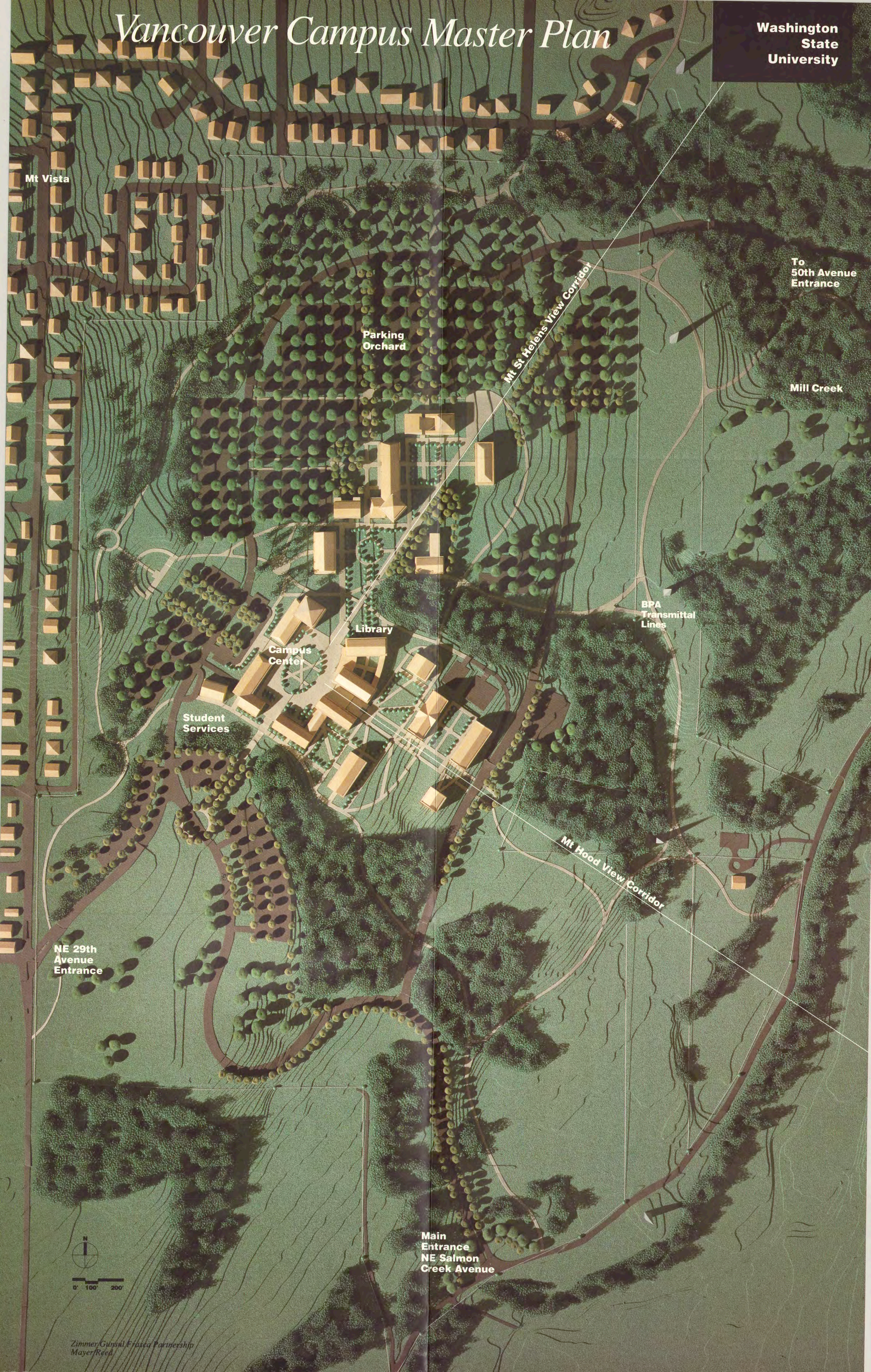


Vancouver Campus Master Plan



Vancouver Campus Master Plan

Washington State University



Mt Vista

Parking Orchard

Mt St Helens View Corridor

To 50th Avenue Entrance

Mill Creek

Library

Campus Center

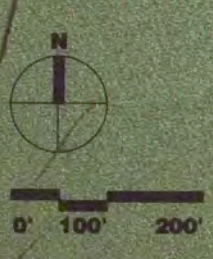
BPA Transmittal Lines

Student Services

Mt Hood View Corridor

NE 29th Avenue Entrance

Main Entrance
NE Salmon
Creek Avenue



September 1992

*Prepared for Washington State University by
Zimmer Gunsul Frasca Partnership*

Mayer/Reed

Parametrix, Incorporated

The J. D. White Company

The Basmaciyen Group

PAE Engineering

Geotechnical Resources Incorporated

Vancouver Campus Master Plan

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Table of Contents

Executive Summary

Introduction

WSU Vancouver Mission	3
Academic Programs	5
Curriculum Projections	8
Planning Process	9
Master Plan Objectives	12

Campus Site

Location	15
Regional Map	15
Vicinity Map	16
Site Description	17
Landscape Zones	18
Site Analysis	20
Environmental Conditions	22
Existing Utilities	24

