



STANDARD EIGHT

PHYSICAL RESOURCES

The University's physical resources, its mortar and bricks, are priceless and precious assets of the State of Washington. The University has more than 300 buildings across three campuses, including over eighteen million gross square feet of space (including approximately one million gross square feet of leased space) and making up over one-fifth of all space owned by the State of Washington.<sup>1</sup> Current estimates show a total replacement value of \$5 billion.

Physical resource planning, management, and maintenance are premised on the University's fundamental mission to provide education, research, and service of the highest quality. The University understands both the limited nature of and the fierce competition for capital resources. Given this understanding, the University has accepted its responsibility to make the highest and best use of these resources and to maintain the quality and historic tradition of a premiere research university. As a result, the stewardship of the University's physical resources is a complex, continuous, and collaborative process, which resides in a number of units. These include:

The *Capital and Space Planning Office* (CASPO) is a unit of the Provost's office that is the University's link to the state Office of Financial Management, legislative staff, and Higher Education Coordinating Board. CASPO is the primary capital planning and budgeting office of the University and is also responsible for managing all university space.<sup>2</sup>

The *Capital Projects Office* (CPO) manages the design and construction of healthy and inspiring facilities to support the University's teaching, research, and public service programs.<sup>3</sup> This includes building alterations, additions, new construction, and grounds improvements for the three campuses as well as remote field stations.

The *Real Estate Office* is responsible for all real property transactions for the University leasing, purchasing and selling, as well as asset management and property management.<sup>4</sup> The Real Estate Office is a unit within Business Services.<sup>5</sup>

The *Office of Regional Affairs* (ORA) serves as a link between the University, surrounding neighborhoods, civic groups, and local government.<sup>6</sup> ORA works to build relationships with these groups by sharing information and seeking new opportunities to match the University's academic capital with needs in the community. It also seeks to promote mutual understanding between these groups and coordinate campus response to local policy issues.

*Facilities Services* operates and maintains University facilities and grounds, provides assistance and expertise in support of the capital program, and provides other services in support of the institutional mission.<sup>7</sup> Consisting of six departments that include Campus Engineering and

Operations, Custodial Services, Maintenance and Alterations, Finance and Administration, Organization Relations, and Transportation Services, the organization provides a varied array of services and programs that support the University's physical resources.

The *Environmental Health & Safety Department* (EH&S) is a unit that reports to the Health Sciences Administration and provides policies, guidelines, technical expertise, and centralized services in support of the University's efforts to maintain safe, healthful, and environmentally responsible places of work and education.<sup>8</sup>

Faculty, staff, and students, through numerous institutional committees, participate in physical resources planning. Among these committees are the University Budget Committee, Capital Facilities Committee, Academic Advisory Committee on Facilities, and Faculty Council on University Facilities and Services.

## PHYSICAL RESOURCE PLANNING/CAMPUS MASTER PLANS

In January 2003, the Board of Regents approved a new Campus Master Plan (CMP) that will guide the future development of the Seattle campus.<sup>9</sup> The CMP builds on and replaces the 1992 General Physical Development Plan (GPDP), extending the continuity of planned development over the last century. The CMP is the outcome of active participation by faculty, staff, and students of the University; residents and businesses in surrounding neighborhoods; representatives of local government; and users of the University's services and programs. It will guide the Seattle campus growth over the next decade in response to increasing student enrollment and research demands, while preserving the beauty of its physical environment and minimizing any impacts on its neighbors. The CMP includes guidelines and policies for developing three million gross square feet. The goals of the CMP are to:

*Respect Its Stature* – The CMP should honor the status of the campus as a national treasure, a work of art, and a triumph of environmental design, enriching life with a harmonious marriage of space, form, and participation.

*Ensure Stewardship* – The CMP should ensure good stewardship of the existing campus, maintaining and protecting the value of the University's physical resources and character, history, architecture and open space. Changes to the campus should improve and enhance, rather than detract from, the value and quality of the campus. The CMP identifies and encourages preservation of historic resources and open space.

*Provide Facilities* – The CMP should provide for the facility and infrastructure needs of the next decade.

*Maximize Flexibility* – The CMP should provide the maximum amount of flexibility in order to best accommodate future growth and take advantage of unforeseen opportunities.

*Enhance the Campus* – The CMP should create an aesthetic quality appropriate to the campus as a whole and to specific areas, conserving and improving existing buildings, open spaces, and views on campus, and looking for opportunities to create additional open spaces.

*Provide Accessibility* – The CMP should ensure access to and within the campus, maximizing non-vehicular travel, emphasizing pedestrian routes for all pedestrians, and promoting the design of environments to be usable by all people, to the greatest extent possible, without the need for special arrangements or adaptations.

*Promote Safety* – The CMP should help create a safe and healthy environment, with personal and workplace safety considerations integral to planning and design of circulation elements, buildings, and open spaces.

*Respect the Environment* – The CMP should value the environment and strive to promote the conservation of natural resources and goals of the Growth Management Act and Shoreline Management Act.

*Encourage Efficiency* – The CMP should encourage efficiency and economy in University operations, with advantageous locations for facilities and advantageous adjacencies of uses.

*Value the Community* – The CMP should recognize the importance of the surrounding communities and strive to achieve compatible working relationships with these communities to improve the quality of life and public benefits for all in the vicinity.

Given resource limitations, present and expected, a high priority is placed on investing capital resources to achieve operating efficiencies and addressing urgent program needs. This is manifested in projects that support consolidation of dispersed functions into central or shared facilities (e.g., library consolidations, utilities infrastructure projects to provide central plant versus distributed services, and energy conservation measures). Efforts to improve space utilization through remodeling/repair projects that reconfigure space so that it is more efficient, or convert space for high priority uses will continue, although these measures still do not provide an adequate amount of space. While progress has been made to address the amount and condition of the space through the capital improvement program, additional needs remain that require continued investment and leasing a significant amount of off-campus space.

Due to enrollment growth expectations, studies have been initiated on how to further increase the utilization of exist-

ing facilities. The HECB was directed to study capacity, national standards, and ways to improve facilities utilization at the four-year higher education institutions. CASPO provides University-wide utilization and capacity reports annually to the HECB.

The facilities component is only one factor of utilization and the University has addressed enrollment planning issues in a comprehensive way to determine what facilities are needed and then how best to provide them. Former President McCormick appointed an Enrollment Planning Task Force to address how additional enrollment would be accommodated at the University.<sup>10</sup> The following is a summary of the Strategies and Recommendations for Growth from the report:

- Create a Compact of Shared Responsibility between the University and our partners in education to provide quality education to the next generation of Washington students.
- Shape the University through enrollment growth in ways that enhance the core mission and promote selective excellence.
- Invest selectively in academic programs, faculty and staff, to ensure growth with excellence.
- Evolve the three campuses of the University of Washington into an integrated educational system based on the principle of complementary programs and functions.
- To improve quality and increase efficiency, invest in students by developing new partnerships with K-12 and community colleges to insure students are ready for University study.
- Invest in students by removing barriers to learning and progress to graduation.
- Use educational technology to transform teaching and learning for access, quality and efficiency.
- To provide access, invest in distance learning.
- Plan for facilities and support services to allow growth.

The University also concluded that further expansion of Summer Quarter and Evening programs could create more complete utilization of existing facilities to meet enrollment growth objectives. Former Provost Huntsman appointed a committee to consider alternative uses of Summer Quarter guided by the desire to maximize existing facilities.<sup>11</sup>

Curriculum planning and classroom utilization policies have been recently reviewed and recommendations for improvements have been implemented or are underway. Most recently, although University classrooms meet the

state standards for both fullness and hours of use, the Provost commissioned the Learning Spaces Consortium to comprehensively review the quantity, quality, and utilization of learning spaces and to find innovative ways of using traditional and non-traditional learning space.

