

CAMPUS MASTER PLAN 2004

A comprehensive analysis and vision for the future of the campus

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Consultant Information:

Program and Space Analysis - Anthony Beckett

Landscape Master Plan - Saucier + Flynn

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PREFACE

A great university must be prepared to expect great things of itself. To this end, the Board of Trustees and Chancellor of the University System of New Hampshire require the development and implementation of a Campus Master Plan, under the direction of the President. This comprehensive long range plan will guide the physical development of the campus with a vision that will span at least two decades, tempered by limited financial resources and the University's ability to secure external funding.

The current plan, adopted in 1994, supports the University's vision with pragmatic, forward-focused initiatives touching all aspects of the institution, including the physical plant, real estate, changes in academic programs, and administrative structure. It has enhanced the pedestrian environment at the academic core, improved connection of the campus quadrants, and addressed space needs.

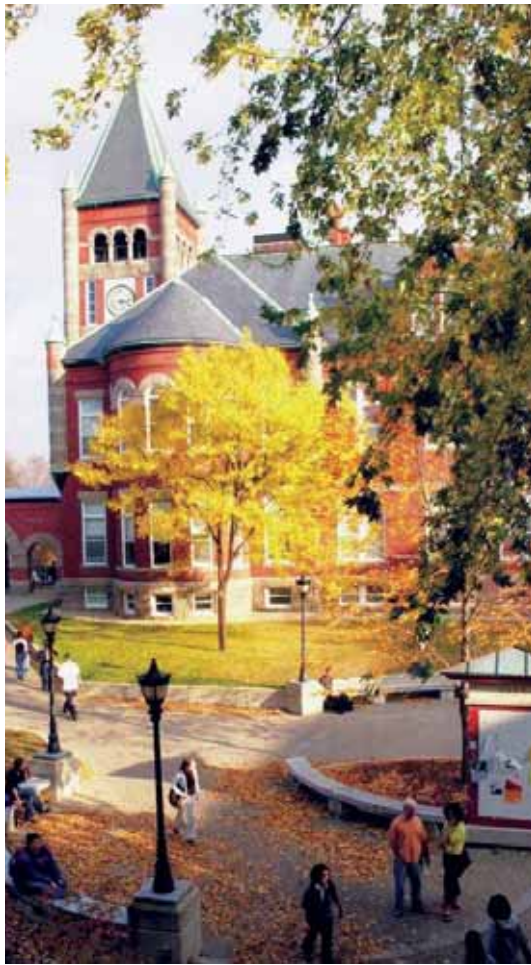
Mid-point in the Campus Master Plan's implementation, the University established an ambitious Academic Plan grounded in five strategic themes: Discovery, Engagement and Outreach, Resourcefulness, Institutional Effectiveness, and Community. The Master Plan required updating to reinforce this academic vision and to reflect the evolving needs of the campus. The University retained Ayers/Saint/Gross, Architects + Planners from Baltimore to lead the process. They were joined by landscape architects Saucier + Flynn from Lebanon, NH; transportation specialists Howard Stein Hudson from Boston; and space planner Anthony Blackett from Boston.

An institution with high expectations faces numerous challenges that are best met by soliciting diverse opinions. The master plan update process was inclusive and dynamic in all phases, which were: Observations, Concept Design, Precinct Studies, Final Plan, and Design Guidelines. The Steering Committee guided the effort and provided feedback and direction from the administration, faculty, students, staff, and representatives of the Town of Durham. The Campus Master Plan Committee gave broad representative input. For 11 months, beginning in December 2002, a series of interactive public forums and constituency meetings gathered thoughts for planning parameters and continued to generate dialogue as the plan developed.

All involved in this process acknowledge and emphasize that the plan is a long-term vision and roadmap for campus development. The successful implementation of any specific elements must be sensitive to phasing in order to minimize negative impacts on campus life. Further, the plan must be managed flexibly so that there is always the capacity to adjust to new circumstances, including financial opportunities or constraints. While we have set for ourselves a 20-year roadmap, we know interim updates and adjustments will be required.

EXECUTIVE SUMMARY





The New England College



The New England Village



The Native Landscape

INTRODUCTION

The New Hampshire College of Agriculture and Mechanical Arts moved from Hanover to Durham in 1893, and the campus developed gradually while retaining much of the intimacy and scale characteristic of a New England liberal arts college. After World War II, it evolved to accommodate the spectrum of teaching, research, and outreach expected of a modern land-grant, sea-grant, and space-grant university. This campus core of approximately 300 acres is bounded by the Durham town center to the east, by family neighborhoods to the south and north, and by large areas of open land owned by the University to the west. The campus core plus these open lands comprise the 1,100-acre main campus. Beyond this lie several outlying parcels of fields and forests owned by the University in Durham and neighboring communities that in total with the main campus form an extended campus of 2,450 acres.

The campus of the University of New Hampshire is a blend of three distinct images – the quintessential New England college, village, and native landscape. These three types of places are intertwined, creating a traditional spirit that is appealing and memorable. They are widely perceived to provide a positive setting for the living and learning experience envisaged by the Academic Plan, and a strong framework that must be respected as the campus matures.

Durham and the University have a symbiotic relationship, which has benefited both over the years. The University provides jobs and services in the community; brings more than 16,000 customers into town; voluntarily pays fees to the town for children living on campus and to the town for fire service; operates the campus police department; maintains campus roads; shares responsibility for water and sewer systems; and provides educational, arts, cultural, athletic, and recreational venues to the community. The town provides an attractive and safe setting, a residential community for families and students, and a small town center convenient to the campus.

Looking out over the next 20 years, the Campus Master Plan needs to adequately support the University's teaching, research, and public outreach priorities to achieve the goals of the Academic Plan. Specifically, the plan must address the following issues and expectations:

- The Academic Plan calls for integrating academic and non-academic aspects of student life into a more coherent experience; strategically growing University-wide research; strengthening interdisciplinary teaching and research activities; employing appropriate state-of-the-art technology to enhance the educational experience; becoming more competitive in attracting the most capable motivated students, and the highest quality faculty and staff; with the overall goal of not being all things to all people, but rather focusing on areas that are consistent with our mission and in which the University can excel.
- The University wants to limit growth, projecting an undergraduate enrollment population between the current 10,850 and a maximum of 12,000, and a graduate student population between the current 2,150 and a maximum of 2,500. Faculty and staff could increase by no more than 100 members each.
- There is a need to house more undergraduate students on campus, but within philosophical and financial limits. There is broad consensus among all constituent groups that the University needs to augment the types and amount of affordable family housing for graduate students, new faculty, and visiting scholars. This is critical for research growth and recruitment.
- Many of the primary academic and residential buildings are, or soon will be, well over 50 years old and in need of major renovations, including 60 percent of the housing stock. There are serious life safety code and ADA deficiencies in numerous buildings that need to be addressed. A small fraction will be demolished. The deferred maintenance value on the Durham campus is estimated to be \$370 million, while the replacement value is \$1.09 billion.
- The campus layout is fundamentally sound, but there is a need for some significant modifications to specific areas to reinforce the



Campus Landscape



Proposed Landscape Improvements

walking campus, resolve pedestrian/vehicle conflicts, and alleviate frustrations associated with bringing vehicles to the campus core. A key aspect to these issues is the barrier created by the railroad tracks through the center of main campus.

- The campus core landscape that was developed in the early 1900's is a defining image for the University, but it is degenerating and needs to be ecologically rejuvenated. The woodland groves that are interspersed around the campus core need to be nurtured and sustained. The outlying fields and forests are needed programmatically and should be preserved.
- Decades of constant use have taken their toll on the infrastructure and common utility distribution systems. Key roads and pathways have deteriorated, and the natural setting is frayed.
- The Town and the University are intertwined and there are critical issues of impacts on the community and opportunities to enhance relationships with neighbors, businesses, and the community at large.

All of this must be accomplished within a persistent environment of financial constraint by finding solutions that create the greatest value added for the long-term vitality of the institution.



Proposed Campus Plan



Existing Campus Plan - 2004



The University's buildings and grounds must support academic endeavors and reflect the institution's values, particularly as they relate to the new Academic Plan. To reflect these initiatives, the following planning goals were developed:

1. Meet the Needs of the Academic Mission
2. Blend Living and Learning Environments
3. Improve Campus Access and Mobility
4. Balance the Needs of the Built and Natural Environments
5. Enhance the Character of the University and Its Relationship to the Greater Community

GOALS OF THE PLAN



Science Quad - after



Science Quad - before



Agricultural and woodland areas west of the railroad tracks and within extended campus

MEET THE NEEDS OF THE ACADEMIC MISSION

The plan identifies approximately 1.6 million gross square feet (gsf) of campus-wide projects to support teaching, research, outreach, and academic services. These initiatives will be implemented gradually using a variety of constrained funding sources. This approach includes renovation of 788,000 gsf of existing outdated space, replacement of 344,000 gsf in buildings that are beyond repair or need to be demolished for other purposes, and development of 481,000 gsf to address current space deficiencies, provide growth for research, strengthen targeted programs and initiatives, and provide for a modest increase in student population.

The plan strategically reorganizes the uses of some existing academic buildings that are slated for renovations. Migrating these functions will make them more effective and efficient and will reflect the changing emphasis and structure of academic programs. Much of the new space for academic purposes will be created as additions to existing buildings as they are renovated. There are also opportunities to reinforce the physical linkages between teaching and research by the way new facilities are located and by redefining roads and pathways to enhance mobility among buildings. More administrative services and public outreach functions need to be relocated to the west edge of campus, providing more space for teaching, research, and academic support functions in the campus core.



Forest Park Rendering - after



Forest Park Rendering - before

The large tracts of agricultural fields and native forests throughout the western portion of the main campus, as well as the outlying parcels of the extended campus, are extremely valuable to the academic mission and need to be retained and maintained to continue to educate students, provide economic support for the Animal Science Programs, sustain a natural resource of the state, and secure venues for *in situ* field research and recreational activities.

Other essential outlying facilities provide important research and outreach activities. These include the Jackson Estuarine Lab, the Coastal Marine Lab, and the Browne Center for Outdoor Education. Proximity to the campus and location in the appropriate environmental settings is critical for each of these programs to continue to succeed.

BLEND LIVING AND LEARNING ENVIRONMENTS

The Academic Plan emphasizes the relationship between living and learning, and the Campus Master Plan reinforces this premise with more on-campus undergraduate, graduate, and family housing.

For undergraduates, the residential experience strengthens the transition to campus life, supplements the classroom experience, and eventually offers further independence in anticipation of life beyond the University. This strategy provides housing for 60-70 percent of undergraduates, compared to 50 percent now. Virtually all freshman and sophomores will be housed close to the academic core, where a mix of teaching spaces could be incorporated into new residence halls. The plan anticipates having 30-45 percent of juniors and seniors living on campus in apartments and suites at the edges of the residential ring, compared to 20 percent now. On-campus family housing for graduate students, visiting faculty, and recently hired faculty is planned to increase from 150 to 370 units.



PHOTO: B. MILLER 2003
Aerial View from The Gables - before

IMPROVE ACCESS TO AND MOBILITY AROUND THE CAMPUS

As the University grew throughout the 20th century, the railroad tracks to the west and the town center to the east have been physical boundaries that have kept the campus core compact and comfortably walkable. The Campus Master Plan maintains and enhances this commitment to a walkable campus by adjusting the circulation patterns of service and transit vehicles and removing private vehicles from many pathways in the academic core. Consolidation and limited expansion of parking in addition to adding to the network of streets by connecting portions of the campus now separated by the railroad tracks will significantly ease congestion on Main Street and improve access. The plan also recommends the removal of small interstitial parking lots and thru-traffic from the academic core. Eliminating cul-de-sacs and dead ends will make vehicular circulation more fluid and return open space to a pedestrian network while still being mindful of service and ADA access. Finally, the plan calls for a series of comprehensive transportation improvements built on system infrastructure investments, expanded transit options, and enhanced visitor information to support long-term campus development. The Plan is consistent with transportation demand management (TDM) strategies adopted in Spring 2003 to alleviate the traffic congestion and parking problems that frustrate so many campus users.



College Way - after



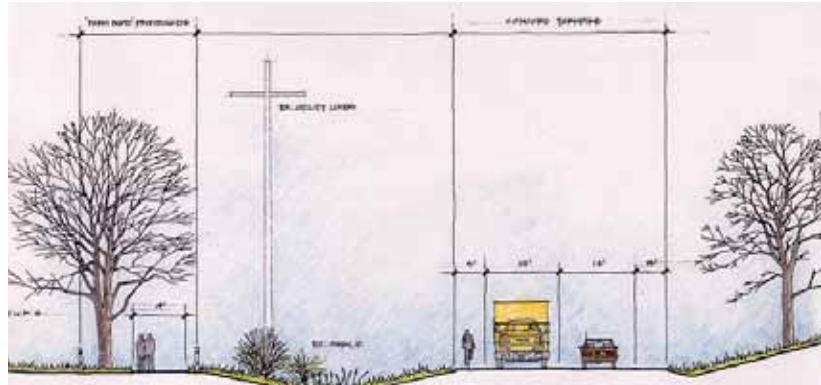
College Way - before

BALANCE THE NEEDS OF THE BUILT AND NATURAL ENVIRONMENTS

Creating usable open space will improve the daily life and functioning of the University. There must be a balance between providing the functional elements of a vital campus and respecting the landscape. The grounds act as the common experience for the entire University community, making the landscape critical to the development of a memorable place. The Campus Master Plan includes a supplemental Landscape Master Plan that makes a series of recommendations to preserve, restore, and enhance the campus ecologically as a living/learning environment.

Preserving the health of aged trees and establishing a tree replacement program will revitalize the collegiate character of the campus, while repairing natural areas that are stressed by the campus activities will improve the University's legacy.

The plan proposes celebrating the Ravine by creating a consistent threshold with low stone walls and small gateways. Throughout the campus core, the plan transforms the pedestrian experience and creates places for small gatherings and daily interactions using paving, site furnishings, and signage. UNH is one of the few land-grant, sea-grant universities in the nation to retain agricultural land and forests immediately adjacent to the campus as a major educational and open space resource. The large tracts of agricultural fields and native woodlands of the extended campus should be retained and maintained in balance with the continued development of the campus core, as well as along Main Street and Concord Road to the west edge.



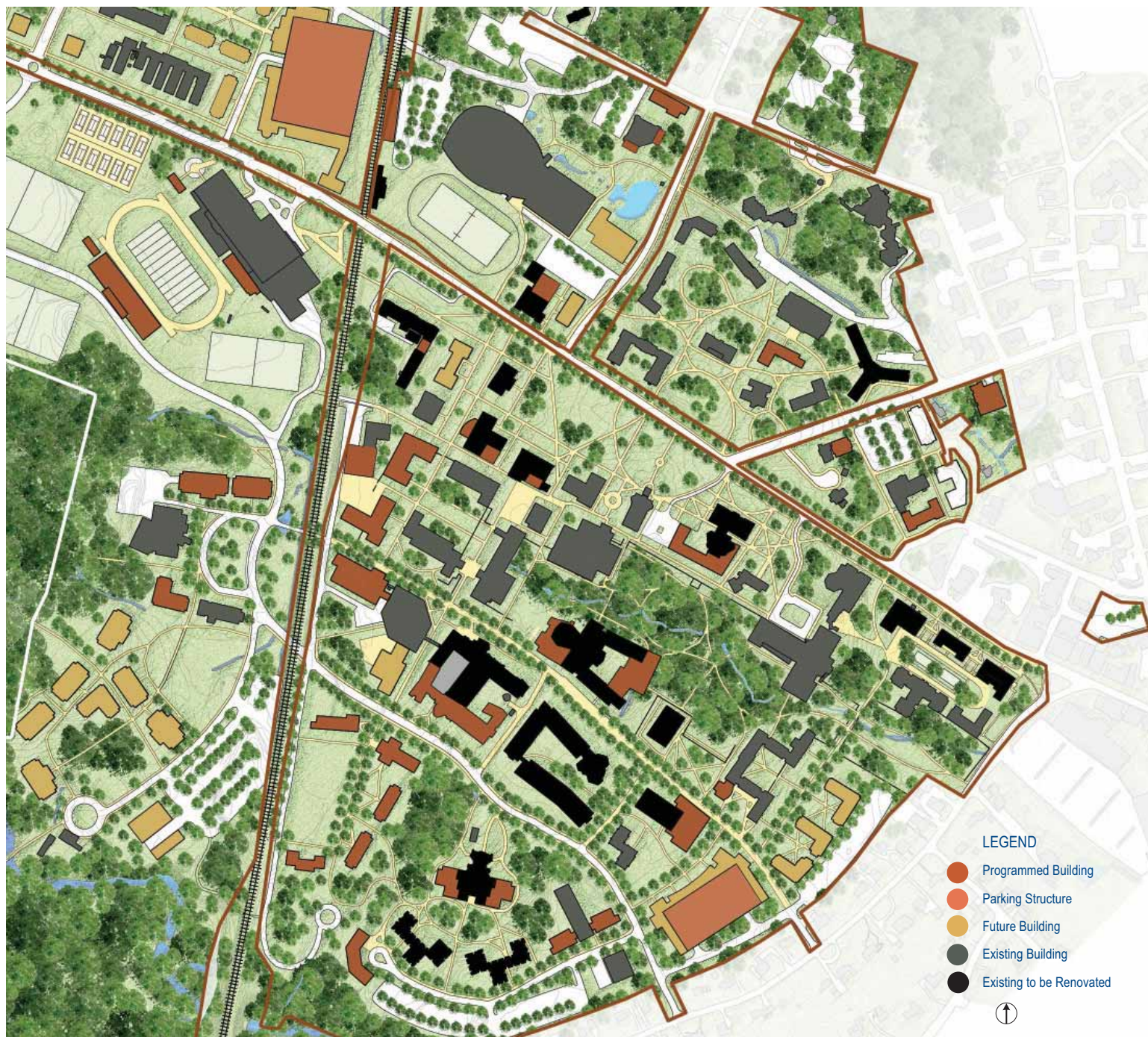
Proposed Concord Road Profile

ENHANCE THE CHARACTER OF THE UNIVERSITY AND ITS RELATIONSHIP TO THE GREATER COMMUNITY

A strong, cohesive campus environment must extend into Durham, reinforcing the character of the residential neighborhoods and picturesque Main Street.

Gateways to the campus and between on-campus locations create a sense of place. The main gateway begins on Concord Road at the intersection of Route 4 on the western edge, with its agricultural fields and paddocks, athletic fields, and service buildings, all of which are set against woodlands. The plan recommends this gradual transition be strengthened with the consolidation of equine, dairy, and community farm components. Toward the rail line, the fields will transition from agriculture to athletics and the buildings from agrarian to residential to academic. The result is a shift from the imagery of the New England landscape to the collegiate grounds at the heart of the campus along Main Street.

The University needs to reinforce appropriate connections with the downtown, and to maintain clear edges with the surrounding family neighborhoods. Each of these will help to transition the pace of activity and the scale of buildings from campus to town. Campus grounds at all entrance routes should denote a gateway into the campus realm and create a consistent demarcation of arrival at the University. The Campus Plan maintains a ring of student residences as the transition from the academic core to Durham neighborhoods. It encourages a variety of civic and commercial functions in the downtown, which can serve many needs of the campus population and provide an important amenity to the entire community. The university acknowledges that some students will continue to prefer to live off campus in the downtown area, at the same time it supports the Town in its pursuit of preventing student rentals in single family home neighborhoods. The Plan addresses the desire of the university and many townspeople for a significant increase in the proportion of undergraduates housed on campus.



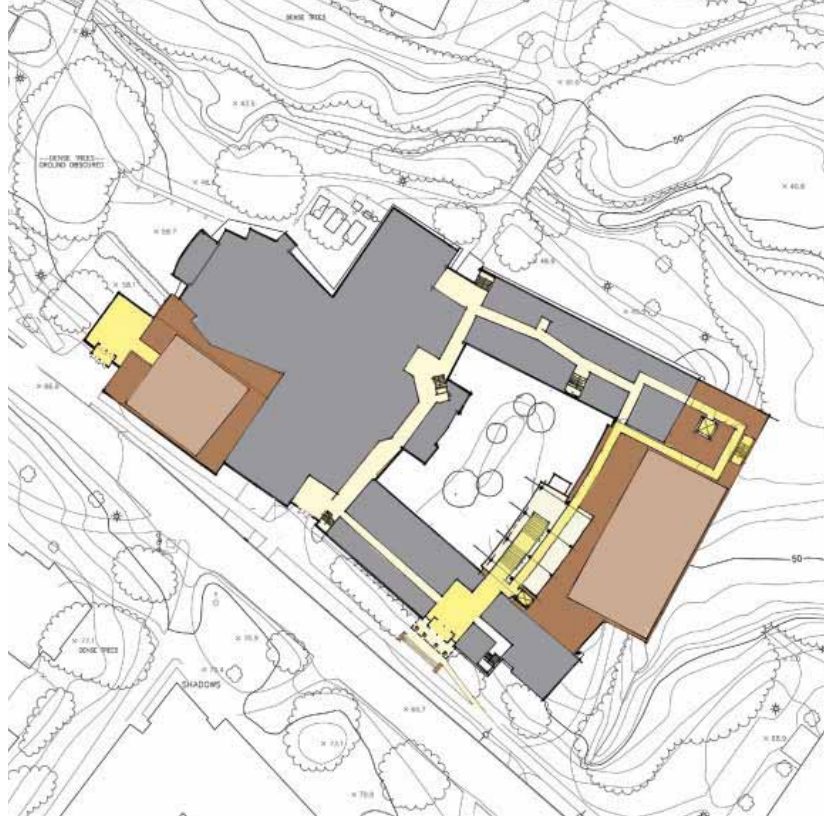
Proposed Academic Core Plan

The following summaries note specific plan recommendations for campus facilities, land use, and campus improvements. Phasing details are included in Appendix 3 under four broad categories: Phase One recommendations will be pursued rapidly with further study and the identification of funding. Phase Two projects address immediate needs and pursuit of funding will follow immediately after Phase One. Phase Three elements are not the highest priority, but should be considered as funding is available. Phase Four outlines the elements that will adequately address the remaining needs that are anticipated over the 20-year planning horizon. The following is a summary of the specific elements in all four phases of this Campus Master Plan.

ELEMENTS OF THE PLAN



Kingsbury Hall expansion - model



Paul Creative Arts Center Site Plan

COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES

One of the primary buildings for the College is Kingsbury Hall. Renovations will begin in 2004, providing adequate space for the foreseeable teaching needs of the four Engineering disciplines, Mathematics, and Computer Science. However, the spaces of the remaining College departments need consolidation and rationalization. DeMeritt Hall is in the worst condition of all the academic buildings. The plan proposes it be expanded and renovated for Physics. Parsons Hall is to be renovated for Chemistry and other laboratory needs of the College. Earth Sciences will be accommodated as part of a renovation and addition to James Hall.

COLLEGE OF LIBERAL ARTS

Psychology is currently spread between Conant, its departmental base, and two old houses. It would be difficult to expand Conant to consolidate the department, therefore the plan recommends the department move into a renovated Nesmith Hall (currently used for swing space). Nesmith can house the entire department and its expansion needs.

The performing and fine arts departments are in the Paul Creative Arts Center and satellite centers in the Service Building (3D Art) and New Hampshire Hall (Dance). The performing arts need additional or replacement venues: a concert hall, black box theater, rehearsal rooms, etc. Dance needs to be

consolidated with Theater and 3D Art with the rest of the Art Department. It is proposed to reconfigure the Paul Creative Arts Center to achieve these goals over several phases.

The remainder of the College's space needs for English, Philosophy, Education, Anthropology, Sociology, Communications, History, Political Science, and Geography require minor expansions. They can be accommodated in the space vacated by the Carsey Institute allowed by replacement space provided with NH Hall renovation and additions, as well as by the proposed renovations of Huddleston, Hamilton-Smith, Horton, Morrill, and James halls. The recently completed renovations to Murkland Hall satisfy the space needs for the department of Languages, Literatures, and Cultures.

COLLEGE OF LIFE SCIENCES AND AGRICULTURE

Natural Resources space needs rationalization and consolidation, so the plan recommends renovating and expanding James Hall. This project will also benefit Earth Sciences, accommodating a strong interdisciplinary bond with Natural Resources. A renovated Kendall Hall is needed to consolidate the Animal and Nutritional Sciences programs and address their space needs. As research needs of the College expand, these moves would be accommodated in the proposed new research buildings (identified under General Academic).

Land occupied by the Equine program and Farm Services is designated for other uses in the Master Plan, requiring consolidation of the Equine program and farm buildings (including a new Community Farm) into the current Dairy Management area. This consolidation will provide replacement facilities for the Equine program and include a new riding arena.

SCHOOL OF HEALTH AND HUMAN SERVICES

With recent renovations and additions to Hewitt Hall and Pettee Hall, the facilities of the School of Health and Human Services are in good shape. However, space for Kinesiology needs consolidation and rationalization. The recommendation is to renovate and expand New Hampshire Hall, in part as an opportunity to relocate the recently formed Carsey Institute, and the associated social science institutes at UNH, but also as a mechanism to address the Kinesiology space and program needs that exist there. The current sites of some of the School's clinics and the Child Study Development Center are needed for other University functions. The intent of this plan is to consolidate the School's clinics and the CSDC as a child center, possibly co-located with a community childcare facility at a location on the west edge of campus providing safe and convenient access for off-campus and on-campus clients.



Consolidated COLSA Farms



West Edge



New Hampshire Hall



McConnell Hall



Research and proposed sites west of the railroad tracks

WHITTEMORE SCHOOL OF BUSINESS AND ECONOMICS

The expansion and renovation of McConnell Hall is the focus of this plan to address the outdated facilities and the growth planned for the Whittemore School. These steps support and advanced the teaching and research techniques necessary for a modern school of business; a critical resource to the businesses and industries of New Hampshire.

INTERDISCIPLINARY RESEARCH AND SCHOLARSHIP

Interdisciplinary learning and research are hallmarks of the University of New Hampshire. Funded research has roughly doubled over the last five years, and student participation in the process of research and discovery has become a central value. Much of the growth in research has occurred through major interdisciplinary centers and institutes, which provide critical mass in targeted areas of expertise, and bridge between the disciplinary strengths represented by departments and colleges. The Institute for the Study of Earth, Oceans and Space supports inquiry in large-scale earth system science and earth-sun interactions. The Marine Program will play a growing role in organizing the diverse set of faculty members pursuing the sea grant mission. The new Carsey Institute will bridge areas of research in the social and health sciences, while the recently established Leitzel Center focuses on science, math, and engineering education.

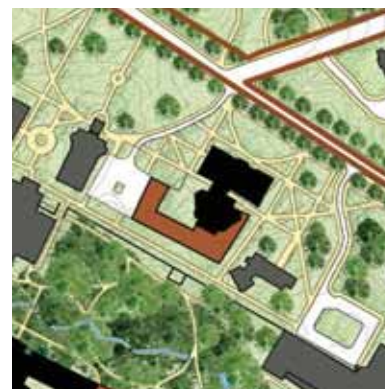
The plan projects real growth of 50 percent in funded research. Renovation and expansion of New Hampshire Hall will accommodate the Carsey Institute. Three new research buildings totaling 175,000 gsf are needed to house the rest of the projected growth in research. This plan locates these new buildings west of the railroad tracks near the new underpass. However, sites east of the tracks could also be considered depending on the nature of the programs to be housed. One of these buildings will also include the Office of Sponsored Research in anticipation of its displacement from the Service Building, whose site is needed for a more substantial academic building.



Proposed Academic Core Campus



Art & Life Sciences Quadrangle



Hamilton-Smith Expansion

GENERAL ACADEMIC

The classroom inventory is a shared feature for most all academic units. In general, the number of existing classrooms satisfies existing needs based on nationally accepted standards. However, the classroom mix will require redistribution over time to meet demand and in support of the Academic Plan long-term objective to keep large classes to a minimum. It is recommended that these adjustments should be made based on more detailed study, and that they could occur as buildings are renovated.

R.O.T.C. will be relocated when Zais Hall is replaced by a larger academic building. The relocation of the Durham Fire Department, the Office of Sponsored Research, and the 3D aspect of the Art department will allow for the decommissioning of the Service Building, also making way for an improved academic building. These new facilities will accommodate the additional space needed for the anticipated enrollment growth, the relocation of a consolidated Fine Arts, the proposed consolidation of the branch libraries now in Parsons, Kendall, and DeMeritt Halls, and the rise in research activity.

STUDENT SERVICES

Three areas of student administrative services need space consolidation, reorganization and/or expansion on the central campus: Student Support



Existing campus plan with housing highlighted



Grant and 12 Ballard Street



Proposed campus plan with housing highlighted

Programs, Student Enhancement Programs, and Admissions. It is recommended that the collection of Student Support Programs, entities that are focused on academic improvement, be consolidated in a renovated Hood House (already the location of some of the programs). It is further recommended that Student Enhancement Programs, those aimed at enhancing academic excellence, be co-located in Conant (vacated by Psychology). And lastly, Admissions would be accommodated by an expansion of Grant House (where they currently reside).

Other possible actions are: Expansion of 12 Ballard Street to accommodate various programs, such as the Student Health Center, the Counseling Center, and SHARPP, or simply the relocation of the Counseling Center and/or SHARPP to an as yet undetermined location, thus freeing space in their respective locations. The Counseling Center change in part makes way for the demolition of Schofield House, and in the case of SHARPP allows possible future expansion space for Health Services at 12 Ballard Street.

HOUSING AND DINING

The plan identifies locations for up to 2,350 new and replacement beds for undergraduates to meet the goal of housing 60-70 percent on campus. The strategy includes replacement of undergraduate beds currently in the

Mini-dorms (to be demolished) and Woodside (to become family housing). New beds on the east side of the railroad are convenient to the three existing dining facilities and are envisaged as suite-style units. The primary location for many of these units is the site of the existing Forest Park family housing. Those to the west of the tracks will be apartments.

It is proposed that 370 family housing units be provided as Forest Park is demolished over time. These family dwellings will be in groupings of 100-150 units in locations accessible to the campus core by foot or by shuttle bus.

The on-campus dining capacity is adequate to accommodate at least 700 additional beds and possibly as many as 1,200 beds, requiring expansion in a later phase. Philbrook Hall is the proposed expansion venue to meet the dining demands of the projected undergraduate residential population. It also needs more immediate renovations to replace the 1960's cafeteria-style food service with updated methods.



Consolidated recreation and athletics fields



ATHLETICS AND RECREATION

The findings of a recent feasibility study are included as elements of the plan for Athletics and Campus Recreation: the construction of a new home grandstand and Field House expansion and renovations, including an academic center, expanded athletic training and weight room facilities, improved locker rooms, and more office and function space. In addition, the outdoor fields for Athletics and Campus Recreation will be expanded, and some existing fields will need to be relocated as the road network is extended out to Main Street west of the railway tracks.

ADMINISTRATION

The plan includes relocating numerous administrative service functions from the campus core into consolidated facilities in the Leavitt Service Center area and replacing several temporary trade and administration buildings in the same area. The old wood frame buildings along Garrison Avenue will be demolished to provide space for expanding Student Services at 12 Ballard Street and Grant House, as described above.



Service Access



Pedestrian Crossing



Main Street

Other administration buildings recommendations include: replacement of Durham Fire Department and the regional ambulance group, whose site in the campus core will be used for two significant new academic buildings; a new building for the UNH Foundation; and renovations and expansion of the Elliot Alumni Center for consolidated University Advancement functions.

TRANSPORTATION AND PARKING

Development of north and south underpasses for vehicles and pedestrians will connect campus lands now bisected by the railroad tracks. These underpasses will connect to and extend the network of campus roads, providing alternative routes from the western approach on Main Street. This will significantly reduce the pedestrian/vehicle conflicts, while allowing campus visitors and non-University traffic to travel Main Street to and from the town center. Closing College Way and College Road for limited access will transform these areas into campus pedestrian environments, while providing service and ADA access necessary for proper daily functioning and evening events. Removing numerous small interstitial parking lots scattered throughout the campus core and consolidating them in larger parking areas and parking structures at the edges of the core, along with improved transit service, will remove private vehicles from many pedestrian-oriented areas and reduce the frustrations of circling the campus in search of parking.

CAMPUS IMPROVEMENTS

There are visible key areas that need to be upgraded in order to reinforce the three campus images – the New England college, village, and native landscape. The gateway experience from Route 4 to the railroad tracks is a transitional experience from pastoral farm lands and woodlands to play fields and tennis courts to the buildings and Great Lawn of the campus core. Rusty chain link fences, ineffective signage, lack of pedestrian walkways, and appropriate landscaping treatments need to be addressed. College Walk, at the center of the academic experience, needs a complete transformation that will make the entire area feel and look better. The width of Main Street needs to be reduced while still providing for safe travel for cars, bikes and people. The area between Pettee Hall and Zais Hall will be transformed with new academic buildings replacing the Service Building and Zais Hall. The removal of College Road will allow the creation of a new quadrangle that will make this back lot of campus into a center piece. Other outdoor spaces like Conant Square and the Dell behind the Thompson Hall parking lot can more quickly be improved and should be addressed immediately. Attention must be brought to the details of the campus environment, including edges of walkways and roads, placement and screening of dumpsters, and use of consistent materials across the campus. The mature trees of the campus are an important asset to the landscape and they need to be invigorated to sustain them, while at the same time a tree replacement program must be implemented now to anticipate their gradual dying off over the horizon of this plan.



The updated plan's recommendations support and build upon the findings of the 1994 Campus Master Plan, which remains a solid foundation for the future of the University. The 2004 plan makes specific modifications and allows UNH to evolve over the next 20 years while adhering to its goals. Refinement is anticipated through project-specific studies, marketing studies, financial constraints, and the further evolution of the academic plan.