Master Plan: Concept

Site Development Background	29
Features of the Master Plan	32
Campus Axes	34
Campus Center	36
Orchard	38
Meadow	40
Woodlands	42

Master Plan: Buildings and Open Spaces

Building Treatments	47
Landscape Treatments	48
Hierarchy of Open Spaces	50
Building Clusters	52
Linking Buildings to Open Spaces	54
Outdoor Meeting Areas	56
Recreational Facilities	57
Public Art	58
Viewpoint	58

Master Plan: Campus Access

Circulation System	61
Transportation Management	62
Public Transit	63
Entrance and Orientation	64
Pedestrian and Bicycle Access	66
Off-Site Improvements	68
Roadways	70
Parking Facilities	71
Service Areas	72
Nighttime Access	74
Access for the Disabled	74
Emergency Access	75
Control of Access	75

Master Plan: Site Management

Grasslands	79
Naturalized Landscapes	79
Native Landscapes	80
Drainage	82
Habitat Protection	82

Master Plan: Campus Expansion

Maintaining the Integrity of the Campus	85
New Buildings	85
Additions to Buildings	85
Phasing	86

Master Plan: Utilities

Energy Conservation	91
Central Distribution System	91
Heating	91
Chilled Water	91
BPA Transmission Lines	92
Electricity	92
Emergency Power	92
Telecommunications	92
Natural Gas	93
Water	93
Sanitary Sewer	93
Storm Sewer	93

Index	94-96
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Executive Summary

The Master Plan provides direction for the development of the WSU Vancouver branch campus as an educational resource for southwest Washington. It establishes a set of principles that will guide decisions on the siting, orientation, and form of new campus facilities. The Master Plan provides for a campus that will grow and change, yet appear whole at all times during its development. The physical form of the campus will reflect the attributes of the University, provide access to a quality education, encourage partnerships with the community, and respect conditions of the site. The Master Plan is based upon the following five planning objectives:

Creation of an enduring campus image

Two intersecting view corridors and a permanent Campus Center will constitute the basic framework of the campus core. A grid of trees, forming an orchard, will organize the outdoor spaces in and around parking areas. Grasslands near the campus core will preserve the openness of the site and allow views from the campus. Existing woodlands supplemented by new plantings will form a campus edge.

Creation of interdependent buildings and open spaces that relate to curricular needs

The built environment will create a sense of unity and reflect the academic mission of the University. Campus design will project an image of permanence and quality. Clusters of buildings with shared open spaces will facilitate interaction among disciplines. A hierarchy of interrelated open spaces, centered on the primary view corridors, will form a cohesive system within the larger landscape.

Creation of understandable and safe circulation routes that promote easy access both within the campus and between the campus and neighboring communities

The availability of both educational opportunity and community partnership depends on convenient access. Improved vehicular routes will connect the campus with Interstates 5 and 205. Public transit will be accommodated as a preferred mode for campus access. The campus will have a pedestrian core surrounded by parking areas and a loop road. Pedestrian and bicycle paths will connect with the regional Clark County trail system. Buildings and circulation routes will be configured for access by the disabled. The design of access, lighting, and signage will create a safe and welcoming environment after dark, reflecting the heavy nighttime use expected on the campus.

Sensitivity to the existing site conditions

The campus site includes grasslands, wooded riparian areas, and wetlands. Campus development will be centered on open, upland meadows that have been farmed in the past. Although many of the open areas on the site will be developed, some grasslands will remain to preserve the openness of the site. Wooded slopes, forming an edge for the upper meadows, will also be preserved. Wetlands along Mill and Salmon Creeks will be protected and restored, with campus drainage systems designed to avoid degradation of waterways. Wildlife habitat corridors will be maintained within the site.

Flexibility to accommodate future expansion without compromising the established identity of the campus

Long-term educational success requires a campus that can grow and change. Buildings will be designed and placed to accommodate expansion. New construction will respect the extraordinary natural features of the campus, and enhance the view corridors forming the basic campus framework. Utility systems will be planned with long-term needs in mind.

The new Vancouver branch of Washington State University (WSU Vancouver) will complement other institutions of higher learning in the region and serve as an educational resource for residents of southwest Washington. The campus will primarily serve residents of Clark, Cowlitz, Klickitat, Pacific, Skamania, and Wahkiakum counties. Unlike most other universities, WSU Vancouver will be a commuter campus offering only upper-division and graduate-level courses. Because of its role as a public institution, the physical form of the campus is important: it must reflect the attributes of the University; it must be adaptable to future change; it must be a respectful occupant of its site. The Master Plan sets the stage for the present and future needs of a growing institution.

1

WSU Vancouver Mission

Academic Programs

Curriculum Projections

Planning Process

Master Plan Objectives

WSU Vancouver Mission

The mission of WSU Vancouver arises from Washington State University's traditions as a land grant university, and from educational needs identified by the Washington state legislature and the Higher Education Coordinating Board (HEC Board), the bodies creating the WSU branch campuses. The Physical Planning Committee of Washington State University has developed and clarified the mission of WSU Vancouver. The first portion of the mission is to provide access to quality upper-division undergraduate and graduate education for the citizens of southwest Washington. The students attending WSU Vancouver are initially expected to be place-bound residents, many of them older people who have jobs or families. In the future, however, the University is also expected to serve a rapidly-growing group of upper-division and graduate students in traditional college age groups. The second portion of the WSU Vancouver mission is to develop partnerships with the community, and thereby assist the economic and cultural development of southwest Washington. There are no other public or private baccalaureate or graduate institutions located in the region. The third part of the mission is to set an example of environmental responsibility in the development of the campus, thereby maintaining the site as an ecological resource for the region.

