

# Communities of Opportunity: Smart Growth Strategies For Colleges and Universities



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Communities of Opportunity: Smart Growth Strategies for Colleges and Universities

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*Cover Images: Clockwise from top left, Northeastern University by David Bagnoli; University System of Maryland at Hagerstown by John W. Frece; University of Virginia by Andrew Greene, University of Virginia Office of the Architect; University of Cincinnati by Lisa Ventre; University of Pennsylvania by David Bagnoli*





## Foreword

Ayers/Saint/Gross Architects + Planners is pleased to sponsor and co-author “Communities of Opportunity: Smart Growth for Colleges and Universities” with the National Association of College and University Business Officers (NACUBO). We hope the contents of this publication will inform and inspire college and university leadership to create sustainable places of lasting value both on and surrounding their campuses.

High performance strategies are becoming fundamental to campus operations. When first instituting sustainable practices on a campus, the focus is typically on several key issues, including energy use and production, water consumption and treatment, the composition and reuse of materials, curriculum development, purchasing policies, and dining operations. It is equally important to incorporate sustainable practices into planning for facilities renewal and expansion both on and off campus. As space needs grow beyond the capacity of existing facilities, new development should adopt a sustainable pattern that sets the stage for integrated operations at all levels.

The most frequent definition for sustainability, found in the Brundtland Report, states: “We must learn to care for the needs of the present without compromising the ability of future generations everywhere to meet their own needs.” Principles of sustainability can be applied throughout higher education operations and programs. When applied to large-scale planning and development projects, sustainability is often called smart growth.

As defined by the Smart Growth Network, smart growth describes a development pattern that supports the economy, community, public health, and the natural environment. Strategies and techniques that support this pattern help communities create attractive, safe, and healthy new neighborhoods and maintain existing ones. They facilitate

design that encourages social, civic, and physical activity through interconnected, compact, and walkable mixed-use neighborhoods.

Centuries-old institutions of higher education traditionally followed smart growth patterns to create connected, compact, and coherent campuses. Unfortunately, those values were lost on many campuses during the latter half of the twentieth century. But now colleges and universities are returning to strategies that created some of the best-loved campuses and college towns to the benefit of students, faculty, staff, and community members.

Higher education campuses hold a unique role in our society. They are the laboratories for innovation and the setting for the formative experiences of our citizen-leaders. Colleges and universities have both the opportunity and the responsibility to exhibit excellence in all areas, including sustainable campus planning and design through smart growth. This is especially important with college town developments in which institutions expand beyond their traditional boundaries and town-grown distinctions dissolve.

As is stated later in this publication, “we express our values by what we build.” What we build on and near campuses should exemplify our strong appreciation for supporting our future. What better way to do this than to offer the next generation – tomorrow’s leaders – thoughtfully planned models of a sustainable world.

Jim Wheeler  
President, Ayers/Saint/Gross

## Preface

Communities across the United States have adopted smart growth strategies to help ensure that new growth and development meets multiple community goals. They have adopted policies that allow for mixed-use development and encourage the reuse of abandoned properties and brownfield sites, as well as invested in infrastructure that allows for the construction of a variety of housing types, provides transportation choice, and removes barriers to compact, walkable, mixed-use neighborhoods that are safe and convenient for residents. Many of these strategies can be applied to growth and development on and off college and university campuses. Similar to communities – where these strategies support a range of community goals – smart growth strategies can help colleges and universities meet their mission to provide high quality education, support research and innovation, and serve the community through community service.

Colleges and universities are growing, and they need new facilities to accommodate this growth. Whether it's space for new academic classrooms, laboratories, dormitories, research centers, business incubators, or space for retail and services necessary for a campus to thrive, college and university business officers are involved in decision-making related to how and where this growth occurs. *Communities of Opportunity: Smart Growth Strategies for Colleges and Universities* makes the case that growth and development of new facilities that support the functions of a college or university – whether on or off campus – is an opportunity to add to and enhance the physical identity of an institution, use limited resources more efficiently and maximize investments, improve relations across the campus boundary and with local communities, and demonstrate that an institution is and can be a good steward of the environment.

better development patterns can support the goals of institutions of higher learning. The publication begins with an overview of smart growth strategies and the better outcomes that these strategies have yielded when adopted by colleges and universities and communities across the country. It then makes a four-part argument for adopting these strategies:

1. Creating thriving, vibrant places helps to attract and keep the best students, faculty, and staff.
2. Smart growth development patterns are a more efficient use of scarce resources and are better investments.
3. Colleges and universities and the surrounding communities can work together across the traditional boundary of the campus to solve challenges in mutually beneficial ways.
4. Better development patterns allow colleges and universities to improve their environmental performance.

The publication concludes with eight profiles showing how some colleges and universities have adopted these strategies and are addressing the challenges and opportunities presented by growth. The colleges and universities included in this publication are just a sample of institutions that are doing good work in this area. Time, space, and the scope of the project precluded the authors from including every example. My hope is that this publication makes choosing examples to showcase even more difficult by stimulating smart growth on campus.

John D. Walda  
President, NACUBO









*Eckerd College (Image: Photographer, Chris Hildreth)*

*“We express our values by what we build.”<sup>1</sup>*

— James Moeser, Chancellor, the University of North Carolina at Chapel Hill

## The Challenge

Each college and university prides itself on its unique traits of identity, culture, and core mission. An institution’s campus and, in many instances, the surrounding college town are typically the physical representation of these characteristics. Quads, walks, greens, or, more specifically, places like Bascom Hill in Madison, Wisconsin, the Corner in Charlottesville, Virginia, or Morningside Heights in Manhattan, are as indicative of a college or university as the array of majors and courses and faculty members. In an era of growing enrollments, the need for additional research facilities, opportunities to partner with the public and private sector to support economic development, and the increasing community service roles, most institutions know they need to expand.

Institutions increasingly recognize the degree to which the continued growth of campus facilities – when done well – can strengthen efforts to recruit and retain the highest caliber of students, faculty, and staff. This growth does not come without challenges, specifically how to grow in a way that respects the best qualities of the institution; uses resources efficiently;

provides students, faculty, staff, and community members increased choice in how to get around, where to live, work, and shop; and even addresses environmental concerns that often accompany growth and development. Smart growth strategies can help colleges and universities tackle these challenges.

Industry analysts estimate that 40 percent of all colleges and universities are engaged in new construction, renovations, and retrofitting projects on and near campus. In 2006 alone, the value of this construction was approximately \$14.4 billion.<sup>2</sup> As campus administrators know well, numerous factors contribute to the constant need for updating and constructing campus facilities. In the face of such needs, many colleges and universities have replaced the question, “Should the campus grow?” with “How will we grow to meet future needs?” and “How can we grow to compete with our peers?” To meet the challenges, institutions are looking for better ways to grow and opportunities to collaborate with communities immediately adjacent to campus as a way to ensure growth is beneficial to all stakeholders.

## From Iconic Past to Successful Smart Growth Strategies

Thomas Jefferson's design for the University of Virginia is the seminal achievement in American campus planning and defines the image of the university. Building upon this unique history and addressing current day pressures, UVA has implemented a variety of measures to improve the health and livability of campus and community members, while improving the health of our natural environment.

Demonstrating further commitment to the University's Guidelines for Sustainable Buildings and Environmental Design, in January 2007 the Board of Visitors approved USGBC LEED certification for all new and existing building projects. Aimed at improving multi-modal transportation opportunities, since 2006 UVA has hired a transportation demand management coordinator; established a fare-free bus program allowing all university ID holders to ride the City of Charlottesville buses; and updated the UVA Bike Smart Plan and map. Thinking holistically about integrating sustainability into the planning, design, and operations, UVA released its first Sustainability Assessment, establishing baseline performance and proposing a strategy for increasing activity levels. Similarly, the university is in the process of updating its master plan, the Grounds Plan, addressing historic preservation, the natural environment, connectivity, and sustainability.

Representing a snapshot of smart growth strategies, the university is continually advancing opportunities and initiatives.



*(Image: Dan Addison, University of Virginia News Services)*



*(Image: University of Pennsylvania, Division of Facilities and Real Estate Services)*



*Historically campuses in the United States have been tied to their places and their landscapes – the University of Virginia to the foothills of the Blue Ridge Mountains and Charlottesville, the University of Pennsylvania to Philadelphia and the Low Library at Columbia University echoing the grand institutions of New York City. (Image: Victor Waldron)*

Smart growth approaches can help campuses and their adjacent communities achieve multiple benefits from investments in new facilities. New development on and off campus typically presents challenges related to traffic, parking, mobility, and the environment. New growth can also strain the financial resources of the institution and the surrounding community. Smart growth approaches, however, can help colleges and universities create great places, as well as promote positive environmental outcomes by enhancing transportation choices, fiscal responsibility through the reuse of existing infrastructure and underused properties, and economic development and job creation by supporting mixed-use and joint venture projects. This publication will show how smart growth strategies can help:

1. **Create enduring, vibrant places** that improve both campus and community quality of life with each increment of growth. This in turn helps boost student, faculty, and staff recruitment and retention and ensures the college or university can remain competitive with peer institutions.
2. **Realize fiscal benefits** by maximizing dollars spent through efficient use of existing space and infrastructure, increasing transportation options, creating mixed-use live-work-play developments on or near campus, and, where appropriate, partnering with private and public sector entities to make the most effective use of investment dollars.





*The Cotton District in Starkville, Mississippi, home to Mississippi State University, is a great place for faculty, students, and staff to live, work, and play only a short walk away from campus. (Image: U.S. EPA)*

3. **Foster greater cooperation between the institution and the community** by working to ensure that growth can help meet multiple challenges across the traditional divide of “town vs. gown.” Smart growth approaches can help institutions and communities address issues such as housing affordability, transportation choice, revitalization, community connectivity, and increased economic opportunities in a collaborative way.
  
4. **Contribute to healthy, sustainable campuses and communities** through the preservation, restoration, and enhancement of the environment. By supporting a mix of uses and compact building design, smart growth approaches can increase transportation choices, reduce reliance on the automobile, and decrease emissions. Environmental benefits are compounded when additional strategies are used such as green building techniques and purchasing renewable energy.

## What Is Smart Growth?

Smart growth development strategies support multiple economic, community, public health, and environmental outcomes in the creation of new places. These strategies help create attractive, safe, and healthy new neighborhoods and maintain existing ones. The ultimate goal is to facilitate development that encourages social, civic, and physical activity by creating interconnected, mixed-use, compact, and walkable neighborhoods. The Smart Growth Network, a national partnership of over 35 business, government, and civic organizations, supports and educates communities on the implementation of smart growth development principles.<sup>3</sup>

## Environmental Benefits of Smart Growth Development Practices

Growth and development affects our environment. Direct impacts of development include water runoff due to increased impervious surfaces when natural land, for instance, is turned into a new subdivision and wildlife habitat fragmentation and wetland destruction resulting from the conversion of forest to a new office park. Indirect impacts include increased automobile trips and increased emissions because of low density as well as single-use development that doesn't support transit or alternative transportation choices. Not all development affects the environment equally, however. Smart growth strategies support development patterns that are environmentally friendly, such as:

- Compact development that lessens the demand for the conversion of undeveloped land and thereby helps to protect working lands and habitat
- Mixed-use development that increases transportation choices and decreases automobile trip generation
- Reusing existing properties such as brownfields and underused sites that yield multiple environmental benefits including cleanup of contaminated sites (or potentially contaminated sites) and reduced demand for greenfield development.

For a more in depth, technical discussion of the environmental impacts of development patterns see *Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality*, available at [www.epa.gov/smartgrowth](http://www.epa.gov/smartgrowth).