The planned construction of facilities, particularly residence halls, will enhance the cohesion of the campus community and develop stronger connections between quadrants. New facilities, in combination with a reinvestment in older structures, will support the University's research and teaching goals in a strong academic community. The improvements planned for the major open space of the campus will have the greatest impact on the sense of place. Changes to the pedestrian paths, roadways, transit, and parking will directly improve the mobility of the campus population and the efficiency of the institution as a whole.

CONCLUSION

THE PLAN

NEW ENGLAND VILLAGE, COLLEGE, AND LANDSCAPE



OVERVIEW AND PROCESS

The Campus Plan Update is a comprehensive response to the University of New Hampshire's 2003 Academic Plan. The update takes into consideration the five strategic themes of the academic vision and is grounded in the 1994 Campus Master Plan, which was adopted as a framework for two decades of growth and progress in teaching, research, and service.

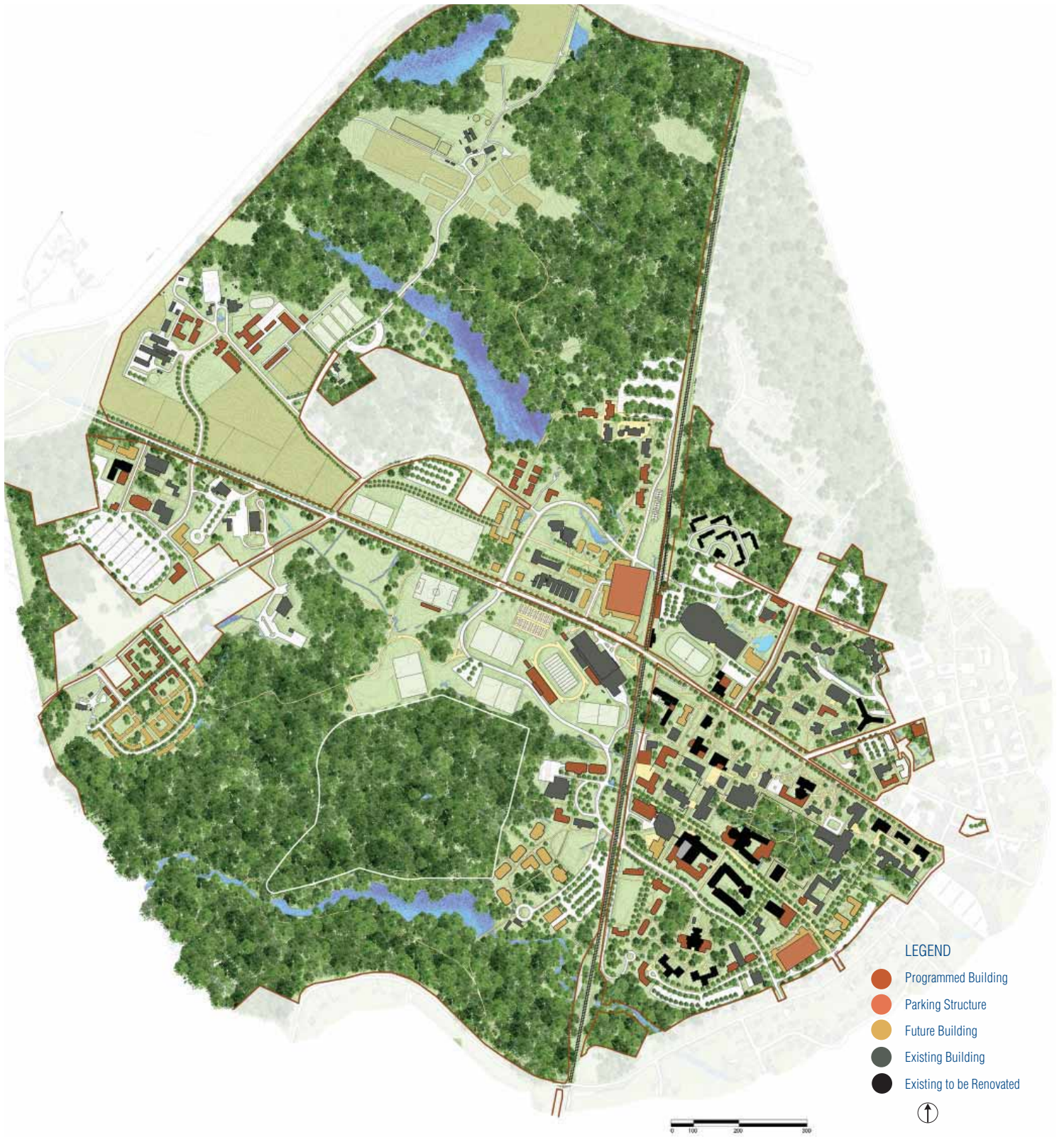
The themes of the Academic Plan are:

1. Discovery
2. Engagement and Outreach
3. Resourcefulness
4. Institutional Effectiveness
5. Community

The 2004 Campus Plan evolved from nearly a year of dynamic interaction among stakeholders from the University and the community. Numerous workshops included members of the faculty, staff, student body, and town and regional constituents. The campus was divided into three Precincts: The academic core, student life areas, and the agricultural and athletic parcels on west campus and outlying parcels.

Each workshop included a tour, review of the existing conditions, and discussion of space needs. After conversations about design issues, concepts were presented of discrete pieces of each Precinct. With further input, revised drawings were developed for review. These workshops produced a number of design concepts for various sections of campus and, ultimately, a single concept for each Precinct.

The concepts were refined and coordinated into the final plan, creating a guide for long- and short-term campus development in support of the Academic Plan and the original Campus Master Plan.



Final Plan

PLANNING PRINCIPLES AND CONCEPT PLAN

CONCEPT DESIGN PHASE

The Principles summarize the key precepts that the UNH community felt the plan should include, while the Concept Plan is an organizational sketch of the campus reflecting key issues and the Planning Principles.

PLANNING PRINCIPLES

EXPRESS THE ACADEMIC VISION OF THE UNIVERSITY

Through better physical and pedagogical connections of:

- Teaching, research, and engagement
- Academic and student life
- Outreach to the campus and surrounding communities

SUPPORT THE DAILY LIFE OF THE UNIVERSITY

- Improve the living-learning environment
- Foster academic, social, and community interactions
- Refine the visitor experience
- Seek greater efficiency and economy of campus functions
- Ensure accessibility for all constituents

PRESERVE THE NEW ENGLAND CHARACTER OF THE BUILT AND NATURAL CAMPUS

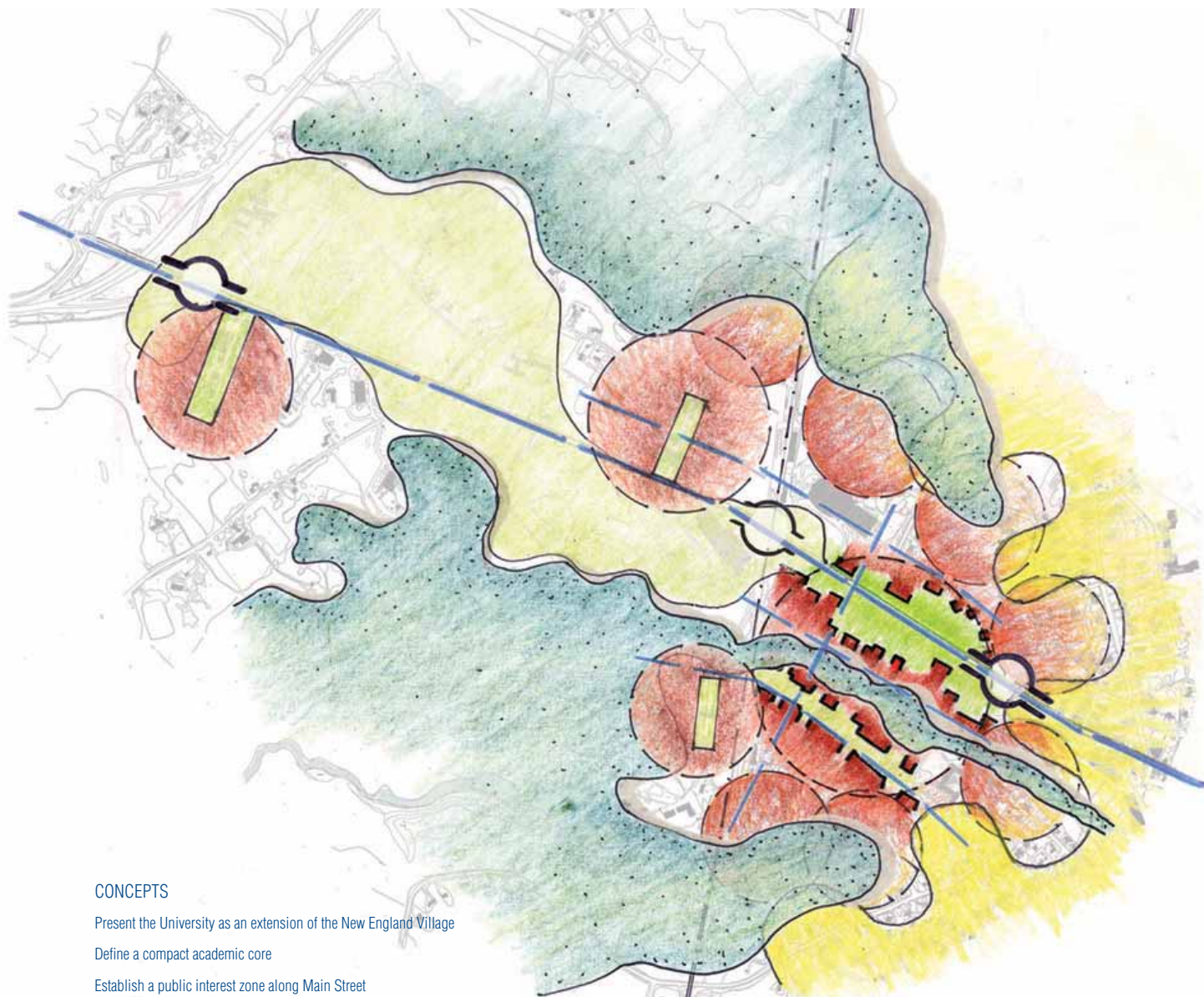
- Unify the walkable campus network
- Brand UNH as the quintessential New England campus
- Link manmade and natural systems
- Express the unique regional landscape

STRENGTHEN THE RELATIONSHIP WITH OUR COMMUNITIES

- Integrate the University and Durham through shared resources
- Enhance campus access to students, faculty members, staff, and visitors
- Foster mixed-use activities that knit town and campus
- Address mutual concerns of parking and housing

CONCEPT DIAGRAM

The campus conceptual framework engages town and gown as well as the built and natural environments. The concept is centered on a compact academic village as the core of the University. Student life uses, such as housing, meeting space, cultural, athletic, and recreational venues, surround the core and form a transition into the town and landscape. Overlaid on these functional elements is the natural system's framework of woodlands, fields, streambeds, and rivers as a microcosm of the New England landscape. Implementing gateways at the edges and key locations within the University announces and references the University realm.



CONCEPTS

Present the University as an extension of the New England Village

Define a compact academic core

Establish a public interest zone along Main Street

Create compact residential neighborhoods

Ease appropriate uses into the landscaped perimeter

Present a network of roads

The Campus Plan supports the goals of the Academic Plan and additional objectives developed during this process. The goals also take into consideration that projects must be sensibly phased to minimize disruption and to operate within funding constraints. The goals are:

1. Meet the Needs of the University Academic Mission and Plan
2. Blend Living and Learning Environments
3. Improve Access to and Mobility Around Campus
4. Balance the Needs of the Built and Natural Environments
5. Enhance the Character of the Campus

GOALS



Great Lawn and Thompson Hall

GOAL 1: MEET THE NEEDS OF THE UNIVERSITY ACADEMIC MISSION AND PLAN

The Academic Plan stresses the intent of the University to integrate teaching and research activities, living and learning environments, and graduate and undergraduate experiences. It also reflects the efficiencies required by a public institution with limited funding.

The University reinforced its desire to build on the strong characteristics of the academic core, which engenders the sense of history often associated with New England colleges and universities. However, the core also reflects deterioration from high pedestrian and traffic levels and insufficient building maintenance.

Enhancing the character of this area will require reorganization of circulation and strategic relocation of campus facilities. In conjunction with a review of parking, transportation, vehicular access, and landscape, the planning process involved a comprehensive space utilization analysis. A number of recommendations emerged for consolidation or co-location of various academic, administrative, and service functions. Recognition of interdisciplinary research as an expanding aspect of the academic experience has also impacted the plan.

The reorganization of campus uses includes construction, renovation, and expansion of existing buildings for new uses, incorporation of available technology, systems upgrades, and the maintenance of the University's existing assets. New and renovated buildings will accommodate the integration of teaching, research, and living facilities, while the reinforced open space network will create outdoor rooms as extensions of community space. The migration plan demonstrates the efficient co-location and consolidation of student services, visitors' needs, research centers, library facilities, academic departments, support functions, and administrative units.

GOAL 2:

BLEND LIVING AND LEARNING ENVIRONMENTS

The Academic Plan emphasizes the relationship of living and learning to foster the holistic development of students as members of a larger community. On-campus housing plays an important role by leveraging the resources of student life to supplement classroom education and to transition students as they acclimate to the University community and, eventually, to society.



Strong functional ties between academic life and the residential setting will establish a comfortable institutional scale and mitigate feelings of “being lost” on campus. The University has conceptualized a two-part program for on-campus residential facilities during these transitional periods. Part I targets housing for 90 to 95 percent of freshmen and sophomores.

Part II seeks to align living accommodations and student development with specific academic pursuits. This phase requires a residential setting compatible with the growing independence of advanced students, including suites or apartments, and the possibility of a less structured residential environment off campus. To achieve the goal of housing 30 to 45 percent of these students, the University must maintain facilities, programs, and affordable pricing.

These two elements have a combined goal of providing on-campus housing for 60 to 70 percent of undergraduates. To reach this goal, the Campus Plan provides new buildings to accommodate 2,350 new beds while demolishing several obsolete residence halls over the 20-year planning horizon. This will result in an increase of 1,720 on-campus beds.

The plan identifies sites for approximately 370 new graduate student and family housing units to replace 154 units of outdated facilities. In addition, the Campus Plan provides placeholders for future on-campus student housing. This strategy requires coordination of construction and renovation to ensure that the bed count continues to grow without periods of reduced capacity.

During the planning process, many areas were discussed as possible housing locations, as were a variety of configurations. Early suggestions included:

1. Housing with athletic and recreational fields on both sides of the street, dramatically changing the approach to campus
2. Housing and research facilities along the edge of the College Wood by the Oyster River



Potential Graduate Housing Sites

These ideas were rejected because of either the perceived distance from the core campus, the difficulty of integrating uses, or the preference for single-use research and academic schemes. The final plan shows locations for housing north of Main Street on the west side of the railroad tracks, north of the proposed campus recreation fields and south in the area of Forest Park.

The plan also reflects the possibility of a variety of graduate and family housing locations with appropriate amenities such as childcare. During the Precinct 3 workshop, several family housing sites were examined

on the west side of campus, as well as on some closer parcels that are part of the extended campus. Ultimately, utility demands, transit availability, geographic isolation, and environmental concerns focused the plan to three on campus sites and the potential for private develop off-campus on Madbury Road.

On-campus Greek housing was discussed as an opportunity to create a unique setting and identity for these students, while supporting redevelopment off-campus and establishing a quintessentially collegiate gateway. The initial concepts involved Greek housing west of the railroad tracks along Main Street to provide ample outdoor space for activities. Workshop participants defined a transitional building type between the agrarian west campus and the academic core. Ultimately, consensus on the details of on-campus Greek housing could not be reached, although the Campus Plan provides ample footprints to accommodate it later.

Challenges to the planned housing program include market pressures and the limitations of the University's bonding capacity. The market will dictate what types of on-campus housing will successfully attract students. Room types, amenities, location, and costs will have to be balanced within the pro-forma restrictions of bonding capacity.

GOAL 3:

IMPROVE ACCESSIBILITY TO AND MOBILITY AROUND THE CAMPUS

The Campus Plan establishes an implementation plan to improve the walkability, accessibility, and character of the campus. Based on the recommendations developed by the Transportation Policy Committee (TPC) and approved by the President in 2003, these efforts will guide the University toward a transportation management system that emphasizes health and

safety, efficiency, cost-effectiveness, and fairness for all University constituents. This framework seeks to manage the transportation system in a rational and economically sustainable manner to:

1. Reduce personal and community inefficiencies
2. Expand transportation options
3. Enhance mobility and convenience
4. Improve visitor access
5. Reduce harmful impact on the environment
6. Foster a sense of place

Successful implementation will be measured by improved access for visitors, students, faculty members, and staff, and convenient non-vehicular mobility across campus.

The University faces challenges in balancing the competing interests of parking, mobility, access, campus identity, and environmental impact. From a spatial perspective, the division of the campus by Main Street and the Boston and Maine Railroad corridor creates unique challenges. Main Street is a critical corridor for campus access and for regional mobility. The Campus Plan recognizes that it is necessary to maintain traffic flow on Main Street, reduce pedestrian-vehicular conflicts, and provide reliable intra-campus transit service. The rail line offers a new Main Street by which visitors view the University and arrive and depart from campus. From a policy and financial perspective, additional parking and transit infrastructure require enhanced investment and sustainable funding mechanisms.

The Transportation Policy Committee concluded that there was a shortfall of roughly 600 desirable parking spaces on campus and that many aspects of parking policy and transit service were exacerbating the problem. The Committee provided short and long-term transportation demand management (TDM) recommendations that included:

1. Construction of parking facilities
2. Continued development of convenient transportation alternatives
3. A zone approach to the parking permit system
4. Continued increases in on-campus housing for students
5. Significant improvements to the visitor experience on campus
6. Efforts to manage class scheduling to disperse peak periods of demand

The plan supports all these initiatives and further calls for the removal of small inefficient lots on the core campus in order to reduce congestion, enhance the pedestrian experience, and reclaim greenspace.

The UNH street system facilitates a 10-minute walk to all points within the core campus. As all transit users are also pedestrians, an efficient transit



Main Street



Amtrak Rail Line and Dairy Bar



Existing Campus Transit



Existing Campus Transit

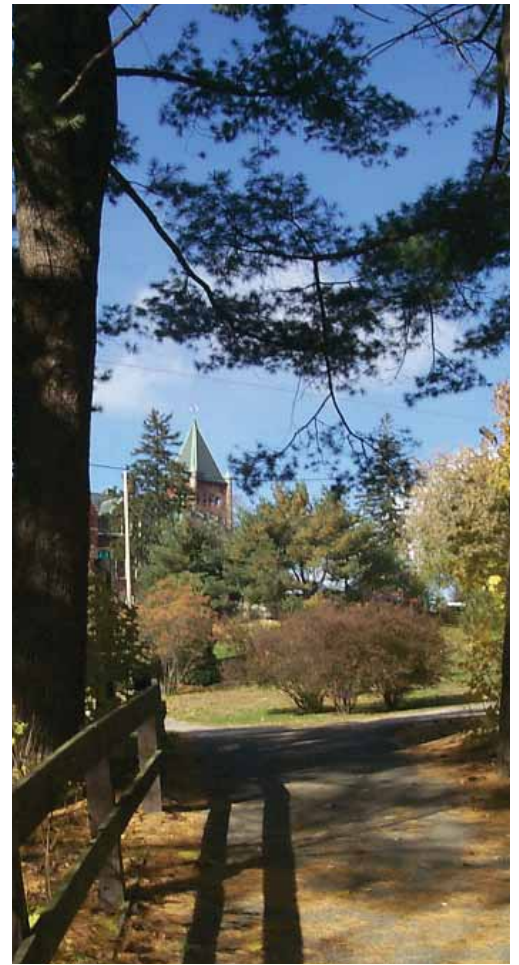
system will be maintained through this and other corridors for reliable and timely access between the West Edge Lot, core campus, and local residential neighborhoods. Transit access will be considered and supported in all development plans, and the transit system will be run with a safe, comfortable, technologically sound, and fuel-efficient fleet. The University will continue to look for support from state, federal, local, and campus funding sources. In addition, ongoing evaluation of service routes and productivity will ensure efficiency.

UNH operates Campus Connector shuttle routes throughout the campus and Wildcat Transit commuter bus service to surrounding communities. Rideshare and carpool programs are available to students, faculty members, and staff. UNH will continue to develop and expand these programs and support other transit alternatives. The University also will continue to solicit state, federal, and municipal support for these services and will coordinate them through regional planning forums.

Phased construction of parking structures on A and B Lots will eliminate inefficient parking areas in the core campus and ensure adequate supply, including replacement of spaces lost to construction. Surface lot reduction also will improve the character of the core campus. Throughout the effort to consolidate surface lots, the University will maintain ADA and service accessibility, consistent with the goals and vision of the Master Plan.



Wetlands



The Ravine

GOAL 4:

BALANCE THE NEEDS OF THE BUILT AND NATURAL ENVIRONMENTS

In addition to unifying the campus and allowing efficient movement between facilities, the grounds reflect the nature and values of the institution and express a sense of place. With specific landscape typologies, the grounds can be organized and evoke a variety of images while providing continuity to the experience of campus.

The University has an opportunity to repair damage to the natural environment by sensitively managing woodlands and wetlands, uncovering waterways buried in culverts, and limiting the impact of automobiles. UNH is a clear regional leader in environmental studies and can showcase the campus while maintaining the collegiate image of its grounds.

The Campus Plan, through the Landscape Master Plan, provides a strategy for enhancing the character of campus and correcting the effects of a long period of heavy use. Open spaces link the existing open space network and encourage the pedestrian campus core. The landscape plan includes the implementation of standards for paving, site furnishings, and grounds maintenance.

Through proper management of open spaces, UNH also will mitigate the impact of its growth on storm water run off, water quality, aquifer recharge, and air quality.



GOAL 5:

ENHANCE THE CHARACTER OF THE CAMPUS

Outreach and community involvement are key to the Academic Plan, particularly in the role of the University as a local, regional, and statewide resource. Defining a consistent and enduring sense of place adds to the arrival experience and makes the University more attractive to the larger community.

Under the Campus Plan, the consolidation of outreach and visitor facilities along Main Street will tie these public facilities to a major route onto campus from the Route 4 bypass and Concord Road. This processional path will define the image of campus for visitors and characterize the landscape west of the railroad tracks.

The consolidation of COLSA farm and agricultural programs and administrative service facilities on the western end of campus is the first step in defining this image and establishing later opportunities along Main Street to share the character with residential and recreational facilities. To the east, the identity of the campus will be tied to the image of Durham, including the perception of traffic, landscape, building character and scale, and the incorporation of natural features.



Although the University serves the state and region, the Academic Plan acknowledges the importance of the communities within close proximity. These communities, particularly Durham, benefit from the cultural, athletic, and economic resources of the University, and are affected by decisions on campus. The Campus Plan provides greater community access to the amenities on campus, while mitigating the impact of projected growth on the community through land use strategies that encourage a pedestrian-oriented core.

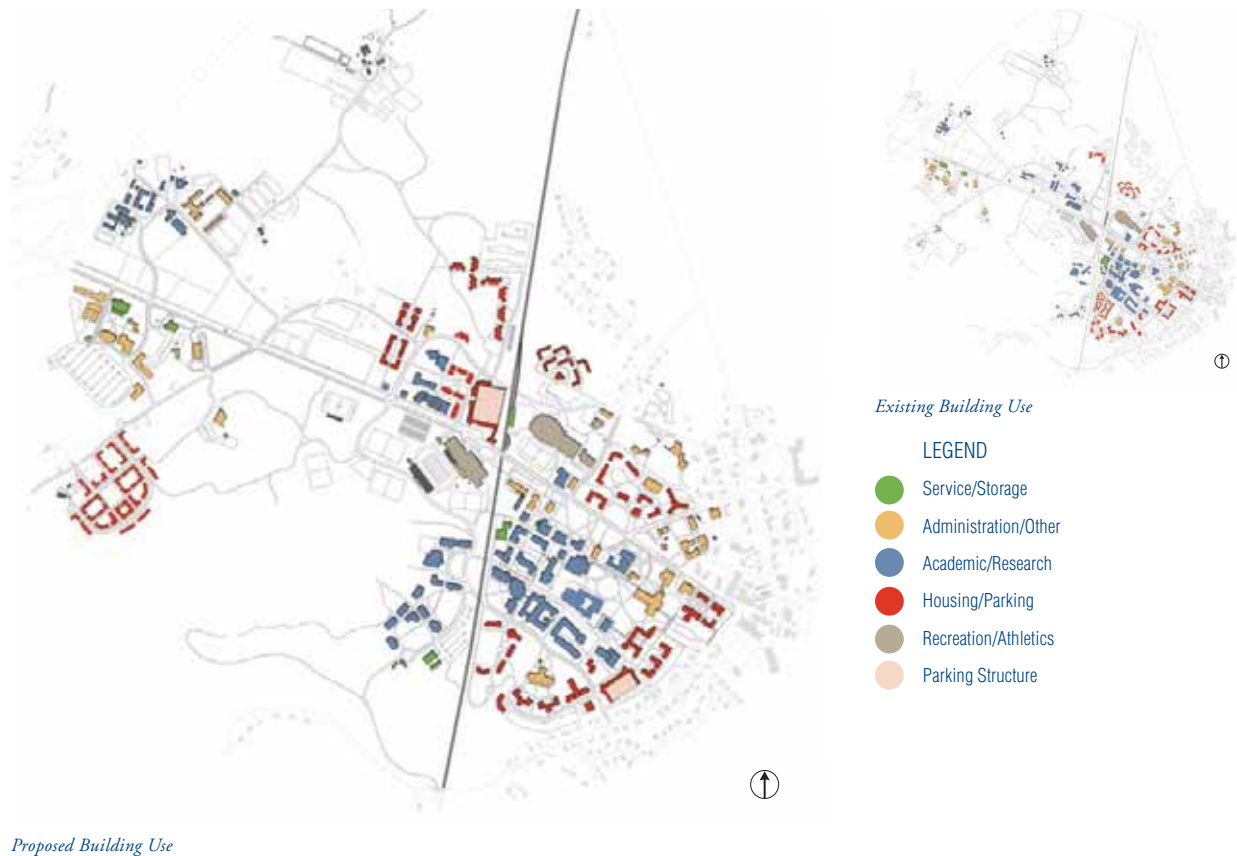
Mutual town and University needs should be considered for public services, including the fire department, ambulance and dispatch facilities, and community resources like the childcare facility and redevelopment of the Garrison Avenue area. The Campus Plan should be supplemented by feasibility studies for these and other facilities considered in the first half of the 20-year planning horizon.

Additional study should be given to the impact of development on municipal utilities and to update the University's Utility Master Plan in cooperation with the town. The University should minimize energy consumption, water consumption, storm water run off, and waste water discharge through the implementation of conservation technology and techniques with new buildings and renovations. By improving efficiency in existing buildings during renovation and adopting high standards for new buildings, the University can ease the impact of the modest growth expected over the next two decades. During the planning of residential housing, these issues should be addressed. Adding beds will have some associated impact on water and sewage, and new facilities should incorporate conservation strategies.



ELEMENTS OF THE PLAN

Based on these goals, the plan provides strategies to support the Academic Plan through improvements to campus buildings, land use, grounds, and circulation.



The land use plan creates a dense core of academic functions with an enhanced peripheral residential ring. It expands the academic capacity by relocating service functions to Leavitt Center, consolidates agricultural functions at the western edge, and connects outlying facilities through higher density. Structured parking allows the University to use more land for buildings and open space in the academic core and adjacent residential areas.

The plan depicts the consolidation of functions currently distributed across the campus to use land more efficiently and improve the operations of campus functions, including:

- Transformation of the Paul Creative Arts Center for classroom, office, and performance space to fulfill requirements of the music, dance, and theater programs. This addition and renovation will be facilitated by the construction of the Fine Arts building (see PCAC Feasibility Study).
- Relocation of service and administrative functions that do not have daily contact with the campus community to the Leavitt Service Center and the west edge of campus. Moving these facilities will eliminate unnecessary traffic from the core and free-up space for academic functions. This change requires reconfiguration and

BUILDINGS AND LAND USE

expansion for additional service and administrative functions. The rebuilt Leavitt Center will make efficient use of the limited land, consolidate functions into larger buildings, and create a positive first impression of campus.

- Development of consolidated COLSA/agricultural facilities, including the Campus-Community Farm at the western campus edge. The centralized location of dairy, equine, community farm, and farm services facilities will provide shared facilities, simplified services, community access, and generate a like-minded academic community. The cluster of buildings will reflect the agrarian structures of the surrounding landscape, while the associated pastures and paddocks provide a transition into the campus landscape. A relocated service road to the Leavitt Service Center will allow for easy access and parking for events.
- Expansion and renovation of Demeritt Hall, James Hall, Nesmith Hall, McConnell Hall, and NH Hall will allow for the expansion and consolidation of Physics, Natural Resources, Psychology, the Business School, and the Carsey Institute respectively. These expansions of existing academic buildings will serve to address some existing unmet space needs and make way for space needed to satisfy modest enrollment increases.
- A new Science Library adjacent to Hewitt Hall to combine the science departments' specialty libraries. The facility will create a central place for the sciences, fostering collaboration, freeing existing space for other academic uses, and streamlining the library system.
- A new Fine Arts Building adjacent to Rudman Hall to locate the fine arts facilities from the PCAC and the 3D studios now in the Service Building. This project will require the demolition of Zais Hall and relocation of ROTC.
- Consolidated recreational and athletic fields on both sides of Main Street between Route 155A and the Field House. These areas will be a central location for sports activities to meet the demands of students and provide a transition from the agrarian fields into the campus. Fenced areas will be minimal and some will be replaced by stone walls more in keeping with the campus vernacular, thus presenting a unified, accessible, and open environment.

New facilities also will be required to accommodate growth, develop roads, or consolidate uses on campus, including:

- Three new research buildings interspersed with teaching buildings on both sides of the rail line. These facilities are intended to meet the needs of the University research mission as it matures over the next 20 years.
- A highly visible Visitors Center addition to Grant House, providing a clear orientation for prospective students, parents, and other visitors. The Center will have a welcoming central location with on-site or nearby full-service visitor parking.
- A University Police Facility constructed in the proximity of Barton Hall
- A new Durham Fire Department building since the current one will be displaced by the closure of College Road and construction of new academic facilities at the location of the existing Service Building. The Campus Plan preliminarily locates this building on Garrison Avenue at Stratford Avenue due to its proximity to roads leading throughout the town, or an alternate site adjacent to a B Lot parking structure. The actual location will require a joint planning effort from the town and University to determine the most appropriate site, including consideration of off-campus sites.
- The ambulance corp will need to be relocated adjacent to the police facility or the new fire station.
- A new childcare center resulting from the replacement of Forest Park. The scope of a new childcare facility has not been determined but, as a first step, this need can likely be satisfied at Woodside with the proposed transition to family housing there. The ultimate location should be accessible to the town and University communities on foot, by transit, or by vehicular drop-off with minimal impact on residential neighborhoods. The plan illustrates one possibility of co-locating a childcare center with the future relocation of SHHS clinics and the Childhood Development Study Center. A planning study involving the town and University should be undertaken to refine the needs and ultimate location.
- Placeholders for additional academic space as other needs develop. They are apparent at Hamilton-Smith, around Morse Hall, and on Main Street at Pettee Brook Lane.



Existing Residence Halls

LEGEND

- Residence Halls



Proposed Residence Halls

HOUSING

- A new west campus housing complex connected to the Gables Apartments across the reservoir dam and close to the recreational fields. Additional housing capacity in this area, along with the Gables, will help develop the critical mass of students needed to generate a stronger sense of community and may at some point provide adequate demand for amenities, including a food service/convenience store. This housing is organized around a central space that acts as an outdoor room for organized activities or passive recreation and is suitable for relocated graduate and family housing or undergraduate residents. It also could provide a single location and sense of place for the Greek system, enhancing the capacity of these organizations to build traditions.

- Expansion of the Gables Apartments to the west and south of the existing facilities. This expansion will help connect the existing Gables to the campus on the south and to the natural recreational assets of the reservoir and woods to the west. These expansions and the new west campus housing development will create pedestrian paths from the existing facilities to the recreational fields along Main Street.
- New residence halls at the periphery of the core campus, with potential for academic space incorporated on the ground level, directly connecting the academic and residential functions.
- Development of undergraduate housing on the south and east sides of the academic core, along a pedestrian spine from Main Street to the site of the existing Mini Dorms. This housing includes the redevelopment of Forest Park, Mini Dorms, and the Lower Quad, as well as strategic infill locations. It provides additional housing density near the academic core and connects existing housing facilities. Student housing along this edge will help the transition of University functions from the academic core into Durham.
- Renovation and transformation of Woodside apartments from undergraduate to family housing, to help offset the phased demolition of Forest Park.
- Family housing at Leawood Orchard Property on Mast Road, with transit access to core campus. This development will provide a variety of housing types for graduate students, junior faculty members, and families. The diversity is intended to support the formulation of a strong community among changing populations.
- Consideration of off-campus, public-private neighborhood development in coordination with Durham and private landowners in the vicinity of Madbury Road. Development might be modeled as a mixed-use neighborhood with a variety of taxable uses in a traditional New England village pattern.
- Locate the Housing office in Hitchcock Hall, which is already occupied by Residential Life.

