

STANDARD VIII: PHYSICAL RESOURCES

At The University of Vermont, human, financial, and physical resources come together to provide what we believe represents a quality learning experience. The physical environment chronicles over 200 years of history with a unique mix of styles and features a rich blend of architectural character, and superb natural elements. The Main Campus, which comprises the academic core of the University, overlooks the city of Burlington, Lake Champlain to the West, and the Green Mountains to the east.

Land

UVM owns 16,378 acres of land located throughout 81 cities and towns, primarily in the northern two-thirds of the State of Vermont. Land holdings include:

- Lands under perpetual lease total 12,410 acres. It should be noted that the primary change in UVM's land holdings since the 1988 Self-Study is due to the reduction in its leased land holdings by issuing quitclaim deeds, thereby selling the leasehold interests.
- Main Campus covers 929 acres and is composed of the academic core of the campus (Central Campus, Centennial Campus, Redstone Campus, Athletic Campus) and South Campus, which is utilized primarily for agricultural, horticultural, and natural areas management purposes, both instructional and research-oriented.
- The agricultural and forestry research areas cover 1,785 acres, of which approximately 509 acres are part of the Main Campus.
- Natural Areas cover 1,863 acres in the State of Vermont, of which 118 acres are part of the Main Campus. An additional 223 acres of Natural Areas have been acquired since the 1988 Self-Study Report.
- Eighteen acres are located at the former Fort Ethan Allen in the towns of Essex and Colchester, which currently houses the family student housing component of the residential options for the students.

Since 1988, the University has redefined its Main Campus to encompass lands that are contiguous and proximate in the cities of Burlington and South Burlington, including agricultural and forestry research lands and natural areas, as part of the campus master planning efforts. This redefinition of boundaries of the Main Campus represents most of the differences in Main Campus acreage as reported in the 1988 Self-Study Report.

In addition, UVM owns two acres in City of Palm Bay, Florida and two acres on Moody Island #52 of Moosehead Lake, Maine. Both of these properties were acquired as gifts and are currently listed for sale, with one of the five lots under contract in City of Palm Bay, Florida. Please refer to UVM 1997 Campus Master Plan for further detailed information (*UVM Listing of All Land Holdings and UVM Listing of Leased Land Holdings are on file in workroom files*).

Buildings

The University's physical plant consists of 292 buildings located throughout the State of Vermont. Main Campus, located in the cities of Burlington and South Burlington, encompasses 158 of these buildings. 35 of the 158 buildings in four historic districts are listed on the National Register of Historic Places. 60 buildings are accessory buildings, such as barns, garages, and sheds. The balance of the buildings are located at the former Fort Ethan Allen in Colchester and Essex (36 buildings), the Morgan Horse Farm in Weybridge (15 buildings), the Forestry Research Centers in Jericho and Wolcott (13 buildings), and at the Proctor Maple Research Center in Underhill (10 buildings).

It should be noted that in 1988 there were 65 buildings located at the former Fort Ethan Allen in Colchester and Essex while currently there are 36 buildings located in this area. This reduction in buildings is a result of selling 25 "Officer Quarter" buildings, the divestment of Vermont Educational Television from the University auspices (three buildings), and one building that was demolished due to disrepair.

All of the buildings are regularly maintained and are generally in good condition. However, the aging process plus changing program needs have caused increasing demands for renovations. The current deferred maintenance backlog is \$67 million and growing annually. Since the last accreditation report in 1988, general funds allocated to reduce this backlog have doubled from \$583,000 in FY88 to \$1,186,000 in FY98. The next increase in the deferred maintenance backlog is increasing at roughly two or three times the growth in the annual increases to the general fund allocations. Further reduction in this backlog has been established as a high institutional priority in future years.

Leased Facilities

Facilities are leased by the University at 13 sites of the State for the offices of the UVM Extension System. Additional facilities are also leased within the greater Burlington area to accommodate the needs of Continuing Education, various sponsored research activities, and off-site storage. All of these facilities are adequate for their respective uses. Future plans call for consolidation of many of these activities back on campus.