Planning will soon begin on how to adapt the University's ten-year plan to incorporate the enrollment planning. Classrooms, class laboratories, faculty offices, and research space required for additional faculty members due to anticipated enrollment and research growth must be planned, designed, and constructed. Both short- and long-range capital development plans are critical to achieving the goal that the University's physical environment provide facilities appropriate for changing and modern research and instruction and promoting efficiency and economy in University programs.

## UNIVERSITY OF WASHINGTON, BOTHELL CAMPUS MASTER PLAN

The University of Washington, Bothell (UWB) is co-located with Cascadia Community College (CCC) on 127 acres at the northwest intersection of I-405 and SR 522 in the City of Bothell. Under the UWB Campus Master Plan, the campus will be developed in numerous phases, with an eventual student capacity of 10,000 full-time equivalents (FTE). At build-out, not expected until 2010, this translates into approximately 20,000 individuals (including students, faculty, staff, and visitors), approximately 1.2 million gross square feet of buildings, and 4,200 to 6,600 parking spaces are planned to accommodate this enrollment level.

The first phase, completed September 2000, developed approximately 165,560 assignable square feet to accommodate 1,200 FTE students at UWB and 119,750 assignable square feet to accommodate 800 FTE at CCC.<sup>12</sup> Phase 1 work consisted of three buildings that included separate UWB and CCC classroom/office buildings and a joint use library/media facility. The classroom/office buildings contain a mixture of joint, primary/secondary (primary use by one institution with secondary use during nonscheduled times by the other institution) and institution-specific dedicated use spaces. This phase also featured one of the largest wetland restorations ever attempted in the state.<sup>13</sup> In addition to off-site street improvement work this phase connected the Sammamish River Trail, south of SR 522, through the campus to the North Creek Trail, which is east of I-405 at the north end of the site.

The second phase, Phase 2a, completed September 2001, developed approximately 132,693 assignable square feet (75,750 for UWB and 56,943 for CCC) to accommodate an additional 1,000 FTE (600 FTE at UWB

and 400 FTE at CCC).<sup>14</sup> This phase included a separate classroom/office building for the University, additions to the Phase 1 CCC and Library/Media buildings, two multi-story parking garages, surface parking lots and Central Plant building.

Occupancy of the next phase of development, Phase 2b, is contingent upon the successful design and construction of the "South Access" from SR 522.<sup>15</sup> Design of this project is currently underway with the Washington State Department of Transportation.

## UNIVERSITY OF WASHINGTON, TACOMA CAMPUS MASTER PLAN

Phase 1A of construction at UW Tacoma, along with the master plan for campus construction, earned nationwide recognition for architectural excellence and historic preservation. The project received the 1999 Honor Award for Regional and Urban Design from the American Institute of Architects and an award by the National Trust for Historic Preservation. The project included renovating six historic warehouses.

Four historic warehouses are connected by a main hallway. The project included multipurpose classrooms, offices, and atriums that provide gathering space.

*Garretson Woodruff Pratt* -- Constructed in 1890, served as a warehouse for a thriving dry goods wholesaler named Garretson Woodruff. Less than five years after it was finished, the company collapsed in the depression of the mid-1890's. The building, which houses classroom space as well as faculty offices and the Student Affairs office, features some of the finest ornate terra cotta detailing in Tacoma's historic warehouse district. *Birmingham Block* - The historic Birmingham Block warehouse building was renovated to provide classroom space and is one of four warehouses that make up the Academic Building. It houses the campus's interactive distance learning facilities. *Birmingham Hay & Seed* -- Part of UW Tacoma's Academic Building, the historic Birmingham Hay and Seed building was renovated to include classroom space -- including high-tech "smart classrooms-- student computer kiosks and the UW Tacoma Career Services Center. *West Coast Grocery* -- The historic West Coast Grocery warehouse building was renovated to include faculty and program offices and classroom space. The building also houses the UW Tacoma Copy Center, the Associated Students of UW Tacoma office, the Student Publications office and the student lounge. West Coast Grocery is one of four warehouses that make up the Academic Building. *Walsh Gardner* -- This large, windowed warehouse was designed by Carl August Darmer, the city's foremost early architect, and built in 1911 -- the same time as Tacoma's Union Station. Walsh Gardner now houses classrooms, faculty offices, Computer Services, a language lab, video

lab classrooms and UW Tacoma's computing and nursing labs. *UW Tacoma Library* -- The UW Tacoma library reading room -- a classic brick building with high, arched windows -- was built in 1902 as a transformer house for the Snoqualmie Falls Power Company. This transformer house continued in service until 1958, when it was converted into a warehouse. After Phase 1 of the UW Tacoma construction project, the building opened as the UW Tacoma library in 1997. In addition to books and other materials, the library houses the media lab and provides access to the collections of the entire University of Washington library system.

Phase 1B provided a small but significant addition to the campus providing much-needed space at a crucial point in campus development. *Dougan Addition* -- This unusual triangular-shaped building provides the northern gateway to campus and fits into the junction of Jefferson and Commerce avenues. It connects to the historic Dougan warehouse refurbished in Phase 2A. This 13,000 square foot addition, was originally used for science in advance of the completing the Science Building. It provides multipurpose classrooms that can be modified easily for art studios to take advantage of high ceilings and skylights to capture natural light.

Phase 2A of construction expanded access to higher education with a wide range of classroom, lab, and office space. This phase included four projects. Notably, with completion of the Phase 2A, the campus filled a city block and featured a landscaped stairway from Pacific to Jefferson Avenues.

The Science and Keystone Buildings, the Phase 2A south complex, opened early in 2002. The 48,000 square foot *Science Building* features a new general computing lab; advanced computing lab for Institute of Technology students; Geographic Information Systems lab; two biology labs, saltwater aquariums; chemistry lab; geology lab; rooftop greenhouse; five computer classrooms and two multi-purpose classrooms; and faculty offices. The 13,500 square foot *Keystone Building* is an unusual triangular two-story building connected to the Science Building by a sky bridge. It features the Teaching and Learning Center; 162-seat auditorium; sky bridge over an active railroad track to provide disabled access up a steep grade.

The Dougan Building and Fourth Floor of West Coast Grocery, Phase 2A north complex, opened in 2000. The 25,000 square foot *Dougan Building* features a historic warehouse, built in 1891, refurbished into classrooms and offices. The 85,00 square foot *Fourth Floor West Coast Grocery*, which was previously left as shell space for office space was completed.

Phase 2B of the campus plan is due for completion in January 2004 and expands access to higher education by

adding classroom and office space required to continue UW Tacoma's rapid growth to serve regional educational needs. In addition to general classroom space, it includes specialized classrooms, a student center funded by students, and offices for student services. The *Cherry Parkes Warehouse Buildings* began in August 2002. These three connected warehouses along Pacific Avenue are being remodeled to house classrooms, labs, offices, and specialized classrooms. Inside, the three buildings are being renovated as a single structure. The *Mattress Factory Building* construction also began in August 2002. This facility will include classrooms, offices, and space for student services such as career counseling.

The 1889 *Pinkerton Building*, built originally as a combination hotel and warehouse, is among the oldest structures in Tacoma's historic warehouse district. Located on the north end of the UW Tacoma campus at the corner of 17<sup>th</sup> and Broadway, the three-story structure was renovated as part of a public-private partnership. State funds acquired the building. Non-state funds refurbished it to provide 12,000 gross square feet as the headquarters of the state's new Institute of Technology, which was proposed by the Governor in 2000. The Institute was funded and launched in 2001. The Pinkerton, which was opened in February 2003, includes computing labs and offices.

UWT is currently working on a supplement to the existing 1993 UWT master plan. Adoption of the revised plan will involve the campus community and City of Tacoma.

## CAPITAL PLANNING

The capital planning process is comprehensive and decentralized; allowing opportunities for academic and administrative units to articulate and demonstrate their needs. It is a participatory process that involves constituencies across the institution including Board of Regents, administrators, faculty, staff, students, and other interested parties. The "UW Capital Planning Process" figure summarizes the planning process and participants. See Figure 8.1.