A primary responsibility of any university is teaching students to think critically and to evaluate ideas carefully. The basic elements in educating students are active scholarly inquiry by the faculty, openness to new ideas, and continual debate and evaluation of those ideas. A diversity of opinions and philosophies is essential to a university. Students who acquire only a single methodology for evaluating ideas cannot be considered well educated. The curriculum therefore must be broad-based and encourage interdisciplinary exploration. In addition, the acquisition of intellectual skills cannot rely only on passive absorption in the classroom. Education also takes place outside the classroom through debate among students, continual dialogue among students and faculty, and the exchange of ideas between the university and the larger community. The University must foster an atmosphere conducive to debate, and it must build constructive ties with the surrounding community.

In summary, the Physical Planning Committee has formulated the following specific goals for the Vancouver campus:

Provide access to quality higher education for residents of southwest Washington.

The Vancouver campus will provide educational opportunities for residents of the surrounding region who have no college degree. The campus will also extend educational opportunities for graduates of Clark College, Lower Columbia College, and other nearby institutions of higher education.

Form a partnership with the community.

The curriculum envisioned for the Vancouver campus includes cooperation with local businesses, industries, and professionals.

Set an example of environmental responsibility.

The campus site includes sensitive riparian areas and wetlands, making careful environmental planning imperative.

WSU Pullman

Pullman, Washington has been the seat of WSU since its foundation as a land grant university in 1890. The branch campus at Vancouver will extend the educational resources of WSU and provide access to quality higher education for residents of southwest Washington.



Academic Programs

The Vancouver campus will offer upper-division and graduate courses in the arts and sciences, business, education, health and human services, natural resources, and engineering. Interdisciplinary exploration will be encouraged. Because there will be no on-site student residences, most students will commute to the campus from nearby communities. The upper-division curriculum envisioned for the school will complement programs offered by local community colleges, allowing residents to complete bachelor's degrees and then to study at the graduate level. Because the campus is expected to serve a large number of part-time students, it is likely that many classes will be offered in the evenings.

As a supplement to on-campus faculty and libraries, the school will capitalize on resources from throughout the state using innovative systems of long-distance teaching and information exchange, such as the Washington Higher Education Telecommunications System (WHETS). The school will develop ties to the surrounding community through the use of adjunct faculty employed in related fields. Physical planning to accommodate such a curriculum requires a flexible and inviting arrangement of interrelated facilities.

Because it will be a branch of Washington State University, the Vancouver campus will be intimately related to the Pullman campus. It will make the resources of Washington State University available to those living in southwest Washington and, therefore, it should reflect the mission and heritage of WSU.

THE CURRICULUM PLAN

A series of formal and informal evaluations, conducted on both the Vancouver and Pullman campuses, formed the basis for WSU Vancouver's long-range curriculum plan. The evaluation process involved university faculty and staff, the HEC Board, and interested members of the community. The plan is based upon a set of criteria developed during the evaluation process. Both societal needs, such as the economic demand for various degree holders, and student demand influenced the selection of programs. Programs with high projected enrollments were preferred over programs with more limited enrollments. Curricular coherence was another criterion used in developing the long-range plan. The strengthening of general education and writing as a part of WSU's overall curriculum reform, for example, dictated some of the programs and courses that were selected. Planners also attempted to find programs that would strengthen one another; offerings were preferred if they could contribute to related programs.

Community Partnerships

Programs that promote partnerships with the local community will be an important part of the WSU Vancouver curriculum. Community partnerships will ensure that academic programs meet the needs of the community, and that resources necessary for those academic programs are available as the campus develops. Partnerships may include local school districts, industries, and governmental agencies. Certain organizations, such as the United States Geological Survey (USGS) and local community colleges, may have offices or buildings on the campus. As a branch of Washington State University, the Vancouver campus should also function as a conduit between the southwest Washington community and all programs of the university, whether located in Vancouver, Pullman, Spokane, or the Tri-Cities.

As part of an overall strategy to establish partnerships and to build research programs, research and development centers will be developed in collaboration with various outside groups in southwest Washington. Research centers may be located in close association with the campus. These centers will function as focal points for instructional programs at WSU Vancouver, and will also link related programs at other WSU campuses to the southwest Washington community. Research centers could include a center for natural resource management, a resource center for science and mathematics education, a center for the study of employment and society, and collaborative professional development schools.

PRINCIPLE ELEMENTS OF THE PROPOSED CURRICULUM

No university can be master of all intellectual territories. Rather, each must concentrate on areas in which it can excel. This is especially true of a small, developing campus. Five areas of concentration have been selected for WSU Vancouver: an integrated undergraduate program, education, business, health and human services, and natural resources. The existing engineering program will also be maintained, although a lack of student interest in this area suggests that some changes should be initiated.