## Smart Growth Principles

1. **Mix of Land Uses** – By mixing housing, shops, offices, schools, and other land uses in the same neighborhood, community leaders can encourage alternatives to driving, such as walking or biking.
2. **Take Advantage of Compact Building Design** – When growth is accommodated in compact development patterns, communities can preserve open space, minimize infrastructure costs, and support transportation choices.
3. **Create a Range of Housing Opportunities and Choices** – New development can increase the number of homes available in a community. Zoning and development policies can be adapted to ensure that a variety of home types are available – small homes to large, rental and homes for purchase.
4. **Create Walkable Neighborhoods** – Walkable neighborhoods enable a variety of transportation options and provide opportunities for everyday physical activity.
5. **Foster Distinctive, Attractive Communities with a Strong Sense of Place** – Development should represent the values and unique history, culture, and geography of a community.
6. **Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas** – Farmland, pastures, forests, and other undeveloped land are vital to the local and national economy and to a healthy environment.
7. **Strengthen and Direct Development Toward Existing Communities** – Development that invests in existing neighborhoods takes advantage of the infrastructure and resources already in place, thereby maintaining and increasing the value of public and private investment.
8. **Provide a Variety of Transportation Choices** – A balanced transportation system that incorporates many means of travel and is supported by land-use patterns increases choices for moving around a community.
9. **Make Development Decisions Predictable, Fair, and Cost Effective** – Governments have the opportunity to create a more attractive investment climate; this can be done with clear codes and regulations as well as by the ability to make decisions quickly, cost effectively, and predictably.
10. **Encourage Community and Stakeholder Collaboration in Development Decisions** – Growth can create great places to live, work, and play when it involves residents, businesses, and all other stakeholders early and often to define and implement the community’s vision and goals.<sup>4</sup>



*Rams Head Plaza at the University of North Carolina at Chapel Hill used to be a surface parking lot. Now it is a three-story parking structure topped by a “green” roof. At the roof level students access a dining hall and recreation center. (Image: Dan Sears, University of North Carolina)*

## Getting Better Environmental Results

The University of North Carolina Chapel Hill is aiming to accommodate new growth on infill sites. By taking advantage of topography, UNC was able to convert a surface parking lot to a three-story parking garage, as well as convert the roof into a plaza that allows students, faculty, and staff to access a new dining hall and recreation center. The vegetated or “green” roof absorbs some of the rainwater that falls in the plaza. This site level strategy reduces the overall amount of water that must be accommodated in the stormwater system.<sup>5</sup>



*Eastman Theatre at the Eastman School of Music of the University of Rochester in Rochester, New York. (Image: University of Rochester)*

## Smart Growth On and Off Campus

Most of our best-loved universities and their surrounding towns have naturally used development strategies that we would call smart growth to create connected, compact, and coherent campuses. In addition, some of the best-known college towns have exhibited the same type of development patterns for generations. The constituency served by these places – students, faculty, staff, and community members – fulfill many of their daily needs in and around the institution, allowing for a lower number of automobile trips. Because colleges and universities do not typically pick up and move their historical campus, sorting out issues that come with growing in place has been a prominent challenge for both the institution and the college town.

American colleges traditionally separated the intellectual pursuits of the college or university from the surrounding community. The term “campus” evokes this separation. However, recent developments across the United States suggest this separation has begun to break down, and the edges are blurring. University districts in many communities are integral to the social and economic health of the local institution and vice versa. In addition, the expanded needs of campuses and surrounding communities, and the arrival of innovative real

estate financing options, have led to a greater integration of community and college.<sup>6</sup>

The trend for both on and off campus development is toward more efficient use of land through increasing densities and a mix of land uses. On campus this may mean seeking out infill opportunities for redevelopment such as surface parking lots or underused facilities to take full advantage of existing space and mixing previously segregated uses such as residential, classroom, and administrative uses in new buildings or sets of buildings. The increased densities and mix of uses not only efficiently uses the infill spaces, but it also helps to solve transportation problems by allowing students, faculty, and staff to get around without an automobile. Since campuses and their surrounding towns or precincts are interrelated to varying degrees, the prevalence of compact mixed-use development off-campus is also gaining momentum. Development adjacent to campuses often includes dining and shopping options, administrative office or academic support spaces, as well as housing for staff, students, or the community. Entertainment venues, limited parking, and connections to mass transit naturally follow. Other new developments outside of traditional campus boundaries also include such uses as research facilities,



academic space, or “incubator” facilities to promote public/private partnerships for research and development. In each case, the pattern creates growth and development to serve multiple purposes and is a successful addition to an institution’s assets.

In the recently published book *The University as Developer*, editors David C. Perry and Wim Wiewel, argue that development plans for colleges and universities have increased impacts on the local community as a whole.<sup>7</sup> Local policy and the participation of higher education institutions in community-wide planning efforts are paramount. Experience shows that collaboration between institutions and local stakeholders increases fairness and predictability, leads to better places, and ensures that the development pattern addresses and helps to solve multiple challenges.

The Initiative for a Competitive Inner City (ICIC) and CEOs for Cities recently documented that more than half of all colleges and universities are located in core urban areas and most of these institutions are land locked.<sup>8</sup> Unlike private sector businesses, many colleges and universities have great physical and institutional investments in their campus and are not likely to move to the metropolitan edge to accommodate growth.

**Learning to accommodate growth within a constricted development context is essential for such campuses.**

Colleges and universities offer unique strengths and benefits to struggling communities. A 2004 *Planning* magazine article reports on the increased role colleges and universities are playing in urban community revitalization. The article quotes David Perry, one of the editors of *The University as Developer* and the director of the Great Cities Institute at the University of Illinois at Chicago, on the increasing role of colleges and universities as developers, especially in light of the recent history of corporations abandoning cities. Specifically, Perry argues that colleges and universities need “to be a signature element of a city’s cultural and aesthetic direction. They also have an obligation to be a good neighbor and to buffer their impact on the people who live next door.”<sup>9</sup> More recently, The Chronicle of Higher Education reported on a number of colleges and universities stepping into the void created by the changing global economy, especially in traditional manufacturing communities. Writer Karin Fischer reports, “As traditional manufacturing economies in many parts of the country decline, universities are being asked to play a greater economic role in their local communities.”<sup>10</sup> Cities from Akron, Ohio, to Bethlehem, Pennsylvania, to Rochester, New York are cited as benefitting from the economic opportunities

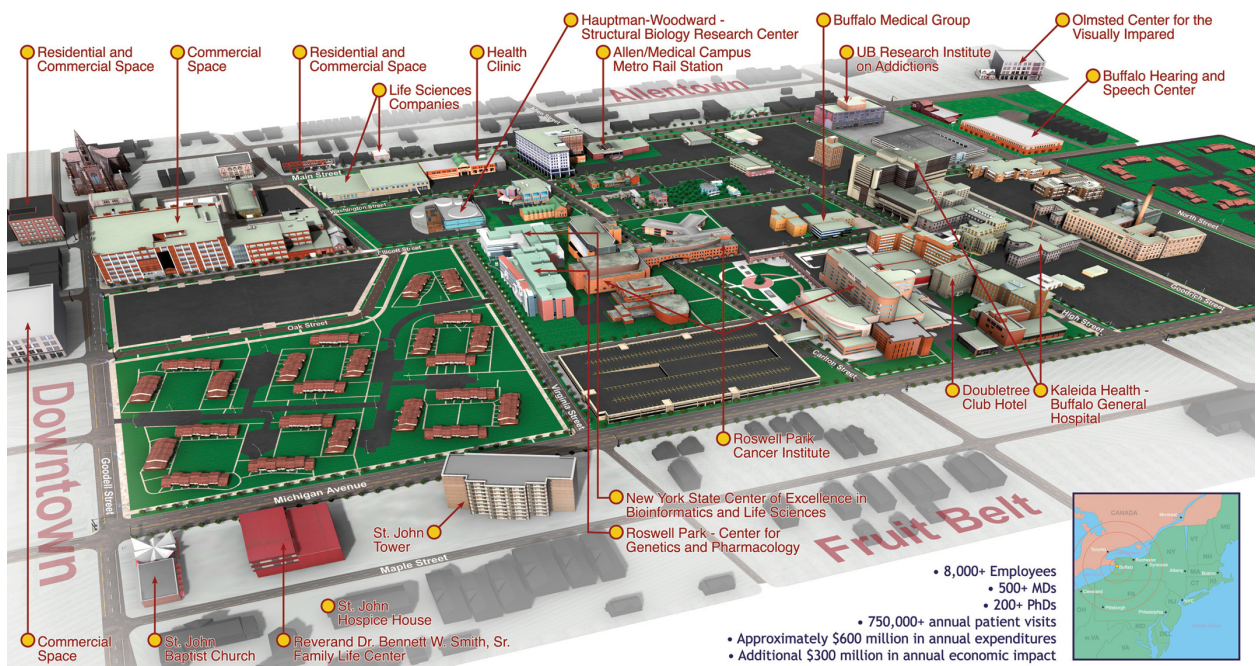
nurtured by higher education institutions in these places, as well as the renewed spirit of cooperation and collaboration between the communities and these colleges and universities.

A good example of a university partnering with a municipal government, adjacent neighborhoods, and other research organizations interested in seeing their resources leveraged for positive economic benefit of the entire community is the University at Buffalo’s participation in the Buffalo Niagara Medical Campus (BNMC). BNMC is a nonprofit community economic development corporation in downtown Buffalo, New York, that coordinates activities related to planning, development, and enhancement within the medical campus; addresses issues of common concern to its member institutions; cultivates a sense of place within its 100-acre footprint; and promotes an awareness of community among its members and with the surrounding neighborhoods. Its mission is “to cultivate a world-class urban medical center by facilitating collaboration among the region’s major health care and research-related institutions located on the campus.” BNMC carries out its mission by implementing the strategic plan adopted in 2003. The guiding principles for the plan are:

- Establish a common campus address
- Improve physical integration between campus and neighborhoods
- Foster community and economic development
- Enhance the open space network

BNMC is run by a board of 20 members and a professional staff of five. The annual operating budget is approximately \$600,000 per year. A trustees council of about 40 neighborhood organizations, local businesses, and partner institutions serves in an advisory role and helps BNMC carry out its mission. The district as a whole is approximately 100 acres, exclusive of two residential neighborhoods adjacent to the district that participate in BNMC activities and services. The organization is funded by its member organizations. Its programming comes from a variety of sources including direct governmental appropriations, grants, cooperative agreements, and charitable contributions. Each year, the area sees approximately \$600 million in expenditures and an additional \$300 million in annual economic impact. Of the 8,000 workers in the district, 500 are M.D.s and 200 are Ph.Ds.<sup>11</sup>





Buffalo Niagara Medical Campus map, showing the member organizations and the campus' place in the community. (Image: BNMC)

The leaders of BNMC are leveraging the growth of their member organizations to create a downtown campus where residents, employees of the institutions, and university faculty and staff feel safe, have convenient access to stores, and have places to live and work. This type of mixed-use growth and development can help reduce commute times, revitalize a portion of the city that had previously seen large scale disinvestment, have a positive impact on surrounding neighborhoods, and create a place where people really want to be – an increasingly important component of recruiting high level students, faculty, and staff.

## Benefits of Smart Growth Development Strategies

Colleges and universities that adopt smart growth strategies as they seek to accommodate growth can realize significant benefits. These strategies can help institutions meet their core missions more efficiently, allowing growth and development to be beneficial for a range of priorities. The section that follows discusses these benefits.

## Creates enduring, vibrant, accessible places

Colleges and universities are growing at a significant rate in the effort to meet demands of increasing enrollment, research, and infrastructure needs. Institutions have a choice in how to physically accommodate such growth. They can pursue a program to build enduring, memorable places that seek to meet multiple institutional goals or, alternatively, they can build facilities meant to meet the most basic, necessary functions and goals of the individual building and program.

It is clear that prospective students and faculty desire institutions that provide not only the highest quality education and facilities, but also a vibrant and active campus life. The physical campus and its interface with the surrounding community is often an important part of these prospective constituents' final choice. Thus, creating enduring, vibrant places both on and off campus is becoming more recognized as a critical part of any recruiting effort. Further, while enrollments are expected to rise through 2010, such increases are projected to level off shortly thereafter. With high school graduation rates expected to decline beginning in 2009, any increase in enrollments will be made up of more nontraditional college students.<sup>12</sup> Meeting increased expectations and this more competitive recruiting climate may be a challenge to even the most well-planned recruiting efforts.

