







Letter from the President

Bucknell Community Members,

This document summarizes one of the most important initiatives any university can pursue, a plan for the use and development of its physical space. Significantly, this master plan emerges out of Bucknell's overarching institutional strategy and in tandem with the comprehensive campaign. This intersection of major planning efforts allows Bucknell to move forward confidently on every front and, in so doing, to ensure the excellence of the institution today and for decades to come.

This commitment to planning is consistent with one of Bucknell's traditional competitive advantages. When Jens Larson established the master plan that guided Bucknell's campus evolution for much of the 20th century, he was responding to the institutional recognition that looking ahead, managing change, and capitalizing upon its natural strengths would ensure the campus's lasting quality. With this master plan, we aim to leave the campus in better shape, and better prepared, for the future even than is evident in the magnificent place we know.

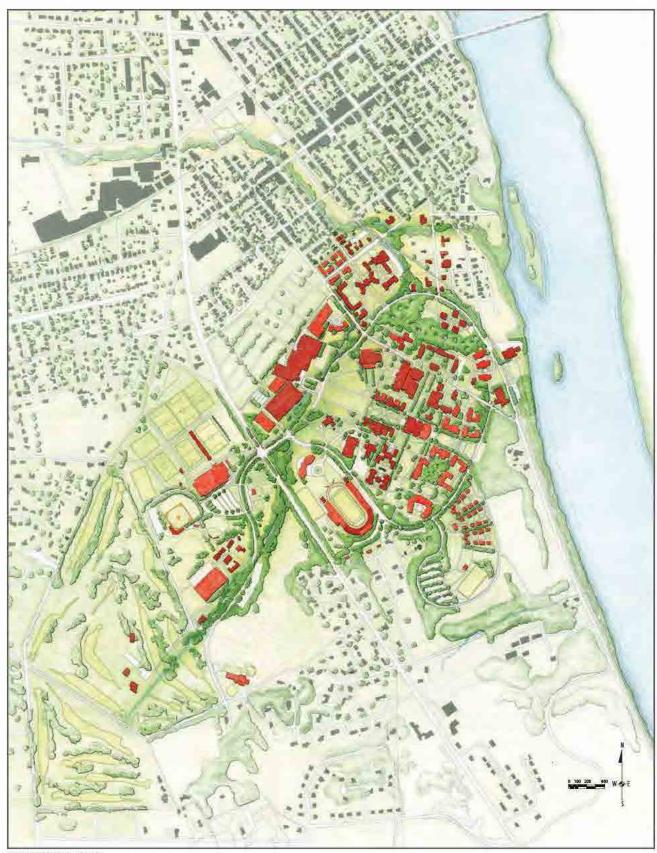
The goals that this plan describes are both ambitious and realistic. They are grounded in research, developed through extensive analysis of the University's space, of competitor institutions, and of the physical opportunities that our campus enjoys. They reflect the reality, as revealed in clear terms by the space assessment, that Bucknell's space needs are considerable, and that a modern version of the Larson plan is now required. With that in mind, this plan is meant to provide immediate, practical benefit as well as to challenge our imaginations as to what is possible. Emerging out of The Plan for Bucknell, linked closely to the comprehensive campaign, it provides a strategically integrated path to making campus additions and improvements that are meaningful, valuable, and enduring.

We are grateful to Shepley Bulfinch Richardson & Abbott for the energy and expertise they have given to this master plan. The result is a worthy reflection of the insight and aspirations that have long benefitted Bucknell. We submit it to the Board of Trustees with a request for approval, and look forward to beginning the steps that will start transforming this master plan into reality.

Sincerely,

Brian C. Mitchell

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Campus Plan, 2008

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Heading to class

A Vision for Bucknell

"[W]e look to the Master Plan to provide Bucknell with a vision for the campus for the next 75 years, and that allows this special place to remain the pride of all of us who love this institution."

- Susan J. Crawford '69, Chair of the Board

A Vision for Bucknell

This master plan provides Bucknell with a powerful vision for the physical development of the campus while strengthening the University's reputation as a center of academic excellence in an increasingly competitive higher education environment.

This master plan comprises a series of integrated planning efforts, the core components of which are listed below.

Integrated Planning Efforts

- ➤ Land Use Plan
 75-year framework for land use and development
- ➤ Campus Plan
 30-year accommodation of the planning agenda
- ► Landscape Guidelines

 Vision for enhancement of the campus landscape
- Stormwater Guidelines
 Strategy for campus stormwater management



A classic university quad

Foundation of the Master Plan

In 1846, Bucknell's founders set their sights on Lewisburg as the University's future home knowing that they had found a location of special opportunity. Over many generations, Bucknellians entrusted to carry this promise forward have established a quintessential college campus on this beautiful land overlooking the Susquehanna River. Today, the more than 100 buildings on its 450 acres stand as a testament to the vision of Bucknell's founders. Open grounds, maintained with care, stretch in every direction and buildings share a common architecture that is a Bucknell hallmark.

The Origins

The unique campus that is so beloved today might not have come to exist were it not for the vision of some of the University's earliest leaders. Their initiative in establishing and implementing a master plan allowed the campus to evolve into a series of connected buildings that maintain relationships to the University's academic mission and the natural environment, aspects still central to the campus's value today.

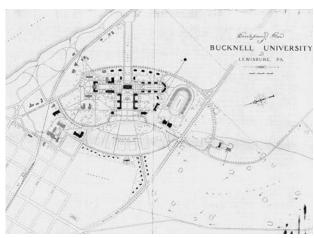
Of singular importance to this evolution of the campus has been "The Larson Plan." In 1932, the University commissioned acclaimed architect and campus planner Jens Larson to develop Bucknell's first master plan. Centered around a new campus library, that plan envisioned a series of quadrangles that radiated from that new center of the campus like spokes on a wheel, creating great lawns and broad vistas.

The Larson plan defined the framework for campus development over the ensuing 75 years, allowing enough flexibility to fit future needs. Well into the 1960s, Larson retained his relationship with the University, guiding campus development. The memorable images of the campus we now know are largely a result of Larson's cohesive, long-standing commitment to creating a total campus environment.

This commitment to the value of Bucknell's physical space in support of its educational mission continues today. The Board of Trustees recognized this imperative when it unanimously established *The Plan for Bucknell* in April 2006.



Old Main burned in 1932, triggering the need for the Larson Plan



Larson Plan, 1932

The Plan for Bucknell

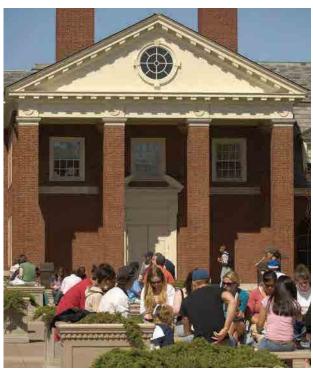
- Strengthen the academic core
- Deepen the residential learning experience
- Enhance diversity
- Strengthen connections with the world
- Secure the University's financial future

At the core of this strategy are five key goals as indicated above.

Fundamental to these goals is Bucknell's first-class living and learning environment.



Christy Matthewson-Memorial Stadium



The campus community today

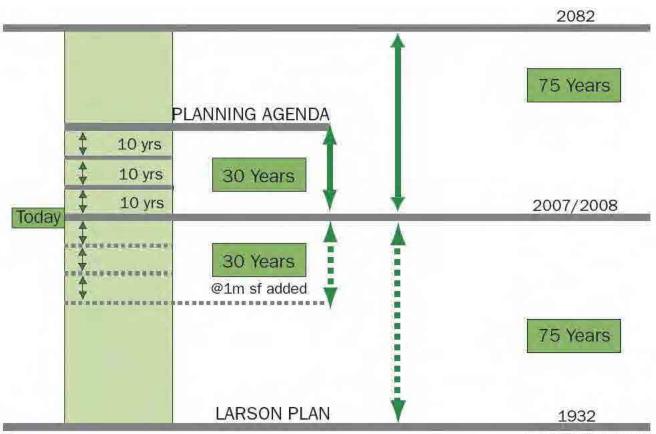
The Opportunities

Implicit in Bucknell's vision is the understanding that, as a leading institution, it must apply every strength well and meet the highest standards for its living, learning, and working environments. The Bucknell campus affords the University a significant competitive advantage. Its location; living and learning facilities; and athletic, recreational, and green spaces are significant assets. Combined with Bucknell's strong faculty, these assets are part of what continue to make Bucknell unique. The master plan aims to enhance these advantages and allow the University to achieve its aspirations on a global stage.

The master plan proposes to extend Larson's vision by strengthening the University's connection to the region. It builds on the basic concept of the Larson Plan, involving a series of academic quadrangles centered on Bertrand Library, an orientation to the river, and the connection of campus neighborhoods with pedestrian walkways and green space. It presages campus development for several generations.



Facing campus from Lewisburg



Extending the Larson Plan

Bucknell comes to this challenge with a significant need for additional living, learning, and work space, as the analyses imperative to this master plan have made starkly clear. The University is well-positioned to apply new resources for immediate impact to address this problem. It enjoys a solid financial position and has valuable property available for development. With careful planning and application of its resources, it can construct and renovate academic and residential spaces befitting its needs while meeting its commitment to environmentally

conscious development. Bucknell can fulfill its original vision of a campus tied together by pedestrian green spaces and greenways and made integral to the community it shares.

The Principles

To capitalize on these opportunities, the University has developed this master plan, supported by the renowned architectural and planning firm Shepley Bulfinch Richardson & Abbott, according to the principles below.

Key Principles

- Be a pedestrian campus focused on students, faculty, and student-faculty interaction
- Use existing space purposefully and thoughtfully
- Reflect the Larson Plan by tying new construction into a sense of this place with an emphasis on stewardship and an abiding respect for the environment
- Be open to its natural neighbors

 East Buffalo Township, Lewisburg, and the Susquehanna River and remove obstacles to seamless integration
- Commit to sound, reasonable, sustainable, and financially practical environmental planning policies

- Integrate Bucknell West into the core mission of the University
- Maintain or enhance academic facilities, student housing, extracurricular environments, and support areas to promote integrated living and learning experiences
- Integrate the planned and natural environments more fully with one another and The Plan for Bucknell
- Encourage development in the corridor between the campus and Lewisburg's Market Street and along Market Street itself
- Seek financial partners and use the entire scope of University resources to accomplish these goals

"...always design a thing by considering it in its larger context, a chair in a room, a room in a house, a house in an environment, an environment in a city plan..." - Eliel Saarinen

The Future

Implementation of the master plan will be ongoing and evolutionary, and its implications will extend well beyond the important beginnings made possible by the upcoming comprehensive campaign. In the end, this master plan will become, like the campus prized today, Bucknell's most tangible visual expression of itself as a University, what it believes, and how it will thrive in the 21st century.

Why Plan?

Bucknell now finds itself in an enviable position with a campus that is thoughtfully planned, embodying the vision for campus development set forth by Larson 75 years earlier. The "Hill of Learning" that he envisioned in this picturesque central Pennsylvania community created a model academic environment and one of the most beautiful campuses in the country. Today, the Larson plan has been largely built out.



The "Hill of Learning"

With The Plan for Bucknell in place, Bucknell is in a position to extend Larson's vision by articulating a master plan designed to meet new, bold institutional goals. Immediate action is especially important because, while campus development has been relatively constant, benchmarking data indicates that Bucknell has not responded fully to changes in teaching, learning, and campus life with changes to facilities on par with peer and aspirational institutions.

While its campus is one of Bucknell's greatest assets, it also poses its greatest challenge:
Bucknell has among the fewest usable square feet of campus space when compared with institutions of similar enrollment size. Whether measured in terms of living space for students, classroom space, office space for faculty and staff, or laboratory space – in fact, in practically every realm of usable space a modern campus requires – Bucknell falls far short of its peers.

Unclassified Classrooms 23,286 NASE Laboratories 167,792 NASF Residential 460,439 NASF Offices 208,280 NASF 13.1% Health Care 2,101 NASF Support Study 84,483 NASF 101.674 NASE 5.3%

Special Use

255,814 NASF 16.1%

Existing space use

General Use

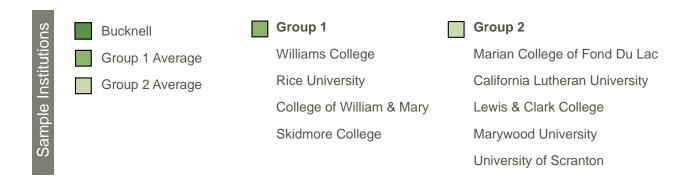
214,989 NASF

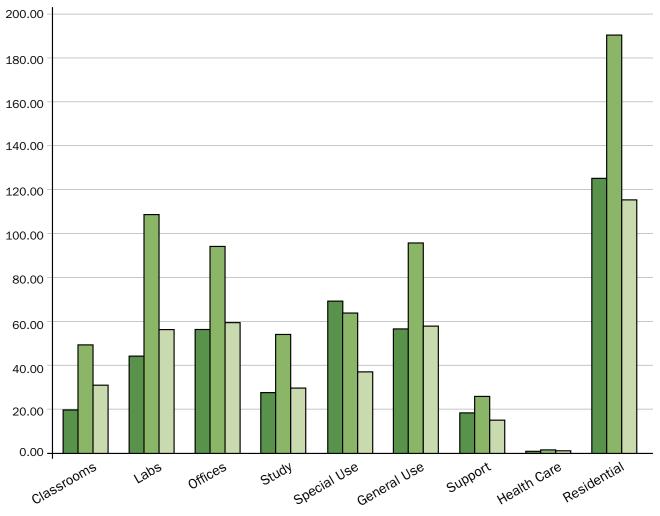
Moreover, today, important planning is happening at local, regional, and state levels. Bucknell has a significant opportunity to take a strong leadership position in supporting plans for life in central Pennsylvania that balance cultural, economic, and environmental resources.

The development of a long-term vision for land and space at Bucknell University has been a collaborative process, engaging many different people, including members of the Board of Trustees, faculty, students, staff, neighbors, and business owners. Emerging out of these discussions, this document sets forth a conceptual framework for the future of the Bucknell campus built around agreed-upon planning principles.



Aerial view of campus and community





Bucknell square feet per student as compared to averages of two sample groups

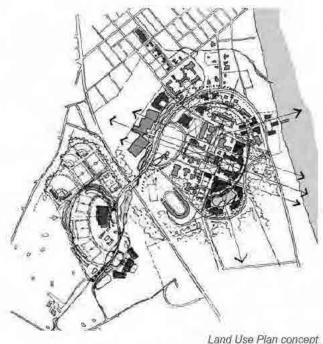
The Elements of the Master Plan: The Land Use Plan and The Campus Plan

What is the Land Use Plan?

The Land Use Plan is a tool designed to guide near- and long-range development of the campus. This Land Use Plan provides a flexible framework that gives Bucknell choices as to how to proceed in a way that is consistent with the vision of the Campus Plan.

Due to the ever-changing face of higher education - in terms of funding, facilities needs, and program development - institutions cannot accurately forecast and plan for all necessary campus improvements over the planning horizon. The framework must allow for decisions that protect sacred aspects of the campus while also guiding development in areas suitable for growth.

Bucknell's Land Use Plan extends Larson's vision for the campus another 75 years, providing a road map for growth and change to the campus environment while preserving and enhancing its fundamental essence. Over time the juxtaposition between the intellectual acropolis and its pastoral setting has become diffused. The Land Use Plan will strengthen Bucknell's commitment to open space and environmental stewardship while creating a framework to support additional usable space for classrooms, laboratories, recreation, socializing, athletics, and more.



The plan pays particular attention to four perimeter zones: the integration of Bucknell West into the rest of campus, farmland to the south, the Susquehanna River, and downtown Lewisburg. As relevant in each zone, the Land Use Plan suggests uses that include open space, recreational areas, parking, and facilities, and establishes general facility types within planning districts to provide predictability and structure for future generations.

Finally, the Land Use Plan captures a defining element for the future in the campus greenway system. The campus greenway will require a commitment from the University and state and local government officials for several generations, and the guidance of clear objectives to realize this major initiative.

Opportunities

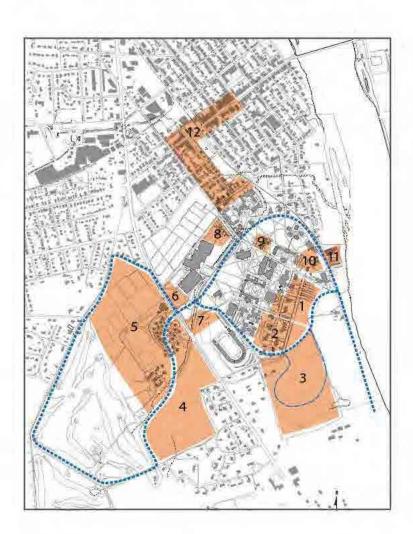
What is the Campus Plan?

Bucknell's Campus Plan provides a 30-year vision for the physical development of the campus required to meet the University's commitment to its academic and social mission as well as its sense of stewardship. It is developed from a planning agenda that grows out of a physical assessment of the campus and a list of needs projected over time. A central component of the Campus Plan is its role in the long-term physical implementation of the University's mission as set forth in The Plan for Bucknell.

The Campus Plan is also meant to provide flexibility through the decades ahead even as it defines implementation options for the next five to ten years, including buildings to be renewed, adaptively reused, and decommissioned, in addition to identifying the opportunities for new facilities. Campus planning districts are the keys to the master plan. They provide a set of recommendations and guidelines for each area of the campus, creating the potential for localized identities within an overarching institutional identity.

Land Use Opportunities

- 1: Interdisciplinary Academic Space and Vertical Residential College
- 2: Interdisciplinary Academic Space and Vertical Residential College
- 3: Student Village and Amenities
- 4: Recreation and Athletic Opportunities
- 5: Recreation and Athletic Opportunities
- 6: Ancillary Services
- 7: Campus Gateway
- 8: Campus Community Bridge
- 9: Academic Opportunity
- 10: Student Housing
- 11: Susquehanna River Access
- 12: Lewisburg Core Community Opportunities



"The move to 24/7 living and learning models also requires different types of living environments."

Changes in Education and Impact on the Campus Plan

The thoughtful and responsive development of the Bucknell campus is essential to the successful delivery of the University's academic mission in a learning environment shaped by cycles of social and pedagogical change.

Space for experiential- and research-based learning

Dynamic teaching methodologies are leading to fundamental changes in learning environments. The traditional classroom with tablet armchairs and 18square feet per seat does not support the type of faculty engagement, student collaboration, modern pedagogies, and interdisciplinary curricula that today's leading colleges and universities demand. Instead, larger classroom spaces are needed that support highly flexible rooms with seamless technology, integration of lab experiences into lecture spaces, and an emphasis on team-based learning.

Transformational living and learning experience with broad range of choices

The move to 24/7 living and learning models also requires different types of living environments. This shift creates an immediate need for a variety of housing choices that include the progression from community-building first-year experiences to fourthyear opportunities for transition to independent living. Other emerging trends are an emphasis on co-curricular activities that require dedicated space and visibility as well as living environments with integral learning spaces (often around societal themes) and a range of affinity-group housing.

Administrative staff and space to support diverse activities

The demand for additional University administrative staff brings with it requirements for space to accommodate them. As a result of a growing desire to maximize the effectiveness of students, faculty, and other staff as they pursue their administrative business, and an increased emphasis on fundraising and national visibility, administrative staff is growing. In addition, a growing number of students who bring complex and sometimes ongoing wellness issues to campus require integrated student support teams.

Role of technology in teaching, research, and communication

Students expect the latest technological tools from the knowledge-driven enterprise of academia to support their diverse ways of learning. The University must bring the world to the campus and the campus to the world with ubiquitous technology in a variety of settings both in and outside of the classroom. In addition, harnessing the power of the web with the most useful tools for teaching requires the training of faculty and the provision of places to experiment with technology before it is brought to the classroom.

"The earliest conversations about sustainability identified a high level of campus interest."

Commitment to Sustainability

As our society is working to lay the groundwork for a sustainable future, Bucknell has set forth its commitment to play a critical role as a steward of the environment and educator of tomorrow's leaders and consumers.

Environmental sustainability

The University has demonstrated its commitment to sustainability by signing on to the American College and University Presidents Climate Commitment, creating interdisciplinary programs of learning and research such as Globalization Studies, and supporting student, faculty, and staff initiatives through the Environmental Center. Policy and operational decisions will be crucial as Bucknell moves towards a sustainable campus, including the environmentally sustainable development and management of facilities, use of local purchasing contracts, and development or expansion of the cogeneration plant and alternative energy sources.



The Academic Quad from Marts Hall

What is a Greenway System?

- Corridors and hubs
- Corridors are protected open spaces, managed for conservation and/or recreation
- ► Hubs are destinations/origins that are integral to a greenway network
- Bucknell University is considered an important hub
- Greenways are crucial to maintain connectivity between conservation lands, communities, parks

Bucknell's genuine commitment

Sustainability was a common theme throughout the "listening phase" of the planning process from various members of the campus community. The earliest conversations about sustainability identified a high level of campus interest, fueled by the energy of community members and informed by external social, economic, and environmental trends. In almost every exchange, the team heard support for initiatives that would positively affect the immediate Bucknell community as well as the greater Susquehanna regional community. The President's initial vision to position Bucknell as a leader in environmental stewardship and sustainability informed the Campus Plan from the outset. As the process continued, many community members voiced a desire to make the campus pedestrian friendly and re-connect with the river. From campus to the extended community, Bucknell's commitment to sustainability proved genuine.



Aerial view of campus, 2002

The Making of Bucknell's Master Plan

"Bucknell's setting - the central Pennsylvania landscape, the Susquehanna River and the Norman Rockwell-like town of Lewisburg – creates a perfect environment for a transformational education experience."

- Brian C. Mitchell, President

The Making of Bucknell's Master Plan

Bucknell has experienced steady growth and change over the last several decades. Since 1978, student enrollment has increased by 18%, average class sizes have been reduced so that the studentfaculty ratio is now 11:1, and faculty teaching loads are being strategically adjusted from six courses per academic year to five, with the goal of four as a possible longer-term objective.

The master plan recognizes that the goal of any campus is to be as efficient as possible in the use of campus space. Bucknell, however, has become one of the tightest private university campuses in terms of square footage per student that has been benchmarked. While Bucknell has responded to some of these changes through additional facilities, it has been outpaced by peer institutions, putting it at a competitive disadvantage.

Though construction of new facilities can appear to be the only solution to addressing space shortages, that step should be considered only after careful evaluation of the potential of existing space to meet future needs. The value of space for the institution's mission depends practically as much on the policies that direct how space is used as on the space itself.

A classroom in Vaughan Literature Building

Often policy adjustments can solve problems that otherwise might seem addressable only through new construction - and thus can save millions of dollars.

Teaching and learning styles are focused increasingly on shared student-faculty research, collaboration, and interdisciplinary scholarship. Many students have more than one major and minor. Student study-abroad programs and faculty field research will continue to stretch the campus globally.

Campus life is also changing dramatically. A commitment to a diverse community and educational experience leads to a requirement for a wide range of student life offerings in the form of housing, dining, recreational facilities, community spaces, and connections to the surrounding community. The Plan for Bucknell commits to "academic programs of the highest standard of quality" and an "integrated living, learning experience." Facilities will help fulfill this objective by attracting and supporting the goals of bright and diverse students and high-caliber faculty.

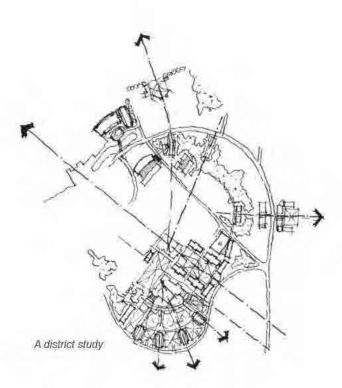


Lewisburg streetscape

The Process

The master planning process is designed to be comprehensive, with an underlying integrity to ensure a product that embodies and advances Bucknell's institutional aspirations. With the leadership of the University's facilities and planning group, Shepley Bulfinch created a structure with six distinct steps.

A key strategy in this process is to begin planning and designing only after the University's needs and goals have been identified and validated. This strategy ensures that the needs and goals of Bucknell are authentically represented in the planning process that follows.





Campus Master Plan community forum

Process: Six Distinct Steps

- Engage the Community Listen, observe, interview, document
- Set Goals and Planning Principles Vision (Bucknell and Beyond), inspire, dialog with The Plan for Bucknell
- Establish Land Use Plan Framework for the Campus Plan
- Planning Agenda Synthesize goals, needs, aspirations
- Planning Considerations Test-fitting the planning agenda
- Implementation Considerations Space use, land use framework, master plan, implementation

Engage the Community

The master planning process has been highly inclusive. In addition to meetings with the President and his senior staff and the Campus Master Plan Advisory Group, Shepley Bulfinch met regularly with the Board of Trustees and the Buildings and Grounds subcommittee.

Campus and community input was solicited through interviews and open forums. Shepley Bulfinch met with senior academic administrators, representatives of academic units, administrative units, and student government, as well as community agencies and planning groups. In addition to the interviews, several open forums for faculty, staff, and students were held.

Set Goals and Planning Principles

The development of planning principles is fundamental to the complex process of campus planning. Principle-based planning allows for an objective evaluation of proposals that emerge from the campus planning process. Planning principles become even more valuable after a plan is complete and new demands on the campus emerge. Shepley Bulfinch developed these planning principles based on consultation with and review by a wide cross-section of the campus community.