On a regular basis, units are asked to provide long-range master facilities plans in conjunction with their strategic plans. The academic need for proposed major capital projects is evaluated by the Academic Advisory Committee on Facilities, a standing committee appointed by the Provost. Strategic analysis of impact, feasibility, linkages, timing, and site options is also provided by CASPO, CPO, Government Relations, Development, and the Executive Vice President. This stage of the process ensures the identification and pursuit of projects that are relatively consistent with previous plans and consonant with the overall role and mission of the University.

# UW Capital Planning Process

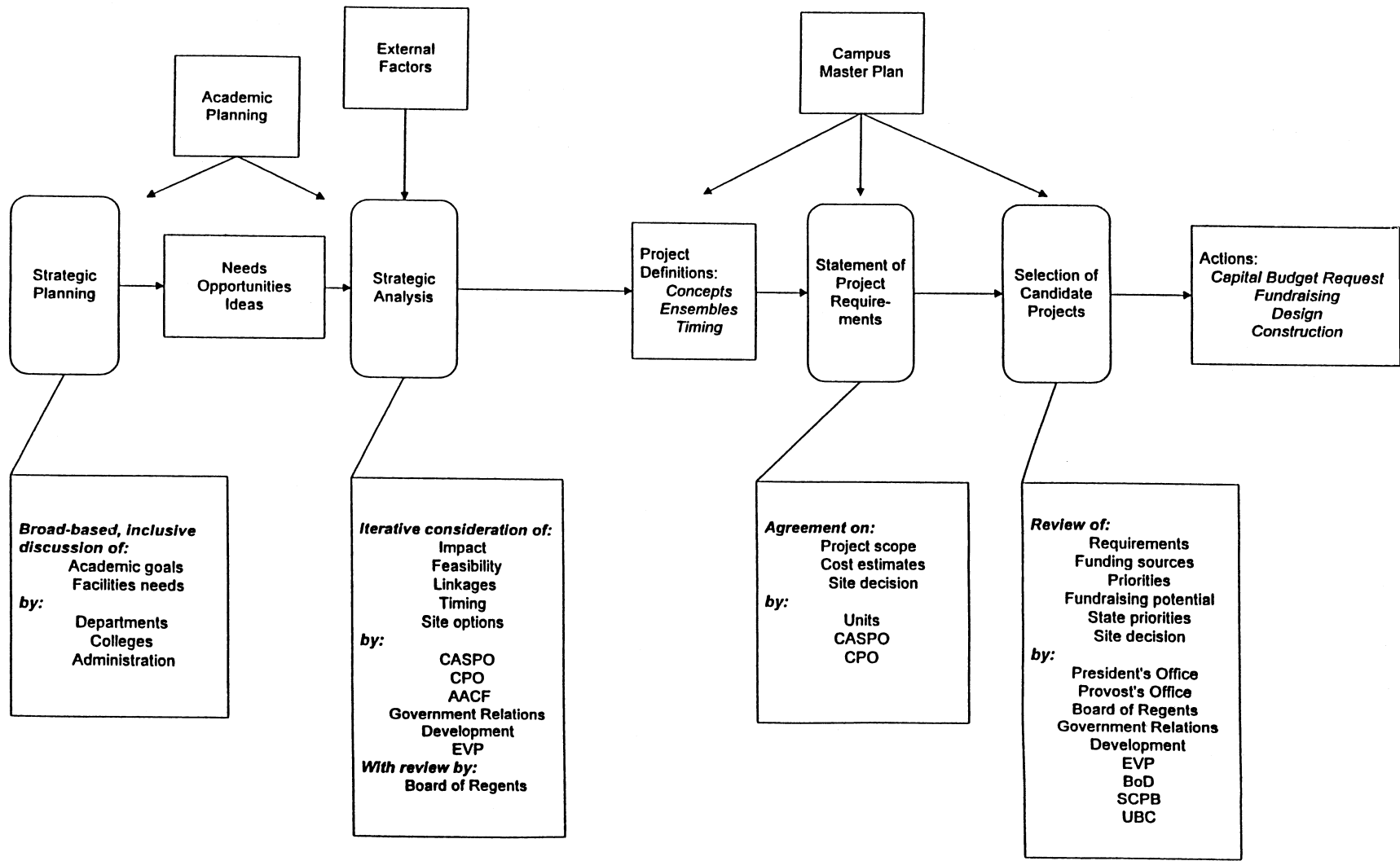


Figure 8.1

Following the strategic planning and analysis phase, projects are further defined and developed. The Capital and Space Planning Office developed a Programming Guide to assist units in defining the elements (i.e., scope, schedule, and budget) of a successful project; be it for construction of a new building, an addition, renovation or remodel. This step is critical in the design and construction process because it establishes the space and technical requirements upon which the design team will base the building design, agreement among the users and support staff on what the project is intended to do, and the responsibilities of each party involved in the process. At the conclusion of this integral step a project agreement covering scope, schedule, and budget is drafted and signed by the involved departmental and central administrative representatives.

The selection of candidate projects is based on a review of the project requirements, funding sources, institution and state priorities, fundraising potential, and site decision by the President's Office, Provost's Office, Board of Regents, Government Relations, Development, Executive Vice President, Board of Deans, Faculty Senate Committee on Planning and Budget, and University Budget Committee.

This capital planning process is critical to the success of the University's capital projects. The University carefully examines the process to inform decisions on the allocation of resources, improve the delivery of services, and provide cost-effective projects. The University recently completed an external review of the capital process, which identified several areas for improvement.

### Capital Budget Request

The University's operating budget request seeks investment from the State in helping the University accomplish its goals; investment that revolves around three budget priorities: 1) sustainable investment in faculty and staff; 2) investment in transformation of education and discovery, particularly in technology-intensive arenas; and 3) investment in expansion/growth via increased enrollments.

The corresponding capital budget priorities are for the State to invest in projects: 1) required by health, safety, or legal regulations; 2) necessary to sustain current program scope and quality; and 3) that support program growth and transformation.

The University's 1999-2001 general capital fund budget was \$322 million; with \$235 million allocated to the Seattle campus, \$50 million allocated to the Bothell campus, and \$37 million allocated to the Tacoma campus.<sup>16</sup> The 2002-2003 general capital fund budget was \$243 million.<sup>17</sup> Since 1989, the University has invested over \$1.2 billion in capital improvements; with unprecedented investment in new science and engineering facili-

ties through a combination of state funding and local University funds.

Beginning in 1999, the University's capital budget and 10-year plan was redefined. Instead of taking a linear view of planning that identified projects in a "stand-alone" entitlement fashion, each major project was grouped into what was called an "ensemble" of related capital projects. This approach more clearly outlined components of the plan and articulated the funding, scheduling, and phasing requirements to accomplish a whole palette of goals over time. Flexibility was added in that new project linkages could be introduced, or existing linkages changed, without compromising the integrity of the long-term plan. Current priorities, program development, space efficiency opportunities, infrastructure requirements, and a host of other elements may drive project linkages. This new ensemble planning approach allows for the full picture of the University's mission and academic priorities to be known, possible opportunities to be considered, and future surprises to be minimized.

This approach to the capital budget process will continue to be used internally by the University although the fundamental strategy for the 2003-05 Capital Budget Request and Plan has changed dramatically based on recent campus-wide conversations regarding facilities condition, current programmatic needs, and creative funding alternatives. The University is realistic in accepting the fact that the State may not be able to afford to support this institution as in years past and that it must begin to creatively and aggressively address the challenges of alternative methods of capital support. Alternative funding sources will be sought for new construction. The University has had considerable success in securing private and federal funding for the good of its overall mission and educational responsibilities. For example, substantial private funding was secured to match state contributions in the Henry Gallery renovation, the Allen Center for the Visual Arts addition, the Business Administration Executive Education Center and Foster Library, the new William Gates Law School Building, and the Paul G. Allen Center for Computer Science and Engineering. Concentrated efforts will continue to attract these and other forms of private support that constitute an increasingly important complement to state funding. This year the University will engage in a campus-wide process to develop a Building Restoration Plan that will include discussion of the policy framework for capital planning and the prioritization of critical building renovations for the next ten years.