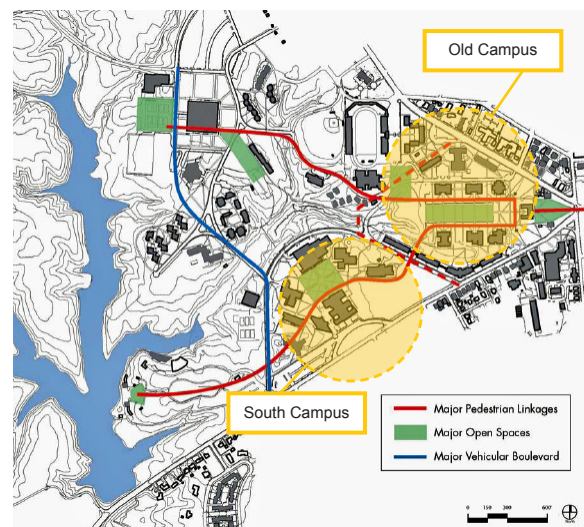
Buildings as well as the physical space between buildings – streets, sidewalks, plazas, parks, or greens – contribute greatly toward what makes campuses, cities, and towns memorable throughout the world. Design principles that colleges and universities should adopt to create such enduring, vibrant places include:

- **Form:** Well-defined outdoor “rooms” or “corridors” should add to the existing campus and the surrounding community.
- **Unity:** New development should physically connect to and strengthen existing campus forms.
- **Completing the Existing:** Infill buildings on difficult sites should complete outdoor spaces. Completion of such spaces supports the campus as an expression of the college’s identity.
- **Reuse Old Buildings:** The combination of old and new adds vibrancy and interest to the campus.
- **Mixed-Use Building:** Buildings that support a variety of uses create vibrant places, can help connect campus and community, and help solve transportation challenges.
- **Interconnections:** As appropriate, the campus should provide for connections with surrounding communities.
- **Uniqueness of Place:** New construction should acknowledge and build upon attributes such as materials and building forms that make the campus unique and recognizable.
- **Compactness:** Campus should develop at densities and with a mix of uses that add to campus life and provide environmental benefit by preserving natural areas.
- **Mobility:** Campuses are unique in their ability to accommodate pedestrian and bike circulation as a means to contribute toward the resolution of transportation challenges. Access to transit and shuttle services help relieve pressure to accommodate the automobile.
- **Sustainability:** Institutions should take advantage of sustainable building technology and siting, as exemplified by the LEED Rating system.

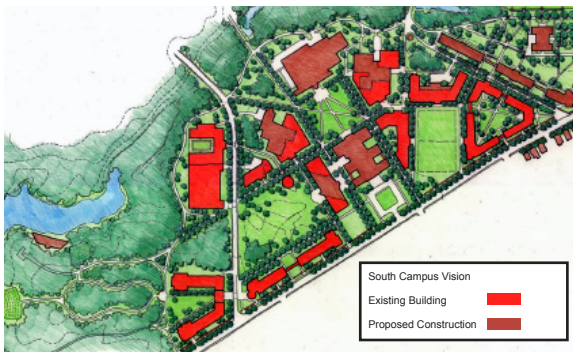
The following examples illustrate recent efforts by universities to ensure future growth creates such enduring, vibrant places.

The College of William and Mary in Williamsburg, Virginia, has a vision for design that is both simple and straightforward. Seeking to ensure future campus development meets its vision of unifying the campus’ architectural and landscape character, the college adopted four plain, yet powerful, guiding principles:

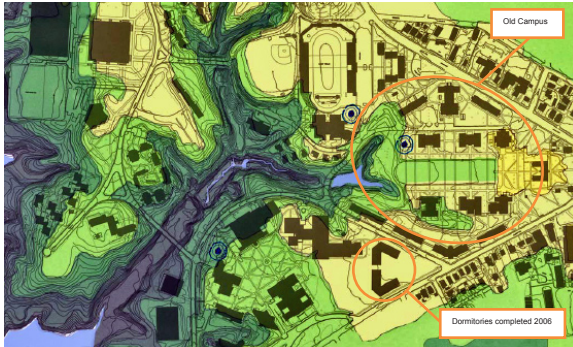
1. The architectural configuration and character of the Old Campus should be preserved.
2. New public spaces on campus should be created and connected by clearly articulated pedestrian circulation paths. New buildings should create and frame new public spaces wherever possible.
3. Existing barriers to unifying the campus, such as roads and parking, should be removed (or at least minimized) wherever possible.
4. The unique naturalistic attributes of the ravine intervening within the campus landscape should be preserved and enhanced.<sup>13</sup>



College of William and Mary campus in 2002 showing existing buildings, open spaces, and pedestrian and car circulation in the South Campus and the Historic Campus (Image: Sasaki, Inc./Boynton Rothschild Rowland for the College of William and Mary)



*William and Mary's vision for future growth and expansion of the South Campus (2002). (Image: Sasaki, Inc./Boynston Rothschild Rowland for the College of William and Mary)*



*New dormitories – Jamestown North and South – completed in 2006 on the South Campus (Image: Cunningham + Quill Architects)*



*Aerial view of Jamestown North and South (looking east) (Image: College of William and Mary)*

The design guidelines are influencing the form that new development takes as William and Mary grows. The map on this page shows the College of William and Mary as it existed in 2002 and highlights two areas within the campus – the South Campus and the Old Campus. Much of the South Campus was built in the 1960's and 1970's. It is principally an academic area; dormitories and other uses are absent. In contrast, the Old Campus, dating to the end of the 17th century, has always been mixed use. Residence halls, academic buildings, and administration buildings all existed in that area. The vision for the expansion of the college's facilities used the design guidelines to show how new buildings on the South Campus could be sited.<sup>14</sup> These new proposed buildings help to create spaces in the South Campus that are more formal, reflecting the traditional development pattern of the Old Campus. The proposed mix of residence halls and academic buildings will create a more vibrant place, while also beginning to knit together the old and the new portions of the William and Mary campus.

As of 2006, the new dormitories – Jamestown North and South – have been built on the South Campus across the street from the Old Campus. These new residence halls respect the integrity of the Old Campus, help to define the open space adjacent to the building site, and begin to restructure the South Campus by bringing student living into the previously single-use campus.





Jackson State University Campus Master Plan, showing growth occurring on the west side of campus and the formalization of the pedestrian walk through the campus. (Image: Jackson State University)

Jackson State University (JSU) in Jackson, Mississippi is another example of how a university is using the need to grow and accommodate enrollment increases as a mechanism to create a vibrant campus and help to revitalize the adjacent neighborhoods. In 2000, early in his tenure as president of JSU, Ronald Mason, Jr. recognized that the first impression of visitors to the campus needed to be improved if the university was going to be able to compete for the best students, faculty, and staff. The need to expand the existing campus facilities to accommodate growing enrollments and research production allowed JSU to retrofit some of the existing facilities and build new facilities with the aim of improving the way the campus looked, felt, and performed. With Mason leading a revamping of the entire campus master plan, JSU looked to accommodate and focus growth on its western edge, proposing creation of a series of open spaces connected by well-landscaped pedestrian and vehicular thoroughfares. The new master plan defines a main east-west pedestrian street that bisects campus, and proposes two north-south quadrangles to establish pedestrian places with a human scale for faculty, staff and prospective students.

JSU has also recognized that growth and development off campus can, and should, yield multiple benefits, including creating a vibrant, thriving place for students, faculty, staff, and residents in the adjacent communities. This meshes not only with the current academic and research mission of Jackson State, but also its historic mission as a historically black university to serve the local community. Jackson State, through the JSU Foundation, is beginning to redevelop a 50 acre parcel just to the east of the campus, adjacent to downtown Jackson. Over the past 30 years or so, this area has seen disinvestment in businesses, infrastructure, and housing stock. The desire to reinvest in the area is strong, however, from the both university and community perspective. The redevelopment strategy calls for the construction of neighborhood shops and restaurants, as well as homes ranging from single-family detached to townhomes and student residences. The JSU Foundation is also revitalizing a second neighborhood just to the south of the campus. These efforts will help transform declining communities into places where residents will have choices in where to live, shop, work, and play. For Jackson State, the additional supply of homes will mean that faculty, students, and staff will have the choice of living near campus and downtown, and have the opportunity to walk to class or an office, restaurant, or shopping.

*“The overarching goal of the \$200 million in construction projects is simply to build a living and learning community deserving of the students, faculty, staff, and alumni who make Jackson State great. As we continue to build our nation’s leaders, we must make sure that they get the best education possible. The facilities and their varied resources are very important to that end.”*<sup>15</sup>

— Ronald Mason, Jr., President of Jackson State University

## Master Plans

While growth rates vary by institution, facility renewal and expansion is a continual process for all colleges and universities. To build successfully while safeguarding a university's mission as outlined in a strategic plan, growth should be guided by a campus master plan, typically updated every 10 years with periodic reviews to ensure changing conditions comply with the plan. Such a planning process should study near-term academic and physical plant needs as well as additional "beyond the horizon" needs, and objectively consider the responsible capacity of campus land to accommodate such needs. A key element of the master plan should be consideration of how the plan can reflect and facilitate the institution's core academic mission and institutional values. Master plans, or a separate planning process, should also take into account how the campus interacts with the surrounding community and what goals exist to improve the campus and community in concert. The final product should provide a road map guiding immediate additions and renovations to the campus' buildings, grounds, and infrastructure, as well as anticipated long-term campus growth.

### Realizes fiscal benefits for both the institution and the community

Compact, walkable, mixed-use development that takes advantage of infill sites and existing infrastructure can yield numerous benefits to both a university and the surrounding community. In addition, when colleges and universities leverage their existing resources in partnership with the adjacent community, they both maximize investments. The institution gets the facilities it needs and the community, as a partner in creating these facilities, can help ensure the new development also serves community needs.

Colleges and universities are beginning to recognize the tremendous market demands they can bring to bear on the development process in adjacent precincts. Many factors point toward the need for increased campus development that is financially efficient and ecologically-responsible, as well as creates excellent social spaces that serve the university and the community.

*Colleges and universities are major economic engines.* Urban colleges and universities alone employ more than two million workers who bring a demand for housing, retail, transportation, and leisure services near their place of employment. More than 1,900 urban universities spent \$136 billion on salaries, goods, and services in the mid-1990s. Many municipalities would like to capture that power to benefit the local economy.<sup>16</sup> Cities and even states across the country are beginning to recognize the economic value and vitality associated with colleges and universities, especially when compared to the single industries that were the economic lifeblood of many older U.S. cities. According to *The Chronicle of Higher Education*, so called "Rust Belt" cities and their respective regions are teaming up

with local higher education institutions to nurture job growth based on much of the intellectual and entrepreneurial activity evolving from campus. Further national studies show that population growth trends are favoring regions with college towns and cities over regions without them.<sup>17</sup>

*Growing more efficiently.* With more than two billion gross square feet of existing campus space dating from 1970, a tremendous amount of renovation and replacement is anticipated to occur on campuses to meet current needs and future expectations. Many older campuses may be considered to be near their responsible capacity, making new development outside of the traditional campus core the only choice for growth. Such a choice, coupled with the rising costs of energy and infrastructure improvements, demands efficient land uses and sensitive designs that maximize the value of every dollar spent. Fiscally sound decisions for campus expansion need to start with assessing existing assets, resources, and opportunities for maximizing the development potential of current land uses and improving campus systems efficiencies.

Colleges and universities can inventory their campuses to assess where the greatest potential for additional development and a mix of uses exist. This might reveal sites on campus that are appropriate for additional buildings, expanded complexes, or reconfiguration to accommodate more residences or classrooms. Furthermore, a master plan might suggest an innovative or adaptive reuse of some part of campus that would offset the need to build off campus.



Efficient land use decisions do not always need to be based on the amount and type of buildings but can focus on land use resources such as parking or street right-of-way. When these land uses are efficiently redeveloped to their highest use, existing infrastructure can be maximized and costs can be minimized.

For instance, by providing additional surface parking to address transportation challenges, colleges and universities are spending scarce resources on projects that serve limited goals. By replacing surface parking with structured parking, valuable and in the long term potentially scarce, amounts of land are left available for other uses more directly related to the core mission. Colleges and universities should look more broadly at parking challenges and consider increasing mobility in and around campus. Efforts to solve campus mobility issues by mixing uses and buildings more compactly result in more efficient use of land and ultimately dollars.

Creating mixed-use places on and adjacent to campus with a range of residential types, academic and administrative space, retail and commercial opportunities, and transit connections, reduces overall trip generation and thus the demand for more parking. The reality is that colleges and universities and their adjacent communities often have the infrastructure, development pattern, and tradition to solve broad transportation problems by providing a range of use options to students, faculty, staff, and the community. By taking advantage of existing assets and viewing parking as one of an array of answers to a transportation challenge, institutions and communities may adopt development policies and practices that allow for scarce resources to be spent on educating students rather than financing parking spaces.<sup>18</sup>



*Emory University converted a faculty parking lot with 40 spaces to a brick pedestrian way with an adjoining lawn, landscaping, trees, and benches. While the physical transformation was extraordinary and a great improvement, the university community was most impressed that 40 colleagues gave up their front door parking spaces in an effort to make the campus better for everyone. (Images: Ayers/Saint/Gross)*



## BruinGo! at UCLA: Addressing the parking problem by increasing mobility choice

The University of California, Los Angeles has adopted an innovative approach to reducing costs and protecting the environment. By using Transportation Demand Management (TDM) strategies to help address mobility demand to and from campus, the university has been able to maintain and even reduce traffic levels since 2001. UCLA's TDM approaches include vanpools, carpools, transit pass subsidies, and encouraging faculty, staff, and students to walk or ride a bicycle to campus. Providing incentives for these alternative modes so that they compete with the demand for parking has enabled UCLA to both enjoy better relations with its adjacent communities, and continue to grow its academic and research programs. UCLA administrators estimate that more than 1.3 million annual trips to and from campus are eliminated through UCLA's TDM programs. Another half million are saved through provision of on-campus student housing, which the campus has significantly expanded in the past several years.