Planning Principles

- Be a pedestrian campus
- Use existing space purposefully and thoughtfully
- Reflect the Larson Plan by tying new construction into a sense of this place
- Be open to its natural neighbors and remove obstacles to seamless integration
- Commit to environmental planning policies
- Integrate Bucknell West into the core mission of the University

- Maintain or enhance the quality of academic facilities, student housing, extracurricular environments, and support areas
- Integrate the planned and natural environments more fully with one another and The Plan for Bucknell
- Encourage development in the corridor between the campus and Lewisburg's Market Street and along Market Street itself
- Seek financial partners and use the entire scope of University resources to accomplish these goals

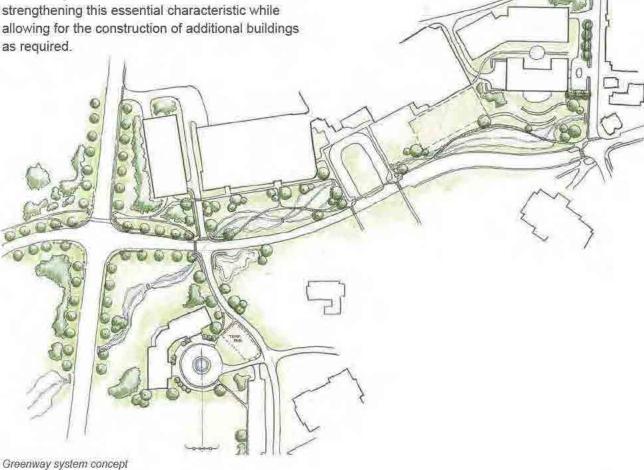
Establish Land Use Plan - Framework for the Campus Plan

Given the dynamic and ever-changing needs of higher education, it is not possible to predict accurately all improvements that will or should be made to the campus. The Land Use Plan is meant to establish a framework for making decisions that uphold the planning principles and the strategic mission.

Interviews and conversations with members of the campus and local community revealed that people most often feel that a sense of openness is central to Bucknell's identity. This fact informed the development of the Land Use Plan's role in strengthening this essential characteristic while allowing for the construction of additional buildings



Bird's-eye view of campus



Set the Planning Agenda

The Planning Agenda is a comprehensive list of needs to be addressed in the master plan. The Planning Agenda was reviewed with the President and senior staff to ensure that these needs match the University's strategic goals and priorities.

The planning agenda defines more than 100 needs over a 30-year period. The goal of the Campus Plan is to provide a path to achieve this agenda in existing and new facilities over time. The planning agenda themes are listed below.

Planning Agenda Themes: 30-Year Build-Out Period

Academic

Interdisciplinary Centers Bertrand Library addition Residential College Replacement facilities (for Animal Research, Observatory, ROTC) Academic Student Services Center New Arts Complex Academic office, teaching & research space (Management, Engineering, Natural Sciences, Social Sciences, Humanities,

Administrative

Mathematics)

Welcome / Admissions / Alumni Center Senior Administration offices Administrative office space Addition & renovation to existing buildings

Renovation of existing buildings

Campus Fabric

Improvements to existing open space Additional parking Road reconfigurations Rt. 15 campus entrance reconfiguration Greenway system, river walk, rails to trails Storm-water management system Bookstore / retail Gallery / Performance

Campus Support

Inn & Business Center Event & media production studio IT facility upgrade Facilities, shops, warehouse & auxiliary services

Renovation of existing student housing

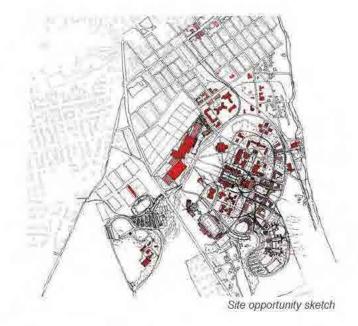
Student Life

Additional student housing

Dining University Center Interfaith Center Wellness Center Cowan Conference Center Renovation of existing buildings Athletic Center Baseball & Softball fields & support facilities Additional recreational & practice fields Stadium addition & renovation **Tennis Courts** Golf Center

The Plans and Guidelines

The goal of the Campus Plan is to identify options for the placement of these facilities within the land use framework over the next 30 years. This process will give Bucknell flexibility and choices in implementing the plan, a roadmap to the physical form of the campus, and multiple routes to these ends.





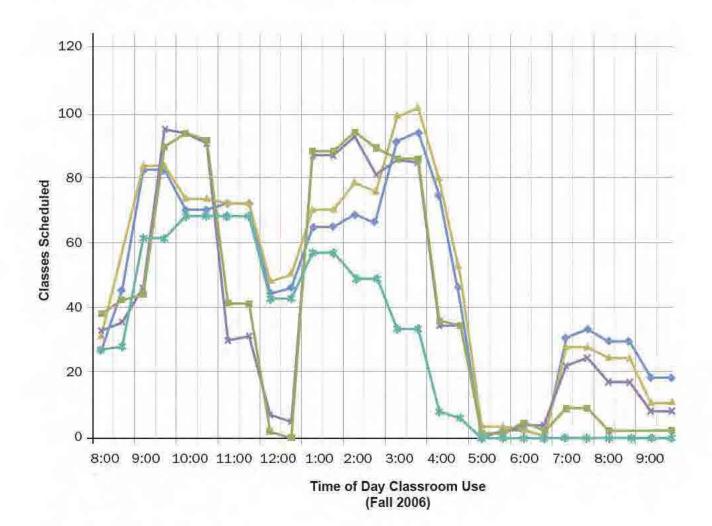
New Academic Quad

Fundamental to the planning process is to consider first the highest and best use of existing space, and only then to look at the construction of additional space. It must be stressed that, as the master plan develops, the University should develop new space-use policies with the goal of increasing the use of, and interdisciplinary collaboration within, existing space. This imperative is especially true for classroom scheduling, which the research shows is currently inefficient. This research analyzed campus space use, class-hour blocks, and related policies, and promises to yield a more efficient use of existing teaching space than is practiced today.

This graphic shows the number of classes in session over the course of the days of the week, Classes do not take advantage of the 8:00 or 8:30 AM timeblock, and while classes should not be scheduled on

Monday Tuesday. Wednesday --- Thursday Friday

Tuesdays and Thursdays from 12 Noon to 1 PM. we see a significant drop off on those days starting at 11:00 AM. Monday and Wednesday mornings and early afternoons have more classrooms unused than on Tuesdays and Thursdays, Many fewer courses are taught on Fridays; this is particularly true on Friday afternoons.



Over the past 30 years, Bucknell has added nearly one million square feet to the campus inventory, including 250,000 square feet in the natural sciences alone. During this period, student enrollment has been managed within a fairly narrow range, as is the objective for the coming three decades. In this context, many ask what is driving the need for additional space. There are three causes: changing learning styles, which are driving pedagogical changes that require additional space; the research-rich intellectual environment that increasingly characterizes Bucknell and its competitors; and dramatically elevated expectations for the quality of campus life. Together, these drivers are leading Bucknell and its peers to plan for a dynamic future.

Land Use Plan

The Land Use Plan translates Bucknell's strategic goals into a physical reality. The greatest value of the Land Use Plan, as illustrated in the following diagrams, is its long-range vision, array of options, and flexibility. The plan, though bold in its vision, is sensitive to the history and beauty of the campus. The campus, town, river, and landscapes integrate seamlessly, illustrating the University's historic and ongoing commitment to its built and natural surroundings. As illustrated in the greenway concept, the Land Use Plan reconnects the campus to its region by a system of greenways and sustainable water features, once again demonstrating the University's commitment to an environmentally sustainable future. The plan celebrates the presence of the Susquehanna River, Miller Run and Bull Run Streams, the Oak Grove, meadows, and farmland.



Developing planning options



Campus neighborhood, Sixth Street

Many perceive Bucknell to be composed of three separate campuses: the lower campus, the West campus, and the campus core. This division has become an impediment to the success of Bucknell's strategic mission. The Land Use Plan will strategically bridge these divides by leveraging building, program, and open-space locations in a way that promotes a diverse cross-campus social and academic opportunity while at the same time overcoming challenges to pedestrian accessibility that the existing topography presents.

The Land Use Plan envisions a campus that contributes to the living and learning process of students and provides an ideal physical setting for teaching and learning that are natural and constant. It is anticipated that the current generation of University and community leaders will embrace the land use vision and implement phases of the land use infrastructure with each campus facilities initiative.



Study, New Academic Quad

Major Focus Areas of Land Use Plan

- Property Ownership and Acquisition
- Zoning
- ▶ Flood Water Management
- Land Use Zones
- Greenways
- Roadways
- Campus Edges Connections and Buffers

- Zones of Opportunity for Future Development
- Zones of Legacy for Preservation
- Zones of Stewardship Land Banking
- Campus Entranceways and Gateways
- Integration of Outside Planning Initiatives (Susquehanna Greenway, Lewisburg Area Recreation Authority, Downtown Partnership, Rails to Trails)

These focus areas create the setting that makes Bucknell a unique and special place. Students and faculty seek a learning environment that offers an authentic daily life, connected both to a larger community and to nature. Bucknell has a powerful opportunity to distinguish itself by its commitment to downtown Lewisburg and surrounding neighborhoods, by its understanding and leveraging of its life on the river, and by its leadership in the sustainable development of farmland.

The Land Use Plan seeks to build on the strengths of the Larson plan, the juxtaposition of formal campus zones to informal zones, the design of circulation systems in concert with the natural topography, and the intimate scale of the campus's core buildings. Larson also envisioned a strong

connection in the long term to the land holdings west of Route 15 (Bucknell West) as well as to the Susquehanna River.

The Land Use Plan extends the vehicular and pedestrian circulation systems created in the 1932 plan and suggests the reorganization of areas that have departed from the plan. The goal is to strengthen the visual character of campus and provide a framework that specifies zones of opportunity for continued growth and change. The Land Use Plan leverages the land assets of the 49acre farmland and Bucknell West. It must be noted, though, that while these important land holdings provide opportunities for near-term development, equally important is the opportunity the Land Use Plan offers to preserve land for future generations.



South Village Farm Plan along Susquehanna River

The Campus and District Plans

The planning team has developed a series of Campus Plan components that the University can assess for best fulfillment of the planning agenda. Major themes include a new academic quadrangle, multi-class-year ("vertical") residential colleges, a New Arts Complex, additional on-campus and off-campus housing, and the beautification of the campus landscape, among others.

The campus plan divides the campus into nine districts. Each district links to the Land Use Plan as the landscape canvas for Bucknell's cohesive environment. While they each have distinct land uses and program objectives, the districts follow common planning and design guidelines. The campus plan's major focus areas are listed on the following page.

The campus plan recommendations propose to meet future campus needs while preserving and enhancing the essence of the campus. Members

of the University community emphasized the importance of retaining and improving one's sense of the generous open space of the region. Bucknell is unique among most of its peers in that it has available a major site - the area directly adjacent to its library – for development that will not impact important green spaces.

A vital organizing principle for the original campus is the juxtaposition between the formally organized hilltop and the surrounding informal landscape. The campus plan seeks to strengthen the identity of these systems, while enhancing the visual and physical connections between them.

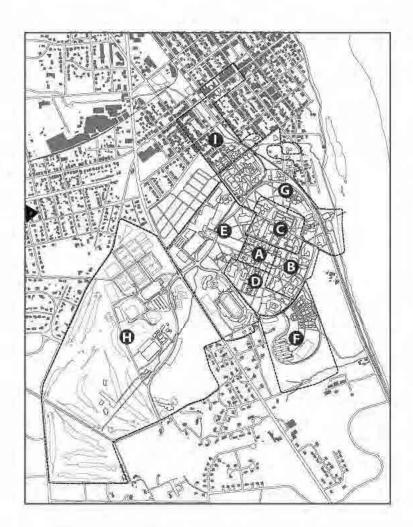
Each campus district presents an opportunity for transformation and stewardship. For example, the new academic quad provides a framework for an orthogonally composed core campus open space connected to more fluid space to the south that flows into the farmland and river beyond.



Campus Gateway and Welcome Center

Planning Districts

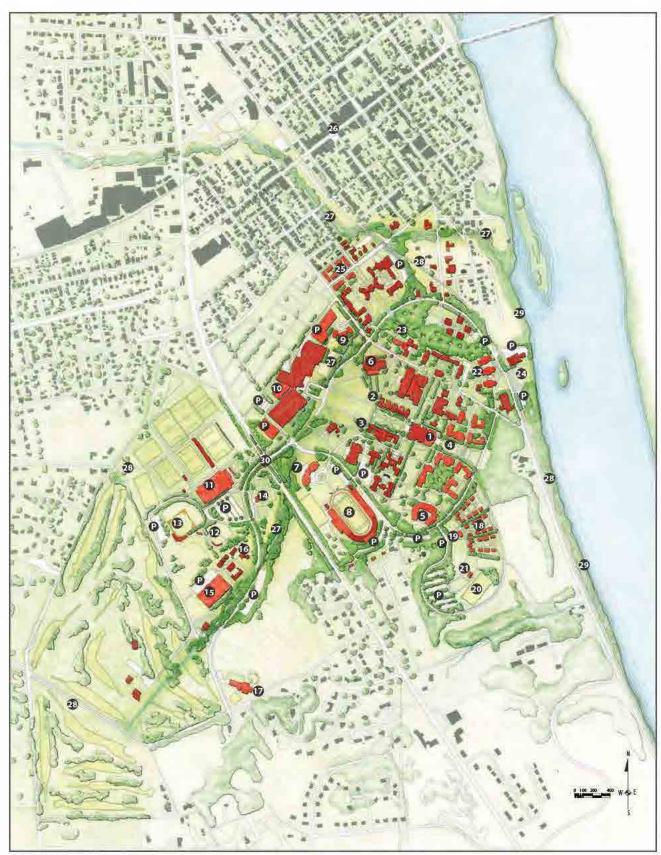
- A: Academic Quadrangle
- B: New Academic Quadrangle
- C: Science, Engineering and Old Main Quadrangle
- D: Arts District
- E: The Front Lawn
- F: South Village Farm
- G: Lower Campus Edge
- H: West Campus
- 1: Lewisburg Core Community



Major Focus Areas of Campus Plan

- Open Space Composition Woodlands, fields, lawns, quadrangles, courts and gardens
- Greenway Composition Miller Run, Bull Run, Susquehanna riverfront connection
- Facility Siting In concert with open space

- Parking Strategies Surface and structured
- Utility Infrastructure
- Vehicular Circulation Systems. Roadways, service, emergency vehicle access, Americans with Disabilities Act (ADA)
- Pedestrian Circulation Systems Pathways, street crossings



Campus Plan, 2008

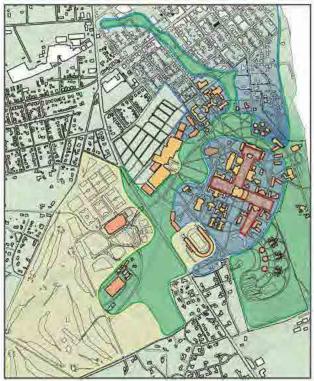
Tennis Courts

Bertrand Library Addition & Renovation	♠ Shops, Warehouse, Facilities
2 Academic Quad Renovation & Additions	® ROTC
3 Academic Quad Renovation & Additions	⑦ Golf Center
4 New Academic Quad	South Village Farm Housing
Academic Space Interdisciplinary Centers	19 Community Center / Café
Student Housing Dining Option	Recreation Fields
Underground Parking	3 Field Support
New Arts Complex	2 Student Apartments
6 University Center	Academic Services
Welcome / Admissions / Alumni Center	2 River Recreation Center / Multi-use Space
Stadium Renovation & Additions	Student Housing Village
19 University Inn & Business Center	26 Lewisburg Core Community Opportunities
• Wellness Center	ॐ Greenway System
1 Athletics Center	Bike Trail / Recreation Trails / Rails to Trails
② Softball Field	River Walk
13 Baseball Field	Campus Gateway

Parking

Landscape Guidelines

The plan recommends the development of a coherent and unified system of landscape spaces comprising four major zone types. These zones, as seen in the figure below, are distinguished from one another but threaded together by a harmonious system of circulation. Recapturing, clarifying, and creatively expressing these distinct landscape types and emphasizing their contrasts are key elements of the new plan. The four major landscape zone types identified in the analysis are listed.





Major Landscape Zone Types

- Greenways and Pastoral Open Spaces
- Hilltop Academic Core
- Intensively Developed Campus
- Athletics, Fields and Courts

Of particular note is the greenway concept, which offers great potential as an expression of the University's dedication to the importance of open space, stewardship of the natural environment, and sustainability.

Stormwater Guidelines

Federal, state, and local authorities provide a regulatory framework in which development can occur so as to minimize the potential impacts of storm runoff, stream flow, and the groundwater table. Beyond those regulations, the University has a responsibility to manage stormwater to the extent practical to maintain and potentially improve the existing environment, prevent damage to structures. and protect residents' health and welfare.

The land use plan proposes improvements to the main campus entrance at Route 15 that affect the Miller Run stream crossing. Improvements to Miller Run will help the University better celebrate this important natural resource. Stormwater management should be a key component of site design for all future development. Stormwater systems offer Bucknell opportunities to develop living laboratories and transform the campus into a classroom by using elements of the water management system as environmental teaching tools.

Implementation Considerations

The goal has been to create a campus plan for the next 30 years set within a Land Use Plan to last 75 years. A related goal has been to create a plan that would be flexible enough to accommodate the fact that projects and development can be initiated for a variety of reasons. Factors that lead to the implementation of any particular component of the planning agenda can range from anticipated building projects that support the academic mission to unanticipated donor gifts and opportunities of great value to the institution.

The flexibility of this plan has been tested through scenario-planning at a campus district level. This proofing of the flexible framework typically starts by forecasting a component of the planning agenda as an emerging priority and articulating the means to that end. The framework reveals inherent characteristics, favorable or otherwise, and the ideas in the master plan are adjusted accordingly.

All proposals must support The Plan for Bucknell. The University has committed to a compelling vision: "To provide students with the premier undergraduate experience in American higher education." This vision must permeate all aspects of the campus for a transformational experience. This vision also depends on the vital connection to the environs, recognizing that the town, county, and region play important roles in the rich experience of the campus community and as such will be an important focus for this planning effort.

The recommendations and next steps in the following section demonstrate how emerging priorities manifest themselves physically in the districts defined in Bucknell's Campus Plan.

Process: Typical Filters for Analysis

- Are there enabling projects that must occur? If there are enabling projects, would it be beneficial to de-couple components?
- How does this priority affect other priorities?
- ➤ Are there any limiting regulatory requirements or lead times?
- What are the durations of activities. and do they run parallel or sequential?
- ▶ How does alternative financing effect delivery?
- If only a portion of the district is implemented, will the end result look finished enough?
- What infrastructure is reasonable to complete now versus at a later date?

Recommendations and Next Steps

In November 2007, the Board of Trustees endorsed the planning principles and the land use framework. The adoption of the master plan includes a 30year commitment to a planning agenda as well as open-space and facility plans. Many of the needs articulated in this plan are near term (5 to 10 years) while others may be long term (10 to 30 years), in the context of the 75-year Land Use Plan.

To enhance Bucknell's competitive edge in attracting students and faculty who support its strategic plan, we recommend consideration of the following near-term, five- to ten-year construction agenda, which includes the components embodied in this master plan.

Master Plan Components

- Academic
- Student Life
- Administrative
- Support
- ▶ Campus Fabric



New Academic Quad - Center of Centers

Academic

Begin planning the development of the new academic quad and arts facilities.

This initiative provides the core academic space to foster interdisciplinary teaching and learning. Anchored by an expanded Bertrand Library, the new academic quad would create additional faculty/student lab space and faculty office space to support the new teaching load and commitment to research. This development provides swing space for renovated, adaptive reuse of existing facilities. The proposal allows the concept of a "center of centers" to become a distinctive environment for Bucknell. At the same time, the parking proposal reflects the

University's commitment to sustainability by immediately reducing surface parking across campus and creating the greenway.

Consolidation of the University's arts programs into a defined arts district, including new and expanded facilities housing the arts, will position the University as a regional cultural leader and establish a cohesive presence for its arts community, which is currently scattered across the campus core and West campus. To complement the new arts district, the University will also seek to enhance and define a public arts district anchored by the Campus Theater in downtown Lewisburg and by additional commitments to the arts.



View of New Academic Quad from Library Addition

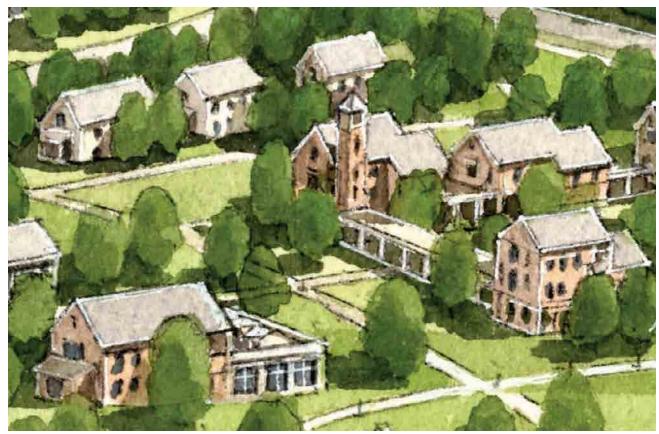
Student Life

Develop the strategic plan for housing, the South Village Farm, and the West Fields.

The strategic plan for student housing will create an integrated and comprehensive housing demand report that details the mix of housing options and related amenities.

The campus needs new high-quality housing to replace the outdated Mods and single-family houses along St. George Street. The goal is to create flexible housing models that can

accommodate general housing, Greek housing, and affinity housing. The South Village Farm proposal envisions a living-learning environment in safe and efficient housing proximate to the campus core, yet transitional in unit type. The transformation of the West campus into a comprehensive athletic complex could continue with the construction of new softball, baseball, and golf facilities. The construction of new housing options fosters the development of the new academic quad, the long-awaited demolition of the Mods, and the final steps in completing additional athletic facilities on the West campus.



South Village Farm Student Housing

Administrative

Develop a new Welcome Center, a new University Inn and Business Center, and a downtown Administrative Office Building.

Two primary campus entrances will feature the following welcoming facilities:

- On Route 15, a new Welcome Center serving prospective students, parents, alumni, visitors to campus, current students and faculty, and the Lewisburg area community
- At the intersection of 7th Street and Moore Avenue, a new University Inn and Business Center, connecting guests to the campus and to downtown Lewisburg

These are signature opportunities for Bucknell at newly defined gateways along the proposed greenway, providing not only an attractive physical entrance to the campus, but also a strong welcome to prospective students and visitors.

Locating an Administration Office Building on a downtown site reinforces the University's commitment to the borough of Lewisburg, strengthening its physical ties and providing an economic stimulus. This initiative will also have a ripple effect on campus, freeing up muchneeded administrative space on campus and enhancing operations by consolidating several administrative groups.



New Welcome Center

➤ Support Develop a University Bookstore in downtown Lewisburg.

The bookstore, based on an academic superstore model, will draw students, faculty, staff, and visitors to downtown Lewisburg. This initiative will provide additional economic stimulus to the community while introducing prospective students to Market Street as they form initial impressions of the campus and town.

Campus Fabric Enhance the campus landscape through the building projects.

Several initiatives outlined in earlier recommendations may create opportunities to develop phases of the greenway system, river walk system, and rails to trails; greatly reduce surface parking; and significantly enhance green space.

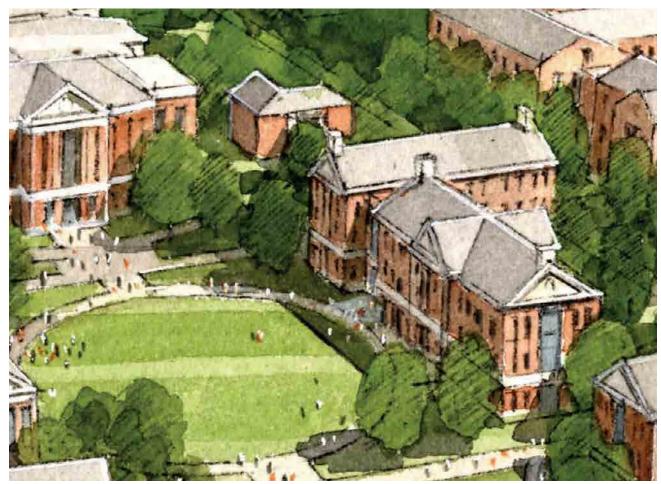


New University Inn and Business Center

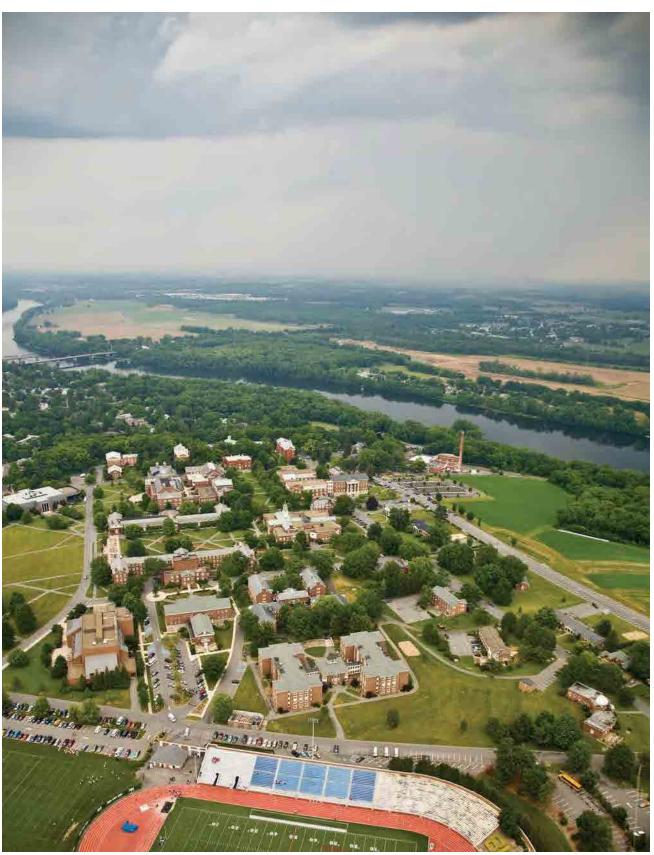
Conclusion

This master plan is offered to the Bucknell University community with confidence and considerable pride. In doing so, we at Shepley Bulfinch Richardson & Abbott gratefully acknowledge the countless hours that so many dedicated Bucknellians have put into its design and development over the past 24 months.