The 2003-05 State Capital Budget Request proposes a long-term strategy to restore the core capabilities of University buildings that are essential for effective teaching, research, and public service.<sup>18</sup> The University made restoration and preservation of core facilities the highest priority for state capital funding and requested \$75 mil-

lion annually for facilities renovation, renewal, and modernization projects. This funding will eliminate the backlog of deferred renewal and modernization. This restoration of campus facilities will provide the quality of space for students, faculty, and staff that is vital to their ability to carry out the University's mission.

### **Specific Capital Investment Program – Minor Repairs**

The pace of change in modern higher education requires the ready availability of funding for small projects. The need is especially acute in the science, technology, and engineering fields where research and teaching requirements undergo continual change. Demands on these minor repairs funds are driven by the need for space remodeling and rearrangement to utilize space better; to accommodate program growth and change; to modernize classrooms throughout campus; and to provide infrastructure support for changing technological requirements. Program renewal funds are needed to refit laboratories to meet the needs of newly recruited faculty, researchers, and graduate students.

The University prioritizes funding for minor repair projects that improve academic programs by reserving a fund pool specifically for this purpose, which is referred to as Program Renewal Minor Repair funding. Over the last three biennia, the University has allocated approximately \$36 million in program renewal funds to the schools, colleges, and other administrative units for minor capital project program needs.

The University also prioritizes specific funding for safety projects where pre-existing conditions result in a regulatory violation or personal, occupational, and/or public or property safety hazard that is facility related. As a result of the complex teaching, service, research, and medical sciences activities in which the University engages, multiple federal, state, and local mandates regarding health, safety, and environmental protection must be addressed. These regulatory mandates have continued to increase in number and complexity, making compliance a challenge for the aging facilities of the University and requiring the completion of specific projects that are critical for the health and safety protection of the University students, employees, and surrounding community. Minor repair projects that are addressed by these funds include complying with federal regulation of certain materials such as asbestos; upgrading facilities to meet fire and life safety requirements; meeting standards for laboratory safety including installation of fumehoods and eyewash stations; and complying with a wide range of environmental, public health and worker protection requirements, such as improvements in water supplies and ventilation.

### **Physical Facilities Development and Major Renovation Planning**

The 1999-01 general capital fund budget was targeted to address the development and major renovation needs of the University of Washington Medical Center, Law School Building, Suzzallo Library, Bothell Phase 2A, and Tacoma Phase 2A. The major capital project expenditures for fiscal year 2003 include continuing funding necessary to either complete or substantially complete the following major capital projects:

William H. Gates Hall – The New Law School is moving forward toward completion in Spring 2003. The project will provide 196,000 gross square feet of space to house the University's center of legal scholarship, including offices, teaching facilities, law clinics, the Marian Gould Gallagher Law Library, and necessary support spaces to accommodate the entire Law School program.

The Paul G. Allen Center for Computer Science and Engineering – Scheduled for completion in Spring 2003, this 160,000 gross square foot facility will provide laboratories, academic space, and offices necessary to broaden the University's role in instruction, research, and service in the Computer Science and Engineering program areas.

UW Tacoma Phase 2B – This next phase of development for the Tacoma campus includes the renovation of five historic buildings for use as classrooms, computer labs, faculty/staff offices, retail, academic and campus support space. Additionally, space in the Pinkerton Building at UWT will be renovated for the Institute of Technology under a separately, predominantly donor-funded project.

Emergency Power System, Phase 1 – Two new diesel generators and additional switchgear will be installed to increase the Seattle campus emergency power system's generating capacity and to allow for improvements to the distribution system. This is the first of a two-phase project that will add approximately 60 buildings to the Seattle campus emergency power system.

Adequate facilities are critical for the delivery of programs and maintaining a nationally competitive University. The upkeep and modernization of the University's existing facilities is a major focus of the capital budget strategy, which is intended to fund the range of major building renovations to minor program renewal projects. These projects address requirements such as life safety and building renewal but also allow schools and colleges the resources and flexibility to adapt to instructional needs, technological advancements, and academic priorities through program renewal. The University of Washington's long-term strategy to address the restoration of core campus facilities and the backlog of deferred facilities needing renewal and modernization is encompassed in the 2003-2005 State Capital Budget Request of \$150,000,000.

The Association of Higher Education Facilities Officers (APPA) developed the “Facilities Condition Index: (FCI) for monitoring and reporting on facilities’ conditions. The FCI is a ratio of the deferred renewal and modernization backlog to the current replacement value: 0-5% is rated “good;” 5-10% is rated “fair;” and >10% is rated “unsatisfactory.” The University’s current overall FCI is 28%.

## INSTITUTIONAL FACILITIES

In 2001, the University had 10.3 million assignable square feet, 8.3 million non-assignable square feet, and 1.4 million parking square feet. The distribution of the assignable square feet by space type is as follows:

Classroom	4.1%
Laboratory	18.5%
Office	20.4%
Study	5.9%
Special Use	23.4%
General Use	6.5%
Support	5.5%
Health Care	3.5%
Residential	9.9%
Unclassified	2.3%

The primary thrust of the University’s capital budget strategy for the past several biennia has been to implement the findings of the Science and Engineering Study of 1988 and recent major infrastructure, life safety and renewal assessments. Classrooms, class laboratories, faculty offices, and research space required for additional faculty members must be planned, designed, and constructed at all three campuses for the University to meet its responsibilities for additional higher education enrollments and maintain its status as a leading research institution. All of this activity must be balanced with the continuing need to upgrade and renew existing facilities to meet new program and facilities requirements.

In addition to new capital funding and construction, the campuses, schools, and colleges of the University have always actively managed their resources. Reallocation of resources on a regular basis allows deans, department heads, and directors to create new degrees and programs, add essential new technology, and create mutually beneficial adjacencies with others. Reallocation has been one means through which an enormous amount of change occurs at the University without using additional funds.

Internal reallocation in response to new priorities is a long-standing part of the University’s culture.

The University will continue to reallocate existing facilities and resources to respond to new opportunities and needs that become higher in priority than some existing activities. For example, the University will take steps to insure that when new buildings are occupied, vacated spaces are converted to uses that will assist in new or changing program requirements.

Table 8.1 shows the major new construction projects that have been completed in the last ten years at the Seattle campus.

The Capital and Space Planning Office uses established institutional guidelines for space planning allocation and programming information for new projects. The Facilities Evaluation and Planning Guide (FEPG) sets institutional standards that are comparable to the national standards for higher education institutions. The FEPG was developed on the basis of the U.S. Department of Education’s Facilities Inventory and Classification Manual (FICM) with additional input from Washington’s public four-year colleges and institutions, the state Office of Financial Management (OFM), the Higher Education Coordinating Board, and the State Board for Technical and Community Colleges. The FEPG is used in the full scope of facilities planning and assignment activities including the establishment of minimum requirements for teaching and support operations, the evaluation of the impact of factors such as technology and teaching applications on space use, and peer comparisons. The FEPG is used most effectively as a guide rather than prescription, with the understanding of the need to balance optimal planning and actual conditions.