One such program is the BruinGo! transit subsidy. UCLA has partnered with Big Blue Bus, the city of Santa Monica's transit provider, and Culver CityBus, to provide a subsidy for students, staff, and faculty. The subsidy means that UCLA riders can swipe their Bruin ID cards, drop a 25¢ co-pay into the farebox, and ride the bus (the campus has also developed a subsidized pass program with LA's Metro and DOT transit, providing transit and rail access throughout the metropolitan region). While the program costs are not insignificant, the benefits reaped include reduced demand to build costly parking on campus, less automobile traffic to and from campus, and environmental quality enhancements. Early studies showed a benefit to cost ratio of about 2.4 to 1. Other external environmental benefits, such as reduced vehicle emissions and decreased single-occupancy-vehicle commutes to campus were not part of the calculation.

At universities where TDM strategies are part of the mobility solution, parking demand has shrunk and students have more transportation options, yielding greater environmental and economic benefits. The effect at UCLA has been a dramatic reduction in parking demand—the wait list for a student parking permit has shrunk from a historical high of 4,000 to zero over the last few years, eliminating a long-standing parking problem. Other universities with similar programs to UCLA's include the University of Illinois and the University of North Carolina, among others.<sup>19</sup>

The University of Puerto Rico (UPR) in San Juan, Puerto Rico has a transportation challenge – there's not enough parking on campus to satisfy demand. Sites for future parking, surface lots or structured parking, are either limited or construction costs are prohibitive. In 2003, a new metro transit stop opened near the main entrance to the university. Officials at UPR were skeptical that the new access to rail transit would help to solve the broader transportation challenge. Preliminary research by UPR professor Gabriel Moreno-Viqueira shows that public transportation ridership to UPR has risen from 8 percent in 2003 (when the only choice was bus) to 22 percent in 2007. Public transportation usage by first year students is up from 2 percent in 2003 to 31 percent in 2007. Approximately one-third of all trips to the campus are now walking or public transportation trips. The opening of the metro station can now allow UPR to make decisions about how and where to grow the campus with the knowledge that public transportation can actually lower the demand for parking on campus. This new transportation choice can help UPR shift resources away from the construction of parking spaces and toward other facilities that better represent its core mission.<sup>20</sup>

*Faculty, students, and staff come with increasing expectations.* Today's administrators know that recruitment of the best faculty and staff includes the ability to offer up-to-date facilities in the right location, with a high quality of life. Furthermore, today's students come with higher expectations for quality of facilities and leisure opportunities than in the past. With rising costs of tuition and debt, students today place tremendous weight on high quality facilities. Additionally, with the increase of non-student residential communities on or adjacent to campus (e.g. alumni condominiums and retirement communities), older, sophisticated residents bring significant disposable income and a desire to live where daily needs of retail and culture are met within walking distance.

To meet such rising market demands, many campuses are turning to the creation of new mixed-use developments off campus in nearby areas. These projects may include retail, student or market-rate housing, academic space, commercial/office space, or other "back of house" university departments. Benefits to the town include retail that adds to the local tax base, housing within walking distance of a major employer,



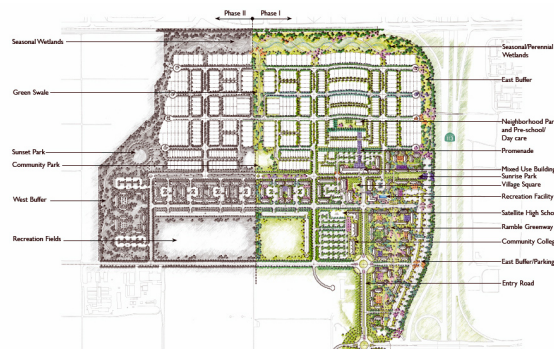


Northeastern University. (Image: David Bagnoli)

additional parking, and a lively pedestrian-friendly destination. Proper balance of these uses may consequently reduce traffic congestion and pollution.

One example is the University of California, Davis. UC Davis is working with a private partner to build a mixed-use community to provide affordable ownership housing opportunities for faculty and staff, as well as additional housing for students. The plan encompasses approximately 205 acres of university-owned land immediately west of the core campus and south of the Davis city limits. Existing residential neighborhoods border the site to the north.

The university's board of regents approved the project in November 2006, and groundbreaking could be as early as fall 2007, with first occupancy in spring 2009. The first-phase plan of West Village calls for 312 to 343 homes for employees and apartment-style housing for 3,000 students. The project is oriented around a village square surrounded by commercial services that will serve as the heart of the community. The plan also creates a site for the Davis Center of the Los Rios Community College District and a small day care or preschool facility. The plan includes a generous network of connected open spaces with bicycle and pedestrian paths. West Village is designed to contribute to the vitality of the university and the Davis communities, reduce regional traffic on roads and highways, and offer high quality and sustainable environmental design.



University of California, Davis, land use plan for the West Village project. (Image: UC Davis)

With prices about 30 percent below market in Davis, the West Village homes are seen as a major tool for recruiting and retaining top faculty and staff. Already, about 1,400 people have expressed interest. To maintain affordability over time, the price of homes at the time of resale is tied to the faculty salary index or cost-of-living index, whichever is greater. In this manner, future housing prices will more closely match the ability of future generations of faculty and staff to pay, rather than fluctuate with the local housing market, which has recently experienced double-digit annual percentage increases.

The campus engaged in an extensive community outreach process, including more than 30 public meetings and workshops and development of a Web site. The faculty and staff newspaper runs regular updates, and the communications office issues news releases. The university also prepared a video for use in the approval process.<sup>21</sup>

*Financing options.* Options abound for the financing of these new college town developments, including conventional campus financing as a means to maintain control, or, where private sector developers can build more efficiently, long-term land leases. Additional options might consider mixed financing with other joint venture partners (for more details on public-private partnerships, see the Appendix, starting on page 43). In some cases, colleges have combined efforts to benefit both the institution and the municipality.

The University of Maryland, College Park has successfully implemented a relatively new strategy to use private funds for traditional campus services such as housing. With this approach, a separate nonprofit foundation is established to own the buildings and obtain tax-exempt financing. The university leases the land to the foundation. A developer is selected to construct the improvements, and may be hired to manage the buildings, earning both a development fee and a percentage of revenues. The foundation sends any excess profit back to the institution. After the lease expires the property reverts to the institution.

In another College Park example, the university is seeking a private sector developer to redevelop a 38 acre parcel within the east campus district. The project will create an exciting mixed-use environment comprised of office, retail, hotel, residential, and structured parking which will provide inviting outdoor civic spaces and connectivity to the main campus, the city of College Park, and the adjacent transit district. A question and answer session for prospective developers hosted by the university to gauge interest in September 2006 attracted more than 200 participants.<sup>22</sup>

In the University of California, Davis example previously described, the university will retain ownership of the land, but it will enter into ground leases with a private developer who will design, finance, and construct the on-site infrastructure and buildings, then sell units to faculty and staff, and rent housing to students.<sup>23</sup>

Another example is the Ohio State University which, in 1995, collaborated with the City of Columbus and a number of neighborhood associations and civic groups to establish Campus Partners for Community Urban Redevelopment as a nonprofit organization to develop a comprehensive revitalization plan for the neighborhoods around the university and to work with the university, city, and neighborhoods to implement improvements outlined in the plan. Working with a master developer for portions of the University District, Campus Partners successfully led the community-based



*Sketch of the University of Maryland College Park East Campus development (Image: University of Maryland)*

planning effort that resulted in the development of the Campus South Gateway project.

The project includes a wide mix of uses, as well as:

- 250,000 square feet of community and university serving retail
- 88,000 square feet of office space, the majority of which is occupied by the university
- 190 market rate apartments
- 1,200 space parking garage
- Eight-screen cinema

In order to accomplish such a broad scope of change, Ohio State sounded out financing and partnership strategies that would include support from multiple sources:

- The university's board of trustees authorized investment of \$20 million from endowment to finance the land acquisition.
- The City of Columbus helped Campus Partners acquire the necessary land, committed \$6 million for infrastructure improvements, approved a tax-increment financing district to support the garage, and permitted Campus Partners to manage the design and construction of these improvements to meet city specifications.
- The State of Ohio appropriated \$4.5 million in capital funds to help subsidize the parking garage.
- Campus Partners received an allocation of \$35 million in federal New Markets Tax Credits to help finance the retail portion of the project.
- The university issued tax-exempt bonds to finance the housing, office space, and parking garage.<sup>24</sup>

Public institutions with cumbersome procurement processes and smaller colleges with little internal design and construction management expertise may find it useful to collaborate with the private sector. However, universities and colleges may want to exercise caution with this strategy as bond-rating agencies consider such projects to have a higher risk of default. The result may drive up the costs of borrowing, and, consequently, rents on the property.

## Joint Venture: Johns Hopkins University and the development of Charles Village

Charles Village, a Baltimore neighborhood adjoining the Homewood campus of the Johns Hopkins University, had been a struggling area. Despite being blessed with an excellent housing stock and avid supporters of the area, for several decades the Village had experienced limited reinvestment. It has recently undergone resurgence. As part of the preparation of a campus physical master plan in the late 1990s, the university reached out to the Charles Village residents and businesses, including them in its planning. As Hopkins continued its expansion to its east into Charles Village, it worked closely with the neighborhood to ensure compatible and acceptable additions. Most recently, Hopkins chose a joint venture group, the Collegetown Development Alliance (comprising a national student housing developer, a retail/marketing analyst, and a local development/construction company), to develop retail, conference space, and student housing on university-owned land in the Village. The Alliance worked with community members and organizations to garner local support for the project. Although the university's initial impetus was to relocate the campus bookstore, the project grew to meet both the university and the community's desire for an enhanced retail district as well as the university's need for more student housing. The new \$80 million building, known as Charles Commons, houses a Barnes & Noble bookstore, 600-plus student beds, dining areas, and conference facilities. It has become a catalyst for other, privately financed revitalization projects on nearby properties.



*Rendering of Charles Commons, Johns Hopkins University.  
(Image: Johns Hopkins University)*



## Fosters greater cooperation between the institution and the community

Many communities know that colleges and universities bring communities vibrancy and economic stability through their support of cultural, commercial, and residential uses adjacent to campus. College towns are attractive places to live, work, and play, and, increasingly, they are becoming a retirement destination for aging baby boomers. As attractive places to live, many college towns are growing and need to address the challenges and opportunities that accompany growth. Many colleges and universities are growing as well, compounding both the opportunities and challenges for the institutions and the surrounding communities. Meeting these challenges in an open, transparent, and collaborative way helps to foster goodwill across what, in many places, has been a historic divide between “town and gown.” Colleges and universities can start to bridge the divide by showing that growth can be beneficial to all stakeholders, especially when there is cooperation on how and where that growth occurs.

*A nontraditional growth model.* As institutions venture “off-campus”, they must recognize that unlike traditional campus growth, the development of off-campus cultural, commercial, and residential space may not align with the traditional model for growth met by the office of a university architect or facilities office. Such challenges have been met by a partnership with the private development community or in some cases an institution’s sanctioned real estate office or foundation. Such an approach ensures that the goals of the institution are being met while being kept independent of 501(c) restrictions that might preclude profit-driven mixed-use development.

Off campus improvements such as new construction on infill sites, brownfields, and vacant or underutilized properties, rehabilitation of existing structures, and the complementary expansion of a local economy, can yield invaluable results in college towns or precincts. These opportunities, however, are often unachievable because of the challenges associated with land acquisition and the securing of appropriate investment resources. As place-based institutions with long-term views, as well as the ability to acquire both land and financing to develop it, colleges and universities have much to offer communities interested in seeing these types of properties redeveloped. In some cases though, institutions may not be staffed to work through some of the challenges that typically accompany redevelopment of these sites. Colleges and universities should look to partner with organizations that do this well. Numerous experienced brownfield and infill developers exist across the country. As a first step, institutions interested in initiating an infill project should identify the developers of excellent similar projects on or near other campuses and investigate partnering with those firms. The partnership will allow the institution to concentrate on its core mission, allow the developer to do what it does best, and share both the risks and rewards inherent in such projects.