Bucknell offers one of the most striking and beautiful campuses in North America. The linkage of the master plan to the University's strategic plan assures that the campus will remain relevant, vital, and dynamic whatever opportunities or challenges await it in the 21st century. With the implementation of the master plan, Bucknell can take a major step toward its goal of providing the finest undergraduate experience available in higher education.



New Academic Quad



Looking East to the Susquehanna River

Campus Analysis & Needs Assessment

"Bucknell is the tightest campus in terms of space that I have ever seen the campus has been making a little space go a long way for a long time - but now that lack of space means the campus has no flexibility."

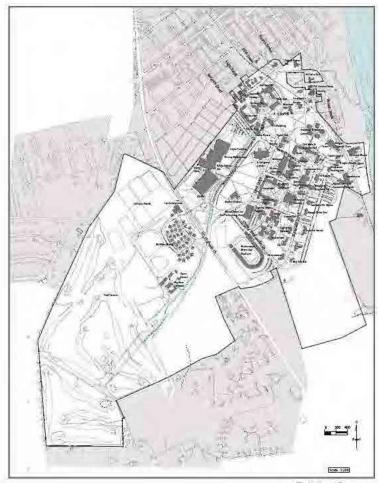
> - Annie Newman, Shepley Bulfinch Report to the Board of Trustees, April 26, 2007

Campus Analysis & Needs Assessment

Physical Campus Assessment

The assessment of Bucknell's natural and built environment and that of its immediate surroundings provided a foundation of understanding for the master plan to spring from. The team identified strengths and weaknesses of the campus in an effort to capture the spirit that defines Bucknell as a place. Establishing this baseline analysis prior to developing planning proposals ensured that the resulting planning solutions have integrity. The site assessment identified existing resources, elements of architectural and landscape character, and constraints within the physical campus and its environs.

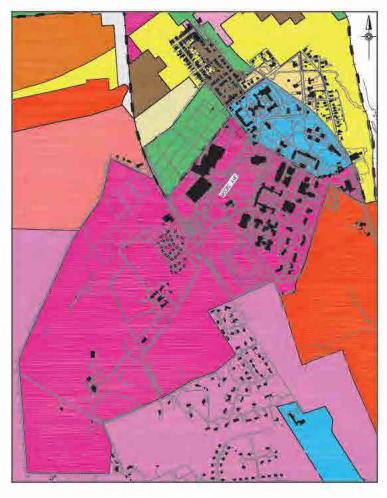
The assessment process began with the collection of data on the campus's physical space, building use, and related statistics. Physical reconnaissance of the campus and environs included site visits and the review of recorded field observations through maps, field notes, diagrams, and photographs. In addition, the team analyzed past campus and regional studies and previously proposed projects. These included previous campus master planning documents, select University reports, neighborhood studies, regional environmental studies, and planning documents from Lewisburg Borough and East Buffalo Township, the two jurisdictions bordering the campus. Technical studies provided useful information regarding on-site stormwater management, topography (specifically the flood plain), traffic, zoning, and water and sewer utilities.

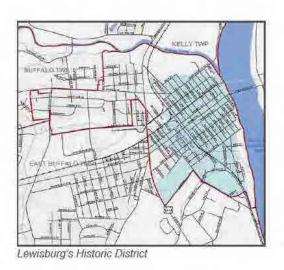


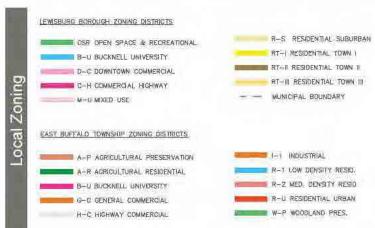
Existing Campus

Campus and Local Zoning

The Local Zoning map (right) presents current zoning conditions and identifies zoning related constraints, opportunities and considerations for the campus proper and the University Village neighborhood (generally bounded by Market Street, South Fifth Street, St. George Street, and South Seventh Street). Both the Borough of Lewisburg and East Buffalo Township are revising portions of their zoning ordinances. It is not known when those changes will take effect, though it is currently understood that the revisions will only include minor changes to better define and express the ordinances' intent. Once those revisions are enacted it may be necessary to review the ordinances for any possible impact on the campus master plan.





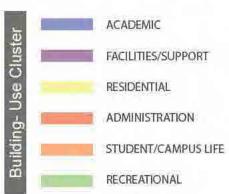


Building and Land Use

The uses of buildings and their proximity to one another are of principal importance when planning campus space. Land-use zones, in concert with the strategic and academic mission goals, play decisive roles in locating facilities. The team examined these factors at Bucknell. including how adjacencies of compatible building uses could improve convenience for students and faculty, increase efficiency of the uses within a building, and encourage vitality on campus. In some instances a deliberate mix of uses could encourage cross-disciplinary activities.

The team identified and mapped existing building uses on the Bucknell campus to generate a comprehensive Building-use Cluster diagram (left). The assessment showed that not only are Bertrand Library and the academic quadrangle strategically located in the campus core, but that academic buildings dominate the core. The intellectual heart of the campus is thus substantially segregated from student and campus life activities. Student life facilities, which are sited on the front lawn along with the stadium and the athletic center, create the campus' public zone. Student housing, distributed around the campus periphery, can be grouped into four distinct clusters, which will be explained later. The campus facilities and support cluster on the east of the campus has the closest physical link to the Susquehanna River.





The most significant observation of this assessment was of a dichotomy between uphill and downhill campus. Observation and interviews with the campus community make clear that this dichotomy - driven by both topography and program distribution - tends to fragment Bucknell's sense of community and campus life.

Campus Fabric and Institutional Identity

A cohesive physical campus fabric establishes the identity of the University. The fabric of Bucknell's campus today is defined by buildings ranging in age from the mid-19th to early 21st century. The aspects of a building that contribute to a coherent campus fabric are its architectural style, form, scale, material, and color. Buildings that contribute significantly to cohesion of the campus are 'primary contributors' while others that digress from the architectural palette are 'transitional.'

The core campus is cohesive and rich in its architectural vocabulary. However, the majority of the transitional buildings, which are located along the front entrances of the campus, influence a visitor's first impression of the campus. New campus development should follow an architectural palette that complements existing primary contributors and thus enhance the overall richness and cohesion of the campus (right).



Contributors to Bucknell's image

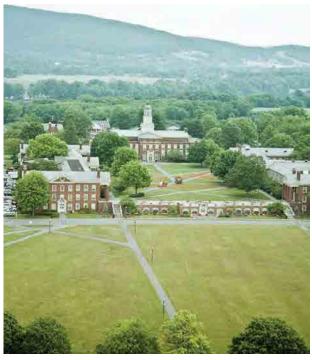
Open Space

Open space plays a vital role in knitting together the campus, as well as anchoring Bucknell in its pastoral setting. The campus contains significant and successful open spaces that contribute to the University's memorable identity. The Larson plan juxtaposed an informal landscape with a formal arrangement of buildings on the top of the hill. Buildings were placed to create open spaces of varying sizes between them. The Academic Quad, open on one end, oriented to views of the mountains, is the most significant formal space on campus. The recently created science / engineering quad on the site of a former parking lot is another successful space created by the careful placement of the surrounding buildings. This quad is closed by Carnegie and internally focused. Smaller yards and courts such as behind Vaughan Literature, the Roberts / Trax / Kress quad, and between the science buildings provide intimate outdoor rooms. Downhill from the Academic Quad are additional significant open spaces of very different character.

The west campus, the Sacred Lawn and the Miller Run corridor create an initial impression of a distinct campus landscape connected to the landscape of the region. This expansive open space is a setting for buildings placed as objects in it (the Chapel, the Langone Center, and the Ken Langone Athletic Recreation Center) and harkens to the region's rolling farmland. The Oak Grove, on the steep hillside between Roberts Hall and the lower campus, provides yet another type of open space that refers back to central Pennsylvania's pre-agricultural landscape.

Today, Route 15 separates central campus from west campus. The development of a campus greenway will unify the westernmost reaches with lower campus open spaces, Lewisburg, and the Susquehanna River to its east. This concept will enhance the first impression of Bucknell by integrating the campus and regional open space systems.

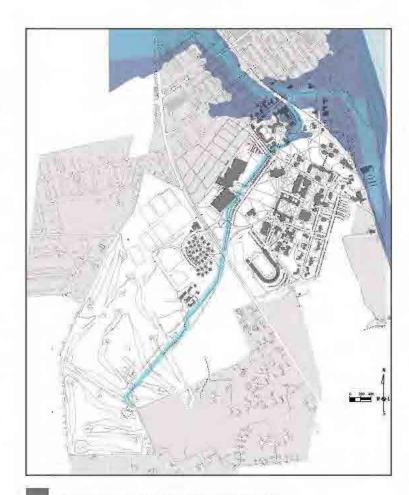
The greenway concept emerges from natural features that define Bucknell: the Susquehanna River, Bull Run, and Miller Run. Currently seen as constraints, these waterways could become distinctive scenic elements, better water management systems and important educational opportunities.



Open space on Bucknell's campus

Campus and Neighborhood Floodway and Floodplain

The Existing Floodway map (right) shows floodplain and floodway-related constraints for Bucknell and the University Village neighborhood, typically focused on the Bull Run. The team analyzed related documents to fully understand the impact of FEMA floodplain regulations and potential revisions. Improvements and developments in the areas of the University Village and portions of the campus in the floodplain (shaded in darker blue) are possible, but with strict limitations. The light-blue shaded area delineates the designated floodway of Bull Run and the assumed floodway of Miller Run based on the Pennsylvania Department of Environmental Protection (PADEP) guidance of 50 feet from the top of the streambank on both sides. Building development is further restricted within the floodway areas and requires extensive study and permitting. Furthermore, local ordinance prohibits any construction activities that would cause any increase in flood heights.



Existing Floodway

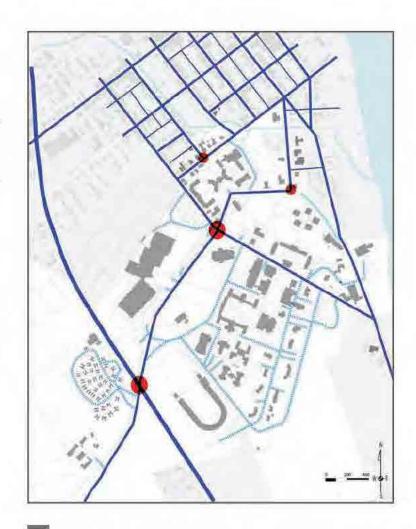
100-YEAR FLOOD BOUNDARY

RIVER FLOODWAYS

Vehicular Circulation and Campus Entrances

Route 15 and Seventh Street are arterial roads connecting neighborhood and regional interstate traffic to the Bucknell campus. Route 15, Moore Avenue, Walker / Loomis Streets, and Seventh Street are the primary vehicular routes and public right-of-ways to (and through) the campus. The campus has one prominent public main campus entrance located on Route 15 and a community entrance located at the intersection of Seventh Street and Moore Avenue. Although Route 15 is an important vehicular connection to the region, it also divides the campus into two pedestrian zones. The high traffic volume of the four-lane road makes crossing from the main campus to the west campus challenging and dangerous. Further, Seventh Street disrupts the pedestrian integrity of the campus by bringing public traffic through its core. The Vehicular Circulation diagram (right) illustrates the vehicular circulation system on the campus, including the vehicular ways on campus that are owned by the University.

The excess of vehicular ways through the campus combined with the large number of parking lots within its core negatively impact the visual integrity of the campus. They also encourage people to drive some distances within the campus that are easily walkable. Strategically eliminating vehicular traffic on some through roads while preserving emergency, service and handicap access will encourage pedestrian movement and knit together the campus.

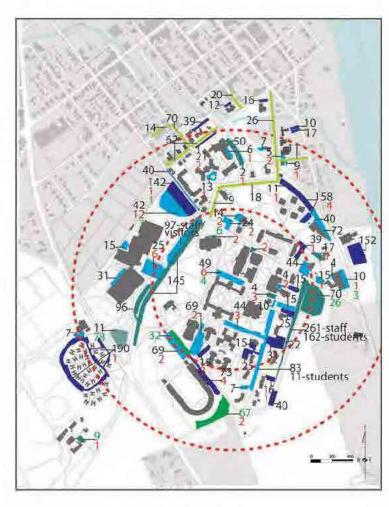


Vehicular Circulation

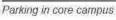
PUBLIC RIGHT-OF-WAY NAMES ASSESSED. UNIVERSITY STREET VEHICULAR ENTRANCE

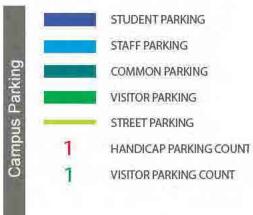
Campus Parking

As seen in the Campus Parking diagram (right), bituminous concrete parking lots and on-street parking, with a total capacity of approximately 3,000 spaces, are found throughout the campus, including the campus core between the five- and ten-minute rings. In addition to being an eyesore, this scattered parking pattern breaks the cohesiveness of the campus and is a major impediment to a pedestrian-friendly campus. A large amount of parking is located within a five-minute walking distance of Bertrand Library. A focus of the land use plan will be the consolidation of parking lots and their relocation to the periphery where practicable, while meeting ADA requirements. Central parking provided within the 5-minute ring should be below grade, greening the center of campus.



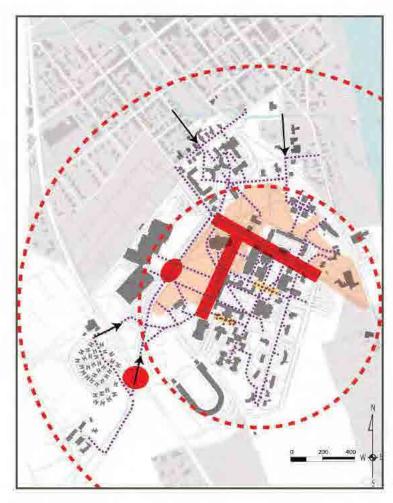


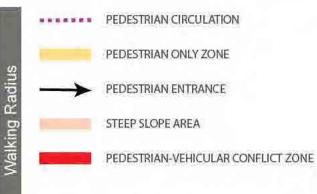




Pedestrian Circulation

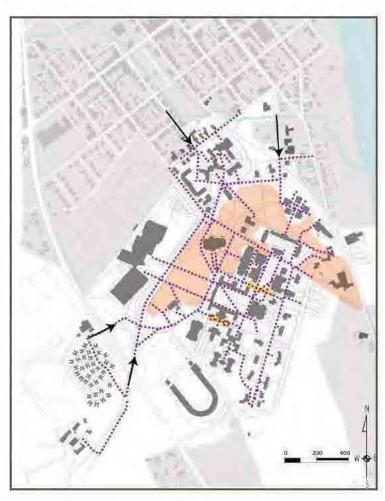
Pedestrian access contributes significantly to the vitality of a campus. Though the Bucknell campus spreads across nearly 450 acres, the core campus is less than five-minutes walk from Bertrand Library and nearly all campus buildings are within a ten-minute walk, as seen in the diagram to the right. The beauty of the campus, its landscape, and surrounding views make walking a pleasure. However, the steep sloping front lawn and Oak Grove hill present a challenge for pedestrians and impede accessibility for those with ambulatory challenges. The location of significant housing across the daunting barrier posed by Route 15 also discourages east-west pedestrian connections.

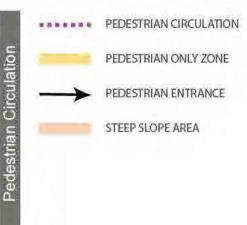




The diagram to the right maps the network of pedestrian ways on campus. The pedestrian circulation system includes pedestrian-only paths, sidewalks along vehicular roads and through parking lots, vehicular roads without sidewalks, and informal paths on lawns, each resulting in varying degrees of pedestrian safety and convenience. The analysis reveals the extent to which pedestrian travel paths are in conflict with vehicular traffic, especially along the primary vehicular roads. The pedestrian underpass at Route 15 and Smoketown Road is not very effective: since it is not on the direct or most desirable pedestrian route, students tend to cross at grade. Mitigating the pedestrian crossing issue with appropriate traffic calming measures is critical to integrate the west campus with the main campus.

To encourage pedestrian movement on campus, the University needs to undergo a cultural change where walking is encouraged by being made convenient and safe, and where vehicular use is discouraged through the core campus, with parking lots relocated to the campus edges. Parking policy will be critical to the success of this effort.

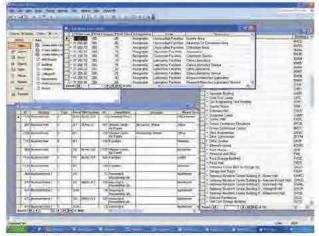




Space Analysis

Summary

The analysis of Bucknell's space against common planning guidelines shows that Bucknell is significantly under spaced in critical areas such as classrooms, offices, campus support, and residential space. As compared to its peers and the schools with which Bucknell will be competing for students and faculty, Bucknell has long done much with typically fewer square feet. However, economy of space eventually leads to inflexibility, as is the case at Bucknell. With virtually no open offices or additional research space, and faculty offices that are typically much smaller than current standards, the ability to recruit and support the proposed faculty increase will be a real challenge. Offices for administrative groups are sub-par in terms of size and quality, and will not allow expansion of many critical groups such as senior administration, advancement, or student services. Student housing is also significantly lacking as compared to the competition, offering few amenities, an inadequate variety of housing options, and, in the case of the Mods, residential facilities that have long outlived their usefulness.



Space database for Bucknell University



Inventory

The team created a space inventory to analyze and project needs within the master plan. The inventory data defines space use at a snapshot in time – January 2007. The team analyzed the net assignable square feet (the sum of the areas of spaces that can contain program space – but excluding such features as walls, shafts, stairways, corridors, public restrooms, and mechanical rooms).

Space Use

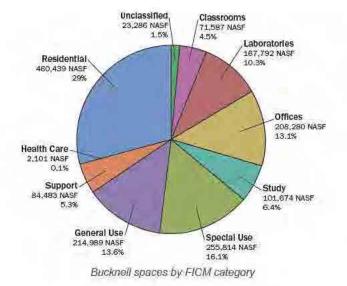
There are numerous ways to look at how space is distributed on the campus. One way is to classify each building by its primary function and then look at the distribution of these functions.

Looking at the distribution of individual spaces by Postsecondary Education Facilities Inventory and Classification Manual (2006) space codes (FICM) (see Appendix I for definitions of the types of spaces included in each category) provides a finer grain of analysis and allows for comparison to other institutions' space inventories as well as typical benchmarks and rules of thumb for space planning. As shown below, more than half of the total space on campus is used for residential, special use (primarily athletics, animal facilities, and greenhouses) and general use (assembly, food facilities and dining, day care, lounges, and retail).

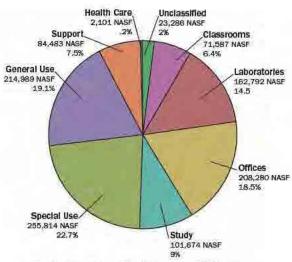
Buildings by Use

- 33% Academic
- 36% Residential
- 31% Administrative, Athletics, Student Services Support and Rental

As campuses differ most widely in terms of the amount of residential space they have, it is common to look at the distribution of total non-residential space. Bucknell's non-residential space is 42% special and general use (athletics and recreation, vivarium, assembly, dining, and gallery), 18.5% offices and office support, and 14.5% laboratories (both teaching and research). For small private universities such as Bucknell, classrooms are typically about 15% of total non-residential space. with teaching labs another 15%. As can be seen here, Bucknell's percentages for these categories are much less. Offices, at 18%, are also low, as these are typically 25% of the total non-residential space. A table comparing space per student at Bucknell to that of similar campuses can be found on page 60.



Bucknell's non-residential spaces FICM category



Classrooms (FICM Code 100)

Of the 71,587 NASF (net assignable square footage) in Code 100, 66,364 NASF is classrooms and 5,223 NASF is classroom service (i.e., storage closets and projection booths). Of the total Code 100 space, 58,594 NASF is assigned to academic scheduling. The registrar manages the use of general use classrooms. The classroom utilization report details the use of this space and of the 12,993 NASF departmentally assigned classrooms.

Although typical planning metrics call for 5% of non-residential space to be classrooms at research universities, at small private universities this figure often goes up to 15%. At 6.5%, Bucknell is slightly higher than the benchmark for research universities but substantially under that for small private universities. As detailed in the classroom report (see Appendix J), to meet its class needs, Bucknell should have more space in general use classrooms as many of their rooms are tight (with SF/seat rates of less than 20 SF), which argues for using the 15% benchmark for Bucknell. Another metric looks at the total number of seats in general use classrooms as compared to the total number of students. With 3,611 seats and 3,678 students, Bucknell has a ratio of .98 seats per student, which is high (it is not necessary to be able to seat every student in class at the same time on any given day) - the rule of thumb is .75. Thus, with 3,700 students, Bucknell needs approximately 2,775 seats in general use classrooms



O'Leary Center

A detailed analysis of classroom use studied general purpose classrooms, computer classrooms, fixed seat rooms, and seminar rooms controlled by Academic Scheduling as well as departmentally controlled classrooms, teaching labs, and studios. (See Appendix J for details of classroom analysis).

Common measures of classroom efficiency are class hour utilization, seat use, and station size. Class hour use measures the number of hours that a classroom is scheduled as a percentage of the total weekly hours that it could be scheduled. Bucknell schedules classes 52 hours out of the week, making its average class hour utilization less the standard target rate of 67%.

Seat use measures the average number of seats filled when a room is occupied divided by the room's seat count. Bucknell has an average seat use rate of nearly 60%, slightly below the target rate of 67%.

Station size considers the average amount of space per seat in a room, and is indirectly related to classroom efficiency. Right-sizing a room by adding or subtracting chairs will affect seat utilization. which will in turn alter the balance of class hour utilization. While the traditional target has been 20-25 SF/seat, schools such as Bucknell are moving toward an average range of 28-32 SF/seat, which allows for more flexible teaching styles. At Bucknell, seminar rooms are tight and typical classrooms even more so with an average station size of 19 SF/seat. If the university moves away from tablet armchairs to small tables and chairs as many of its peers are doing, there will be fewer seats in each room, which will change the balance of classroom sizes based on seat count.

Due to the unique nature of certain types of teaching spaces, many rooms are controlled and scheduled by departments rather than by the registrar. While this arrangement is appropriate in certain situations, these rooms tend to be much less efficiently used than centrally scheduled general use classrooms, which enjoy the flexibility and efficiencies of economies of scale. It is also worth noting that some of the classrooms considered in this analysis are not primarily classrooms, such as lounges that are used to hold a freshman seminar class.



Olin Science Building

Standard departmental classroom types include science and engineering labs (which constitute the bulk of Bucknell's departmentally controlled spaces), generic classrooms, performance labs (commonly used for theatre, music, or dance), and art studios. The average class hour utilization rate for departmental classrooms for the semesters analyzed was less than 25%, substantially lower than the target rate of 67% or Bucknell's general use average of 50%. Seat utilization, on the other hand, is high with a rate of over 70% for every room type. The high rate of seat utilization, however, does not make up for the efficiency loss due to class hour utilization.

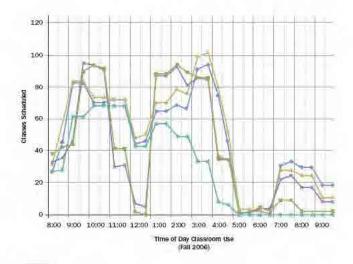
In certain cases, departments might actually have more unique teaching spaces than they need. For example, the biology department has 11 teaching spaces, which they only use about 20% of the time for classes. Similarly, electrical engineering, chemistry, and geology each have five or more teaching spaces, which they use on average less than 25% of the time for classes.