Instructional Spaces

There are 160 classrooms and 100 class laboratories on the campus accommodating from 18 to 350 students each. Of the 260 class/lab spaces, approximately 30 percent are controlled and scheduled centrally. The balance are either departmental laboratories, seminar rooms, or classrooms used primarily by one college or program. There has been a slight increase in classrooms and class laboratories since the 1988 Self-Study. With the exception of some small departmental spaces used as classrooms, all classrooms contain some level of audiovisual and instructional technologies.

Although not reported in the 1988 Self-Study Report, there are 91 open laboratories available to students and used primarily for individual or group instruction that is informally scheduled, unscheduled, or open.

The recently completed major renovation/construction project at Old Mill and Lafayette has allowed for the update of nearly 20 percent of UVM classrooms and constitutes the primary increase to the number of classrooms. The completed Robert T. Stafford Building represents the increase to class laboratories since 1988.

The most frequently voiced need is for more technologically advanced instructional spaces. As part of the Old Mill and Lafayette renovation, an additional four state-of-the-art technology instructional spaces, a multimedia lab, and a technical control center capable of connecting any classroom to any of the University's several transmission capacities was constructed. Additionally, a second tele-classroom was completed in the Eugene W. Kalkin Building since the 1988 Self-Study Report. Additional upgrades are being planned.

Research Facilities

University research space encompasses 401 research labs, located in 24 buildings, with a total of over 135,000 square feet. Virtually every space is in use by sponsored research or the Experiment Station. The extent of sponsored funding is disproportionate to the space available.

The Robert T. Stafford Building has been completed since the 1988 Self-Study Report and has added over 30,000 square feet of state-of-the-art biomedical needs. This represents the primary increase in research labs since 1988. A pressing and continuing need, however, is for additional state-of-the-art laboratory space and animal care facilities to maintain the quality of research, to remain competitive in the grant and contract field, and to consolidate off-campus activities proximate to campus. In addition to this need for more space, some existing laboratories need upgrading to meet prevailing standards and replace technologically and functionally obsolete equipment and furnishings. Current plans call for an annual investment of \$800,000 from Indirect Cost Recovery in future improvements.

It should be noted that a biomedical facility is in the preliminary phases of construction planning to add needed research facilities, proximate to the Robert T. Stafford Building.

Planned Construction/Renovations

This is a synopsis of those major construction and renovation projects that were planned for in the 1988 Self-Study Report and the University's current planning efforts for the next five years:

- **Emerging Technologies Building:** The Robert T. Stafford Building was completed in 1991, providing state-of-the-art research capabilities for the combined agricultural and medical Department of Microbiology and for muscular/skeletal research.

- **Medical Research Building:** As stated in the Research Facilities section above, preliminary plans are proceeding to construct a new facility proximate to the Robert T. Stafford Building to provide needed research facilities, primarily for the College of Medicine.
- **Hills Agricultural Science Building Renovation:** Given budget constraints and other priorities, this facility has not been renovated but is proposed to be renovated within the next five years.
- **Interim Space Building:** Although construction of a new 20,000 square-foot building had been planned — to serve as swing space for departmental housing during renovations to dedicated program space — the University has instead utilized University Heights buildings which became available at the close of a long-term ground lease.
- **Central Maintenance Facility:** In lieu of constructing a new facility and accomplishing some of the consolidation needs of Physical Plant Department, the department moved to a larger facility on the periphery of Central Campus. Although a central maintenance facility remains an identified need, no building proposal is anticipated within the next five years.
- **Gutterson Field House:** A major renovation of the hockey facility within Gutterson Field House was completed in 1991, which included increased seating capacity, a larger ice service with an upgraded compressor system, a lobby that houses concessions, restrooms, and a ticket office, and an additional varsity locker room, utility locker rooms, and a training room.
- **Old Mill Renovation:** A major renovation of the Old Mill and Lafayette buildings was completed in May 1997. In addition to major mechanical upgrades, four additional tele-classes were added and a multi-media lab and a technical control center for Distance Learning efforts were constructed within the complex.
- **Pomeroy Hall Renovations:** Major upgrading needs of Pomeroy Hall, including mechanical systems and finishes compatible with its listing on the National Register of Historic Places, were completed in 1998.
- **Christie-Wright-Patterson Dormitory Renovation:** Over a three-year time period, renovations were completed in these individual residence halls and main lobby of the complex. The renovation included major upgrades to mechanical systems, window systems, and rooms, such as bathrooms, floor lounges, kitchenettes, and an expanded fitness center.
- **Co-generation:** Construction planning is in process for a co-generation facility in proximity to the Central Heating Plant. This facility is envisioned as a means of reducing electrical and heating costs. Preliminary reports and analyses, however, suggest that with a likely drop in future energy rates due to anticipated deregulation of electrical utilities, the project may not prove cost effective. The University continues to explore this option