Integrated Undergraduate Program

Many universities are exploring new ways to address deficiencies in general education. As a first step in developing an undergraduate curriculum, WSU Vancouver will build a strong general education program. The backbone for the curriculum will be the humanities and social sciences degrees already in place. Similar programs in the sciences will be developed as soon as the laboratory facilities of the new campus are available. Specific majors such as psychology, sociology, and political science will be added as the curriculum develops. As a means of developing cross-disciplinary coherence, interdisciplinary programs such as women's studies, alcohol studies, American studies, comparative American cultures, and environmental sciences may also be established.

Education

With an unprecedented demand for new school employees, an important function of the Vancouver campus will be training and certifying teachers and school administrators. Related programs in early childhood education and early childhood intervention will also be developed.

Business

The Portland/Vancouver area provides many opportunities for the study of business. Existing business programs at WSU have been very successful and local studies indicate that the demand will grow. Assessments indicate that business programs will be as popular on the Vancouver campus as they are in Pullman. Undergraduate programs in hotel and restaurant administration and master's degrees in areas such as accounting will also be developed.

Health and Human Services

As a result of rapid population growth, the southwest Washington region must address a number of health service issues. Social and counseling services in the region are undergoing transition and expansion, providing opportunities for research of national and international significance, and also creating a demand for graduates trained in health and human services. Inquiries from potential students indicate a demand for degree programs in clinical psychology, alcohol counseling, and related areas.

Natural Resources

The Pacific Northwest is facing great challenges in the areas of natural resource management and environmental protection. Urban growth, air and water quality problems, and demands for restrictions upon the use of non-renewable or slowly-renewable resources are becoming prominent issues in southwest Washington. In contrast to areas of the country dealing primarily with past environmental mismanagement, it is possible here to plan for the wise use of natural resources from the beginning. Environmental issues need to be addressed from a multi-disciplinary perspective; public policy, public perception, and public administration may be as relevant as the basic life sciences. Degree programs in environmental sciences, natural resource sciences, natural resource management, and public administration may be developed at the Vancouver campus.

Engineering

The Vancouver branch campus began as the Southwest Joint Center for Higher Education. The role of WSU was limited to graduate programs, and the initial emphasis was on engineering. Several different graduate engineering degrees were developed, including engineering management, which was a new degree to WSU. The enrollment in engineering programs, with the exception of engineering management, has been low and has also been declining. At the same time, interest in undergraduate engineering programs has been declining nationally. Information from local community colleges suggests that few pre-engineering students are available for transfer to bachelor's programs in engineering. Furthermore, background courses in sciences and mathematics have yet to be developed at WSU Vancouver, and some must await the new campus facilities.

Still, it is apparent that graduates of undergraduate engineering programs are in demand. In southwest Washington, the demand is greatest in the areas of electrical engineering and computer science. Given WSU Vancouver's charge to be responsive to local needs, engineering creates a dilemma. While there is a societal need for high-cost engineering programs, there is currently little student demand. Consequently, the following steps appear judicious. (a) Develop background programs in mathematics and sciences. (b) Add laboratory facilities that could support electrical engineering and computer science programs with phase two of the campus building plan. Initiate undergraduate engineering programs as soon as the second phase of campus development is completed. (c) Develop a long-range plan of partnerships with industry to equip laboratories and to hire faculty. (d) Consider the possibility of substituting undergraduate programs in engineering for the master's programs. (e) In the interim, expand the engineering management program, the one graduate engineering program that is drawing students.

WSU Vancouver will offer both undergraduate and graduate programs in natural resources, business, education, engineering, health and human services, and general studies. The curriculum plan outlines these areas of concentration.

INSTRUCTIONAL PROGRAM PROJECTIONS

Undergraduate Majors	1999-2000 Enrollment (FTE)	2009-2010 Enrollment (FTE)
Agriculture/Natural Resources	81	137
Business	244	341
Education	130	221
Engineering/Technology	0	20
Health	88	127
Arts and Letters	107	306
Social Sciences	358	624
Sciences	192	325
Undergraduate Total	1,200	2,101
Graduate Majors		
Agriculture/Natural Resources	30	62
Business	20	46
Education	92	142
Engineering/Technology	16	28
Health	20	26
Arts and Letters	0	14
Social Sciences	14	54
Sciences	8	28
Graduate Total	200	400
Grand Total	1,400	2,501

Planning Process

The consultant team received notice to proceed with preparation of the WSU Vancouver Master Plan on February 4, 1992. Zimmer Gunsul Frasca Partnership, the prime consultant, had already participated in weekly programming meetings with the WSU Vancouver Physical Planning committee. The Physical Planning Committee continued to meet every two weeks to oversee the master planning process. The committee included members of the faculty, staff, and student body of WSU Vancouver, as well as representatives of the WSU administration and of the southwest Washington community.

One of the first actions taken when work began on the master plan was organizing a coordination meeting with all the affected Clark County agencies. That meeting was held on February 20, 1992 in the company of WSU representatives. At this meeting the County representatives stated their areas of interest and concern and clarified the formal approval processes to be followed. At subsequent meetings with each County department, the consultant team identified specific technical requirements and topics requiring further clarification as to procedure or technical information.