Scheduled hours and enrollment for all classes shape a university's demand for classrooms. A common reason for low classroom use is a discrepancy between the enrollment sizes of classes and the sizes of available classrooms. Bucknell has a mismatch between classroom sizes and course enrollments in some size categories. In addition to comparing size distributions, we compared the number of classrooms available to the quantity of classrooms needed. The analysis showed that Bucknell should have a total of 77 classrooms assuming that enrollment and class hour numbers remain constant. To provide for flexibility and growth potential, we recommend maintaining 80-83 classrooms.

Graph Analysis

Given the below-standard station size in many classrooms, we recommend that classrooms be right-sized to a target 30 sf/seat. Doing so, however, will result in an excess of classrooms that provide fewer than 30 seats and an insufficient number of classrooms with 30 to 60 seats. One solution to this problem would be to combine adjacent small classrooms or seminar rooms to make a single larger classroom. While useful in theory, our preliminary search has found no good candidates for this option. Another possibility is to repurpose a group of rooms, such as offices, and renovate the space to create a larger classroom. The displaced programs might then find a home in several of the smaller classroom spaces or in new facilities. In the near future, only medium / large classrooms should be added and only very small classrooms taken off line where possible.

Another potential barrier to efficient classroom use is the distribution of class hours across a week. As is typical, the early morning, lunchtime, and evening slots carry the lightest class load, while late morning and mid-afternoon time slots are very busy. The 4:00-5:00 pm time slot also drops off, likely due to schedule conflicts with late afternoon athletics and other activities. Friday afternoon, when few people choose to take or teach classes, is also poorly used. To the extent possible within the Bucknell culture, we suggest encouraging more classes to take place during low use hours, particularly 11:00 am -12:00 noon and 4:00-5:00 pm.



This graphic shows the number of classes in session over the course of the days of the week. Classes do not take advantage of the 8:00 or 8:30 AM timeblock, and while classes should not be scheduled on

- Monday Tuesday Wednesday - Thursday Friday

Tuesdays and Thursdays from 12 Noon to 1 PM. we see a significant drop off on those days starting at 11:00 AM. Monday and Wednesday mornings and early afternoons have more classrooms unused than on Tuesdays and Thursdays, Many fewer courses are taught on Fridays; this is particularly true on Friday afternoons.

The analysis also revealed that while it has standard time blocks for scheduling classes, a significant number of courses are scheduled for times outside of these standard blocks, leading to much inefficiency of use. Since the time of this analysis the University has made a strong effort to eliminate these non-standard class times.

This graph shows the number of classes scheduled in legal time blocks for the Fall of 2006 versus those in

Legal Time Block Illegal Time Slots Scheduled Illegal Time Blocks Low Utilization High Utilization

illegal time blocks. The large number of courses held outside of regular time blocks contributed to the inefficient class hour utilization rates. Classes that do not conform to the standard schedule result in periods of time, often half-hour blocks, when classrooms are empty as they cannot be used for another class. Unless there are pedagogic reasons to not adhere to a standard schedule, such illegal time scheduling results in classroom use inefficiency and also can create scheduling problems for students.

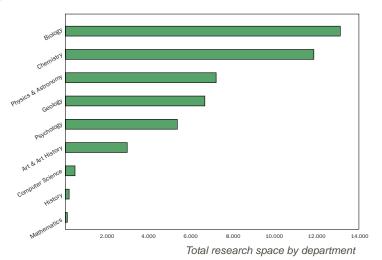
- +	Monday	Tuesday	Wednesday	Thursday	Friday	Total Hrs	
8:00 AM	23	3 16 2 20	28	17 2 23	23 23	62	8:00 AM
8:30 AM	23 14 3		28 15 43	17 2 3 26	23 1 24	80	8:30 AN
9:00 AM	56 14 7	N 16 2 22		17 2 3 2 26	55 1 56	123	9:00 AM
9:30 AM	56 14 7			60 2 3 2 69	55 1 56	166	9:30 AM
10:00 AM	52 1 5		55 1 56	60 1 3 2 67	54 54	148	10:00 AM
10:30 AM	52 1 5		55 1 56	60 1 2 64	54 54	146	10:30 AM
11:00 AM	60 1 2 6	3 25 2 1 28	60 1 2 63	16 4 2 20 16 1 2 1 21	59 1 60	117	11:00 AM
11:30 AM	60 1 2 6 60 1 2 6	3 25 2 1 28 3 25 2 1 68	60 1 2 63	16 1 2 1 21	59 1 60	118	11:30 AM
12:00 PM	41 2 4		43 2 45 43 4 47	1 6	40 1 41	68	12:00 PM
12:30 PM	41 4 4	5		1 5	40 1 41	69	12:30 PM
1:00 PM	44 4 1 4 5	3 45 7 2 61 3 45 7 2 61		44 4 3 7 64	47 1 2 50	141	1:00 PM
1:30 PM	44 4 1 4 5	3 45 7 2 61		44 4 3 7 64 44 4 3 7 64 44 4 3 7 67	47 1 2 50	141	1:30 PM
2:00 PM	36 7 1 4 4	8 45 7 2 1 62	36 2 12 1 1 52		35 1 2 1 39	134	2:00 PM
2:30 PM	36 7 4 4		36 2 12 1 51	31 4 3 7 55	35 1 2 1 39	125	2:30 PM
3:00 PM	20 32 7 4 6	3 38 7 2 1 2 57	18 29 12 4 1 64		18 1 1 1 1 22	131	3:00 PM
3:30 PM	20 32 7 4 1 6	4 38 7 2 1 2 57	18 29 12 4 1 1 65	31 4 2 7 54	18 1 1 1 1 22	131	3:30 PM
4:00 PM	4 32 7 4 1 4	8 16 2 1 2 21	3 29 12 4 1 49 3 12 4 2 1 22	6 2 7 15 6 2 7 15	1 1 1 3	68	4:00 PM
4:30 PM	4 7 4 1 1	5 16 2 1 19	3 12 4 2 1 22	6 2 7 15	1 1 2	37	4:30 PM
5:00 PM		0		0	0	1	5:00 PM
5:30 PM		0			0	1	5:30 PM
6:00 PM		0 2		3 3	0	3	6:00 PM
6:30 PM		0.		3 3	0	3	6:30 PM
7:00 PM	4 8 16 2			6 7 6 19	0	40	7:00 PM
7:30 PM	4 8 16 2 3		2 14 8 1 25		0	41	7:30 PM
8:00 PM	8 16 2 2			7 6 13	0	31	8:00 PM
8:30 PM	8 16 2 2			7 6 13	0	31	8:30 PM
9:00 PM	16 1			- 6	0	15	9:00 PM
9:30 PM	16 1	6 C	8 8	6 3	0	15	9:30 PM
Total Hours	52	7 373	535	399	348	2,180	
Utilization	49	% 529	6 50%	37%	43%	47%	
Day Time H	ours 45	6 36	2 477	358	348	2,001	
Day Time U	tilization 56	% 509	6 59%	50%	43%	52%	
Evening Ho	urs 7	1	58	41	0	179	
Evening Util	lization 26	% N	21%	15%	NA	22%	
Illegal Hour	s	3 70.5	34			248	
% Illegal	6	% 199	6%	25%	3%	11%	
Illegal day	98	61.5	32			231	
% Day Illega	al 7	% 179	7%	27%	3%	12%	
Illegal 1 hr		46		46		92	
Illegal 1.5 h	nour	0	10		2	33	

Laboratories (FICM Code 200)

This category is composed of three types of labs and their support spaces: teaching labs (those used primarily for scheduled classes, with special equipment that differentiates them from a regular classroom, such as a chemistry lab or a sculpture studio), open labs (typically open access computer labs that are not used primarily for scheduled classes, and language labs), and research labs (assigned to specific faculty or departments and not used primarily for scheduled classes).

Of the 162,792 NASF of Code 200 space, 81,736 NASF is class lab and class lab support, 21,025 NASF is open lab and support, and 60,004 NASF is research lab and support. For schools like Bucknell, typically 7-15% of non-residential space is class labs. Bucknell has 7.4% in class labs, within the benchmark range. Typically there is one class lab seat for every six students; Bucknell has one seat for every 3.4 students, which may indicate an excess of teaching labs. As shown in the classroom report, some teaching labs have very low class-hour utilization rates - as few as three or five hours per week. Support space for teaching labs should be around 28% of the total teaching lab space: Bucknell has only 8.6%. This may be because some prep activities take place in the labs as opposed to separate prep rooms. Planning standards for open labs call for 13,000-14,000 NASF of space for a school of Bucknell's enrollment. As noted above, Bucknell exceeds this standard with 21,025 NASF of open lab and support space.

There are no well-defined standards for research space. Not only do needs vary widely between disciplines, but the emphasis placed on research varies among institutions. The demographic change in university faculty that is occurring (as the relatively larger numbers of faculty hired during the expansion of higher education in the 1960s begin to retire) will likely increase demand for research space as new faculty hires and institutions tend to be more focused on research productivity. In large research-intensive institutions, research \$/sf is a typical measure of research space use. Bucknell is not yet at the level of research productivity for this to be a meaningful measure. When we look at research space as distributed across departments, as expected the sciences have the majority of space designated as research labs, with biology and chemistry having the largest areas.



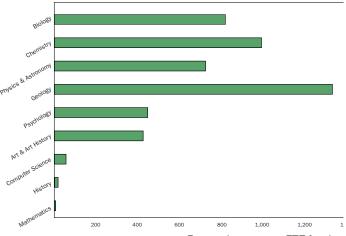
One anomaly in the way Bucknell records space assignments is that, in engineering, research space is assigned to departments in some cases and to the college in others, making the analysis of engineering research space difficult. A more robust analysis should be undertaken by the University looking at each department's research space as well as which faculty are occupying which labs. A preliminary analysis in which a department's total research space was divided by the total number of faculty (excluding visitors and adjuncts) shows a range of 800-1,200 NASF per faculty member across the sciences.

Offices (FICM Code 300)

The 202,280 NASF of space in offices, office support, conference rooms, and support is 18.5% of total nonresidential space at Bucknell. Typically this category is around 25% and is usually the second largest use of space after housing (as noted before, special and general use space are the second and third largest after housing at Bucknell).

The overall perception from the campus walkthroughs is that Bucknell is very tight on office space: not only is virtually every office occupied, making future growth problematic, but in many cases offices are smaller than is typical at peer institutions. This problem extends to every level of authority. For example, the offices of the president and provost, at 286 and 219 NASF respectively, are among the smallest observed at any school. Faculty offices are also smaller than the current standards with an average size of 136 NASF.

For years the planning standard was 120 SF per office, but current standards are between 150 and 180 SF for faculty, acknowledging not only the large number of books that are typical in faculty offices but also the space needed to accommodate computers as well.



Research space per FTE faculty

Faculty who do not have separate research labs, typically in disciplines outside of the sciences and engineering, require even larger offices as this space serves as both office and research space for them. Bucknell should adopt space planning guidelines as part of an overall space policy that take into account these trends.

A good planning guideline is 200 NASF in Code 300 space per faculty/staff that require offices. Of the 1,300 faculty and staff, approximately 1,060 require office or desk space. Given the projected increase of 40 faculty and 40 staff over the next few years, Bucknell would require approximately 229,000 NASF in Code 300 space (27,000 NASF over the current amount).

Bucknell appears to have sufficient office support space, with an average of 200 NASF per 1,000 NASF of office space (the typical planning standard is 160 SF per 1,000). Conference rooms also appear to be sufficient in number, with one for every 30 offices (rule of thumb is 1:33), though their size, location, and scheduling may be problematic. As office space increases on campus, space in these categories will need to increase as well to maintain these ratios.

Study Space (FICM Code 400)

The 101,674 NASF of space in this category includes not only the stacks and study and processing rooms in Bertrand Library, but also any smaller libraries or study rooms in individual departments. Planning guidelines for study space are complicated and have not been updated to reflect the changing nature of libraries in the 21st century. Many on campus have noted that at the time of the last addition to Bertrand 20 years ago the library was planned to serve 20 years. The consolidation of Information Services with the library and the desire to co-locate these staff, the desire to have a larger, discrete café/study commons as part of the library, and a plan to increase volume totals will all need to be considered in developing a program for a library addition.

Special Use Space (FICM Code 500)

This category includes athletics space (excluding offices but including gyms, locker rooms, storage, etc.), media production space, clinics, animal facilities, and greenhouses. At Bucknell, the 255,814 NASF of space in this category is the second largest after residential space. Athletics space is the majority, with 215,812 NASF (84%). There are few overall planning standards for this category. With the KLARC, Bucknell would appear to have sufficient space for its athletics programs; however, it was reported that recreational fitness is often quite crowded. This was not assessed in this study. The animal facilities in the Biology Building may require upgrading and the entire Animal Behavior Lab (formerly the Psychology Lab) facility should be relocated and replaced.

General Use Space (FICM Code 600)

General use space is the second largest category of non-residential space after special use. Bucknell has 214,989 NASF of this kind, which includes assembly spaces, exhibition, food facilities and dining, day care, retail, meeting rooms, and lounges. Food facilities and dining total 63,367 NASF, and lounges total 58,712 NASF (this includes lounges in departments as well as those in residential halls, houses, and fraternities). Assembly spaces and their support (such as in Weis Center, Weis Music, Tustin and Coleman) total 54,189 NASF. Space planning guidelines in these categories are again highly dependent on the culture and programs at a given institution.



Soika Pavilion

Support Space (FICM Code 700)

This category includes central computer server rooms, facilities and departmental shops, central storage, garages, hazardous waste storage, and departmental storage (but not office storage which is included in Code 300, or residential storage which is in Code 900). Bucknell has a total of 84,483 NASF in this category, the bulk of which is shops, central storage and garages. A planning guideline is that support space should equal .06% of the total assignable space on campus (excluding Code 700). This rule of thumb results in a space need of 90,057 NASF for Bucknell, not too far off the current amount. However, the current total does not include the large number of storage trailers on the campus. The central warehouse is also losing space to accommodate central utility plant functions. It appears that Bucknell could require significant additional storage space in order to remove the trailers. Fortunately this space is not expensive to build and Bucknell has sufficient land holdings to allow placement that does not adversely impact the core campus. Storage space is always an issue on campuses, and a policy regarding storage that includes a rigorous review and removal of stored materials that are no longer needed should be developed. As the campus grows, it's likely that the need for support space will increase to stay at the benchmark ratio.



Recycle Shed

Healthcare Space (Code 800)

This category of space covers the Student Health Services facility but not the offices in it. At 2,101 NASF, this is the smallest category of space on the campus, as is typical. The planning guideline is 2,000 SF + 0.3 SF/FTE of students over the first 2,000. This would result in 2,500 NASF for Bucknell, slightly more than is currently allocated.

Residential Space (FICM Code 900)

As noted before, 36% of total assignable space at Bucknell, 460,439 NASF, is categorized as residential space, which includes student rooms in residence halls, houses, fraternities, apartments, and toilets and bathrooms in these buildings. Of this, 20,903 NASF is in rental houses, 6,147 NASF is in the President's House, and 1,476 NASF is at the Cowan Center. The 431,913 NASF that is student housing has 3,011 beds, for 143 NASF per bed. The need to replace existing housing facilities such as the Mods, some fraternities, and special interest housing, the desire to increase the number of students living on campus, and the need to decompress some dorms so that lounges that had been taken over for bedrooms can be restored, requires a significant amount of newly built housing at Bucknell.

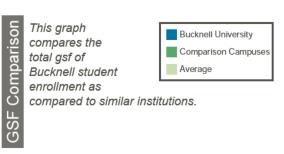


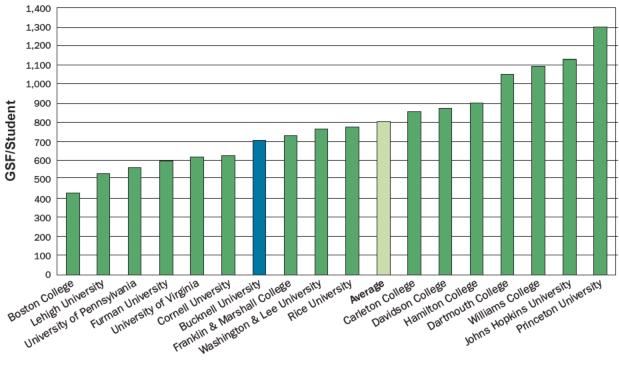
Swartz Hall lounge

Comparing to Other Campuses

Benchmarking can be a useful tool for assessing a campus against its current or aspirational peers as well as the schools with which it competes for students and faculty. The types of data that can be compared include space use, current building or planning projects, trends in housing, classroom design, or research activity, and institutional metrics such as acceptance and retention rates, endowment, and operational budgets.

As an initial tool, the GSF (gross square footage) as a ratio of student enrollment at Bucknell was compared against a number of comparison institutions. As can be seen from this analysis, Bucknell is in the lower half of schools on this data point. However, many of these schools are in the midst of significant building programs and will be increasing their space over the next few years. The growth expected as part of this master plan will allow Bucknell to reach and perhaps exceed the peer average over time.



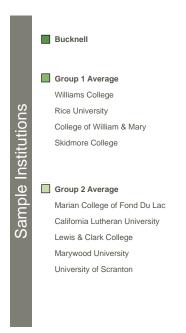


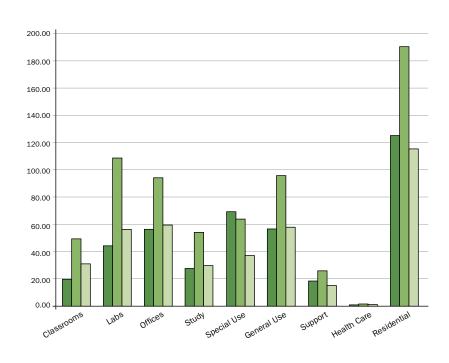
Space per Student: GSF Comparison

As is often the case, many of the institutions contacted were unable or unwilling to assist in the benchmarking when it came to space data. Many peer institutions do not have space inventory data, as was the case at Bucknell prior to this Master Plan. Only four comparison campuses were able to provide space data by FICM (Postsecondary Education Facilities Inventory and Classification Manual, 2006) code, which we supplemented with data in Shepley databases and other sources such as the Society for College and University Planning (SCUP) Campus Facilities Inventories reports (group 2) for private colleges with enrollments similar to that of Bucknell.

As can be seen, Bucknell's space holdings in classrooms, labs, offices, and study space are significantly lower than comparable campuses when looked at as a ratio of space per student, which supports the analyses of the Bucknell inventory.

The planning team collected a set of data and points of interest on comparison institutions and the University researched peer data on various institutional metrics (Appendix D).





Planning Agenda

The campus master planning team and the University developed a Planning Agenda, the list of needs that would be addressed within the Master Plan.

Process

Interviews

The master planning team conducted several rounds of interviews with representatives of academic units, administrative offices, and student government, as well as community agencies and planning groups. These interviews focused on what was working well at Bucknell and obstacles to the mission and goals of the University. Summaries of the interviews led to a list of common themes, which informed the creation of the Planning Agenda.

Forums

In addition to the interviews, several open forums for faculty, staff and students were held. These forums allowed the planning team to gain valuable insights into the concerns and needs of the campus community. The common themes from these forums were also incorporated into the Planning Agenda.

Assessment

The site and space analyses and benchmarking research conducted in Phase One of the Master Plan led to the development of a space program so that order of magnitude needs could be established for each item in the Planning Agenda.

Planning Agenda Categories

The Planning Agenda was divided into five general categories. Following is a list of the primary Planning Agenda themes in each of the categories.

Academic

New Academic Quad

 Facilities to support growth in arts and sciences, engineering, management, residential colleges, and the library, among others.

College of Arts & Sciences

· Facilities to support reorganization and growth of the college.

New Arts Complex

· Quality facilities that allow integration of art history, and visual, literary, and performing arts.

Engineering

Facilities that support growth of the college.

College of Management

· Facility for a newly created college.

Teaching/Learning spaces

- · Rebalanced general use classrooms via rightsizing of existing rooms through furniture or configuration changes.
- New teaching facilities integrated into new academic buildings as well as repurposed administrative space.
- Adaptive reuse of ineffective classrooms to meet other program needs.
- Adequate supply of quality specialized teaching spaces within departments via integration into new academic buildings as well as enhancing existing facilities.

Library

 Enhanced and expanded Bertrand Library to create a library for the 21st century that will allow greater integration of Library and Information Technology staff.

Interdisciplinary Institutes and Centers

· Facilities for institutes and centers that will bridge departments and colleges, connect to the residential colleges, and support innovation and distinctiveness in areas of current and emerging importance and relevance.

Residential Colleges

· An integrated, four-year residential learning and living experience that supports and complements the academic nature of student life.

Student Life

Housing

 A range of new residential offerings that substantially upgrade the quality of the residential experience to meet 21st-century expectations and needs and allow replacement of the Mods, Greek houses, small houses, and decompression of existing dorms, to include a balance of housing between the upper and lower campuses, a physical renaissance of Greek life and an enhanced University Village experience for seniors.

University Center

 A true university center that will provide a common home for the diversity of students, faculty and staff at Bucknell and provide dining facilities, student organization space, student affairs offices, student mail, and a campus store. The existing Langone Center, as currently configured, no longer adequately serves as a true university center, not only functioning as a dining facility, but also serving as a center for student life. A new or revitalized university center could provide diverse dining options, space for student organizations and student affairs offices and other programming central to the life of the University.

Interfaith & Multicultural Centers

- A facility to bring together the diverse spiritual and faith traditions of Bucknell and replace Newman House, Berelson, and the Muslim prayer room.
- · A multicultural center, perhaps integrated into the University Center, to enhance Bucknell's commitment to diversity and building bridges.

Academic Support Services & Enrollment Services

- A centralized one-stop shop that brings together various academic support units such as the Writing Center, Service Learning, Teaching and Learning Center, and others.
- A centralized Enrollment Services Center combining the Offices of the Registrar & Financial Aid for ease of student service.

Recreation, Health & Wellness

· Facilities to integrate student health, psychological services, and fitness as well as increase outdoor recreational facilities to support the development of the whole student.

Athletics

Better utilization of the west campus, including the golf course, to maximize field space, consolidate competition play and provide facilities that will allow greater recreational use of the KLARC. Upgrades to Memorial Stadium.

Administrative

Administrative Facilities

- · Add administrative facilities to allow reuse of Marts Hall for academic programs and teaching spaces.
- Co-locate Finance Office, Human Resources, & Procurement to allow greater efficiencies.
- Establish a new facility for Public Safety to allow it to more efficiently pursue its mission.
- Expand the Administrative Services production facility to address safety issues.
- Consolidate creative and communications staff to allow for ease of collaboration.
- Expand and consolidate Library and Information Technology server functions and consider an offcampus redundant facility to ensure the integrity of the campus' data.

Welcome Center

Create an enhanced gateway at Route 15 with an admissions / welcome / alumni center, to promote the quality of Bucknell's liberal arts education and enhance student recruitment.

Support

- Move and replace Facilities shops and garages to allow greater campus access to the river.
- Increase warehousing / storage facilities.
- · Improve central shipping & receiving.

Inn and Business Center

 Located at a significant gateway at the intersection of Moore Avenue and 7th Street.

Campus Fabric

Parking

- · Remove parking from the academic core and relocate it to the perimeter of campus.
- · Create opportunities for structured parking facilities, above and below grade, on central campus.

Landscape – including natural landscape and water features

- Restore and beautify Miller Run.
- Develop a landscape vocabulary of paving and plantings that recognize and celebrate the more important spaces on campus, most significantly the existing Academic Quad.

Site furniture

· Develop a standard palette of benches, bike racks, light fixtures, trash cans, and related elements to unify the campus.

Gateways & entrances

- Reconfigure the Route 15 entrance to improve safety.
- Enhance the entryway experience from all of the multiple gateways.

Vehicular and pedestrian circulation

- · Reduce conflicts between vehicles and pedestrians, encourage the pedestrian experience of campus, and address service and accessibility needs through a coherent circulation plan.
- Pedestrian and cycling pathways that connect to downtown and the river: Extend the circulation plan to connect to the local region beyond the campus.

Opportunities for Distinction

Living / Learning Environments / 21st Century

Academical Village

Given the scale of housing and academic space being considered, Bucknell has a unique opportunity to redefine the transformational residential campus experience. A series of neighborhoods support environments for students and faculty.

Vertical Residential Colleges

Bucknell's first-year residential college program will be extended through the second, third and fourth years. The new academic quad will be organized to support students with common academic areas of focus.

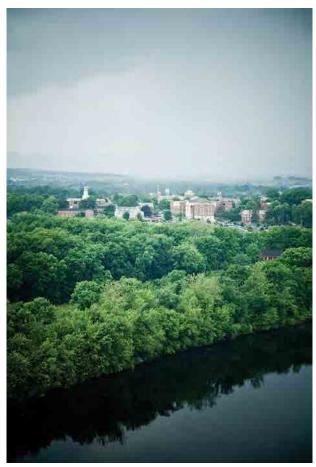
Interdisciplinary Learning

Future campus facilities should support opportunities for cross-disciplinary and departmental collaboration. The changing nature of learning requires flexible academic loft buildings that can evolve over time.

Model for a Sustainable Environment

Over the last decade, Bucknell has embraced many sustainable initiatives including the co-generation plant, green energy sources, photovoltaic, and the environmental committee. LEED certified buildings, innovative stormwater practices, research initiatives such as photovoltaic, future of the Susquehanna River.

Catalyst for regional change involving Bucknell and Lewisburg: a model partnership for regional revitalization; rediscovery of a connection to the Susquehanna River.