Studies of space at the University indicate that the quantity of instructional space is appropriate given utilization goals. Measures to increase the use of facilities must also address the need to improve the condition of the spaces, which also limits utilization. Changing curriculum and modern research requires appropriately sized and configured facilities that meet current pedagogical needs. For example, there are a limited number of classrooms with the modern instructional technology required for modern teaching methods. Over the last two biennia \$9.4 million of University capital funding has been invested in classroom improvements and now most classrooms have basic equipment and infrastructure such as Ethernet and data projection systems. Due to limited resources, the needs for new equipment and technology must be balanced with the need to renew and maintain the general condition of the classrooms. The condition of many other instructional spaces, such as laboratories must be improved. While some of these needs are currently being addressed through the minor repair program and the State’s allocation of “economic stimulus fund-

University of Washington Seattle On-Campus New Construction and Renovation 1991-2001 Major Projects		
Project Name	Completion Date	Total Gross Square Feet
Allen Library Addition	Jun-91	221,635
Stevens Court Addition	Aug-93	100,647
Health Sciences H Wing Addition	Aug-94	211,284
Physics Building/Kincaid Hall Addition	Aug-94	279,121
Chemistry Building	May-95	130,227
Health Sciences K Wing (Fialkow Biomedical Sciences)	May-95	227,640
West Campus Garage	Apr-96	231,786
School of Business Executive Education Center and Library (new)	Jun-97	65,566
Henry Gallery Renovation	Jun-97	12,539
Allen Center for the Visual Arts (Henry Gallery Addition)	Jun-97	49,646
UWMC East Wing Addition	Dec-97	43,121
Electrical Engineering/Computer Sciences & Engineering Building	Jan-98	237,794
School of Social Work Addition	Sep-99	9,000
Fisheries Sciences Building	Oct-99	130,307
Oceanography Sciences Building	Mar-00	111,276
Mary Gates Hall Renovation/Addition (Old Physics)	Jun-00	183,435
Ethnic Cultural Center Addition/Renovation	Sep-01	22,000
ICA Indoor Practice Facility	Nov-01	100,000
<b>Total Gross Square Feet 1991-2001</b>		<b>2,367,024</b>

Table 8.1

ing,” there are a number of spaces that require capital improvements.

Campus studies show that there are still deficiencies in the amount of faculty and graduate student office space and modern research laboratories. Major construction and renovation projects and the reallocation of space have addressed the most severe deficiencies in the quantity of space. The University intends to continue major capital development in the next ten years to continue to address the shortage of space for some departments, although the

condition of aging buildings is now the highest priority for state funding.

All requests for on-campus or off-campus space are managed by CASPO. CASPO monitors the University's compliance with restrictions on rental and lease space. After CASPO approval, the Capital Projects Office and/or Real Estate Office work with the department faculty or staff to ensure that the physical facilities are appropriate to meet programmatic needs.<sup>19</sup> The University owns the following off-campus sites: Washington Park Arboretum,<sup>20</sup> Big Beef Creek Lab,<sup>21</sup> Friday Harbor Laboratories,<sup>22</sup> Olympic National Resource Center,<sup>23</sup> and Pack Forest.<sup>24</sup>

CASPO is responsible for maintaining an inventory of all space owned and leased by the University of Washington to support the allocation and management of capital resources. Developing and applying appropriate tools for decision-making and resource allocation is an on-going, increasingly demanding realm. To this end, CASPO, in partnership with other units, initiated several process improvement strategies to:

- better understand the breadth and depth of the University's space and its functions;
- develop more reliable methods for making informed decisions;
- respond more quickly with appropriate solutions;
- improve “customer” interface for project tracking; and
- develop innovative “state-of-the-art” facilities upgrades.

The advent of web-based interactions has improved the access and amount of information available to University departments. Many of the improvements listed below are of this nature and are more efficient and accessible largely due to the Internet.

*Learning Spaces Consortium* - Not all learning occurs in the traditional classroom. Learning spaces are spaces that are known and can be scheduled for the purpose of teaching and learning and include laboratories (computer, wet, and dry) and studios. Increasingly faculty and students are relying on these non-traditional spaces and there is an inadequate supply, with a general recognition that the demand will keep growing. Although general assignment classrooms are centrally managed and scheduled, other learning spaces, such as class laboratories are managed and scheduled by the departments. The quality and utilization of learning spaces is not fully known and therefore there is insufficient management and systems information to comprehensively assess use; scheduling and best use. The Learning Spaces Consortium's goal is to develop a policy that will maximize effective use of space; enhance learning spaces; increase the total space

devoted to learning and better utilize common and shared information.

*Customer Interactive Space Inventory Management System* - In November 2000, CASPO received a University Initiative Fund (UIF) grant to better manage its space inventory through improved data systems. The space inventory management system "SIMS" is a utility-process intended to improve management of campus space through faster, clearer response to space requests, better information about how space is used, and a common data set from which to work with the campuses, schools, and colleges on space analysis, option plans, and assignments.<sup>25</sup> This information will contribute to improve communication and will provide a basis for partnership in managing our space resources. To make this data readily available to CASPO's customers it will have the capability of being viewed and updated on the web and those rooms directly associated with instruction and research will be linked to color coded printable floor plans.

## PROJECT IMPLEMENTATION

The Capital Projects Office (CPO) manages design and construction of new and remodeled University facilities.<sup>26</sup> CPO provides programming, predesign, cost estimating, design, and construction services for building alterations, additions, new construction, and grounds improvements for the Seattle and Tacoma campuses and remote field research stations. The State General Administration Office managed the initial phases of construction for the Bothell campus. Projects range in size from a few thousand dollars to \$100 million and have numbered over 250 in each of the last five years.

The organization is composed of four major units, Design Services, Special Projects, Capital Projects Central Campus, and Capital Projects South Campus. Design Services staff includes architects, engineers, and interior designers who, working with campus clients, prepare designs and contract documents on projects up to \$250,000. The Special Projects team focuses on pre-design studies for all projects valued under five million dollars. Capital Projects Central and South Campus focus on major projects valued at over five million dollars. The CPO management group includes project managers and construction administrators who organize and administer the work of outside design consultants and public works contractors. In addition, support is provided by the Attorney General's office, environmental planner, contracts officer, the campus architectural advisor and landscape architect, and accounting and information technology staff.

The mission of the CPO organization is to plan and develop quality facilities efficiently and effectively to support the University's teaching, research, and public service programs. The CPO adheres to strong standards of excellence that reflect the values the organization is committed to: service orientation; stewardship and long term vision; employee satisfaction; pride in quality; cooperation with other public authorities and community; continuous improvement; and creative, "can-do" attitude. Underlying all these values is the CPO's commitment to maintain high ethical standards and integrity in all relationships.

The CPO Project Control Group establishes procedures, analyzes, monitors, audits, and reports on all matters pertaining to costs and schedules for construction projects. Cost and schedule control systems have been developed for all phases of a project; planning through construction. Focus on safety is one of the critical components to insure that construction projects progress in an orderly way, meet schedules, are within budget, and ensure continued health and safety of University students, employees, clients, and contractors.

University construction project contracting must comply with the public works requirements. In the past, this bid process was limited to the traditional "low bid" approach. This method was often time-consuming and difficult to manage. The University worked with the other state institutions and agencies to support changes in legislation to permit alternative contracting methods to be used, the Design-Build (D-B) or General Contractor/Construction Manager (GC/CM) approach, both of which have distinct advantages for better control of project scope, schedule, and budget.

In August 2000, the Executive Vice President charged a committee to review the established facilities modification processes and make recommendations for improvements. One significant outcome from the review was the Project Intake Process, which streamlines the minor projects process.<sup>27</sup> The Capital Projects Intake Tracking System is a web-based system that allows administrators better access to information throughout the life of their projects.<sup>28</sup> Also, a newly formed "Special Projects" group was created to focus on smaller (less than \$5 million) projects and they have initiated several process improvements and a "best practices" study team. The CPO Project Tracking System is a web-based system that facilitates monitoring all construction projects across the three campuses.<sup>29</sup>

The Facility Design Information (FDI) Manual is written by University staff in cooperation with various departments and is intended for use by design professionals to facilitate design and construction of University facilities. The manual was written in response to problems that have occurred during design, construction, and operation of University facilities in an attempt to avoid historical prob-

lems, to allow flexibility for future alterations, and improve ease of maintenance. Code compliance is implicit in the Manual.<sup>30</sup>

Environmental Health and Safety (EH&S) is involved at all levels of new building construction and building renovation programs from design phase through plan review, commissioning, acceptance, and confidence testing to assure that facilities are built or renovated to meet regulatory and University health and safety standards. In addition, the Director of Environmental Health and Safety sits on the University's Project Review Board (PRB). The PRB, made up of directors and associate vice presidents, is the final review point for major capital projects and each PRB member must sign off before a project begins.

