CHAPTER 4.2 – MAIN CAMPUS: PROPOSED FRAMEWORKS FOR CAMPUS PLANNING

BUILDINGS RECOMMENDED FOR FUTURE RESTORATION, RENOVATION, ADDITIONS OR REMOVAL

As part of all review processes, if any facility is over fifty years old, a historical review analysis should be conducted to determine best next steps to be in compliance with U.S. Secretary of Interior’s Standard for the Treatment of Historic Properties.

A number of the buildings on campus are recommended for renovation because their deferred maintenance requirement costs are particularly high (see Building Condition Assessment in Chapter 4.1: Existing Conditions). The Waterman Building, for example, has a high maintenance and repair backlog for its mechanical and electrical systems. Other buildings such as Billings Center are candidates for renovation because they are being considered for new uses once the Dudley H. Davis Center is completed.

Additions to existing buildings need to be considered with the same level of planning as a new building. A number of factors need to be considered.

- How will an addition affect existing campus spaces and walkways?
- Can the host building support an addition?
- If the existing building is a historic structure, can it be added to without losing any of its architectural character?
- How will an addition impact existing spaces, circulation, structure and utility systems?
- Are the proposed programmatic spaces appropriate for an addition, or are they better off in another location?
- Spaces such as lobbies, lounges, offices, classrooms, laboratories and storage spaces each have different requirements that will affect an addition’s location and size.

Buildings such as the Fleming Museum and the Bailey/Howe Library are recommended for additions because their programs need to expand, and there is an opportunity to improve the campus fabric in that area. The Fleming Museum addition will help the Museum and the University reconnect to Colchester Avenue. A Bailey/Howe addition could help make the University’s main library feel more open and inviting, particularly with the new Davis Center nearby.

Some of the buildings are also being recommended for removal. For example, C-B-W residence halls, are being recommended for removal because their demolition will allow for significant new campus residential developments to improve and upgrade student housing options in the 2015-and-beyond phase of the Plan.

The University is currently assessing the removal of the Pomeroy Barn and the Villa located within Trinity District.

Note: This diagram uses a base drawing showing existing conditions in order to represent buildings recommended for demolition rather than the base drawing used elsewhere in this chapter that depicts future land banks.
It is recognized that the historic buildings, structures, and sites of the University contribute to an understanding of its identity and history. The stewardship shown to these resources reflects on the stature, the quality, and the very integrity of the institution.

The University embraces its responsibilities and stewardship to maintain and respect its historic resources in accordance with local, state, and federal regulations, standards, and guidelines. In that light, the Director of the Historic Preservation Program or a qualified historic preservationist consultant will be consulted whenever necessary, and for major projects, included as a member of the project team.

Fleming Museum, Wadhams House, Given Medical Building, Perkins Building, Coolidge Hall, and the John- son House are recommended for nomination to the National Register of Historic Places.

The University has conducted an inventory of historic garages and carriage houses and is in the process of expanding the University Green Historic District. Refer to Appendix for the listing of historic facilities, including buildings over 50 years old.
A goal of the Campus Master Plan is to unite student services in a central, accessible location for quality customer service and efficiency of support services, providing one-stop shopping. Central locations for the Center for Health and Wellbeing, culture and diversity functions, and other student support services will facilitate the ability to do cross referrals between service providers and be better integrated in the daily life of the campus for students, faculty and staff.

Accordingly the following concepts are proposed:

- The preferred option (red circle) for locating a consolidated Center for Health and Wellbeing is at the Johnson House on the corner of Main Street and University Heights Road with an addition to the south to meet the needs of a modern health center. A second option (green circle) would be a facility at the southeast end of the C-B-W Quadrangle/Land Bank.

- Work is underway to consolidate of many of the student academic support functions, such as Financial Aid, Student Accounting, and the Registrar within the Waterman Building to provide one-stop shopping for students.

- Along with the relocation of student life functions within the new Dudley H. Davis Center, relocating multicultural functions to the Living/Learning Center is recommended for the consolidation and to improve access to programs.

- Campus Police Services and Emergency Services remain in their current location with expansion. This location is strategic allowing ready access to the campus, including Trinity District to provide protection and emergency services.
The implementation of a truly pedestrian campus is a key vision and one of the primary goals of the University of Vermont Campus Master Plan. A range of interrelated initiatives are proposed to accomplish this goal. These include multi-modal pathway networks to reinforce the north-south circulation spine of the campus, design enhancements and amenities for pedestrian and bicycle travel, further improvements to the popular successful Campus Area Transportation System (CATS) shuttle service, and an emphasis on serving the bulk majority of the parking in peripheral lots located at the perimeter of the campus.