In addition to partnering with experienced developers of infill sites, colleges and universities should try to break out of the traditional financing model and tap into the breadth of its alumni and other supporters by introducing investment opportunities for small investors. By introducing nontraditional funding sources as well as the provision of a built-in market, institutions bring to the table a ready mix of success that can provide for such uses as incubator office or laboratory space, as well as residential options for faculty, staff, and graduate students, topped off with a healthy balance of retail. This in turn can provide the community with a more attractive quality of life for noninstitutional workers and residents and, perhaps most important, a vastly improved tax base.



## Good Neighbors: Virginia Commonwealth University

Since the early 1990s, Virginia Commonwealth University (VCU) has taken very seriously its role in its community. It has used its resources and growth and development policies to benefit its students, faculty, staff, and neighbors. VCU has two campuses in Richmond, Virginia, the Monroe Park campus and the Medical College of Virginia (MCV) campus. The Monroe Park campus includes the Broad Street corridor. Historically, Broad Street was a retail center, but was in decline during the 1970s and 1980s. Since the early 1990s, under the leadership of President Eugene Trani, VCU has been one of the drivers of the revitalization of the Broad Street corridor.

By investing in a new recreation center, student apartments, a new school of fine arts, administration, and other buildings along the Broad Street corridor, VCU demonstrated, through an investment that amounted to \$100 million, that the area was a good place to grow. As a result, approximately \$100 million in new private investment has occurred in the Broad Street Corridor including retail stores such as Lowes, Kroger, and a local food retailer Ukrops, as well as nearly 500 new housing units.<sup>25</sup>

VCU has done much of this work by embracing the community and working with the Carver Area Civic Improvement League (CACIL). Called the Carver-VCU Partnership, this initiative involves students, faculty, and staff in a variety of activities including community policing and visioning and planning for development. One result of the partnership has been VCU's respect for the integrity of the housing stock in the residential portions of the neighborhood. VCU agreed not to purchase residential properties to accommodate university expansion.<sup>26</sup> Noting the importance of collaborating with the community, VCU has begun an interdisciplinary effort to continue its relationship with its neighbors. VCU Community Solutions has involved student, faculty, and staff research, teaching, and service in an effort to help solve community challenges.<sup>27</sup> Partners include public and private organizations that support community development in Richmond.

*Overcoming suspicion.* As college and universities are using development projects to improve the physical connections to adjacent communities, opportunities and challenges arise. Given the manner in which many campuses have grown over the past 50 years, communities are often distrustful, if not outright fearful, of local institutions. Colleges and universities often face the challenge of conveying a genuine interest in improving the life of their surrounding communities as a means to maintain a competitive edge while frequently having to defend a history of independent planning and growth. Overcoming such suspicions requires determination and commitment from the highest levels of an institution and may involve some of an institution's most tangible assets, including both land and access to funds. An example of this dynamic is the University of St. Francis (USF) in Joliet, Illinois. As reported in *University Business*, USF faced a skeptical community – one resident wondered why the university couldn't just move away and “leave the neighborhood alone” – as it began to plan for and implement an expansion agenda. Despite working closely with the community to develop expansion plans, USF needed support from residents to convince community skeptics that the university could and would respect community members' involvement in the expansion plans. Trust between the institution and the community rose in part due to USF's commitment to

grow in place and not relocate to land it owned on the outskirts of Joliet. Ultimately, USF worked closely with the neighborhood association, listened to the concerns of the community, and relied on citizen support for its expansion plans, which included the doubling of its on campus residence halls to a total of 750 beds between 2006 and 2021.<sup>28</sup> With both town and gown's vested interests in seeing economically stable and culturally vibrant neighborhoods adjacent to local schools, it is important to recognize the contributions each brings to the relationship. Colleges and universities quite often have procured land in adjacent communities and are, of necessity, often committed to betterment of the surrounding community. For their part, cities and towns provide the framework within which a local institution can grow to meet market demands. Too often faced with the significant loss of substantial commercial and middle-class residential tax base to the suburbs, these cities and towns can benefit from increased interest and investment by local colleges and universities.



*Community residents and students at Jackson State University in Jackson, Mississippi at a community meeting discussing a road project that affected both campus and community in 2002. (Image: Wes Harp)*

Following a concerted effort to capitalize on such assets as a physical place in the community, economic development opportunities, and its historic mission as an educational institution, Trinity College in Hartford, Connecticut has increased enrollment by 77 percent over a decade earlier. In 1996, Trinity set out to be a partner in revitalizing the neighborhoods around the college, creating a vibrant, viable, and safe community that would take advantage of existing educational, health center, and economic development resources. One of the signature projects has been the Learning Corridor, a 16-acre site adjacent to the campus. This site includes a magnet middle school, high school level resource centers, a Boys and Girls Club, an arts center, and an early childhood education center. This is just one of a number of initiatives in which Trinity engages with the local community to advance not only its own mission of academic excellence and civic engagement, but to partner with the surrounding community to grow opportunities from within.<sup>29</sup> Such efforts point the way toward how colleges and universities can become an effective catalyst for revitalization that meets a community's long-term planning needs. Thus colleges and universities, inextricably linked to their surroundings, may provide a major impetus for growth otherwise unavailable to a town or city.



*VCU buildings in the Broad Street Corridor. (Images: Mary Lorino, BAM Architects)*



Noting the need to solve problems that arise due to population growth such as increased traffic volume, the provision of services, and the need for forward looking strategies to accommodate growth, the University of Maryland teamed with the City of College Park to address transportation and development challenges that have accompanied expansion and economic growth. Collaboration to address this issue occurred through the College Park City-University Partnership. City and university officials understood that the US Route 1

corridor, the main gateway into the community, provided the best opportunity for accommodating new expansion, yet the street design and land use codes did not allow a development pattern consistent with minimizing automobile traffic. Through a series of initiatives, including technical assistance provided by the U.S. EPA, the Partnership worked with the county and other stakeholders to develop and apply a transportation demand management study for the corridor.<sup>30</sup>



*Dartmouth College building at 7 Lebanon Street in Hanover, N.H. (Image: Dartmouth College)*

## Dartmouth College: The campus in the community

When Dartmouth College purchased a prime site on Lebanon Street in Hanover, New Hampshire, behind the college's Hopkins Center for the Arts, the college saw "an opportunity to do things that were beneficial for us and for the town," explains Paul S. Olsen, Dartmouth's director of real estate.

Because the Dartmouth campus is strongly integrated with downtown Hanover, the college was eager to help complete the Lebanon Street streetscape by working with the town to consolidate an existing town-owned lot with land owned by Dartmouth, an area that for some time had been considered a prime location for a municipal parking facility. Dartmouth worked with Hanover to develop the two sites as one, resulting in a three-story retail and office building over an underground garage and linked to an above-grade parking structure next door. Once the project was completed, Hanover assumed ownership of the parking facility, leasing a number of spaces back to the college for its use. While the upper floors of the building were originally planned to be office space offered for rent or lease, the college ultimately opted to use the space to address its own space needs. The town got nearly 200 new parking spaces and additional commercial offerings for the downtown, while Dartmouth got a new building that provided much-needed office space as well as revenue from retail space on the ground floor. Current ground-floor tenants include a women's clothing retailer, a home furnishings store, and an investment firm.

Still, Olsen insists that the rationale behind the Dartmouth-Hanover collaboration on a mixed-use building and parking garage "wasn't about economics," because "Dartmouth had larger goals in mind," including addressing the town's long-standing need for additional parking and luring new businesses to an already vibrant downtown.<sup>31</sup>



### Contributes to a healthy and sustainable campus

Colleges and universities across North America have significant impact on the built and natural environment. Many are growing in efficient ways that lessen growth's environmental impact; others are working to address environmental issues associated with energy, transportation, waste management, and relationships with local communities. In addition to adopting smart growth strategies in planning and siting development projects, yielding better environmental outcomes by reusing land and new vehicle trip generation, colleges and universities can also seek to pursue site specific strategies to increase sustainability on and off campus. Sustainable practices not only provide beneficial environmental outcomes, but they also can be cost efficient, and, in an increasingly competitive recruiting environment, colleges and universities are finding that campus sustainability initiatives can provide an edge.<sup>33</sup>

According to Second Nature, creating a healthy and environmentally sustainable campus requires a systematic approach that integrates sustainability into every aspect of campus life: addressing “how, when, where of campus growth”; identifying compliance requirements and implementation of sustainable practices; and realizing fiscal benefits.<sup>34</sup> These components already exist individually, but colleges and universities should take a holistic view of their campus, and work together to grow in a more sustainable manner and improve their overall environmental performance. Achieving sustainability requires changes in policy and practices at all levels of the university community, and requires action from individual students, staff, and faculty members through to the administrative level.

*“A sustainability focus requires that we as a society focus simultaneously on a systematic solution for building healthy, economically strong, and secure, thriving communities....Sustainability is not one more issue that higher education must deal with – like computer literacy. It really is central to an institution’s mission and function.”*<sup>32</sup>

— Tony Cortese, Second Nature



*The second Smart and Sustainable Campuses Conference held at the University of Maryland in April 2007 brought together 350 participants representing nearly 160 colleges and universities to discuss innovative ways to improve environmental performance on campuses across the country. (Image: NACUBO)*



*University of New Hampshire received an Energy Star Award from the U.S. EPA in 2006. Three residence halls at University of New Hampshire have received the U.S. EPA's ENERGY STAR rating. According to the U.S. EPA, the residence halls are the first residence halls to receive this rating. Recent extensive upgrades in these residence halls, part of a campus-wide Climate Education Initiative to conserve energy and lower greenhouse gas emissions, are saving UNH nearly \$80,000 per year compared to an average dorm in the United States.<sup>35</sup> (Image: University of New Hampshire)*

Colleges and universities can begin to “green” their campuses and take a leadership role among their peers by implementing a number of different initiatives, including:

- Using land in a way that allows for transportation choice, balancing the demands of pedestrians, cyclists, and vehicles in transportation management
- Incorporating environmental considerations in the planning and design decision-making process of proposed projects, programs, and activities, including property acquisition, transfer, and leasing
- Conserving, protecting, restoring, and enhancing the natural and cultural landscapes that contribute to a balanced comprehensive open space system on campus
- Preserving historically significant resources and committing to a comprehensive understanding of its place in the broader cultural/historical fabric of the region
- Protecting and improving indoor and outdoor air quality and minimizing atmospheric pollution
- Minimizing water consumption through efficient resource use and implementing conservation programs and initiatives.
- Reducing quantity of wastewater produced, improving wastewater quality, and reducing the quantity and improving the quality of storm water runoff that drains from outdoor surfaces
- Reducing energy consumption, implementing energy conservation programs, and promoting energy efficiency
- Implementing pollution prevention practices or waste minimization programs to reduce the amount of hazardous and solid waste generated on campus
- Purchasing products that consider environmental impacts in addition to quality and cost
- Promoting environmental awareness, education, and training for the university community regarding their responsibilities as citizens
- Measuring and monitoring progress in achieving environmental principles, goals, and objectives

Colleges and universities have taken steps to minimize their environmental footprint: from tackling energy efficiency to reducing greenhouse gas emissions to developing their campuses in a “smart and sustainable” manner. Contributing to a healthy environment ensures a college or university becomes a leader on sustainability by increasing its competitive edge with other colleges and universities on the social, economic, and environmental impacts among students, faculty, and staff who rank their top choices for recruitment and retention. It also increases potential profit by reducing the environmental impacts from the operations and maintenance budget. Examples of these activities include maximizing environmental efficiency; conserving natural resources; extending life cycles of buildings and equipment; avoiding potential fines and penalties; and improving public health.

## What Do We Do Now?

Many campuses go through strategic planning processes that typically include work groups for academics, research, student/campus life, finance, outreach and service, and campus facilities. Strategic planning efforts in these areas can and should evolve into a vision for future campus development. As discussed above, while campus development is about accommodating growth in new or renovated facilities, the resulting development pattern can have an impact across campus functions. In following the path towards a new development pattern – one that serves multiple goals – colleges and universities should use as broad a vision as possible. A strategic planning process often provides a start for such a vision.