OUTLYING PARCELS



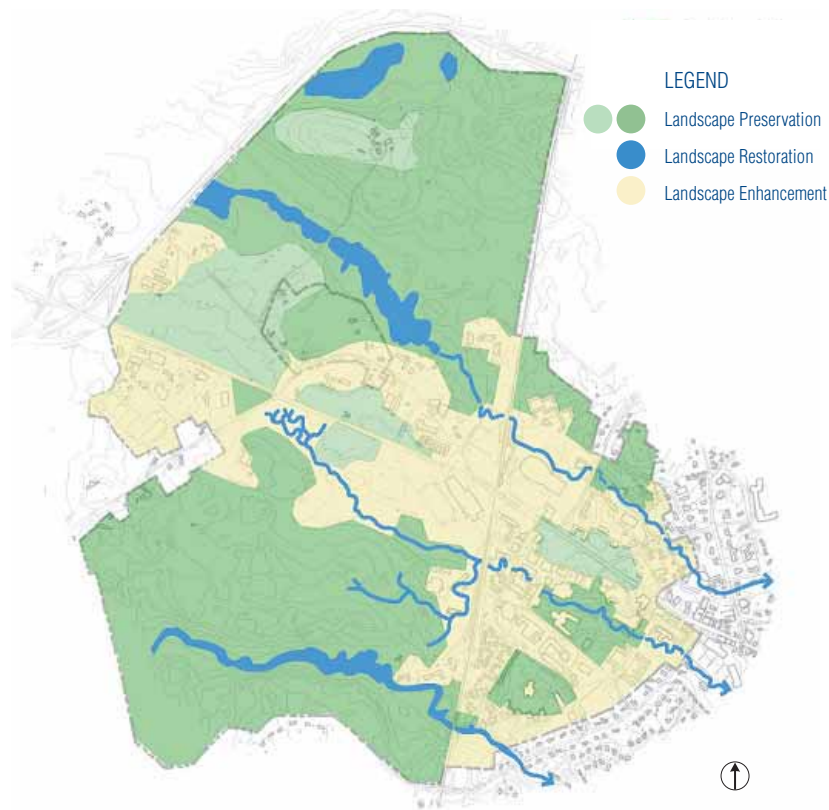
Outlying Parcels

LEGEND

- Forest Land
- Crop Land
- Main Campus

The extended campus incorporates significant land holdings that are an asset to the University, town, and region. These large, sometimes contiguous areas reflect the natural and cultivated aspects of the New Hampshire landscape, while functioning as teaching and research laboratories and a resource for COLSA. In the future, these land holdings will continue to provide opportunities for research, teaching, forest products production, including maintaining forestlands for habitat and watershed protection and for crop production and passive recreation. To avoid the negative consequences that may arise from competing or overlapping incompatible uses of these lands, it is recommended that a means for consultation among users be instituted to develop dynamic “zoning” plans on specific lands where these issues are a concern.

- The amount of crop land will be balanced with the needs of the herd for food production and manure spreading, and in turn striving to reduce the amount of leased farm land required.
- The non-structured recreational opportunities will be explored with the development of trail systems, simultaneously providing broader public access and control of use.
- Forest areas will be maintained for scientific and academic use. Limited timber harvest will be considered for academic investigation and to maintain the health of the large tracts of forests. Unless there are compelling reasons to do otherwise, limited timber harvests may be continued on specific parcels, given appropriate rotation periods, as in the past.
- The existing historic structures on outlying parcels play an important role in the heritage of the land, but do not have a functional association with the current uses of these parcels. These structures are in need of maintenance beyond their value to the University and a plan should be developed to ensure good stewardship of the historic farm houses into the future. It may be prudent to sell small portions of the property, including these structures, to ensure investment in their maintenance and restoration.
- The University has several built structures on outlying properties, many of which support the agricultural aspect of this land grant institution. In addition, there are three facilities that provide strong ties to the academic experience on campus: Jackson Estuary Laboratory, in need of lab renovation and additions; the Browne Center, providing academic and outreach opportunities; and the Coastal Marine Laboratory encompassed by new facilities now being planned for New Castle and Rye. This Campus Plan has not identified any other building programs needs outside of the contiguous campus.



The Campus Plan's Landscape Master Plan provides a series of pedestrian promenades connecting the academic and residential facilities, new open spaces, and restoration of existing natural amenities. The pedestrian promenades take advantage of existing pedestrian corridors in some cases and form the armature of future development in others. The landscape plan includes improvements and restoration of existing features, including the Ravine, the Dell, Conant Square, and College Brook, while taking advantage of the closure of College Way and College Road to create pedestrian and service/transit ways. Landscape improvements are recommended for processional routes into the University grounds and at the thresholds to different parts of campus.

Open space changes will improve the character of campus, incorporating the following:

- Landscape improvements and pedestrian paths at the perimeter of the academic core better connecting the peripheral housing to the academic functions. These changes are aimed at improving the perceived distance between residential and academic facilities.
- Consistent transition zone between the core campus and the adjacent residential communities. Additional student housing will

LANDSCAPE



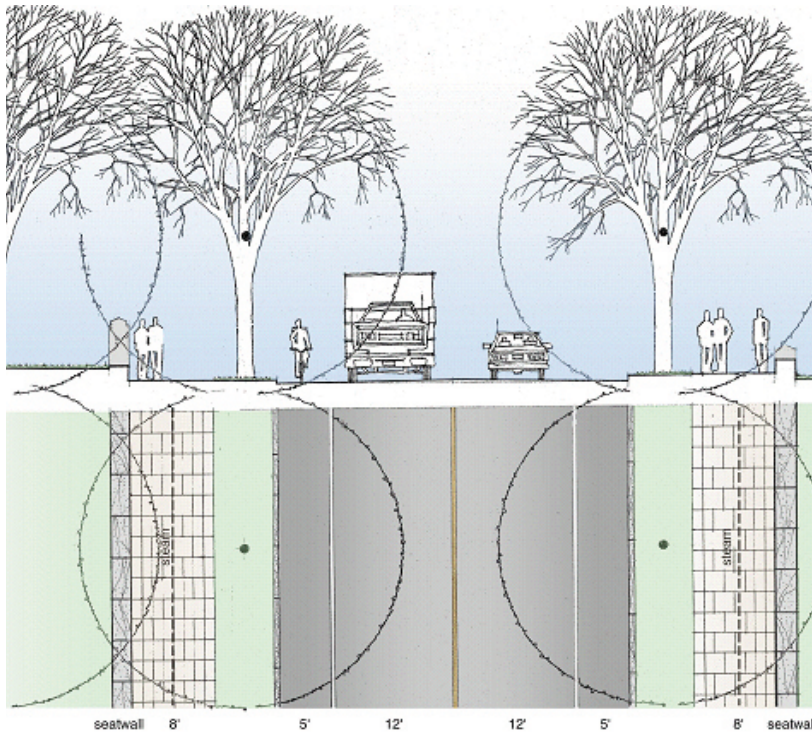
New Science Quad

use landscape and moderately scaled buildings to buffer private residences from the activity of the core campus.

A quadrangle formed by a new Fine Arts Building and a new Science Library in conjunction with Rudman Hall, Hewitt Hall, and Spaulding Life Sciences Center. This quadrangle will require construction of a service road along the rail line, and a wide walkway capable of supporting frequent service access to the equipment housed in the telecommunications building at the east end of the quadrangle. The frequency and

duration of these service activities should be studied to determine the disposition of service access and parking prior to implementation of the landscape plan.

- Landscape enhancements between the Library and Hamilton-Smith, known as the Dell. This space serves as a primary arrival point for campus visitors, a major campus crossroad, and a primary entrance to the Ravine. It is important that the Dell gives a positive first impression and campus image. Landscape improvements in this area will include plantings, site furnishings, and storm water management. A key component will be the development of a strategy for transformation from open lawn to a wooded dell, thereby extending the Ravine northward up the hill and adjacent to the Great Lawn.
- Landscape enhancements surrounding the MUB, creating a positive image of the campus grounds. It is important that a cohesive identity be established for the MUB landscape. Improvements will include plantings, site furnishings, and significant changes to the adjacent Ravine.
- Designed edges, gateways, and thresholds at entries and transitions. Gateways to woodlands, such as the Northwest Woods and College Wood, mark their boundaries. Constructing gateways at major vehicular points of entry to the campus will provide an awareness of arrival and a positive first impression.



Conceptual Main Street Improvements

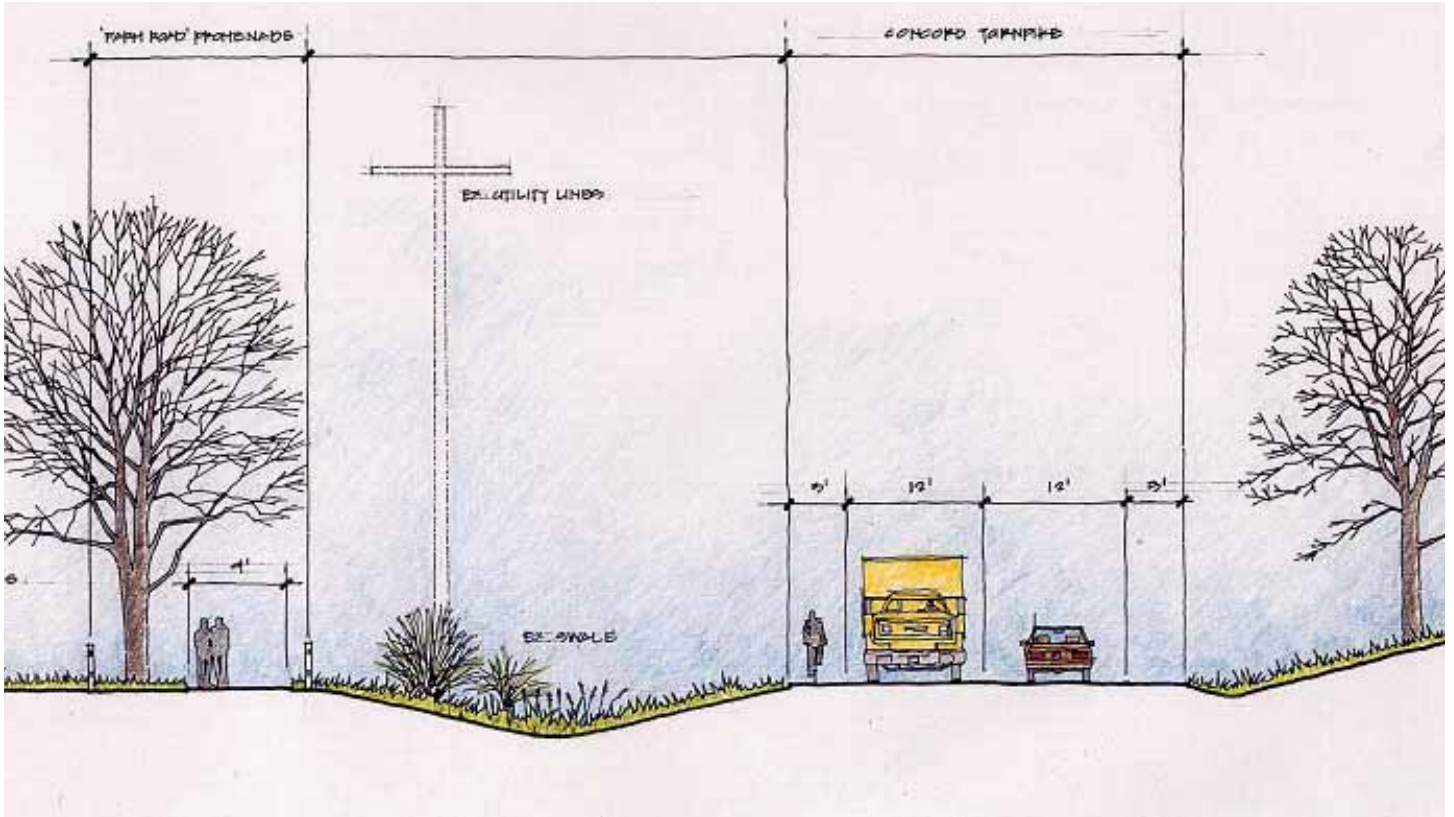


Existing Main Street

- Improvement of informal recreation areas at quadrangles formed by residential buildings Mills, Scott, and replacement buildings at Forest Park.

The plan incorporates streetscape improvements to limit the visual and functional impacts of campus traffic, including:

- Main Street improvements. The University will work with Durham to reconfigure the street corridor along the core campus and at the entry to downtown. The improvements may include narrowed lanes, improved transit, bike and pedestrian infrastructure, and aesthetic changes that balance the needs of all users. Where possible, efforts will be made to relocate above-ground utilities underground and ensure integrity of all underground utility ways.
- Implementation of a consistent landscape treatment along Concord Road, incorporating a storm water bio-retention swale, a pedestrian and bicycle path, a fence or stone wall, and an row of trees. This roadway landscaping will link the adjacent athletic, agricultural, and service areas, and secure a foreground for the various buildings and landscapes between the roadway and the woodlands.



Conceptual Concord Road Improvements



Existing Concord Road

The health of woodlands and wetlands is highlighted through restoration, maintenance, and preservation. The campus plan provides for adequate facilities growth while minimizing the development of woodlands and reduces overall impervious surfaces responsible for the degradation of water quality, particularly roadways and surface parking. Features of the plan include:

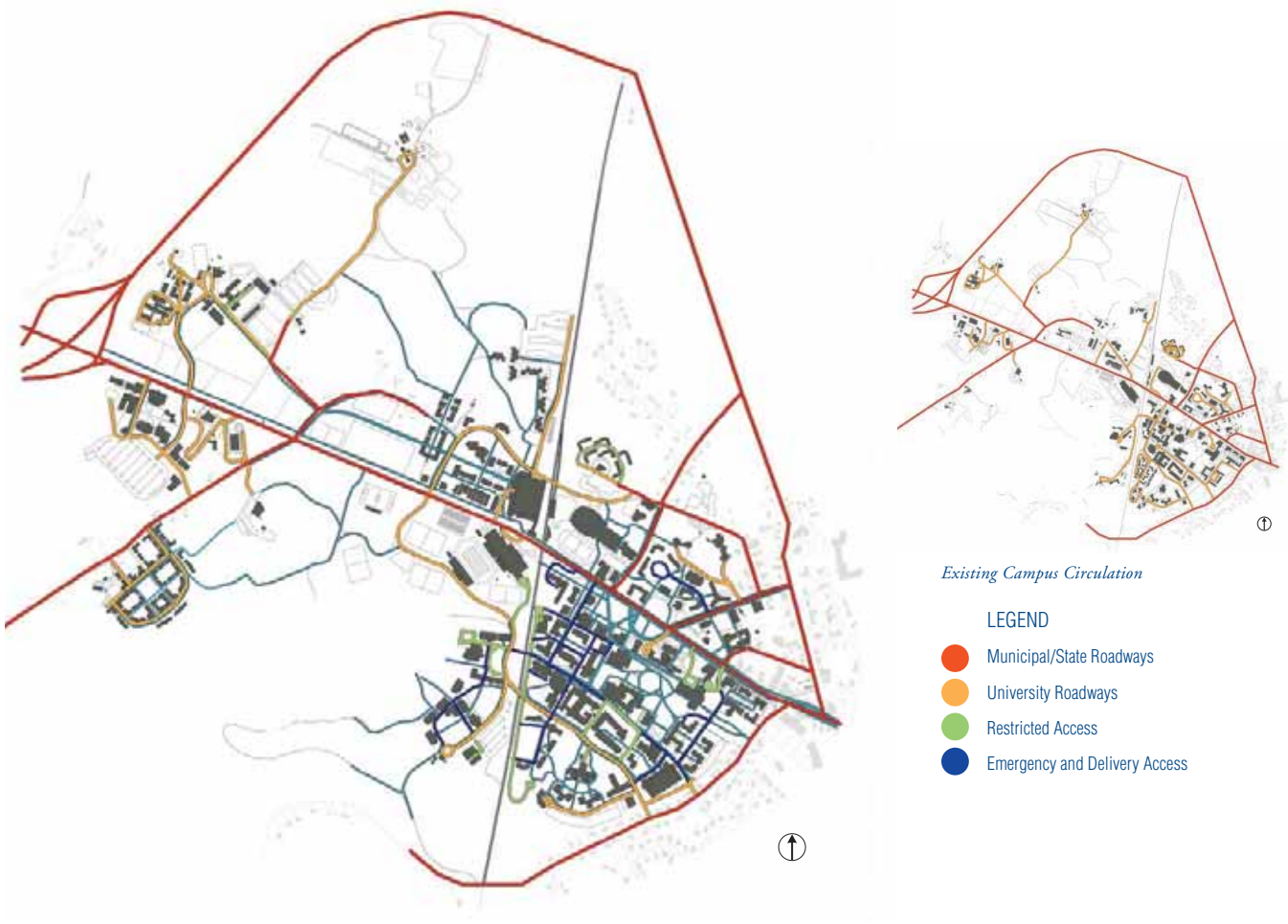
- Creation of a Tree Replacement Plan for the dead, dying, and diseased trees throughout campus. It also will address the rejuvenation of overgrown or declining shrubs and their overall health management.
- Restoration and enhancement of the Ravine. The plan will strengthen the character and identity of the Ravine by enveloping it in a low stone wall. At strategic locations, new portals, gateways, and steps will announce the transition from the manicured campus into a special realm where natural processes inform aesthetics. The plan calls for the eventual replacement of the existing bridges and walkways, and the eradication of invasive species will result in a landscape more expressive of the region's unique character. In addition, expansion of the Ravine to the east, over what is now



Example of wall suitable for ravine

C Lot, will create a portal and campus gateway that interface with downtown Durham, providing residents direct access to a cohesive campus open space system.

- Restoration of College Brook. Creation of the sciences quadrangle and the eventual displacement of C Lot provide an opportunity to daylight and restore major sections of College Brook. The redevelopment of the area where the firehouse stands and the creation of a pedestrian underpass at the railroad bed are unique ways to reconnect fragmented portions of this important corridor. This approach will improve storm water management, eliminating periodic flooding. The construction of the McDaniel Drive Extension in the southwest also will improve the character and condition of College Brook.
- Restoration of Pettee Brook. Like College Brook, Pettee Brook, which originates in the northwest portion of campus, has been compromised over time. A dam built in the 1920s slows its movement through campus, as does the railroad embankment. Developments such as Strafford Avenue Extension, the north underpass, Craig Supply redevelopment, and the area adjacent to Alumni Woods and behind the Whittemore Center may provide opportunities to restore this portion of the stream.
- Development of a sophisticated Turf Management Plan to guide the long-term management of lawns and open fields. It will inform management decisions and cultural practices affecting mowing, fertilization, and other operations that keep the University's lawns in optimum condition. At the same time, the Turf Management Plan will address lawns that can have reduced maintenance without compromising landscape quality. This plan also will look at areas that can gradually be transitioned back into meadows or woodlands.



CIRCULATION

Patterns of vehicular, service, transit, and pedestrian circulation are modified under the Campus Plan to improve the quality of the grounds and the efficiency of circulation. Within the academic core, small interstitial parking areas will be eliminated through parking consolidation, and roads will be limited to service, transit, and emergency access. The plan provides potential transit access along College Way, College Road, and Quad Way to improve the efficiency of campus shuttles and return these areas to pedestrians. Access across campus quadrants will be improved through penetrations under the rail line, reconfiguration of Main Street, and an enhanced network of streets within the peripheral residential ring.

The pedestrian circulation network will see considerable improvement through the landscape improvements listed above, and through the following:

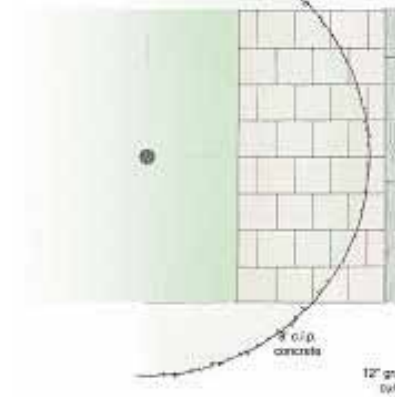
- **Main Street improvements.** The University and Durham will work together to continue Main Street improvements westward from downtown with significant streetscape, landscape, and sidewalk improvements. Concord Road and Main Street will be improved to create a western gateway as the primary access to UNH. Where appropriate, bus pullouts/shelters and bicycle/pedestrian improvements will be incorporated throughout the corridors. The Campus Plan also recommends redesign and reuse of College



College Way

Road and College Way, which would be closed to general traffic and become pedestrian/transit/service corridors.

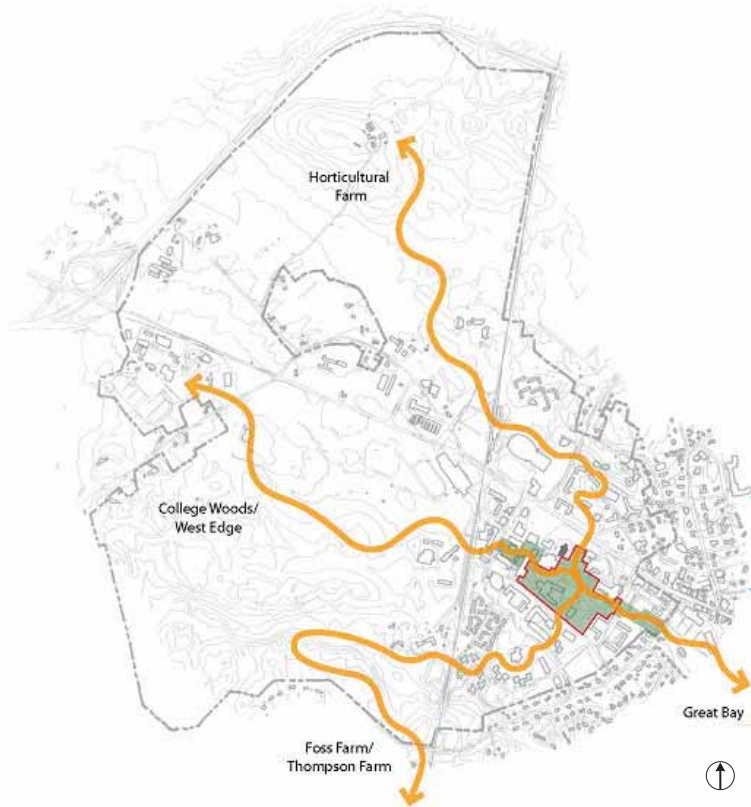
- The partial closure of College Way. The creation of a wide pedestrian path will facilitate east-west pedestrian movement, while removing a barrier to the flow of pedestrian traffic from the academic core to the residential quads to the south. This change will be accommodated in conjunction with a one-way access route and drop off plaza in front of PCAC for patrons and performers.
- The north and south underpasses and east-west mobility. A new street network will interweave the campus and create an accessible, appropriately scaled neighborhood west of the tracks. Access to the core campus will be provided by three routes (two underpasses and the existing Main Street bridge) and by reducing congestion on Main Street by traffic dispersion. This extended network of streets, along with the closing of College Road to general traffic, will encourage significantly more campus-bound vehicles to use the enhanced west gateway, obviating the need for any additional roads, such as the proposed “northern connector”. However, the plan does not foreclose long-term opportunities for a connecting road from Route 4 along the west side of the rail line to the proposed UNH street network.



Proposed Walkway



Existing College Way



Proposed Paths and Trails Network

- The south extension of DeMerritt Way, strengthening connections between the academic core and residential areas south of McDaniel Drive. The pedestrian experience will be enriched with new paving treatments, plantings, and site furnishings.
- Enhancement of pedestrian connections. As the east campus continues to evolve, it will be important to improve pedestrian connections between the MUB and quadrangle formed by Huddleston and Mills Halls and the open quadrangle defined by Christensen and Williamson residence halls. The promenade will be designed as a primary campus walkway and vehicular traffic will be limited to campus shuttles and service vehicles.

- Creation of a University Trail. A cohesive trail system will wind from the core campus to the edges in some locations, along the existing campus pedestrian circulation system. Inspired by the University's Sustainable Trail Program, the University Trail will connect the academic core with the Northwest Woods, The College Woods, downtown Durham, future faculty and staff housing, and distant properties like the Thompson Farm. It will be a thematic trail that underscores and enlightens users on the University's efforts to develop a sustainable campus environment. Through consistent paving treatments, site details, furnishings, and interpretive signage, the Trail will provide an opportunity to experience the campus's unique open space system.
- The east and west extensions of Library Way, strengthening connections between the academic core and facilities west of the railroad tracks. To the west, Library Way will extend through the railroad underpass and connect to the expanding campus core. A spur connection will lead to the outdoor athletic facilities and field house. To the east, Library Way will extend from its present terminus behind Thompson Hall directly to the entrance plaza in front of the MUB. Through similar paving materials, site furnishings, and other design elements, the extension will unify these two distinct areas of the campus while creating a safer and more pleasant pedestrian experience.



ROADS AND STREETSCAPES

Appropriate bicycle and pedestrian design elements will be integrated into new streetscapes and the Main Street redesign plan. The redevelopment of College Road and College Way will provide streetscapes oriented around transit, pedestrian and bicycle use. On heavy travel ways, bicycle and pedestrian uses will be segregated. In support of walking and bicycling, the plan proposes expanded bicycle infrastructure, including racks and storage areas, and encourages expansion of intra-campus bike transportation. The University will continue to work with the state, Durham, and regional partners to develop safe and effective bicycle routes to and from campus.

Improvement of campus-wide signage and way finding systems is encouraged, including new campus gateway markers. The existing directional signage provides information to drivers after they enter the University, and the signage system needs to be updated and amplified for drivers and pedestrians. Gateway markers on Route 4 announcing the University, along with markers on Concord Road and Main Street, will designate the University edges and create a sense of arrival.

PARKING

Consolidation of small, inefficient lots into larger central parking facilities will reduce local traffic created by drivers searching for parking. In coordination with a proximity-based zone system, the number of parking spaces on campus will be maintained with carefully controlled expansion over the horizon of the plan. A proposed parking structure on A Lot and, potentially, B Lot will enable UNH to manage parking more efficiently by eliminating inefficient parking areas within the core campus and replacing spaces lost to construction. A reduced number of surface lots is consistent with the goals and vision of the Campus Plan.



1994 Campus Master Plan

COMPARISON TO THE 1994 PLAN

PROGRESS SINCE 1994

The 1994 Campus Master Plan expanded the academic core west of the railroad tracks and reinforced the perimeter development around the core. The ring included roadways, parking facilities, housing and dining facilities, and public venues, while the core was refined as a pedestrian campus with new buildings and improved landscape. The plan had a number of major initiatives.

THE LOOP ROAD

The plan recommended moving vehicular traffic out of the campus core through the formation of a loop road bypassing Main Street. The new bypass was shown extending from the edge of downtown Durham, around the academic core south of Main Street and the housing north of Main Street, under the railroad tracks and back to Concord Road beyond the football field. Two small sections of the street network have been built from Main Street to Mast Road and from Main Street to Quad Way. The south underpass is in design.

THE WEST LOT

To accommodate parking displaced in the core, the plan proposed a large surface facility by the Route 4 interchange behind the Leavitt Service Center. Transit services connecting this lot to the campus were intended to remove congestion from Main Street. The West Edge Lot was built with 760 spaces and the Mast Road Lot has 350. With various lots and spaces removed from the campus, the net increase from 1992-2002 was 950 spaces, resulting in a 17 percent increase in available parking.

THE PERIMETER STUDENT HOUSING RING

Along the Loop Road, the plan described a perimeter ring of housing. In some cases it was infill around existing housing; in other areas it involved redevelopment of existing facilities or the development of natural areas. Some of this housing, particularly south of the core campus and along Garrison Avenue, was within easy walking distance of the academic core. Others areas of housing, particularly the expansion of The Gables, required transit for access to campus. Mills Hall opened in 2003 with 360 new beds next to Alexander Hall.

THE WEST GATEWAY

The western approach to campus is the most commonly used, particularly by visitors, and forms the first impression of the University. The north side of Concord Road has been an agrarian complex for many years, and the 1994 plan proposed refining the landscape of this area to reinforce the agricultural use and define the image of the campus approach. No progress has been made on the West Gateway.

THE EXTENSION OF THE ACADEMIC CORE WEST OF THE RAIL LINE

To accommodate growth in academic facilities, the 1994 plan proposed a research and academic quadrangle through the redevelopment of agricultural facilities on the west side of the railroad tracks adjacent to athletic fields and College Woods. This area was within the 10-minute walking campus, providing the railroad tracks were penetrated to provide access. This area has since become the expanding campus core, with construction of the Environmental Technology Building and the Chase Ocean Engineering Building.

PUBLIC VENUES

The 1994 plan proposed the construction of two public venues: a 6,000-seat multipurpose arena for athletic, convocation, and other activities, and a performing arts center. The Whittemore Center was opened in 1995 and meets the first of these visions. Resources have not been identified to begin work on the performing arts center.

2004 UPDATE

The areas designated for development under the 1994 Comprehensive Campus Plan remain appropriate for the next 20 years and beyond. The 2004 update generally supports that direction and the implementation to date.

The update affirms the following elements of the 1994 Plan:

- Restoration of the walking campus
- Diversion of campus traffic to a perimeter network of streets
- Enhancement and expansion of student housing peripheral to the academic core
- Development of research and academic facilities on the west side of the railroad tracks
- Closure of College Way and College Road to general vehicular traffic
- Consolidation of COLSA facilities at the western edge
- Redevelopment of Forest Park for undergraduate housing and academic needs
- Improvements to Concord Road / Main Street
- Regional road access via a primary, western entrance

The update proposes the following changes to the 1994 plan:

RENOVATION AND EXPANSION OF PCAC

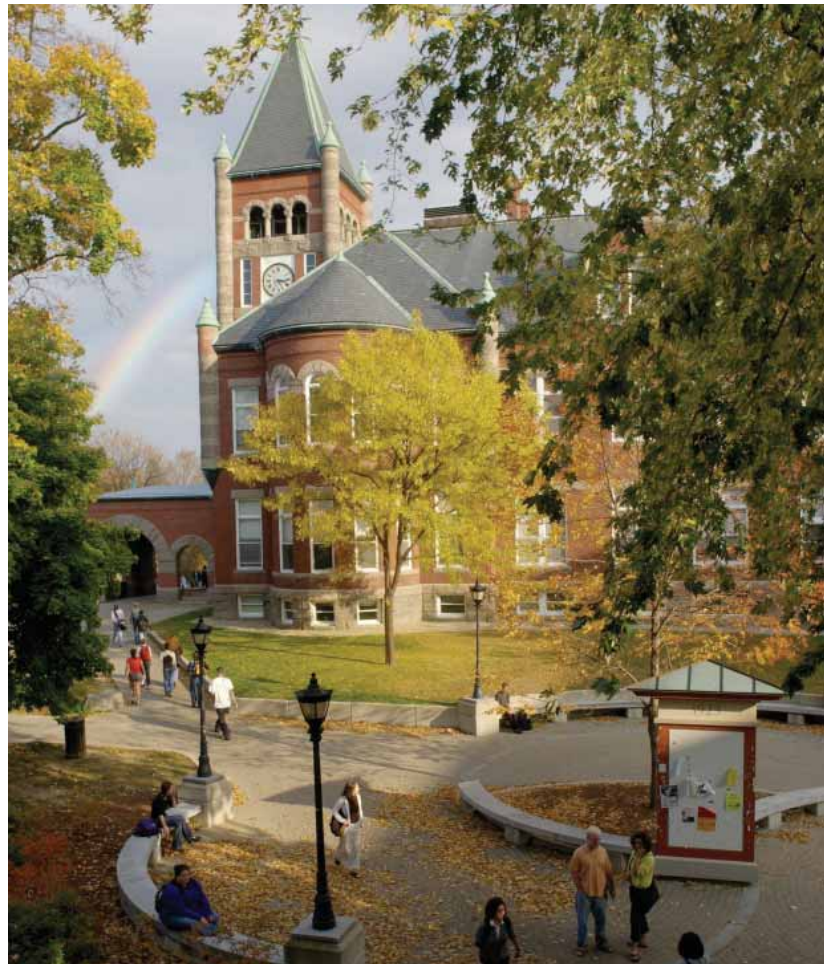
The most significant variation from the 1994 plan is support for the feasibility study proposing phased renovation and expansion of the Paul Creative Arts Center instead of its replacement. The renovation strategy allows for gradual upgrades and continual operation while improving the space and technology needs of the fine arts programs. Larger theatrical or music venues will be accommodated by facilities off campus.

TERMINATION OF THE LOOP ROAD ON THE EAST END OF CAMPUS

Although the update proposes a continuation of the perimeter road concept, its execution has evolved to a simple network of streets. The original proposal was for a singular loop road around the academic core, primarily on campus grounds. It would connect the north and south branches at Pettee Brook Lane. The new proposal does much the same on the west end of campus but ties into the existing Durham street network. On the south side of Main Street, the extension of McDaniel Drive from the west will connect into Mill Road, much as it does presently. Campus roads between McDaniel and Main Street will be closed to daily traffic and become pedestrian, service, transit, and emergency access only. On the north side of Main Street, the extension of Strafford Avenue will connect into Garrison Avenue rather than extend through to Pettee Brook Lane.

CONSOLIDATION OF PARKING IN STRUCTURES

The 1994 plan provided for consolidated parking facilities on the western edge of campus, adjacent to the Leavitt Complex. This portion of the plan has been implemented but has not realized the goal of intercepting traffic



before it reaches main campus and Durham. The Update provides a similar parking scenario with two facilities near the core capable of reducing the amount of traffic moving from lot to lot. The two facilities, one on either side of Main Street and the railroad line, are within walking distance of the academic core on Lot A, accessed by Strafford Avenue Extension, and Lot B, accessed by McDaniel Drive Extension. These two garages maximize the capacity for parking adjacent to the core, the Whittemore Center, and the Field House, while reducing surface land use and improving storm water run off quality.

FAMILY HOUSING COMPLEXES

During the process of the 1994 plan, it was proposed that Forest Park family housing be demolished and relocated, although a site was not determined. The update provides three suggestions for family housing placement.

1. The Leawood Orchard Property on Mast Road
2. Near the Thompson School between the proposed recreational fields and the reservoir
3. Reuse the Woodside Apartments as 100 units of family housing.