The Campus Master Plan also identifies priority landscape projects to significantly improve the open space network by building a coherent pedestrian experience across campus (refer to Chapter 4.4 Master Plan Development for further information). Priority projects proposed include the transformation of the University Place road into a pedestrian plaza; the Green Mountain Walkway that provides a connective green space that creates a system of linkages through the core of the campus, connecting the south and north through to Trinity District; additional landscape improvements to the Redstone Walkway providing smaller pocket spaces that are more usable while maintaining the important institutional buffer with the residential neighbors; and bringing forth an important concept that has been discussed since the 1960s, creating a "land bridge" to connect the north and south portions of the campus across Main Street. This proposal will place Main Street under a "land bridge" for a short distance, creating a pedestrian at grade level connection across Main Street.

Important to note is that there is sufficient parking space availability to serve all proposed building projects and anticipated parking demand associated with faculty/staff increase growth and projected student enrollment through 2015. The following pedestrian, transportation and parking plans in this section chapter also present a conceptual approach as to how parking and transportation programs and facilities will address and accommodate the University’s complete build out as envisioned for the next 50 years or beyond.
PEDESTRIAN & BICYCLE CIRCULATION

The University has developed a hierarchical system of pathway designations for the future delineation of vehicular, bicycle, and pedestrian routes on campus. This approach will guide the implementation of new pathways as well as the reconfiguration and rehabilitation of existing pathways.

The proposed pathway network includes:

**Multi-Use Paths** – 20’ to 24’ in width to accommodate shuttle, service, and emergency vehicles such as will exist at University Place and Green Mountain Walkway. In all cases multi-use pathways will be shared roads assigned to accommodate limited service vehicle and shuttle traffic. Surfacing will be primarily asphalt, but textured lanes for bicycle and pedestrian travel on one or both sides of the vehicular travel way should be considered as a design option.

These pathways will be designed in accordance with American Association of State and Highway Officials (AASHTO) standards for pathway geometry and design and built in conformance with Vermont Agency of Transportation (VTrans) construction specifications.

**Primary Walkways/Bikeways** – 8’ to 15’ in width and should support bikes and pedestrians with limited service vehicular use for access to utilities, such as steam lines. At utility access points extra coverage should be built in to prevent vehicle damage to lawn areas. These paths would comprise part of the bicycle network so logically, they should connect with each other across campus. New technologies such as patterned/textured paving or porous paving approaches that allow stormwater infiltration, such as honeycombed concrete pavings will be considered. Another approach will be to use porous paving surfaces that have grass as the finished surface but have structural elements below grade (as per VTrans construction standards) which provide stability and support to allow limited vehicular use.

**Secondary Walkways** – 5’ to 8’ and primarily for pedestrian use only. These are typically city and limited-use sidewalks. These are almost always of concrete construction and where they follow or relate to the municipal networks, the surfacing should remain concrete. Note that all pedestrian and bicycle facilities should follow where appropriate the guidelines and standards that are contained in the Vermont Pedestrian and Bicycle Facility Planning and Design Manual, which is published by the Vermont Agency of Transportation.

Entry Areas and Plazas will also continue to be an integral part of the pedestrian campus when located as part of a building entry or to provide outdoor gathering spaces. These areas will be constructed of similar materials already being used around campus, concrete pavers, native stone or patterned concrete. Brick should be used as accent elements rather than as the primary surfacing material. Accessible entryways will be another important consideration in the design of these plaza and building arrival areas.

**Interior Circulation** - where possible new construction will consider circulation routes and their connectivity. The goal is to create alternative options within the interior of buildings for pedestrian use during the winter months and inclement weather. A number of additional considerations and initiatives will further support the goal of creating the complete pedestrian campus. For example, future routing of pathways will serve land bank areas as they are developed. “Trunk routes”, the primary circulation network through the campus will be consistently signed and surfaced to better accommodate skateboarders, bicyclists, and pedestrians together on one route. These could be developed as part of the new Green Mountain Walkway as well as the Catamount Walkway. Future or refined bicycle routes will need to be reviewed by the involved constituencies such as Local Motion, the Burlington Bicycle Council, the Metropolitan Planning Organization and the local municipalities. Overall accessibility for pedestrians will also be an important consideration in pathway location and design.