Once a campus understands the rationale for developing in a compact sustainable manner, college and university leaders chart a course and provide the resources for how they will move toward better development patterns on and off campus. That said, what are the steps for implementation and who should be involved to ensure acceptance of a project and the support it needs to ensure success? Here are some steps to consider:

1. Make an environmental assessment and survey the current situation – ask the question, will the current plan and structure allow the university to meet its mission?
2. Understand the historic growth of students, faculty, staff, and funding to have a better understanding of future needs.
3. Communicate the need for change in the status quo – a better development pattern means a better institution.
4. Establish a broad coalition to help guide change including the board of trustees, students, faculty, staff from all departments, community members, alumni, etc.
5. Develop or revise the vision for the institution – make sure it’s an accurate reflection of where the institution wants to go and constantly communicate that vision.
6. Create a strategic plan that can be implemented – include the academic mission and its physical manifestation, the campus.
7. Write or revise the master plan based on the strategic plan and vision.
8. Engage the local leaders on the interconnection between campus and the community.
9. Help ensure success by implementing catalytic projects first; build on successes.<sup>36</sup>

Beyond establishing the process for creating and implementing a development process on and off campus, decisions must be made with a broader focus so that impact from the entire community can be assessed. Assets and resources such as students, faculty, and community residents can contribute to direction of a smart and sustainable plan. Keeping the best interests of these groups in mind will help in decision making and prioritization of strategies that can be used to enhance the campus and the development process.



## Profiles



Main Street, University of Cincinnati. (Image: Lisa Ventre)



Steger Center, University of Cincinnati. (Image: John Hunter)

### Planning for the Future: Placemaking to Inspire a New Generation of On and Off Campus Interaction

Institution: University of Cincinnati

Location: Cincinnati, Ohio

Type of Institution: Large Urban Public

Total Student Enrollment: 35,000 (Fall 2006)

Tools and Resources: <http://www.magazine.uc.edu/0798/contents.htm>

Administrators at the University of Cincinnati (UC) understand that in order to flourish in the 21st century, colleges and universities must take bold steps to define themselves as innovators, leaders, and trailblazers. To be recognized as exceptional is a goal the university has had throughout its history. However, in the past 15 years the university has made a focused investment in building a campus that places students at the center of all it does. University administrators realized that to make their campus more attractive to students, staff, and faculty, a more dynamic sense of place had to be created. In other words, buildings and open space needed to interact in a way that frames public areas and invites people to use them. On campus this is done by creating pedestrian corridors, bringing buildings to the street, and mixing land uses so that activity can occur throughout the day and all over campus.

This multi-year effort has been nationally recognized for articulating a strategy for redefining the university through renovation of historic buildings, construction of mixed-use structures, and establishment of “Main Street,” a lively thoroughfare that meanders through the campus and like a small town, provides places for students, staff, and faculty to

gather, work, and interact. Inherent in the Main Street concept is the permeability of the campus borders. Consequently, it was clear to campus leadership that improvements in the neighborhoods adjacent to campus were also necessary to complete the transformation.

The university worked with local neighborhood associations to assess the opportunities for investment and improvements and even helped create some community development corporations. The results have come in the form of public-private investment, for which the university has provided some of the development costs, primarily in the form of what it calls “patient capital,” or low interest loans and gap financing. Products range from housing at all income levels, especially for students who wish to live near campus, to space for businesses in new and renovated buildings. New mixed-use development has been constructed adjacent to the university on Calhoun Street in the Clifton Heights neighborhood, and opposite the university’s academic health center in Corryville, among others. Included uses are restaurants and specialty shops, cafes, and clothing stores, all ideal uses to serve the nexus of college students and the neighborhood population surrounding campus.

To accelerate the momentum, the university joined with four other major employers in the combined neighborhoods around campus to create the Uptown Consortium. The consortium leverages the resources of its members to stimulate investment and economic growth in Uptown. All of the partners are focused on building a better community and realize that strong and vital neighborhoods are essential for preserving and bolstering the strength of the existing assets like the campus of the university. The consortium’s formation has resulted in

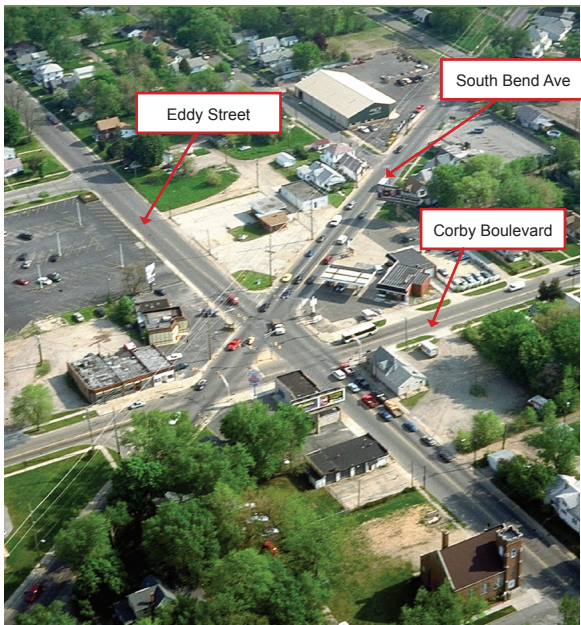
a major shift in civic leadership's view of the urban core, which now extends beyond downtown to include the Uptown neighborhoods.

Yet, improving the physical structure of campus is only half of the puzzle for a university like University of Cincinnati. As with many public, research-oriented universities, another motivating factor is the academic status of its programs. While UC has many top-ranked programs, it has recently raised admissions standards, improved retention and graduation rates, and, building on its distinction as the founder of cooperative education, increased the range and number of experiential learning opportunities for its students. While many institutions address these factors separately, UC has made it a goal to do it simultaneously with the physical transformation of the campus.

The near completion of the campus master plan, and the arrival of a new president, Nancy L. Zimpher, has stimulated the creation of a strategic plan for academics at UC as well. This plan, called UC|21, has ambitious goals aimed at making UC a leading urban research university in the 21st century.<sup>37</sup>



*The Mews near Main Street, new campus development at the University of Cincinnati (Image: Andrew Higley, University of Cincinnati)*



*Existing intersection of Eddy Avenue, South Bend Avenue, and Corby Boulevard. Eddy Avenue leads directly to the campus. (Image: Ayers/Saint/Gross for the University of Notre Dame)*

## Revitalizing Notre Dame Avenue: A Founder's Vision

Institution: University of Notre Dame

Location: South Bend, Indiana

Type of Institution: Large Private

Total Student Enrollment: 11,500 (Fall 2006)

Tools and Resources: <http://architect.nd.edu/> and <http://www.asg-architects.com/expertise/campusPlanning/und/index.htm>

The University of Notre Dame College Town Feasibility Study is the revitalization guide for 82 acres south of the university surrounding Notre Dame Avenue. The plan calls for a redevelopment that increases affordable housing options and creates a pedestrian-friendly environment. Under the plan, Notre Dame provides home ownership incentives to encourage faculty and staff to live within walking distance of the campus.



The study includes a master plan as well as urban and architectural design guidelines shaping the redevelopment of the streets, homes and businesses in proximity to the university. Notre Dame Avenue provides a ceremonial approach to the Golden Dome of the Main Building on campus, with the main gates and design aesthetics that welcome visitors onto campus. It was originally envisioned as a grand avenue flanked by a double row of tightly spaced trees. Over the years the neighborhood around Notre Dame Avenue declined due to disinvestment, increased demolitions, and general neglect.

To reverse the decline and restore the original approach to the campus, Notre Dame purchased a number of vacant parcels around and along the avenue and has since begun developing these properties in an effort to revitalize the neighborhood. The revitalization includes residential, retail, dining, and commercial developments, as well as vehicular and pedestrian connections linking the campus to the area. The photos and plans illustrate how this revitalization will take shape in the neighborhood, specifically where Eddy Street, South Bend Avenue, and Corby Boulevard intersect. The redesign of this intersection illustrates how the “quad layout” can be echoed within the neighborhood adjacent to the university. Buildings located close to the street will help frame this space and define how its pedestrian nature is similar to that of other spaces on campus. Furthermore, open spaces are recommended to further reinforce the connection and to create an identifiable figural place within the city fabric.

The design guidelines for the neighborhood, and specifically for Notre Dame Avenue, will ensure consistency of form and character of the new houses slated to be built in this area. The guidelines outline the placement of the house on its lot, size and massing of the house, the selection of architectural elements, details, color selection, and landscape choices. All of these efforts aim to restore the original vision of Father Edward Sorin, the university’s founder, as a grand, processional approach to the university while giving the faculty a welcoming community in which to live nearby.



Sketch plan of the proposed intersection of Eddy Street, South Bend Avenue, and Corby Boulevard. (Image: Ayers/Saint/Gross for the University of Notre Dame)



Aerial sketch of the proposed intersection of Eddy Street, South Bend Avenue, and Corby Boulevard showing the creation of a quadrangle, infill development, and the formal entryway to the campus. (Image: Ayers/Saint/Gross for the University of Notre Dame)





*Revitalization in the University City District near the University of Pennsylvania.*



*A restaurant in the University City District near the University of Pennsylvania (Images: David Bagnoli)*

## Reaping the Benefits of Investing in Good Neighbor Relations

Institution: University of Pennsylvania

Location: Philadelphia, Pennsylvania

Type of Institution: Large Urban Private

Total Student Enrollment: 23,704 (Fall 2005)

Tools and Resources: <http://www.upenn.edu/ccp/index.shtml>

Over the course of many years, the University of Pennsylvania had separated itself from its neighbors in West Philadelphia. As with many institutions in similar situations, Penn recognized a need to make changes or contend with eroding neighborhood conditions and impacts upon its own vitality. Disinvestment in the neighborhood, blighted buildings, and decreasing property values collectively were creating a perception that the university was not safe for students, faculty, and staff.

Motivated to improve this perception and invest in the surrounding neighborhood, leaders of the university decided that a wholesale initiative to use its knowledge, resources, and students to improve the physical and psychological make-up of West Philadelphia would not only help revitalize the neighborhood, but would also allow the university to grow and share with its neighbors the opportunities that come along with that growth. Beginning in the mid-1990s the university initiated a revitalization strategy through applied learning activities and direct investment to make West Philadelphia a better place. Penn's leaders also understood that in order to be effective, they had to present a comprehensive strategy for addressing revitalization and reinvestment in West Philadelphia. This process had to be open, transparent, and yield results. The strategy, called the West Philadelphia Initiative (WPI), included strong stakeholder involvement, participation from the highest levels of the university's

leadership, and a commitment to addressing issues as they arose. Results have been strong and quantifiable. WPI has yielded 350,000 square feet of new retail space, more than 500 new homeowners, the addition of 500 new apartments in the area, and more than \$300 million in private investment since the mid-1990s.<sup>38</sup>

In addition to the WPI, since 1997 Penn has been part of the University City District (UCD), the Business Improvement District in the Penn neighborhood. UCD is a nonprofit community improvement association run by a coalition of 11 partner organizations. Within its 2.2 square-mile service area, its mission is to build "effective partnerships to maintain a clean and safe environment and to promote, plan, and advocate for University City's diverse, urban community."<sup>39</sup> Each of the partner organizations support the UCD's operations. UCD employs 40 "safety ambassadors," maintains open space, is a partner in providing transit service through the district, manages planning and capital improvement initiatives, and provides marketing and promotional support for activities in the district.<sup>40</sup> Results have included a decrease in crime and an increase in population as well as growth in tax revenues as new businesses locate in the area.

The university and private developers invested hundreds of millions of dollars over the past decade in security, retail, schools, the local housing market, and what Penn refers to as "economic inclusion"—making sure the community and minority companies share in the success. The results have been monumental. Penn has become a model for campus-community relations and return on investment. The mixed-use transitions between the campus and West Philadelphia include a range of commercial and housing options as well as increased services. Penn is now the beneficiary of increased national rankings and applications for admissions—both harbingers of success.