The Madbury Road area could be appropriate if the current fraternities, sororities, and off-campus student apartments are relocated.

APPENDIX 1

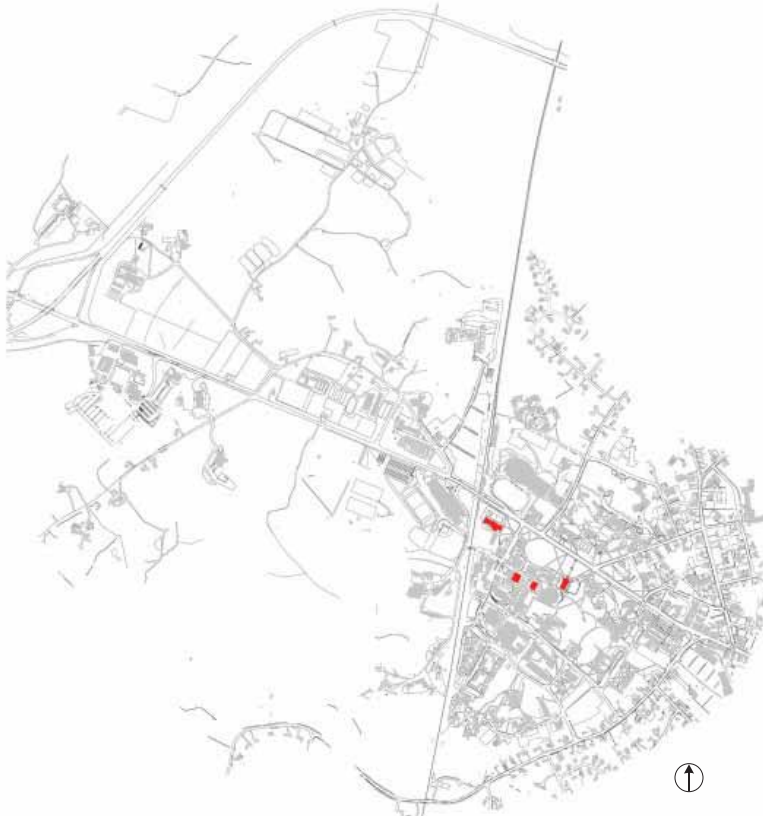
OBSERVATIONS



PROCESS AND OBSERVATIONS

The Observation Phase followed two paths: Physical data collection and accumulation of data, opinions, and priorities from focus groups of stakeholders on and off campus. Participating groups were:

- Transportation Policy Committee
- Space Allocation Repair and Renovation Committee
- Land Use Focus Group
- Housing Focus Group
- Landscape Focus Group
- Deans Council
- Faculty Senate
- Operating and PAT Staff
- Academic Units
- Sustainability Group
- Student Service Units
- Administrative Units
- Student Senate Leadership
- Graduate Student Organization
- Diversity Committee
- University Open Forum
- Town Open Forum
- Town of Durham
- Strafford Regional Planning Commission
- New Hampshire Department of Transportation
- UNH Board of Trustees
- UNH Alumni



1895 Campus Plan

1866-1893: CAMPUS FOUNDING

The University of New Hampshire began as a land grant institution under the Morrill Act of 1862. Four years later, The New Hampshire College of Agriculture and the Mechanical Arts was established at Dartmouth College in Hanover. For 27 years, the institutions shared space and a president. While the arrangement facilitated the establishment of the College, it did not work well for the faculty, staff, students or the state, which wanted an institution to educate farmers in agricultural advancements and technologies.



CAMPUS HISTORY



1920 Campus Plan

1893-1923

When Ben Thompson died in 1890, he left his Durham farm to the state on the condition that it become an agricultural college. The Thompson Farm was appropriate for an institution whose mission was education in agricultural science and development of well-rounded individuals. Near the farm's center were two topographical landmarks: A hill and the Ravine. College Brook runs through the Ravine, with steep wooded slopes on either side. This stream valley provided for surface drainage and for a time was referred to as College Drain. The hill and the Ravine remain central to the physical form of the campus.

In 1892, the Board of Trustees hired Charles Eliot to draw a site plan for the first five campus buildings: Thompson, Conant, Nesmith, and Hewitt (then Shops) halls and the dairy barn. Eliot visited Durham and worked for three months to create a plan. The top of the hill was selected as the site for Thompson Hall, a Romanesque building with an ornate tower that became a landmark for Durham and a symbol of the University. It remains an icon.

To show their enthusiasm for the new campus, the Classes of 1892 and 1893 had graduation exercises in Durham before the College officially relocated. The Class of 1892 convened in an unfinished barn, while the Class of 1893 used the unfinished Thompson Hall.



Street, Town and Campus Roadways



Campus Aerial Circa 1920

When classes began on the Durham campus in the fall of 1893, there were 51 incoming freshmen, including 10 women, and 13 upper classmen. The original state appropriation did not include funds for dormitories, which became a larger problem than anticipated prior to the move. Three times the anticipated number of students enrolled in the first Durham class, and the private enterprise in town did what it could to house students and faculty members.

Without appropriate housing, the College had difficulty recruiting women. Smith Hall was built for women in 1907-08 through private funding and state appropriation. The first men's dorm, Fairchild Hall, was built in 1915. Before Fairchild was completed, 50 freshmen lived in the basement of DeMerritt Hall. As the housing shortage for men continued, the administration encouraged the growth of the fraternity system, which could provide room and board. The result was expansion of the UNH Greek system from the late 1910s through the 1930s.



Main Street Residence Halls

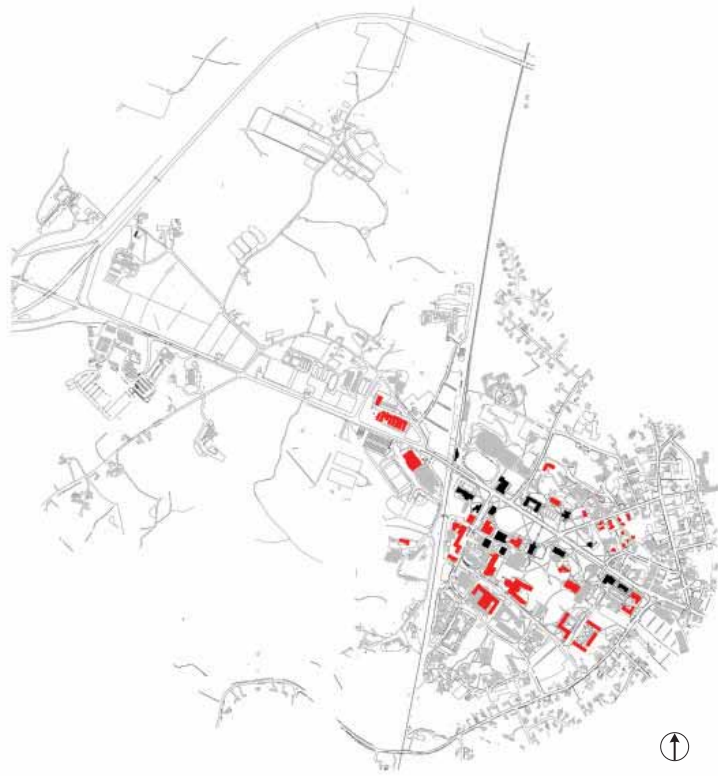
George H. Whitcher, Director of the Agricultural Experiment Station, developed faculty housing in 1893 since Durham had insufficient resources. He built Dean Pettee's house, three houses on Strafford Avenue, and Lambda Chi House. Other faculty members built homes near campus, in the Garrison Avenue area, and near Mill Road.

Main Street, part of the thoroughfare from Concord to Portsmouth, passed through the campus into downtown Durham, and the College developed along this spine with consistent architecture, materials, and compactness.

In 1914, Eric Huddleston became professor of architecture and chair of the newly established architecture program; he also guided the formation of the growing campus. Huddleston served as the campus architect and designed and remodeled 22 campus buildings between 1916 and 1946, thereby creating the look of the campus that has been synonymous with the University of New Hampshire for over seven decades.



Thompson Hall Lawn



1960 Plan



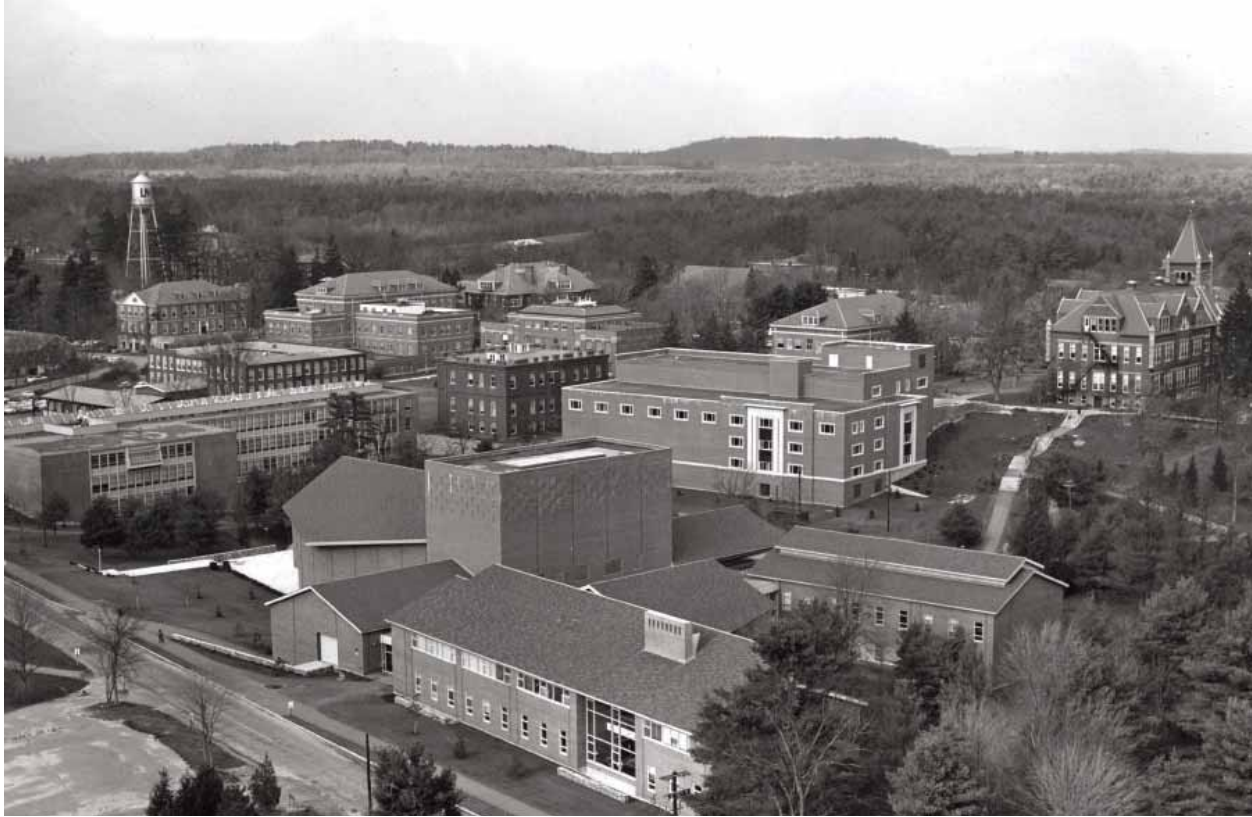
Campus Core - Circa 1950

1923-1970: THE ESTABLISHMENT OF THE UNIVERSITY

In 1923, the College was renamed The University of New Hampshire to address the broader mission of the school and to anticipate future growth and diversity. A year later, President Ralph Hetzel hired Bremer Pond, a landscape architect and professor at the Harvard School of Landscape Architecture, to create the first formal campus plan. In the Pond plan, agricultural buildings were moved to the periphery. It was adopted in 1925 and was implemented to some degree. Pond consulted on landscaping for the University until 1937, when he completed a tree-planting plan.

Lewis Fields were completed in mid-1936 and the Field House in 1937. Gavin Hadden, who specialized in building stadiums, was hired as a consultant for the construction of the Field House, which would become Cowell Stadium, and for the design of the outdoor playing fields. This plan formalized an area that had been used for recreation since the College moved to Durham. The only playing area that was not moved permanently to this side was the outdoor hockey rink, which remained near New Hampshire Hall.

Enrollment was 891 students in 1920 and 3,700 by 1960. The end of World War II precipitated rapid change for the University, including the need for academic and residential spaces. The campus had developed along Main Street and was now forced to expand on the south side of the Ravine and



Campus - Circa 1960

relocate many of the agricultural operations to the west side of the railroad tracks. However, the natural and man-made boundaries kept the campus contained and compact.

There also was a shift in the architectural style during this period. Modern Architecture was imported from Europe. The Memorial Union Building, the Paul Creative Arts Center, Spaulding Life Center, Dimond Library, Kingsbury Hall, and Stoke Hall were built in a style that broke with the campus architectural tradition.

In addition, the impact of the automobile was significant. College Road extended south of the Ravine, forming a campus loop road. Large parking lots were required and numerous small lots were tucked into all areas of campus. Service and delivery access became a daily issue.

The end of the world war and the emergence of Baby Boomers expanded enrollment significantly between 1955 and 1970. To accommodate the growth, Modern Architecture was added through the 1970s, including The New England Center, Philbrook Dining Hall, Williamson Hall, and Christensen Hall. These buildings are sited well, integrated with the landscape, and have appropriate materials and details. Prominent architects, such as Skidmore Owings and Merrill, William Pereira, and Shepley Bulfinch Richardson and Abbott left their mark on the campus.



Campus Core Pedestrian Way



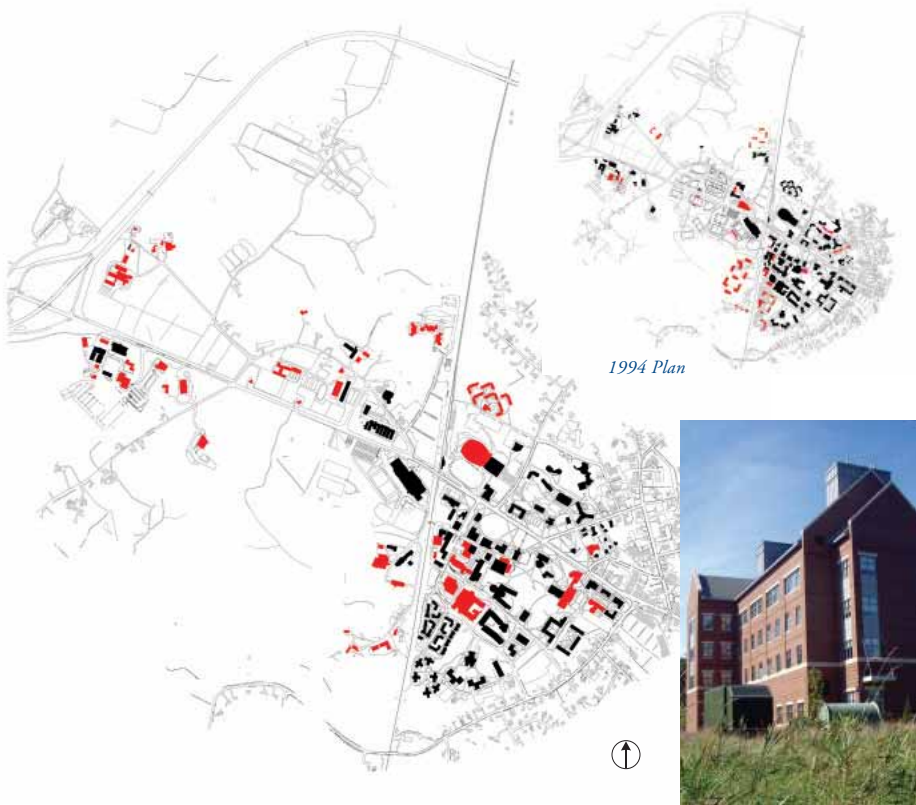
1980 Plan

1970-1990: A RESPITE FROM DEVELOPMENT

The enormous post WW II expansion ended abruptly in 1970 with virtually no construction on campus until the mid 1980s. Over this period enrollments continued to grow and additional space needs went unfulfilled.

The University now had multiple streets within its academic and residential cores. McDaniel Road was introduced to handle residential expansion to the south and to provide service access to the academic buildings south of College Road. College Road was cut into two pieces, one accessed from Main Street, the other accessed from Mill Road.

In the mid 1980s, construction began again with Morse Hall, the Student Health Center, Woodside, and a major addition to the New England Center.



1990-2003: THE CONTEMPORARY UNIVERSITY

Beginning in 1990, development on campus accelerated to accommodate years of unmet program demands. In 1994, the Comprehensive Campus Master Plan called for additional spaces for academics, support services, student services, athletic and recreational activities, and on-campus student housing. Out of this plan, the University developed the Whittemore Center, The Dimond Library expansion, Rudman Hall, the Environmental Technology Building, and Mills Hall. The Library Storage Building, the Printing and Mail Building, and the West Edge Parking Lot were built in the area of the Leavitt Service Center at the west edge of University property.

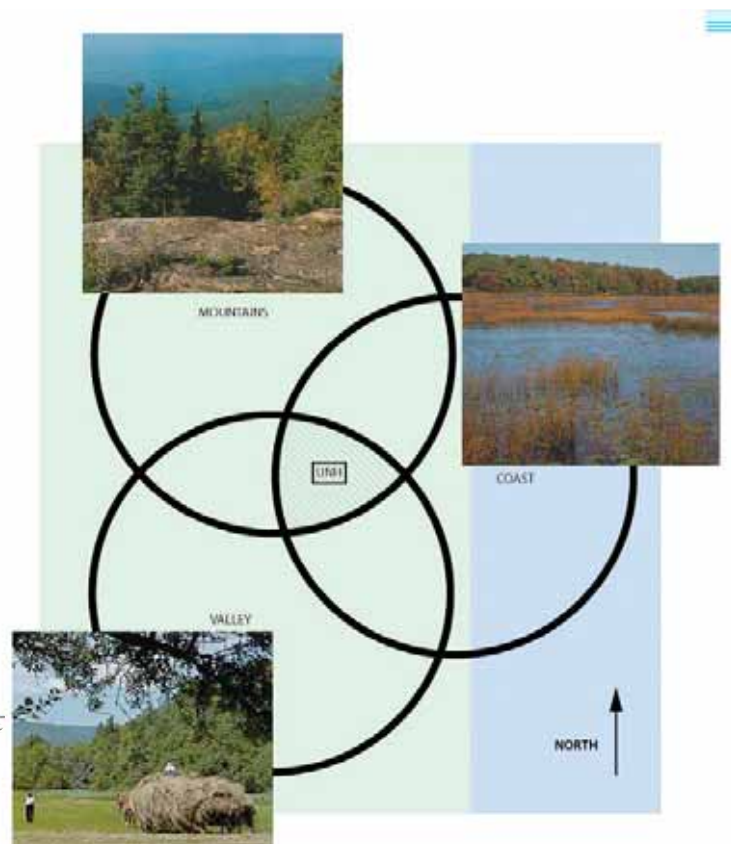
The plan also recommended the development of a beautifully landscaped, pedestrian-oriented campus with architecture that spoke to the University's unique location and history. Buildings from this plan have begun to reestablish many of the planning principles from the campus's founding.

PROJECTS COMPLETED FROM 1990-2003: TOTAL INVESTMENT OF \$230 MILLION

The Gables
Browne Center Renovation
Smith Hall Renovation
Hewitt Hall Renovation and Addition
Library Storage Building
Chase Ocean Engineering Lab
Memorial Union Building Addition and Renovation
Rudman Hall
Printing and Mail Building
Whittemore Center Addition and Renovation
West Edge Parking Lot
Spaulding Hall Renovation
Dimond Library Addition and Renovation
Morse Hall Renovation
Pettee Hall Renovation
Stillings Hall Renovation
Environmental Technology Building
Track and Field Upgrade
Rail Station Platform and Canopy Renovations
Mills Hall
One Leavitt Lane Addition
Murkland Hall Renovation
Holloway Commons
Artificial Turf and Lights
Congreve Hall Renovation



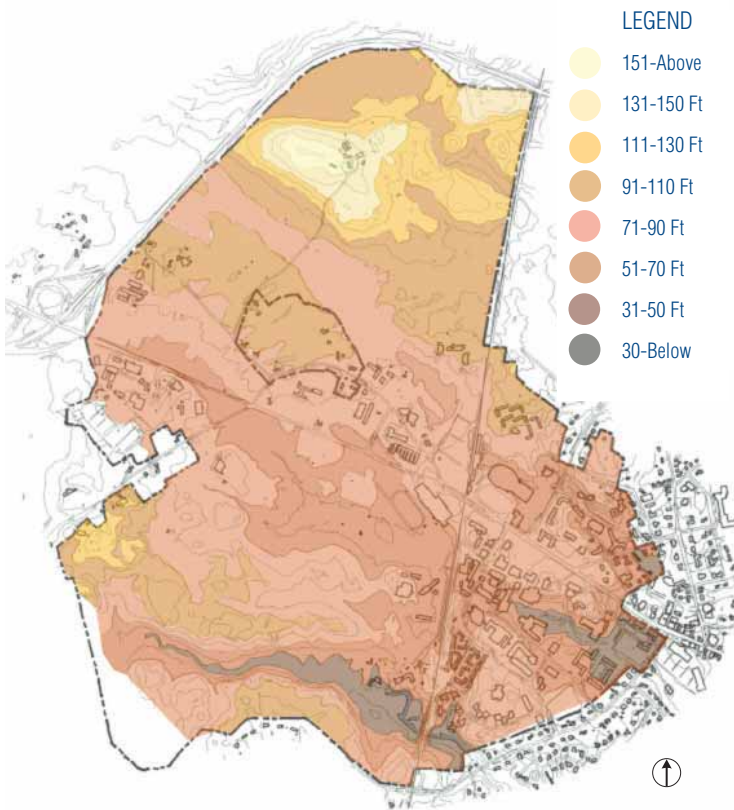
Regional Topography and Landscape



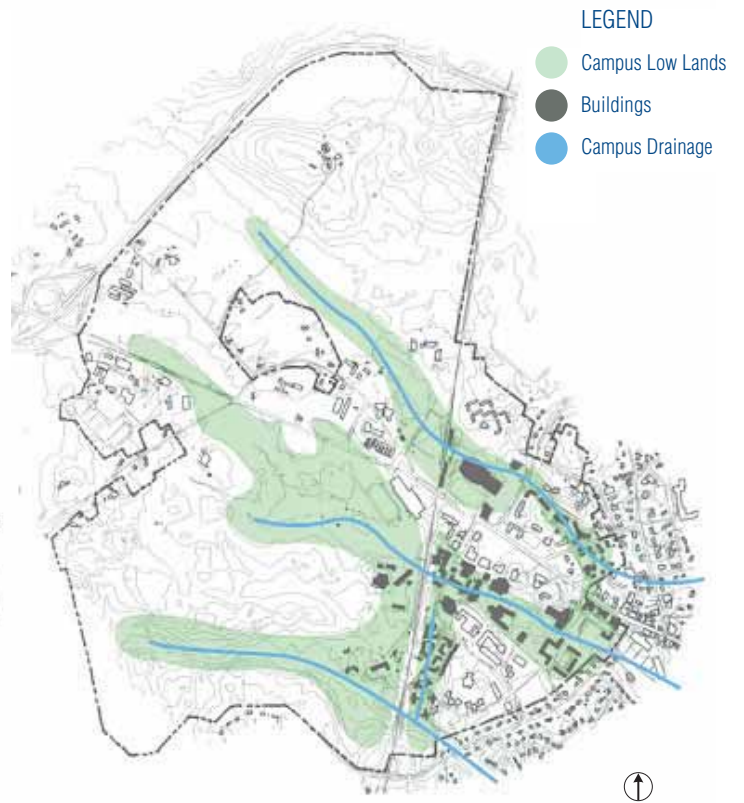
NATURAL SYSTEMS

REGIONAL CONTEXT

The Durham campus is at the convergence of three distinct landscapes: The Belknap/Moose Mountains to the north, the valleys of the piedmont to the west, and the coastal regions along the Atlantic shore. Each of these regions has unique physical characteristics. Rugged stone ledges and tall conifers characterize the mountains; open meadows and farm fields define the valley; and estuaries and coastal marshes are typical of the Great Bay. This convergence is a special asset of the campus and should be nurtured.



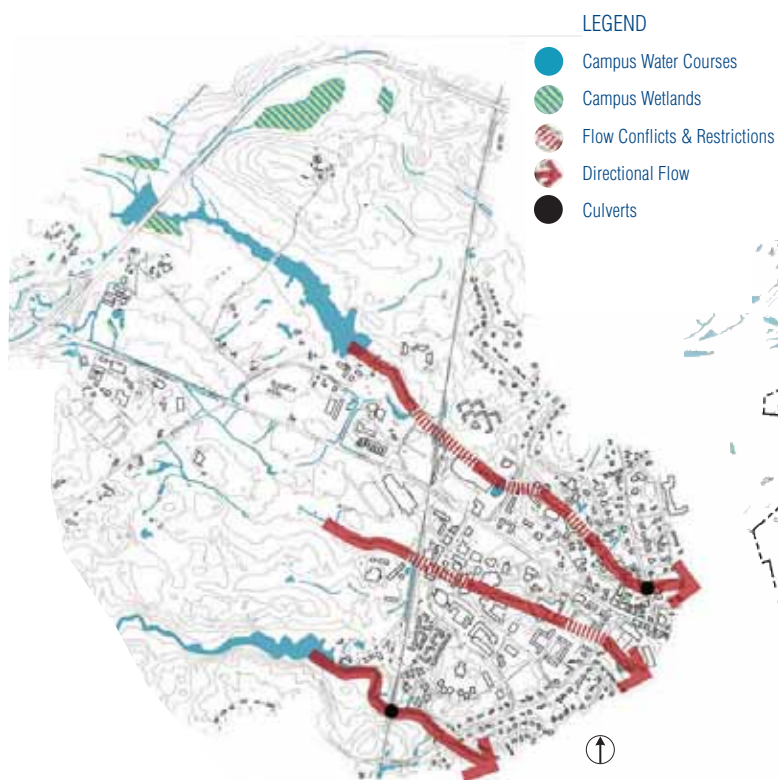
Campus Landforms



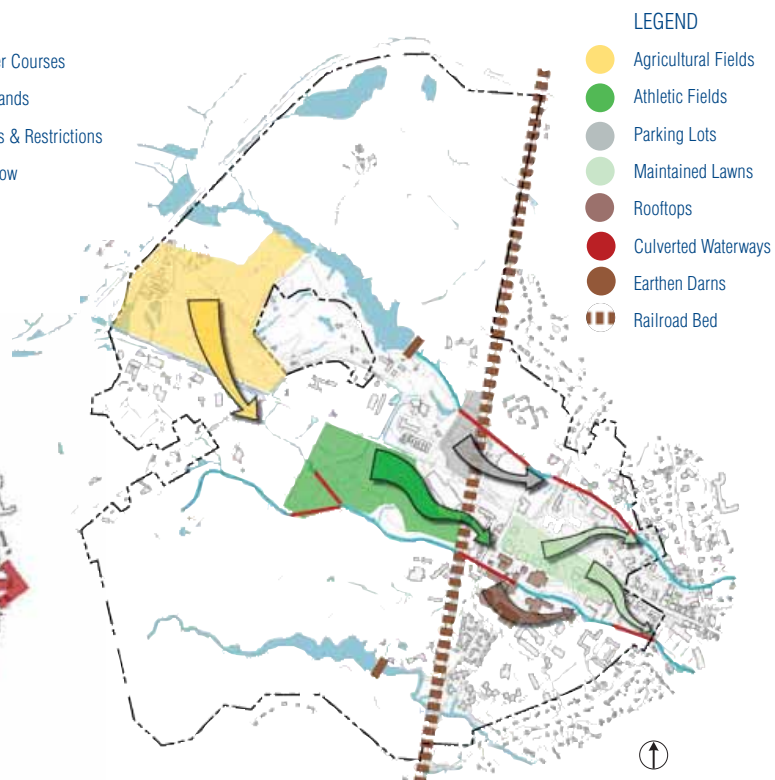
LANDFORMS

Topography has influenced natural and built aspects of the campus landscape throughout its history. Buildings originally were located along the ridgeline in the campus core, where they had prominent sites. Man-made landforms, including the railroad, compromised the integrity of the natural systems. The construction of the railroad bed created an artificial ridgeline and has since affected campus drainage patterns.

The rapid expansion of the 1950s and 1960s resulted in significant development in campus valleys and natural drainage ways. Some of these new built systems are not aligned with natural systems and affect construction costs and erosion of the quality of the landscape, as well as the quality of campus life.



Stream System



Water Shed



HYDROLOGY

Rivers, reservoirs, wetlands, and other water bodies account for a significant portion of the campus landscape and have influenced the placement of campus buildings, the alignment of roads, and the development of viable outdoors spaces. Water features are an amenity when they enhance the picturesque nature of a campus but a constraint when wetlands or poor soil characteristics from a high water table impact construction.

LANDSCAPE EVOLUTION

Development has compromised the effectiveness of the campus's natural systems. However, the degradation began well before the University was established. The removal of trees to make way for cropland and pastures, which occurred throughout New England during the 1800s, has continued uninterrupted. Construction of dams, channelization of streams, increases in intensity of runoff from parking lots and rooftops, and leaching of nitrates from agricultural and recreation fields have cumulatively led to further degradation of natural systems.

At its origin, the campus landscape was defined by open fields and woodlots, meadows and pastures, orchards, rivers, streams, and ponds. Vestiges of that landscape are defining elements of the contemporary campus landscape. The surroundings planned in the 1920s have matured



Open Space Typologies



and are in need of revitalization. Key areas of natural landscape have been allowed to reestablish, including the College Brook Ravine, which is now a central feature of the campus.

The campus landscape is evolving once again. The implementation of sustainable development practices is essential to maintaining a standard of living and quality of life in the coming century. The next evolution in the landscape will be the further repair of natural systems and the knitting of campus open spaces. Responsible management and development practices, as well as sensitive site design, will enhance the viability of natural habitats and enrich the quality of campus life in general.

OPEN SPACE TYPOLOGIES

Major campus open spaces fall into one of several categories: woods, open fields, the traditional campus landscape, coastal connections, and townscape. In addition, there are two other types of open spaces: interstitial woods and interstitial fields. The Outlying Parcels have woodland, agricultural fields, open meadows, and waterways.



LEGEND

- Orcharads & Groves
- Natural Areas
- Greenswards
- Fields & Meadows
- Plazas & Yards
- Parking Lots
- Marginal Landscapes
- ★ Special Places
- Promenades



LANDSCAPE TYPOLOGIES

Within the major open space systems is a series of landscape spaces that we occupy, attach value to, and personify. The planning, design, and management of larger open systems deal with natural systems. However, the built landscape requires attention to detail and human occupation, representing everything from the special campus spaces that contribute to the quality of life (College Woods, the Great Lawn in front of Thompson Hall, and the Murkland courtyard) to the more marginal landscapes that can erode campus character and compromise campus aesthetics.

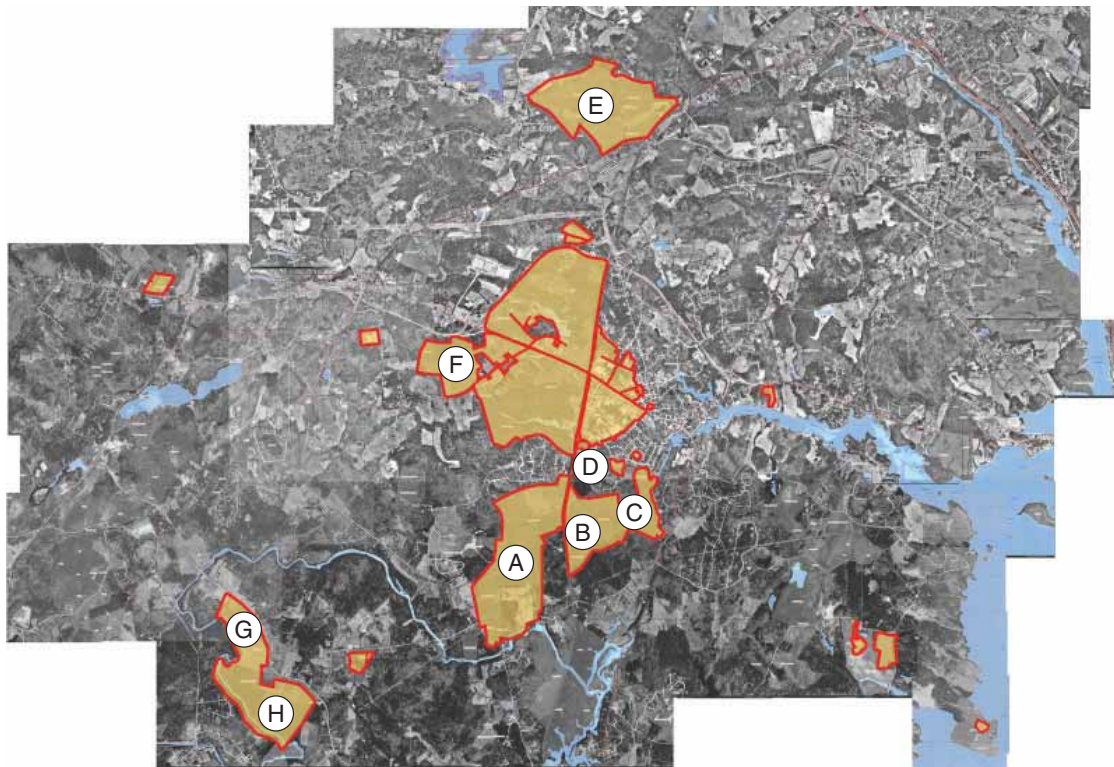
VEGETATION TYPES

The diverse regional vegetation requires varying amounts of energy and resources to maintain; they also differ in their effect on the ecosystem.