A major requirement was that a supplement to the Site Selection Final Environmental Impact Statement, approved in August 1990, be prepared. The approved EIS had compared alternative sites for the campus on the basis of possible environmental impacts resulting from development. It had relied upon available information and had concluded that unacceptable environmental impacts would not necessarily result from development of the Vancouver campus. As the Master Plan was developed, much more specific data became available concerning the environmental effects of development. The County required that a Supplementary Environmental Impact Statement (SEIS) be prepared to take full account of the more precise information soon to be available. With WSU as the lead agency, the University and the consultant team began the SEIS process with public scoping, a procedure that involves the public in defining the impacts to be investigated. The State of Washington Environmental Policy Act (SEPA) procedures were followed for scoping, advertising and reviewing comments on possible environmental impacts.

All local, state, and federal agencies with jurisdictional interests in the site were contacted, informed of the project, and invited to visit the site in the company of the consultants. Several accepted the invitation and became informed at first hand about the special circumstances which prevail in different parts of the 348-acre campus. In particular, wetlands and riparian areas were inspected. Damage inflicted on these areas by cattle was noted, as was the immediate improvement in conditions effected by the University's recent removal of cattle from the campus property.

A series of four public meetings was organized to seek advice and guidance from those who live or work in the vicinity of the campus and elsewhere in the southwest Washington community. The first meeting was held in early March, before the consultant team had begun to develop specific concepts for design of the campus. The team recognized the importance of hearing particular concerns and advice from the larger community before making design decisions, so that full advantage could be taken of that information.

The team prepared a series of three alternative concepts for development of the campus. These were presented to the Physical Planning Committee with an outline of how each might be expected to evolve through three phases, based on campus population projections for the years 1998, 2010, and 2025. With recommendations from the consultant team, the Physical Planning Committee was asked to eliminate the least promising alternative.

In early April, at the second community meeting, all three concepts were presented together with the observations of the Physical Planning Committee. The Clark County Department of Parks and Recreation also made a presentation on its planned county-wide trail system, with which campus trails are planned to connect.

Also early in April, a Regional Transportation Task Force was formed to address larger issues concerning campus access in the context of County and State transportation plans and priorities. Collaboration with this group not only enables coordination of efforts, but also provides a forum for sharing information on funding sources that might be used for road improvements in the vicinity of the campus. Such improvements could both address pre-existing problems and improve regional access via freeways and inter-connecting streets. Near- and-long range transit planning continues to be a topic of great importance to the campus and to the community as a whole. Task Force meetings continue on a regular basis.

Following the second community meeting, the consultant team developed the two preferred concepts in greater detail. The Physical Planning Committee then reviewed the concepts, with subsequent reviews conducted by the President's Cabinet at Pullman and at the third community meeting. A single preferred concept was identified. The consultant team began to refine the campus plan, including the arrangements of buildings, parking, and access. Ongoing dialogues with environmental agencies, the Regional Transportation Task Force, and other County departments also contributed to the process. Technical reports on different aspects of the master plan were reviewed with the Physical Planning Committee, and the Committee examined a complete overview of the project prior to its presentation at the fourth community meeting in early June.

In July 1992, cost estimates were prepared for the Vancouver campus as a part of the capital budget process. A summary master plan was submitted for consideration by the WSU Board of Regents and for approval by the Higher Education Coordinating Board (HEC Board). The completed Master Plan was submitted to the WSU Board of Regents for approval after the Supplemental Environmental Impact Statement was completed.

COMPLIANCE WITH GOVERNMENTAL REGULATIONS

The Master Plan has been designed to comply with the requirements of Clark County and other governmental agencies that have jurisdictional authority over campus development. To comply with the requirements of the State of Washington Growth Management Act, Clark County is currently establishing goals and drafting policies that will determine the future urban development patterns of the County. Preliminary projections based on land-use trends include the campus site and surrounding areas within the Clark County Urban Growth Boundary. The campus design provides for future expansion in an organized manner, and it is expected to conform with urban development requirements.

Land-use planning and environmental permits necessary to construct the WSU Vancouver campus will be obtained at the appropriate stages of campus development. The University must obtain a Conditional Use Permit from Clark County in order to build the campus on land previously designated for residential use. The County will consider the Supplemental Environmental Impact Statement (SEIS), which parallels the Master Plan, in evaluating the Conditional Use Permit application. After the County issues a Conditional Use Permit and ensures that proposed improvements meet state and local regulations, it may grant Site Plan Approval and building permits.

Additional environmental permits will be necessary for specific construction projects near Salmon and Mill Creeks. Removal of the former dairy barn near Salmon Creek will require Hydraulic Project Approval from the Department of Fisheries, Section 401 Water Quality Certification from the Department of Ecology, and Shoreline Substantial Development Approvals from both Clark County and the Department of Ecology. Roads that cross wetland areas designated in the SEIS will require Wetland Nationwide Permits issued by the Army Corps of Engineers. Changes to designated wetlands will also require a Clark County Wetland Permit, which must be granted before the County can issue Site Plan Approvals or building permits.

Master Plan Objectives

The overall purpose of the Master Plan is to accommodate the academic mission of the University through the evolutionary growth of a unique campus. The campus must also appear whole during all stages of growth. Instead of a grand and rigid scheme, the plan establishes a set of principles that will guide decisions about the siting, orientation, and form of new campus facilities. The Master Plan supports the 'Principles of Physical Planning and Decision Making' and the 'Basic Planning Concepts' approved by the Board of Regents for WSU's statewide campus system.

