at Morganton (From December 1, 1886 to November 30, 1888), 1889, Lynne Getz's Broughton Hospital Student Project, Appalachian State University Belk Library.
[17]. Ibid.
[18]. Ibid.
[19]. Avery, "Broughton: New Ideas in Treating Mentally Ill."

buildings went up in the early 20th century that still stand in what is no longer part of the hospital campus. This includes ten residences on Bickett Street and Sterling Street.

Between the 1920s and 1940s, the hospital's main campus grew even more dense, with the addition of buildings such as the Art Deco-influenced power house and its smoke stack, the machine shop, Bates, Saunders, Marsh, and Thomas. Several staff houses and frame barns from this era no longer stand. Construction of the new hospital led to the demolition of several large buildings from this era, as well, including Hoey, Morrison, and McCampbell.

Little construction, other than additions to older buildings, has occurred on the site since the mid-20th century. Exceptions include the gymnasium and chapel, built in 1960 and 1975, respectively. This is due in part to a continuing trend of deinstitutionalization, which has limited the need for expanded facilities.

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6 CASE STUDIES OF PSYCHIATRIC HOSPITAL REDEVELOPMENTS

CASE STUDIES

COMMUNITY PROFILE (2014)	MORGANTON, NC	HICKORY-LENOIR-MORGANTON METRO AREA
POPULATION	16,816	363,936
POPULATION DENSITY (PER SQ. MILE)	878	222.3
TOTAL LAND AREA (SQ. MILES)	19.15	1637.38
MEDIAN HOUSEHOLD INCOME (IN 2014 DOLLARS)	$35,144	$40,820

TRAVERSE CITY, MI

The case of the Village of Grand Traverse Commons illustrates how a large hospital site can be redeveloped over time by a master developer that has access to public tools and incentives and a vision that respects the historic nature of the site and includes a mix of uses.

COMMUNITY PROFILE (2014)	TRAVERSE CITY, MI	TRAVERSE CITY MICRO AREA	MORGANTON, NC
POPULATION	15,006	145,374	16,816
POPULATION DENSITY (PER SQ. MILE)	1,802.3	86	878
TOTAL LAND AREA (SQ. MILES)	8.33	1,691.07	19.15
MEDIAN HOUSEHOLD INCOME (IN 2014 DOLLARS)	$47,836	$50,817	$35,144

The Northern Michigan State Hospital was a Kirkbride-plan facility that opened in 1885. The wings of the 387,000 main building were abandoned in 1970 and the entire facility closed in 1989. It was vacant until 1998 when a local nonprofit convinced a city redevelopment board not to demolish it.[1]

The Minervini Group acquired the 27-building, 63-acre site for $1 in 2002. By 2005, the 150,000 square foot opened as residential, office, and independent shops/restaurants. At build-out, the Village of Grand Traverse Commons will have 1,000 residents and 800 workers. Residential units range from 300 square foot studios to 3,800 square foot luxury condos. As of spring 2013, total development cost for 700,000 square feet of the site was $60 million.[2] The gradual development was intentional, according to Raymond Minervi: "I knew that to be successful it would take a long time for the concept to evolve. This is a small city and only capable of absorbing so much residential and commercial space."[3]

As of 2016, the site contains:[4]

- Residential units, including 68 affordable housing apartments and vacation rentals;
- A senior living community;
- 14 retail shops, mostly in the 100,000 square foot "Mercato," an "indoor street" of shops;
- Nine food and beverage establishments, including a winery and a coffee roastery;
- 33 professional offices, including attorneys, counseling, yoga, and a salon.

The redevelopment process had several elements:[5]

- The local redevelopment board made an agreement with Minervini Group that the former would gain clear title to the land and buildings for $1 in return for putting a roof on developing 20,000 square feet of the main building;
- The project received $2 million in state brownfield grants;
- The site received state renaissance zone designation, meaning that residents and businesses will pay no state income taxes or property taxes until the benefit expires in 2017;
- The majority of the buildings on the site are eligible for historic tax credits;
- Minervini Group is a comprehensive developer and manager of the site: they will finance, supply, design, construct, sell, lease, rent, maintain, and manage everything on the site.

The site has a trail network and arboretum. The campus has a weekly farmer's market and several festivals.[6]

DANVERS, MA

The Danvers project is an example of a development that was successful, in part, because of favorable growth trends and massive demolition that allowed for less costly redevelopment, but left only a small part of the Kirkbride's façade intact. By leaving only a section of the front wall standing, and completely demolishing most of the wards, the developers angered some and partially appeased other preservationists and local community members who feared losing the iconic building. The project also tapped into a growing residential market, as Danvers is located just 20 miles outside of Boston and the development is only a mile from I-95.

[1] Berger, Chris, "Nothing Crazy About Living in this Former Insane Asylum," *Curbed*, 12 March 2013.

[2] Berger.

[3] Schneider, Keith, "From Ex-Mental Hospital to a New Mixed-Use Life," *New York Times*, 9 November 2010.

[4] The website of the Village of Grand Traverse Commons, http://www.thevillagetc.com.

[5] Schneider.

[6] Berger.

COMMUNITY PROFILE (2014)	DANVERS, MA	MORGANTON, NC
POPULATION	27,075	16,816
POPULATION DENSITY (PER SQ. MILE)	2,039.4	878
TOTAL LAND AREA (SQ. MILES)	13.28	19.15
MEDIAN HOUSEHOLD INCOME (IN 2014 DOLLARS)	$77,404	$35,144

The State Lunatic Hospital at Danvers opened in 1878 on nearly 200 acres of land in Danvers, Massachusetts. Architect Nathaniel Bradlee designed a building influenced by the Kirkbride plan: it had a large, central administrative building with three step wings on each side. The building was constructed of granite[7] and was more than 700,000 square feet.[8]

According to a report prepared by Danvers Town Archivist Richard B Trask in 1981, the gradual phase-out of patients began in the 1970s.[9] The Kirkbride building was closed in 1989 and patients were moved to another facility. The entire hospital was closed in 1992.[10]

Original 1875 architect drawing (Source: Danvers State Insane Asylum)

Following the hospital's closure, the State's Division of Capital Asset Management (DCAM) mothballed the building, and reports from the time indicate that local officials were frustrated to see the building sit idle, unable to be sold until the legislature passed a bill allowing it. In 1997, the House and Senate approved such a bill, and also allowed the State to issue a bond for up to $5 million to prepare the site for disposition.[11]

DCAM issued a request for proposals and received 11 responses. The Citizens Advisory Council, a group formed through the enabling legislation, considered five of those responses substantial, and recommended that DCAM choose Archstone Communities as the buyer and developer, because Archstone had promised to preserve the entire Kirkbride. Archstone then reneged and proposed a plan in which they would preserve less than one third of the Kirkbride, which DCAM accepted. Archstone ultimately withdrew, at which point DCAM chose AvalonBay as the buyer and developer without soliciting public input.[12]

AvalonBay Communities purchased the property for $18.1 million in 2005.[13] Its residential development sits on approximately 51 acres of hilltop space; the total site is approximately 500 acres, most of which is protected agricultural land.[14] The firm spent $72 million turning the hospital into luxury apartments over the next three years.[15] AvalonBay demolished six of the eight wards and all but the façade of the remaining two wards and main administrative building.[16] Preservationists tried, unsuccessfully, to save more of the original building.[17] Ultimately, Avalon Bay's development preserved only one ninth of the Kirkbride.[18]

The original plan was to have 433 rental apartments that would start at $1,350 per month and 64 condos that would range from $390,000 to $500,000.[19] Fifteen percent of the 433 units were to remain affordable.[20]

By leaving only a partial façade, the company may have mitigated some of its potential buyers' fears of inhabiting a psychiatric hospital. According to AvalonBay's vice president of development, Scott Dale, "We were attracted to the site because of the quality of the real estate…It is, quite simply, a beautiful piece of land that overlooks Boston."[21]

Avalon sold 8.2 of the 17.2 low-lying acres it owned to Northeast Health System, the parent company of Beverly Hospital, which in 2007 opened a medical and day-surgery center. Avalon planned to sell the remaining low-lying acreage for development as a skilled nursing center.[22]

Avalon also gave the Town of Danvers $2.35 million to "mitigate the effect on the town," according to the *Boston Globe.* This included "money for the schools, affordable housing, historic preservation, and athletic fields."[23]

Avalon Danvers was sold in 2014 for $108.5 million.[24] It is now called Halstead Danvers.

[7] Trask, Richard, "Danvers State Hospital," from the website of the Danvers Archival Center at the Peabody Institute Library, March 1981, http://www.danverslibrary.org/archive/?page_id=1096.
[8] Brooks, Rebecca Beatrice, "History of Danvers State Hospital," History of Massachusetts, 19 September 2012, http://historyofmassachusetts.org/history-of-danvers-state-hospital.
[9] Trask.
[10] Brooks.
[11] Ramseur, Michael, *Haunted Palace: Danvers Asylum as Art and History*, Artship, 2005, 211.
[12] Ibid.
[13] Castelluccio, John, "Boston Group Buys Avalon Danvers for $108.5M," *Salem News* (MA), 3 July 2014.
[14] Laidler, John "Despite Slow Economy, Danvers State Project Forges Ahead," *Boston Globe*, 10 June 2010.
[15] Greenfield, Beth, "At Home in Infamous Surroundings," *New York Times*, 14 October 2007.
[16] Brooks.
[17] Greenfield.
[18] Ramseur, 212.
[19] Greenfield.
[20] Laidler.
[21] Greenfield.
[22] Laidler.
[23] Ibid.
[24] Castelluccio.

NEWTOWN, CT

The case of Fairfield State Hospital in Newtown, Connecticut illustrates how local residents who fear the effects of residential growth and a local government that attempts to singlehandedly control the future of a site without seeking other public partners (such as the state government) or accommodating the needs of potential private partners can face a long, slow pre-development process. In the twenty years since the hospital closed, little private development has occurred on the site, local costs continue to accrue, and almost all the historic buildings have deteriorated beyond the point at which development is feasible. Not only can they not be redeveloped, but until they are demolished, their condition represents a significant deterrent to private development.

COMMUNITY PROFILE (2014)	NEWTOWN, CT	MORGANTON, NC
POPULATION	2,027	16,816
POPULATION DENSITY (PER SQ. MILE)	878.7	878
TOTAL LAND AREA (SQ. MILES)	2.31	19.15
MEDIAN HOUSEHOLD INCOME (IN 2014 DOLLARS)	124,688	$35,144

Fairfield State Hospital in Newtown admitted its first patients in 1933.[25] The hospital sits on one of the highest points in town, on a 186-acre campus of rolling hills. The site contains 16 primary buildings. The State Department of Mental Health closed the facility in 1996 and in 1999 the State issued a request for qualifications from master development entities. Four development entities were invited to submit proposals after the RFQ stage, and three did. The State's review of development entities was suspended when the Town of Newtown exercised its right of first refusal and the Town's board submitted a letter of intent to purchase the site in early 2000. This LOI was issued following the newly formed Fairfield Hills Authority's review of the three proposals and its determination that only by purchasing the property, which sits in the geographic center of the town, could the local community, not the State or a private developer, ensure the campus redevelopment served the local community's interests.[26] Specifically, by voting to purchase the property, residents were trying to keep the site out of the control of residential developers.[27] The Town of Newtown closed on the property for $3.9 million.[28]

Newton voters had approved a bond for $48 million ahead of the purchase: this included $3.9 million for the purchase, an unspecified amount for demolition, abatement, and the creation of athletic fields, and $27 million for a new intermediate school which opened in 2003.

Image: Bing Maps

The Authority made a master plan in 2003, which it has updated at least every five years since. The plan called for open space, recreation, municipal, educational, cultural, and commercial uses, including restaurants, medical offices, corporate offices, spas, banks, a performing arts center, museums, and art galleries.[29] It specifically prohibited residential development as a way to limit the growth that was putting pressure on schools and other public services.