- Native woodlands have high aesthetic value, support natural habitats, and require little time and effort.
- Meadows, pastures, and agricultural fields have poor diversity, require moderate support, and can generate pollutants that degrade water quality.
- Marginal landscapes have less aesthetic appeal, limited diversity, and the potential to generate pollutants. However, they require moderate attention and have moderate value for wildlife.
- Athletic fields serve a critical function, have some aesthetic appeal, but bring little opportunity to enhance wildlife habitats and generate pollutants if not managed properly.
- Within the campus core, vegetation is richly diverse, high in aesthetic value, but requires significant attention. If managed properly, these areas offer reasonable wildlife habitats, especially for smaller animals. When left unattended, they produce pollutants and compromise water quality.

CORE CAMPUS TREE INVENTORY

The University has developed a core Campus Tree Inventory. This approach is consistent with the Landscape Master Plan that seeks to preserve and enhance the UNH cultural heritage and ecological integrity. Campus tree inventories not only catalog existing trees, they can serve as excellent planning tools. A cursory review of the inventory reveals a diverse collection of native and exotic trees and raises concerns regarding their general health. Many trees in the campus core, and particularly on the Great Lawn, are nearing the end of their life and need replacement. A closer inspection should be conducted to determine the underlying cause of the poor performance of so many of the University's trees.



Extended Campus Land Use

Housing and dining wrap around the University's academic core and provide transition into Durham. Athletics, recreation, and student services are adjacent to the core. Academic and support spaces for the College of Life Sciences and Agriculture and the Thompson School of Applied Science are in the northwest quadrant. Administrative functions are dispersed in buildings like Thompson Hall, Hewitt Annex, and in former residential buildings along Garrison Avenue. Other administrative and facility management functions are at the far west edge and in buildings along the Oyster River on the south edge, west of the railroad tracks. The visitor's center is in a former barn adjacent to parking Lot A. Admissions is in Grant House, a Victorian home diagonally across the street from Thompson Hall.

Significant natural assets surround the core. The College Woods, in the southwest quadrant, is a preserved woodland that provides a living lab for academic studies as well as recreational uses. The agricultural and horticultural fields, north of Main Street/Concord Road, provide space for academic studies, research, and community outreach. The wooded area north of these fields is used for forestry studies, research, and recreation. These natural assets are a microcosm of the New England landscape, living laboratories for the University, and opportunities for community use.

The land holdings of the University beyond the contiguous campus include approximately 1,300 acres within a five-mile radius. Unlike many land-grant universities that have been forced to develop their properties, UNH maintained land for academic studies, research, agricultural support, forestry, and recreation on a continuous basis. They give the University an incredible asset that should be maintained as open space for the timeframe of this plan. To ensure that conflicts do not occur between the competing interests for open space the University should undertake a study to investigate the designation of zoned open space uses particular research, recreation, and agricultural activities.

LAND USE

For legend see table on next page

OUTLYING PARCEL SUMMARY

Parcel	Town	Total Acreage	Agricultural Acreage	Forested Acreage	Access	Slope	Water Features	Buildings	Current Uses
Foss Farm/Thompson Farm	Durham	296.1	65	225	Mill Rd and Packers Falls Road	Some Slopes > 20%	Abuts Lamprey River, Streams and Wetlands	Highland House and Outbuildings	A-1, B, C-1, C-2, C-3, D-1, D-2, E-1, E-2, F-1, G-1, G-2, H
East Foss Farm	Durham	164.6	0	165	Foss Farm Road	Moderately Sloping, Some Slopes > 20%	Streams and Wetlands	None	B, C-1, C-2, C-3, C-4, C-5, D-1, D-4, F
MacDonald Lot	Durham	78.9	0	80	Route 108 and Foss Farm Road	Moderately Sloping, Some Slopes > 20%	Abuts Oyster River	None	North 12.5 acres conserved as Natural Area (not cut for 200 years), B, C, D-1, D-4, E
Mill Road	Durham	12	0	9	Foss Farm Road	Relatively Flat	None	Town Water Tower	Durham Water Tower, Power Transmission Lines, B, F-1
Kingman Farm	Madbury	355	80	270	Route 155	Some Slopes > 20%	Ponds, Abuts Bellamy River	Farm Hse Various Bldgs	A-1, B, C-1, C-2, C-4, D-1, D-5, D-6, E-3, F-1
Moore Fields	Durham	132	90	30	East Road and Leavitt Complex	Relatively Flat	Abuts Oyster River	None	A-1, B, C-1, C-3, C-6, D-5, D-7
Burley-Demeritt and Bartlett-Dudley	Lee	308	135	160	Hook Road	Moderately Sloping, Some Slopes > 20%	Abuts Lamprey River	1 Unoccupied House & Various Buildings	A-1, A-2, A-3, B, C-1, C-7, D-8, D-9, F-1
Browne Center	Durham	34	0	32	Dame Road	Moderately Sloped	Abuts Streams & Wetlands	main bldg + yurts	outdoor education programs
Elliot Farm	Durham	20	10	5	Beech Hill Road	Moderately Sloped	None	none	A-1, radio antennae
Garrity Road Gravel Pit	Lee	14	0		Garrity Road	Very Steeply Sloped	None	none	gravel pit
Davis Lot	Lee	10.5	0	10.5	Wiswall Road		None	none	very limited
System Offices	Lee		0		Route 4		None	2 office bldgs	offices only
Mendum's Pond	Barrington	187.6	0	185	Hall Road		water front	boat house, staff office, 2 picnic pavilions	F-2
Jackson Lab at Adams Point	Durham	(leased)	0		Durham Point Rd	Moderately sloping, some slopes >20%	shore front	research bldg and garage	research bldg and dock only
Totals		1598.7	380	1171.5					

LEGEND

A. Agriculture:

1. Hay production, some corn, animal waste disposal
2. Dairy: Raising Replacement Heifers
3. Equine

B. Forestry: Occasional timber harvest

1. T-School courses:
2. Dept. of Nat. Resources courses
3. Zoology Dept. courses
4. Biology Program
5. Wildlife Demonstration Areas
6. NR and DEC: Various soils courses and wetland delineation course

D. Research:

1. NR: Babbitt (amphibians), Lee & Eckert (permanent vegetation plots and invasive species research)
2. AirMap project (EOS/NOAA)
3. Dept. of Electrical Engineering (antennas in field)
4. Litvatis (squirrel ecology)
5. Agriculture (Dept. of Plant Biology) Runoff Study
6. Weather Monitoring Station
7. Bird Study
8. Swine Facility: Human Nutrition
9. Dairy Cattle Research

E. Extension/Outreach:

1. Possible location of CIRPS (Ctr. for Integrated Regional Problem Solving).
2. GLOBE and Landcover Team
3. Agriculture

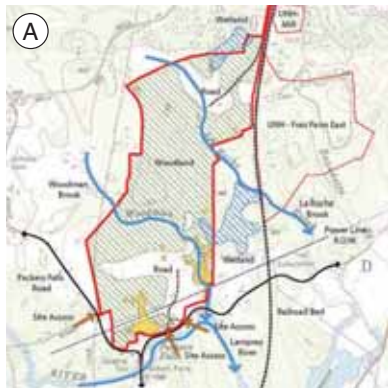
F. Recreation (UNH and public):

1. winter sports, hiking, running, mountain biking, birding, nature study
2. swimming, canoeing, fishing, picnicking

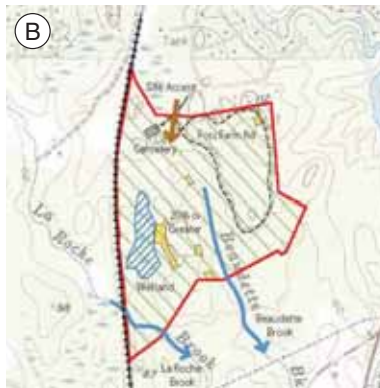
G. Endangered Species:

1. Song birds
2. Ground nesting birds

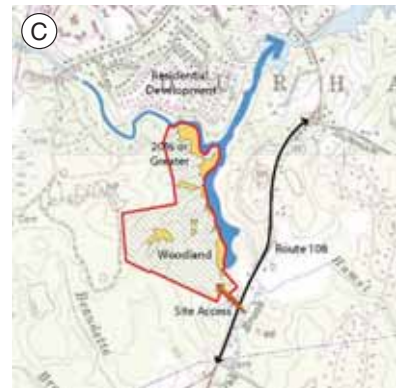
H. Family Cemetery Plot



Foss Farm/Thompson Farm



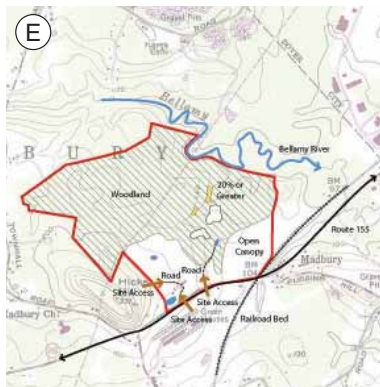
East Foss Farm



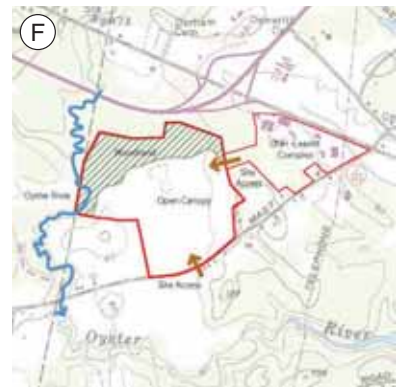
McDonald Lot



Mill Road



Kingman Farm

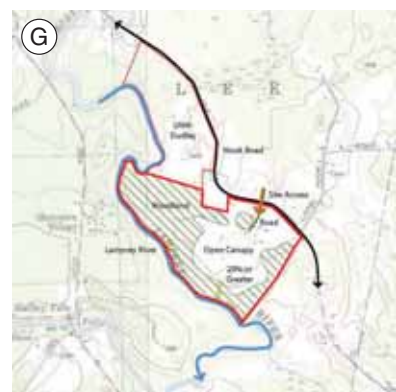


Moore Fields

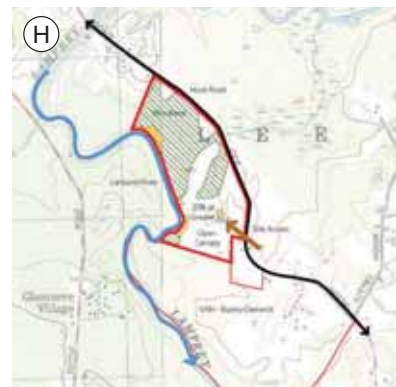
Approximately 370 acres are used to grow feed crops and to spread manure economically for the Animal Science program. An additional 130 acres were leased for the same purpose in 2003. Feed is processed on campus to support these programs. Occasionally, these properties are insufficient for all of the feed needs and additional supplies are purchased. The Animal Science and Equestrian programs will continue to need feed in the future.

Approximately 940 acres are forest used extensively by Natural Resources and the Thompson School programs for teaching and research. Some of the timber is harvested annually for forest management, teaching, and revenue. These properties need to be maintained for these purposes. Informal recreation also occurs but must be well managed to not infringe on research in certain areas.

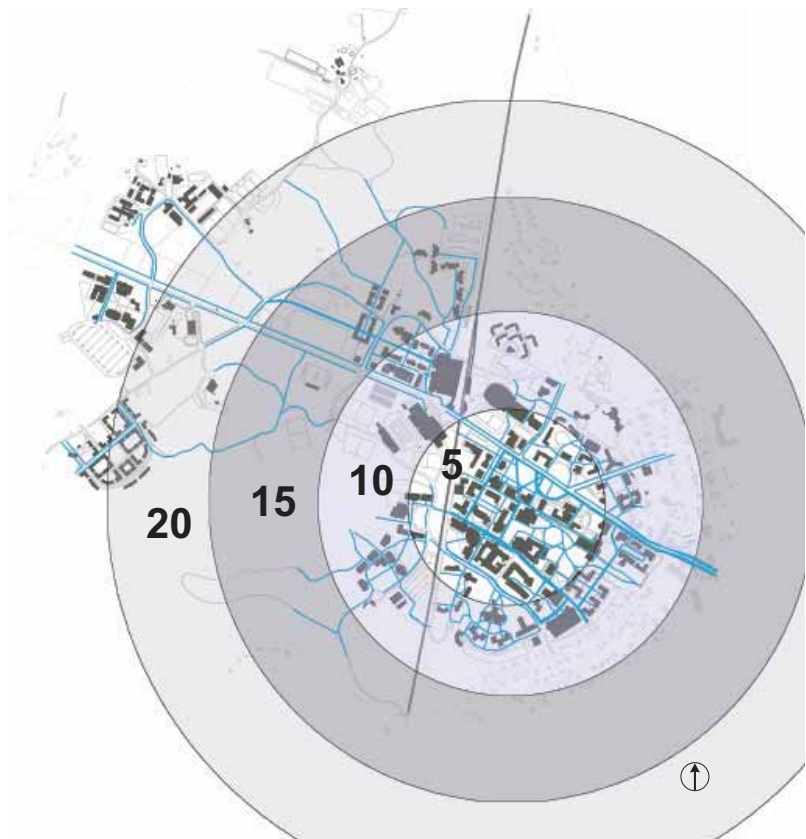
Some of these properties have farmhouses that may be of historic interest. The University has no programmatic needs for some of these structures or the resources to maintain them, let alone refurbish or restore them. Therefore, it will seek individuals or entities to use them appropriately and become stewards for the structures.



Burley Demerit



Bartlet Dudley



Walking time from center campus

CIRCULATION

The manmade and natural boundaries of the campus kept it physically compact over the history of its development. This enabled the University to maintain an academic scheduling and resident housing/class location policy based upon a 10-minute walk between classes. This length of time seems to be a reasonable distance for the average pedestrian before other modes of transport are considered. The Campus Plan maintains this commitment to a core campus designed with walking as the predominant mode of transport, supplemented by transit services around the core and to adjacent sections of the campus. Activities that do not need daily contact with the faculty, staff, or students can be located beyond the core and linked by campus shuttle service. These campus edge areas also can contain facilities services and remote parking.

The street network within the core campus has evolved over time and allows vehicular access to almost every building, creating frequent conflict between pedestrians and automobiles. Predominant concerns include Main Street, College Road, College Way and McDaniel Drive. Other corridors with conflicting vehicular and pedestrian segments are noted in the map below.

Main Street remains the primary transport spine for the town and University, and the railroad bisects the campus, constricting east-west mobility for Durham and UNH. To alleviate this bottleneck, the 1994 Master Plan called for two additional rail crossings and a loop road. These additional east-west corridors, and the accessibility provided, disperse much of the University related traffic on Main Street and provide expanded access to the southwest quadrant of the campus.

Student housing, recreation, athletics, administrative, and academic functions are on the north and south sides of Main Street, creating pedestrian crossings that exceed the volume of daily traffic on the street. To accommodate this traffic, the University has engaged police to monitor and direct traffic at peak periods. Pedestrian compliance with crosswalks in the Main Street corridor is marginal, resulting in increased congestion and potential safety hazards.

College Road and College Way pass through the academic core south of the Ravine. Students drive to this section of campus to pick up and drop off friends, service vehicles make deliveries, and food vendor vehicles park within the academic heart of the campus. UNH transit vehicles also navigate this road and are often delayed due to traffic congestion and conflicts. General automobile and vendor traffic need to be eliminated within the academic core while providing appropriate emergency, service, ADA-required, and campus transit access.

The southern underpass, with an extension of McDaniel Drive west to Main Street, will provide expanded access to the southwest quad. The completion of this new road segment will permit the modification of College Way, and eventually College Road, into pedestrian, transit, and service vehicle corridors. The long-term transformation of College Road will require the relocation of the Durham Fire Department and service access to the power plant via a new alley along the foot of the rail bed.

SERVICE ACCESS

UNH is mindful of service and ADA access for buildings in areas that predominantly serve pedestrians, such as Library Way, College Way, and the Science Quad. With the unrestricted road network of the core campus, service vehicles have easy access to nearly every building. While it is important to maintain service and delivery access to buildings, it is more important to preserve certain areas of the campus for pedestrian flow and to ensure safety. Service access hierarchy ranges from large fire trucks to small delivery carts. This hierarchy is accommodated in the Campus Plan in a new series of control restrictions and profiles appropriate to the most sensitive users.

REGIONAL ACCESS

The UNH campus is accessed primarily from state routes 108, 155, and US 4. Faculty, staff and student residences show wide distribution in all directions, with heavy concentrations in the adjacent urbanized centers of Dover, Newmarket, and Portsmouth. Increasingly, UNH constituents are dispersed in more rural communities to the west along US 4 and the cities of Rochester and Somersworth to the north. As part of the observation process of the Campus Master Plan update, the consultants evaluated the distribution of UNH constituents through review of residency data acquired from parking permits and other sources. UNH is prepared to adjust transit



College Way



Consolidated Parking



Existing Parking

routes and infrastructure to reflect changes in these distribution patterns. There are concerns that too much traffic heading for the campus goes through local neighborhoods, and that more traffic should be encouraged to use the west gateway from US 4 to Main Street.

PARKING

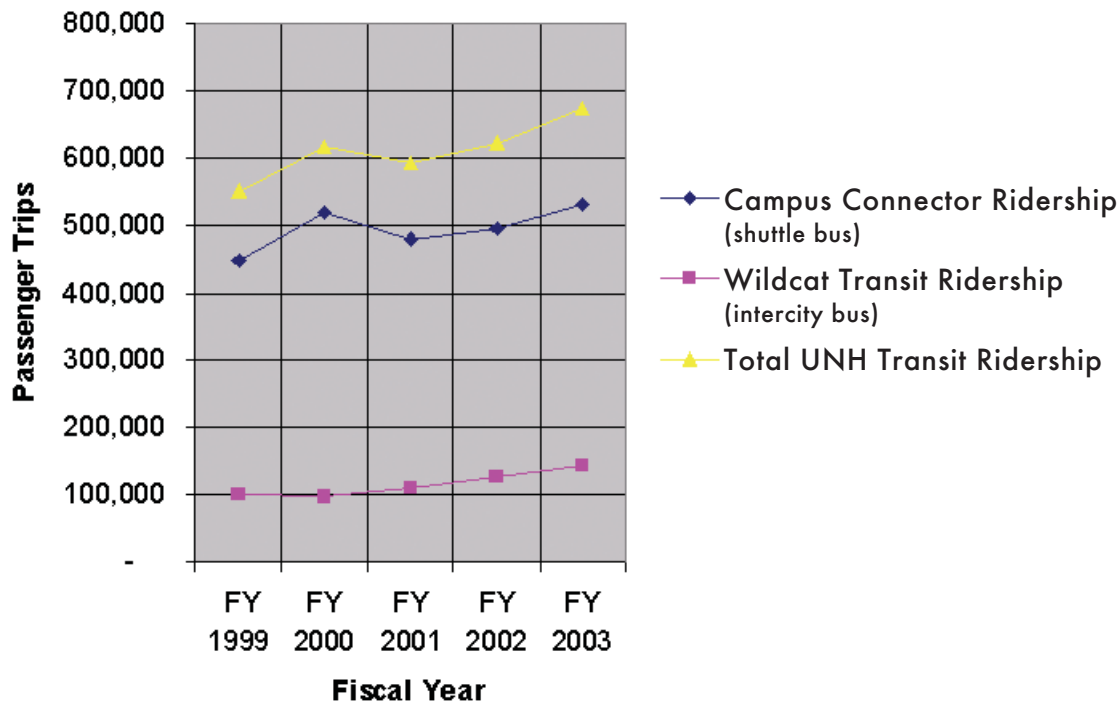
In 2002, UNH provided 6,450 parking spaces throughout the entire campus. In total, there are 89 campus parking lots, each containing two to 933 parking spaces. As in any high-density area, there is a shortage of parking in the immediate core area with an overall availability of parking in remote areas accessible by transit. However, many of these spaces are perceived to be too remote for convenient access even with the current shuttle service.

Numerous small lots within the academic core, coupled with minimal parking restrictions, have resulted in faculty, staff, and students circling the campus looking for available parking. This has led to additional congestion, frustration, and safety issues. The University's Transportation Policy Committee (TPC) has recommended new parking policies and transportation incentives to reduce the demand for on-campus parking, and providing some additional parking spaces. The policy report calls for the construction of a parking facility that would add overall capacity while allowing for a planned reduction of surface parking lots within the core campus to greatly improve the pedestrian environment and safety. The policy report also provides incentives for the UNH community to park remotely and utilize transit services to access core campus. An incentive based zone system has been proposed to reduce traffic impact in core campus.

The combined surface area of parking lots consumes approximately the same amount of land as the academic core, making this space a valuable and limited resource of the University. Alternatives to surface parking are being explored, and the first step is to consider policies and strategies that reduce the need for vehicles on campus. Another is to examine parking location and density. Parking structures provide a higher density in specific locations around the campus, free up land used by surface parking for either new buildings or open space, and are convenient locations for accessing the University shuttle system, which would serve the campus and surrounding communities. Structures are generally a costly solution to the parking problems on campus but should be considered as a component of a well thought out transportation demand management plan.

In 2002 the ratio of parking spaces (6,450) to total campus headcount (16,320) is .4:1 or 40 percent. Based on a review of other public universities' parking situations, this ratio is at the mid-point of the national average. By continuing to expand the demand management program, the University can maintain parking efficiently at 40 percent of the projected total head count (18,000), by adding approximately 600 new spaces on campus over the 20-year planning horizon.

UNH Transit Ridership FY 99-2003



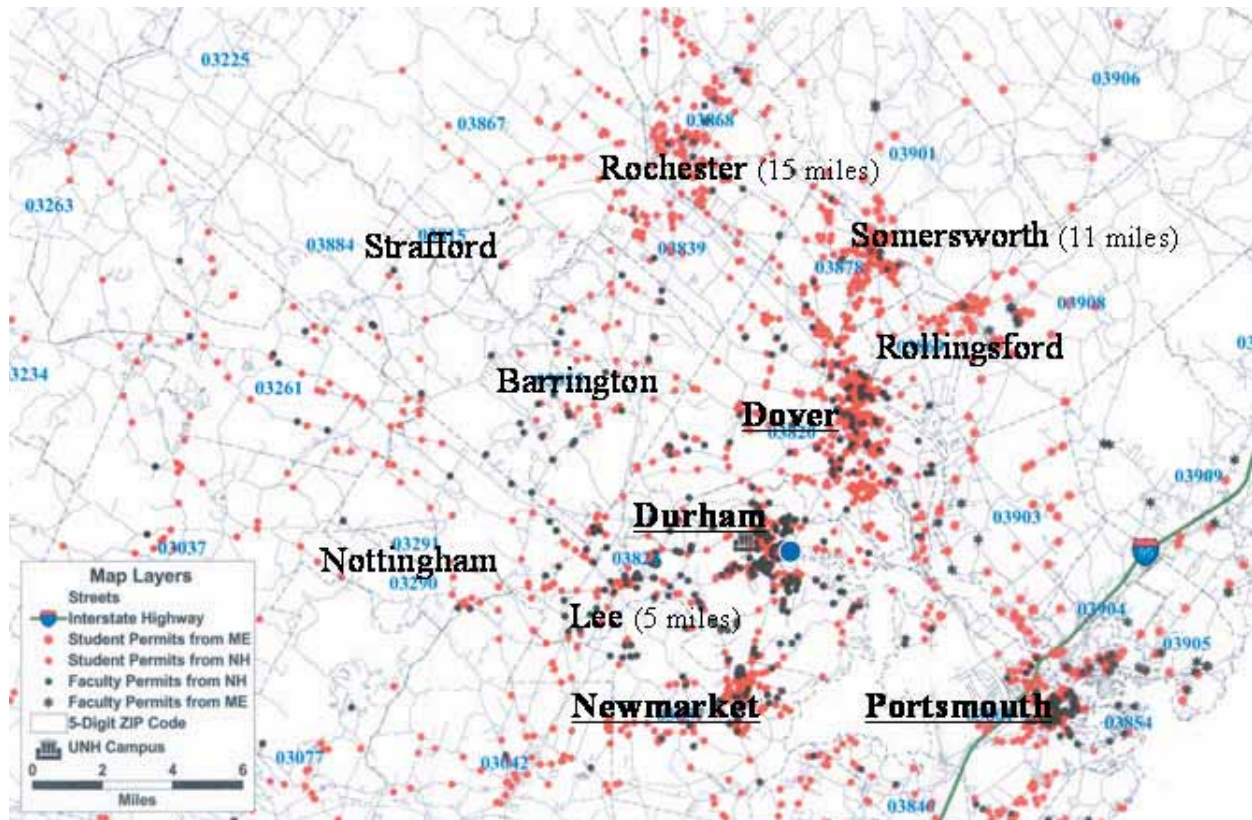
1. Plan to maintain current ratio for parking at 40% of total head count
2. Implement Demand Management Program
 - Potentially reduce parking ratio over time
 - Elements of Demand Management
 - A. Promote Alternatives: Transit, bicycles, ridesharing, walking
 - B. Create zoned parking system
 - C. Reallocate parking to central structured facilities
 - D. Increase on-campus housing

PARKING AND TRANSPORTATION

TRANSIT SERVICES

UNH operates two transit systems to serve its constituents and the public. These services are funded through a combination of Transportation Services permit fees and student operational funding, as well as federal capital investment. Services have seen expanded investment in recent years, with ridership increases. The Transportation Policy group and a student advisory committee evaluate routes and schedules annually. These services are coordinated with regional public transit provided by COAST and a reciprocal pass system is used.

The University's Campus Connector provides free fixed route access to all quadrants of the campus and downtown Durham. Service is tailored to meet the needs of the UNH community, with reliable transportation to parking



Population Transit

lots, residence halls, classrooms, and administrative buildings. The service operates seven days a week from early morning to late night during the academic year. As the Campus Plan's network of streets is constructed, new and more efficient transit route options will be implemented, expanding mobility and accessibility options for all constituents.

The Wildcat Transit system connects the core campus with the surrounding communities of Portsmouth, Newington, Dover, Madbury, and Newmarket. The routes are evaluated annually and adjusted to the commute needs of the faculty, staff, and students. The service also provides shopping, recreational, and employment access for UNH students and operates into the late evening hours. Wildcat Transit operates year round, with reduced service during non-academic session.

In addition to these University operated services, a number of private and public intercity bus and Amtrak intercity rail services directly serve the UNH campus. This combination of providers represents a unique intermodal transportation system that connects the University with neighboring towns, major cities, and airports, including Boston, Manchester, Portsmouth, and Portland. These services make UNH a livable and connected campus for users who seek mobility options other than private vehicle ownership.

DEFERRED MAINTENANCE

The University has deferred maintenance records of every building on campus and has rated each building's condition as good, needing minor renovation, needing moderate renovation, needing major renovation, or should be considered for demolition.

Many of the buildings considered for major renovation are part of the current capital improvement program, including Kingsbury, DeMerritt, James, Nesmith, Parsons, and Philbrook Dining halls. Other academic buildings that should be considered for major renovation include Kendall and Morrill halls, the Paul Creative Arts Center, Horton Social Science Center, Hamilton Smith Hall, the greenhouses, and Barton/Cole, Putnam, and New Hampshire halls. While housing and dining facilities have more regularly scheduled maintenance, many residence halls will reach 50 years of age without major renovation within this planning horizon. Residence halls anticipated to need major renovation for this master plan include Fairchild, Hetzel, Stoke, Williamson, and Christensen. The latter two are large and will require a capital effort to address infrastructure issues like electric heat, ADA, and technology.

Several campus buildings beyond repair are slated for demolition. They include the Forest Park residential area, the Mini Dorms, the small wood frame homes on Garrison Avenue and Pettee Brook Lane, and possibly the lower quad residential complex. Other facilities slated for demolition include Zais Hall, the Service Building, Hewitt Annex, the Nutrition Center trailers west of the tracks, the Poultry Facility, Ritzman Lab, 11 Brook Way, and temporary buildings in the Leavitt Service Center. These demolitions will open up site opportunities to further serve the academic and social missions of the University, therefore making better use of the available land.

The University's 26 percent increase in space needs includes a 20 percent expansion for academics and research and a 49 percent increase for residences.

PROGRAM SPACE NEEDS

With 3.26 million net square feet (nsf) of existing space assigned to programs and departments, the plan anticipates:

- 950,000 nsf of expansion
- 490,000 nsf in replacement
- 1,000,000 nsf of renovation

The total affected space equals 2.45M nsf, with the .95M nsf of expansion taking the existing 3.26M nsf to 4.21M nsf over a 20-year period.

These planned increases support three fundamental institutional decisions: modest and measured growth of the undergraduate population; and aggressive pursuit of a higher student population housed on campus; and a

market growth in research of about 50 percent, based on dollar values for a mature research program. Undergraduate growth is anticipated to be limited, based on projected demographics in New Hampshire, the competitive environment in New England, and the University's assessment that it can only maintain quality and focus if the undergraduate program remains roughly its current size.

Forecasts for graduate students are more difficult to make because they must take into consideration demographics and the economy.

The plan allows for maximum growth in undergraduates over the 20-year period of about 10 percent (or .5 percent year without compounding) and is practical in that it provides for a responsible percentage of New Hampshire's high school graduate cohort. It is also prudent in that it proposes a physical plant that supports the maximum. As the build-out of the academic features of the plan progresses, it is expected that actual enrollment levels will influence real-time decisions

Integral to this commitment is the expectation that most freshman and sophomore students will have a residential college experience before considering a transition to more independent living in apartments on or off-campus during their junior and senior years. At full maturity, the University is anticipating the number of undergraduates housed on campus to be in the range of 60 to 70 percent. This plan accommodates 60 percent over the next 20 years, taking into account the modest enrollment growth anticipated, while improving on the existing 50 percent figure.

REPLACEMENT AND RENOVATION

In addition to building expansion, there are replacement and renovation plans representing 490,000 nsf in replacement buildings. These buildings are considered to have exceeded their useful life and are either not fiscally responsible candidates for renovation or occupy sites that exceed their value. The former category refers to wood frame buildings like those in the Garrison Avenue area, as well as temporary structures at the West Edge (Leavitt Center). Buildings considered for replacement, occupying valuable building sites, refer to structures like the Service Building and Zais Hall, allowing for a transformation of this part of campus.

The plan to renovate 1,000,000 nsf addresses the issues associated with an aging inventory. The strategy to renovate the core academic buildings is based on the KEEP New Hampshire initiative, targeting the aging Academic (Science and Engineering) infrastructure. It also represents an effort to address the most urgent infrastructure improvements for residential facilities. Inherent in the replacement and renovation strategies is the enhancement of poor quality and often underutilized space in an effort to improve the contribution that these buildings make to the UNH mission of teaching, scholarship, and engagement.

The University wishes to continue to be a good neighbor and support the town of Durham. The town wishes to maintain its single-family community and its New England charm. The town also wishes to discourage rentals by absentee landlords and conversion from single-family homes to rentals within the town limits. Student rentals are a significant business in the town, making up approximately 20 percent of the property tax base. The town would like to encourage faculty members, staff, and graduate students to live in town to provide a sense of ownership. However, because of the high cost of housing in Durham, students, faculty members, and staff tend to move to other communities, which increases commuter traffic and congestion and reduces the connection between the University and town.

There is the potential to partner with Durham and use land within the town limits to address housing needs. A goal of the University is to work with the town to control locations of student off-campus housing so it does not permeate the entire community. Focusing housing near the edge of the campus in downtown, where many students want to live, and reinforcing single-family neighborhoods and rural areas encourages housing that fits the needs of families and students.

The Main Street, and Madbury Road, corridors could be developed to provide housing mixed with retail and commercial space in downtown Durham. If off-campus housing is built in remote areas of town, it would do nothing to reduce traffic, disrupt the rural character of the countryside, and encourage sprawl. The downtown mixed use approach would give space to the private sector for needed goods and services, create a vibrant center, and provide tax revenue for the town, all of which benefit the town and University.

The University completed a Utility Master Plan in 1998. One of the outcomes of the 2004 campus plan update will be an assessment, with Durham, of current of water, sewer, power, storm water, and gas capacities. The Spruce Hole aquifer also should be evaluated to supplement the current water system which is taxed during periods of drought.

TOWN AND GOWN COMMUNITY

UTILITIES

APPENDIX 2

PROGRAM ACCOMMODATION



APPENDIX II: PROGRAM ACCOMMODATION

Implementation of the Campus Plan will require coordination and sequencing of numerous projects to meet the space needs of the institution and the campus population.

These needs were assessed in meetings with more than 50 stakeholders on campus, then discussed and tested with decision makers at every level in each of the space categories, which are:

- Academic and Research
- Student Academic Services
- Housing and Dining
- Athletics and Campus Recreation
- General Administration

The outcome is a set of precepts to guide space decisions and to define specific space-related needs for the extended campus. The process also documented unmet needs, program growth, enrollment projections, and poor quality or underutilized space.

ACADEMIC AND RESEARCH PRECEPTS

1. Support the University's fundamental mission of teaching, research, and engagement.
2. Maintain a walking campus that continues to support a 10-minute class change (density vs. sprawl).
3. Accommodate 10 percent undergraduate growth over 20-years and an estimated 25 percent in the graduate population over 10 years.
4. Appropriately integrate buildings to enhance the undergraduate academic experience, blurring the lines between research and teaching.
5. Fund new and renovated academic buildings primarily from state resources. Leveraging State and private funding for academic buildings such as McConnell Hall, PCAC, NH Hall will be considered as a pragmatic strategy for the renovation of the aging building inventory.
6. Fund research buildings from federal resources.
7. Classroom capacity should be geared toward smaller class sizes, understanding that the large and medium classrooms with current technology are presently at a premium.
8. Consolidate fractured academic departments whenever possible
9. Strive for a healthy balance in departmental structure by keeping co-located Social Science Institutes on the core campus.
10. Provide appropriate parking and transit accommodation to programs and departments with outreach integral to their mission, i.e. the Arts (PCAC), SHHS Clinics, Social Science Institutes, Cooperative Extension.
11. Balance crop lands and the animal herd in terms of feed and available property owned by UNH.