On campus, university buildings have been refaced to open out toward the streets and West Philadelphia, and all new buildings have ample windows facing the street, making the university appear welcoming. Penn has provided additional lighting on the streets for safety. As these efforts were gaining momentum, the university worked on formalizing its focus on campus planning and articulating its commitment to the community. In 2001 the university's "Development Plan" was released (and updated in 2006) illustrating how the campus would physically

integrate with West Philadelphia and extend east toward Center City. The goals of the plan included strengthening the identity of the pedestrian core as well as upgrading the building stock and infrastructure on campus. The plan calls for creating a coherent identity throughout campus while considering the needs of the community by stabilizing residential housing stock and creating more student housing options on campus. This balance will also be enhanced by fostering mixed-use development achieved through public-private partnerships.<sup>41</sup>

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## Investments in a Downtown Satellite Campus Supports Multiple Community Goals

Institution: University System of Maryland at Hagerstown

Location: Hagerstown, Maryland

Type of Institution: Regional Higher Education Center

Total Student Enrollment: 400 (Fall 2005)

Tools and Resources: <http://hagerstown.usmd.edu/renovation.aspx>

Colleges and universities often accommodate growth by building satellite campuses. In other instances, new campuses serve institutional needs or are built for educational opportunities beyond traditional campus experiences. Colleges and universities can ensure that the development of new campuses serve the multiple needs of their constituents – students, faculty, and staff – as well as the surrounding community by providing transportation choice, creating vibrant places, mixing uses, and involving numerous stakeholders in development decision making. When the University System of Maryland decided to open a regional higher education center in the western Maryland city of Hagerstown, the initial plan was to place the campus on the outskirts of town near a major interstate highway. But when an abandoned hotel – Baldwin House – and department store in the heart of the city was offered as an alternative location, controversy arose over which location was in the long-term best interest of both the university and the city.

When the costs of acquiring property and creating the appropriate space – either new or rehabilitated – at each site were all added up, the downtown Hagerstown site was the slightly more expensive option. The impact of the investment overall varied in each of the sites, however. Supporters of the downtown site argued that more benefits would accrue for the



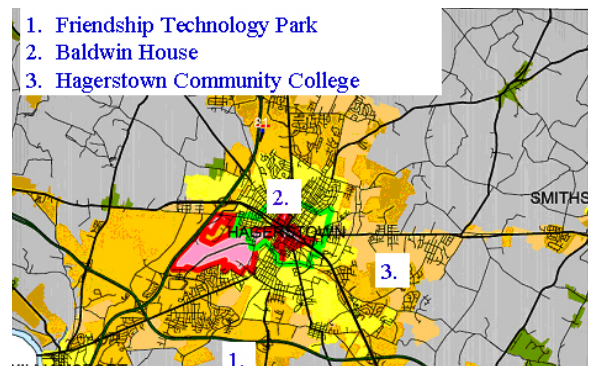
*Downtown Hagerstown, the site of the University System of Maryland at Hagerstown. (Image: John W. Freese)*

city, its residents, and the University System of Maryland should the Baldwin House rehabilitation be chosen. Ultimately, the decision was made by then Maryland Governor, Parris Glendening, to renovate the building downtown rather than build outside of town. The City of Hagerstown sold the building to the state for \$1, and by the fall of 2005, the Hagerstown campus enrolled approximately 400 students in the downtown site. The center is funded through state budget appropriations to the University System of Maryland.

By siting the new education center in downtown Hagerstown, more students come downtown in the afternoon and evenings. As a result, new businesses began locating downtown and foot traffic increased. The existing parking garage that had been empty at night was soon put to further use. An adjacent outdoor courtyard created a location for day and evening community events, establishing the downtown as a destination. The decision to site the campus in downtown Hagerstown has caused university officials – from the chancellor and university presidents down to facilities' managers – to become more aware of the impact their facilities have on surrounding communities and revitalization efforts. The University System of Maryland had been teaching courses on smart growth policies and

practices for a number of years beginning in the mid 1990s. This Hagerstown project was an opportunity for the university system to “walk the talk” and use smart growth strategies in its own growth and development decision-making.

City officials – and the public – became more aware of the importance of placing or keeping key institutions downtown rather than on the fringe. In this case, although the cost of the rehabilitation of the Baldwin House was slightly more than new construction at the fringe of Hagerstown, the overall positive impact on the community is greater in the downtown site. Infrastructure is being reused, the downtown has become more vibrant, new economic activity is occurring there, and the community did not have to bear the cost of providing new services to a site where no services had existed.<sup>42</sup>



Map of the Hagerstown, Maryland, area showing three possible sites for the new University System of Maryland at Hagerstown. Maryland chose site 2, Baldwin House, in downtown Hagerstown rather than the other two sites outside of downtown. (Image: University of Maryland)

*“I’ve seen in the last 16 months [since January 2005] an energy for redeveloping downtown that I’ve never witnessed before. The university center is a big part of that. I was initially opposed to the downtown location. Now that I’m here, and seeing what is happening, I see the wisdom.”*

— David Warner III, Executive Director,  
University System of Maryland at Hagerstown





*Berea College's Ecovillage learning complex. (Image: Berea College)*

## Producing What You Need: A Sustainable Campus that Works

Institution: Berea College

Location: Berea, Kentucky

Type of Institution: Small Rural Private

Total Student Enrollment: 1,514 (Fall 2006)

Tools and Resources: <http://www.berea.edu/buildings/ecovillage/default.asp>

Berea College was founded in 1855 as the first interracial and coeducational college in the South. The college provides a high quality, liberal arts and professional education to students from Appalachia and beyond. The college promotes understanding and kinship among all people, service to communities in the region, and sustainable living practices, which set an example of new ways to conserve our limited natural resources. Based on this philosophy, administrators and college leaders believe that the campus and community should be integrated, with specific attention paid to resources the college uses for energy consumption and other aspects affecting the college's ecological footprint. Decisions are made with the understanding that Berea's goals should incorporate the confluence of ecology, economics, society, and technology. Berea College is motivated to be a sustainable campus both in policy and in action. As such, the entire collegiate experience for students is designed as a holistic one. All students are required to work for the college at least 10 hours per week. Doing so, they gain an appreciation for the dignity of all types of labor, earn money for their room, board, and books, and provide needed assistance to the college's operations.

The college's strategic plan, called "Being and Becoming: Berea College in the 21st Century," focuses on key operational and academic issues. Growing out of the strategic plan, the college reviewed institutional policies and practices to ensure environmental responsibility and sustainability in all its operations. This included adopting a land use plan addressing the college's holdings of campus, forest, and farmlands. It also

included a stringent Energy Master Plan to significantly reduce energy consumption as well as design standards with minimal ecological impact for building construction and renovations. Some of the key elements include renovating buildings to increase efficient energy and water use, while improving comfort and functionality; construction of student residences and teaching facilities; campus operations such as heating and lighting systems, recycling, purchasing practices, grounds maintenance; and sustainable management of the college farms and forest and ecological design that encourages the participation of all community members in the design process. With this commitment to sustainability and holistic ecological function of the campus, the college established a Campus Environmental Policy Committee. The committee monitors the progress of Berea College toward ecological sustainability – the ability to meet current needs without degrading the natural systems and resources required to meet future needs and recommends policies and actions that will promote progress toward ecological sustainability.

Broadening the conversation from sustainability to smart growth, the college notes that its practices regarding master planning, design, and land consumption and management can and should be hand-in-hand with practices for ecological and environmental stewardship. For instance, Berea aims for its land holdings to retain green space, increase recreational opportunities, protect wildlife habitat and stream corridors, and encourage conservation of "production" land use (agriculture, wildlife, forestry, etc.).

Berea College is committed to land use policies that promote no net loss of ecological function where possible and pursues, to the greatest practical extent, placement of permanent conservation easements on portions of farm and forest land.



Renderings for the University of Kentucky College Town Plan.  
 (Images: Ayers/Saint/Gross for the University of Kentucky)



## Accommodating Growth Through Revitalization: University of Kentucky College Town

Institution: University of Kentucky

Location: Lexington, Kentucky

Type of Institution: Large Public

Total Student Enrollment: 26,260 (Fall 2003)

Tools and Resources: [http://www.uky.edu/EVPFA/Facilities/FacilitiesPlanningUnit/Campus\\_PLan\\_Update/](http://www.uky.edu/EVPFA/Facilities/FacilitiesPlanningUnit/Campus_PLan_Update/) and <http://www.asg-architects.com/expertise/townPlanning/lexington/index.htm>

The “University of Kentucky College Town Feasibility Study” is a revitalization plan for a 77 acre neighborhood in Lexington, Kentucky. The site is advantageously located between the downtown core and a large land-grant institution. The urban design strives to revitalize this area after years of abandonment and/or uncontrolled infill retail. The goal is to improve the quality of life for the city’s residents and the university community by providing an area that is a vibrant place where students, faculty, and residents will meet, live, work, shop, play, dine, and walk.

To show quick results, the institution implemented streetscape improvements such as tree planting and sidewalk repair. To tackle bigger issues, the university hired specialized consultant groups to examine the potential for increased retail and residential development. Based on recommendations from market data and analysis, the team prepared schemes for eight multi-family residential projects to be developed on vacant or underutilized lots.

Substantive research on university-community partnerships and employer-assisted home ownership initiatives led to a recommendation for a program to foster home ownership. The university provided a housing ownership stipend to those who would relinquish their parking permits near the campus. This program reduced traffic, created more pedestrian activity round-the-clock, led developers to be less speculative about residential development, and advanced a stronger sense of community through ownership.

This urban design initiative generated substantial interest allowing the city to move forward with its goals. The city issued requests for proposals to developers for housing projects on city-owned land, and the university is building projects within the study area as proposed by the design. Shared goals, such as structured parking for the neighborhood’s institutions and retail, increased retail development, and increased home ownership are creating a foundation for revitalization and genuine community. The public and private partnership has resulted in progressive development which is positive and complementary to both entities.

To date \$65 million have been invested in the study area, and an additional \$85 million is proposed for new building projects.



Howard Hall, Lewis and Clark College. (Image: Lewis and Clark College)

## Growing Green: Master Planning for an Enhanced Campus Footprint

Institution: Lewis and Clark College

Location: Portland, Oregon

Type of Institution: Small Urban Private

Total Student Enrollment: 3,433

Tools & Resources: <http://www.lclark.edu/dept/public/howardpressroom.html>

Lewis and Clark College is committed to integrating environmentally responsible development practices into its construction program and campus master planning. This is a natural outgrowth of the commitment to sustainability and smart growth that is prevalent across the City of Portland. Campus administrators and decision makers understand the beneficial position of being a leader and model for campus planning. Their actions and directives can motivate other campuses around Portland, the Northwest, and throughout the country to achieve environmental results. President Tom Hochstetler believes “that sustainable development concepts, applied to the design, construction, operation, renovation, and demolition of our buildings and landscape, can enhance the economic well being and environmental health of the college.”<sup>43</sup> “Lewis & Clark’s commitment to sustainability is not just talk; we model our sustainable efforts to the community at large,” said President Tom Hochstetler. “We are proud to put our ‘green’ face forward.”

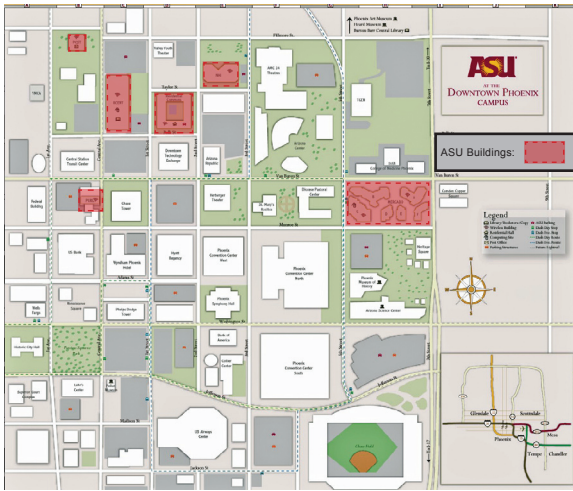
Lewis and Clark College has established an array of planning and construction programs and initiatives, including green building, campus master planning, and sustainable development. The college is committed to green building and green architecture which implies a development methodology that stresses solving the needs of the present, without diminishing the resources necessary to solve the needs of the future. In building construction, this is normally accomplished by creating architecture that minimizes use of natural resources;

energy; toxic materials and waste; and emissions of pollutants and maximizes the use of recycled materials.

Lewis & Clark College received a LEED Gold Certification for the John R. Howard Hall for environmentally friendly design by the U.S. Green Building Council. “We are honored to receive the LEED Gold certification,” said President Tom Hochstetler. “The systems, materials, and construction practices that went into Howard Hall make it a model of sustainable design and operation. In very practical ways, Howard Hall does not just sustain the environment—it transforms it. What it does for our natural environment, it also does for Lewis & Clark’s academic environment. Howard Hall is now the college’s academic center for disciplines involved in studying and interpreting certain patterns, habits, and behaviors of people and society.” As of Spring 2005, Howard Hall joined approximately 40 other comparably rated buildings across the country. These building standards, guided by the U.S. Green Building Council, help colleges and universities understand that green buildings can boost the bottom line and promote the creation of livable, sustainable communities. J.R. Howard Hall is expected to consume 40 percent less energy than a typical building of the same size, thanks in large part to raised-floor displacement ventilation and night cooling systems. The elevator operates with 40 percent less electricity than standard elevators and does not use hydraulic fluid. The new building’s interior features exposed steel, unpainted concrete blocks, and polished concrete floors. The building has a smaller footprint than the structures it replaced, but it brings a net gain of 25 offices and 14 classrooms to the campus. Contractors recycled more than 95 percent of construction debris and used low-toxicity adhesives, carpet, and composite wood products throughout the building. The building design and construction was accomplished through a campus-wide initiative that coalesced with three applied learning classes in environmental studies to educate the campus and community about the benefits of green building.