with local utilities to ensure that its future electrical and heating needs are met in the most cost-effective and environmentally responsible manner possible.

- **Miscellaneous Research Laboratory Upgrades:** Planned upgrades have occurred in existing research areas in buildings such as Given Medical Complex, Marsh Life Sciences, and Cook Physical Science.

Equipment

University-wide equipment purchases from current funds during the last three fiscal years have exceeded \$3 million per year. Moveable equipment valued at over \$1,000 is recorded in the UVM Equipment Inventory System, which provides a means of identifying federal-, state-, and University-owned equipment. Currently, there are over 18,000 pieces of equipment valued at approximately \$65 million on the inventory. Since budgeted base funds are not adequate to meet equipment procurement needs, salary savings as a result of temporarily vacant positions and year-end re-appropriations are often used for this purpose. Increasing the funds allocated to equipment will be given careful attention during the next five years.

Compliance with Government Regulations

University facilities are constructed, renovated, and maintained in accordance with a wide range of local, state and federal laws and regulations. The division of Administrative and Facilities Services has experts in life safety and building codes, asbestos and lead paint management, regulatory land use, ADA compliance, environmental health, laboratory safety, and the proper management of chemical wastes.

Campus Master Plan

A major revision of the University's Campus Master Plan, adopted by the Board of Trustees in October 1997, makes a commitment to a land use pattern which provides a flexible framework to preserve what is good on campus, to improve on what could be better, and to provide a structure to integrate the needs of diverse programs for the future. Such planning principles as sense of place, accessibility, respect for the environment, circulation, comparability, and flexibility will be used to drive future decisions for physical development. Land use premises provide a framework for locating future facilities and functions along with any project's impact on infrastructure, open space, boundary transitions, community access, and the Natural Areas. Facilities premises provide a primary focus on the re-design, rehabilitation and re-use of existing facilities and the development of facilities which are adaptable to changing needs and utilize new technologies. A deliberate component of the adopted plan provides a process to assess a project and its compliance to the overriding principles and premises described above. Development and management of the plan is through the University Planner, a senior member of the staff of the Assistant Vice President for Administrative and Facilities Services.

Space Planning and Allocation

Space allocation and related renovation decisions are shared by the Provost and the Vice President for Administration. Individual deans and division heads have some discretion within their jurisdiction to reallocate space. The Land Records office manages and verifies annually an automated data-base building/room inventory, maintained according to the Facilities Inventory and Classification Manual of the National Center for Education Statistics (NCES). Space policies are in the process of being further documented and defined by a task force chaired by the Assistant Vice President for Administrative and Facilities Services.

Facilities Operation and Maintenance

The management of the University's physical resources falls primarily to the division led by the Assistant Vice President for Administrative and Facilities Services. Day-to-day operation of most campus facilities is handled by the Physical Plant department. This unit has a reputation for innovation and was the first department on campus to embrace, and fully implement within its custodial unit, the concept of "self-directed work teams." Additionally, this department oversees and manages all solid waste, recycling, composting, and waste reduction efforts from academic and administrative buildings as well as residence halls. Through these efforts, the University has made ground-breaking advances in the quantity of waste it recycles and keeps out of the landfill.

Facilities design, construction, and renovations are coordinated by the Architectural and Engineering Services department. Most recently, this unit led the renovation/construction of Old Mill/Lafayette and Pomeroy Hall.