Transition and conflict areas must be dealt with consistently via the use of signing, policies or avoidance. Bike lanes and routes might also employ color treatments as an approach to better “signing” the routes. However, maintenance must be considered with regard to the surface coloring. Service and shuttle roads can also accommodate bicyclists, and shuttle stop pullovers may be necessary to avoid conflicts in flow, particularly with increased shuttle headways over time. Bicycle routes from peripheral lots need to be reinforced and added to as in the case, for example, of the route to and from the Commuter Lot located in the Centennial District. Bike racks should be appropriately located at new buildings and key destinations on campus. Current bike rack locations and conditions should be revisited. Bicycle amenities such as route maps, improved signing, undercover storage and perhaps even a commuter bike facility with lockers/tools/showers are to be considered as improvements in the future.

Ultimately the overall goal for the future bicycle and pedestrian network on the campus is to provide the safest, most logical and engaging circulation system for pedestrians and bicyclists, and to sustain a seamless connection with all modes of travel including the CATS shuttle system as well as external vehicular access and parking.
PEDESTRIAN CIRCULATION

(Note all secondary walkways are open to bicycles)
BICYCLE CIRCULATION

All on-campus bicycle routes are part of the regional bikeway system.
The circulation routes outlined in the Campus Master Plan strategically reorganize service and emergency vehicle routes throughout the campus to minimize the impact of vehicles on this now predominately pedestrian campus.

Service access and loading docks must be organized within an efficient network that will serve all buildings. Service access will penetrate the campus as needed, with appropriate loading docks at designated buildings. Where service access penetrates beyond automobile access into the pedestrian campus, access route design will signify that transition. The service access areas within the campus interior will not appear to be roads; they will look like pedestrian ways but will accommodate service vehicles with the proper paving support, truck turning radii, access width and length, and temporary service vehicle parking areas so that turf and landscaping are not damaged and pedestrian access is not blocked.

Emergency access is important in maintaining the safety of the University. Emergency access routes, therefore, have been designed to serve emergency vehicles in the most efficient manner possible. The following standards were established to accommodate this priority.

Emergency vehicles will have access to the interiors of all districts. This traffic will be the most infrequent vehicular traffic on the campuses but will involve large emergency vehicles. Therefore, the most critical issue is that the emergency access routes allow for the turning movements of these vehicles as defined by the local municipality’s Fire Marshal.

All buildings will be accessible by emergency vehicles from two sides. Emergency access routes will be designed with 20-foot wide minimum horizontal clearance on hard surface. Routes will also be designed with minimum outside turning radii of 41-feet to allow for the requisite turning movements of emergency vehicles. Surfaces will be reinforced pedestrian pavements in the most heavily traveled areas of campus to support the weight of the emergency vehicles. Any changes to or construction of new emergency access routes will be reviewed and approved by the local Fire Marshal.
Although vehicular circulation will continue to be an important component of the campus circulation network at the University of Vermont, it is clear that over time there will be fewer vehicles on campus and less emphasis on cars. Automobile access by the public and the University community will be focused primarily at the perimeter of campus with access to and from visitor parking and the peripheral lots within the core campus. Thus shared use roadways or pathways will form the spine of the campus circulation network for use primarily by shuttles and service vehicles. While vehicular circulation will be restricted in certain areas, the network will still accommodate emergency access with a consistent system of removable/collapsible barriers or bollards. In addition, access to handicapped parking spaces will be maintained and located near to accessible building entries.

The current roadway network which is accessible for limited use public access will be developed and managed as Multi-Use Pathways. These are routes which are or will be 20’ to 24’ in width to accommodate shuttle, service, and emergency vehicles. Examples of multi-use pathways will exist at University Place and Green Mountain Walkway. In all cases multi-use pathways will be shared roads assigned to accommodate limited service vehicle and shuttle traffic. Bicycle routes will be co-located with these multi-use pathways.

Primary Walkways/Bikeways are to be 8’ to 15’ in width and should support bikes and pedestrians with limited service vehicular access to steam line utilities. Extra coverage will be built in at utility access points to protect vehicle damage to grass. These paths will connect with each other across campus to provide a logical pedestrian and bicycle network. Refer to Pedestrian & Bicycle Circulation sections in this chapter. New technology will also be employed for certain areas where short term vehicle access or parking is necessary such as porous paving and underground stabilization systems that allow movement on grassed areas without negatively impacting the condition of the surface areas.

Note that there will also be limited areas where service access is maintained to key buildings and these areas which are currently used for this purpose are identified in the existing conditions map in Chapter 4.1 Main Campus: Existing Conditions that delineates campus service access. This access will need to be accommodated in the future although the extent and nature of service vehicle movement and vendor access to facilities can be made more efficient by co-locating access points and consolidating service locations, as well as, developing policies which address where and when vendor trucks can move about campus.