12. Decommission buildings on a case-by-case basis on outlying properties that are not integral to the University's mission.
13. Provide swing space for academic renovation and addition projects.
The present resource is dwindling and will go away when psychology consolidates and Nesmith is renovated as part of the University's Phase 2 projects and priorities.

ACADEMICS AND RESEARCH

Academic and research space accommodation is extensive in the variety of programs and interests it represents. The Campus Plan recognizes the expectation that buildings supporting research will be integrated successfully into the campus academic fabric. What's more, UNH's reputation as the quintessential New England liberal arts institution with a thriving research base emphasizes the value of appropriate space usage.

While the undergraduate enrollment projection is 0.5 percent a year over the 20-year planning horizon, commitment to core undergraduate education must be maintained. Graduate students are expected to increase by 400 to 2,500 over the next decade, depending in part on a stable economy. Increases also are expected in research into atmospheric, marine, and environmental sciences, and there is growing interest in medical analysis and material sciences.

A common thread for all academic units is the University wide classroom inventory. In general, the number of existing classrooms satisfies current needs, as do the over all quantity of classroom seats based on nationally accepted standards. Presently there is very high classroom utilization in the peak use class scheduling window (Tuesdays / Thursdays; and Monday / Wednesday afternoons). Of interest to the campus community is the appropriate balance of classroom sizes and quantities. It is believed that the mix of current classroom sizes over time requires some redistribution. In support of the Academic Plan there is a long term desire to keep large classes to a minimum. Going forward classrooms should provide a minimum of 25 seats and some classrooms should be increased to the 80-seat range while providing an enhanced technology platform. These adjustments in classroom size can occur as buildings are renovated.

Further detailed analysis is required to assess the opportunities to improve utilization of classrooms outside the peak use window defined above. Factored into this review of utilization and efficiency should be the ongoing short term needs required to accommodate classrooms temporarily displaced by construction.

The Campus Plan takes into consideration the specific goals and requirements of each college and school in addition to the needs of related areas, such as the Graduate School, the Library, and research space.

THE COLLEGE OF LIBERAL ARTS (COLA)

COLA represents a large number of majors and provides a sizable portion of the required general education courses. The recent renovation of Murkland Hall has improved conditions for the languages, literatures and cultures department, as well as the Dean's Offices. However, much of the COLA space holdings are in buildings requiring renovation, resulting in fractured departments as they have grown over the years. The Paul Creative Arts Center (PCAC), Hamilton-Smith, Horton, Morrill, and Huddleston Halls fall into the former grouping, while and sociology, family studies, anthropology, and psychology are fractured departments.

The instructional and community benefits provided by PCAC are being considered as a phased strategy by this plan. The facility needs a complete renovation, using the existing site to add functional space for performance, rehearsals, and teaching. Large rooms will be multifunctional, access for occupants and patrons will be addressed, and the art program eventually will be accommodated in a new facility, along with the University Art Gallery.

COLA's research initiatives (including the Family Research Lab, Crimes Against Children Research Center, Institute for Policy and Social Science Research, and the Justice Studies Program), are being considered with consolidation of Social Science Institutes as part of the established Carcey Center. Plans to address these needs are focused on a renovated and expanded New Hampshire Hall.

SCHOOL OF HEALTH AND HUMAN SERVICES (SHHS)

New Hampshire Hall also will house part of the SHHS. In addition to providing space for the Carcey Center (including the Adolescence Resource Center and the New Hampshire Institute for Health Policy and Practice), over time this renovation will address the goal to consolidate the kinesiology department. Relocation of all SHHS clinical and service programs is projected for facilities to be built on the west edge of campus to include the Child Study Development Center, the Marriage and Family Therapy Program, and the other clinics now in Hewitt Hall. This project will allow expansion space for programs in Hewitt Hall, and in concert with the recently completed renovations to Pettee Hall will address the needs for this College well into the future.

THE COLLEGE OF LIFE SCIENCE AND AGRICULTURE (COLSA)

This college controls considerably more space than other UNH colleges and schools. Included in its responsibilities are the farms that represent just less than half the 450,000 NSF it controls. The consolidation of agriculture functions to the Dairy Center is addressed by the Campus Plan as the creation of the Agricultural Complex, reinforced by the recently established Community Farm in this area. Also in the western part of the extended campus is the Woodman Horticultural Farm. This valuable facility,

contiguous to the core campus, will be maintained as a showpiece, along with the surrounding habitat and forest.

COLSA, as part of a 2001 Space Study, is continuing to aggressively consider the effectiveness of present space holdings and pursuing efficiencies to allow for growth in genome studies and marine sciences. The desire to provide some overlap at the Thompson School for four-year and two-year programs will require improved and expanded space. Renovations for James and Kendall halls are critical to the ongoing success of the programs that reside in those facilities. And new buildings are anticipated for the life sciences, as is a new Science Library in what is being referred to as the Science Quad formed by Rudman and Hewitt Halls, along with the Telecom Building. These two new buildings will replace the service building.

Graduate-level courses and research are anticipated to grow environmental studies, natural resources, environmental sciences, and medical analysis. Renovation and expansion of James Hall for the natural resources teaching will be complemented with the opportunities afforded by a new environmental sciences research building.

THE WHITTEMORE SCHOOL OF BUSINESS EDUCATION (WSBE)

With its current design and lack of technology, McConnell Hall does not allow WSBE to effectively deliver current programs. Near-term growth underscores that present classroom space and offices are not adequate to accommodate the entire school in McConnell. In addition, the school plans to re-structure its undergraduate business administration degree, requiring renovation and expansion of the facility. Undergraduate enrollment has been capped in an effort to mitigate the space situation, and new space is necessary for WSBE to remain competitive in attracting new students and faculty members.

THE COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES (CEPS)

The College is in the process of a complete renovation of Kingsbury Hall. Upgrades for DeMerritt, James, and Parsons halls are also important, and have been captured as integral to the University's request to the state as part of KEEP New Hampshire (Knowledge Economy Education Plan for NH). All three renovation/addition projects address expansion needs for the departments and programs they house. Not included in these projects is a large meeting space for college and public use. Placeholders for future efforts at Kingsbury include a 200-seat lecture hall and a covered atrium. Both items are important to the college for its own program needs and as opportunities for outreach to the academic community.

Interdisciplinary efforts for CEPS are prominent in research with Institute for the Study of Earth, Oceans, and Space (EOS) in Morse Hall and with COLSA in environmental sciences (natural resources and earth sciences) and the Science Library (biological sciences, physics, engineering, math,

and chemistry). The academic program space controlled by CEPS in Morse Hall is valuable and provides opportunities for interaction with researchers there. Proposed expansion of Morse Hall is seen as a benefit to engineering and the Institute for the Study of Earth, Oceans, and Space. A similar addition or expansion for the Environmental Technology Building (ETB) could do the same for CEPS research and marine sciences.

INTERDISCIPLINARY RESEARCH

Interdisciplinary learning and research are an important aspect of what UNH has to offer as a land, sea, and space-grant institution. As part of this plan, accommodations have been made for funded research to grow by 50% in the 20-year planning window ahead. Much of the growth in research to date has occurred through major interdisciplinary centers and institutes, and that trend is anticipated into the future.

The Institute for the Study of Earth, Oceans and Space (EOS) collaborates with COLSA and CEPS departments and is in need of expansion space within Morse as infill to highbay space, or as an addition shared with academics or other sponsored research. The Marine Program is in the process of planning the implementation of a new 20,000 GSF Coastal Marine Laboratory. The Marine Programs also anticipate opportunities for growth in collaboration with COLSA at the Jackson Estuary Laboratory at Adams Point, with CEPS with the Chase Ocean Engineering Laboratory, and with sponsored research with an addition to Environmental Technology Building. The new Carsey Institute will bridge areas of research in the social and health sciences and is considered as a future occupant for a renovated New Hampshire Hall.

Three new research buildings, totaling 175,000 GSF, are needed to house the rest of the projected growth in research. One of these buildings will also include the Office of Sponsored Research in anticipation of its displacement from the Service Building.

STUDENT ACADEMIC SERVICES PRECEPTS

1. The academic experience should engage student life in support of the Academic Plan.
2. Provide structural/spatial opportunities for a sense of community across campus.
3. Cultural diversity should be supported throughout the campus community.
4. Consolidate undergraduate Academic and Student Services into groupings - academic support, academic enhancement, and health – and whenever possible deliver services where students live.
5. Knit informal recreation, afforded by contiguous University-owned property, more broadly into the student experience.

STUDENT ACADEMIC SERVICES

These services are randomly dispersed throughout campus. Consolidation of the programs and departments that deliver support and enhancement services is a priority. A higher level of service will be afforded students, and space-related benefits will be realized when activities are appropriately co-located. The second priority for Student Academic Services is to improve the Admissions visitor experience. Renovation and expansion of Grant House and relocation of some visitor parking to the adjacent lot are proposed. Also of importance is the student residential experience. There should be less crowding for freshman housing, and informal recreation spaces should be interspersed in the residential areas. An important underlying theme is that all spaces are learning spaces, and that opportunities for connectedness and common experiences should be fostered by facility-related decisions.

HOUSING AND DINING PRECEPTS

1. New undergraduate beds are required to increase housing stock to a design capacity of 60 percent over the next 20-years; suite-style beds are the highest priority. Sixty to 70 percent represents mature capacity for the University.
2. Provide a greater number and more diverse range of family housing options for married students, visiting faculty, and graduate students. Maintain a sense of community for family housing, yet provide a variety of locations featuring a distinct set of amenities.
3. Renovate structurally sound older residential facilities as modified suites and/or increased singles mix.
4. New beds are intended to increase upper-class person retention on campus. More suites and apartments are needed, as is an increased ratio of singles and fewer beds in apartments.
5. New beds east of the railroad tracks, near the dining facilities, will be suites; west of the tracks will be apartments.
6. Provide on-campus residential communities that foster connectedness and allow for efficient staffing.
7. Provide good housing for graduate students to help attract the brightest and the best and compensate for traditionally low stipends.
8. Food service should be designed into academic/student life buildings.
9. A consistent dining experience should be provided at all three dining facilities.

HOUSING AND DINING

Based on the recommendations of the Academic Plan and the Student Experience component of the 2003 NEASC self-study, the University is beginning to focus much more holistically on the development of students. In this context, the residential experience affords an important opportunity to work with students to help them become more reflective about their learning,

to introduce them in a more comprehensive way to opportunities that will complement their core academic experiences, and to engage them as members of this community. Envisioning the set of experiences that will be part of this initiative, two phases emerge. Phase I will focus on the freshman and sophomore years of most students' experience at UNH. Phase II allows for the process of growing independence in living options that coincide with affiliation to a specific academic culture.

The correct range for undergraduate housing is philosophically and practically the 60- to 70 percent range. Consistent with the University philosophy, mission, and vision, the UNH goal is to house 90- to 95 percent of all freshman and sophomores; 100 percent puts an undue burden on those with unusual circumstances. As students become juniors and seniors, the desire for more independence leads some of them off campus. Others are attracted to stay on campus when the quantity, quality, and price of available housing balances with student expectations relative to the rental market in Durham and surrounding communities. There is no specific percentage of on-campus housing for juniors and seniors that will create this balance for all time. It must remain fluid as market conditions change. Based on our recent experience, and our aspirations, we can reasonably aim to house 30- to 45 percent on campus. The target of 90- to 95 percent of students in Phase I and 30- to 45 percent in Stage II leads to an overall goal of 60- to 70 percent. Over the next 20 years, the University aims to improve on the existing 50 percent by achieving at least the minimum (1,720 additional beds), and the Master Plan identified sufficient housing sites to eventually accommodate the 70 percent figure as required.

The increase in undergraduate beds on campus will naturally affect the University dining services. The addition of Holloway Commons to the dining options on campus has increased the capacity for additional meals for the students who will occupy the new suite beds (also anticipating some partial meal plans for those that live in the apartments). The largest challenge for dining is the renovations required at Philbrook Hall. This more traditional dining experience is not in line with the standard provided by the new Commons and the renovated Stillings Hall. Renovation of Philbrook is anticipated in an early phase, with a future addition for seating anticipated to allow for the University's pursuit of 60 percent and beyond of undergrads housed on campus.

In addition, the University cannot focus solely on undergraduate housing; family and graduate student housing are significant areas of need. An important part of filling this need is providing transitional (three to five years) housing opportunities for junior and visiting faculty members, as well as an attractive housing option for graduate students, all of whom are an integral part of the academic and research at UNH. With the eventual decommissioning of Forest Park, the University is considering multiple future sites to provide a more diverse range of options and rental rates. Renovated

units at Woodside Apartments will likely attract graduates and some junior faculty members. Sites further out, such as the Leawood Orchard and the Reservoir, will likely appeal to junior and more senior faculty members new to the area, including the visiting faculty.

Playing Fields - Athletics and Campus Recreation											
				May 16, 2003		Revised 5/27/2003					
Existing to Remain (in same location)	EXISTING Field Name or Designation		PROPOSED Field Name or Designation	Recreation AND/OR Athletics		Sport(s)	Competition and/or Play Field	Field Dimension (playing surface only)	Will be affected by McDaniel Dr. Ext. (yes/no)	Proximity to respective facility (Rec Sports or Field House)	Comments (artificial surface, lighting, etc.) All level and adequately drained.
	Memorial Field Shared	1	Memorial Field	Recreation AND Athletics		Recreation: Club and Intramural Athletics: Field Hockey and Lacrosse	Game/Practice	70 x 120 yds	No	<1/4 mile	Artificial surface, lights
	Bremner Field (Upper Field) Shared	2	Bremner Field (Upper Field)	Recreation AND Athletics		Recreation: Lacrosse Athletics: FB and Soccer	Game/Practice	90 x 140 yds	No	>1/4 mile	Artificial surface, lights
	Football Field Athletics	3	FB Field	Athletics	FB		Game	70 x 120 yds approx square	No	<1/4 mile	presently grass with no lights - in future will have lights and probably artificial surface
Existing In Flux (can be relocated as required see Proposed Field listing)	Soccer game Athletics	4	Soccer game	Athletics	M/W Soccer	Game	75 x 120 yds	Yes	>1/4 mile	grass, no lights	
	Soccer practice Athletics	5	Soccer practice	Athletics	M/W Soccer	Practice	75 x 120 yds	Yes	>1/4 mile	grass, no lights	
	Lower Field Athletics	6	Football / Soccer practice	Athletics	FB, M/W Soccer	Practice	75 x 120 yds				
	Throwers Area Athletics	7	Football practice	Athletics	FB	Practice	75 x 120 yds	Yes	>1/4 mile	grass, no lights	
	Boulder Field Recreation	8	Throwers Area	Athletics	Track and Field	Game/Practice	Maintain Existing dimensions if moved.	Maybe	>1/4 mile	proposed south underpass extension intersection at Main would allow Throwers to remain as is, otherwise move.	
	Outer 1 Recreation	9	Recreation Field 1	Recreation	Club and Intramural Rugby and other	Game	70 x 140 yds	No	>1/4 mile	Grass	
	Outer 2 Recreation	10	Recreation Field 2	Recreation	Club and Intramural	Game/Practice	70 x 120 yds	No	>1/4 mile	Grass	
		11	Recreation Field 3	Recreation	Club and Intramural	Game/Practice	70 x 120 yds	No	>1/4 mile	Grass	
		12	Recreation Field 4	Recreation	Club and Intramural Softball and Baseball	Game/Practice	Allow for Home-outfield = 300'	No	Any	Do not provide any text or graphic representation of a baseball field on any public documents, Grass	
			Existing Must Remain in present location - Memorial, Bremner, and Football Field								
2/28/03 UNH-Campus Planning Notes: 1) Field #9 would replace Outer 1 and 2, 2) Field #10 would replace Boulder Field, 3) Recreation fields in play now amount to 4.5 fields (Outer 1 and 2 Fields equal 1.5 fields). The proposed, if fully implemented,											

ATHLETICS AND CAMPUS RECREATION PRECEPTS

1. Athletics and campus recreation represent distinct departments with distinct reporting structures.
2. Allow for Kinesiology, Campus Recreation, and Athletics to benefit from the collection of University sporting resources.
3. Recreation facilities need to be provided in a capacity commensurate with student body size and, when appropriate, in proximity to the campus residential community.

ATHLETICS AND CAMPUS RECREATION

Understanding that athletics and campus recreation are distinct entities, they do have a set of built resources that are similar in nature. Both departments are interested in the future playing field layouts for their respective programs. Renovation of the Field House is intended to go hand-in- hand with the Stadium project for much needed improvements for the athletics department. Future placeholders for a campus recreation-managed Aquatic Center are accommodated in the Campus Plan as well.

In keeping with the 1994 Plan, this update calls for playing fields flanking Main Street along the western approach to the core campus. Athletic interests are predominantly focused on displacement issues required by the McDaniel Drive extension through the South Underpass, and continuing along the edge of College Woods buffer to the future Main Street round about. Campus recreation is planning for the displacement of Boulder Field and the increase of organized recreation fields on the north side of Main Street. See below for a prioritized strategy of athletic and campus recreation playing fields.

GENERAL ADMINISTRATION PRECEPTS

1. Foster opportunities for town and University collaboration and cooperation, including the relocation of the Durham Fire Department and the community childcare facility.
2. Consolidate select core campus administrative functions and relocate entities to the west edge when appropriate.
3. Organize Central Storage for improved utilization of core campus spaces.

GENERAL ADMINISTRATION

This category is highlighted by the intended migration of University support functions from the core campus to the west edge. Several USNH entities, as well as some CIS groups and storage functions, fit this model targeting consolidating and relocating to the west edge of campus the program space and the parking needs they generate. This strategy will allow for the decommissioning of several small, old, wood frame structures that burden the campus utility and maintenance budgets, and facilitate their replacement off the core campus where less costly construction materials and methods are aesthetically acceptable. General administration concerns also will focus on the utility infrastructure, especially that required for the future build-up of residential facilities, as well as other important campus-wide and community needs for fire, ambulance, police, and childcare.

APPENDIX 3

PHASING AND IMPLEMENTATION

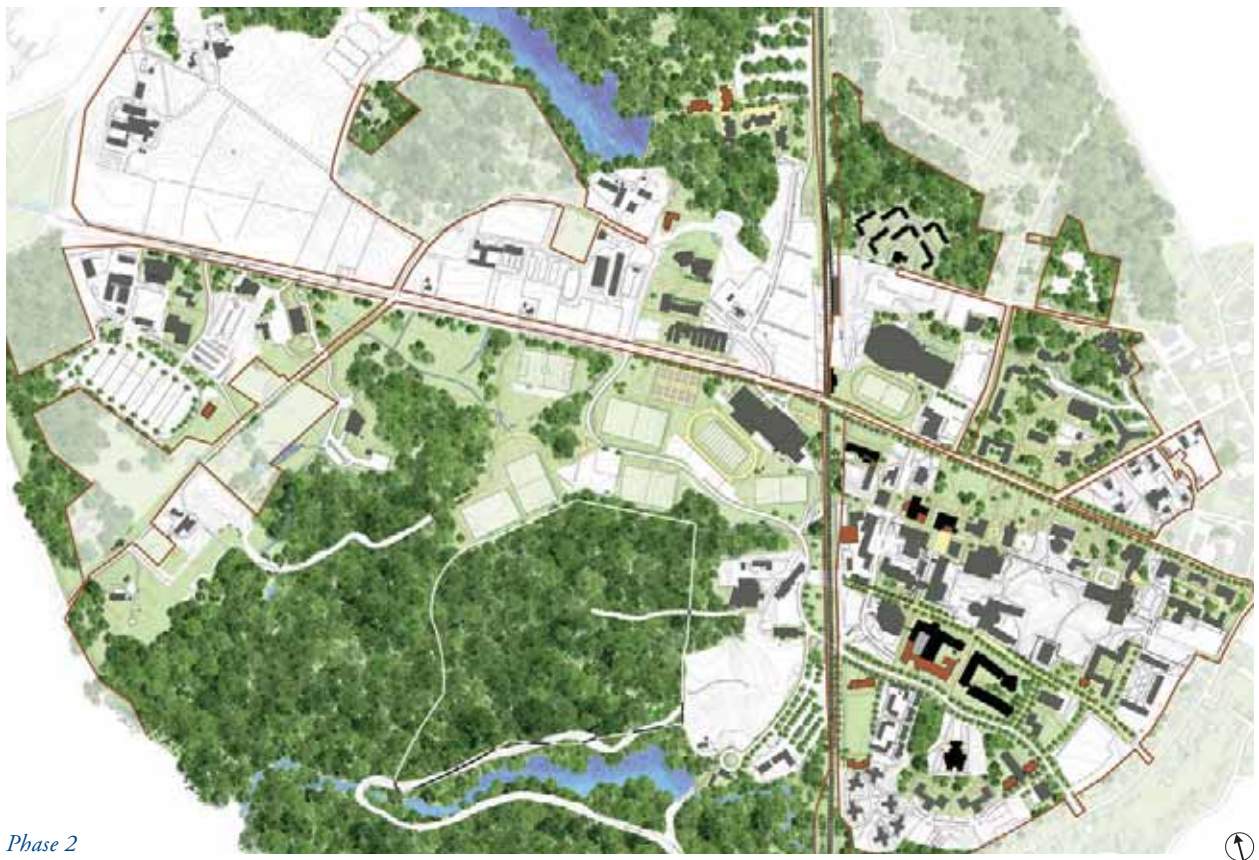


PHASING AND IMPLEMENTATION

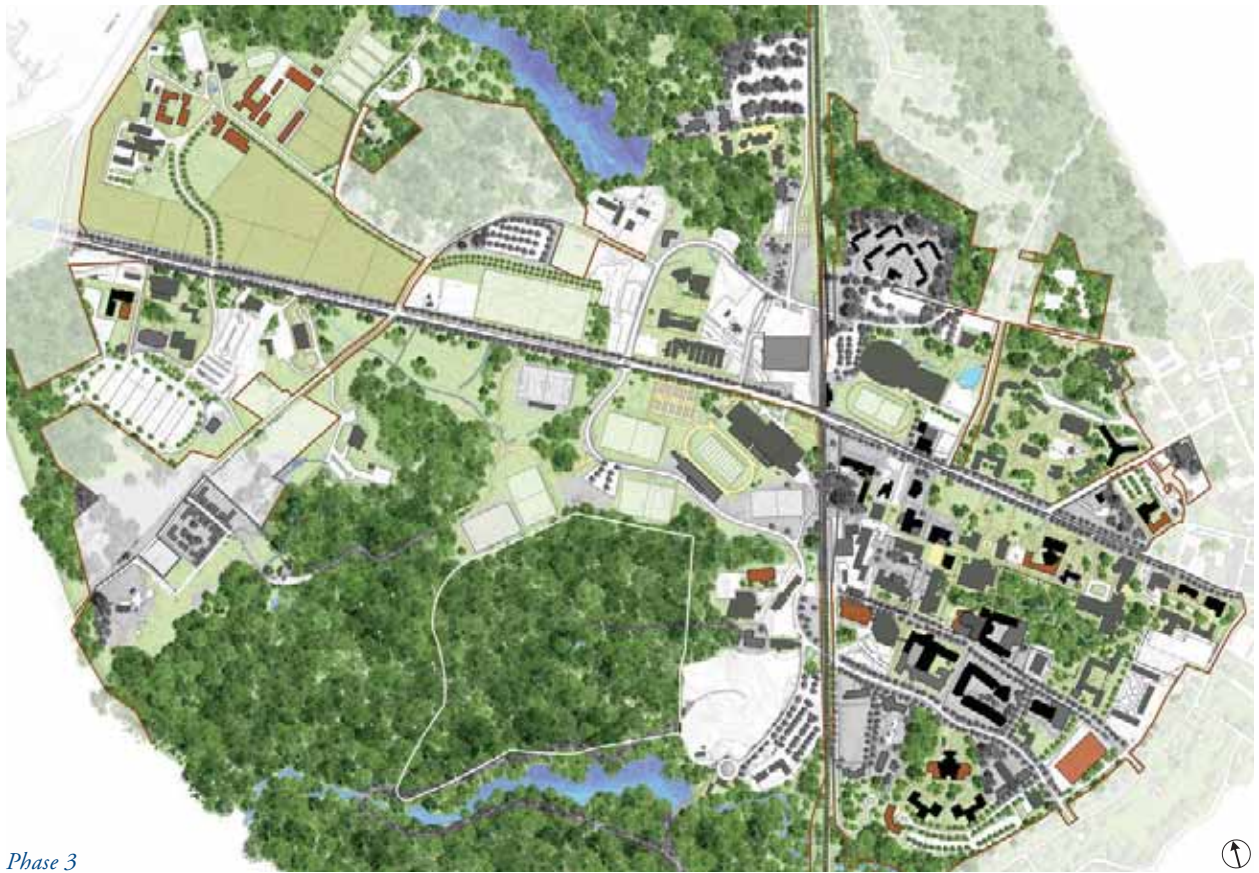
This appendix shows the proposed project phasing including those that do not necessarily have space implications: Parking/Transportation/Transit and campus improvements. The funding source and occupants are also shown. Four phases are identified, and prioritized without specific time frames attributed to any of them. This phasing plan has been developed to anticipate replacement needs, especially when demolitions are involved. It is important to note that the University will pursue scenarios that avoid long-term reductions in supply during implementation, however, there may be some short-term instances that are unavoidable.



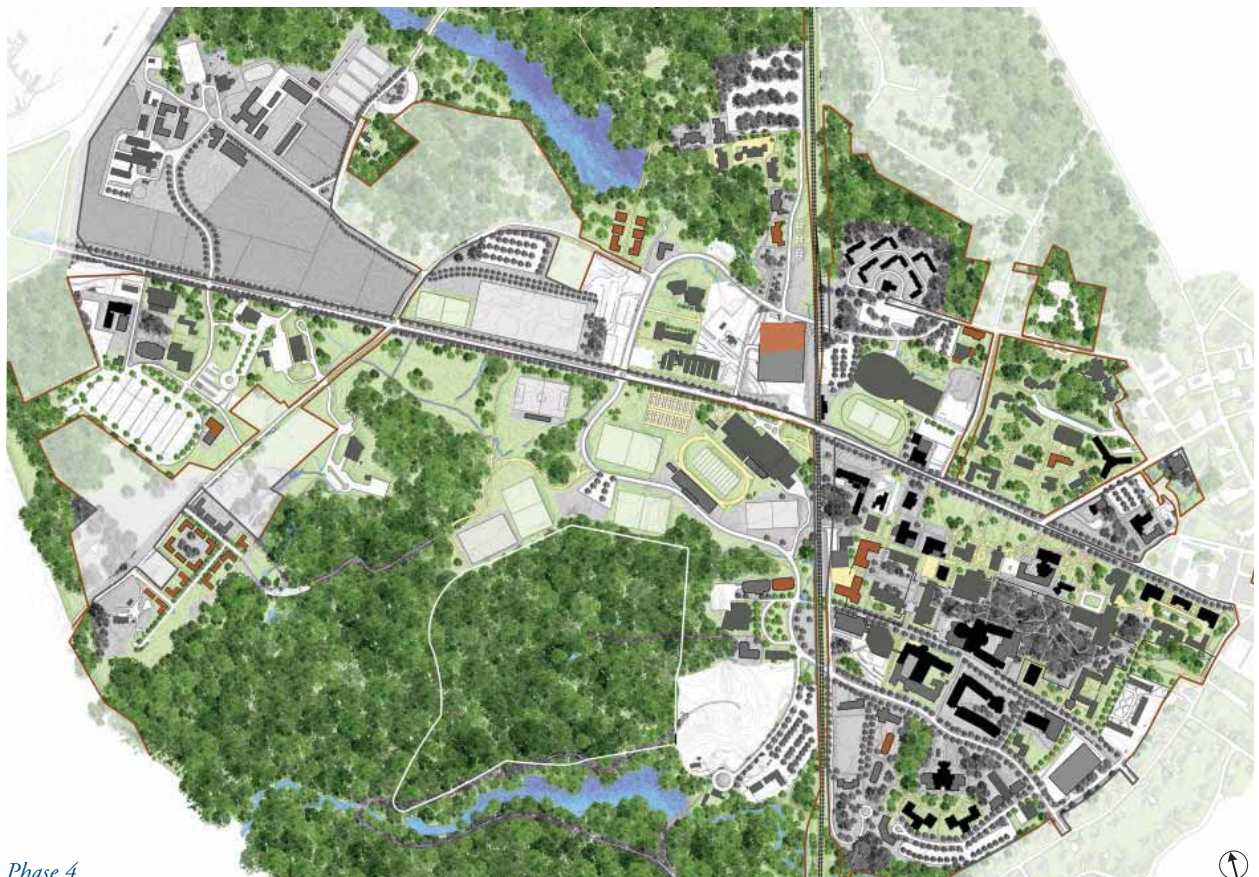
Phase 1



Phase 2



Phase 3



Phase 4

University of New Hampshire

CAMPUS MASTER PLAN 2004

PHASING BY PROJECT CATEGORY

Rev 12.2 - final

PHASE	PROJECT	Expansion GSF	Replace GSF	Renovate GSF	OCCUPANTS	Project Cost
ACADEMIC BUILDINGS		491,000	336,000	829,000		\$529,000,000
1	KINGSBURY HALL	45,000	91,000	73,000	Engineering, Math, Computer Sci, Dean	\$52,900,000 (1)
1	COASTAL MARINE LABORATORY	20,000	0	0	Marine Programs	\$14,000,000 (1)
1	DEMERRITT HALL	10,000	0	44,000	Physics, Math	\$20,800,000 (1)
1	JAMES HALL	14,000	0	59,000	Natural Resources, Earth Science	\$27,700,000 (1)
1	PARSONS HALL	0	0	143,000	Chemistry	\$45,000,000 (1)
1	NESMITH HALL	10,000	0	52,000	ANSC, OSP, CE, NR Necropsy, Psychology, RED, Geography	\$17,800,000
2	McCONNELL HALL	41,000	0	68,000	WSBE	\$27,500,000 (1)
2	RESEARCH BUILDING #1	55,000	0	0	TBD	\$21,600,000
2	PAUL CREATIVE ARTS - Part 1 of 3	25,000	12,000	10,000	Music, Theater & Dance, Art	\$24,700,000 (1)
2	NEW HAMPSHIRE HALL	0	31,000	29,000	Kinesiology, Social Sci Institutes	\$18,100,000 (1)
3	HAMILTON-SMITH HALL	30,000	0	58,000	Liberal Arts, Academic Expansion	\$24,300,000
3	KENDALL HALL	0	0	39,000	ANSC, Bio Sci Library, NHVDL	\$12,300,000
3	RESEARCH BUILDING #2	60,000	0	0	TBD	\$23,500,000
3	EQUINE BUILDINGS	15,000	61,000	0	Equine, Farm Services	\$5,300,000
3	CAMPUS - COMMUNITY FARM	5,000	0	0	COLSA	\$500,000
3	JACKSON LABORATORY	10,000	0	11,000	Marine Research Programs	\$5,700,000
3	MORRILL HALL	0	0	26,000	Education	\$5,500,000
3	PAUL CREATIVE ARTS - Part 2 of 3	10,000	0	100,000	Music, Theater & Dance, Art	\$36,900,000 (1)
4	HORTON HALL	0	0	58,000	Liberal Arts	\$14,600,000
4	HUDDLESTON HALL	0	0	18,000	Liberal Arts	\$3,500,000
4	NEW CONSOLIDATED ART BLDG (2D AND 3D)	23,000	67,000	0	Art and Art Gallery	\$48,100,000
4	RESEARCH BUILDING #3	65,000	0	0	TBD and OSR	\$25,500,000
4	NEW ACADEMIC BUILDING	20,000	17,000	0	ROTC, Academic Expansion	\$11,400,000
4	NEW SCIENCE LIBRARY	27,000	27,000	0	Engineering, Chemistry, Physics, Bio Sci, Earth Sciences	\$19,700,000
4	PAUL CREATIVE ARTS - Part 3 of 3	0	8,000	41,000	Music, Theater & Dance	\$17,100,000 (1)
4	WEST EDGE SHHS OUTREACH BUILDING	6,000	22,000	0	CSDC, HHS Clinics	\$5,100,000
STUDENT AND ACADEMIC SERVICES		5,000	4,000	76,000		\$13,000,000
2	HOOD HOUSE	0	0	20,000	Academic Support Services	\$2,100,000
2	CONANT HALL	0	0	25,000	Academic Enhancement Services	\$3,500,000
2	GRANT HOUSE	5,000	0	8,000	Admissions, Visitors Center	\$2,700,000
3	12 BALLARD STREET	0	4,000	23,000	Health Service, Counseling Cntr, SHARPP	\$4,600,000
HOUSING and DINING		813,000	271,000	589,000		\$315,000,000
1	APARTMENT RESIDENCE HALL	31,000	109,000	0	400 beds for undergraduates	\$36,100,000 (1)
1	HUBBARD HALL ADDITION	50,000	0	6,000	180 beds for undergraduates	\$14,600,000 (1)
1	UNH-HOUSING OFFICE	2,000	8,000	0	Offices move to new addition to Hitchcock	\$2,800,000 (1)
1	GRADUATE @ WOODSIDE APTS	0	45,000	109,000	386 beds removed, add 100 families units	\$500,000 (1)
1	FOREST PARK PARTIAL DEMOLITION	NA	NA	NA	56 units of existing buildings removed	\$300,000 (1)
1	SUITE STYLE RESIDENCE HALL	120,000	0	0	400 beds for undergrads, plus rec area	\$31,900,000 (1)
1		203,000	162,000	115,000	Net - Suites 580, Family 44 units, 0 GSF Reno	
2	HOUSING RENOVATION #1	10,000	0	68,000	Project priorities TBD	\$9,100,000
2	FAMILY / GRADUATE HOUSING	65,000	55,000	0	120 units for family/grad stdts, 1-3 br units	\$23,500,000
2	FOREST PARK PARTIAL DEMOLITION	NA	NA	NA	98 units of existing buildings removed	\$600,000
2	APARTMENT RESIDENCE HALLS	60,000	0	0	200 beds for undergraduates	\$11,800,000
2	SUITE STYLE RESIDENCE HALLS	106,400	0	0	360-400 beds for undergraduates	\$19,400,000
3	HOUSING RENOVATION #2	0	0	124,000	Project priorities TBD	\$13,000,000
3	MINI-DORMS DEMOLITION	NA	NA	NA	300 beds in 6 buildings removed	\$400,000
3	SUITE STYLE RESIDENCE HALL	52,400	54,000	0	360-400 beds for undergraduates	\$19,400,000
2 / 3		293,800	109,000	192,000	Net - Suites 480, Apts 200, Family 22 units, 175K GSF Reno	
4	HOUSING RENOVATION #3	0	0	109,000	Project priorities TBD	\$22,900,000
4	APARTMENT RESIDENCE HALLS	54,000	0	0	180 beds for undergraduates	\$14,400,000
4	FAMILY / GRADUATE HOUSING	170,000	0	0	150 units for family/grad stdts, 1-3 br units	\$35,700,000
4	SUITE STYLE RESIDENCE HALL	79,800	0	0	270-300 beds for undergraduates	\$21,200,000
4	HOUSING RENOVATION #4	0	0	109,000	Project priorities TBD	\$22,900,000
4		303,800	0	218,000	Net - Suites 280, Apts 180, Family 150 units, Reno 125K GSF	
1	PHILBROOK DINING HALL	0	0	32,000	Improve Infrastructure	\$4,500,000 (1)
3	PHILBROOK DINING HALL	12,600	0	0	200 additional seats	\$3,900,000
4	HUDDLESTON HALL	0	0	32,000	Additional seats??	\$6,300,000
		12,600	0	64,000		
ATHLETICS and CAMPUS RECREATION		227,000	169,000	376,000	FIELDS	
		50,000	0	15,000	BUILDINGS	\$25,000,000
1	ATHLETIC FIELDS	0	81,000	0	New Soccer game field at Boulder Field	\$900,000
1	ATHLETIC FIELDS	0	0	212,000	Soccer and Football practice (2); Throwers	\$300,000
1	CAMPUS RECREATION FIELDS	0	0	163,800	Outer 1&2 to offset loss of Boulder Field	\$300,000
2	FIELD HOUSE / STADIUM EXPANSION	50,000	0	15,000	Athletics	\$22,000,000 (1)
3	CAMPUS RECREATION FIELDS	0	88,200	0	North of Main St, replacing Outer 1	\$400,000
3	ATHLETIC FIELDS	0	0	0	Transfer of Outer 1 from Campus Rec.	-
3	CAMPUS RECREATION FIELDS	75,600	0	0	North of Main Street	\$400,000
4	CAMPUS RECREATION FIELDS	151,200	0	0	North of Main Street	\$700,000