Guidelines and standards are developed through EH&S leadership to assure that facility safety issues are identified and addressed. Examples of these efforts include:

- An ad hoc UW Fiberglass Safety Committee developed standards for restricting the use of fiberglass in duct work because of health concerns;
- Health, safety, and environment construction standards are incorporated into contract documents;
- Ventilation Safety Committee establishes standards and provides oversight with emphasis on laboratory requirements such as fume hoods and biological safety cabinets;
- Capital safety projects are identified and prioritized and projects initiated by EH&S with input from Health and Safety Committees and faculty and administrative staff to maximize this limited resource;
- Special standards relating to the environment and health and safety issues are part of the UW Facility Design Manual to assure that contractors adhere to regulations and standards;
- The Montlake Landfill Oversight Committee provides guidance on any proposed uses of the east campus area to help proactively manage the legacy of solid wastes and methane generation inherent in a former landfill; and
- A "Project Managers' Reference Document For Environmental Stewardship"<sup>31</sup> is available to assure construction project managers follow environmental regulations.

All new construction is designed in compliance with all applicable codes governing accessibility including the Americans with Disabilities Act (ADA). Within each biennium's budget funds are earmarked to bring University

facilities into compliance. The University's Standing Committee on Accessibility oversees a prioritized schedule of improvements for accessibility compliance. In addition to this list, funds are set aside to address any immediate needs for students, faculty, or staff.

Under the auspices of the University's Standing Committee on Accessibility, detailed survey information was compiled in the mid-90's about each campus building's compliance with the ADA guidelines. This information was used to prepare the campus Access Guide for Persons with Disabilities and to list modifications needed to bring each building into compliance with the guidelines. The cost of completing all of the identified deficiencies exceeds \$50 million. The Standing Committee on Accessibility has further developed priorities for these modifications since funding has not been available to implement all of the modifications. The UW publishes an "Access Guide for Persons with Disabilities," which is available online.<sup>32</sup>

State regulations on contracting, financing, and other business-oriented activities influence the University. Recently two changes on contracting and funding were made that enable the University to more quickly get projects to completion and capitalize on the University's success in obtaining research grants.

*Public Works:* The threshold for Public Works contracts is now \$35,000. This change allows more work to be done "in-house," which is more efficient in terms of completion time and quality control since University staff designs and constructs the project.

*Debt Financing:* An outcome of the most recent state legislative session was a bill that now allows the University to finance debt with revenue from research funding.

## EQUIPMENT AND MATERIALS

Basic furniture and equipment are generally provided as part of the initial capital budget for major new construction and renovation projects. The University allocates equipment budgets to the campuses, schools, and colleges who are responsible for prioritizing and allocating funding to the departments and units.

The central Equipment Inventory Office reports to the Controller and is included in the Financial Management Division. Primary activities of the Equipment Inventory Office include coordinating annual and biennial inventories, reviewing and approving equipment purchases at the time of requisition, preparing and submitting equipment closing reports for federal research awards, and providing year end inventory data for financial statement purposes. The Equipment Inventory Office is guided by administrative policy statements on equipment inventory.<sup>33</sup>

As of June 30, 2001, the University had more than \$200 million worth of inventoried equipment (\$685,684,999 less \$485,003,000 in depreciation) and almost 60,000 items listed in the University records. Inventories are performed biennially for non-federally titled equipment and annually for equipment titled to the federal government. For the most recent inventory cycle, 85% of inventories were completed by the institutional due date.

### Facilities and Equipment Maintenance

Facilities Services maintains the facilities, equipment, and grounds of the University. This includes 18 million gross square feet of buildings and parking structures; 22 miles of public roads, drives, streets, and pathways; 693 acres of urban property including waterfront, vistas, quadrangles, courts, and open spaces; and over seven miles of walk-through utility tunnels that are used to distribute power, steam, chilled water, communications, and other utilities. There are two buildings on the National Register of Historic Places and seven others on the Washington State Register of Historic Places. Nine hundred and sixty-one (961) FTE staff within Facilities Services provide various functions ranging from recycling services to power plant operations in support of the primary education and research mission of the University.

Facilities Services operates and maintains University facilities and grounds, provides assistance and expertise in support of the capital program, and provides other services in support of the institutional mission.<sup>34</sup> Consisting of six departments, which include Campus Engineering and Operations, Custodial Services, Maintenance and Alterations, Finance and Administration, Organization Relations, and Transportation Services, the organization provides a varied array of services and programs.

Campus Engineering and Operations provides mechanical, electrical, structural, architectural, communications, asbestos, and environmental engineering services related to design, construction, and maintenance of all University facilities.<sup>35</sup> This department maintains the Facility Design Information Manual intended to set design guidelines for construction work; compiles accessibility information; maintains all building record drawings using CADD, archives, and electronic indexing; and assists with design development, technical construction issues, and operations and maintenance challenges.

Custodial Services is responsible for cleaning building interiors, restocking building custodial supplies, responding to emergency fire, flood, and vandalism situations, stripping and refinishing floors, window washing, and carpet cleaning on a regular, scheduled, or chargeable basis.<sup>36</sup> Cost reduction strategies including team cleaning and a shift to early dayshift cleaning have enabled Custodial Services to provide a blind cleaning program

and decrease special request and emergency response time.

The Maintenance and Alterations (M&A) unit is responsible for general maintenance (preventive and corrective), repair, alterations, and renovations of campus facilities including building interiors, exteriors, and grounds. Located geographically throughout the institution, maintenance and alterations teams perform a wide range of fabrication, maintenance, and repair in all the skilled trades.<sup>37</sup> University maintenance crews work on lighting, electrical systems, foundations, roofs, ceilings, exterior walls, painting projects, maintenance and repair of medical and laboratory equipment, refrigeration systems, and other important aspects of University facilities. Systems and databases purchased or developed to support these functions include Facilities Management Enterprise system, a web-based maintenance management system that allows for improved job planning, assignment, and tracking, an asbestos program database, and a materials management database.<sup>38</sup> Improvements in efficiency and effectiveness are guided by a Management Accountability Program (MAP).

Transportation Services includes four major units: Parking Services, Motor Pool, Property and Transport Services, and Transportation Program Administration.<sup>39</sup> Parking Services is a self-sustaining unit responsible for construction, maintenance, and operation of parking structures, lots, and controlled areas. It provides service to assist University faculty, staff, students, and visitors with their commuting needs and service and delivery access to University facilities. The Motor Pool handles vehicle acquisition, rental and maintenance for the purpose of providing convenient access to rental vehicles for the University community at affordable prices. Property and Transport Services provides programs to the University community that include moving, storage, surplus property collection sales, and disposal, solid waste and litter collection, recycling collection, Disabled Persons Shuttle, and the Health Sciences Express bus service. Transportation Program Administration provides administrative support to Transportation Services, is responsible for the University's transportation management programs, the U-PASS commuter program, and the Husky Stadium Transportation and Parking Program. The U-PASS program is a national model for managing unique transportation alternative programs for all campus commuters.

In support of the annual and long-term plans for remodeling, renovation, and major maintenance, Facilities Services maintains a database of information to indicate and monitor the condition of campus facilities. This database, called FacMan, is a software program designed to record maintenance backlogs and cyclic renewal data derived from facilities audits. A comprehensive facilities audit for the Seattle campus was completed in 1996. This audit, and ongoing audits of specific facilities, pro-

vides the basis for determining capital needs to correct current facilities deterioration and to avoid future deterioration. The FacMan software enhances Facilities Services' ability to classify short- and long-term needs and to quantify and prioritize projects, which in turn enhances resource allocation decisions. The State of Washington Joint Legislative Audit and Review Committee is using the FacMan model as a basis upon which to build a comparative framework to assess backlog maintenance and repair needs throughout the state.