Public disagreement about the future of the site surrounded the creation of the first plan. One controversial element of the plan was the allocation of $8.5 million to build a new town hall on the site. In addition, a community group formed to oppose the sale of any property on the site, and proposed that the entire site be used for public purposes, with very little commercial use. Residents interviewed by the *New York Times* in 2003 indicated that they believed the process was moving too quickly and they feared losing a public resource.[30] By the time the first master plan was presented to the public, it included a provision that land should only be leased, not sold, to private entities. [31] It also removed references to the idea of a corporate office park on one part of the site.[32]

Eventually, the Town decided to relocate municipal offices to an existing building on the site, and spent $6 million renovating Bridgeport Hall.[33]

[25] From FairfieldStateHospital.com, Accessed 3 March 2016.

[26] "Background Information," from the website of the Town of Newtown, Accessed 3 March 2016, http://www.newtown-ct.gov/public_documents/NewtownCT_FFHills/background.

[27] Prevost, Lisa, "Warily, Newtown Weights New Housing," *New York Times*, 20 January 2011.

[28] Hutson, Nanci G., "Fairfield Hills Leaders See 2015 as a Year to Market the Campus," *CTPost.com*, 26 December 2014.

[29] Hutson.

[30] Doniger, Nancy, "In Newtown, A Master Plan Creates a Stir," *New York Times,* 9 February 2003.

[31] "Fairfield Hills Master Plan (Amendment) 2013," from the website of the Town of Newtown, http://www.newtown-ct.gov/public_documents/NewtownCT_FFHMPRC/index.

[32] Doniger.

[33] Hutson.

Even boarded up, the hospital was a draw: a newspaper article from 2004 detailed the 15 trespassing violations local police had issued to young people on the hospital grounds in three separate incidents in the preceding 10 days. Town officials described how people regularly broke into the buildings, going as far as tearing plywood off windows and doors and cutting holes in chain link fences. Officials worried about the implications of someone getting hurt or killed while in a closed building, and as one said at the time, "All it takes is a half-decent lawyer to call it an attractive nuisance."[34]

Six years in, the only private activity that had occurred on the site was an 86,000 square foot sports and fitness academy. The 2013 update to the plan states that private developers have found the current buildings, due to deterioration and configuration, infeasible. The plan states that the presence of the buildings "likely represents a substantial barrier to realizing the economic development potential as well as the recreation and public use themes desired by residents." The plan states that as of 2012, only four buildings appeared salvageable, and eight other major buildings had likely deteriorated beyond being reusable.[35]

The 2013 plan amendment allows some rental housing on the upper floors of commercial buildings, which it previously did not allow. Still, all buildings would remain in Town ownership. The plan acknowledges that the active discouragement of development proposals that included housing "may have resulted in a loss of development that would have benefitted the community." The plan stipulates that housing must be ancillary and not a primary use.

The 2013 capital improvement plan sets out almost $4.5 million for the next five years for demolition and walking trail creation.

An unclear power structure, in which the development process has no clear "quarterback," may also slow progress. The Fairfield Hills Authority is an appointed group that considers development proposals and manages leases to developers. But a 2014 article suggests that the authority is "little more than a sounding board" because the board of selectman, zoning officials, and other officials maintain control of what happens on the site. Since its forming, the authority has not proactively pursued development and has instead waited for others to approach it. [36]

In 2013, local leaders shared a plan to offer $1 a year, 30-year leases to developers, who would then be responsible for remediation and demolition costs[37]

In 2013, Town was planning a 4,000 square foot ambulance facility and a parks and recreation center. They have discussed a fire station and police station, as well. As of 2013, five hospital buildings had been demolished.

Though the Town became a major anchor tenant as a way to support the success of Fairfield Hills, its municipal offices move was not without consequence. In February 2016, a town selectman alerted the Town's Board of Finance that the former town hall, which the Town vacated when it moved to Fairfield Hills, is on its way to exhausting all of its financial resources within a year. The historic structure was home to the Town operations until 2009, when the Town moved and stopped paying rent. The publicly-owned building has been unable to generate sufficient revenues since its major tenant moved out, and elected officials proposed increasing their annual subsidy to the building to $75,000 per year, or half its operating expenses.[38]

STAUNTON, VA

The ongoing redevelopment of the former Western State Hospital site in Staunton, Virginia illustrates how a creative public-private partnership with clear inter-governmental cooperating can serve a master redevelopment. It is an instructive project in its similarities to historic Broughton as well: the large site is in a similarly-sized downtown, with interstate frontage, neighboring a school for the deaf and blind, with the new hospital relocated adjacent to the site.

COMMUNITY PROFILE (2014)	STAUNTON, VA	STAUNTON-WAYNESBORO, METRO AREA	MORGANTON, NC
POPULATION	24,132	119,016	16,816
POPULATION DENSITY (PER SQ. MILE)	1,208.1	118.8	878
TOTAL LAND AREA (SQ. MILES)	19.98	1,002.01	19.15
MEDIAN HOUSEHOLD INCOME (IN 2014 DOLLARS)	$39,982	$49,262	$35,144

The Western State Hospital, which was most recently used as a prison, closed in 2003.[39] In 2006, the Commonwealth decided to replace the Western State Hospital and the General Assembly approved $112.5 million for the new facility.[40] The new hospital was built on adjacent

[34] Driscoll, Eugene, "Warning: Stay Away from Fairfield Hills," *News-Times* (Danbury, CT), 28 September 2004.
[35] "Fairfield Hills Master Plan (Amendment)."
[36] Hutson.
[37] Ibid.
[38] "Edmond Town Hall Facing Financial Difficulties," *Newtown Bee*, 25 February 2016.
[39] Peters, Laura, "More Renovations Begin at Villages at Staunton," *News Leader*, 15 December 2015.
[40] "Fact Sheet: New Western State Hospital and Economic Development of Western State Property in Staunton," from the website of the City of Staunton, 9 July 2009, http://www.staunton.va.us/directory/departments-a-g/economic-development/western-state/documents/WSH_Fact_Sheet_7-9-09.pdf.

property. Construction for the hospital broke ground in late 2009, and pre-development activities for the former hospital property began in early 2010.[41]

The City of Staunton contributed $15 million toward the relocation of the hospital and in return the Commonwealth deeded the City 265 acres of the old hospital campus that sits along I-81. The City contributed to the project as a way to free up the old hospital campus; the Commonwealth's allocation would have funded some new facilities within the old campus, but kept some hospital functions in the old buildings. With the City's contribution, the new hospital could be built on an entirely different property in one phase.[42]

The City planned to have a single master developer working on the site as a way to coordinate development activities and maximize value. The City was advised on master developer selection by a private firm whose CEO was a former Commonwealth secretary of commerce and trade.[43] The master developer, Staunton Gateway Partners, was chosen from several companies that responded to a solicitation by the Staunton Industrial Development Authority.[44]

"Staunton Crossing" is the name of the master development. To prepare the site, the City has made several investments, including building a four-lane boulevard entrance to the site and demolishing some buildings.[45] Delays in the construction of the boulevard and traffic circle, which has cost $2.1 million and began in spring 2015, has slowed down the larger project. The road is expected to be completed in April 2016.[46]

"The Villages at Staunton" is meant to be a village-like community within the city. Adaptive reuse and new construction that complements the historic nature of the campus will serve residential, office, hospitality, entertainment, and commercial uses.[47]

The development is in process. As of December 2015, two sets of condominium developments and another home development have occurred on the site. A 45,000 square foot building is currently being developed into office space.[48] A hotel, called Blackburn Inn, is in the planning stages.

BUFFALO, NY

The Richardson Olmsted Complex in Buffalo, New York, serves as an example of a Kirkbride redevelopment that while seemingly successful in terms of reuse, has taken decades and large infusions of public money. After decades of neglect and negotiation over reuse, the complex is being redeveloped solely with public money—the development failed to leverage large and sustained public investments to attract private partners, and thus the citizens of New York fully bear the potentially nine-figure cost.

COMMUNITY PROFILE (2014)	BUFFALO, NY	BUFFALO-CHEEKTOWAGA-NIAGARA FALLS METRO AREA	MORGANTON, NC
POPULATION	259,959	1,135,667	16,816
POPULATION DENSITY (PER SQ. MILE)	6,437.2	725.6	878
TOTAL LAND AREA (SQ. MILES)	40.38	1,565.05	19.15
MEDIAN HOUSEHOLD INCOME (IN 2014 DOLLARS)	$31,668	$50,726	$35,144

The Buffalo State Asylum for the Insane opened in 1880, eight years after construction began on what is now known as the Richardson Olmsted Complex in Buffalo, New York.[49] Architect Henry Hobson Richard designed the Kirkbride building. Landscape architect Frederick Law Olmsted, designer of New York City's Central Park, designed the grounds.[50]

The hospital's history is similar to that of Broughton: the hospital grew through the first half of the 20th century and patient labor played an important role in maintaining the large complex. Amidst national moves toward rehabilitation and community care, the hospital demolished three of the Richardson building's patient wards in 1968 to build a one-story rehabilitation center in 1970. In 1974, all patients were moved out of the original Richardson Building and into a newer complex. Administrative offices remained in the building until the 1990s.[51] The building was placed on the National Register of Historic Places in 1973 and was declared a national historic landmark in 1986.[52]

[41] "Pre-Development Agreement for Old Western State Authorized," WHSV.com, 8 January 2010.
[42] Fact sheet.
[43] Ibid.
[44] "Pre-Development Agreement for Old Western State Authorized."
[45] "Commercial Development Coming to Former Western State Site," WHSV.com, 22 October 2015.
[46] Peters, Laura, "Staunton Crossing Moving Forward," *News Leader*, 28 January 2016.
[47] The website of the Villages at Staunton, http://www.villagesatstaunton.com.
[48] Peters, Laura, "More Renovations Begin at Villages at Staunton."

[49] From the website of the Richardson Olmsted Complex, Accessed 7 February 2016, http://www.richardson-olmsted.com
[50] Ibid.
[51] "Richardson Olmsted Complex Structures Report," prepared by Goody Clancy, July 2008: 110, http://www.richardson-olmsted.com/files/documents/planning_and_reports/historic_structures_full_report.pdf
[52] The website of the Richardson Olmsted Complex.

The Richardson Olmsted Complex (Map data: Google)

Largely unoccupied, the main building deteriorated throughout the 1970s and 80s, despite various attempts, including a governor's task force in 1984, a 1986 adaptive reuse design competition, and a $3.5 million interior and exterior rehabilitation in 1989. The building was significantly boarded up in 1989 in response to continued acts of vandalism.[53] In 1998, then-mayor Anthony Masiello successfully requested that Governor Pataki not include the building in attempts to sell 12 of New York's psychiatric hospital buildings to private developers. The mayor hoped to redevelop the site into a magnet school and residential development.[54]

Still, the hospital sat unused. In 2004, a group of local citizens filed a lawsuit to bring attention to the facility's deterioration. The State allocated $5 million toward stabilization.
In 2006, Governor Pataki pledged $100 million to redevelop the 500,000 square foot complex. A quarter of those funds were used to create an art museum and pavilion; the remainder has "funded important activities to prevent further deterioration of the Complex and to ready it for reuse." The Richardson Center Corporation (RCC), composed of community members and appointees of the governor, was made responsible for exploring adaptive reuse feasibility.[55]

In 2007, the Urban Land Institute (ULI) began to study the feasibility of redeveloping the site. Within a year, historic structures and cultural landscapes reports were completed and a $2 million stabilization effort began. In 2010, another nearly $8 million was put toward further stabilization.[56]

In 2011, a master plan was completed, which focused on a hotel and conference center and city architecture center. The State also enacted special legislation to allow the conveyance of the property to the Richardson Center Corporation. [57]

[53] "Richardson Olmsted Complex Structures Report," 118.
[54] Rozhon, Tracie. "A Fight to Preserve Abandoned Asylums; Sales Seen as Threat to Landmarks Of Architecture and Idealism," *New York Times*, 18 November 1998.
[55] The website of the Richardson Olmsted Complex.
[56] Ibid.
[57] Ibid.