As the Physical Planning Committee has stated, the design of the Vancouver campus must provide access to quality higher education, accommodate the formation of community partnerships, and set an example for environmental responsibility. In addition to being safe and physically accessible to all citizens, the campus must project an image of openness to the community. Quality education must be further enhanced by the construction of interrelated facilities. The character of the campus, established by the first phases of development, must be sufficiently powerful to survive and to remain identifiable through successive generations of change. To meet these goals, the following objectives were identified for the Master Plan:

Creation of an enduring campus image.

The campus should project an image of permanence and quality.

Creation of interdependent buildings and open spaces that relate to curricular needs.

The built environment should create unity and enhance the academic mission of the University.

Creation of understandable and safe circulation routes that promote easy access both within the campus and between the campus and the community.

The availability of both quality education and community partnerships depends on convenient access.

Sensitivity to existing site conditions.

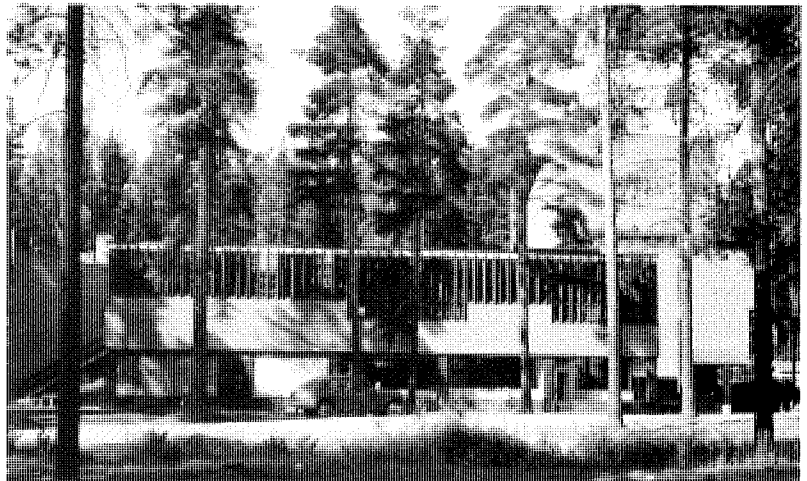
The campus should engage its site but respect environmentally-sensitive areas.

Flexibility to accommodate future expansion without compromising the established image of the campus.

Long-term educational success requires a campus that can grow and change, yet maintain its character.

12

The campus should engage its site but respect environmentally-sensitive areas.



The campus site includes wooded slopes and grassy terraces, with panoramic views of the Cascades. The site offers both an accessible location for an institution of higher education and a setting capable of inspiring and supporting academic pursuits. The natural beauty that characterizes the site was important in its selection. It is an attribute that the Master Plan must both preserve and use to advantage, demanding great sensitivity in the development of campus facilities.

2

Location

Regional Map

Vicinity Map

Site Description

Landscape Zones

Site Analysis

*Environmental
Conditions*

Existing Utilities

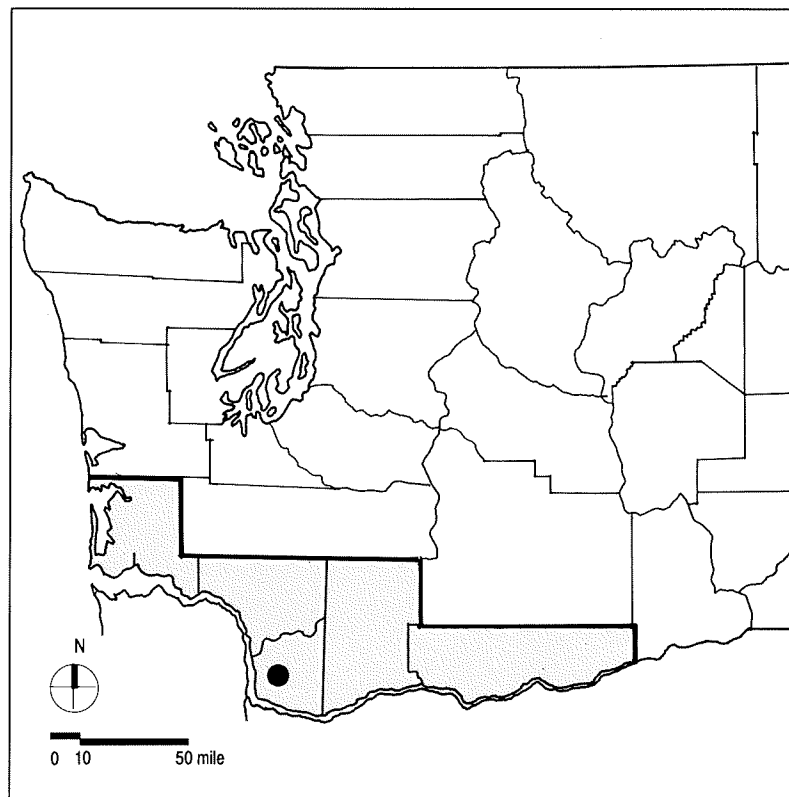
Location

The WSU Vancouver Campus is located in Clark County, Washington, 7 miles northeast of the Vancouver city center. The campus site is near the junction of Interstates 5 and 205, with the closest freeway access at Interstate 5 and NE 134th Street. The 348-acre site is bounded by NE 50th Avenue to the east, NE Salmon Creek Avenue to the south, and NE 29th and 30th Avenues to the west. Residential areas abut the northern and western boundaries of the site. Mill Creek flows from north to south through the eastern portion of the property. An old dairy farm, including a barn, is situated on the southern edge of the site along NE Salmon Creek Avenue. A 250-foot strip of land owned by the Bonneville Power Administration (BPA) and occupied by high-voltage overhead transmission lines bisects the property from north to south. Also excluded from the site are two homestead properties that adjoin the BPA-owned land.