The Susquehanna River connection to Bucknell



The Gateways Student Apartments

The Bucknell University campus and downtown Lewisburg's vibrant Market Street are separated by only three blocks, yet neither area is fully benefiting from the geographic proximity. While physical connections between the areas are not clear today nor are there sufficient programs or facilities to draw the campus community downtown, opportunities exist to enhance the connection with a wellplanned series of real estate and public property improvements. Such improvements will supplement and contribute to economic activity on Market Street as well as enhance the services available to University students and employees. More importantly, the investment on Market Street will work to protect the downtown commercial district as it faces increasing competition from development on Route 15 just north of Lewisburg.

The University, local business leaders, and local political bodies share a commitment to improving the connection between Bucknell and downtown Lewisburg. The objectives of the University Village project are as follows:

- · Create a clear, functioning, and integrated link between the campus and Market Street;
- · Strengthen relations between the community and the University:
- · Strengthen and enhance student and staff recruitment and retention;
- Enhance the physical appearance of the neighborhood and improve the neighborhood environment;
- Define a clear gateway to and a new front door to the University from Market Street;
- Clarify future student and faculty housing options and policies; and
- Complement and enhance the retail activity on Market Street.



Downtown Lewisburg

As part of the campus master planning process, the University has defined a series of component building programs that could be leveraged to advance the Lewisburg Core Community Initiative objectives. These program elements are considered new capital projects, each of which would be implemented on campus or on a campus edge. The program elements are as follows:

- A new university bookstore
- A Bucknell branded inn with meeting space
- New parking structures to support additional parking demands.
- · An administrative office building to house University employees
- · New student housing in an apartment-style configuration
- A regional arts center to house performance space and portions of the University art collection
- Rehabilitation of the existing Campus Theater on Market Street

Additionally the University is considering an incentive program to attract University employees, faculty, and staff to home ownership in downtown Lewisburg.

Central to these efforts is the relocation and development of core University facilities in downtown Lewisburg. More specifically, the University is pursuing the acquisition of certain Market Street properties for the development of a new University bookstore, administrative space for administrative offices, and the regional arts center. With the complementary renovation of the Campus Theater, the realization of the planned building program will add professional workers, retail-supporting foot traffic, and enhanced cultural entertainment outlets to downtown Lewisburg.

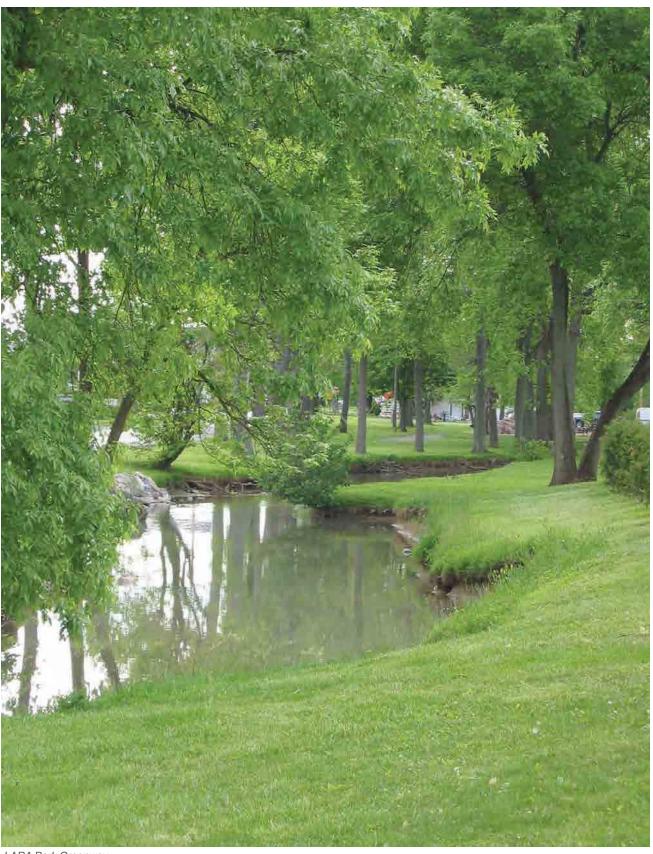
The investment in the Lewisburg Core Community Initiative will be supplemented by a series of public infrastructure investments that will likewise advance the Initiative's objectives. A series of 2006 and 2007 Main Street and Elm Street grants have funded the reconstruction of 7th Street and streetscape improvements on Market Street. Future projects include the creation of a 6th Street Greenway, the implementation of a rails-to-trails project, and improvements to the Bull Run Watershed.



Bird's-eye view of Market Street



Market Street



LARA Park Greenway

Land Use Plan

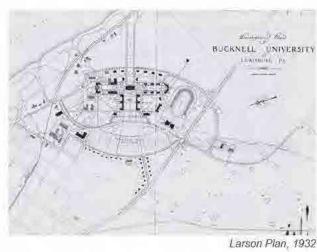
Green space is defined as open space with natural vegetation in an urban setting that provides an environment that contributes to the social, economic and environmental well-being of a community.

- Shepley Bulfinch Community

Land Use Plan

Introduction

As stated in the Executive Summary, the Land Use Plan seeks to build on the strength of the Larson Plan extending it for another seventy-five years. The Land Use Plan proposes a framework which can be supported by the evolving needs of Bucknell.



Lewisburg Borough Bucknell Universi East Buffalo Township

Property Ownership

Property Ownership and Acquisition

Current Land Holdings

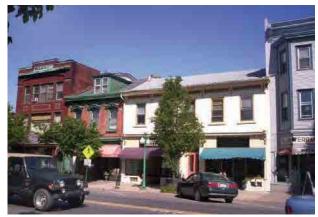
Today Bucknell has 450 contiguous acres of land, accommodating its central campus, athletic fields, and golf course. Of that, approximately one-third remains largely undeveloped in the southern farmland and nursery and driving range area west of Route 15.

Current land holdings accommodate potential campus changes for the next 30 years, as projected today. Given the dynamic changes taking place in higher education and research, Bucknell should continue to acquire contiguous or potential contiguous property offered at market prices.

As the Master Plan is implemented, Bucknell should continue to assess land-banking opportunities and land-preservation zones.

Farm / River Frontage

Control and stewardship of the land along the Susquehanna River is essential to the Master Plan principle of reinforcing the connection between the campus and this powerful asset. The University has the potential to demonstrate best practice in defining the character of life along the dynamic Susquehanna in environmentally sensitive development, care of water sheds, stewardship of habitats, and overall character of the land. The central Pennsylvania landscape has been clear cut for lumber and converted to agricultural uses over the last several centuries. With lumber no longer a primary local or regional industry and the nature of agriculture changing, the University can redefine the role of the river in the 21st century.



Lewisburg



Susquehanna River frontage

University Village / Downtown

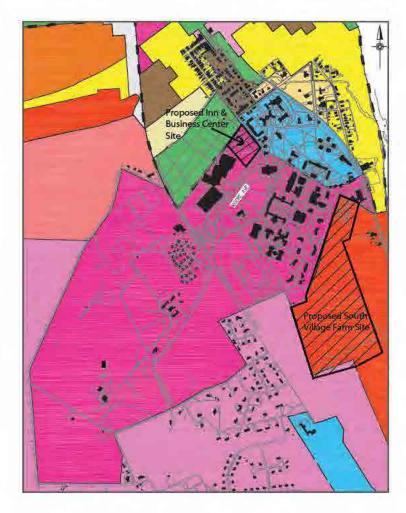
The University has the potential to be a catalyst for a vital downtown Lewisburg through strategic investment partnerships and programs. Defining the needs of the campus community and the local and regional communities and incentivizing change while remaining sensitive to the scale and charm of Market Street is essential. Long-term property ownership in the downtown should be carefully evaluated with a goal of maintaining and enhancing an authentic character developed through broad and diverse ownership.

Financial incentives for faculty and staff to live in the Lewisburg neighborhoods will support local merchants, revitalize housing stock, and further enhance faculty and staff presence on campus during evenings and weekends.

Zoning

The campus resides in three zoning districts, as seen in the diagram to the right. The main zone is the Bucknell University district; the farm lot, located to the south, is in the residential urban district; and the area between River Road and the Susquehanna River is within the residential town III district. Generally, the Bucknell University district is unrestrictive and tailored to customary university land uses.

To achieve the goals of this plan, the farm lot will need to be rezoned to allow for university student housing and athletic and recreation facilities as proposed in the South Village Farm district plan. The limited recreational uses proposed along the river are permitted by special exception; therefore, zoning hearing board approval will be required. The Inn and Business Center to be located along 7th Street is not specifically listed as a permitted use within the Bucknell University district; therefore, further investigation and a zoning district amendment may be required prior to implementation.





and Use Opportunities

Land Use Zones

Zones of Opportunities for Future Development

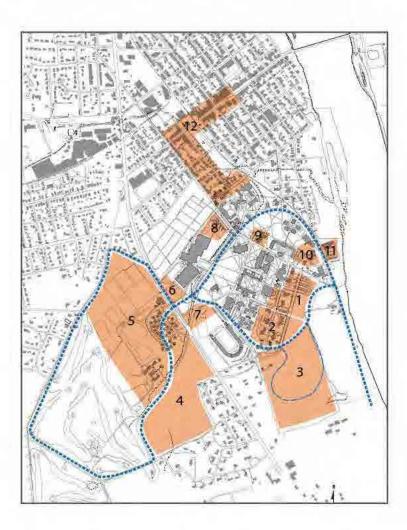
The land use plan proposes a campus loop road, as seen in the diagram below, that essentially defines the five-minute walk ring around the campus core. An important opportunity for the campus is the undeveloped zone within this loop south of Bertrand Library. A connection from the intellectual heart of the campus to the river and the hills beyond was envisioned by Larson in 1932. This zone provides Bucknell with an opportunity to develop a new

primary open space at the heart of the campus. In the 19th century, the original Main Hall (now Roberts Hall) was positioned to address the river and greet travelers crossing the mighty Susquehanna. The campus largely turned its back to the river in the 20th century. Recapturing a long-distant view and connection to a local, regional, and global community is a powerful metaphor for this zone.

The farmland south of the campus provides an opportunity to think critically about the nature of development on 19th- and 20th-century farmland.

Land Use Opportunities

- 1: Interdisciplinary Academic Space and Vertical Residential College
- Interdisciplinary Academic Space and Vertical Residential College
- 3: Student Village and Amenities
- 4: Recreation and Athletic Opportunities
- 5: Recreation and Athletic Opportunities
- 6: Ancillary Services
- 7: Campus Gateway
- 8: Campus Community Bridge
- 9: Academic Opportunity
- 10: Student Housing
- 11: Susquehanna River Access
- 12: Lewisburg Core Community Opportunities



An educational opportunity for the community, this zone should become a national model for living and learning communities with a focus on capturing original research that can inform housing development broadly.

The proposed greenway along Miller Run will strengthen the integration of the central and west campuses. As the pedestrian connection is clarified, the nursery and golf driving range will become more viable for other types of development in the future. The Master Plan anticipates this zone land banked for future development in the near term.

Zones of Legacy / Stewardship

Legacy spaces are those places that have historically defined the image and experience of an institution. The principle legacy spaces at Bucknell are the Academic Quad between the Library and the Freas overlook; Science and Engineering Quad; and Old Main Quad including Taylor Hall, the Sacred Lawn bounded by Moore Avenue, the Langone Center, Freas Hall and the Chapel; and the historic Oak Grove. These elements of the campus open space system are deserving of special stewardship. Each currently requires refurbishment and, in the future, should always receive priority maintenance. They should all be considered 'sacred' in the sense that their preservation should be considered imperative.



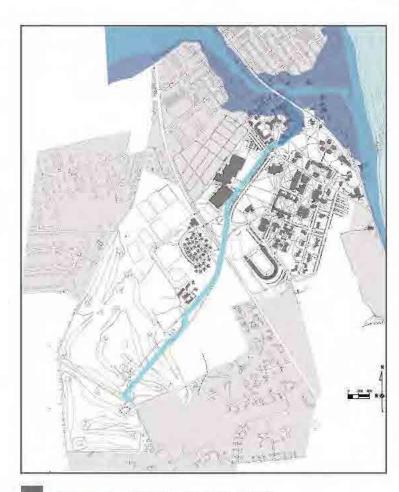
Larson's view of campus, 1932

Flood Water Management

The campus is directly influenced by two watersheds, Miller Run and the West Branch Susquehanna River. A third watershed, Limestone (Bull) Run extends through the University Village area. These three watersheds create both opportunities and constraints to campus use and development. Previously, these waterways have been largely ignored and only exist as a background feature to the campus.

A small portion of the downhill campus is located within the 100-year floodplain of the Susquehanna River, including the areas located along St. George Street, including Larison Hall, and areas between River Road and the Susquehanna River (right). Though, local ordinance limits future development in these areas, existing campus buildings may be maintained

Miller Run headwaters form within the Bucknell Golf Club area as an intermittent stream and generally flow along Smoketown Road and Moore Avenue before joining with Bull Run just east of the railroad tracks. Along its course, Miller Run is bridged in multiple locations, including at Route 15, Davis Gym, 7th Street Café and the Arts Building in addition to local roadway culverts. Much of the natural characteristics of Miller Run have been lost due to development of utilities, parking and construction of buildings.



Existing Floodway

100-YEAR FLOOD BOUNDARY

RIVER FLOODWAYS

Miller Run is also protected by a floodway that is 100 feet wide and essentially prohibits encroachment by development within 50 feet of the top of its banks. In the area east of Route 15, the land use plan includes removal of parking lots and the Art Building to help reshape Miller Run and celebrate the area as a natural system. This restored riparian zone will dramatically enhance the aesthetic quality of the campus and provide opportunities for hands-on teaching of ecological and hydrological studies as well as improved flood flows and water quality.

This floodway area will become the restored area of the stream corridor allowing for pedestrian access, natural plantings, enhanced flood flows and improved water quality. West of Route 15 only minor stream enhancements are envisioned, including stabilization of the legacy soil stream banks, plantings of additional native vegetation to support diverse habitats, and enlargement of culverts to better manage flood flows. Immediately west of Route 15, Miller Run has the potential to serve as a regional stormwater basin in order to mitigate future development on the west campus.

This basin area will include permanently wet areas for additional aesthetics and habitat opportunities.



Miller Run

Much of the Miller Run corridor proposes to incorporate stormwater Best Management Practices (BMPs) in order to limit degradation of the stream from past and future development. BMPs employ varying techniques which emulate natural systems in order to reduce stormwater volumes, cleanse stormwater of urban pollution and maintain moderate water temperature from hot surfaces. BMPs suitable for use with campus development include infiltration trenches, drywells, natural filters, oil/water separators, grit chambers and native vegetative cover among others. Individual BMPs should be selected based on the nature of the improvement, its location on campus and the identified enhancement to the stormwater system that is desired.

Within the University Village area, approximately 75% of the land area is located within the floodway and floodplain areas of Bull Run. This severely limits the opportunity for future development to occur within the established regulations versus desired land uses versus the historic architecture to be retained. All new residential development must be located above the flood elevation while commercial development can occur below the flood elevation if the structure is properly flood-proofed.



Bull Run

Greenways

Greenways are open space corridors, often along streams, and generally with trails. They provide a network of both local and regional connections as well as sustainable wildlife habitat, stormwater detention and recharge, as well as recreational opportunities. Bucknell has a unique opportunity to take a leadership role in the broader community by developing the Miller Run corridor as a major connector between University and both the Susquehanna basin and its proposed River Walk as well as to and between downtown, the neighborhoods to the west of campus, and the nascent regional rails-to-trails network. This pathway system will not only serve regional walkers, joggers, and bikers, but will support the development of a pedestrian-friendly campus core by facilitating internal connections.

The University also has an opportunity to develop a new trail system to the south on the Farm Land with connections to both the river and to the ravine. Open space greenways along route 15 and at the campus perimeters will provide visual buffers and transitions from the surrounding urban development to the landscape core of the campus.



Greenway System



LARA Park Greenway

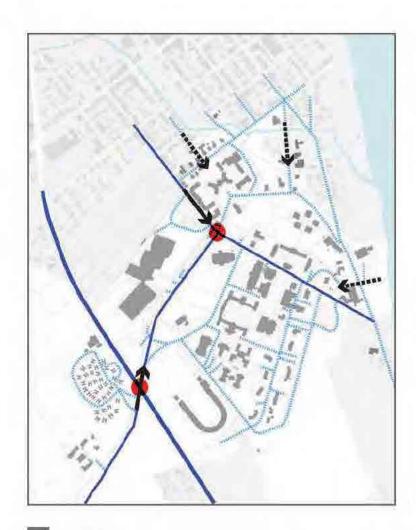
Circulation Systems & Campus Gateways

The campus plan is knit together with a system of circulation characterized by the relative importance of pedestrians, bicycles, and vehicles, in that order. A significant effort and investment in the relocation of parking will be key to the success of nearly all other objectives.

Pedestrian

The primary circulation goal of the plan is to create a campus that encourages pedestrian use, especially throughout the hilltop campus core. The plan proposes this zone be free from throughcirculation by vehicles. The network of pedestrian paths should be varied and reflect the importance of the spaces through which it passes and the volume of traffic it must accommodate. Paving materials will be hierarchical according to landscape zone, and widths of pathways will be standardized to reflect usage. The pathway patterns (i.e., orthogonal, elliptical, meandering) will similarly reflect the landscape zone or district the system serves.

Signed and safe jogging trails that extend out into the surrounding neighborhood and ultimately the region (e.g., along the rails to trails system or the riverfront pathway) should be developed. (As noted elsewhere, this may require modification to the golf course design, the public way of Smoketown Road. or both to accommodate a route to the neighborhoods to the west.)



/ehicular Circulation

PRIMARY CAMPUS GATEWAY

PRIMARY VEHICULAR ROUTE

SECONDARY VEHICULAR ROUTE

PRIMARY VEHICULAR ENTRANCE

SECONDARY VEHICULAR ENTRANCE

Bicycle

Bicycle use should be encouraged through the addition of bicycle storage facilities or racks immediately adjacent to residences, classrooms, and athletic facilities. Where warranted by potential volume, separate bike lanes should be provided; these lanes should be included along the perimeter loop roads, as well as along routes from the campus core to the West Campus and the neighborhoods beyond. The plan recommends the addition of bike lanes on the streets connecting the campus and downtown, but as this initiative will adversely impact available parking, it may not be enthusiastically received by the Borough.

Vehicular Circulation & Campus Entrances

The intent of the plan is to minimize the impact of cars and through traffic on campus, and to enhance and simplify the circulation that will remain. To that end, a loop/road around the campus core is proposed with smaller inner loops and short spurs into the campus core to provide service and handicapped access. Emergency access will penetrate further into the core across specially designed pedestrian ways.

The arrival sequence at the entrances requires special attention. To that end, the plan proposes redesign and relocation of the intersection of Moore Avenue, Smoketown Road and Route 15. This change will provide a far safer approach and egress from campus and more direct access to the west campus facilities as well as opportunities for a greatly enhanced aesthetic impression of the campus. Relocation of the intersection closer to the existing pedestrian tunnel will also encourage its use and safety.

The intersection of drives in front of Rooke Chapel will be realigned or relocated for safety and ease of transit. Moore Avenue will continue straight ahead, but a new loop road to the newly expanded area of the campus will continue up the hill to the south, along the side of the stadium, to access the South Village, the arts facilities and the new underground parking beneath the new academic quad at the heart of the campus. It will continue to the east to join the existing Seventh Avenue with its connection to River Road.

The plan also proposes a redesigned Moore Avenue that becomes a parkway-like, gently curvilinear drive through the Miller Run Greenway, with all roadside parking removed so as to maximize the visual appeal of the initial views of the campus landscape.

Beyond the 7th Street intersection, the redesigned road will continue in an uninterrupted arch to meet Brown Street at its current location. Along this stretch of road, parallel parking will replace the existing perpendicular spaces which will be removed for reasons of both safety and clarity of wayfinding on the new loop road.



Route 15

Parking and Drop-Off

Greening the campus is a goal of the Land Use Plan and the relocation of existing surface parking is key to its success.

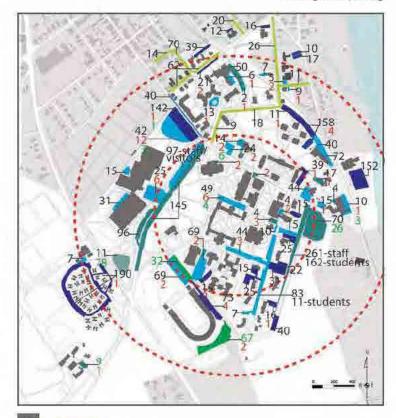
Surface parking currently located within the five-minute walk ring should be moved to the zone between five and ten minutes or placed in structural parking. preferably below grade.

Structured parking will be provided at both ends of the athletic complex to serve its visitors as well as those arriving at the Welcome Center, the chapel, and the Inn and Business Center. A major underground structure below the first phase of the new academic quad will provide parking and direct access to all of the academic and administrative functions of the hilltop core as well as below grade-service for the expanded library.

Surface lots will be designed to high standards, but minimized in size and location as well as screened with significant landscaping. New lots are proposed at the south end of the South Village Farm, the south end of the stadium, and in the heart of the west campus athletic complex. Existing smaller lots within the core will be reorganized and enhanced for minimal impact, but will accommodate short-term delivery and accessible parking as necessary. Dropoff facilities are provided for all public buildings.



Underground parking





Open Space Systems

The Master Plan recommends a coherent and unified system of landscape spaces, distinguished from each other by relative importance, but threaded together by a harmonious system of spatial compositions and through circulation. Four major landscape zone types, identified in the diagram to the right, have been identified in the analysis, all worthy of recognition and enhancement.

Recapturing, clarifying, and creatively expressing these distinct landscape types and emphasizing their contrasts are key principles of the new plan. Building on many existing campus characteristics, this system of landscape types can be further articulated in its varied scales of spatial definition and manner of planting treatments and with the refinement of site materials (pavings, site walls and fencing, furnishings, lighting and signage) selected to reinforce the hierarchical distinctions of these zones.

Major Landscape Zone Types

- Greenways and Pastoral Open Spaces
- Hilltop Academic Core
- Intensively Developed Campus
- Athletics, Fields and Courts



HILLTOP ACADEMIC CORE INTENSIVELY DEVELOPED CAMPUS GREENWAY & PASTORAL OPEN SPACES ATHLETICS, FIELDS & COURTS

Greenway and Pastoral Open Space

The proposed enhancements to this zone will be the single most visible and dramatic change to the campus landscape, one that will communicate, to first-time visitors especially, an institutional embrace of sustainable values and stewardship of the natural environment. The zone encompasses the riparian, stream-side zones of Miller and Bull Runs, the Susquehanna embankments, the hillside wooded groves, and the area of the proposed South Farm Village. It also includes much of the area west of Route 15, including the proposed stormwater detention area along Miller Run, the tree nursery, the new facilities and maintenance area off Smoketown Road, and similar agrarian spaces on the campus. Finally, the campus verges – its transitions into field edges and wilder woodlands - come under this heading.

This zone will include a comprehensive stormwater management system integrated into the landscape to mimic and enhance the existing natural systems. The use of natural filters, native vegetation, streambank restoration, and constructed wetlands will minimize development impact on the campus waterways while providing a learning laboratory for students.

Perhaps even more important than its varied landscape character, this zone offers the University a series of physical and visual connections to the broader region through ecology, recreation, and vista.

Formal Quadrangles

The Academic Core on the hilltop is a zone characterized by its rectilinear layout, relative formality, symbolically and in some cases historically important buildings, symmetry of building arrangements, and tree alignments. The series of rectangular quadrangles, which largely focus on building entrances, are linked at their corners, with pedestrian paths typically flanking the side aisles under trees and criss-crossing the central spaces. The spaces feel appropriate to the institutional, loosely Georgian revival architecture, although each is distinguished in its own way.

It is important to note these are essentially flat spaces, in marked contrast to the surrounding side slopes, and the entire zone is to be pedestrianexclusive, with only limited service and emergency vehicle access. These spaces are at the heart of the campus, and the materials used here should reflect this situation, including brick paving with bluestone building entrance plazas, better quality seating, lighting, and other site amenities. A somewhat more manicured, refined management of plant materials is also warranted.