Another transportation initiative which has been forwarded as part of this Campus Master Plan is the proposal to construct a “land bridge” across Main Street to connect the University campus, which is currently bisected by the four lanes of Main Street. This is a proposal which was first proposed by Landscape Architect Dan Kiley in the 1960s and was again considered when Main Street was reconstructed in the late 1990s. The land bridge would connect the campus at existing grade level which would consequently require Main Street to travel through a short tunnel below this land bridge. A successful model of a campus land bridge connection can be seen at Harvard University, where busy Cambridge Street was placed underground, allowing Harvard’s pedestrian campus to be connected with an at grade land bridge.

The overall goal for vehicular circulation is to limit the presence and frequency of vehicles on campus and continue to progress towards a complete pedestrian campus where circulation systems are integrated, creating a seamless network of shuttle routes, pedestrian walkways and bicycle routes.
VEHICULAR CIRCULATION
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CAMPUS SHUTTLE CIRCULATION

The Campus Area Transportation System (CATS) will continue to be the backbone of the University’s transportation system. This type of transportation is critical for a campus that spans well over 1.5 miles from the Redstone District to the Trinity District. The CATS buses will be the key strategy of the transition to a pedestrian campus. This will allow commuters, faculty and staff to park at the campus perimeter in the peripheral lots and travel safely, comfortably, and in a timely manner to their University destinations. Furthermore, in a move towards a more sustainable environmental operation, on-campus buses will continue to be powered with Compressed Natural Gas (CNG), and route locations will serve the expanded pathway system and peripheral lots with a more efficient and amenable network of pedestrian pathways and bicycle routes.

The CATS network will continue to be based on ridership needs and thus have a certain level of adaptability in terms of routing and stops designed to serve the campus districts and the land bank areas as they are developed. Thus shuttle routes need to be flexible and adaptable over time, and will continue to serve the key campus destinations.

Co-location of internal shuttle routes and service roads currently exists and will continue where possible. These routes will continue to serve bicyclists as well, reinforcing the internal shared roadway network. This network should be continually redeveloped over time so that roadways reflect consistent widths, surfacing, signing, and are designed with alignments that are more fluid to better accommodate traffic flows. Another need with regard to enhancing the shuttle system will be to improve and/or upgrade shuttle stops to provide better protection from inclement weather. Students currently wait in or under cover of adjacent buildings until the shuttle arrives. This practice should continue where appropriate. In locations where this opportunity does not exist, the University should build shuttle stops with coverage and amenities so that students can wait safely and comfortably.

Funding for shuttle system improvements could be obtained through new development projects which result in the need for changes to the system.

It is envisioned that the CATS shuttle system will connect effectively with the evolving regional transit system as well, to promote commuting via public transit. It is possible that the shuttle system will eventually expand outside of the Main Campus to serve satellite campuses and the parking located at these campuses as de facto intercept lots.

The shuttle bus system will continue to be integrated with the other University circulation systems, i.e. pedestrian, bicycle, and vehicular to ensure that movement around the University campus is a seamless experience.
FUTURE PARKING INVENTORY
BY CAMPUS ARCHITECTURAL DISTRICTS

The proposed parking distribution for the future pedestrian campus reflects the full envisioned build out of the campus based on the 2005 Paulien Study projections. The University has sufficient parking for all anticipated build out, enrollment and faculty/staff growth through 2015, and the projects on the Capital Project list.

The majority of parking demand in the future will be served by the existing and proposed Peripheral Lots.

Future parking spaces that will need to be retained within the campus core will be accommodated in structured parking and limited smaller surface lots, where possible and appropriate. Co-locating service spaces is desirable to reduce future spaces, while visitor and handicapped parking will be retained in the core parking areas. The overall intention will be to move the parking spaces removed from each District into the peripheral parking area nearest to that District.

In order to achieve the goal of a pedestrian campus and accommodate the future parking to parking, the University needs to consider the following potential strategies:

1. Decreasing core parking numbers in applicable districts through the following methods:
   1. revisiting student parking policy and numbers by district;
   2. adding in new parking in small scale lots where possible or appropriate within the district or at the edge of the district;
   3. placing the shortfall in peripheral lots; and/or
   4. reconsidering visitor/service handicapped parking locations and numbers.

2. The University will continue to use and expand as intensively as possible Transportation Demand Management (TDM) approaches.