Projection

The highest priority for the future will be the renovation and rehabilitation of existing facilities to reduce the deferred maintenance back-log, to update instructional and research space, and to accommodate the continuing consolidation of activities. If needs for office space decrease, former private homes currently used for offices will be converted back to residences or other uses compatible with the adjacent neighborhood.

Selective new construction will be necessary during the next ten years. Discussions are under way concerning how additional needs for library space, medical research laboratories, and student support facilities can be met. Funding will have to come from a combination of federal/state appropriations, gifts and grants, student fees, and the use of general funds to support the repayment of general obligations bonds issued for these purposes.

In the University's 1997 Campus Master Plan, the following facilities have been identified as potential projects within the next five years, although funding has not necessarily been identified:

- **Sustainable Agriculture Facility:** The Hills building was originally scheduled for renovation eight years ago, but the State Appropriation was subsequently reallocated

because the project was too expensive at the time and other projects took precedent for the College of Agriculture. We are proposing to request State Capital funds for the FY03 and FY04 for a modest and targeted renovation which will allow this underutilized building to become the anchor location for the Center for Sustainable Agriculture.

- Vermont Food Science Center: Again not incorporated in the 1988 Self-Study Report, renovations and programming are underway to upgrade Carrigan Hall to meet the needs of this program.
- Aiken Center: Selective renovation and construction of an addition to support the School of Natural Resources instruction and research efforts is planned within the next five years.
- Perkins Building: UVM is seeking State Capital funding (FY00) to undertake a major renovation of the Perkin's Building, home of UVM's Geology department. If federal or private funding becomes available, plans include removing inefficient one-story appendages to the main building and adding 7,000 net square feet.
- Sociology Building: Proposed within five years is an addition to the existing facility to provide needed faculty offices and a multi-purpose area for research, teaching assistant/student conferences, and student computing needs.
- Waterman Building: a \$3 million State Capital Appropriation (FY99) will be used to address pressing deferred maintenance needs, alleviate office over-crowding where possible, and to make Waterman more student friendly by providing improved study space, space for faculty and student interaction, and a student services information center. A complete renovation will be deferred for another five to ten years.
- Athletic/Recreation Fitness Center: The University received a major donation to upgrade the existing indoor track and field portion of the Gutterson Field House — known as the Gardner-Collins Cage — and add a Fitness Center to the facility. Work is underway on the Gardner-Collins Cage and plans are underway for the Fitness Center to be completed in 1999.
- Bailey/Howe Library: An addition and renovation is planned to be funded in three phases within the next five years to add needed study space and storage space for its collections, and to serve as the information gateway to the campus.
- Family Student Housing: Given the current condition of the two family housing apartment complexes at the former Fort Ethan Allen location in the towns of Colchester and Essex Junction, the University is in the process of determining its long range plan for those facilities. Possible renovations or relocation of the function may take place within the next five years.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the various methods used to collect and analyze data. These methods include direct observation, interviews, and the use of specialized software tools.

3. The third part of the document describes the process of identifying and measuring the variables that are being studied. This involves a careful selection of indicators and the development of a measurement scale.

4. The fourth part of the document discusses the importance of ensuring the reliability and validity of the data. This is achieved through the use of standardized procedures and the implementation of quality control measures.

5. The fifth part of the document describes the process of analyzing the data and drawing conclusions. This involves the use of statistical techniques and the interpretation of the results in the context of the research objectives.

6. The sixth part of the document discusses the importance of reporting the findings of the study. This involves the preparation of a clear and concise report that summarizes the key results and provides a detailed explanation of the findings.

7. The seventh part of the document describes the process of evaluating the study and identifying areas for improvement. This involves a critical review of the methodology and the results, and the development of recommendations for future research.

8. The eighth part of the document discusses the importance of maintaining the confidentiality and security of the data. This is achieved through the use of secure storage methods and the implementation of strict access controls.

9. The ninth part of the document describes the process of disseminating the findings of the study. This involves the publication of the results in a peer-reviewed journal and the presentation of the findings at conferences and seminars.

10. The tenth part of the document discusses the importance of ensuring the ethical integrity of the study. This involves the development of a code of ethics and the implementation of measures to protect the rights and privacy of the participants.