## Health and Safety

The University has a long standing executive level policy that assures that the UW will create, maintain, and enhance a safe and healthful environment for all individuals associated with the institution, including students, faculty, staff employees, hospital patients, and visitors.

Numerous organizational units within the University commit resources to carrying out this policy including Facilities Services, the Capital Projects Office, Organizational Health and Safety Committees, Health and Safety Advisory Committees, the Risk Management Office, the University Police Department, and Environmental Health and Safety (EH&S). These units work cooperatively to assure that the facilities, environment, operations, systems, and processes that make up the University function to the highest health and safety standards.

Environmental Health and Safety supports the teaching, research, and public service mission of the University by providing policies, guidelines, technical expertise, and centralized services to assure that academic and operational departments create and maintain a safe, healthful, and environmentally responsible place of work and education.<sup>40</sup> EH&S services fall into five major areas:

*Risk Assessment and Investigative Services* include the evaluation of actual and/or potential threats through hazard identification; documentation of exposure potential and contributing factors through sampling, testing, analysis, and field evaluations; fire and accident investigations; research protocols reviews; employee complaints; and documented injury incidents.

*Policy and Program Development and Coordination Services* provide the University easy access to the necessary tools as well as central coordination of broad campus efforts needed for interpreting, administering and meeting health, safety and environmental requirements; managing capital safety efforts; and supporting necessary University committees. These services include, but are not limited to, development of various safety manuals (Radiation Safety Manual; Laboratory Safety Manual; Biohazard Safety Manual), construction standards such as the FDI, the UW's Administrative Policy Statements regarding

health, safety and the environment; and University-wide document templates (e.g. Health and Safety Plans).

*Regulatory and Policy Compliance Oversight Services* support programs in maintaining up-to-date policies and procedures and complying with established policies and procedures. These services includes: regulatory liaison; oversight and support services, such as radiation, food, water recreation, and other public health inspections in compliance with specific health permits and license requirements; general surveys conducted to document levels of compliance with a broad array of fire, hazardous materials, and occupational health and safety requirements; review of facility/construction plans; review and acceptance of new and renovated buildings; and the development of required University reports to regulatory agencies (e.g. IAR reports, Community Right-to-Know). In addition, EH&S is the point of contact for regulatory inspections and reports and provides University perspective on emerging regulations, legislation, and public policy. EH&S also provides consultation on a variety of health and safety issues where University clients and departments do not have the expertise to interpret regulations and their applicability to specific situations.

*Centralized Operational Services* are conducted on behalf of the University in order to effectively and efficiently maintain specific operational licenses, permits, and fees; test and/or certify specific facilities such as fumehoods and biosafety cabinets; and manage radioactive and hazardous materials and waste, including but not limited to contract, collection, categorization, storage, packaging, disposal, and shipping; and inventory/database services.

*Educational and Outreach Services* inform the University community of existing and emerging mandates and requirements and afford the opportunity to meet training requirements.

Hazardous Materials Management. Environmental Health and Safety provides ongoing training to the University community in laboratory safety practices.<sup>41</sup> The University's Laboratory Safety Manual<sup>42</sup> contains chemical safety policies and procedures, a generic Chemical Hygiene Plan that can be easily customized for each laboratory, and hazardous waste management policies and procedures.

The Washington State Department of Ecology conducted an audit of the University's Hazardous Waste Management Program in 1996 and EH&S works closely with them in assuring the University is a model operation. In addition, the University program has received two awards from Washington State for its pollution prevention efforts.

The University was a participant in a national consortium of universities headed by the Howard Hughes Medical Institute to establish best practices for laboratory management of hazardous wastes. The resulting report was for-

warded to the EPA, which submitted it to Congress for consideration of changes in RCRA requirements and applications in higher education.

Radiation Safety Assessments. The EH&S Radiation Safety Program requires principal investigators using radioactive materials to conduct routine laboratory surveys to assure proper containment. <sup>43</sup> EH&S Radiation Safety staff also survey these laboratories to satisfy requirements for administrative oversight. Surveys include contamination monitoring with instruments or wipe samples and observation of laboratory practices such as housekeeping, consumption or storage of food and drink, radioactive waste management, laboratory security, and survey instrument calibration.

Facility Safety Assessments. EH&S Assessment Team surveys of campus facilities are intended to identify potentially unsafe or non-compliant conditions. Reports and recommendations are intended to improve safety by preventing injury, unnecessary exposure, loss of property, or damage to the environment. The primary areas of assessment are fire safety, general safety, biological safety, chemical safety and administrative controls. For the past fiscal year 392 surveys were conducted and 2,365 deficiencies identified. In addition, all BL-3 laboratories are surveyed annually for compliance with CDC guidelines.

Hazardous Waste Management Assessments. Two groups survey laboratories for hazardous waste management practices. The University EH&S Assessment Team, noted above, performs laboratory safety audits that include hazardous materials and waste management with a significant focus on fire code and hazardous materials concerns. The Hazardous Waste Team, as part of ongoing waste collections, continually audits laboratory waste management practices. These audits focus on four common container management practices: 1) proper labeling of containers; 2) keeping containers closed; 3) proper storage and segregation; and 4) appropriate disposal of old or unneeded chemicals. The rate of deficiencies reported differs somewhat between the two audit teams, reflective of the teams' areas of expertise, interest, and frequency of inspections.

## UNIVERSITY OF WASHINGTON, BOTHELL

UWB occupies 178,000 gross square feet dedicated through Phase 2a of construction to accommodate 1,800 FTE of students. As an institution co-located with Cascadia Community College, some buildings are shared facilities. These include the Physical Plant Services Building (11,386) and the library and media complex (119,000) which houses the branch library of the

University of Washington with access to the full holding of the UW Library system. All facilities are new construction, completed in August 2000 and August 2001 and include classrooms, student break out space, and study rooms. Faculty offices are located in close proximity to the classroom and student spaces, allowing for easy access between faculty and students. Cascadia Community College has 111,500 gross square feet dedicated to its use and UWB has secondary use of their space as well as dedicated use in the Cascadia Community College building for interactive TV classrooms (2) and shared teaching science labs.

Facilities dedicated to UWB are more than adequate to meet the existing program needs. Facilities include classrooms, office suites for program and institutional administration, computer labs dedicated to programs and open use for all students, research labs, and science teaching labs.

UWB opened the doors to its new campus in September 2000 as a fully furnished facility, with furniture and equipment selected for their intended use. Furnishings include a typical array of tables, chairs, and desks designed and installed for optimum use. Unique furnishings include e-podia found in all classrooms which provide instructors with a central point of control for all electric/electronic classroom resources. Science laboratories include fixed lab tables with chemical resistant surfaces and stools. Office spaces are furnished with large, modular desk units and height-adjustable chairs, and typically have two guest chairs. Filing cabinets and significant shelving space complete the suite of office furnishings.

Most classrooms are furnished with tables rather than individual desks in order to allow maximum flexibility in instruction. Tiered classroom spaces have fixed tables including the UWB2 Building which contains a larger 90-seat tiered classroom with fixed seating and tables. The number of available chairs matches the maximum occupancy of each room. All classrooms were designed to be equipped with e-podia linked to the network, so that instructors can easily access their files without copying information to disks. The e-podia are connected to permanently mounted projectors and equipped with VCR and DVD players. Additional components, such as document cameras, can be ordered from the Campus Media Center.

The plant operations (Physical Plant Services) and security (Department of Public Safety) are part of the UWB organizational structure providing service to both UWB and Cascadia Community College. Parking facilities are managed and staffed by contract with an outside vendor, Ampco System Parking, and are used jointly by Cascadia and UWB. The bookstore, "University Bookstore," and a small deli, "La Pachanga," are also contracted entities. UW Computing & Communications provides management

of the network infrastructure from the router to the wall jack.