In 2013, the South Lawn was re-greened, as a precursor to greater development activity. This included the planting of 125 trees, creation of environmentally friendly rain gardens, and the building of a pedestrian loop trail.[58]

The first phase of the building redevelopment centers on an 88-room hotel and conference center. Construction began in late 2014 and was expected to take two years. Local hospitality management firm InnVest Lodging will operate the hotel, known as the Hotel Henry Urban Resort Conference Center.[59]

The Richards Center Corporation is the developer. Total development cost is estimated to be $69 million. The project is being funded by $54 million in state money and $16 million in state and federal historic tax credits. Empire State Development, the state economic development agency, provided grants for predevelopment, stabilization, and re-greening. Several foundations have provided unspecified support for the project, as well.

MORRIS PLAINS, NJ

The pre-development process and eventual demolition of the Greystone Park Kirkbride building demonstrates the pitfalls of a confusing and seemingly opaque process for determining the fate of an historic hospital. The State of New Jersey, by rejecting redevelopment proposals in favor of a costly publicly-funded demolition, lost a landmark building, missed what several developers saw as an opportunity to attract investment and create local economic value, and outraged and lost the trust of a portion of the public. The public sector, as this case suggests, can inhibit development, just as in other cases, it can enable it.

COMMUNITY PROFILE (2014)	MORRIS PLAINS, NJ	NEW YORK-NEWARK-JERSEY CITY, NY-NJ-PA METRO AREA	MORGANTON, NC
POPULATION	5,635	6,550,191	16,816
POPULATION DENSITY (PER SQ. MILE)	2,203.8	1,720	878
TOTAL LAND AREA (SQ. MILES)	2.56	3,808.17	19.15
MEDIAN HOUSEHOLD INCOME (IN 2014 DOLLARS)	$110,167	$74,217	$35,144

Greystone Park opened in 1876 as the New Jersey State Lunatic Asylum at Morristown. The main building was a 675,000 square foot, five-story Kirkbride. It has three, three-story wings. Its

[58] Ibid.
[59] Ibid.

three-foot thick walls are made of gneiss.[60] Samuel Sloan, Broughton architect, was Greystone's architect, as well. He followed the Kirkbride plan.[61]

Greystone Park
(Source: Preserve Greystone)

Similar to Broughton, Greystone was constructed between the 1870s and mid-20th century and contains a mix of Victorian and modern architecture.[62] It has underground tunnels used for patient transport, similar to Broughton.[63] The buildings are on a large site that once contained occupational therapy and a self-supporting agricultural operation.[64]

The hospital was at its highest patient capacity, 6,719 people, in 1954. The process of deinstitutionalization, along with a class-action lawsuit, led to the reduction in patients served from the 1950s on.[65] The state opened a new hospital adjacent to the original hospital in 2008. The Kirkbride was permanently closed after those patients were transferred to the new facility that year.[66]

The state commissioned a redevelopment feasibility assessment for the main building, which was delivered in early 2013. [67] The report deemed the main building's condition to range from "good" to "failed," and identified the deteriorated roof as a major cause of damage, which it also attributed to a lack of climate control, vandalism, and age. Based on its market analysis, the report considered three redevelopment scenarios, all of which it concluded were economically infeasible without decreasing development costs, providing State incentives to developers to encourage larger private investment, or permitting new construction on other parts of the site to create additional economic value.

	DEVELOPMENT COST	AVAILABLE FUNDING	FUNDING GAP
315 APARTMENTS	$112,500,000	$101,425,000	$11,075,0
MIXED-USE: 181 APARTMENTS, ASSISTED-LIVING FACILITY, INN	$103,025,000	$77,275,000	$25,750,000
199 APARTMENTS CONVERTED TO CONDOS AFTER TAX CREDIT PERIOD	$107,375,000	$95,500,000	$11,875,000

Following the feasibility report, the state issued a request for expression of interest. Six firms responded with proposals of varying specificity for how they could redevelop the building (a seventh came later). The State ultimately rejected all seven responses it received. Instead, they awarded a $34 million demolition contract. Quoted in the *New York Times*, State Treasurer Andrew P. Sidamon-Eristoff said, "We are sympathetic to those who are passionate about architectural preservation. However, the Kirkbride building's advanced deterioration, which has worsened since 2011, massive size and challenging configuration present unique obstacles to a viable redevelopment."[68]

A local group, Preserve Greystone, sued to prevent demolition. The group's president said that a private developer could put the building "to good use at no cost to taxpayers," while the State instead spent $35 million to demolish it.[69] Star-Ledger reporter Mark Di Ionno articulated many of the strong citizen objections to the State's decision and its opaqye decision making process: "If it doesn't stink, then it's just lazy. Or lacks vision and creativity. Or shows an unwillingness to compromise. But we don't know, because the process wasn't open."[70] Di Ionno notes that the State's stated reasons for tearing down the building were that it was too deteriorated to save and that it would require public money to reuse, but no officials have elaborated on the process or criteria used to reach these conclusions.

The six proposals that the State received before the response deadline had varying degrees of specificity, though each included a way to preserve the main building and overcome the funding gap that the feasibility report had identified.

Developer Resource Group's proposal to the State, which centered on a sustainable agriculture and education program, included a plan for fully financing the estimated $98 million development with private capital in return for full ownership of the property following development.[71]

Building and Land Technology Corporation proposed at least 550 residential units in the Kirkbridge building, 100 new townhouses, and 5,000 square feet commercial and office space. Financing would come from a first mortgage, federal and state historic tax credits, equity, and

[60] Hurley, Dan, "Preservationists Fight to Save a Former Asylum in New Jersey," *New York Times*, 18 August 2014.
[61] "History of Greystone Park Psychiatric Hospital," Preserve Greystone, accessed 10 September 2015, http://www.preservegreystone.org/history.html.
[62] "Greystone Played a Significant Role in the Evolution of Mental Health Treatment," New Jersey State Division of Property Management and Construction, accessed 8 September 2015, http://www.state.nj.us/treasury/dpmc/Assets/Files/A1132%20Greystone%20campus%20timeline.pdf.
[63] Ben Horowitz, "State Awards $34 Million Contract to Tear Down Historic Greystone Building," *Star-Ledger* (New Jersey), 18 August 2014.
[64] "Greystone Played a Significant Role in the Evolution of Mental Health Treatment."
[65] Ibid.
[66] Ibid.
[67] Urban Partners, *Greystone Park Hospital Main Building Redevelopment Feasibility Assessment*.
[68] Ibid.
[69] Ibid.
[70] Di Ionno, Mark, "Something Stinks about the Greystone Deal," *NJ.com*, 9 April 2015.
[71] Developer Resource Group's response to a request for expression of interest in the redevelopment of the former Greystone Psychiatric Hospital, 28 May 2013, http://www.state.nj.us/treasury/dpmc/Assets/Files/GCA%20Management%2005-28-13.pdf

an inventive grant from the State's Economic Development Authority. Their proposal was the most specific, and listed the following required incentives: [72]

- Title to the 90 acres for a $1 consideration.
- The approval of a Part 1 for the entire property by the NJ SHPO and the NPS, as well as Part 2 and Part 3 applications for each building as they are renovated in accord with the Standards of the Secretary of the Interior.
- An award of State Economic Incentive Tax Credits of a minimum of $20,000,000, the sum necessary to cover the site work, demolition, abatement, and remediation necessary to undertake the rehabilitation.
- The adoption of State Historic Tax Credit legislation to provide a minimum of $15,000,000 per annum of State Historic Tax Credits for qualified commercial structures.

Forest City's proposal centered on high-end rental residential and a mix of other uses that tie into the neighboring public recreation facilities. They acknowledged that a public-private partnership would be an important element of a successful redevelopment. The firm highlighted its experience securing tax credit financing to make projects feasible.[73]

Cross Properties proposed a 310-unit residential development. Its financial assessment was vague: the proposal said the firm did not foresee funding gaps, and would respond to any gaps by selling land, seeking grants, seeking public investment, tax abatement, an easement donation, and historic tax credits.[74]

Greystone Community Innovation Team proposed a smart growth, village-style development that centered on a range of residential options and a mix of commercial, and recreation uses, including an organic farm.[75]

Auto Mart, a West Virginia firm responsible for preserving the Trans-Allegheny Lunatic Asylum and operating it as a paranormal tourist attraction, proposed a similar program for Greystone. Their proposal appears to assume similar development costs and schedules, with development phases being funded by visitor revenues as they are received. Their five-year development costs for the Trans-Allegheny Lunatic Asylum were $6.2 million, reflecting in-house preservation and demolition and limited redevelopment.[76]

Reporter Mark Di Ionno spoke with representatives of two of the responding firms following the State's rejection of their responses. Both said the State did not acknowledge or respond to their responses, or explain why they had rejected them.

Demolition of 26 structures and their connecting tunnels began in the spring of 2015 and was completed by October.[77] The state is planning to then deed the site to the county for use as open space. The state is saving some elements of the Kirkbride, such as the stone veneer and some columns, to honor the site's history.[78]

[72] Building and Land Technology Corporation's response to a request for expression of interest in the redevelopment of the former Greystone Psychiatric Hospital, May 2013, http://www.state.nj.us/treasury/dpmc/Assets/Files/kirkbride%20building%20response-13may21.pdf.

[73] Forest City's response to a request for expression of interest in the redevelopment of the former Greystone Psychiatric Hospital, May 2013, http://www.state.nj.us/treasury/dpmc/Assets/Files/Greystone%20RFEI%20-%20ForestCity.pdf.

[74] Cross Properties' response to a request for expression of interest in the redevelopment of the former Greystone Psychiatric Hospital, 30 May 2013, http://www.state.nj.us/treasury/dpmc/Assets/Files/Greystone%20RFEI%20-%20Cross.pdf.

[75] Greystone Community Innovation Team's response to a request for expression of interest in the redevelopment of the former Greystone Psychiatric Hospital, 30 May 2013, http://www.state.nj.us/treasury/dpmc/Assets/Files/Greystonevillage5-30-13final.pdf.

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7 SHPO LETTER OF SUPPORT

North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office
Ramona M. Bartos, Administrator

Governor Pat McCrory
Secretary Susan Kluttz

Office of Archives and History
Deputy Secretary Kevin Cherry

February 22, 2016

Mr. Peter Cvelich
Development Finance Initiative/School of Government
University of North Carolina at Chapel Hill
Campus Box 3330, Knapp-Sanders Building
Chapel Hill, NC 27599

Re: Broughton Hospital and North Carolina School for the Deaf Historic Districts
Conceptual Reuse Plans
Morganton, Burke County, NC

Dear Mr. Cvelich:

Thank you for your study submittal regarding the proposed conceptual reuse plans for the Broughton Hospital and North Carolina School for the Deaf buildings and sites within both National Register Historic Districts. Our staff has reviewed the information you provided, and we offer the following comments within the body of your February 10, 2016 email below.

During the course of the Broughton Hospital Study, DFI has developed a conceptual strategy for reusing and significantly improving the majority of historic hospital buildings and attracting additional private investment to surrounding public property. These conceptual plans would respect historic architecture and would expect to benefit from the Historic Preservation Tax Credits in so doing. Nevertheless, to adaptively reuse the historic buildings would require some modification to the historic campus and structures.