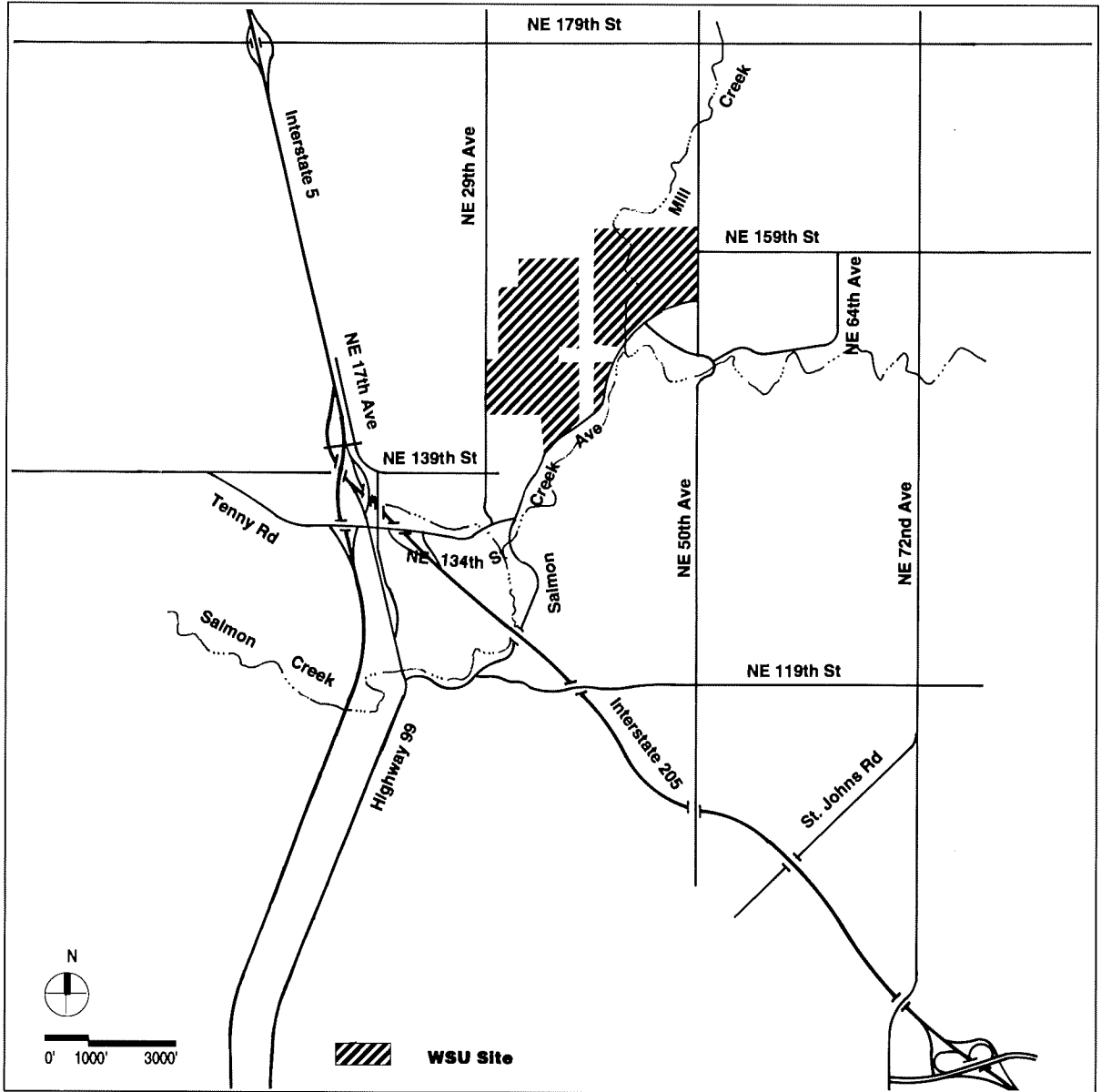
Regional Map

The WSU Vancouver campus will serve residents of southwest Washington.

-  Southwest Washington Region
-  WSU Vancouver Site



WSU Vicinity Map



The campus is located 7 miles northeast of the Vancouver city center, just east of the Interstate 5/205 interchange.

Site Description

The campus site is remarkably diverse in character. Varied topography and vegetation create a series of open and enclosed spaces that provide many opportunities for integrating campus with landscape. The site drops 260 feet along the southeastern slopes of Mount Vista, a Clark County landmark. Densely-wooded ravines and riparian wetlands flank both Mill Creek, which traverses the site from north to south, and Salmon Creek, into which Mill Creek empties near Salmon Creek Avenue. Gently-sloped fields constitute the remainder of the property.