3. The University will need to further develop and expand the peripheral lots. This is the critical core element of the future parking distribution and location strategy. The future shuttle system routes will need to be modified to serve the peripheral lots.

4. Work with the appropriate local, state and regional entities to continue to use and further develop the regional intercept lots similar to what is currently occurring at the Lakeside facility (Gilbane). Regional transit in the long term should serve these lots and the University in a coordinated manner.

5. Support and work through Campus Area Transportation Management Association (CATMA) with Chittenden County Transportation Authority (CCTA) and others as appropriate to improve regional transit service and continue to provide incentives for ridership. All CCTA routes are available to University faculty, staff, and students free. Bus rapid transit along the Route 2 corridor is one future possibility that might be effective and in the future the critical mass may warrant reviving the commuter rail system regionally.

6. The LINK Express is another CATMA unlimited access program that the University participates in that is operated by CCTA is already exhibiting signs of success. LINK Express routes currently from St. Albans, Montpelier, and Middlebury provide an alternative to driving into Burlington alone with a direct bus connection. The LINK Express is free to University faculty, staff and students.

7. Further develop faculty staff housing (through public/private partnerships) close to campus so that these residents can walk/bike/shuttle to their workplace, thus reducing parking demand on campus.

8. Address how to best manage student parking to include:
   1. identify which students are allowed to have cars;
   2. consideration of long term car storage options; and
   3. placement of student cars in peripheral lots.

9. It is also important to note that as the University expands into external campuses or leased spaces elsewhere in Greater Burlington area or regionally, parking demand on Main Campus may be consequently reduced.

This is the long term vision for the University’s parking system and realization of a pedestrian campus. The University will continue to explore innovative approaches and solutions to effectively address the needs for campus parking while relocating parking from the core campus to the periphery and/or off-campus.
FUTURE PARKING INVENTORY
BY CAMPUS ARCHITECTURAL DISTRICTS

University Historic Green District
Main Street North District
Trinity District
Gateway District
University Heights District
Redstone District
Athletic District
Centennial Sports District
Centennial District
Centennial Woods Natural Area
Land Bank
Peripheral Parking Site
UVM Property Lines
City Lines/Boundaries
Parking will be relocated to Regional Parking Intercept Park & Ride Lots strategically located on high-traffic approaches to campus. These intercept lots are connected to campus destinations with a reorganized and expanded shuttle system.

The percentages noted on the diagram represent a percentage of the total number of commuters projected to drive to campus on each major route on any given day.
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One key element in the overall transportation planning framework for the University is the viability of Transportation Demand Management (TDM) as a means of reducing vehicular traffic and parking needs on campus. The Campus Area Transportation Management Association (CATMA), which serves Fletcher Allen Health Care, American Red Cross, Champlain College, as well as the University, has already initiated successful and award-winning TDM Programs.

Currently the University offers several TDM programs to encourage its employees and students to carpool and use public transportation.

- **RidesWork Program**
  - Confidential carpool matching service
  - Commute Smart Card
  - Also registered in the Guaranteed Ride Home Program - Free taxi ride home in an emergency

- **Bike/Walk Reward Program**
  - Currently over 200 active participants
  - Downtown Burlington gift certificates for people that walk or bike to work at least two days per week for four consecutive weeks
  - Also registered in the Guaranteed Ride Home Program

- **Unlimited Access Program**
  - UVM faculty, staff, and students can use CCTA service at no charge
  - UVM ID card can be swiped on the bus
  - Resulted in 20,000 trips per month from the University
  - Used by 2,500 individuals

The University, through CATMA, will continue to encourage cooperative efforts between the University, cities, and region to implement TDM programs as well as improve public transit, regional bike routes and intercept parking facilities. These efforts will further reduce commuting in private vehicles and on campus vehicle numbers and the consequent parking demand.
All additions to the Campus Utilities infrastructure will be sited to avoid the future infill land banks defined in this chapter’s Land Banks Designations. Refer to the *Utilities Master Plan* for coordination of new utilities and more information on existing conditions and specifications available through Physical Plant.

Systems improvements include:
- Develop chilled water system;
- Develop combined heat and power;
- Maximize the use of the steam system;
- Minimize demand charges from local utilities;
- Invest in distribution and central systems;
- Design and build for contingencies;
- Use fuel that maximizes the benefit for the environment;
- Use systems as an educational model; and
- Maximize opportunities with current capital projects.

Continuous planning for utilities is important for many reasons including reliability, safety, cost effectiveness, capacity for growth projections, minimizing the environmental impact, and both short and long term maintainability.