The campus facilities are new and have been built to reflect current building and safety codes. ADA standards have been followed in providing access into and within all principal campus buildings, including rest rooms. Ample parking for physically disabled is provided in both of the parking garages and all surface parking areas.

The Department of Public Safety actively monitors traffic safety on the co-located campus. UWB also has a Safety Committee, which follows the regulations established by the Washington Administrative Code for health and safety.

When programs are offered off-campus, facilities are appropriate for the programs offered. While UWB has limited off-campus programs, those offered typically lease local community college classrooms for program offering.

The campus has a full complement of support equipment necessary for educational and administrative needs. Such equipment includes, but is not limited to, computers, printers, scanners, photocopiers, and projection equipment. The science laboratories are considered to have state-of-the-art equipment. In addition, the e-podia available in all classrooms facilitate the learning process for faculty, staff, and students. The campus Media Center is also equipped with highly sophisticated audio visual equipment including cameras, audio, video, and film recording and editing gear, as well as photography and sound studios containing all the necessary equipment.

All computers access the Internet via one of four DSL lines shared with the CCC and have a full suite of Microsoft software which includes, but is not limited to, Word, Excel, PowerPoint, FrontPage, and Explorer. The Media Center provides support for state-of-the-art video and audio production/editing equipment as well as support for the aforementioned e-podia.

Science laboratory areas are fully equipped for chemistry, biology, physics, and the earth sciences with pressurized air and natural gas ports, de-ionized water dispensers, and a variety of sinks. Among the 4 labs and 2 preparation areas are 6 ventilated hoods. Chemistry labs have individualized flexible ventilation units for every lab station. All labs have multiple computers and printers with Internet access. The science laboratories are adequate in size and scope for all current classes. Safety and proper laboratory techniques are emphasized in all classes, and the laboratory coordinator ensures all prescribed handling and storage standards are maintained.

UWB uses, stores, and disposes of hazardous materials appropriately. The use and handling of hazardous materials at UWB is limited to the science laboratories and is facilitated by the UWB lab coordinator. The hazardous materials include a variety of items that are stored in

industry-standard flammable – or corrosive – resistant storage units. Material Safety Data Sheets (MSDSs) are maintained in a single volume by the lab coordinator and additional copies of necessary MSDSs are posted in the associated laboratories. Waste materials are stored appropriately on-site in a labeled cabinet and disposed of through the University of Washington's Environmental Health and Safety Department. UWB adheres to the University of Washington's Laboratory Safety Manual regulating the use, storage, and disposal of hazardous materials. A copy of that manual is retained by the lab coordinator and is readily available for easy reference. The lab coordinator attends relevant training sessions offered by the University of Washington Environmental Health and Safety Department.

The facility master plan is consistent with the long range educational plan of the institution. The existing plans call for facility development to serve a total of 10,000 FTE (6,000 dedicated to UWB) through full campus build out. The master plan is reviewed and updated periodically as all construction and planning is contingent upon state funding and allocation. Capital funds are appropriated to the Seattle Campus for distribution to the Bothell Campus.

UWB has been funded by the state for the entire construction of the current facilities. Both UWB and Cascadia Community College have received funding for the design and permitting of the south campus access ramp, which will provide south access to the campus to and from SR522. Since pre-design and design for the campus south access ramp has already been appropriated, both Cascadia and UWB will be requesting construction funding during the 2003-2005 biennial legislative session.

Elevators, ramps, drinking fountains, restrooms, fire extinguishers, fire alarms, eyewashes, light switches, and doorways are all compliant with ADA requirements. The main entries on the Lower Level and the First Floor in the UW1/UW2 buildings are equipped with automatic doors. Intercoms are located in the north and south stairwells for use by the physically impaired during an emergency evacuation. The parking facilities include 1,951 parking spaces, 5 road-surface spaces for the physically impaired in close proximity to buildings and 18 parking spaces for the disabled in the South parking garage (closest to UWB) and 8 parking spaces for the disabled in the North parking garage (closest to Cascadia Community College). All laboratory classrooms are equipped with at least one table and one sink for use by the physically impaired; regular classrooms have adjustable tables. ADA access is equally provided in the Library and Media Center.

## UNIVERSITY OF WASHINGTON, TACOMA

Facilities staff supports the UWT mission of providing access to education through maintaining the physical structures and plant services required for faculty and staff to carry out their roles, such as teaching and conducting research. Facilities staff support the mission of 'linkages to the community' through planning and preparing on-campus venues for use by community organizations. Facilities staff provide maintenance and operations services for all campus buildings and university-owned property within the 46 acre site in downtown Tacoma. (A full description of the UWT facilities can be found in the description of the UWT Campus Master Plan).

UWT Facilities staff work with Capital Projects to bring new buildings online and are continually learning new building systems for new construction (three buildings during 2002-03). Facilities, together with Safety and Security, work to assure compliance with all safety procedures and regulations. Recently, staff implemented a successful energy conservation program that met consumption reduction goals, and did so in such a way as to not adversely affect the academic mission. Staff also manage minor renovation projects on campus, installation of new equipment, supervise janitorial services, and collaborate with management of the ongoing construction program. In addition, the staff is responsible for records management and equipment inventory control.

## 1 UW Factbook:

Table G2, Assignable/Non-Assignable Square Feet By Campus - Total University, <http://www.washington.edu/admin/factbook/tablg2.pdf>;

Table G3, Assignable Square Feet by Space Type - Total University,

<http://www.washington.edu/admin/factbook/tablg3.pdf>;

and  
Table G8, Gross Square Feet by Location and Construction Year, <http://www.washington.edu/admin/factbook/tablg8.pdf>.

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3 Capital Projects Office, <http://www.washington.edu/admin/cpo/capital.projects.html>

4 Real Estate Office, <http://www.washington.edu/admin/reo/>

5 Business Services, <http://www.washington.edu/admin/business/>

6 Office of Regional Affairs, <http://www.washington.edu/community/index.html>

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8 Environmental Health & Safety, <http://www.ehs.washington.edu/Index.htm>

9 Campus Master Plan 2002-2012, <http://www.washington.edu/community/cmp/cmp.html>

10 Enrollment Planning Task Force Report, <http://www.washington.edu/reports/enrollment/>

11 Summer Report, <http://www.washington.edu/reports/summer/>

12 UW Bothell Phase 1, <http://www.bothell.washington.edu/fpdc/development/phase1.html>

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General Capital Fund Budget History, [http://www.washington.edu/admin/pb/caspo/office/capplan/summR2\\_99\\_01.pdf](http://www.washington.edu/admin/pb/caspo/office/capplan/summR2_99_01.pdf).

17 Regents Fiscal Year 2003 Budget, <http://www.washington.edu/admin/pb/home/pdf/regents-cab-memo-fy03bgt.pdf>

18 2003-2005 Capital Budget Request and 2003-2013 Capital Plan, <http://www.washington.edu/admin/pb/home/pdf/uw-capbgt-0305.pdf>

19 Space Request Form, <http://www.washington.edu/admin/pb/home/opb-space.htm>

20 Washington Park Arboretum, <http://www.washington.edu/research/field/arboretum.html>

21 Big Beef Creek Lab, <http://www.washington.edu/research/field/beef.html>

22 Friday Harbor Laboratories, <http://www.washington.edu/research/field/laboratories.html>

23 Olympic National Resource Center, <http://www.onrc.washington.edu/facility/fac.htm>

24 Pack Forest, <http://www.washington.edu/research/field/pack.html>

25 Space Inventory Management System-SIMS, <http://www.washington.edu/admin/pb/sims-home.htm>

26 Capital Projects Office Homepage, <http://www.cpo.washington.edu/html/default.asp>

27 Help and Tracking for Renovation (Minor Modification) Projects via Project Intake <http://www.washington.edu/admin/projinfo/>

28 CPO-ITS, [http://www.cpo.washington.edu/its/its\\_default.asp](http://www.cpo.washington.edu/its/its_default.asp)

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