Aerial of Academic Quad

Interstitial Spaces and Gardens

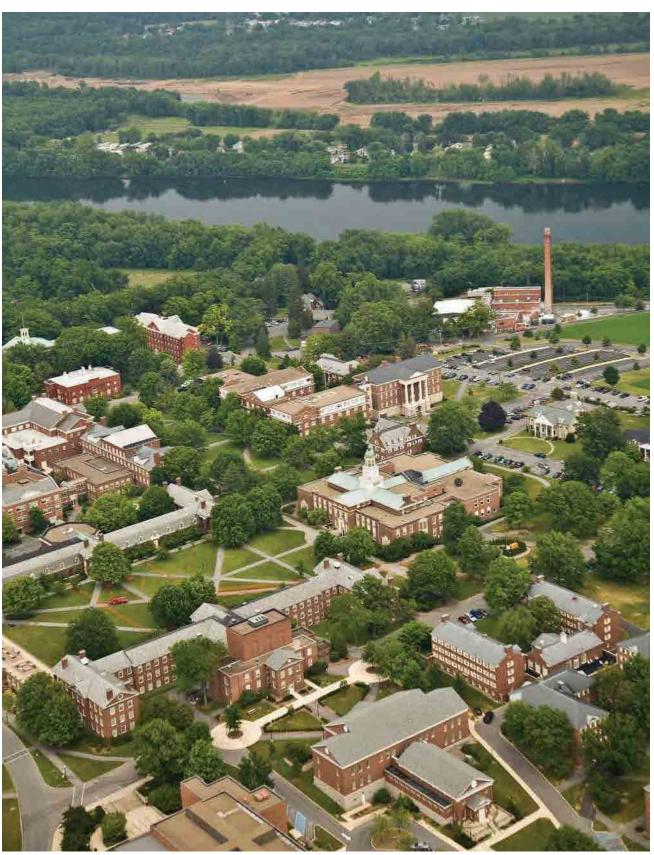
The more intensely developed zone of the campus is composed primarily of linked interstitial spaces, which deserve more intensive landscape treatments befitting their intimate character. The most successful existing spaces are quite like gardens, for instance the courtyards behind Marts and Vaughn Lit. This zone encompasses the areas around the formal quadrangles of the hilltop as well as the in-town portions of the campus. Its landscape composition reflects both the higher density of post WWII construction and the influx of the automobile during that era. It is now characterized by a mix of smaller courtyards and more intimate landscape spaces as well as drives, parking and service yards. The gradual integration of the campus periphery with Lewisburg's more urban streetscapes has also resulted in an interesting blurring of the edges of campus within the fabric of these smaller streets and the largely residential neighborhood.

Athletics, Fields and Courts

These spaces are a critical part of the campus landscape. Not only are they programmatically important, they are also a key element of the initial impression of the campus formed by views from Route 15 both of the open spaces of the west campus and of the stadium and practice fields of the main campus. The size and orientation of courts and fields themselves are regulated by the dictates of NCAA and related standards, but their placement and the adjacent landscape treatments should contribute to the generally more bucolic character of this zone. These areas have a generally high intensity of University community use; they also service visiting teams and spectators and thus require significant vehicular access and proximate parking.



Vaughn Literature Building



Looking East to the Susquehanna River

District Plans

Our vision is to enhance the qualities that contribute to Bucknell's unique place in American higher education, with its balance of small college intimacy and diverse campus environments, framed by the central Pennsylvania landscape.

- Tom Kearns, Shepley Bulfinch

District Plans

Introduction

The campus Master Plan is envisioned to be built out over a 30-year period, within the context of the 75-year land use plan. For the purposes of planning, the campus has been conceptually divided into a series of districts. For each district, planning principles specific to that area have been developed, along with design guidelines and recommendations for proposed buildings, open space, and circulation systems. This chapter summarizes the goals for each aspect of campus defined in the Master Plan.

Overall Vehicular Circulation

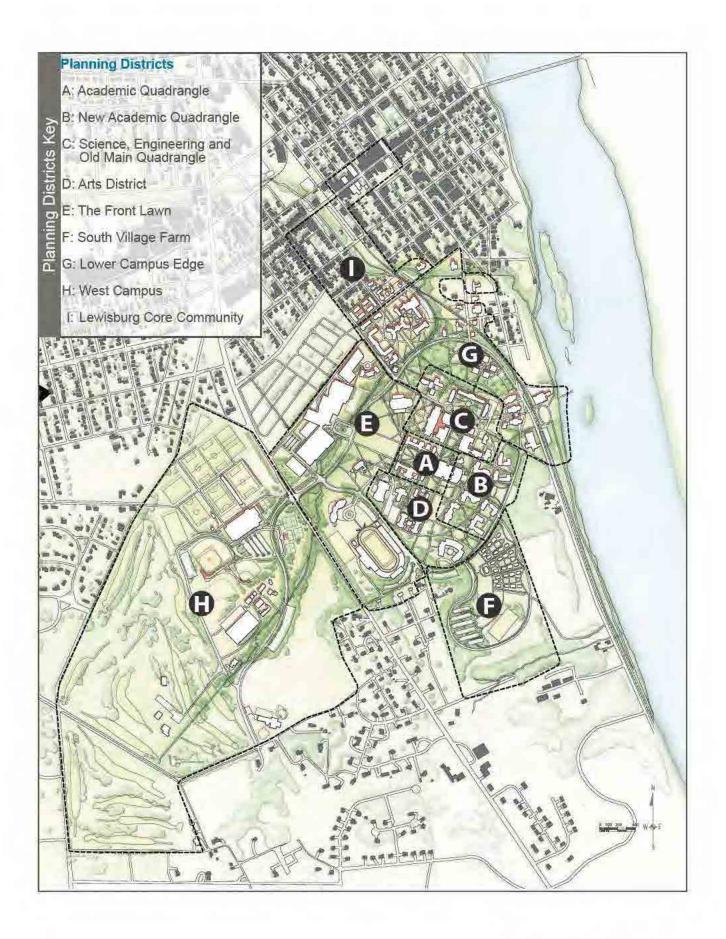
To achieve the goal of making the campus more pedestrian friendly, vehicular circulation will be eliminated within the campus core except for emergency access and service access, which will be provided to all buildings, largely by way of spur roads or smaller interior loop connections. In the case of the library, this approach may be accomplished from a new underground garage, through the basement of the new addition. Vehicular traffic will largely be routed along a new campus drive that circulates around the hilltop and connects to the existing peripheral roadway system. This simplified system will not only help orient visitors to the campus environment, it will also contribute to the sense of a consistent, accessible and familiar open space typology that relates to the academic core.

Overall Parking Strategy

Core parking facilities will be located strategically along the campus drive, providing access to the predominately pedestrian core campus. The majority of this parking will be accommodated in compact, screened lots or in parking structures. A large underground garage is proposed for the core campus under the new academic quad. Discrete lots will provide handicapped and visitor parking in direct proximity to the more public facilities. The elimination of street parking will open views to the campus landscape and improve vehicular and pedestrian safety along the roadways.

Overall Landscape

Throughout the campus, plantings will emphasize the bucolic qualities of the historic central Pennsylvania landscape, applying the agrarian and wooded features of that landscape as appropriate to the campus context. These plantings will generally feature native materials in informal arrangements composed primarily of trees. Linear foundation plantings will be minimized, as is appropriate to both the style and scale of the architecture. The exception to this planting emphasis will be the Academic Quad and some discrete garden areas as well as the riparian corridor of Miller Run, which should be planted with special concern for their potential to contribute to pedagogical uses and expand the campus arboretum.





Academic Quadrangle

Existing Buildings

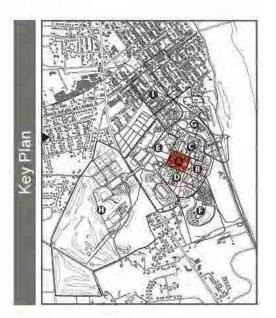
- · Vaughan Literature Building
- Marts Hall
- Coleman Hall
- Freas Hall
- Bertrand Library

Proposed Additions

 Potential for additions to Vaughan Literature Building, Marts Hall and Coleman Hall

Planning Principles

- · Enhance the open quad space with upgraded softscape and hardscape materials, lighting, and other site furnishings, with special attention to its use for commencement.
- · Develop seating or gathering spaces, or both, at building entrances to create a hierarchy of social space and transition from open quad space to indoor building space.
- · Explore the potential of an academic hearth space in Freas to include classrooms and conference space to support the academic activities of the departments in the quad.
- . The axis and view corridor from the guad to the lawn and the landscape beyond should remain open, maintaining the connection to the neighborhood and the region.



- Addition to Marts Hall
- Addition to Vaughan Literature
- Addition to Coleman Hall
- Addition to Coleman Hall









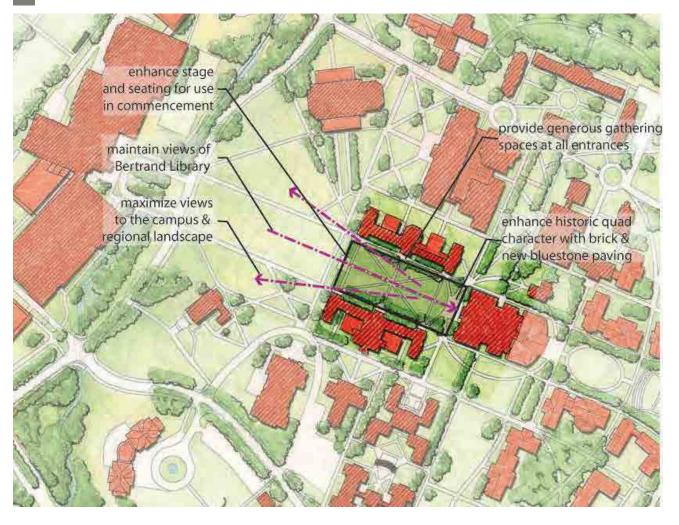


Program Goals

- The original Larson Quad will become an allacademic area, with a focus on humanities and social sciences.
- · Administrative functions will move out of Marts and Freas. This space will be used to house education and history (from Olin and Carnegie) and to create general purpose classrooms.
- The very small classrooms in Coleman and Vaughan will be converted to office use to provide incremental growth space for surrounding departments.
- Bertrand Library will be renovated (and will receive a major addition as part of the new academic quad) to meet teaching and learning needs for the 21st century.
- The potential of the front door location of Freas should be leveraged; one possible option is major teaching or conference spaces that would serve humanities and social sciences as well as the rest of the campus.

Open Space Design Strategies

- The five quadrangles that compose the hilltop campus core are conceptually similar, and their materials should be consistent. But their history, the design of the buildings that surround them, and ultimately their usage varies. This fact should be reflected in the design of the landscape components of which they are constructed. The existing academic quad space was originally the centerpiece of Larson's 1932 master plan. It is, in fact, one of the most unique open spaces on campus, maximizing the views both to the northwest landscape and towards the compelling, opposite façade of Bertrand Library. The character of this open space should be enhanced with brick and new bluestone paving, new plantings, and improved lighting and furnishings. The design should provide more generous gathering space with outdoor seating at all building entrances, so as to create more opportunities for chance meetings and spontaneous conversations.
- While maintaining the basic design intent of this memorable space, the proposed improvements should add a significant degree of sophistication to this historic place.
- Special attention should be paid to enhance commencement, which is held here with its stage at the west end and many rows of symmetrically arranged seating.
- Planting changes should emphasize native materials. The early spring blooming Serviceberry might be considered to replace the existing cherries, Asian introductions that have significant disease and pest damage. Alternatively, a more disease-resistant cherry species should be selected. Unfortunately, the native cherries are not aesthetically suitable for use in this type of formal arrangement.











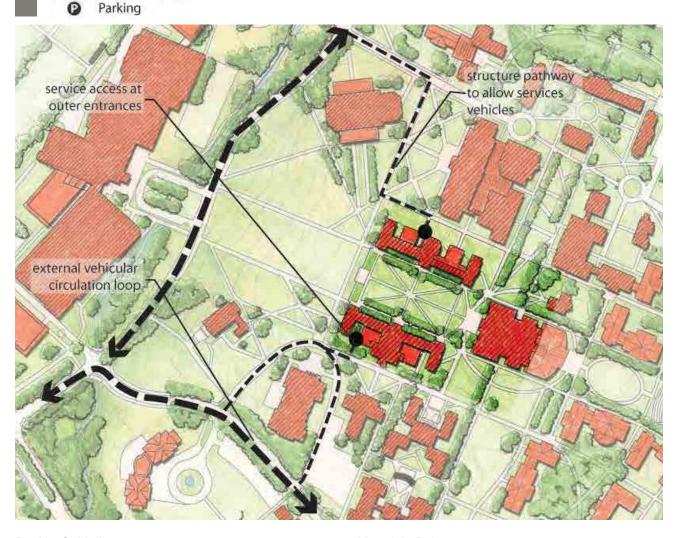
Pedestrian and Vehicular Strategies

Pedestrian pathways through this space will be greatly enhanced through the use of upgraded materials. These walkways will be more formalized and symmetrical in nature and sized for anticipated pedestrian traffic volume. Key paths will be structured to allow service vehicles on to the quad space for special event support.

Parking and Service Strategies

This quad is and will remain accessible to pedestrians only, with service access to all buildings occurring at their outer entrances or, in the case of the library, from below.





Design Guidelines

Buildings in this district should maintain the existing general character and intimacy envisioned by Larson.

Height

Buildings in this district should be three to four stories, conforming to the height of the existing buildings.

Materials Palette

Buildings should be constructed primarily of brick with slate roofs to complement the rest of the campus. Special care should be given to accent wood and stone banding and trim detailing to achieve an intimate, human scale.

A more formal palette of materials should be used for the landscape, including bluestone and brick pathways. Hardscape at building entrances should be expanded to create generous gathering areas with provision of site furnishings, including seating, and bike racks.



New Academic Quadrangle

A new academic guad will be created to the east of Bertrand Library, oriented along the same axis as the Larson Quad. The new academic quad presents Bucknell with an opportunity to bring together a broad cross-section of intellectual and social life, supporting evolving pedagogies and curricula. Buildings and landscape should support a transparent, flexible environment. A new campus drive loop road and significant underground parking will reinforce this district as a new front face of the University.

Existing Building

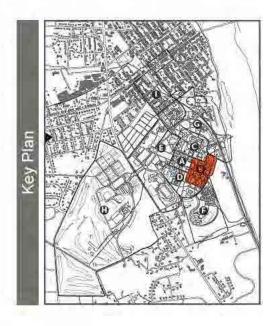
· Demosthenean Hall

Proposed Buildings or Additions

- Library addition (70,000-90,000 GSF)
- College of Management (50,000-65,000 GSF)
- Engineering / Natural Sciences / Math (50,000-65,000 GSF)
- Humanities / Social Sciences (15,000-30,000) GSF)
- Interdisciplinary Centers (39,000-44,000 GSF)
- Residential Colleges student housing & program space (100,000-125,000 GSF)
- Administration (16,000-31,000 GSF)

Planning Principles

· Keep the axis and view corridor to the south from Bertrand to the river open, reinforcing the University's connection to the open landscape beyond the campus. The role of individual buildings on the quad is to create a distinctive sense of place through a cohesive language and relationship. The addition to Bertrand should be the primary architectural gesture to the green.



- Add a significant amount of academic space by adding onto Bertrand Library, creating a new entrance to the east, and creating a center of interdisciplinary teaching and research by providing new facilities for humanities, social sciences, engineering, natural sciences, and the College of Management as well as several interdisciplinary centers.
- Develop a hearth space to serve as a major gathering area in the Bertrand addition.
- Create space appropriate to the function of senior administrative offices, including the Offices of the President and Provost.
- Provide parking under the new quad lawn for a significant number of cars.
- Create a 21st-century academic village by providing student housing and program space in support of the residential colleges.

Residential College 8

Quad with Parking Below

Parking









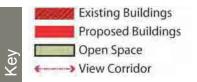


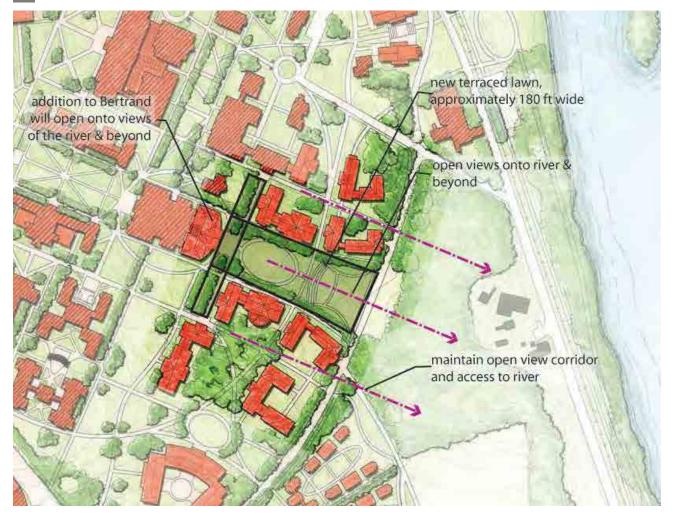
Program Goals

- · A terraced lawn will cover three levels of underground parking.
- The thematic focus of this quad is interdisciplinary living and learning. Interdisciplinary academic facilities will provide flexible growth space for humanities, social sciences, engineering, and sciences as well as the interdisciplinary centers and institutes, to promote cutting-edge scholarship and research at the overlaps of these disciplines.
- · A new building will contain the College of Management.
- · The residential colleges will include program and social space as well as residences for students who will participate in a unique living and learning environment for their four years at Bucknell.
- · Offices for university administrators will relocate here from Marts.

Open Space Design Strategies

- The new academic quad to the east of the library's future expansion and the related adjacent spaces present a significant expansion to this hilltop zone, offering an opportunity for the development of a similar but distinctive courtyard. It should be designed to create a memorable space in a style consistent with the architecture of the campus while looking to the future.
- The scale of the guad would be a width of approximately 180 feet or some dimension between that of the Larson Academic Quad and the Science and Engineering Quad. The goal will be to create a series of quad spaces each distinctive and memorable.
- A special opportunity exists here to maximize views to the east, of both the Susquehanna River and the mountains beyond, vistas that have not been appreciated on campus for some generations. Beginning with a major addition to Bertrand, the guad will open onto views of the farmland and river. The ultimate design of the space and the proposed library addition should be particularly mindful of this potential.













Pedestrian and Vehicular Strategies

The new academic quad will be accessible only to pedestrians. The existing vehicular circulation will be relocated to the periphery as part of the strategy of an expanded campus loop road, and access for parking and service vehicles to this quad will be off of this new road.

Pedestrians will access the quad by new pathways around the library and by the new mid-slope path, which will link all the new and existing spaces around the core of this district.

Parking and Service Strategies

Both parking and service for the facilities within this quad will be provided under the new quad.

Design Guidelines

General

Buildings in this district should extend the general character and intimacy of the campus core.

Height

Buildings in this district should conform to a height of three to four stories, three stories adjacent to

Parking



Bertrand Library and four stories as the topography slopes away to the south.

Roof Forms

Primary roof forms should be pitched with limited use of flat roofs at entranceways, loggias, and secondary building wings.

Scale and Proportion

Building facades should have a base, middle, top organization. Fenestration should be vertically composed in a 2-to-1 or similar proportion. The scale of buildings in this quad should mediate

between that of the Larson Academic Quad and the science and engineering quad.

Materials Palette

Buildings should be constructed primarily of brick with slate roofs to complement the rest of the campus. Special care should be given to accent wood and stone banding and trim detailing to achieve an intimate, human scale. Standing seam copper roofs may be used on secondary roof forms and accent elements such as dormers and entranceways.



Science, Engineering, and Old Main Quadrangle

Existing Buildings or Programs

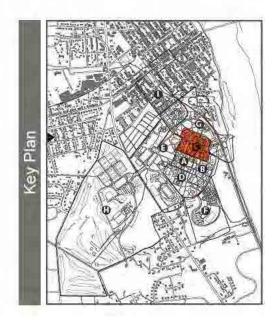
- Computer Center
- Olin Science
- · O'Leary Center
- · Biology/Rooke Chemistry Building
- Delta Upsilon
- · Carnegie Hall
- · Roberts Hall
- Trax Hall
- Kress Hall
- Taylor Hall
- Botany Building
- · Breakiron Engineering
- · Phi Kappa Psi

Proposed Buildings or Additions

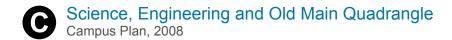
- Olin / O'Leary / Biology / Rooke Chemistry connector
- Taylor / Botany connector/addition

Planning Principles

- Create a cohesive open space that connects Bertrand to Carnegie by limiting traffic on 7th Street to emergency use only.
- Restore Carnegie and create a major social hearth space.
- Develop a major social gathering or event space by enclosing the open space between the Biology and Rooke Chemistry, Olin, and O'Leary Buildings to create an academic heart space.
- Add onto and connect the Taylor and Botany Buildings to create additional academic space.



- Breakiron Addition
- 2 Connector to Olin/O'Leary/ Biology/Rooke Chemistry
- Addition/Connector to Taylor/Botany
- Parking











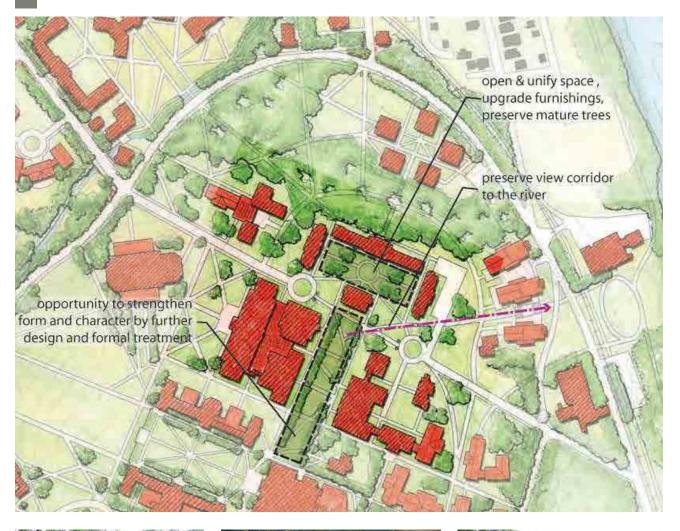
Program Goals

- The science and engineering quad will be a mixed-use zone, with academic facilities for the sciences, engineering, and social sciences, student housing, social space, and academic support services.
- Dana and Olin will be renewed to allow them to be used for contemporary research and teaching.
- Delta Upsilon has the potential to be converted from residential use to academic or administrative use.
- Taylor and Botany with an addition will have the potential to add academic space and provide a bridge between the uphill and downhill campus environments.
- The Computer Center will be upgraded to better serve the needs of Library and Information Technology.

Open Space Design Strategies

- This district, to the northeast of Bertrand, consists of a series of open spaces framed by Biology / Rooke Chemistry, Olin, O'Leary, Dana, the Computing Center, Robert, Trax, and Kress Halls, and contains within it the Carnegie Building.
- It also connects to the lower campus district via Taylor and Botany.
- The science & engineering quadrangle, defined by the Carnegie-Bertrand Library, has a longer axis, and might perhaps be named a mall, in this historic landscape idiom. With its trees and lighting defined somewhat by the accident of history (that it had been a parking lot), this space presents an opportunity for further design refinement to strengthen its form and character, and further complement the interesting surrounding buildings. Its alternate loci, focusing on Carnegie and the Bertrand Library cupola, present an obvious opportunity for a more formal treatment.
- The differences in the open spaces within this district reflect interesting contrasts. The oldest such space the Roberts-Carnegie quadrangle has a marvelous tall canopy of old oak and other deciduous trees, with a distinctive central, circular seating area and items of historic brownstone masonry. We recommend that the foundation plantings of yews be removed for the most part from this site to open and unify the space so it can be appreciated at its full scale, and that its paving and furnishings be upgraded, taking care not to compromise the older trees. The trees should continue to be carefully managed to ensure their survival.

Key

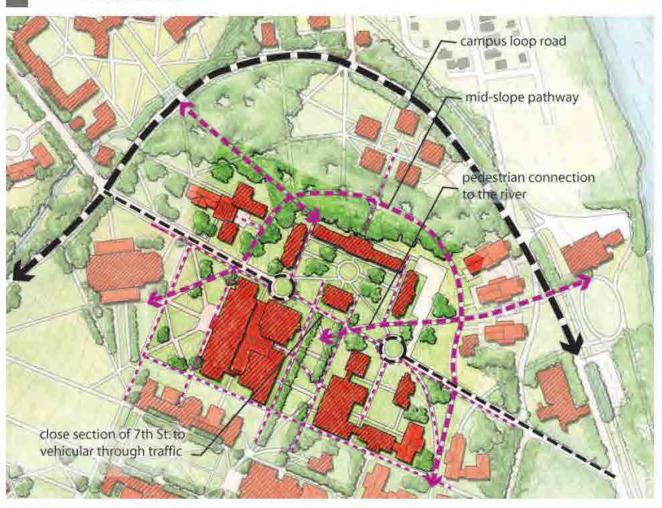








Science, Engineering and Old Main Quadrangle Pedestrian & Vehicular Circulation Strategies



Pedestrian and Vehicular Strategies

7th Street between Trax and Kress Hall will be closed to through-traffic to enhance the pedestrian nature of the district and to provide an opportunity for a celebratory space in front of Carnegie, maintaining access for emergency and service vehicles.

Parking and Service Strategies

This district will primarily be pedestrian. Handicapped-accessible, service, and visitor parking will be provided at the two termini of the newly closed 7th Street section.

Design Guidelines

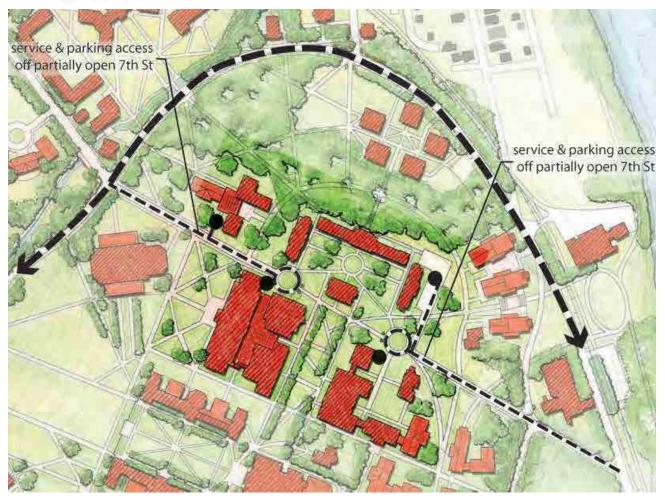
General

Buildings in this district should extend the general character of the Old Main Quad.