Per our prior conversations with your team at the N.C. State Historic Preservation Office (SHPO), we understand that there is agreement in principle to our proposed adaptive reuse strategies and conceptual site plans based on the historic district nomination forms and your interpretation of the scope of the proposed rehabilitation work, assuming it adheres to the following conditions:

- *Before any contributing structure be demolished, all alternatives to its preservation be explored.* **HPO response: In general demolition may be acceptable when the building or component is outside the period of significance of the district, it is so deteriorated or altered that its integrity has been irretrievably lost, or it is a secondary building or component that lacks historic, engineering, or architectural significance or does not occupy a major portion of the site and persuasive evidence is present to show that retention is not technically or economically feasible.**
- *Interior architectural features and finishes in public lobbies and corridors and other principle interior spaces be preserved or are altered in accordance with the Standards based on review of detailed architectural drawings.* **HPO response: We concur.**

Location: 109 East Jones Street, Raleigh NC 27601 **Mailing Address**: 4617 Mail Service Center, Raleigh NC 27699-4617 **Telephone/Fax**: (919) 807-6570/807-6599

- *New building construction be sited and designed to be compatible with the historic scenic character and views of the site, based on review of detailed site plans and architectural drawings.* **HPO response: We concur.**

We respectfully request a signed letter from SHPO by Feb. 22, confirming that draft plans provided to SHPO for review are consistent with those principles, with the understanding that 1) decisions regarding HTC eligibility and qualified rehab expenses would not be rendered until specific application with development plans would be made to SHPO, and that 2) those decisions ultimately lie with the federal National Park Service and IRS. **HPO response: We concur.**

Please let me know if this is a reasonable time frame for SHPO to provide such a letter or if you have questions.

As a summary, below is the scope of site planning and building rehabilitation from the conceptual plans that we have presented and discussed:

- *Broughton Hospital historic district:* **HPO response: We concur, with one comment below.**
  - *Modifications to the Avery Building, a landmark property:*
    - *Construction of porches on back façade to match existing porches on two wings*
    - *Penetrations through parting walls between patient rooms on interior*
  - *Demolition of building fabric that is non-contributing:*
    - *Appendages to Avery and Machine Shop*
    - *Bricked-in porches on Bates*
    - *Walkways between Avery and Jones, Avery and Reece, Scroggs and F2-Dining, F2-Dining and Harper, F2-Dining and Thomas, and between sections of Bates*
  - *Demolition of non-contributing and unidentified structures outside the period of historical significance from the nomination:*
    - *Jones*
    - *Moran*
    - *Carpenter (aka Nurses Dorm)*
    - *Chiller Building*
  - *Demolition of a contributing structure that has been significantly modified so as to have lost any of its historic architectural character:*
    - *Thomas*
  - *Preservation of non-contributing, but culturally significant structures: The Chapel*
  - *Relocation of contributing structures:*
    - *Relocation of five small sheds in southern portion of district.* **HPO response: Relocation must be sited to be compatible with the historic scenic character and views of the site, based on review of detailed site plans and architectural drawings.**
- *NC School for the Deaf Historic District:* **HPO response: We concur.**

  - *Demolition of non-contributing structures:*
    - *Rankin*
    - *Joiner Warehouse*
    - *Jeter*
    - *Henderson*

- *New construction: Nothing taller than 5 stories and sited so as to preserve prominent views to and from icon architecture and landscapes.* **HPO response: New building construction must be sited and designed to be compatible with the historic scenic character and views of the site, based on review of detailed site plans and architectural drawings.**

We appreciate the opportunities our staff had to meet with everyone. These meetings allowed for an understanding of the respect for the historic architecture being taken as well as the conceptual reuse plans for the buildings and sites within both National Register Historic Districts.

These comments are made in accord with G.S. 121-12(a) and Executive Order XVL. If you have any questions regarding them, please do not hesitate to contact Renee Gledhill-Earley, Environmental Review Coordinator, at 919-807-6579 or renee.gledhill-earley@ncdcr.gov or Tim E. Simmons, Senior Preservation Architect and Income-producing Tax Credit Coordinator, at 919-807-6585 or tim.simmons@ncdcr.gov.

Sincerely,

for

Ramona Bartos, Deputy
State Historic Preservation Officer

cc: Patricia Mitchell
Michael Lemanski
Tyler Mulligan
Renee Gledhill-Earley
Tim E. Simmons

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8 CASE STUDIES OF PRECEDENT PROJECTS

Blackberry Farm, Walland, TN

Blackberry Farm is a 4,200-acre, resort that first opened as a six-room inn in 1976. Guests travel to the resort, located in the Smoky Mountains, for fine dining and wine and natural beauty. On site amenities and activities include multiple upscale and casual dining options, a spa, fly fishing, horseback riding, several miles of private hiking trails, sporting clays, and tennis.[1] The resort is a pioneer in farm-to-table dining, and is unique in that it is one of the few luxury destinations in this part of Tennessee. It is near the large tourist draws of Gatlinburg and Pigeon Forge, but is as different as could be. People travel to the resort from around the country for its setting and its focus on luxury comfort.

The resort's various restaurants source heavily from the property: vegetables, cheeses, and meats come from the farm. The resort employs a master gardener, baker, cheese maker, butcher, jam maker, and chocolatier. Blackberry Farm has been rated the top resort in the US by readers of *Travel and Leisure* and the best food lover's hotel by *Bon Appetit*.[2] The resort has earned three James Beard awards.[3]

Guests may schedule their stays around the resort's full calendar of special events. A sample of 2016 events at the resort:[4]

- A weekend of food and wine featuring chef Alice Waters
- Performances by musicians including John Prine, Emmylou Harris, and John Hiatt
- A fitness bootcamp
- Holiday events over Thanksgiving and New Year's
- Cycling tours
- Seminars with financial planners

The resort's approximately 70 units are spread over a range of accommodation types.[5]

- Hill Cottages: Contain living rooms, screened porches with rockers, soaking tubs, high speed internet and flat screen televisions, and dining nooks. Each cottage comes with a private golf cart.
- Cottage Suites: Two- to four-suite buildings offer combination living room/bedroom, king sized beds, covered porch, and in some, connecting doors to allow friends and families to book adjoining suites. Each suite includes a private golf cart.
- One- to Five-Bedroom Houses: The houses have full kitchens, dining rooms, and common areas. Private chefs are available to serve meals in-house.

In addition to guest rentals, Blackberry Farm offers a limited number of ownership opportunities. Owners enjoy all the amenities of the resort.[6]

The Omni Homestead Resort, Hot Springs, VA

The Omni Homestead Resort combines luxury in a mountainous southern setting with up-to-date, family-friendly amenities that attract a range of guests. The case illustrates the appeal of a grand, historic hotel with access to outdoor activities and typical resort amenities, such as a water park and golf courses. The resort is also a successful example of how expansive programming can lead to success year round, as guests consider the Homestead Resort a destination in both summer and winter.

Homestead Resort is a 2,300-acre, amenity-rich, year-round resort. The resort opened in 1766 as an 18-room lodge. It hosted Thomas Jefferson for three weeks and has hosted 23 US presidents in total. The property has two natural hot springs which have drawn visitors to the property for centuries.[7] The resort is anchored by a palatial Greek Revival lodge built around 1903.[8]

The resort features a water park with slides, a lazy river, and a sandy beach; two 18-hole golf courses; a spa; movie theater; and tennis courts. Other on-site activities include horseback riding, skiing and snowboarding, paintballing, falconry, and ice skating. There are eight food and beverage establishments, ranging from a main dining room, to casual dining, golf course-side comfort food, and a sports bar.[9] Though the resort partnered with Canyon Ranch in 2012 to open a holistic spa on the site,[10] the concept was abandoned when Omni purchased the resort the following year.[11]

Homestead Resort has 483 guest rooms and suites and 26 meeting rooms with 73,000 square feet of flexible space.[12] The resort hosts approximately 100,000 guests per year.[13]

Old Edwards Inn & Spa, Highlands, NC

Old Edwards Inn & Spa shows how a downtown hotel can combine historic facilities with luxurious but rustic new construction and connect guests to a charming downtown filled with arts and dining experiences. The Inn does not have the expansive set of amenities of Homestead, but can attract visitors with its great food and wine, charming downtown location, and cool summer weather.

The Inn began as a boarding house in downtown Highlands in 1878. It closed in the mid-1960s before being purchase and renovated in 1982. In 2001, new owners purchased it and invested $50 million in updating the

[1] Website of Blackberry Farm, http://www.blackberryfarm.com.
[2] Grimes, William, "Sam Beall, Farm-to-Table Restaurateur Right on His Farm, Dies at 39," *New York Times,* 27 February 2016.
[3] Galarza, Daniela, "Remembering Sam Beall, Owner of Blackberry Farm, Who Died in a Tragic Accident," *Eater*, 26 February 2016.
[4] Website of Blackberry Farm
[5] Ibid.
[6] Ibid.
[7] The website of Omni Homestead Resort, https://www.omnihotels.com/hotels/homestead-virginia.
[8] Arthur, Nicole, "'Taking the Waters' at the Regal, Glamorous Homestead Resort," *Washington Post*, 26 November 2014.
[9] The website of Omni Homestead Resort.
[10] "The Homestead and Canyon Ranch Partner to Launch Canyon Ranch SpaClub at The Homestead in Hot Springs, Virginia," (press release) 27 September 2012, http://www.kslresorts.com/canyon-ranch.aspx.
[11] Burt, Bernard, "Canyon Ranch SpaClub Splits with The Homestead," *Examiner*, 26 November 2013.
[12] Ibid.
[13] Blackwell, John Reid, "Omni Hotels & Resorts Buys The Homestead," *Richmond Times-Dispatch*, 13 June 2013.

property. Renovations and acquisitions included a spa, executive conference center, restaurants, and a golf club.[14]

The Inn was named TripAdvisor's "#5 Top Hotel" in 2015 and for the past five years has topped many lists of the best resorts and spas in the country.[15]

The property has a range of accommodations:[16]

- The historic downtown inn
- Three groupings of cottages
- Three multi-room homes that can be rented for larger groups, such as wedding parties

There is also a range of food and beverage establishments on site, all of which embrace the farm-to-table experience. Many ingredients come from the property's gardens or from other regional producers.[17]

CATS Academy Boston

CATS Academy Boston is an example of how a residential school can easily inhabit a former hospital campus. School administration, dealing with a disconnected campus around Boston, found a great fit in the boarding school-like campus of the hospital and the large, contiguous property that was otherwise inaccessible in the Boston market. Administration expects this new campus to drive demand for the school, because it lends the feeling that people seek in boarding schools.

The Boston campus is the first US campus for CATS, which also has three schools in the UK.[18] The school serves students ages 14 to 18 and costs $55,000 per year.[19] The campus is 10 miles from downtown Boston, which CATS believes balances the needs for the energy of downtown Boston with the safety of the pastoral campus, which resembles those of other boarding schools. Currently, the campus is split, and dorms are located 20 minutes from the classroom buildings, and private shuttles transport students back and forth.[20] A new, all-inclusive campus is opening in 2016.[21]

The new, 19-acre campus has 400 en-suite bedrooms, 36 classrooms, four language labs, nine wet and three dry science labs, four music rooms, fitness areas, art studios, a theater room, yoga and dance studios, and social areas. Each student has a private bedroom. The campus features several flexible areas that allow students a variety of socializing and studying options.[22]

The new campus adaptively reuses a former historic hospital campus. In addition to the 100,000 square foot adaptive reuse, the school will build a new 20,000 square foot athletic facility.[23] The school began in 2012 with 27 students and had 270 by 2015. Administration expects the school to have 400 students by summer 2016, owing to strong demand from international students and domestic demand for the experience of a New England boarding school.[24]

North Carolina School of Science and Mathematics, Durham, NC

The North Carolina School of Science and Mathematics (NCSSM) exemplifies the opportunities and challenges of adapting a hospital campus into a residential school. The boarding school inhabited the former hospital buildings soon after they were made vacant, with little adaptation. NCSSM enjoys the unique campus and the status that comes with the historic architecture, yet the case also illustrates how adaptation is still needed for a new program to best achieve its purposes.