GENERAL ADMINISTRATION

		58,000	101,000	54,000		\$108,000,000
1	COMBINED HEAT AND POWER PLANT	17,500	0	2,000	Private Contractor	\$23,000,000 (1)
1	CHILLER PLANT - PHILBROOK HALL	3,600	0	0	Private Contractor	\$5,000,000 (1)
1	UNIVERSITY POLICE STATION	2,000	8,000	0	UNH Police	\$1,700,000 (1)
1	RR STATION / DAIRY BAR	2,500	0	4,000	Campus Community	\$1,600,000
1	CRAIG SUPPLY REMEDIATION	NA	NA	NA	Remediate Brownfield site w/ Town	TBD
1	DAYCARE FOR CHILDREN	5,500	1,500	0	Campus Community	\$1,400,000
2	UTILITY INFRASTRUCTURE	NA	NA	NA		\$15,000,000
2	FIRE DEPARTMENT BUILDING	9,000	10,000	0	Durham Fire Department	\$3,500,000
2	AMBULANCE BUILDING	2,500	2,500	0	Durham Ambulance	\$900,000
2	ADMIN SERVICES BLDG	0	35,000	0	Controller, Purchasing, DCE, IA, Council of Presidents	\$5,900,000
2	SWING SPACE	0	20,000	0	As Required	\$3,400,000
3	FACILITIES	0	19,000	0	Asst. VP, IT, FD&C, Campus Planning, Energy and Utilities, FAC BSC	\$3,200,000
	UTILITY INFRASTRUCTURE	NA	NA	NA		\$17,000,000
3	SERVICE / TRADE BUILDING	0	0	42,000	Facilities Trades (shops only), Ctrl Receiving, Maint Control, Lock Shop, SPCT	\$2,400,000
4	UNH FOUNDATION	11,000	5,000	0	UNH Foundation	\$4,000,000 (1)
4	UTILITY INFRASTRUCTURE	NA	NA	NA		\$18,000,000
4	UNIVERSITY ADVANCEMENT CNTR	4,000	0	5,500	Alumni Assoc., Communications	\$2,200,000 (1)

PARKING / TRANSPORTATION / TRANSIT

		581,000	5,000	3,000		\$60,000,000
1	SOUTH UNDERPASS	NA	NA	NA	Campus Community	\$7,000,000 (1)
1	WATER WORKS RD PARKING	TBD	TBD	TBD	Faculty/Staff parking	\$700,000
1	McDANIEL DRIVE to MAIN ST	NA	NA	NA	Campus Community	\$1,000,000
1	CORE CAMPUS VISITOR LOT	TBD	TBD	TBD	Visitor parking	\$300,000
1	GABLES LOT	TBD	TBD	TBD	Transportation Services	\$500,000
2	PARKING STRUCTURE #1 - Phase 1	180,000			Various parking	\$14,100,000 (1)
2	PARKING AND TRANSIT OFFICE	0	5,000	3,000	Relocate to Transportation Services	\$1,100,000
2	MAIN STREET - WEST	NA	NA	NA	Campus Community	\$1,000,000
2	NORTH UNDERPASS	NA	NA	NA	Campus Community	\$8,000,000
3	PARKING STRUCTURE #2	220,500			Various parking	\$13,300,000 (1)
4	C-LOT DEMOLITION	NA	NA	NA	Commuter parking	\$200,000
4	PARKING STRUCTURE #1 - Phase 2	180,000			Various parking	\$13,100,000 (1)

CAMPUS IMPROVEMENTS

		0	0	0		\$5,300,000
1	MAIN ST - Core Campus	NA	NA	NA	Campus Community	\$1,200,000
1	VISITOR ENHANCEMENTS	NA	NA	NA	Campus Community	\$300,000
1	CONANT SQUARE	NA	NA	NA	Campus Community	\$100,000
1	LANDSCAPE ENHANCEMENTS	NA	NA	NA	Campus Community	\$100,000
1	COLLEGE ROAD TRANSFORMATION	NA	NA	NA	Campus Community	\$800,000
2	COLLEGE BROOK RESTORATION - West	NA	NA	NA	Campus Community	\$300,000 (1)
2	CAMPUS TRAILS	NA	NA	NA	Campus Community	\$100,000
2	SCIENCE QUAD	NA	NA	NA	Campus Community	\$1,000,000
3	LANDSCAPE ENHANCEMENTS	NA	NA	NA	Campus Community	\$100,000
3	RAVINE EDGE	NA	NA	NA	Campus Community	\$300,000
4	COLLEGE WALK RR UNDERPASS	NA	NA	NA	Campus Community	\$1,000,000

(1) This value is derived from a previous study

All other project costs are estimated in today's dollar values and do not include infrastructure improvements that would be required.

EXECUTIVE SUMMARY: SECTION 5

8-Dec-03

SPACE ACCOMMODATION SUMMARY

OOM USE CODES - Figures in this section are Net Square Feet (NSF)

	100	200	300	400	500	600	700	800	900	TOTALS
	Classroom	Laboratory	Office	Study	Special Use	General Use (Incl. Dining)	Support	Health Care	Residential	
ACADEMIC/RESEARCH	155,989	424,622	422,270	175,807	196,106	29,332	44,368	895	20,670	1,470,059
Expansion	25,191	110,333	35,130			27,330				197,984
Replacement	9,698	66,914	38,258	37,781	17,229	15,030				184,910
Renovation	80,257	159,664	155,880	1,895						397,696
Academic Sub-Totals	115,147	336,910	229,268	39,676	17,229	42,360				780,590
										1,288,071
										60.6% Pe
STUDENT SERVICES	1,190		52,530	822	122,799	123,651	9,299	6,760		317,051
Expansion			2,900		16,700			2,461		22,061
Replacement						12,524				12,524
Renovation			22,143		8,908			12,708		43,759
Student Services Sub-Totals			25,043		25,608	12,524		15,169		78,344
										126,676
										61.8% Pe
GENERAL ADMIN	4,310	5,760	96,733	193	58,117	20,499	129,333		73,930	388,875
Expansion			4,850		10,650	10,500				26,000
Replacement			28,339				65,584			93,923
Renovation			12,566		21,000	3,280				36,846
General Administration Sub-Totals			45,754		31,650	13,780	65,584			156,768
										251,306
										62.4% Pe
HOUSING/DINING	123	35,658	19,391	407	175,543	18,061	296		831,756	1,081,235
Expansion									621,360	631,485
Replacement					10,125				270,711	270,711
Renovation					27,858				320,334	348,192
Housing/Dining Sub-Totals					37,983				1,212,405	1,250,388
										1,570,396
										79.6% Pe
Percentage of Total Existing NSF	5.0%	13.2%	18.6%	6.0%	11.6%	10.7%	6.2%	0.2%	28.4%	
TOTAL EXISTING	161,489	430,505	607,191	196,213	377,429	349,025	201,061	7,951	926,356	3,257,220
TOTAL EXPANSION	25,191	110,333	42,880	0	27,350	47,955	0	2,461	621,360	877,530
TOTAL REPLACEMENT	9,698	66,914	66,597	37,781	17,229	27,554	65,584	0	270,711	562,068
TOTAL RENOVATION	80,257	159,664	190,588	1,895	29,908	31,138	0	12,708	320,334	826,493
TOTAL SPACE EFFECTED	115,147	336,910	300,065	39,676	74,487	106,647	65,584	15,169	1,212,405	2,266,091
TOTAL FUTURE SPACE	186,680	540,838	650,071	196,213	404,779	396,980	201,061	10,412	1,547,716	4,134,750
Percentage of Total Future NSF	4.5%	13.1%	15.7%	4.7%	9.8%	9.6%	4.9%	0.3%	37.4%	
										63.5% Pe

Anthony Blackett, Program and Space Analysis sub-consultant to A/S/G - with UNH Edits and Additions

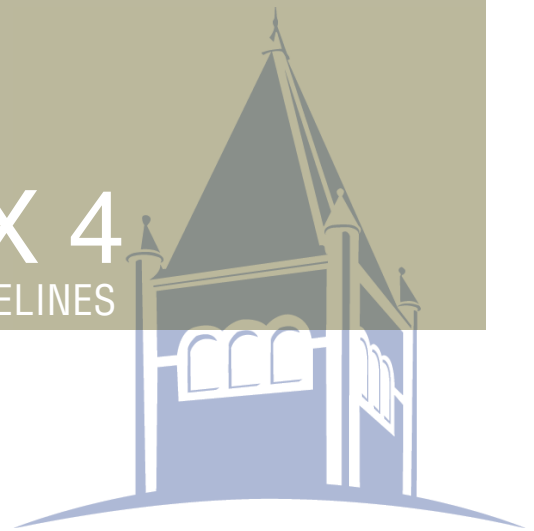
BLDG#	BUILDING NAME	SQ FT	CURRENT USE	CMP Action	PHASE	Comments
ACADEMIC BUILDINGS						
323	11 LEAVITT LANE (PERPETUITY)		EH&S	None	N/A	
249	5 LEAVITT LANE (LIB STOR BLDG)	18,600	LIBRARY	None	N/A	
34	AGRONOMY BUILDING	3,376	COLSA (FARM)	Demolition	3	See Phasing - Equine Buildings (AB)
127	ARCHAEOLOGY LAB	2,050	L A	Demolition	1	See Phasing - Forest Part Phs 2 (H&D)
95	BARTON HALL	17,900	COLSA (THOMPSON SCHL)	None	N/A	
74	BATCHELOR HOUSE	2,500	ADMINISTRATION	Demolition	TBD	President's Commissions relocated in advance
43	BROOK HOUSE	4,500	ADMINISTRATION	Demolition	TBD	DCE consolidation in Verette Hse
244	BROWNE CENTER	4,830	L A	None	N/A	
336	CHASE OCEAN ENGINEERING LAB	45,000	CEPS	None	N/A	
295	CHILD DEVELOPMENT CENTER	8,000	H H S CHILD CARE	Replacement	4	See Phasing - West Edge SHHS Outreach BLDG (AB)
236	COLE HALL (BARTON ADDITION)	15,350	COLSA (THOMPSON SCHL)	None	N/A	
12	CRAFT COTTAGE	2,750	H H S	Demolition	4	See Phasing - West Edge SHHS Outreach BLDG (AB)
14	DeMERITT HALL	40,900	CEPS (PHYSICS)	Addition / Renovation	1	See 2004 Phasing Document
57	DIAMOND LIBRARY	212,000	LIBRARY, ADMIN	Repairs and Renovation	N/A	Buildng Systems and Envelope
293	ENVIRONMENTAL TECH BLDG	54,000	CEPS	None	N/A	
67	FARM MACHINERY BUILDING	6,194	COLSA (FARM)	Demolition	3	See Phasing - Equine Buildings (AB)
13	FARM SERVICE MACHINERY SHED	5,979	COLSA (FARM)	Demolition	3	See Phasing - Equine Buildings (AB)
289	FISH HATCHERY	1,800	COLSA	None	N/A	
24	GREENHOUSES & PESTICIDE LAB	38,300	COLSA	None	N/A	
8	HAMILTON SMITH HALL	59,100	L A (ENGLISH)	Addition / Renovation	3	See 2004 Phasing Document
113	HERSEY HOUSE	5,900	L A	Demolition	1	See Phasing - Psychology consolidation to Nesmith
3	HEWITT HALL	51,115	H H S	None	N/A	
88	HORTON SOCIAL SCIENCE CENTER	57,100	L A	Renovation	4	See 2004 Phasing Document
18	HUDDLESTON HALL	42,450	STUDENT DINING, L A	Renovation	4	See 2004 Phasing Document
107	JACKSON LAB	9,750	COLSA	Addition / Renovation	3	See 2004 Phasing Document
26	JAMES HALL	57,200	COLSA, CEPS, L A	Addition / Renovation	1	See 2004 Phasing Document
110	KENDALL HALL	39,650	COLSA	Renovation	3	See 2004 Phasing Document
48	KINGSBURY HALL	124,000	CEPS	Addition / Renovation	1	See 2004 Phasing Document
269	LIVESTOCK ACTIVITY CENTER	15,930	COLSA (FARM)	Demolition	3	See Phasing - Equine Buildings (AB)
89	McCONNELL HALL	61,550	WHITTEMORE SCHOOL	Addition / Renovation	2	See 2004 Phasing Document
152	MOILES HOUSE	2,888	COOP EXT	Demolition	TBD	Is a function of CE gaining all of Taylor Hall
5	MORRILL HALL	25,900	L A (EDUCATION)	Renovation	3	See 2004 Phasing Document
292	MORSE HALL	115,000	CEPS, EOS	Repairs and Renovation	N/A	Building infill of some high bay space
25	MURKLAND HALL	33,800	L A	None	N/A	
4	NESMITH HALL	51,550	COLSA, SWING SPACE	Addition / Renovation	1	See 2004 Phasing Document
103	NEW DAIRY COMPLEX	34,100	COLSA (FARM)	Addition	3	See Phasing - Equine Buildings (AB)
7	NEW HAMPSHIRE HALL	39,750	H H S (KINESIOLOGY)	Addition / Renovation	2	See 2004 Phasing Document
159	OBSERVATORY	252	CEPS	Relocate	1	Spinney Lane near Reservoir
82	PARSONS HALL	130,050	CEPS (CHEMISTRY)	Renovation	1	See 2004 Phasing Document
61	PAUL CREATIVE ARTS CENTER	104,700	L A (VISUAL/PERFORM. ARTS)	Addition / Renovation	2/3/4	
35	PETTEE HALL	25,562	H H S	None	N/A	Decommissioned by COLSA; making way for South Underpass
130	POULTRY LAB HUMAN NUTRITION	12,200	COLSA	Demolition	1	
49	PUTNAM HALL	18,250	COLSA (THOMPSON SCHL)	None	N/A	Relocate Dairy Management to Agriculture Complex in advance
60	RITZMAN NUTRITION LAB	6,700	COLSA	Demolition	TBD	See Phasing - Programs relocated to Hood or Conant
143	ROBINSON HOUSE	2,150	STUDENT SERVICES	Demolition	2	
335	RUDMAN HALL	111,000	COLSA	None	N/A	
28	SMITH EQUINE CENTER	9,211	COLSA (FARM)	Demolition	3	See Phasing - Equine Buildings (AB)
62	SPAULDING HALL	79,600	COLSA, COOP EXT	None	N/A	
11	TAYLOR HALL	9,100	COLSA, COOP EXT	None	N/A	Place holder site for future development
1	THOMPSON HALL	35,700	ADMINISTRATION, L A	None	N/A	
99	TIRRELL LIGHT HORSE STABLE	10,500	COLSA (FARM)	Demolition	3	See Phasing - Equine Buildings (AB)
134	TUMOR RESEARCH BUILDING	1,820	COLSA	Demolition	1	Decommissioned by COLSA; making way for South Underpass
87	VERETTE HOUSE	5,850	ADMINISTRATION	Demolition	2	See Phasing - Admin Services Bldg (GA)
73	WOLFF HOUSE	5,000	STUDENT SERVICES	Demolition	2	See Phasing - Programs relocated to Hood or Conant
65	WOODMAN FARM - COLD STORAGE	1,680	COLSA (FARM)	None	N/A	
121	WOODMAN FARM - FARMHOUSE	4,544	COLSA (FARM)	None	N/A	
122	WOODMAN FARM - BARN	9,650	COLSA (FARM)	None	N/A	
47	ZAIS HALL	10,500	ROTC	Demolition	4	See Phasing - ROTC Building replacement

BLDG#	BUILDING NAME	SQ FT	CURRENT USE	CMP Action	PHASE	Comments
STUDENT and ACADEMIC SERVICES						
97	12 BALLARD STREET	22,350	STUDENT HEALTH CARE	Addition / Renovation	3	See 2004 Phasing Document
2	CONANT HALL	26,250	LA (PSYCHOLOGY)	Partial Renovation	2	See 2004 Phasing Document
32	FIELD HOUSE	199,100	ATHLETICS, H.H.S	Addition / Renovation	2	See 2004 Phasing Document
40	GRANT HOUSE	4,450	ADMISSIONS	Addition / Renovation	2	See 2004 Phasing Document
29	HOOD HOUSE	16,900	STUDENT SERVICES	Minor Renovation	2	See 2004 Phasing Document
56	MEMORIAL UNION BUILDING	125,000	STUDENT UNION	None	N/A	
39	SCHOFFIELD HOUSE	10,800	ADMIN/STUDENT SERVICES	Demolition	4	See Phasing - 12 Ballard St and Univ Advancement Cntr
337	WHITTEMORE CENTER	225,000	ATHLETICS, RECREATION	None	N/A	
HOUSING and DINING						
51	ALEXANDER HALL	25,900	STUDENT DORMITORY	Addition / Renovation	TBD	
84	BABCOCK HOUSE	53,900	STUDENT DORMITORY	None	N/A	
96	CHRISTENSEN HALL	111,400	STUDENT DORMITORY	Renovation	23/or4	See Phasing - Housing Renovation
20	CONGREVE HALL	63,900	STUDENT DORMITORY	None	N/A	
78	DEVINE HALL	53,500	STUDENT DORMITORY	None	N/A	
145	EATON HOUSE	9,150	STUDENT DORMITORY	Demolition	3	See Phasing - Replacement with suite style beds
44	ENGELHARDT HALL	22,750	STUDENT DORMITORY	None	N/A	
15	FAIRCHILD HALL	27,150	STUDENT DORMITORY	Addition / Renovation	2	See Phasing - Housing Renovation #1
64	FOREST PARK APARTMENTS 1	79,450	FAMILY HOUSING APTS.	Demolition	3	See Phasing - Replacement with suite style beds
90	FOREST PARK APARTMENTS 2	55,700	FAMILY HOUSING APTS.	Demolition	3	See Phasing - Replacement with suite style beds
161	GABLES BUILDING A	55,200	STUDENT APTS. (4-6 PRSN)	None	N/A	
162	GABLES BUILDING B	55,200	STUDENT APTS. (4-6 PRSN)	None	N/A	
163	GABLES BUILDING C	56,400	STUDENT APTS. (4-6 PRSN)	None	N/A	
160	GABLES COMMUNITY BUILDING	2,750	STUDENT SOCIAL AREAS	None	N/A	
45	GIBBS HALL	22,750	STUDENT DORMITORY	None	N/A	
146	HALL HOUSE	9,150	STUDENT DORMITORY	Demolition	3	See Phasing - Replacement with suite style beds
22	HETZEL HALL	36,350	STUDENT DORMITORY	Addition / Renovation	2	See Phasing - Housing Renovation #1
59	HITCHCOCK HALL	36,000	STUDENT DORMITORY	None	N/A	
69	HOLLOWAY COMMONS	85,000	STUDENT DINING, CONF CTR	None	N/A	
85	HUBBARD HALL	53,550	STUDENT DORMITORY	Addition	1	See 2004 Phasing Document
46	HUNTER HALL	22,450	STUDENT DORMITORY	None	N/A	
68	JESSIE DOE HALL	28,500	STUDENT DORMITORY	None	N/A	
58	LORD HALL	24,650	STUDENT DORMITORY	None	N/A	
38	LOUELLA PETTEE HOUSE	7,650	STUDENT SERVICES	Demolition	1	See Phasing - UNH-Housing Office
147	MARSTON HOUSE	9,150	STUDENT DORMITORY	Demolition	3	See Phasing - Replacement with suite style beds
55	MCLAUGHLIN HALL	30,200	STUDENT DORMITORY	None	N/A	
16	MILLS HALL	111,000	STUDENT SUITES (4-8 PRSN)	None	N/A	
259	NEW ENG CTR RESID "A" TOWER	26,400	CONF CTR RESIDENCE	None	N/A	
156	NEW ENG CTR RESID "B" TWR	45,100	CONF CTR RESIDENCE	None	N/A	
91	NEW ENGLAND CENTER	40,500	CONFERENCE CTR	None	N/A	
98	PHILBROOK HALL	30,150	STUDENT DINING	Addition / Renovation	1/3	See 2004 Phasing Document
79	RANDALL HALL	38,450	STUDENT DORMITORY	None	N/A	
148	RICHARDSON HOUSE	9,150	STUDENT DORMITORY	Demolition	3	See Phasing - Replacement with suite style beds
149	SACKETT HOUSE	9,150	STUDENT DORMITORY	Demolition	3	See Phasing - Replacement with suite style beds
52	SAWYER HALL	26,300	STUDENT DORMITORY	None	N/A	
30	SCOTT HALL	26,600	STUDENT DORMITORY	None	N/A	
9	SMITH HALL	23,750	STUDENT DORMITORY	None	N/A	
70	STILLINGS HALL	39,700	STUDENT DINING	None	N/A	
77	STOKE HALL	168,821	STUDENT DORMITORY	Renovation	23/or4	See Phasing - Housing Renovation
112	WILLIAMSON HALL	111,400	STUDENT DORMITORY	Renovation	23/or4	See Phasing - Housing Renovation
150	WOODRUFF HOUSE	9,150	STUDENT DORMITORY	Demolition	3	See Phasing - Replacement with suite style beds
281	WOODSIDE APARTMT A-C	31,350	STUDENT APTS. (4 PRSN)	Renovation	1	See Phasing - Graduate @ Woodside Apts
282	WOODSIDE APARTMT D-F	31,350	STUDENT APTS. (4 PRSN)	Renovation	1	See Phasing - Graduate @ Woodside Apts
283	WOODSIDE APARTMT G-I	35,300	STUDENT APTS. (4 PRSN)	Renovation	1	See Phasing - Graduate @ Woodside Apts
284	WOODSIDE APARTMT J-L	31,350	STUDENT APTS. (4 PRSN)	Renovation	1	See Phasing - Graduate @ Woodside Apts
285	WOODSIDE APARTMT M-O	31,350	STUDENT APTS. (4 PRSN)	Renovation	1	See Phasing - Graduate @ Woodside Apts
286	WOODSIDE APARTMT P-R	35,300	STUDENT APTS. (4 PRSN)	Renovation	1	See Phasing - Graduate @ Woodside Apts
280	WOODSIDE COMMUNITY BLDG	5,050	STUDENT SOCIAL AREAS	Renovation	1	See Phasing - Graduate @ Woodside Apts

BLDG#	BUILDING NAME	SQ FT	CURRENT USE	CMP Action	PHASE	Comments
GENERAL ADMINISTRATION						
117	1 LEAVITT LANE (CIS)	35,550	ADMINISTRATION	Renovation	Ongoing	For core campus administration relocation
365	10 WEST EDGE DRIVE	25,200	ADMINISTRATION	None	N/A	
86	11 BROOK WAY	10,500	ADMIN/ LA	Demolition	2	See Phasing - Admin Services Bldg (GA)
256	13 LEAVITT LANE (SPCT)	1,700	FACILITIES	Demolition	TBD	Relocate to Central Receiving Building
158	17 LEAVITT LANE (FIGMENT)	7,000	FACILITIES	Demolition	TBD	Relocation required; See also phase 3, Facilities, New
111	2 LEAVITT LANE (HUMAN RESOURCES)	4,012	ADMINISTRATION	None	N/A	
94	6 LEAVITT LANE (CNTRL RECEIV BLDG)	19,750	FACILITIES	Renovation	3	See Phasing - Service / Trade Building (GA)
334	8 SPINNEY LANE	4,168	RENTAL	Demolition	TBD	Due to fire damage
36	9 LEAVITT LANE (MAINT BLDG)	4,800	FACILITIES	Demolition	2	See Phasing - Admin Services Bldg (GA); relocate to Central Receiving
260	AMBULANCE BUILDING	2,474	AMBULANCE	Demolition	2	See 2004 Phasing Document
288	DPW GROUNDS & ROADS	6,040	FACILITIES	None	N/A	
287	DPW SALT SHED	2,190	FACILITIES	None	N/A	
27	ELIZABETH DeMERITT HOUSE	6,336	ADMINISTRATION	Demolition	2	See Phasing - Admin Services Bldg (GA)
154	ELLIOTT ALUMNI CENTER	15,950	ALUMNI ACTIVITIES	Addition / Renovation	4	See 2004 Phasing Document
21	HEATING PLANT	15,350	FACILITIES	New	1	See Phasing - CO-GEN at Energy Complex (GA)
100	HEWITT ANNEX (CIS CENTER)	10,000	ADMIN CIS	Demolition	2	Admin Service Bldg and Swing Space provided in advance
136	HIGHLAND HOUSE - THOMPSON FARM	9,999	RENTAL	Disposition	TBD	
92	JANETOS HOUSE	3,950	POLICE	Demolition	1	See Phasing - University Police Station
308	LEAWOOD ORCHARDS BARN	15,134	STORAGE	Renovation	2-4	See Phasing - Family / Graduate Housing; community space
307	LEAWOOD ORCHARDS HOUSE	4,652	RENTAL	Demolition	2-4	See Phasing - Family / Graduate Housing
240	NHPTV	25,200	PUBLIC TELEVISION	None	N/A	
105	O'KANE HOUSE	5,950	H H S	Renovation	TBD	University stewardship issue
6	PRESIDENT'S HOUSE	6,800	PRESIDENT'S HOUSE	None	N/A	
144	RICE HOUSE	2,100	POLICE	Demolition	1	See Phasing - University Police Station
75	RR STATION/DAIRY BAR	3,500	RR, COLSA FOOD SERVICE	Addition / Renovation	1	See 2004 Phasing Document
37	SERVICE BUILDING	47,000	L A, FIRE DEPT, ADMIN	Demolition	4	See Phasing - Fire Dept, Art, and Research Bldg #3
80	TELECOMMUNICATIONS BLDG	3,600	ADMIN CIS	None	N/A	
114	TRANSPORTATION GARAGE	22,350	FACILITIES	None	N/A	Technician access an ongoing issue
50	WATER SUPPLY	4,900	FACILITIES	None	N/A	
TRANSPORTATION						
33	VISITOR INFORMATION CENTER	4,700	FACILITIES	Demolition	2	See Phasing - Parking and Transit Office

APPENDIX 4

DESIGN GUIDELINES





BUILDING DESIGN GUIDELINES

The special legacy of the University of New Hampshire campus must be preserved through its commitment to sustainable design and construction. Building projects – from small retrofits to major renovation and construction – are expected to produce facilities that serve the University for a century or more. The overall design goals to achieve this vision are:

- Buildings must be made of enduring materials, systems and components that need the least maintenance. Components should be readily available and use common methods for replacement.
- Designs must be responsive to the needs and functional requirements of the University as a whole, as well as specific users.
- Designs must strive for construction that provides the greatest long-term value for the money spent, not necessarily the least expensive solution. Selection of materials, quality of workmanship, and attention to detail will reflect that.
- Designs must provide a safe, healthful, accessible environment, complying with or exceeding all applicable codes and regulations.
- Designs must strive to use energy-efficient systems and components.

- Designs must make efficient and appropriate use of campus land.
- Designs will carefully consider the impact to the environment, not only within the campus, but where materials are acquired from and disposed to, and the energy used in the process.
- Designs must be adaptable over time to changes in the function and operation of the building.
- All of this must be accomplished while pursuing designs that are distinguished and timeless. The physical image of the University is critical to the recruitment of students and faculty members; therefore, designs must be responsive to the sense of history and place.
- All elements of the campus should help form a memorable environment with lively places for chance encounters and spaces that have feelings of collegiality. These aspirations apply not only to the interior and exterior of buildings, but to the campus grounds.

BUILDING DESIGN GUIDELINES

The building design guidelines are intended to provide general parameters. When used in conjunction with the Design Guidelines incorporated in the Landscape Master Plan document, they guidelines will help the consistency in the buildings and grounds of the campus, providing a definitive sense of place consistent with the goals of the Comprehensive Campus Master Plan.

These guidelines are not intended to impart a particular architectural style to campus buildings, but to create a framework within which buildings and grounds will develop with common references. These references encapsulate a sense of place that is derived from existing buildings and the forces of the local climate. New buildings should translate these references using appropriate cultural inferences, the requirements of various programs and technological developments in order to attach a particular time period to their design. The result should be buildings that form groupings and are integral to the campus, reinforcing the fabric and feeling of the campus and not just widely varied buildings in the landscape. They should create a whole that is greater than simply the sum of the parts.

The framework is divided into four parts: Density, Building Typology, Massing, and Composition.

Density

The comprehensive campus plan proposes building footprints that support the creation of outdoor space and respect the density of development on campus. The density of development will vary between the core, natural areas and the agrarian areas of campus.

Campus Core

The density of the core campus is modeled on the historic core of campus, particularly the areas from Dimond Library and Thompson Hall to Rudman Hall and James Hall. Buildings within the core campus are considered to be relatively tall, extending up to five stories, with relatively small footprints. The open spaces created are relatively intimate and are strongly interconnected.

Agarian

The density on campus beyond the core takes on a more agrarian nature, with buildings up to three stories. Buildings are grouped into relatively tightly knit groupings, generally surrounding a common open space. The land surrounding these clusters includes largely open space including athletic fields, paddocks, wetlands, and agricultural fields.

Natural Areas

In areas where natural areas are adjacent to the proposed buildings density may be increased to minimize the impact on existing forested areas. Areas of particular attention include expansion of the Gables housing and the expanded campus core adjacent to the Oyster River and near the College Woods. In these areas, building footprints should be minimized in order to diminish the impact of new construction on natural areas. Landscape strategies in these areas should incorporate existing woodlands, meadows and waterways.

Building Typology

Typology is used to determine the role of the building within the greater context of the campus. Most buildings located in the Campus Plan are intended to support the creation of outdoor rooms. A few buildings will act as the focal points of long vistas or as the end of an outdoor space. Design of buildings should take into account the role of the structure on campus and its relative significance to the campus as a whole.

Linear

Linear buildings typically form the edges of major open spaces or streets. These buildings have one primary face, directed to the open space that acts as their “address”. Pedestrian traffic often moves along this edge or around the building along its short sides, making these two sides secondary facades.

Compound

Compound buildings, often referred to as “letter buildings”, frequently use their components to create outdoor space. These buildings may also contribute to the definition of exterior spaces, creating a less formal edge. Forecourts, internal courtyards, and atriums are often the result of letter buildings and should be made public. These buildings can also be used to shield service courts, although this exposes more interior space to noise, possible air quality issues, and limited views.

Centralized

Centralized buildings usually act as the focal point of exterior spaces, vistas or paths. As a focal point, pedestrian traffic may come from multiple directions, in many cases causing these buildings to have no back. All sides of these buildings must be considered and service access often must be discrete.