Height

Buildings in this district should conform to a height of three stories. Connectors that cover existing open courtyard space should be sensitive and allow penetration of natural light. Secondary Service Access Service Courts

Parking



Roof Forms

Roof forms should be pitched roofs for primary building elements and flat for special feature elements such as entrances and porches.

Scale and Proportion

The scale of a building should create harmony with the diverse scale of buildings found in the district. Generally, a vertical window proportion should be adhered to.

Materials Palette

Buildings should be constructed primarily of brick with slate roofs to complement the rest of the campus. Special care should be given to accent wood and stone banding and trim detailing to achieve an intimate, human scale. Standing seam copper roofs may be used on secondary roof forms and accent elements such as dormers and entranceways.



Arts District

Existing Buildings

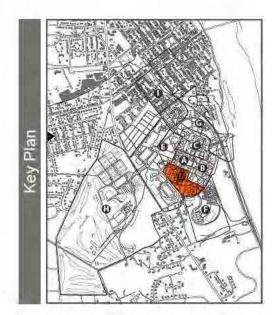
- Swartz Hall
- McDonnell Hall
- · Weis Center for the Performing Arts
- · Sigfried Weis Music Building

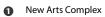
Proposed Buildings or Additions

New Arts Complex (90,000-120,000 GSF)

Planning Principles

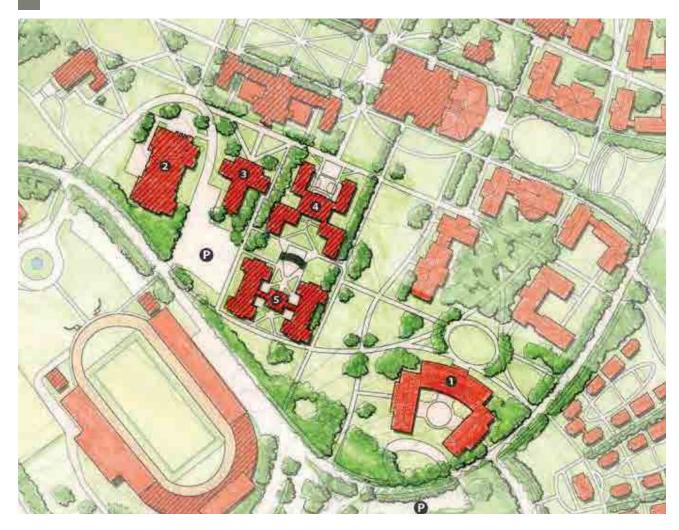
- Connect the Weis Performing Arts Center, Weis Music Building, the theater in Coleman, and the New Arts Complex with an arts walk.
- Create a social space, café, or both as part of the New Arts Complex.
- · Allow the integration of theater and dance.
- Create a central ticket office for the performing arts facilities.





- Weis Center for the Performing
- Weis Music BuildSwarz HallMcDonnell HallParking Weis Music Building





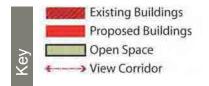


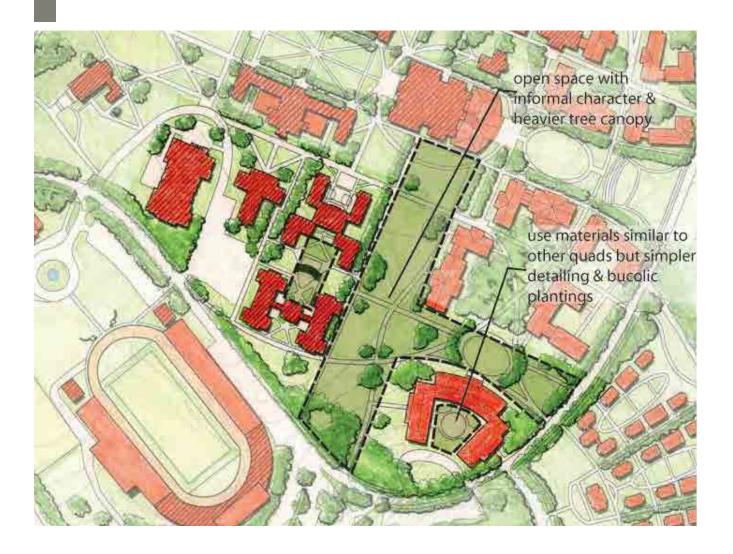




- A major new academic facility to the southeast of McDonnell will house art, art history, the Stadler Center, the Bucknell Press, and the Samek Gallery.
- Additional space will be created to allow the consolidation of theater and dance between Coleman and this new facility, allowing Tustin to be repurposed or removed, and will include a Black Box Theater and space to support the Weis buildings and technical services.

- This is a transitional area to the pastoral landscape of the South Village Farm and to the greater regional landscape beyond.
- The landscape of the arts district will have a somewhat more informal character than that of other districts. Its materials should be as those of the other quads, but its detailing should be simpler and planting patterns more bucolic.
 The tree canopy in this quad should be heavier than in the new academic quad to provide more intimacy.







Pedestrian and Vehicular Strategies

The pathways of this quad should be less rigid, following desired lines in a more organic manner, in keeping with the bucolic nature of the space. Ease of cross connections to the South Village Farm should be considered.

Parking and Service Strategies

Event parking for the Weis Center will remain.

A garage beneath the new academic quad and dedicated parking adjacent to the New Arts

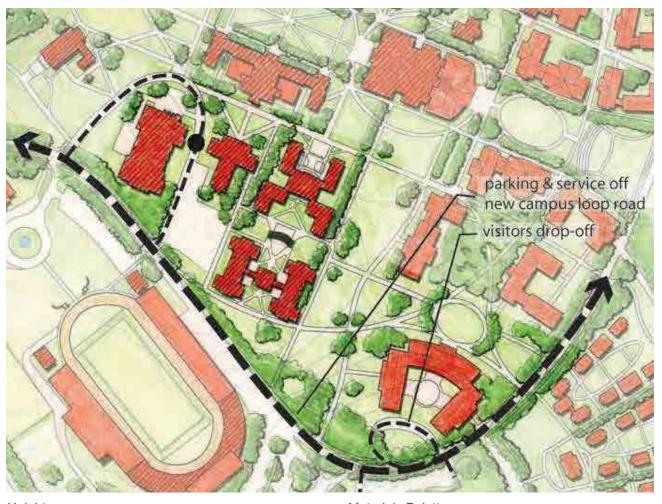
Complex will provide event parking for this facility. A drop-off for the new facility will also be provided.

Design Guidelines

General

While buildings in this district should blend with the general character of the rest of the campus, the design should complement the function. The site allows for the creation of a signature moment as buildings will be in view from across the Susquehanna River and the new campus drive.





Height

Buildings in this district should conform to a height of three to four stories: three stories adjacent to the campus core and four stories as the topography descends to the south.

Roof Forms

Primary roof forms should be pitched, with flat roofs used when required by the function of the building and for accents, at the entranceways, loggias, and secondary building wings.

Materials Palette

Building should be constructed primarily of brick with slate roofs to complement the rest of the campus. Special care should be given to accent wood and stone banding and trim detailing to achieve an intimate, human scale. Standing seam copper roofs and glass may be used on secondary roof forms and accent elements such as dormers and entranceways.



The Front Lawn

Existing Buildings or Programs

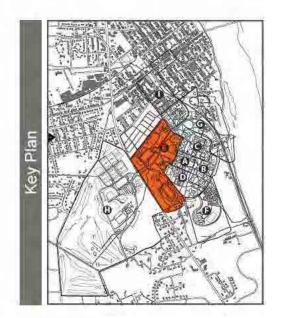
- · Gerhard Fieldhouse
- Krebs Fitness Center
- Davis Gymnasium
- · Kinney Natatorium
- Sojka Pavilion
- Elaine Langone Center
- Rooke Chapel
- Mathewson Memorial Stadium
- Football practice field

Proposed Buildings or Additions

- Welcome Center/Admissions/Alumni (40,000-50,000 GSF)
- Inn and Business Center (65,000 GSF)
- Interfaith Center (10,000-20,000 GSF)
- Elaine Langone Center addition (University Center total of 140,000 GSF)
- Stadium addition/renovation (Stadium total of 30,000-50,000 GSF)
- Two parking structures (500 cars and 300 cars)
- Wellness Center (15,000-25,000 GSF)

Planning Principles

- Create a comprehensible entry experience anchored by a new Welcome Center at the Route 15 entrance and an Inn and Business Center at Moore Avenue and 7th Street.
- Improve the safety of the Route 15 entrance by relocating it.
- Remove parking from Moore Avenue and replace it with structured parking and strategically located surface lots.
- Create a true University Center by adding onto and upgrading the Langone Center to create significant student organization and activity space.



- Welcome/Admissions/Alumni Center
- 2 Inn and Business Center
- Wellness Center
- Parking Deck
- 6 College of Management
- 6 Stadium Addition
- Stadium Addition
- 3 Stadium Addition
- E. Langone Center Addition
- Parking





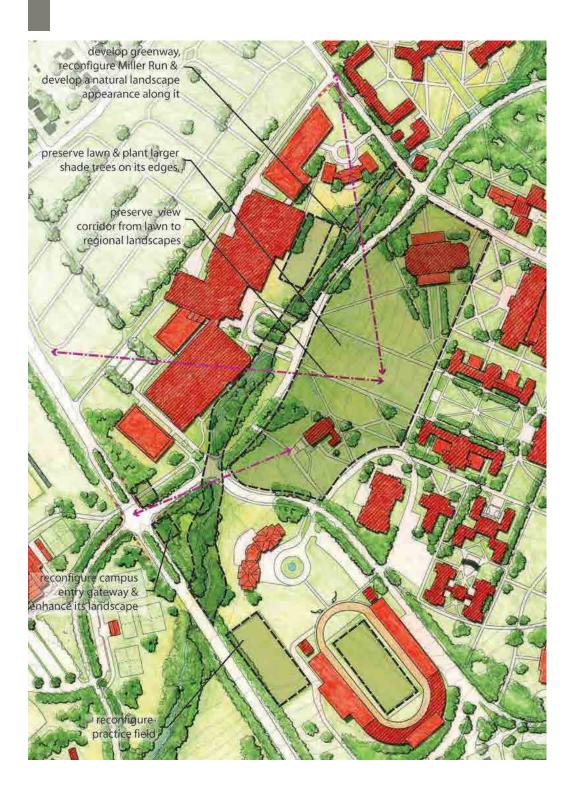






- This district is composed of the greenway system, the majority of the public facilities on campus and the iconic front lawn that extends from Freas to the Miller Run and the athletic complex beyond.
- A reconfigured entryway at Route 15 will provide access to a new Welcome Center that will contain Admissions and an Alumni Center.
- A new or an addition and major renovation to the Langone Center will create a revitalized university center that will include centralized dining, student organization and activity space, a multicultural center, student mail, and a campus store.
- An Interfaith Center will replace the offices, program and worship space currently in the Berelson Center, the Newman Center, and the Muslim Prayer Room, and will provide space for other spiritual and religious traditions on campus.
- Renovations and additions to the stadium will address structural issues as well as upgrade the locker rooms and press box.

- This entry landscape is a visual statement of the University's dedication to the principles of sustainability and stewardship.
- The lawn is also one of the most sacred, historic spaces on campus. By removing parking along the entrance route of a newly laid-out, curvilinear Moore Avenue and by reconfiguring Miller Run to a more naturalistic, meandering stream course, the implementation of the plan will transform the image and experience of the campus landscape.
- This zone will be characterized by a more pastoral, natural appearance, although not wholly wild. It will have a more manicured appearance, as in the manner of a gentleman's farm of the 19th century or a designed, but romantic, rural park (in the spirit of Frederick Law Olmsted's designs). Featuring irregular bosques and small coppices of native trees and shrubs, particularly with wetlands tolerance along the stream and river courses, the resulting spatial character should be meandering, rhythmic and somewhat undulating.
- It is across this landscape that the public facilities of Welcome Center, Athletics, and the Inn and Business Center will be first viewed – and out across which their visitors will gaze.
- The image of the lawn itself is etched in the memory of alumni and visitors alike. It should be preserved, but also framed with larger shade trees planted on its flanks to give it definition and emphasize the forced perspective of the view out to the hills beyond.
- The trees along Moore Avenue should be interrupted at its base to enhance the axial vista to the entry. In keeping with the more bucolic character of this zone, the orientation of buildings in this zone should relate to the topography and should relate to the topography and not to any imposed geometric order.



- The lesser man-made objects within this district should recall some of the older campus landscape features and be distinct from the materials of the buildings' architecture. A few remnant bridges, walls, stairs and gate piers are of a distinctive local brown-red, rusticated masonry. Although this exact material may no longer be readily available, a similar material, possibly of nearby quarried limestone or a cast stone of a matching color, could be used in a somewhat rustic style of construction, similar to traditional campus features.
- An arched bridge of rough block masonry spanning Miller Run and viewed from Rt. 15 and the new entry drive could be complimented by a similarly detailed low wall supporting signage announcing Bucknell at the entrance.
- Gateposts, fence posts, site walls and similar structures should retain this character.
- Roadways and drives should be minimal widths, not necessarily curbed, but more curvilinear and should sit lightly on the land.
- In this landscape the standard campus light with its acorn shape takes on a sympathetic character as it recalls its 19th-century, municipal-park roots.
- The reconfiguration of Miller Run and the treatment of the landscape within this riparian zone will not only create an improved aesthetic image of the University, it will also provide a more contextual setting for the campus and its connections, both natural and pedestrian, to both the town and the region.

Pedestrian and Vehicular Strategies

Moore Avenue will be reconfigured to enhance aesthetic impressions of the campus and provide a far safer approach to campus. The redesigned vehicular circulation system gives the opportunity for safer pedestrian circulation as well. The greenway along Miller Run will offer a park-like pedestrian

route connecting the two main campus entrances and the Inn and Business Center and Welcome Center.

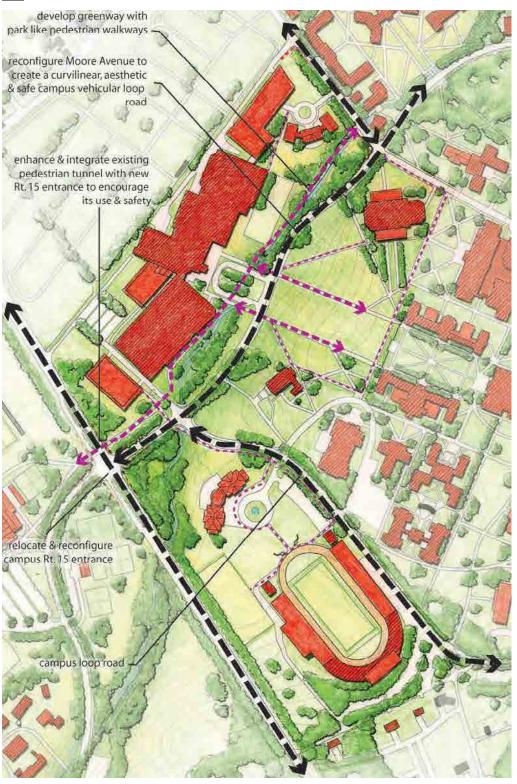
New entrance from Route 15

A dramatic and safer new entry to the University will be created by the relocation and reconfiguration of the intersection of Route 15 and Moore Avenue/Smoketown Road. Shifted to the north, this new design will be far safer than the existing interchange; it will be developed in conjunction with the State Highway Department and will include turning lanes, improved sight-lines, bicycle and pedestrian crossings, possibly medians and the integration of the existing pedestrian tunnel to encourage its use and safety.

Parking and Service Strategies

Structured parking to the southwest of Gerhard Fieldhouse and as part of the Inn and Business Center development will allow removal of parking from Moore Avenue. Much of the existing surface parking north and east of the stadium will remain to serve the stadium and the Welcome Center. Surface parking will also be provided adjacent to the Wellness Center.





Design Guidelines

General

Buildings in this district should extend the general character and intimacy of the campus core.

Height

Buildings in this district should conform to a height of three stories.

Roof Forms

Primary roof forms should be pitched with limited use of flat roofs at entranceways, loggias, and secondary building wings.

Scale and Proportion

Building facades should have a base, middle, top organization. Fenestration should be vertically composed in a two-to-one or similar proportion.

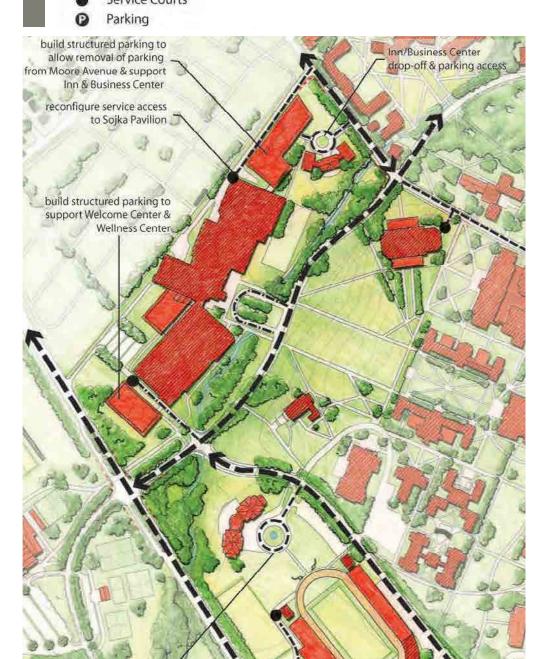
Materials Palette

Buildings should be constructed primarily of brick with slate roofs to complement the rest of the campus. Special care should be given to accent wood and stone banding and trim detailing to achieve an intimate, human scale. Standing seam copper roofs may be used on secondary roof forms and accent elements such as dormers and entranceways.



Welcome/Alumni Center drop-off







South Village Farm

Existing Buildings

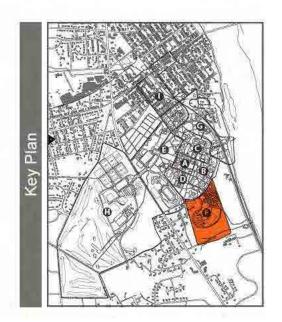
None

Proposed Buildings or Additions

- Student Housing three phases (201,000-234,500 GSF; 600-700 beds)
- Community Center / Café / Field Support (40,000 GSF)
- Recreation Field

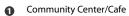
Planning Principles

 Development of part of the farmland to provide an integrated housing cluster will allow the removal of the Mods from west campus and provide enhanced housing for Greek organizations, affinity groups, and theme housing.





View of South Village Farm



- 2 Student Housing
- Recreation Field
- Field Support
 - Parking





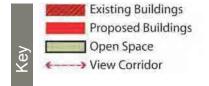




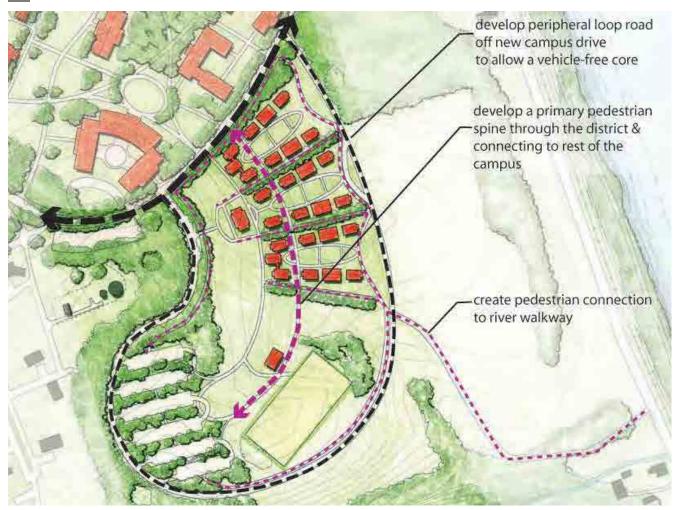


- The village will provide 600 beds, a community center that will serve as a major hearth space with meeting rooms and classrooms, and athletic and recreation amenities.
- Dedicated surface parking will serve this district.

- The landscape of the South Village Farm and of the outlying areas to the south offer new opportunities for the University to demonstrate its commitment to sustainability and stewardship. Its siting should promote ties to the landscape in terms relative to orientation, terrain, drainage and native plantings.
- Views out to the Susquehanna and the mountains beyond should be considered and emphasized in all aspects of design.
- Sustainable design elements should dictate the final open space uses and interaction with natural systems.
- Larger landscape elements such as playing fields and parking should be nestled into the slope and screened with pastoral clusters of trees on the University side and dense evergreen vegetation towards the neighborhood to the west.
- Landscape materials, furnishings, and detailing should conform to those recommended for the greenway and pastoral open space zone.
- This district may also include dedicated conservation areas along the ravine to the south, which, while wild, still may need some active periodic management taking into consideration wildlife, succession, vegetation diversity and maturities, aesthetics, and more passive recreation uses. Such wilder areas present compelling educational opportunities, partly offering long-term study and monitoring comparisons in this era of change.







Pedestrian and Vehicular Strategies

Separation of pedestrian and vehicular traffic will enhance safety and the campus landscape within this zone. A loop road around the periphery of the district will allow the core to be vehicle-free.

Parking and Service Strategies

Service to all of the major buildings or clusters will be from the loop road. Temporary parking will be allowed at major entries, but all permanent parking will be sequestered at the end of the loop.

Design Guidelines

General

Building and landscape design, use, and construction should follow guidelines that promote sustainable living and learning and be responsive to the regional environmental systems.

Height

Buildings in this district should conform to a height of three to four stories.







Roof Forms

Primary roof forms should be pitched with limited use of flat roofs at entranceways, loggias, and secondary building wings.

Scale and Proportion

The scale of buildings in this district should be that of an intimate residential neighborhood community.

Materials Palette

Building materials used should allow for meeting sustainable goals. The primary construction material should be brick with a combination of solar panel and slate roofs. Special care should be given to accent wood and stone banding and trim detailing to achieve an intimate, human scale. A variation of these materials may be used on secondary roof forms and accent elements such as dormers and entranceways and to further sustainable principles.



Lower Campus Edge

Existing Buildings or Programs

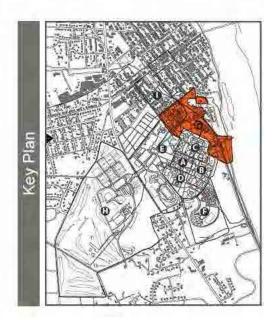
- · Hunt Hall
- · Harris Hall
- Larison Hall
- Smith Hall / Bucknell Cottage
- Vedder Hall
- 7th Street House
- · 7th Street Café
- Stuck House
- Gateway Residence Center
- Bucknell Hall
- · Lowry House
- Alumni House
- Judd House
- · Cooley Hall
- · President's House
- In-town fraternities (Phi Gamma Delta, 64 University Ave., 23 University Ave.)
- Facilities Shop (building to be reused for river recreation support)

Proposed Buildings or Additions

- New Student Apartments (85,000 GSF; 225 beds)
- River Recreation Center (reuse Facilities Shop building)

Planning Principles

- The lower campus edge district stretches along the base of the hill topped by Roberts and includes housing in the existing Vedder/Smith/Larison Hall quad and the Gateway Apartments.
- Open up views to the Susquehanna River.
- Create a physical connection between the campus and the natural regional landscape and the Susquehanna River.
- Preserve the Oak Grove.
- Decompress existing dorms to allow re-creation of lounges and other amenity spaces.
- · Provide a variety of housing types.

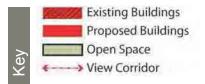


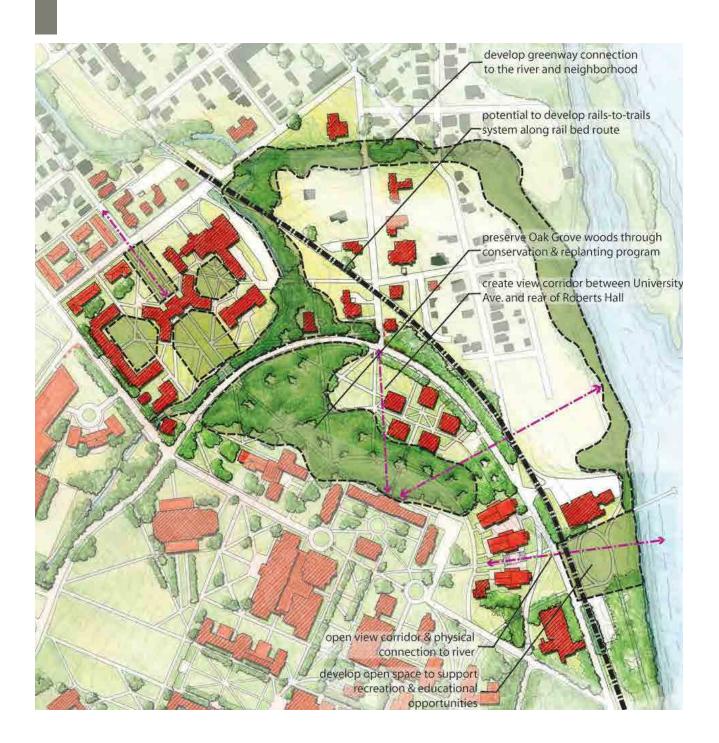




- New student housing will add 225 beds in this district. The student housing location and design will help connect the campus to the Susquehanna River by negotiating the steep slope between River Road and the Old Main Quad and by opening up views to the river.
- A connection to the Susquehanna River will be created via a recreation pavilion at the site of the existing Facilities shops.
- Public Safety will be relocated (need to confirm location).