This project fits into the broad sustainability framework established in the campus master plan. The master plan has three objectives: the accommodation of a wide array of facilities that will enhance the academic, social, and residential resources of the campus; enrichment and restoration of Lewis & Clark’s unique open space environment; and spatial integration and ordering of the disparate areas of the campus. As the campus expands, college planners expect to achieve these objectives by infill development, shifting automobile movement and parking to the periphery, and siting buildings in a manner to create places.





Map of downtown Phoenix showing the ASU Downtown Phoenix Campus. (Image: Arizona State University)

## Becoming Socially and Physically Embedded: Arizona State University's Downtown Campus

Institution: Arizona State University

Location: Phoenix, Arizona (Downtown Campus)

Type of Institution: Large Urban Public

Enrollment: 6,200 – Fall 2006 for the Downtown Campus;  
15,000 – projected Fall 2020

Tools and Resources: <http://www.asu.edu/downtownphoenix/>

The Southwest has grown steadily for the past two decades, particularly in Arizona where the state's population has grown by 60 percent from 1990 to 2005. The addition of 2.3 million people in that timeframe has spurred construction of towns and cities as well as increased the need for services. Demand for higher education added to the complexity for accommodating growth in the state. Arizona State University (ASU), located in Tempe, just outside of Phoenix currently has more than 50,000 students. While university administrators realized that this main campus would continue to flourish and add students, they also understood an opportunity that existed in another location – downtown Phoenix.

In 2004, university leaders began exploring the logistics of planning and developing a downtown campus. While not completely new to the urban sites (ASU had one building downtown in which to expand upon), much work needed to go into preparing the downtown for growth. Being downtown would help ASU connect both socially and physically with city residents and downtown workers. This would enable better coordination and interaction between community partners and faculty, staff, and students. Establishing a new campus would require a master plan and a delicate balance between existing and new building stock.

The most important event for the development of ASU's Downtown Campus was the approval of a \$223 million bond initiative by Phoenix voters in March 2006. This bond provided funding for land acquisition and construction of ASU's campus – a state institution. The August 2006 campus opening was the culmination of the Herculean effort required to bring the campus into being. The Downtown Campus will provide urban amenities that are not currently available to students on the Tempe campus. Located in the area bounded by Van Buren and Filmore, 1st Avenue and Third Street in Phoenix, students will be able to interact with downtown employers and vice versa. This campus is adaptively reusing existing buildings combined with new construction. An elaborate conceptualization and master planning process will guide the multiyear development of the mixed-use academic/artistic/commercial/residential campus plan. The campus will be convenient to light rail service and other transportation systems connecting with commercial, cultural, and entertainment venues, including the Main Campus in Tempe. Adjacent to potential residential and community development, the campus will be a subdistrict of downtown, lending critical mass to other educational and cultural institutions, including the Arizona Biomedical Collaborative (ABC), and University of Arizona Medical School in collaboration with ASU and the Translational Genomics Research Institute (TGen). Businesses throughout downtown are excited about the campus and have adjusted their hours and services to accommodate this institution.

As the downtown campus expands, university officials must focus on placemaking and creating an experience for students, faculty, and staff that will take advantage of the urban environment. For instance, with the light rail adjacent to campus, policies on campus should support this mode of transport. Also, higher density development will have multiple positive effects. First, density, which is common on campuses urban and rural, creates a lively mixture of activity. Higher densities will also support the business community downtown including restaurants, shops, and other retail establishments that cater to the university crowd.



*Downtown Phoenix, site of the ASU Downtown Phoenix Campus. (Image: Arizona State University)*

Developers are finding that the ASU Downtown Campus is a good investment. The possibilities are endless as far as encouraging public-private partnerships to build technology space, classrooms, and residences for students and others. The campus yielded two types of return on investment. The first is the more traditional model wherein vacant buildings surrounding the now Downtown Campus have become valuable by virtue of the university's investment. These buildings have either been renovated by Arizona State University or by developers who are building mixed-use space, offices or private residential. Other redevelopment projects are occurring simultaneously, such as the \$600 million expansion of the Civic Center and the construction of the Medical School.<sup>44</sup>

## Appendix: Structuring Public-Private Partnership (P3) Transactions

By Joan J. Millane, Millane Partners, LLC

Diverse models and strategies exist for developing effective public-private partnership transactions. A P3 project is considered privatized if an entity other than the institution owns it; finances it; markets it, leases it, or collects rent; as well as based on who operates it; who keeps the profits, if any; and finally, who fixes it if rental income does not cover operating expenses, reserves, and debt service. In the traditional model, the college or university performs all of these functions. In P3 transactions, the answer could be the higher education institution or third parties for one, some, or all of the aforementioned criteria.

In a P3 transaction that is 100 percent financed with tax-exempt debt, many players are involved, including the institution, a (501)(C)(3) tax-exempt owner entity and/or its limited liability corporation (LLC), a developer, an underwriter, the bond issuer (conduit), a credit enhancer or bond insurer (not in all instances), the bond trustee, bond buyer(s) or traditional lenders, their real estate and bond attorneys, the property manager, and the project's occupants.

Numerous legal documents are generated, of which almost every aspect is negotiable. The transaction documents may include, but are not limited to, the ground lease, the development agreement, bond documents, building title, survey, environmental studies, a management agreement, sometimes a resident life agreement, tenant leases, and service agreements. (To learn who is a likely party to each agreement, as well as to see additional resources on P3 projects, visit [www.nacubo.org/x9127](http://www.nacubo.org/x9127).)

Institutions seek to develop P3 projects through a convergence of needs, including:

- Limited state financial support, which drive campuses to seek new revenue streams, lower costs, and shorter timeframes.
- Desire to provide new state-of-the-art facilities to remain competitive in attracting and retaining top students and faculty.
- Economic development, to reinvigorate nearby deteriorating or unsafe neighborhoods. According to Ayers/Saint/Gross, trends include less-defined campus edges, off-campus university bookstores as strong anchors, college towns as potential incubators of new business, and a formula for a successful college town that consists of high-end national (30 percent) and local merchants (70 percent).

Other drivers of P3 projects include:

- Urgent need: Often institutions find they need to make housing available for occupancy as soon as possible.
- Speed of delivery and execution: Public institutions recognize that cumbersome state contracting regulations can be facilitated via public-private partnering in which the institution engages the developer and the developer engages architects, engineers, and other parties.
- To purchase expertise and resources: Institutions recognize their need for development, financing, construction, property management, or residential life expertise, or may want its own staff to focus on the institution's core missions. Furthermore, developers bring resources and expertise from lessons learned at other institutions.
- To reduce risk: Colleges and universities transfer responsibility for programming, design, financing, construction, lease-up, lease rollover, and operations to third parties.
- To make money: It makes sense to put underutilized land assets to work to generate new sources of revenues.

Historically there have been two significant misunderstandings of reasons to privatize:

- To have the transaction be off balance sheet to the institution.
- To have the transaction be off credit for the institution, i.e., not using the institution's debt capacity.

Whether a P3 transaction is determined to be off balance sheet and/or off credit is the result of numerous considerations. From an accounting perspective, operating leases can inadvertently become capital leases. From a rating agency perspective, determination of whether a P3 transaction is considered off credit depends on numerous considerations viewed on a continuum of university interface with the project and the rating agency's analysis of risk to future bond buyers.

A P3 project may or may not be off balance sheet, and if off balance sheet, it may still not be off credit. It is important to understand the implications of FASB Statement No. 13 (operating lease criteria versus capital lease designation), which considers transfer of title, bargain purchase option, 75 percent of useful life, and 90 percent present value of future minimum



lease payments. This topic is also addressed by FASB Statement No. 98 (real estate sale/leaseback) and GASB 39 (consolidating affiliated entities) as well as other regulations recently drafted and still being considered since Enron. An institution should seek early advice from its accountants. From the rating agencies' perspective, a ground lease transaction is unlikely to be considered fully off credit. The rating agencies consider numerous factors with respect to the transaction such as whether the project is on or adjacent to campus, or is an essential component of student housing, parking, or other integral institutional program. In such cases, the project's debt is likely to be considered by the rating agency as indirect debt and will therefore have some impact on use of the institution's debt capacity, albeit not dollar for dollar as is more traditional institutional debt financing. Other factors considered include whether the institution has the right to eventually take title to the project, receives revenue from the project, provides services on site at the project, commits to steer students to the project, or retains some control over rent levels. (See Moody's Investors Service March 1998 and May 2001 Special Comments.)

To determine the most appropriate way to meet its objective at a particular time, an institution should consider several factors. Resources and expertise that a developer can bring to the project include project management and leadership, as well as experience and expertise in design, financing (equity), construction, marketing, leasing, property maintenance and operations, and design and implementation of a residence life program.

In a P3 project, the developer earns market-rate development fees and market-rate property management fees (optional), and obtains an easing of barriers to entry (i.e., land assemblage and zoning), 100 percent tax-exempt bond financing (thus no need for an expensive equity partner but also no residual interest), minimization (not elimination) of development risk, university-facilitation of student awareness of availability of new housing, and an exceptional location. In addition, a developer has less real estate market volatility, it diversifies its business risk, and increases the potential for business from other colleges and universities.

The institution benefits from new resources in the competition to attract and retain top-notch students; "control" through the project's annual budget approval process; and any "cash" remaining after expenses, reserves, and debt service (i.e., profit) become annual payments of ground rent to the institution. Finally, the land and buildings become property of the institution at the end of the ground lease (generally 30 to 40

years); in the meantime, the institution has the use of the developer's creativity, expertise, and vast resources resulting in the development of modern high-tech housing within 18-24 months; an integrated residence life program (optional); and the potential for more students to become involved with faculty and extracurricular activities.

Typically, P3 projects have a number of common elements:

- Available land that the institution is willing to ground lease. (Institutions are strongly encouraged not to sell land adjacent to it. Furthermore, a developer can help assemble land at no cost to the institution.)
- A ground lease document which memorializes the deal and stipulates all the controls, rights, and obligations of the parties.
- An economic engine, i.e., a mechanism to provide adequate revenue to cover the cost of operating expenses, debt service, required reserves, and sometimes return on equity. Potential economic engines might be student leases (housing), student fees (dedicated to a recreation center), institutional leases (office, classroom, or research space), and institutional purchases (e.g., goods and services from a bookstore, restaurants, or hotel/conference space).

It is strongly recommended that institutions obtain an objective, credible market study rather than proceeding on the basis of "gut feeling." A professional market survey (considering both on and off campus factors) conducted by an independent firm with credibility in the bond markets and with the rating agencies, or with traditional lenders, will help determine the project size, mix, rental rates, operating expenses, reserve requirements and project debt capacity, as well as an understanding of whether the project can be supported by academic leases or must issue 12-month leases to be financially viable.

A market survey will aid in making the case for approval by the institution's governing board and for the underwriter, rating agency, lender, and credit enhancer for the sale of the bonds. A market survey may range in cost from about \$25,000 to \$40,000, depending on the number of focus groups, market size, and other variables in the scope of work. Considered a transaction cost, the fee for the market study may be reimbursed to the institution at financing closing.

New student housing projects are not always self sufficient. If the new student housing project is to provide new beds, the project can be self sufficient and, in fact, will generate cash flow to the institution due to the financing requirement, generally,

for a 1.2 debt service coverage ratio. However, if the new student housing project is to provide replacement beds, the project is not likely to be able to replace the annual cash flow that the campus had been receiving from the replaced housing in addition to covering the development and operating costs of the new project.

The developer will take development risk, bring equity and financing, and make profits as a fair return on investment. The typical profile for student housing is 100 percent tax-exempt bond financing; for mixed-use projects with private sector use and/or ownership, the structure is generally 75 percent financing and 25 percent equity.

The most common model in higher education facilities construction is the design-bid-build model, although many institutions also use a design-build process. P3 projects most often utilize a developer-led team. While each has its particular advantages and disadvantages, among the advantages of a P3 transaction is its ability to bring expertise and speed of delivery.

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