NCSSM is a public, residential school for academically-talented students that focuses on a STEM (science, technology, engineering, mathematics) curriculum. The school opened in 1980 with a class of 150 high school juniors. Currently, NCSSM plans to have 340 spots in its 2018 entering class and has more than 8,200 alumni that came to the school from across the state. It was the first school of its kind when it was founded; at least 18 such schools now exist.[25]

The campus adaptively reuses the former Watts Hospital, with buildings that date to the early 20th century and which closed to patients in 1976.[26] Students moved in in 1980. In 1986, Hunt Hall opened as a new student dorm building. In the years since, a few additional buildings have been renovated or demolished.[27]

According to the school's master plan:[28]

> The school moved into the abandoned hospital site after very little renovation work was completed; the program was placed in the best possible way in buildings that were originally designed to accommodate a hospital. While some uses from the school program were easily accommodated in hospital spaces, such as students' dormitories in patient rooms, others, such as classrooms, required major change in order to make it an adequate space, which in some cases was not possible. Today, the results of trying to fit the program in the space available are poor quality classrooms and student spaces.

The plan proposes that the school begin to design for its needs, instead of continuing to attempt to fit its needs into the existing design, which becomes increasingly challenging as the school grows and new STEM fields emerge with specialized space needs.

SEED Schools (various locations)

SEED Schools are an example of a boarding school model that can be transplanted to new areas. Currently in three urban neighborhoods, the school—which boards students from underserved areas five nights a week as a way to provide a more immersive educational experience—represents an

[14] The website of Old Edwards Inn & Spa, http://www.oldedwardsinn.com.
[15] Ibid.
[16] Ibid.
[17] Ibid.
[18] The website of CATS Academy Boston, http://www.catsacademy.com/en.
[19] Carlock, Catherine, "CATS Academy Boston Plans $40M, 20-acre Campus in Braintree," *Boston Business Journal*, 20 February 2015.
[20] The website of CATS Academy Boston.
[21] Carlock.
[22] The website of CATS Academy Boston.
[23] Carlock.
[24] Ibid.
[25] The website of the North Carolina School of Science and Mathematics, http://www.ncssm.edu.
[26] Kueber, Gary, "WATTS HOSPITAL (1909-1980) / NORTH CAROLINA SCHOOL OF SCIENCE AND MATH," the website of *Open Durham*, http://www.opendurham.org.
[27] "North Carolina School of Science and Mathematics Campus Master Plan: October 2008,"
[28] "North Carolina School of Science and Mathematics Campus Master Plan Executive Summary:

innovative way to offer the boarding school experience to high-potential students who would benefit from additional support structures.

The SEED Foundation operates three schools, in Washington, DC, Maryland, and Florida. The schools are college-preparatory boarding schools for students from underserved areas. Each school handles its own admissions process, though lottery systems are in place at each since applications exceed available seats.[29]

The SEED school in Washington, DC, serves 325 students in grades six to 12 from the surrounding, low-income, predominantly-Black community. The students arrive to the neighborhood campus on Sunday evening and leave on Friday evening. The public charter school, which is free for admitted students, costs $35,000 per student, which comes primarily from local government funds.[30] This is about three times the cost per pupil of other area charter schools.[31]

The newest SEED school, in Miami, is a seven-day-a-week experience.[32]

The SEED Foundation seeks to open new schools in new areas.[33]

Fearrington Village

Fearrington Village, a mixed-use community developed in the early 1970's eight miles south of Chapel Hill, occupies 1,200 acres of agricultural land and is home to 1800 residents in both detached single family homes and townhouse style residences. Fitch Creations, Inc., a family business formed in 1960, acted as the builder and developer of the entire Fearrington Village community and continues to own and manage most of the businesses within the Village Center.

The Fearrington Village Center includes an adaptively reused Inn and resort, several regionally renowned restaurants and cafes, a recently developed spa, a beer garden and several other boutique shops. The Village also incorporates large tracts of operational agricultural land, walking trails, gardens and other open spaces which are designed to link the residential neighborhoods with the Village Center. The historic Inn and spa have become a premier destination for weddings and events while the operational agricultural components of the village draw families from all around Central North Carolina for weekend visits.

In 2005, Galloway Ridge, owned by Galloway Ridge Inc. a North Carolina nonprofit corporation, was developed as the only Lifecare continuing care retirement community in the Triangle region of North Carolina. The retirement community is sited on a 50-acre tract within the 1200 acre Fearrington Village campus. Galloway Ridge has been described by the Wall Street Journal as a prototype of future housing development for older Americans, featuring a Center for Living operated by Duke University Health System, Rehabilitation and Wellness Center and a Primary Care Center operated by the University of North Carolina's Health system.

Galloway Ridge features residential units ranging from 1BR apartments style units of 800SF to detached cottages/villas of 2000SF. The Galloway Ridge CCRC model implements a one time entrance fee that ranges from $250,000-$1,000,000 and monthly fees that range from $2,400-$4,700. Life Care Services (LCS), a national management organization provides professional development, management, marketing and financial services. This senior living component is integrated into the Fearrington Village campus providing residents with a network of vehicular and pedestrian access to the outdoor and village center amenities.

Givens Estates

Givens Estates Continuing Care Retirement Community, a Christian, ecumenical not-for-profit corporation established in 1975, is a 530-unit residential campus located just outside of Asheville, NC within the Blue Ridge and Great Smoky Mountains. As of 2013, Givens Estates posted a 100% occupancy rate on their Independent Living Units. Entrance fees to join the community ranged from $30,000-$800,000 with monthly fees between $1,100-$3,200.

The mixed-use residential campus features a wide variety of living options, including, apartments, villas, duplexes and individual homes accommodating seniors of all levels of independence. The campus is designed with the majority of the residential facilities on the periphery, focusing the central core of the campus on community amenities such as the dining halls, recreation and entertainment facilities. Recently, the campus invested in the construction of a 400 seat Performing Arts Center. In addition to the wide variety of residential options and common amenities, a health and wellness center, featuring a spa, pool, and psychical therapy gym is located on the campus providing the residents with health care and health related programming.

The 215-acre campus offers residents and guests with a wide variety of passive and active recreational spaces, many of which are connected with the mountainous landscapes of Western North Carolina. The campus grounds feature walking/hiking trails, healing and vegetable gardens, greenhouses, an arboretum, horseshoe pits and croquet fields.

In 2007, the Givens Estates campus expanded its residential offerings with the off-site development of the Great Laurels of Junaluska, which features 100 affordable apartments for residents of limited means. Approximately 25% of all the residents within Givens Estates are receiving some level of financial assistance for their residential fees.

[29] The website of the SEED Foundation, http://www.seedfoundation.com.
[30] Jones, Maggie, "The Inner-City Prep School Experience," *New York Times,* 25 September 2009.
[31] Einhorn, Erin, "The Rise of Urban Public Boarding Schools," *The Atlantic*, 26 December 2015.
[32] Ibid.
[33] The website of the SEED Foundation.

AGRITOPIA[34,35,36]

Agritopia, in Gilbert, Arizona—20 miles from Phoenix—is a 160-acre residential development centered around a 15-acre certified organic farm. Between 2008 and 2010, 452 single-family homes were built on the site. By 2014, 150 assisted and independent living units were on site. In fall 2016, 250 mixed-use residences are scheduled to open, for a total of 950 residential units.

The development is located on the former Johnston family farm. Joe Johnston, seeing the growing residential developments of Gilbert enclosing on his family's property, planned a multigenerational mixed-use development based around the family farm.

Residents have access to rentable garden plots, and for those who would rather not get their hands dirty, the development runs a CSA program called the Good Food Box program. There is a farm stand that operates on the honor system and an outdoor food court. A farm-to-table restaurant is on site. Agritopia also sells its produce to restaurants in the area. There is a homeowners' association that governs as well as organizes social events.

The 143,000 square foot Generations at Agritopia contains 122 units: 74 independent and assisted living units and 48 memory care apartments. The CCRC opened on the grounds of Agritopia in July 2014. The $26 million project is operated by Retirement Community Specialists, which also operates two other CCRCs in Arizona.

The 18-month long construction was completed in July 2014. The project was developed through a joint venture of Retirement Community Specialists and Investment Property Associates. Investment Property Associates develops multifamily and senior communities in Greater Phoenix and Western Michigan.

All but one apartment layout has a full kitchen, washer, and dryer. One layout, a one-bedroom, has a kitchenette. Eighteen units have garages, and there are 18 storage units on the site.

As of February 2015, the CCRC was 75 percent occupied. The independent and assisted-living units were 95 percent occupied. The memory care apartments, which had opened five months earlier, were 50 percent occupied.

Generations has a movie theater, several dining establishments, a wine cellar, and a tea room. Its finishes and art collection make it resemble a high-end hotel more than a senior living facility. The interiors were designed by senior housing interior design firm Thoma-Holec Design.

One of the ways in which Generations is different from other CCRCs is the ways in which it is integrated into a larger community. Though RCS Agritopia wanted to open a CCRC, a market study showed insufficient demand within a five miles radius of the site. When a CCRC named Sunrise Senior Living opened in central Gilbert, RCS reassessed the market and found sufficient demand.

[34] The website of Agritopia, http://www.agritopia.com

[35] Jason Oliva, "Best of CCRC Design 2014: Fitting Into the Master Planned Community," *Senior Housing* News, February 4, 2015, http://seniorhousingnews.com/2015/02/04/best-ccrc-design-2014-fitting-master-planned-community

[36] Lisa Jackson, "How to Build Better Suburbs," *Huffington Post*, August 7, 2015, http://www.huffingtonpost.ca/lisa-jackson/green-suburbs_b_7941068.html

Initially, Generations was to be financed through HUD's Section 232 program, but those plans stalled due to an ownership change during the recession. In 2012, Investment Property Associates bought Generations at Agritopia and, besides a few small changes, proceeded with most of the original design.

Interest in the project was strong enough to lead RCS to begin developing another Generations product. Generations at Ahwatukee is opening outside Phoenix.

SERENBE[37,38,39,40,41,42,43]

Near the Atlanta airport, the rural-inspired New Urbanist community Serenbe broke ground on its first home in 2004. It initially had 220 single-family homes on 1,000 acres, with another 800 home sites planned. Currently, about 400 residents live at Serenbe. The development has a 25-acre organic farm, 160 acres of protected open land, and 15 miles of trails. Serene has four themed "hamlets" that focus on different "elements of a well-lived life:" arts, agriculture, health, and education. Residences include:

- Farmettes: five to 25-acre lots designed to accommodate a single-family home, vegetable garden, farm animals, pastures, and a barn.
- Lots
- Cottages
- Lofts
- studio to three-bedroom apartments for sale and lease in a building meant to resemble a redeveloped textile mill
- Townhomes
- Live/work townhomes: lower levels house restaurants, galleries, and shops. Upper levels have two-bedroom apartments.

The developer is restaurateur Steve Nygren, who began the project on his land. The development began with the organic farm, which developed relationships with local restaurants. This provided strong initial word-of-mouth advertising.