Massing

Massing is used to relate a building to its immediate context with reference to adjacent buildings and topography. Massing is the result of the scale, height, and footprint of a building and generally determines the relationship of the building to pedestrians. Most buildings on campus have a relatively intimate relationship with pedestrians, which is typical of the character of New England liberal arts colleges.

Scale

Most buildings on the University's campus are articulated in relation to the human body. Fenestration, materiality, and datum lines are used to create a comfortable relationship between man and building.

Height

Recent buildings on campus have been tall (four to six stories) in proportion to their footprint, maximizing the efficiency of land use. These buildings have also had steep roof pitches with gable ends, accentuating their height along the short axis of the building, while minimizing the scale along the broad axis.

Footprint

Buildings on campus typically are thin in depth (55 to 85 feet), allowing for the penetration of light and air. Primary façade lengths vary within three categories:

Large: 300 – 375 feet

Moderate: 150 – 175 feet

Small: 70 – 100 feet

New buildings should be designed to keep façade lengths within the moderate category.

Composition

Composition is used to relate the image of the building to other buildings on campus. Relating materials, details or building elements to a common palette is critical to the continuity of the campus character. Evolving typical campus conditions through the filter of technological advancements is important to the advancement of the campus character over time.

Materiality

Successful buildings on campus are typically of two types: brick in the campus core and brick or wood siding in the agrarian campus areas or West Campus.



Modest Entry Scale



Monumental Entry Scale



Core Campus Buildings



Core Campus

The Core Campus is bounded by Mill Road, College Woods, Lot A, The Gables, and Strafford Avenue. The following guidelines apply to facilities in this area:

Exterior Walls

Brick is appropriate as an exterior material for its links to the existing texture of campus buildings and the local vernacular, while providing a durable, low maintenance building envelope. Among other characteristics, brick is generally available from local sources and has the ability to match the texture and color of adjacent buildings. Brick patterns and set backs in the wall plane should be judiciously used to provide relief and to break up the mass of the wall plane, but should avoid articulating the thinness of typical cavity wall construction. Panels of cast stone and natural metal can be used to articulate caps or wings.

Pitched Roofs

Slate is common on campus buildings, and is an appropriate material for new buildings due to its local character, and durability under severe weather conditions common in the local climate. Metal roofs are also appropriate for campus buildings, particularly terne coated steel.

Openings and Trim

Windows, doors, dormers, water tables, and other features of campus buildings are generally light in color – either white or buff. These details



West Campus Building

should use metal, stone, or concrete to match the color and texture of existing buildings for durability and low maintenance.

West Campus

The West Campus includes Leawood Orchard, the Leavitt Center, the Animal Science Area, The Thompson School, and the Horticultural Area, as well as the Athletics and Recreation Areas. The following guidelines apply:

Exterior Walls

Exterior walls should reflect the agrarian heritage of the campus with light construction wherever possible. Wood siding is recommended, although masonry is acceptable where required by program. Bold colors common to rural New England, particularly red, dark green, and white, are acceptable for facilities in this area.

Pitched Roofs

Shingles and metal roofing are appropriate for the west campus areas.

Openings and Trim

Doors and windows reflecting the architecture of New England farms are encouraged. Metal, painted in coordination with other exterior materials, is recommended for durability. Details should be greatly simplified in this area and trim should reflect the restraint necessitated by the economy of rural New England.





Facade with Deep Relief



Facade with no differentiation of pattern



Facade with Modest Relief



Large Scale Opening

Fenestration

Fenestration patterns in many ways relate to the perceived massing of the building. Patterns of windows and doors impact the scale of buildings and their perception in terms of the weight of the building. Openings generally should be scaled to human proportions, either through the overall size of the masonry opening or through the use of panels, to reduce the scale of large glass elements. Where human contact is expected with openings, particularly at major entrances, materials having warm visual and tactile characteristics, such as wood, natural metal and masonry, should be used.

Buildings on campus generally have vertically oriented windows and a relatively equal balance of brick and glass lending a solid appearance to the facade. Some more recent buildings have grouped windows to create large vertical openings, in some cases minimizing the wall surface to make the building appear light. Where large areas of glass or metal panel are used, consideration should be given to the articulation and composition of the surface in order to maintain proper scale. Where masonry is used in new buildings it is appropriate to express the weight of the building. Masonry openings should not comprise more wall surface than exposed masonry. These opening should not be wider than is visually reasonable for the expression of the head of the opening.



Typical Roof Line



Roof forms used to conceal mechanical requirements



Typical Roof Line



Incorporation Dormers to Roof Line



Roof line incorporating mechanical requirements

Profile

The profile of a building also impacts the visual perception of massing through mediating scale and transitioning between various volumes of the building.

Many building elements are used to modify the profile on campus buildings. Dormers create occupied attic levels, cupolas mask ventilation equipment or provide light into major spaces, and chimneys contain vent stacks and exhaust. Porticos or projected bays signify entry. These elements are used without reference to particular styles.

A number of recent projects used gable ends to accentuate the vertical orientation of the narrow sides of buildings, while minimizing the cornice line on the long side of the building. Gables on campus are relatively steep, with pitches between 12 in 12 (45°) and 20 in 12 (60°), in order to facilitate the removal of snow and maximize the occupancy of attic levels. Entranceways should have canopies designed to withstand significant snowfall from the roof, or be located on a gable face.



Cupola introducing light to interiors



Projected Bay



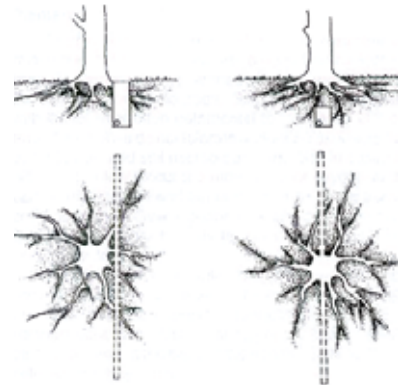
LANDSCAPE DESIGN GUIDELINES

The Landscape Design Guidelines establish a framework for the subtle enhancement of the campus landscape rather than transforming it. The guidelines build upon, not radically alter, the campus's rich design heritage by emphasizing simplicity, balance, and ecological sensitivity. The Landscape Design Guidelines are principle-based, founded on the tenets of sustainability and the belief that landscapes should be managed, not simply maintained. They are flexible and allow for contemporary expression. Long-term management considerations must be weighted equally with issues of aesthetics and sustainability.

These guidelines are divided into 4 parts: Landscape Preservation, Landscape Restoration and Landscape Enhancement. The Landscape Design Guidelines also include the University's standards for Site Furnishings. See the Landscape Master Plan for more detailed description of the Landscape Design Guidelines.

LANDSCAPE PRESERVATION

Preserving the cultural heritage and ecological integrity of an expanding campus landscape is a collaborative process between the client, the designer, the builder, and those responsible for its long-term upkeep. The following policies and procedures should be adopted to protect the campus landscape before, during, and after construction.



Construction Envelopes

Prior to the initiation of design it is important that the project site be thoroughly inventoried to determine the location of valuable site features and fragile areas that will need protection during the construction process. By consensus it is important that the design team establish a construction envelope that includes the footprint of any new structure as well as a carefully delineated work zone.

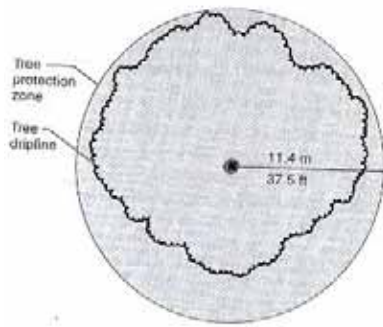
Once a construction envelope is established, all areas outside the construction envelope will be regarded as a protected area and shielded by construction fencing prior to the initiation of any site disturbance. The limits of the construction envelope should be recorded on all design and construction documents. Protected areas should be completely off limits to any construction activity, including equipment parking, cleaning stations, or materials storage.

Construction Staging Areas

Within the construction envelope a construction staging area should be clearly delineated. In those cases where the building envelope is not of sufficient size to support all construction activities, a staging and storage area off-site shall be designated. Contractors should be required to park all construction equipment and private transportation within the construction staging area. No parking should be allowed outside the designated construction staging area. If site conditions limit the parking area within the staging area, construction workers should be expected to car pool from remote parking lots. All chemical mixing and disposal should occur within the construction staging area. The cutting or drilling of inorganic materials such as metal, plastic, concrete, or treated wood should occur within the construction staging area. All stockpiling of materials should occur within the construction staging area. Whenever possible, institute “just-in-time delivery” practices.

Minimize Utility Impacts

Careful consideration should be given to the routing of underground utilities; minimize the disturbance to plant root zones and fragile areas of a site. The additional cost in materials and labor to route utilities around the root



protection zone is quickly off-set by reduced costs associated with the long-term maintenance of damaged or weakened plants. Where it is not practical or feasible to avoid encroachment of the root protection zone, consider alternate steps to minimize damage to plant roots.

Topsoil Preservation

When not protected, soils are easily damaged. Soil restoration is an expensive and time-consuming process. Protecting the soil during construction is a fundamental sustainable practice. Carefully remove topsoil from all areas to be disturbed and store all topsoil on site or at a nearby location protected from sheet drainage that may contaminate or degrade the soil's condition. Avoid situations that lead to soil compaction. Restore all compacted areas by tilling and adding soil amendments based on recommendations by the Landscape Architect, Grounds Superintendent, or consulting Soils Specialist.

Plants Suitable for Protection

Only plants that are healthy, structurally sound, and are expected to have a long life span should be considered for preservation. Dedicated plants or plants with historical or sentimental significance will be given special consideration in the evaluation process. However, the species must be tolerant of construction impacts, and preserving the plant will not place undue burden on the construction process or create unreasonable demands on future maintenance. Plants requiring extraordinary protection measures or necessitating expensive construction detailing will not be considered prime candidates for preservation. If the plant poses a potential safety hazard or is diseased, in decline, over-mature, structurally unsound, or requires extensive maintenance to be maintained after the construction project, it will not be considered a prime candidates for preservation.

Root Protection Zone

Protecting the root system of a plant is fundamental to preserving it during the construction process. The root protection zone is the area around a tree or group of plants in which no grading or construction activity may occur. The size and configuration of the root protection zone depends on species sensitivity to construction, health and age of the plant, and root and crown conformation. The root protection zone should be designated by a certified arborists or horticulturalist.

If regrading must occur within the root protection zone, strive to limit cuts and fills to no more than 6 inches. Try to limit disturbance within the root protection zone and limit removal of the root system from any one side. Minimize site disturbance near plants to be disturbed and carefully monitor trees disturbed during construction. Continue to evaluate trees post construction for a period of two years to detect general decline that may result from construction impacts.

LANDSCAPE RESTORATION

An examination of the campus's evolution reveals that the degradation of the landscape began long before the University was founded. Eighteenth and nineteenth century farm practices took a tremendous toll on the landscape. The extensive clearing of native forests resulted in an irreplaceable loss of indigenous flora and fauna. The subsequent construction of the railroad and the building of two dams further compromised the already altered natural systems.

In the short term, restoring damaged ecosystems is an expensive process. Not restoring them may have dire long-term ramifications that will eventually necessitate an even a greater expenditure of labor, energy, time, and money. It is important that the University take a proactive position on the restoration of degraded landscapes, streams, and wildlife habitats in particular. The restoration of stream banks and natural habitat is a complex process, the detail of which exceeds the scope of this master plan. However, there are preliminary action steps that will stem further degradation and will help facilitate the rejuvenation of damaged ecosystems. The following policies and procedures should be adopted to begin the restoration of the campus's natural ecosystems.

Reconnecting the Fragmented Landscape

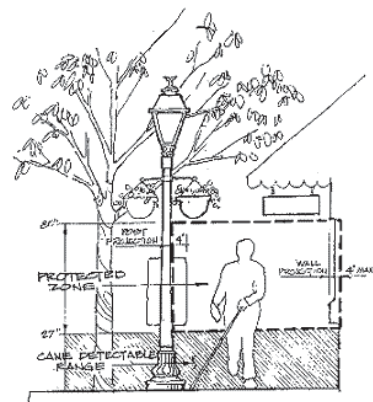
Stream Restoration

To prevent the further degradation of wetlands, a comprehensive Watershed Protection Plan should be further developed beyond those that have been delineated in numerous portions of the campus. It is important that the entire watershed be considered when developing the plan's goals and objectives. Manage campus wetlands to control non-point source pollution and control runoff to lessen downstream flooding. Respect shoreline protection setbacks: do not site structures within 50 feet of a shoreline reference line. Do not apply any fertilizer within 25 feet of a shoreline reference line. Where existing, a natural woodland buffer should be maintained within 150 feet of a shoreline reference line unless activity is related to that shoreline. Identify locations of point source pollution and develop appropriate mitigation plans. Wherever feasible, develop landscape plans that daylight buried streams and restore/enhance natural corridors linking fragmented ecosystems.

Habitat Restoration

Planting efforts beneficial to wildlife are encouraged. Plant shrub masses to provide critical habitat for small animals and songbirds, especially within the academic core. In some cases, the preservation of dead or dying trees that provide dens and nesting places for wildlife should be considered; however, aesthetics and public safety should be prime considerations. Do not save trees that pose a potential hazard or detract from the general aesthetics of the campus. Develop an interpretive signage program to foster a greater awareness on the importance of preserving and restoring native habitats.





Identify and protect sensitive or fragile ecosystems from future construction and route campus trails to avoid these areas.

Tree and Plant Management

A review of the Campus Tree Inventory reveals that 15 percent of the campus's trees are in poor condition and another 35 percent are categorized as only being in fair condition. Three percent of the trees in the inventory were listed as dead. This indicates that only 47 percent of the University's trees are in good condition. Update the Campus Tree Inventory on an annual basis. Monitor and remove all dead trees within the academic core and residential areas of the campus. Trees that do not pose a safety hazard and serve as wildlife habitat can be slated for removal at a future date or left if they do not detract from campus aesthetics.

Consult with a Certified Arborist to identify trees listed in poor condition that will need replacement within the next two years. Prioritize trees that pose a threat to public safety or harbor noxious pathogens. These trees should be slated for immediate removal. Identify trees listed in poor or fair condition that, with remedial treatment to the tree itself or the surrounding site, can be rejuvenated.

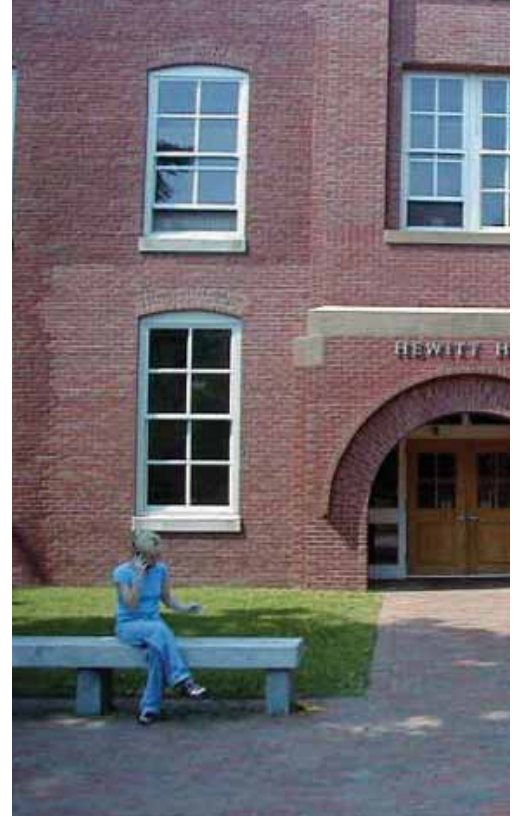
LANDSCAPE ENHANCEMENT

These enhancements are meant to inform the general planning and standard site design policies and procedures. Adherence to the guidelines will ensure the development of an attractive and cohesive campus.

Campus Seating

Campuses are social spaces. They are most successful and memorable when their design affords opportunity for a wide range of social interaction ranging from formal gatherings to chance encounters and quiet retreats. One element that facilitates the pleasure and enjoyment of such encounters is comfortable seating. Create and intimate seating niches throughout the campus to encourage informal encounters between students, the faculty and staff.

- Seating walls are important design components within social spaces. Although somewhat expensive, their use should be encouraged to define the edges of spaces and to provide informal seating. Seat walls should have a minimum height of 17 inches and should not exceed 36 inches in height. (17-19 inches is considered an ideal height for a seating wall.) Seat walls intended to accommodate users from only one side should have a minimum width of 18 inches. Seat walls intended for use from both sides should have a minimum width of 36 inches. The top of seat walls should be slightly sloped to shed water.
- Seating opportunities at important campus gateways, building entries and intersections of walkways should be provided to



encourage social interaction. Seating areas should be protected from winter winds and uncomfortable drafts. Locate seating in suntraps that enable the greater use of the outdoor areas in the fall and spring.

- Locate campus seating near areas where food is served. Make provision in selected seating areas for food carts and other vendors. Seating within plazas and other open spaces should afford a variety of exposures, orientations, and views. Seating opportunities should be developed within the Ravine and campus groves to offer opportunities for quiet reflection and enjoyment of the natural surroundings.

Stairs and Steps

Campus stairs are important site design components. They not only facilitate pedestrian circulation they add character and if thoughtfully done, stairs can serve as seats, stages, and even focal points in a site design. However, stairs do pose maintenance concerns and limit accessibility for some users, especially in the winter when snow removal and ice control may significantly increase maintenance demands. Consequently, stairs should be developed with restraint and should not be the sole landscape design for grade changes. When proposing campus exterior stairs the following design criteria should be considered:



- Exterior stairs should rest on concrete stringers. The selection of tread type, i.e. cut granite, split faced granite or concrete will depend on site specific conditions and the desired effect the stairs will have in the landscape. Campus steps should be a minimum of 6' wide and have a minimum of two risers, strive for three. Stair treads shall be roughly textured providing a non-slip character under both wet and dry conditions.

A good rule of thumb for tread to riser ratio is that $2(\text{riser}) + \text{tread} = 24\text{-}27$ inches. Common ratios for exterior steps are: 6 inch risers and 12 inch treads for stairs attached to buildings. 5 – 5 ½ inch risers with 15 inch treads for stairs standing free in the landscape.

- Handrails are important design components and should be installed on all stairways with more than two risers. Handrails should be black color-coated galvanized extruded steel or stainless steel depending on site-specific conditions and design criteria.
- Announce exterior stairways with landscape treatments such as plantings, lighting, and benches. Plant material sited adjacent to stairways shall not produce litter such as seeds, flowers, and/or fruit that can create slippery or adverse walking conditions.

- Landings between stairways should employ the “Multiple of Five” rule, which provides for five steps per landing and an alteration between left and right foot when stepping onto and off a landing.
- Timber steps should be restricted to woodland trails, jogging paths, and for use as temporary steps associated with temporary campus walks.

Campus Walls

Site walls should be thoughtfully resolved and integrated into the overall design. Careful consideration should be given to their alignment and the manner in which they terminate in the landscape. Wall materials such as landscape timbers and Versa-loc are aesthetically inappropriate for use within the campus core. A structural engineer should review drawings for retaining walls higher than 4 feet.

- Freestanding walls throughout the campus should be constructed of native stone whenever feasible. Stonewalls enrich campus character and reinforce its sense of place. Stonewalls within the campus core should have a split face and be secured from a local source. Stones walls designated for use in other areas of the campus can be constructed of local fieldstone unless their role calls for a more formal appearance.
- Concrete retaining walls, when called for should be thoughtfully resolved. Consideration shall be given to enriching the character of concrete walls with subtle scoring patterns and capstones. Capstones shall extend the full width of the top of the wall. Capstones shall be sloped 2 percent in the downhill direction. Weep holes shall be carefully integrated into the design of solid walls. Care must be taken to insure that seepage does not stain the walls surface or the pavement at the base of the wall. Surface drainage behind and above the wall should be intercepted with a diversion swale to prevent surface water from flowing over the top of the wall.
- Architectural walls (walls integral to the building) should be used to extend the architecture into the landscape and unify the building and its site. Architectural walls should be compatible with the proposed building but respectful of site context. Architectural walls should be used to provide seating in plazas and near building entries. Architectural walls should be used to screen dumpsters and utilities whenever possible.





Campus Fences

Fences are important landscape design elements and should be used on campus to delineate the edges of campus spaces or serve as protective barriers. Many fence types are common to New England and can be effectively used to reinforce the regional character of the landscape and its unique sense of place. The following fence types are recommended for campus use:

Academic Core – White Two Rail Fencing

Fencing should be used with restraint within the campus core. When used it should consist of white two rail fences with the 4 inch square rails rotated 45 degrees to form a diamond pattern. The height of fencing should vary according to the specific design intent and site conditions. The proportional relationship between rails and posts should be carefully considered. Fences should “run” level; avoid the use of fences in situations where the land slopes in such a fashion as to necessitate the fence stepping down across the landscape.

End posts should be a granite minimum of 8” square. Finials and end treatments should relate to the context of the design. The top of fence posts without a finial should be beveled to shed water. Consider snow removal and snow storage when siting fences in the landscape ensure adequate room for

both. Fence posts should be set back a minimum of 18 inches from a paved surface to ensure adequate room for snow removal.

Agricultural Areas – White Four Rail Fencing

- Within the agricultural areas of the campus, a white four rail fence should be used to define paddock space and the edges of meadows and fields. Fence posts should be a minimum of 5 inches square with the top of the post slanted to shed water. Rails should be 1 inch x 6 inches, rough sawn. A vertical 1 inch x 5 inch covering board should be used to hide the joints where rails meet at the posts. Fences should be white stained and kept in good repair. Post and rail fences within Precinct 3 should follow the contours of the land, rising and dipping with changes in grade. Avoid situations that require the stepping of the fence to compensate for sudden changes in grade. Fences should be carefully sited in the landscape. Set fencing far enough back from the edge of the road to allow adequate snow storage and so as not to obscure a view of meadowlands.



Chain Link Fencing

- In certain locations and for certain utilitarian functions chain link fencing is the logical choice because of its durability and effectiveness as a barrier. Where chain link is required, black vinyl covered wire with black posts and rails should be used. Chain link fencing is appropriate to locations where crowd control is required, such as adjacent to the athletic fields. When used as a protective barrier a landscape plan should be prepared that will obscure portions of the fence with landscape treatments or divert sightlines to lessen the fence's visual impact. Black vinyl fencing should be considered for construction fencing, especially within the academic core where extended construction will detract from the overall character and appearance of the landscape.



Screening Fence

- Within the academic core and in other areas where screening is required to shield an offensive view and vegetation will not suffice, a white stained board fence should be used. Posts should be 5½" square bevel at the top with square edges. Smooth 5 inches wide "V" groove boards with ship-lap joinery should be vertically mounted. Board fences should run level with the grade but in those instances where changes in grade preclude this, board fences should be stepped.
- Landscape plans should be developed as a foreground to the fencing to reduce its scale and visual impact. As an alternative to board fencing, architectural walls can be used to screen utilities or objectionable views. Architectural materials should complement the architectural detailing of nearby buildings.



Gifts and Memorials

Campus memorials commemorate the lives of former student, faculty, staff, and other persons who have had a lasting impact on the University. Memorials and gifts often serve as the catalyst for the development of new campus open spaces and landscape projects. Memorial landscapes often include seating, artwork, planting, and other amenities. Memorials serve to remind us that as our time at the University is fleeting and whether we are students, faculty members, staff, or stewards, our obligations are not only to address the concerns of the present but to honor the obligations of the past and preserve opportunities for the future. Stewardship programs that endow existing landscapes such as the Ravine should be encouraged as a desirable alternative to the installation of gifts or memorials.

- Memorials should be carefully sited in the landscape. Consideration will be given to the long-term development of the campus. Consult the Campus Master Plan prior to the placement of all memorials.
- Living memorials such as trees, gardens, and woodland groves should have a maintenance endowment assigned them. The assignment of an endowment will be at the discretion of the University and may be required as part of the gift.
- The placement of memorials should consider routine maintenance concerns such as mowing and snow removal.

Surface Parking Lots

Parking facilities should be thoughtfully designed and carefully integrated into the campus open space system. Design solutions should strive to maintain a balance between open space considerations and parking demands. This involves consideration of not only the location and capacity of the facility but also of the layout of the parking lot and its relationship and connection to adjacent open spaces.

A landscape plan should be developed simultaneously with the layout plan. The landscape plan should address spatial considerations as well as

aesthetic concerns. Trees, hedges, and shrub massing shall be designed along the perimeter of the parking lots to provide a sense of enclosure as well as shade and screening. Deciduous trees should be planted to reduce heat build-up in the summer yet allow for the rapid melting of snow and ice in the winter. Evergreen trees should be judiciously planted to reduce the visual impact of parked cars and to block harsh winter winds.

Interior landscape islands should be designed to divide large lots into smaller sections, effectively reducing the perceived size of large parking lots. However, the design and layout of parking lots should take into careful consideration snow removal and snow storage. Interior islands should be a minimum of 12 feet wide and planted with large deciduous trees. Weak wooded trees, trees that create unsightly litter that can damage automobiles or trees prone to salt damage shall not be used in parking lot landscape plans.

Shrubs should be planted with restraint to avoid conflict with snow storage. Existing vegetation and site features, such as stone walls, should be preserved and incorporated into interior islands whenever possible. Landscaped islands should define the ends of parking rows and island extensions should be incorporated once every 12 parking spaces to prevent long, unbroken rows of parking and provide shade for parked vehicles thereby reducing glare and excessive heat build-up. Where feasible, interior islands should be designed to collect surface runoff that can be treated in grass swales within the island.

Pedestrian connections between parking lots and primary destination points shall be designed as integral components of the campus pedestrian system. Walkways should be spatially well defined and nicely landscaped. Fences and seat walls shall be used along the perimeter of parking lots to provide spatial definition, screening, and to reinforce the unique character of the campus. Pedestrian amenities such as bluelight phones, seating areas, bus stops, trash receptacles, lighting, and bike racks should be incorporated into design solutions to enhance the use of these facilities and reinforce the human scale of these facilities. The introduction of such amenities should be encouraged and adequately funded.

Campus Accessibility

The following recommendations are based on design principles and guidelines developed by the Architectural and Transportation Barriers Compliance Board (a federal agency) and the Public Right-of-Way Access Advisory Committee (PROWAAAC) as a minimum standard for access across the campus. Over time, greater degrees of access will be expected and it is useful to anticipate these upcoming standards to the greatest degree possible within the resources of the institution. In general accessibility should:





- Provide for equal opportunity and maximize accessibility for all users
- Be reasonable in cost
- Be clear, simple and understandable
- Be enforceable and measurable
- Be constructible and maintainable within today's technological capabilities
- Address safety for both pedestrians and motor vehicle operators
- Provide guidance for implementing agencies and the public
- Be flexible enough to include future technologies
- Be consistent with ADAAG
- Support independent use by persons with disabilities

Accessible Routes and Walks

To the extent that the natural topography of the campus allows, provide a continuous unobstructed path connecting all accessible elements, places, and spaces of the campus. Accessible Routes will coincide with the route planned for the general public to the maximum extent feasible. Accessible routes provide more than the minimum of access features and dimensions. Design considerations shall also address how accessible routes are affected by rain, snow, or ice. Accessible routes will be looped, avoiding dead ends.

Sidewalks, trails, and shared-use paths leading to outdoor developed areas will conform to the guidelines presented in the Accessibility Guidelines For Outdoor Developed Areas. Campus sidewalks will have a clear width of not less than 72 inches. Nowhere may the cross section of an accessible sidewalk exceed 1:48 (2 percent). Placement of street fixtures, utility covers, gratings, and other covers should be outside the entire public sidewalk to the maximum extent feasible. If drainage gratings are located within an accessible sidewalk, the grate will have no spaces greater than one half inch wide in one direction.

Safety and Security

Maintaining a safe and secure campus is a proactive process that encompasses a range of issues, some of which are related to landscape design. With an understanding of basic design principals, a thoughtful designer can develop a landscape plan that is aesthetically pleasing, functional, and an important component of a campus-wide crime prevention program. In recent years the concept of Crime Prevention Through Environmental Design (CPTED) has gained recognition as an important component of a crime prevention program. Proponents of CPTED assert that the potential for criminal activity to occur on campus can be reduced through thoughtful design and consistent maintenance. A CPTED plan is built on the following three principles:

Territoriality

A well-defined space promotes “ownership” and makes it easier to identify intruders. Site plans should be developed so that public, semi-private and private zones can be clearly discerned. Physical and symbolic barriers should be used to separate and differentiate various zones. To the extent possible, interior and adjacent exterior spaces should relate physically and programmatically. The character and spatial organization of semi-private and private zones should imply a sense of “ownership” by designated users.

Access Control

Limiting site access points guides circulation and minimizes “escape routes”. Entrances, exits, and circulation through public, semi-private and private spaces should be thoughtfully resolved. Barriers, such as fences or low hedges should be used to obstruct potential “escape routes”.

Surveillance

Open designs that allow for natural surveillance and are free of obstacles and places of concealment offer the most protection against crime. Coordinate the layout and installation of emergency “blue lights” with Campus Safety & Security to insure adequate coverage throughout the campus. Minimize the use of objects that may limit visibility into and/or through a site. Avoid creating places of concealment, such as shrub masses, near first floor windows or building entrances. Strategically place lighting fixtures to illuminate entrance and exit points and provide a uniform wash of light throughout the site.



Visual corridors should be maintained in open park-like settings as well as in densely planted areas. In a visual corridor limit the height of shrubs to 3 feet and insure that tree branches are maintained at least 6 feet from the surface of the ground.

Site Grading

Site grading is an important design tool. A well-resolved grading plan can enrich the aesthetic character of a site. Grading can be used to screen objectionable views, enhance desirable views, provide sound control, direct circulation and reinforce the spatial definition of outdoor spaces.

Site grading should result in a setting that is visually pleasant and in harmony with the existing scale and character of the campus. When developing grading plans, the following design criteria should also be considered:

- Grading solutions should keep in mind winter conditions in Durham. Design solutions that rely on the use of salt or sand to reduce slippery conditions should be avoided. Grading solutions shall insure safe and efficient pedestrian and vehicular movement. Where a change in grade occurs along primary circulation route, designers should strive to resolve such situations with gradual slope transitions at less than 5 percent. Stairs should be used sparingly on campus since they compromise accessibility and require hand shoveling.



- To the extent possible, proposed grades should be kept as close as possible to the original condition of the site. Grading solutions should be developed to minimize site disturbance under existing vegetation especially within the root zone of trees greater than 4 inches in diameter. A Plant Preservation Plan shall be developed whenever a proposed project threatens existing vegetation, especially trees greater than 4 inches in diameter. Topsoil should be conserved whenever possible. It should be stripped, stockpiled, and reused to establish finished grades. The designer should strive to achieve a balance between cut and fill requirements.
- Grading solutions shall consider future maintenance operations. New slopes shall be graded with gentle transitions at the toe and top of slope. Avoid acute transitions and slopes, swales, and ditches having a mechanical or engineered appearance. Strive to develop solutions that minimize periodic maintenance other than mowing operations on grass slopes and normal weeding and pruning on planted slopes. Designers should strive to limit slopes in lawn areas to less than 10 percent. Slopes mowed by vehicles should be 25 percent or less but in no case shall exceed 33 percent. Grass slopes in excess of 33 percent will necessitate hand mowing. Planted slopes, requiring periodic maintenance such as weeding, pruning and litter control should not exceed 3:1 (33 percent); slopes in excess of 3:1 shall be considered not maintainable on a routine basis. Unpaved slopes shall not exceed 2:1 (50 percent) or soil angle of repose whichever is less.

Site Drainage

Designers should strive to incorporate Best Management Practices (BMP) in the development of drainage solutions. The goal of a BMP is to control, store, and/or treat storm runoff on site while providing effective storm water management. A BMP for a specific site should integrate with the natural and built landscape while considering maintenance requirements, costs, and responsibilities.



- Site designers should strive to include appropriate landscape treatments as integral components of a site drainage plan. Landscape practices such as vegetated swales, filter strips, basin landscaping and urban forestry practices preserve and/or enhance the aesthetic character of a site while contributing to an effective storm water management plan.
- Erosion and sedimentation control are critical issues in the development of a storm water management plan. The use of appropriate erosion and sedimentation control practices can significantly reduce soil loss, especially during the construction process. Grass swales should be designed so that velocities do not exceed 4 feet per second for established bluegrass and 6 feet per second for tall fescue. If velocities exceed 6 feet per second, use only approved non-vegetative material including geotextiles, placed stone or other approved methods.
- All drainage pipes daylighting on slopes shall have headwalls. Headwalls shall be cast-in-place concrete, brick, or native stone construction. Material selection shall be determined based on architectural appropriateness. Provide diversion swales uphill from top of retaining walls to minimize overland flow of water over wall surfaces.
- The size, shape, and location of drainage grates shall relate to unit paver size and conform to shape of the paving pattern. Utilize round raised grates when installed in lawn areas. Drainage grates shall be carefully located with respect to pedestrian traffic, allowing for safe travel. Slots will be a minimum of $\frac{1}{4}$ inch wide and will not exceed $\frac{5}{16}$ ".



Public Art

When thoughtfully integrated into the landscape, public art enriches the living and learning environment and enhances the campus experience. The framework of the master plan allows a variety of opportunities for sculpture, environmental art, murals, and art elements as part of buildings throughout the campus core.

Groupings of art could occur along the transformed College Walk, the new Science Quadrangle, or within the Dell of the Ravine. Individual pieces can be placed at key focal points, such as in the plaza on Main Street across from College Road, Conant Square, or various pathway intersections; or in locations where they fit into a more contemplative environment, such as the Parsons courtyard or the Hood House terrace.

Some exciting opportunities for environmental art are in the area of the Scott Lawn, where broad steps are envisaged leading down from Main Street, also along the extension of Library Way toward the addition to Hamilton Smith Hall and the MUB, or the transformed College Walk from Morse Hall to McConnell Hall.

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