- The dramatic views and physical access to the Susquehanna River from this district provide a special opportunity for the University to connect with larger regional systems of ecology and recreation.
- This district is characterized by large trees, flood terraces, and a series of steep embankments, flattening out at the valley floor where the river, while very wide, is typically only a few feet deep.
- Since the river is prone to periodic flooding, building development is restricted near the shore, but this area provides valuable opportunities for education, scientific study, recreation, and aesthetic appreciation.
- The active railroad tracks somewhat challenge unlimited water access but also offer a longerterm opportunity for a rails-to-trails system along the rail bed route.
- The Susquehanna River corridor is the largest scale landscape in the region and offers distant views both up and down river from campus, but also across the flood plain to the ridge mountains beyond. Interestingly, the reverse is also true: one of the first historic views of the Bucknell shows Old Main on the hilltop, viewed across a foreground of the river from the opposite shore. It continues to offer a public vista of the campus. The new housing site identified in this district transitions steep slopes, which will allow multileveled entries to the structure and support a new pedestrian access from the hilltop to the river.
- Due to location and scale, the landscape development of this site should be treated as an interstitial space or garden zone, although the rest of the district will fall into the greenway and pastoral open spaces landscape zone.



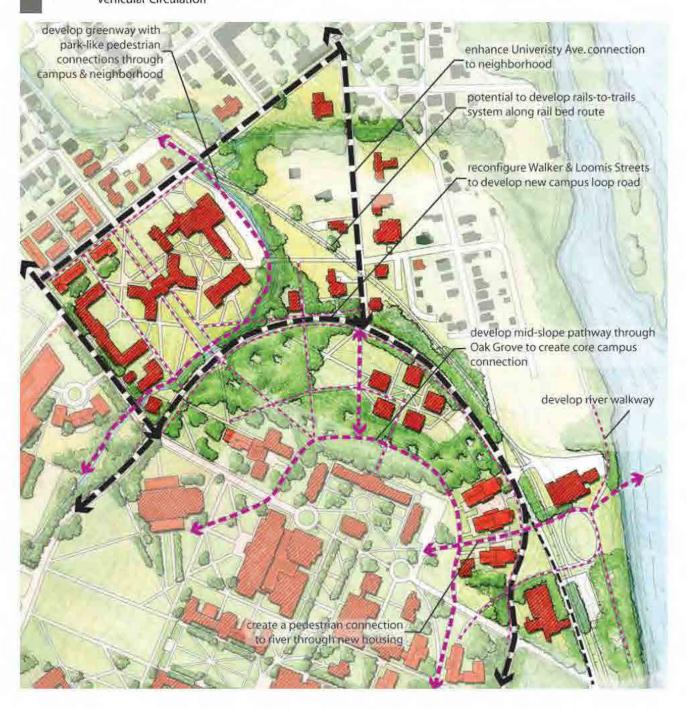


• Another bucolic element of this zone is the wooded hillside oak grove, particularly along the north slope below Roberts Hall. Planted soon after the University's founding, it has always been appreciated for the intimacy and shade it afforded, especially for spectators during warm weather football games, once held at its base. The rather steep incline now has a few paved paths and steps, but is covered with an attractive mixed canopy of predominantly oak trees, although recently inter-planted with a mixture of species. It provides the campus with a vivid spatial character and is one of the campus's sacred spaces. It should be preserved through a conservation and replanting program, although consideration should be given to allow the land to revert to forest floor rather than mown lawn.

Pedestrian and Vehicular Strategies

Major pedestrian connections down to the Susquehanna will be a feature within this district, as will campus core connections on the mid-slope pathway through the oak grove.

Key



Parking and Service Strategy

Much of the smaller parking lots in the district will be removed, although some of the larger lots will be reconfigured and remain. The existing parking lot adjacent to the Gateway Apartments will be reconfigured to create a more campus-like experience. Service and visitor parking will be provided off the end of the truncated 7th Street. The existing parking lot near the existing Facilities Shops building will remain.

Design Guidelines

General

Buildings in this district should extend the general character of the campus and be sensitive to the topography and existing vegetation.

Height

Buildings in this district should conform to a height of three to four stories: three stories adjacent to the Old Main Quad, and four stories as the topography falls away to the south.

Roof Forms

Primary roof forms should be pitched with limited use of flat roofs at entranceways, loggias, and secondary building wings.

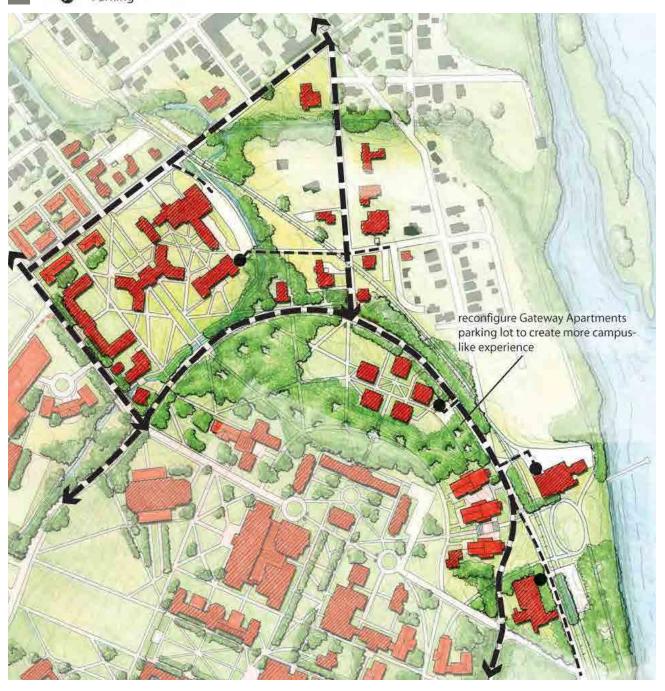
Scale and Proportion

Building facades should have a base, middle, top organization. Fenestration should be vertically composed in a two-to-one or similar proportion. The scale of buildings in this quad should mediate between that of the Old Main Quad and Vedder/Smith/Larison/Hunt Hall. Scales of buildings along St. George Street should mediate between the existing campus buildings and the Lewisburg neighborhood buildings.

Materials Palette

Buildings should be constructed primarily of brick with slate roofs to complement the rest of the campus. Special care should be given to accent wood and stone banding and trim detailing to achieve an intimate, human scale. Standing seam copper roofs may be used on secondary roof forms and accent elements such as dormers and entranceways.

- Secondary Service Access
- Service Courts
- Parking





West Campus

Existing Buildings or Programs

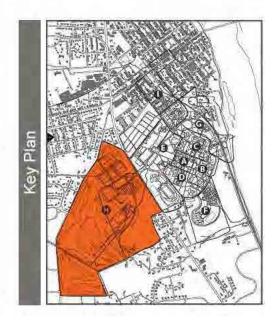
- · Farm/Art Barn Complex
- · Golf Course Buildings
- · Sunflower Day Care
- · Athletics Pavilions

Proposed Buildings or Additions

- Recreation / Athletics Center (100,000-120,000 GSF)
- Tennis courts (10 courts)
- · Baseball/Softball field and Support facility
- ROTC (10,000 GSF)
- Vivarium (15,000-20,000 GSF)
- Shops/Warehouse/Facilities (75,000-100,000 GSF)
- Golf Center (10,000-15,000 GSF)

Planning Principles

- More fully integrate the west campus into the main campus across Route 15.
- Reinforce the Miller Run as a greenway connection to the region.
- · Identify major views to large scale landscapes.
- Support walking and running activities with dedicated roadway lanes and pedestrian pathways.
- Shops Warehouse and the Office of Facilities will be co-located in this district.

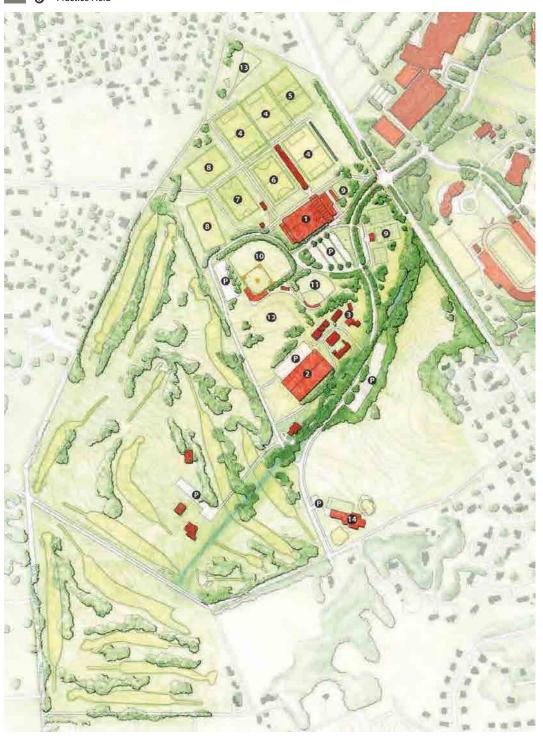


Key

- Recreation/Athletics Center
- Shops/Warehouse/Facilities
- 8 ROTC
- Athletic Field
- 6 Athletic Field
- 6 Athletic Field
- Athletic Field
- Practice Field

- 2 Tennis Courts
- Baseball Field
- Softball Field
- Baseball Practice Area
- Batting Cage
- Golf Center
- Parking





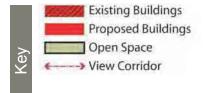


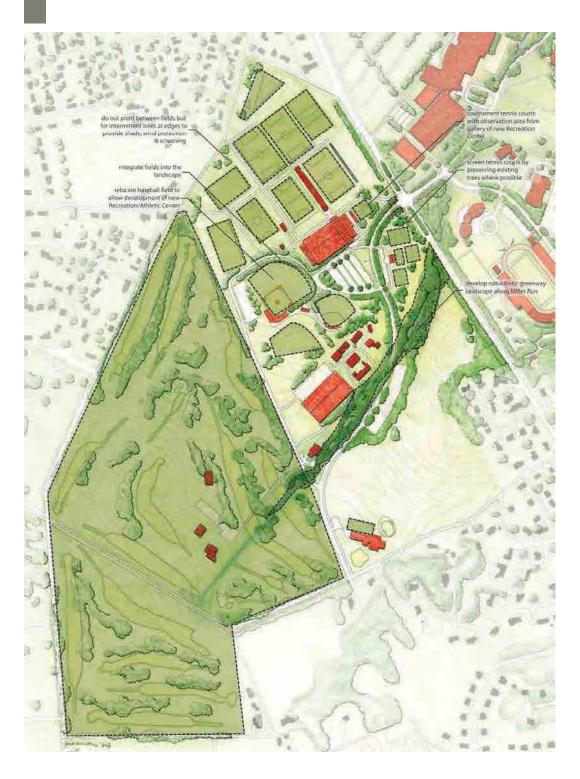




- In the west campus district, the demolition of the Mods and the Animal Lab will provide a major redevelopment opportunity.
- A new Recreation and Athletics Center that provides team workout space, offices, and four indoor tennis courts will allow the renovation of Gerhard Fieldhouse to provide additional recreational space.
- Facilities staff growth will require additional office space. The warehouse is losing space to the Cogeneration Plant, and additional warehouse facilities are needed to allow removal of storage trailers on campus as well as to provide improved centralized receiving and distribution.
- A new vivarium will replace the Animal Lab with a more secure facility.
- ROTC will occupy the Farm House or another facility.

- Within the west campus athletics area will be a
 major indoor track structure with several related
 functions as well as significant surface parking.
 This will necessitate the relocation of the baseball
 field; however, the new baseball stadium can
 be constructed without immediately interrupting
 current field use.
- A small group of tournament tennis courts may be sited at one end of the building, where play could be observed from a second floor room and gallery.
- While the zones immediately around athletic buildings' entrances and services should be treated similarly to those in the urban campus and peripheral developed zone, in fact, much open space and many planting treatments should be incorporated into the landscape treatments as an attractive complement to the typically larger scale of these buildings.
- The pedestrian pathways linking all the current athletic buildings to the pedestrian tunnel and current and future west campus developments should be designed with a relatively more bucolic character, meandering through the more naturalistic landscape of the greenway and along Smoketown Road beyond.
- A generous amount of secure bicycle parking is recommended near the new building entrance to promote bicycle use.
- Trees should define drives and walkways, while plantings such as shrub masses may supplement grading to help screen parking and adjacent uses and contribute to the integration of the athletic complex into the larger greenway system.
- Efforts should be made to integrate the fields into the landscape, despite their conspicuously level surfaces and edges that are often fenced or otherwise defined.





- Although planting between fields is not recommended, some intermittent trees at field edges can provide welcome shade and wind protection, particularly for spectators, as well as screening to minimize the visual impact of lighting for nighttime play. (New lighting for future fields should be carefully designed and managed to minimize glare as much as possible, especially relative to adjacent residential neighborhoods.)
- Where possible, tennis court fencing should be screened by adjacent trees, which can also assist in moderating wind. For the proposed site adjacent to Route 15, there are many existing trees that should be preserved and that will help to buffer traffic noise from court play.
- Team bus drop-off zones should be provided, although long-term bus parking is not required at this site.
- The golf course is a largely self-contained but rich landscape. Although use of this expansive tract of campus is dedicated for its exclusive purpose, the course perimeter paralleling the local road network provides attractive groupings of trees and vistas across the open greens. Because the layout of the course comes right to the edge of narrow roadways, some compromises or modifications of course design may be required to mitigate the often-voiced safety concerns for pedestrians walking and jogging along them. The newly proposed structure for the driving range should be screened with native plantings, and the adjacent parking designed to blend with the surrounding environment as best possible.

Pedestrian and Vehicular Strategies

The realigned Smoketown Road will provide safer access to both the west campus athletic facilities and to the neighborhoods beyond. Similarly, well-integrated jogging and bike paths will be amenities for both the campus community and the greater town population.





Parking and Service Strategies

Parking will be concentrated in front of the Athletics Center, as well as in discrete lots, including environmentally friendly overflow lots, adjacent to major sports venues. New secondary egress routes will be provided for enhanced event circulation. Dedicated parking will be provided for the Office of Facilities, warehouse, and shops, as well as for the day care and driving range.

Design Guidelines

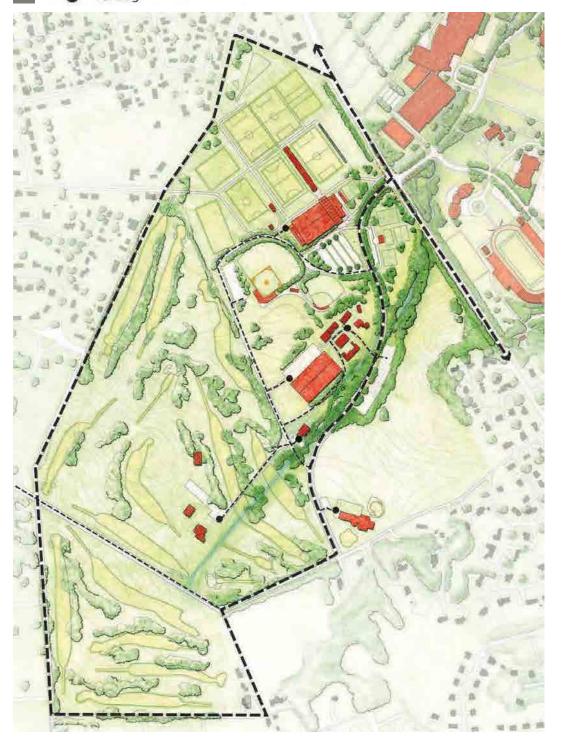
Scale and Proportion

The program types planned for the west campus suggest the need for large structures. Building design should consider strategies to breakdown scale and volume. Also consider design details that address sight lines from Route 15 and the pedestrian approach from the Miller Run corridor.

Materials Palette

Architecturally the materials should have a baseline connection to the core campus palette of brick with trim colored cream or white, while being careful that concepts are being honest with the program being accommodated and not working too hard to look like the Georgian academic buildings located east of Route 15.

- ► --> Primary Service Access
- ---- Secondary Service Access
- Service Courts
- Parking





Lewisburg Core Community

Existing Buildings or Programs

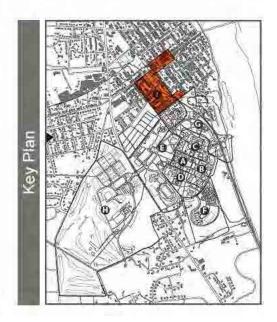
- Hulley House
- · Leiser House
- · Martin House
- Carey House
- Edwards House
- · Sigma Alpha Epsilon

Proposed Buildings or Additions

- Student Housing Village (60,000-75,000 GSF; 120 beds)
- Bookstore / Retail (25,000 GSF)
- Administrative Offices (45,000 GSF)
- Gallery / Performance Space (25,000-30,000 GSF)

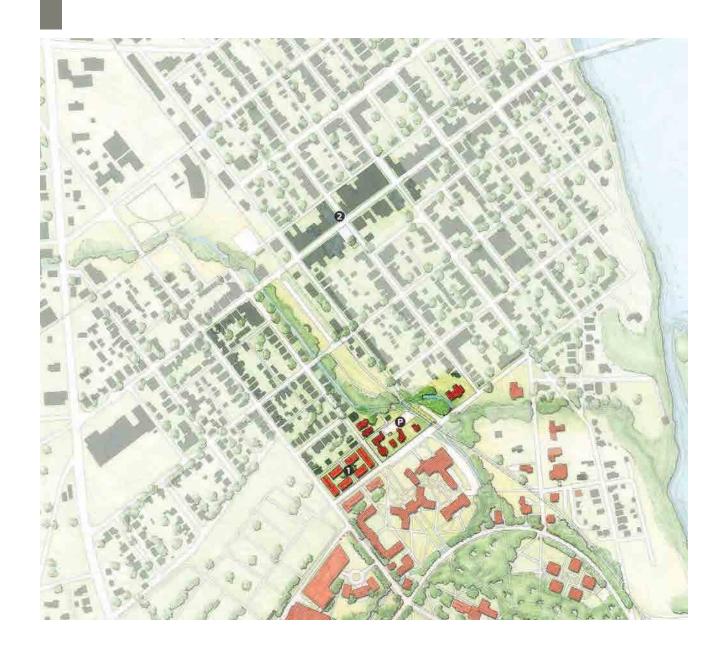
Planning Principles

- · Strengthen connection to Market Street.
- Support village vitality by developing facilities to support campus and community needs.
- Develop loft-style transitional housing for seniors along St. George Street.



- Student Housing Village
- 2 Bookstore/Retail/Admin Offices
- Parking





Program Goals

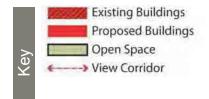
- Loft-style housing units containing 120 beds will be built on the northern edge of St. George.
- Village vitality will be supported by developing an art gallery, bookstore, and administrative offices on Market Street.

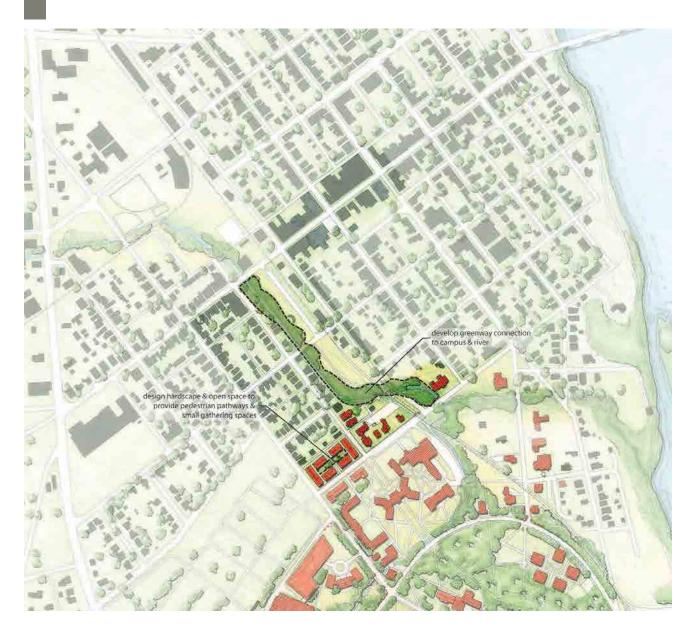
Open Space Design Strategies

- The landscape of these areas must respond to their generally intense use by pedestrians, bicycles, and vehicles.
- The design of this zone demands thoughtful attention to entrance plazas, courtyards, and exterior gathering spaces to accommodate both high-volume pedestrian circulation and more passive gathering. Where possible this design should create clear separation of bicycle and vehicular circulation. Places for recreation, whether for a half-court of basketball, a pickup game of volleyball, or Frisbee should be incorporated, particularly in proximity to residences.
- Interstitial spaces between buildings in this zone are critical. Appropriate plantings should be incorporated to buffer different uses. The hardscape design should provide for logical pedestrian pathways while at the same time defining small gathering spots.
- Closer building proximity and heavy use dictate
 a more intense degree of design and richness
 of detail to these key outdoor spaces. There are
 real opportunities for gardens in these spaces
 and for the potential expression and incorporation
 of artistic, cultural, religious, and scientific
 manifestations, such as sculpture, structure, or
 natural geologic objects.

- Those few parking lots that must be incorporated within this zone should have a high level of design and provide a sense of security. They should be designed with appropriate pavement, curbing, visual screening, lighting, and signage, as well as clear identification of spaces and routes for individuals with restricted mobility. Where possible, service areas, including dumpster locations, should be located in association with parking, the design of which accommodates the necessary circulation routes for large refuse collection vehicles. Where possible, fencing or walled structures that complement adjacent buildings should be used to screen these otherwise conspicuous elements.
- Site materials in this zone should be particularly sensitive to both the vocabulary of the public streetscape and the adjacent architecture, if it is at all directly connected; for example site walls should match building materials.
- Entrance plaza pavements should be more finished than adjacent concrete sidewalks, using unit paver such as brick where possible.

Benches, trash receptacles, lighting, and signage, selected from the hierarchical site furnishing vocabulary discussed elsewhere, complete the picture.(It should be noted that in this zone in particular, provision for snow storage or removal should be carefully considered since, given the high intensity of use, it can make a critical difference to safety and comfort during much of the academic year. In light of diminished bicycle use in the winter, a paved zone for bike storage with an internal drain can double for snow storage.)







Pedestrian and Vehicular Strategies

The vehicular and pedestrian systems for this district will be the public ways of the town.

Parking and Service Strategies

Servicing will largely be off the street and parking on the street, supplemented by the new garage associated with the Inn and Business Center.

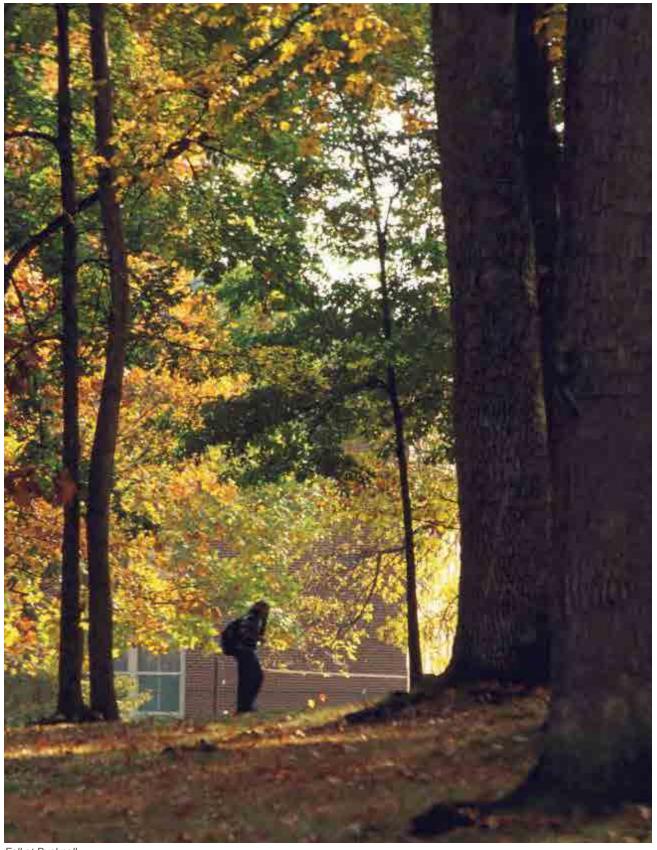
Design Guidelines

Potential areas for development along portions of 7th Avenue and Market Street should consider the historic character of the architecture and work closely with HARB in an effort to meet their objectives.



Transitional zones along St. George and 5th Street should be more transitional in both style and scale. The prototype – which includes transitional institutional, retail, and upper-story loft residential space – should be considered. As development approaches the intersection of St. George and 5th, flood plain considerations will have to be considered at the first floor.

Scales of buildings along St. George Street should mediate between the scale of the lower campus district and the Lewisburg neighborhood buildings.



Fall at Bucknell

Acknowledgements

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Consultants

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