The development grew out of a concern for land preservation and a realization that growth from nearby Atlanta was inevitable. Nygren and other landowners created the Chattahoochee Hill Country Alliance, which helped create a plan to balance development with land preservation. Through a mix of land-use

[37] The website of Serenbe, http://serenbe.com

[38] Jennifer Brett, "At Serenbe, sustainability is an art," *Atlanta Journal Constitution,* July 9, 2015, http://buzz.blog.ajc.com/2015/07/08/at-serenbe-sustainability-is-an-art/

[39] Lori Johnston, "Serenbe, Soleil add more housing options, wellness amenities," *Atlanta Journal Constitution,* March 30, 2015, http://www.ajc.com/news/lifestyles/home-garden/serenbe-soleil-add-more-housing-options-wellness-a/nkfdR/

[40] Josh Green, "Serenbe Expects Wave of Development this Fall, Next Year," Curbed, October 23, 2014, http://atlanta.curbed.com/archives/2014/10/23/serenbe-expects-wave-of-new-development-this-fall-next-year.php

[41] Harold Bubil, "New Urbanism takes root in the red Georgia clay," *Herald-Tribune*, September 10, 2013, http://realestate.heraldtribune.com/2013/09/10/new-urbanism-takes-root-in-the-red-georgia-clay

[42] Megan Kimble, "Serenbe in Chattahoochee Hills, Georgia," *Terrain.org*, December 15, 2012, http://www.terrain.org/2012/unsprawl/serenbe/

[43] "The Serenbe Story," handout by Development Concepts, 2014, http://development-concepts.com/wp-content/uploads/2014/04/Serenbe-Handout1.pdf

tools, such as land purchase, conservation easements, a transfer of development rights, and mixed-use zoning, their vision aimed to provide for 30,000 residences in the area while preserving at least 70 percent of the 40,000 acres of open space. The resulting plan created both dense development and preserved, open spaces.

Serenbe aims to attract residents with amenities such as local boutiques, art galleries, three critically acclaimed farm-to-table restaurants, a bed and breakfast, a well-reviewed theater and playhouse, dog park, fishing pond, stables, and forest with walking trails. There is a focus not just on comfortable living, but on sustainability: treated wastewater irrigates landscaping and homes make use of geothermal and solar features. An "Art Farm" is under development, meant to be a retreat space on the farm for artists.

The development has no spec homes—owners can buy resale homes or build new, using approved builders. In 2014, 75 percent of households were at least 40 years old. A nearby charter school opened in fall 2014, which is expected to help attract younger families to the development.

The Serenbe Homeowners Association is managed by the Nygren family and will transition to an HOA board once the development is 90 percent built-out. The HOA manages roads, parks, and ROW maintenance. Fees of approximately $550 to $1000 per year are based on usage of water, wastewater, and solid waste services.

To account for the placemaking concerns at Serenbe that are larger than those normally handled by an HOA, the Nygren family created the 501c3 Serenbe Institute. Every home sale results in a one percent transaction fee paid by the buyer to the Institute; every lot sale results in a three percent fee. With this money, the Institute manages the Serenbe community experience by sponsoring amenities such as theater groups and arts programs.

The community expected about $85 million in new development in 2015, including the first stages of construction on 200,000 square feet of office space.

The Textile Lofts—a 10,000 square foot apartment building with ground-floor retail—broke ground in late 2014. The new building, which is meant to recreate the experience of living in a redeveloped mill building, had a waiting list before construction began.

Serenbe includes a new section called Mado, which is marketed toward residents aged 55 and up. Mado has 16 one-story cottages. The cottages, designed by Monte Hewett Homes, all have private courtyards. One unique element is the Common House, a shared area between the cottages with two guest suites, a gourmet kitchen, and entertaining areas. This is part of the development's push to attract retirees who still seek active lifestyles and like to entertain, but also may need the cottages' accommodations for aging-in-place.

Nygren, the developer, had trouble finding a bank to fund the development, which he says was a result of there being no statistics showing that people would pay as much for a home near a farm as for a home along a golf course. A small community bank offered to lend the necessary money if Nygren put his downtown Atlanta property—worth three times the sum he hoped to borrow—up as collateral.

The development got off to a strong start, and the initial bank loans were paid back within a few years. Nygren borrowed money for the second phase just as the 2008 recession got underway. Banks were not loaning to builders, so Nygren was selling lots to individuals, which proved challenging. With infrastructure in place in 2002, lots began to sell for approximately $4,500 per acre. By 2014, such lots sold for $500,000 to $950,000 per acre. Nygren envisions 100,000 residents at full build out.

APACHE ASL TRAILS[44,45,46,47,48,49,50,51]

Apache ASL Trails, in Tempe, Arizona, is an affordable housing development for deaf and hard-of-hearing seniors that communicate with American Sign Language. It opened in 2012. The 89,000 square foot mixed-use development has 75 one- and two-bedroom units, designed by a deaf architect, which cater to deaf residents. Residents, who may have felt isolated in hearing communities, value the development because they "share a common language" and are "not lonely anymore." When first leasing, deaf and hard-of-hearing applicants had preference, and the complex opened with a waiting list.

The development was designed by WSM Architects, which has experience with senior living projects. The contractor was Adolphson Peterson.

Design features and amenities include video phones in units; strobe lights that flash to alert residents to the phone, doorbell, and fire alarm; and announcements in common areas that can be routed to hearing aids. The complex has an ASL-friendly manager and an ASL-friendly beauty salon, in addition to a medical clinic. The development has four ground-floor retail/office spaces and a 1,895 square foot medical office unit. The development is on the light rail line.

Total development cost was $16.7 million, $2.6 million of which came from HUD grant and stimulus funding. The development was financed in part by Cardinal Capital Management, an affordable housing developer. Funding also came from the federal Low Income Housing Tax Credit program, Tax Credit Assistance Program funds, and HOME Investment Partnership Program funds.

Soon after construction, HUD—based on the development's marketing materials—charged Apache with discrimination for giving preference to deaf and hard-of-hearing people, in violation of Section 504 of the Rehabilitation Act of 1973. HUD said that the number of units reserved for individuals who are hearing-impaired or in wheelchairs should be capped at 19, or 25 percent of its units, and threatened to withhold funds from the state if it did not comply. According to a HUD officials, this was because, "federal law prohibits facilities that receive HUD funds from providing separate or different housing for one group of individuals with disabilities because this practice denies or limits access to housing for other individuals based on the types of disabilities they have."

These charges led to the scrapping of at least some other developments around the country that were to cater to certain disabled groups and were planning to receive federal monies. Faced with mountain national criticism from disability advocates, HUD ultimately backed down and removed its legal complaint.

[44] Website of Apache ASL Trails, http://www.apacheasltrails.com/main.html

[45] Fernanda Santos, "A Haven for the Dead Draws Federal Scrutiny Over Potential Discrimination," *New York Times*, April 28, 2013, http://www.nytimes.com/2013/04/29/us/arizona-haven-for-deaf-faces-discrimination-charges.html?_r=0

[46] Fernanda Santos, "Arizona: Challenge to Housing for the Deaf is Dropped," *New York Times*, January 24, 2014, http://www.nytimes.com/2014/01/25/us/arizona-challenge-to-housing-for-the-deaf-is-dropped.html

[47] "Tempe Medical & General Offices for Lease," real estate listing on Loopnet, http://looplink.levrose.com/ll/19360077/2428-E-Apache-Blvd

[48] "Housing for Persons with Special Needs: Deaf Seniors – Apache ASL Trails," Arizona Department of Housing brief, *https://www.ncsha.org/system/files/Arizona_HFPWSN.pdf*

[49] "Apache ASL Trails," from the website of WSM Architects, http://www.wsmarch.com/project.php?MA=7&PROJ=41

[50] Kimberly Cheng, "Senior apartment community opens for hearing impaired and deaf in Tempe," ABC15, July 15, 2011, http://www.abc15.com/news/region-southeast-valley/tempe/senior-apartment-community-opens-for-hearing-impaired-and-deaf

[51] Ken Harris, "HUD Reverses Decision on Setting Preferences in Senior Housing," the website of LeadingAge New York, http://www.leadingageny.org/providers/housing-and-retirement-communities/hud/hud-reverses-decision-on-setting-preferences-in-senior-housing

9 INVESTMENT SCHEDULES BY REDEVELOPMENT APPROACH

COMPREHENSIVE APPROACH - RECOMMENDED PROGRAM - ANCHORED BY RESIDENTIAL SCHOOL

		TOTAL SHARE			
COMPONENT	**TOTAL COSTS**	**STATE - SCHOOL**	**STATE - OTHER**	**LOCAL**	**PRIVATE**
AMENITIES					
ACCESS ROAD	$1,244,593			$1,244,593	
GATEWAY PARK/INTERSECTION	$7,605,481			$7,605,481	
POND	$2,993,474			$2,993,474	
GREENWAY SPINE	$1,286,644			$1,286,644	
ATHLETIC FIELDS	$557,555			$557,555	
GREENWAY PATHS	$2,518,920			$2,518,920	
MOTHBALLING					
BROUGHTON (NONE DUE TO IMMEDIATE REUSE AS SCHOOL/MIXED USE)					
NCSD (GOODWIN & JOINER)	$621,100		$621,100		
COLLEGE/COUNTY AREA (BARNS, COLONY, ABATTOIR)	$427,620		$427,620		
DEMOLITION					
BROUGHTON	$2,265,310		$2,265,310		
NCSD	$1,220,436		$1,220,436		
COLLEGE/COUNTY AREA	$934,682			$934,682	
ESTC	$7,500			$7,500	
REPLACEMENT (EXCLUDING LAND PURCHASE COSTS)					
DHHS - BROUGHTON	$10,886,000		$10,886,000		
DPS (BROUGHTON SHARE OF NEW FACILITY)	$7,700,000		$7,700,000		
COLLEGE - ESTC	$11,301,675			$11,301,675	
DHHS - WORKSOURCE WEST	$11,745,000		$11,745,000		
SITEWORK					
BROUGHTON - SCHOOL AND MIXED-USE	$4,102,884		$4,102,884		
HOSPITALITY VILLAGE	$4,212,179			$4,212,179	
NEW RESIDENTIAL	$664,624			$664,624	
CONSTRUCTION					
BROUGHTON - SCHOOL (PHASE 1 - HALF OF AVERY + ACADEMIC BUILDINGS)	$35,798,899	$35,798,899			
BROUGHTON - SCHOOL (PHASE 2)	$32,946,193	$32,946,193			
BROUGHTON - RESIDENTIAL	$19,519,118				$19,519,118
BROUGHTON - COMMERCIAL	$5,228,161				$5,228,161
SENIOR LIVING (PHASE 1 - IL/AL APARTMENTS)	$71,134,648				$71,134,648
SENIOR LIVING (PHASE 2 - VILLAS)	$9,700,179				$9,700,179
HOSPITALITY VILLAGE - RETAIL (BREWERY/RESTAURANT)	$4,992,130				$4,992,130
HOSPITALITY VILLAGE - HOTEL	$29,965,931				$29,965,931
NEW RESIDENTIAL	$11,902,200				$11,902,200
	$293,483,137	**$68,745,092**	**$38,968,350**	**$33,327,327**	**$152,442,368**

COMPREHENSIVE APPROACH - ALTERNATIVE PROGRAM - ANCHORED BY HOTEL

		TOTAL SHARE			
COMPONENT	**TOTAL COSTS**	**STATE - SCHOOL**	**STATE - OTHER**	**LOCAL**	**PRIVATE**
AMENITIES					
ACCESS ROAD	$1,244,593			$1,244,593	
GATEWAY PARK/INTERSECTION	$7,605,481			$7,605,481	
POND	$2,993,474			$2,993,474	
GREENWAY SPINE	$1,286,644			$1,286,644	
ATHLETIC FIELDS	*$557,555*			*$557,555*	
GREENWAY PATHS	$2,518,920			$2,518,920	
MOTHBALLING					
BROUGHTON (MAY BE NECESSARY BASED ON TIMING OF HOTEL)	$0		$0		
NCSD (GOODWIN & JOINER)	$621,100		$621,100		
COUNTY SERVICES (BARNS, COLONY, ABATTOIR)	$427,620		$427,620		
CARRYING COSTS					
BROUGHTON (FOR 7-YEAR VACANT PERIOD)	$2,066,400		$2,066,400		
DEMOLITION					
BROUGHTON	$2,265,310		$2,265,310		
NCSD	$1,220,436		$1,220,436		
COLLEGE/COUNTY AREA	$934,682			$934,682	
ESTC	$7,500			$7,500	
REPLACEMENT (EXCLUDING LAND PURCHASE COSTS)					
DHHS - BROUGHTON	$10,886,000		$10,886,000		
DPS (BROUGHTON SHARE OF NEW FACILITY)	$7,700,000		$7,700,000		
COLLEGE- ESTC	$11,301,675			$11,301,675	
DHHS - WORKSOURCE WEST	$11,745,000		$11,745,000		
SITE PREPARATION					
BROUGHTON - HOTEL	$4,332,133		$922,566	$3,409,567	
NEW RESIDENTIAL	$2,708,694			$2,708,694	
CONSTRUCTION					
NEW SCHOOL (PHASE 1) - NOT LOCATED ON-SITE	$39,155,835	$39,155,835			
NEW SCHOOL (PHASE 2) - NOT LOCATED ON-SITE	$35,231,412	$35,231,412			
BROUGHTON - HOTEL	$80,233,765				$80,233,765
BROUGHTON - RESIDENTIAL	$30,675,322				$30,675,322
BROUGHTON - COMMERCIAL	$5,228,161				$5,228,161
SENIOR LIVING (PHASE 1 - IL/AL APARTMENTS)	$71,134,648				$71,134,648
SENIOR LIVING (PHASE 2 - VILLAS)	$9,700,179				$9,700,179
RETAIL (BREWERY/RESTAURANT)	$4,992,130				$4,992,130
NEW RESIDENTIAL	$22,311,302				$22,311,302
	$371,085,970	**$74,387,247**	**$37,854,432**	**$34,568,785**	**$224,275,507**

LIMITED APPROACH - NARROW PROGRAM - RELIANT ON STATE SCHOOL

		TOTAL SHARE			
COMPONENT	**TOTAL COSTS**	**STATE - SCHOOL**	**STATE - OTHER**	**LOCAL**	**PRIVATE**
AMENITIES (NONE)					
MOTHBALLING					
BROUGHTON (NONE DUE TO IMMEDIATE REUSE AS SCHOOL/MIXED USE)					
DEMOLITION					
BROUGHTON	$2,265,310		$2,265,310		
REPLACEMENT (EXCLUDING LAND PURCHASE COSTS)					
DHHS – BROUGHTON	$10,886,000		$10,886,000		
DPS (BROUGHTON SHARE OF NEW FACILITY)	$7,700,000		$7,700,000		
SITEWORK					
BROUGHTON - SCHOOL AND MIXED-USE	$5,103,143		$5,103,143		
CONSTRUCTION					
BROUGHTON - SCHOOL (PHASE 1 - HALF OF AVERY + ACADEMIC BUILDINGS)	$35,798,899	$35,798,899			
BROUGHTON - SCHOOL (PHASE 2)	$32,946,193	$32,946,193			
BROUGHTON – RESIDENTIAL	$19,519,118				$19,519,118
BROUGHTON - COMMERCIAL	$5,228,161				$5,228,161
	$119,446,824	$68,745,092	$25,954,453	$0	$24,747,279

LIMITED APPROACH - DEFERRAL - MOTHBALLING

		TOTAL SHARE			
COMPONENT	**TOTAL COSTS**	**STATE - SCHOOL**	**STATE - OTHER**	**LOCAL**	**PRIVATE**
AMENITIES (NONE)					
MOTHBALLING					
BROUGHTON	$6,600,000		$6,600,000		
NCSD (GOODWIN & JOINER)	$621,100		$621,100		
COUNTY SERVICES (BARNS, COLONY, ABATTOIR)	$427,620		$427,620		
CARRYING COSTS					
BROUGHTON (FOR 10-YEAR VACANT PERIOD, ALTHOUGH IT WOULD BE INDEFINITE)	$2,952,000		$2,952,000		
DEMOLITION (NONE)					
REPLACEMENT (NONE)					
SITEWORK (NONE)					
CONSTRUCTION					
NEW SCHOOL (PHASE 1) - NOT LOCATED ON-SITE	$39,155,835	$39,155,835			
NEW SCHOOL (PHASE 2) - NOT LOCATED ON-SITE	$35,231,412	$35,231,412			
	$84,987,967	$74,387,247	$10,600,720	$0	$0

10 DISTRICT APPROACH-FINANCIAL MODEL SUMMARY

COMPREHENSIVE DISTRICT APPROACH – RECOMMENDED PROGRAM – ANCHORED BY RESIDENTIAL SCHOOL

Summaries of the financial pro forma models—projections of the performance of a real estate investment—for the comprehensive district approach are presented below. The financial models are presented for the private investment components of the recommended program for the comprehensive district approach, which is anchored by the residential school on the Historic Broughton Hospital Campus. The study recommends that this school be a public investment by the State. Therefore, the extent of the financial projections presented for that program are the development costs. The assumptions used in these pro forma models regarding development costs, sources of capital, and the marketability and income potential of the investments are current as of end of the first quarter of 2016.

Model summaries for the following components are presented on the following pages:

- Residential School
- Multi-use Village
- Senior Living Community
- Hospitality Village
- Multi-family Residential

RESIDENTIAL SCHOOL (SEE P. 24-31 OF THE VISION SECTION OF THE MAIN REPORT)

Development Budget	%	Per GSF	Total
Hard Costs			
Building Demolition	3.0%	$4.70	$2,265,310
Sitework	5.5%	$8.51	$4,103,143
Rehab			
Avery	49.9%	$77.72	$37,453,618
Bates North	2.9%	$4.54	$2,185,750
Machine Shop	0.9%	$1.42	$683,389
Marsh	2.0%	$3.09	$1,486,818
Reece	2.9%	$4.59	$2,209,710
Saunders	2.9%	$4.52	$2,176,243
Steam Plant	1.8%	$2.87	$1,385,072
Laundry	3.4%	$5.32	$2,563,614
Gym	3.9%	$6.03	$2,904,051
Chapel	0.7%	$1.09	$525,000
Contingency	3.9%	$6.08	$2,931,421
Remobilization (second phase)	1.6%	$2.49	$1,200,000
Total Hard Costs	**85.4%**	**$132.96**	**$64,073,139**
Soft Costs			
A&E fees	4.9%	$7.65	$3,684,794
Legal and accounting	0.5%	$0.80	$385,510
Appraisal	0.1%	$0.10	$48,189
Survey	0.1%	$0.20	$96,378
Insurance	0.2%	$0.25	$120,472
Construction loan carried interest	1.7%	$2.61	$1,256,180
Bridge loan carried interest	0.7%	$1.16	$561,281
Loan fees	0.9%	$1.39	$670,539
Contingency	0.9%	$1.42	$682,334
Total Soft Costs	**10.0%**	**$15.58**	**$7,505,677**
Other Costs			
Project Management	4.6%	$7.17	$3,453,276
Total Other Costs	**4.6%**	**$7.17**	**$3,453,276**
Total Budget	**100.0%**	**$155.70**	**$75,032,092**

MULTI-USE VILLAGE (SEE P. 27 OF THE VISION SECTION OF THE MAIN REPORT)

Property Summary	
Gross Area (GSF)	114,359
Number of Units	
Residential	73
Commercial	1
Rentable Area (RSF)	
Residential	87,294
Commercial	11,077
Stabilized Occupancy	95%

Development Budget		
	Per GSF	Total
Acquisition Costs	$16	$1,800,455
Hard Costs	$126	$14,415,960
Soft Costs	$16	$1,831,036
Other Costs	$13	$1,471,667
Total	$171	$19,519,118

Permanent Capital Sources		
Investor Equity	13%	$2,442,257
Developer Equity	1%	$180,475
Historic Tax Credit Equity	25%	$4,786,584
Seller Note	9%	$1,800,455
Primary Mortgage Note	53%	$10,309,348
Total	100%	$19,519,118

Debt Summary	
Amortization (years)	30
Interest Rate	5.00%
Total Annual Debt Service	$780,097
Stabilized Total Debt Service Coverage	1.15

Blended Stabilized Cash Flow (annual)			
	Per Unit	Per RSF	Total
Gross Potential Rent	$18,224	$13.71	$1,348,559
Vacancy	$911	$0.69	$67,428
Operating Expenses	$5,159	$3.88	$381,750
Net Operating Income (NOI)	$12,154	$9.14	$899,381

Disposition Summary			
Year of Sale			6
NOI at Sale (forward 12 months)	$14,200	$10.68	$1,050,793
Capitalization Rate			6.75%
Gross Sale Proceeds	$210,369	$158.25	$15,567,305
Selling Fees	$6,311	$4.75	$467,019
Outstanding Debt	$148,226	$111.50	$10,968,694
Net Sale Proceeds	$55,832	$42.00	$4,131,592

Returns Summary	
Internal Rate of Return	14%
Equity Multiple	2.0x

Development Budget			
	%	Per GSF	Total
Acquisition	**9.2%**	**$15.74**	**$1,800,455**
Hard Costs			
Rehab/Construction			
Bates South	13.1%	$22.35	$2,555,865
F2 Dining	4.8%	$8.15	$932,372
Harper	29.0%	$49.49	$5,659,913
Scroggs	13.8%	$23.59	$2,697,224
South	9.7%	$16.48	$1,884,112
Contingency	3.5%	$6.00	$686,474
Total Hard Costs	**73.9%**	**$126.06**	**$14,415,960**
Soft Costs			
A&E fees	5.2%	$8.82	$1,009,117
Legal and accounting	0.5%	$0.80	$91,487
Appraisal	0.1%	$0.10	$11,436
County property taxes	0.0%	$0.08	$9,542
City property taxes	0.1%	$0.11	$12,243
Survey	0.1%	$0.20	$22,872
Insurance	0.1%	$0.25	$28,590
Construction loan carried interest	1.0%	$1.75	$200,649
Bridge loan carried interest	0.8%	$1.38	$157,888
Loan fees	0.6%	$1.06	$120,754
Contingency	0.9%	$1.46	$166,458
Total Soft Costs	**9.4%**	**$16.01**	**$1,831,036**
Other Costs			
Developer Fee	4.6%	$7.89	$902,373
Operating Reserve	2.9%	$4.98	$569,294
Total Other Costs	**7.5%**	**$12.87**	**$1,471,667**
Total Budget	**100.0%**	**$170.68**	**$19,519,118**

SENIOR LIVING COMMUNITY (SEE P. 32-35 OF THE VISION SECTION OF THE MAIN REPORT)

Property Summary	
Gross Area (GSF)	364,040
Number of Units	326
Rentable Area (RSF)	279,500
Stabilized Occupancy	92%

Development Budget	Per GSF	Total
Acquisition Costs	$14	$4,968,474
Hard Costs	$174	$63,501,538
Soft Costs	$18	$6,631,979
Other Costs	$16	$5,732,837
Total	$222	$80,834,828

Permanent Capital Sources		
Investor Equity	23%	$18,817,312
Developer Equity	1%	$751,020
Historic Tax Credit Equity	5%	$3,959,828
Seller Note	6%	$4,968,474
Primary Mortgage Note	65%	$52,338,193
Total	100%	$80,834,828

Debt Summary	
Amortization (years)	25
Interest Rate	5.50%
Total Annual Debt Service	$4,222,957
Stabilized Total Debt Service Coverage	1.22

Stabilized Cash Flow (annual)	Per Unit	Per RSF	Total
Gross Potential Rent	$39,354	$45.90	$12,829,440
Vacancy	$3,148	$3.67	$1,026,355
Operating Expenses	$20,386	$23.78	$6,645,984
Net Operating Income (NOI)	$15,819	$18.45	$5,157,101

Disposition Summary			
Year of Sale			6
NOI at Sale (forward 12 months)	$20,037	$23.37	$6,532,003
Capitalization Rate			7.75%
Gross Sale Proceeds	$258,540	$301.55	$84,283,908
Selling Fees	$7,756	$9.05	$2,528,517
Outstanding Debt	$153,999	$179.62	$50,203,834
Net Sale Proceeds	$96,784	$112.89	$31,551,556

Returns Summary	
Internal Rate of Return	14%
Equity Multiple	2.1x

Development Budget	%	Per GSF	Total
Acquisition	**6.1%**	**$13.65**	**$4,968,474**
Hard Costs			
Sitework	5.6%	$12.48	$4,544,029
Construction/Rehab			
New Construction	54.0%	$120.01	$43,687,390
Goodwin	7.1%	$15.86	$5,773,180
Joiner	3.2%	$7.17	$2,609,125
Infirmary	1.1%	$2.48	$903,750
Barn	0.9%	$2.06	$750,000
Contingency	6.5%	$14.38	$5,234,064
Total Hard Costs	**78.6%**	**$174.44**	**$63,501,538**
Soft Costs			
A&E fees	4.2%	$9.36	$3,406,147
Legal and accounting	0.4%	$0.80	$291,232
Appraisal	0.0%	$0.10	$36,404
County property taxes	0.0%	$0.07	$26,333
City property taxes	0.0%	$0.09	$33,786
Survey	0.1%	$0.20	$72,808
Insurance	0.1%	$0.25	$91,010
Construction loan carried interest	1.7%	$3.86	$1,405,241
Bridge loan carried interest	0.2%	$0.35	$128,851
Loan fees	0.7%	$1.48	$537,260
Contingency	0.7%	$1.66	$602,907
Total Soft Costs	**8.2%**	**$18.22**	**$6,631,979**
Other Costs			
Developer Fee	4.6%	$10.32	$3,755,100
Operating Reserve	2.4%	$5.43	$1,977,738
Total Other Costs	**7.1%**	**$15.75**	**$5,732,837**
Total Budget	**100.0%**	**$222.05**	**$80,834,828**

HOSPITALITY VILLAGE (SEE P. 36-39 OF THE VISION SECTION OF THE MAIN REPORT)

Property Summary	
Gross Area (GSF)	101,005
Number of Hotel Rooms ("Keys")	120
Stabilized Hotel Occupancy	75%
Commercial Rentable Area (RSF)	19,420
Stabilized Commercial Occupancy	85%

Development Budget	Per GSF	Total
Acquisition Costs	$35	$3,484,930
Hard Costs	$258	$26,029,680
Soft Costs	$37	$3,778,782
Other Costs	$16	$1,664,670
Total	$346	$34,958,061

Permanent Capital Sources		
Investor Equity	8%	$2,652,724
Developer Equity	1%	$332,934
Historic Tax Credit Equity	9%	$2,980,388
Seller Note	10%	$3,484,930
New Markets Tax Credit Loan	22%	$7,600,000
Primary Mortgage Note	51%	$17,907,085
Total	100%	$34,958,061

Debt Summary	
Amortization (years)	25
Interest Rate	5.50%
Total Annual Debt Service	$1,920,528
Stabilized Total Debt Service Coverage	1.40

Blended Stabilized Cash Flow (annual)	Per Key	Total
Dept. Profits and Lease Revenue	$47,013	$5,641,578
Deductions from Income	$28,647	$3,437,629
Net Operating Income (NOI)	$18,366	$2,203,949

Disposition Summary		
Year of Sale		7
NOI at Sale (forward 12 months)	$22,590	$2,710,857
Capitalization Rate		8.00%
Gross Sale Proceeds	$282,381	$33,885,708
Selling Fees	$8,471	$1,016,571
Outstanding Debt	$196,075	$23,528,974
Net Sale Proceeds	$77,835	$9,340,162

Returns Summary	
Internal Rate of Return	21%
Equity Multiple	4.1x

Development Budget	%	Per GSF	Total
Acquisition	**10.0%**	**$34.50**	**$3,484,930**
Hard Costs			
Sitework	5.1%	$17.76	$1,794,349
Construction/Rehab			
Core & Shell	19.4%	$66.99	$6,765,990
Upfit	9.6%	$33.26	$3,359,455
Rehab	24.3%	$84.25	$8,509,830
FF&E	12.3%	$42.68	$4,310,400
Contingency	3.7%	$12.77	$1,289,655
Total Hard Costs	**74.5%**	**$257.71**	**$26,029,679**
Soft Costs			
A&E fees	3.7%	$12.89	$1,301,484
Legal and accounting	0.2%	$0.69	$69,960
Appraisal	0.0%	$0.09	$8,745
County property taxes	0.1%	$0.18	$18,470
City property taxes	0.1%	$0.23	$23,698
Survey	0.1%	$0.17	$17,490
Insurance	0.1%	$0.22	$21,863
Construction loan carried interest	3.4%	$11.88	$1,200,000
Bridge loan carried interest	1.4%	$4.88	$492,445
Loan fees	0.6%	$1.97	$198,938
Leasing commissions	0.2%	$0.81	$82,164
Contingency	1.0%	$3.40	$343,526
Total Soft Costs	**10.8%**	**$37.41**	**$3,778,782**
Other Costs			
Developer Fee	4.8%	$16.48	$1,664,670
Total Other Costs	**4.8%**	**$16.48**	**$1,664,670**
Total Budget	**100.0%**	**$346.10**	**$34,958,061**

MULTI-FAMILY RESIDENTIAL (SEE P. 39 OF THE VISION SECTION OF THE MAIN REPORT)

Property Summary	
Gross Area (GSF)	101,200
Number of Units	100
Rentable Area (RSF)	86,020
Stabilized Occupancy	95%

Development Budget		
	Per GSF	Total
Acquisition Costs	$5	$472,500
Hard Costs	$94	$9,467,628
Soft Costs	$11	$1,064,455
Other Costs	$9	$897,617
Total	$118	$11,902,200

Permanent Capital Sources		
Investor Equity	20%	$2,346,621
Developer Equity	1%	$110,046
Seller Note	4%	$472,500
Primary Mortgage Note	75%	$8,973,034
Total	100%	$11,902,200

Debt Summary	
Amortization (years)	30
Interest Rate	5.00%
Total Annual Debt Service	$479,089
Stabilized Total Debt Service Coverage	1.53

Stabilized Cash Flow (annual)			
	Per Unit	Per RSF	Total
Gross Potential Rent	$12,227	$14.21	$1,222,688
Vacancy	$611	$0.71	$61,134
Operating Expenses	$4,286	$4.98	$428,624
Net Operating Income (NOI)	$7,329	$8.52	$732,930

Disposition Summary			
Year of Sale			5
NOI at Sale (forward 12 months)	$8,343	$9.70	$834,317
Capitalization Rate			6.75%
Gross Sale Proceeds	$123,603	$143.69	$12,360,256
Selling Fees	$3,708	$4.31	$370,808
Outstanding Debt	$86,737	$100.83	$8,673,714
Net Sale Proceeds	$33,157	$38.55	$3,315,735

Returns Summary	
Internal Rate of Return	13%
Equity Multiple	1.8x

Development Budget			
	%	Per GSF	Total
Acquisition	**4.0%**	**$4.67**	**$472,500**
Hard Costs			
Sitework	7.5%	$8.85	$895,211
Construction	68.0%	$80.00	$8,096,000
Contingency	4.0%	$4.71	$476,417
Total Hard Costs	**79.5%**	**$93.55**	**$9,467,628**
Soft Costs			
A&E fees	4.0%	$4.68	$473,381
Legal and accounting	0.7%	$0.80	$80,960
Appraisal	0.1%	$0.10	$10,120
County property taxes	0.0%	$0.02	$2,504
City property taxes	0.0%	$0.03	$3,213
Survey	0.2%	$0.20	$20,240
Insurance	0.2%	$0.25	$25,300
Construction loan carried interest	2.0%	$2.31	$233,968
Loan fees	1.0%	$1.17	$118,000
Contingency	0.8%	$0.96	$96,769
Total Soft Costs	**8.9%**	**$10.52**	**$1,064,455**
Other Costs			
Developer Fee	4.6%	$5.44	$550,229
Operating Reserve	2.9%	$3.43	$347,388
Total Other Costs	**7.5%**	**$8.87**	**$897,617**
Total Budget	**100.0%**	**$117.61**	**$11,902,200**

11 PRE-DEVELOPMENT EXPENSES

FUNDING TO PURSUE COMPREHENSIVE DISTRICT APPROACH

The State is not likely to find a single private developer who will be willing to acquire site control of all developable district property at once and privately fund all necessary predevelopment functions, such as further site planning and identifying specialized developers for each component of the district. Accordingly, the State will likely need to play that coordinating role in the pre-development phase of the project. Because this is not a function typically undertaken by a state agency, the State may find it necessary to retain consultants to assist with the pre-development process, including master development and asset management functions embodied in a Prime Consultant. The most critical phase of pre-development work for the State and local partners to fund is the planning through the execution of the first phase of the district development. Additional phases beyond the first will bring new resources to help cover the costs of further design, planning and project management.

The following funds would be required to pursue the comprehensive district approach through the first phase of the master plan (first 5 years). These funds represent the planning and due diligence work, as well as capital investment in replacement public facilities, site infrastructure and public amenities necessary to attract the first phase of private investment. This excludes the State investment in a western campus of the North Carolina School for Science & Mathematics, funding for which is allocated through the Connect NC Bond. The responsibility for this funding could be shared between State, local government, and third parties (e.g. Federal government, charitable organizations):

PURPOSE	AMOUNT (EXPENDED OVER APPROX. 5 YEARS)
ENGAGE MASTER DEVELOPMENT AND ASSET MANAGEMENT EXPERTISE (PRIME CONSULTANT)	$1.5M
ENGAGE DESIGN AND ENGINEERING EXPERTISE (DIRECTED BY PRIME CONSULTANT)	$800K
CONDUCT ENVIRONMENTAL AND LAND DUE DILIGENCE STUDIES	$300K
PERFORM LEGAL AND TITLE WORK TO ESTABLISH DEVELOPMENT AGREEMENTS	$350K
MOTHBALL VACANT STRUCTURES (APPROX. 100K SF) • $650,000 TO THE DEPARTMENT OF PUBLIC INSTRUCTION FOR GOODWIN HALL AND JOINER HALL BUILDINGS ON THE NC SCHOOL FOR THE DEAF CAMPUS • $100,000 TO THE DEPARTMENT OF HEALTH AND HUMAN SERVICES FOR SOUTH BUILDING ON THE HISTORIC BROUGHTON HOSPITAL CAMPUS • $250,000 TO WESTERN PIEDMONT COMMUNITY COLLEGE FOR COLONY BUILDING AND THE SILO BARNS ON THE WPCC CAMPUS	$1.0M
PUBLIC AMENITIES (I.E. GREENWAY SPINE, STORM WATER BASIN, ACCESS ROAD, INTERSECTION/GATEWAY PARK, ATHLETIC FIELDS)	$13.7M
BUILDING DEMOLITION ON HISTORIC BROUGHTON CAMPUS AND NCSD CAMPUS	$3.5M
REPLACE DHHS WORKSHOP/MAINTENANCE FUNCTIONS IN ANOTHER LOCATION OFF THE HISTORIC BROUGHTON CAMPUS SITE (EXCL. LAND ACQUISITION COST)	$10.9M*
RELOCATE ESTC FACILITY (WPCC-OWNED) OFF THE STUDY AREA (EXCL. LAND ACQUISITION COST)	$11.3M
RELOCATE DPS LAUNDRY FACILITY OFF THE STUDY AREA; BROUGHTON SHARE OF A LARGER, OPTIMIZED FACILIY (EXCL. LAND ACQUISITION COST)	$7.7M*
TOTAL (EXPENDED OVER APPROX. 5 YEARS)	**$51.1M**
*** EXPENSES ANTICIPATED REGARDLESS - NOT RESULTING FROM COMPREHENSIVE APPROACH**	**$18.6M**