Approximately two-thirds of the site lies west of Mill Creek, forming two relatively-flat terraces separated by steeper land. The terraced fields, upon which the main campus will be built, slope downward to the southeast toward the confluence of Mill and Salmon Creeks. The slopes of each terrace range from 0% to 10%, with adjacent land exceeding 15% in slope. The Salmon Creek floodplain, an area composed primarily of wetlands, lies below and to the east of the terraced fields. The northeastern corner of the site is also a flat field.

Impressive views toward the Cascade Mountains dominate the western portion of the campus site. Several mountain peaks are visible from the upper parts of the site over the stands of mature conifers that cover the lower slopes. The most prominent and spectacular views are of Mount Saint Helens to the northeast and Mount Hood to the southeast. More distant views are of Mount Adams to the east and the tip of Mount Jefferson to the southeast. Most of the grassy site lies below viewlines from nearby residences to the Cascade peaks.

Landscape Zones

Drainageways and steep slopes divide the site into four distinct zones. An upper meadow zone comprises gently-sloping fields with views of the Cascades. This part of the site is oriented toward the east, creating an area that is spatially expansive, large in scale, and dynamic. Tall fir trees frame views of distant, receding ridgelines and of the Cascade peaks. In order to take advantage of views and to minimize disturbance in more sensitive areas of the site, most campus development will occur in the upper meadow zone.

A transitional zone is located between the upper meadow and the lower floodplains adjacent to Salmon Creek. The transitional zone is steeply sloped and intricately divided with wooded ravines and small, open meadows. Some of the meadows within this zone are suitable for development. The BPA corridor falls largely into the transitional zone.

The floodplain zone is dominated by lush vegetation of the Salmon and Mill Creek floodplains. This area is small in scale, has an enclosed spatial quality, and is filled with many close-up, detailed views of surrounding riparian and upland landscapes. Dispersed groves of trees and topographic benches divide the area into several linear subspaces. With the presence of wetlands and drainageways, this area is least suitable for development. It should be preserved as an important part of the regional watershed.

The agricultural zone is located in the northeastern corner of the site. It is relatively isolated from the western part of the campus by the Mill Creek ravine. As existing farmland, the area is flat, large in scale, and expansive in appearance. Established woodlands enclose the area on three sides.

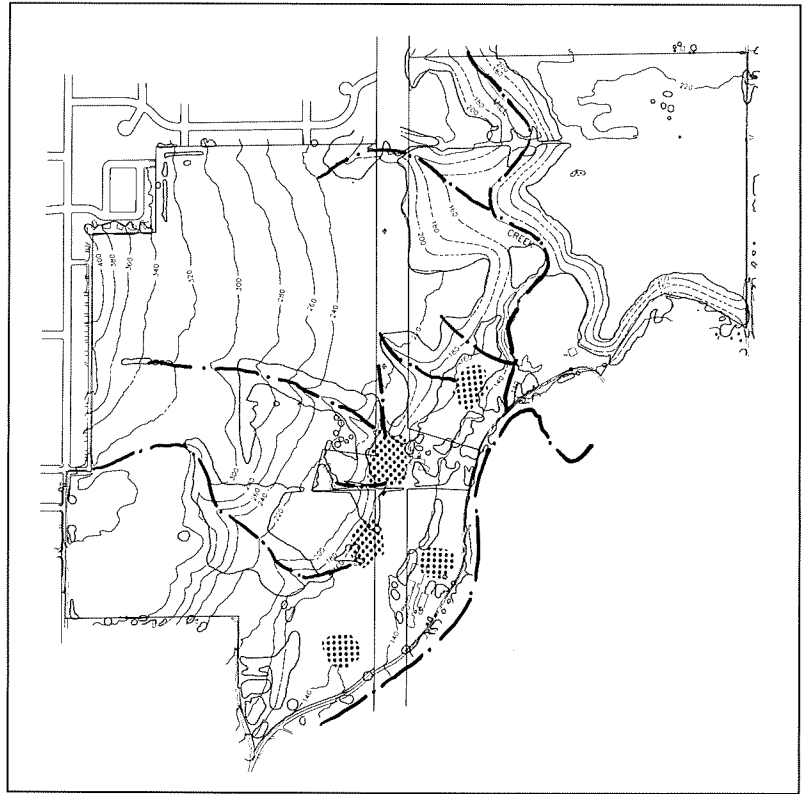
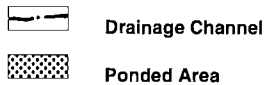


Topography and vegetation divide the site into four landscape zones. Most of the campus will be built in the upper meadow zone, which has excellent views of the Cascades. The floodplain zone, lying below the steep slopes of the transitional zone, is dominated by wetlands and drainageways. The agricultural zone is a flat area that is to continue in agricultural use.

Site Analysis

Topography

The campus site slopes downward from west to east along the lower, eastern slopes of Mount Vista. The elevation of the site falls 260 feet over a horizontal distance of 3400 feet. Ground surface elevations range from about 420 feet above sea level along NE 30th Avenue to about 130 feet along NE Salmon Creek Avenue near the location of the old dairy farm. The northeastern corner of the property, in contrast to the rest of the site, is nearly flat. The lower portion of the site includes over a half-mile of the Mill Creek drainageway and extends well into the Salmon Creek floodplain.

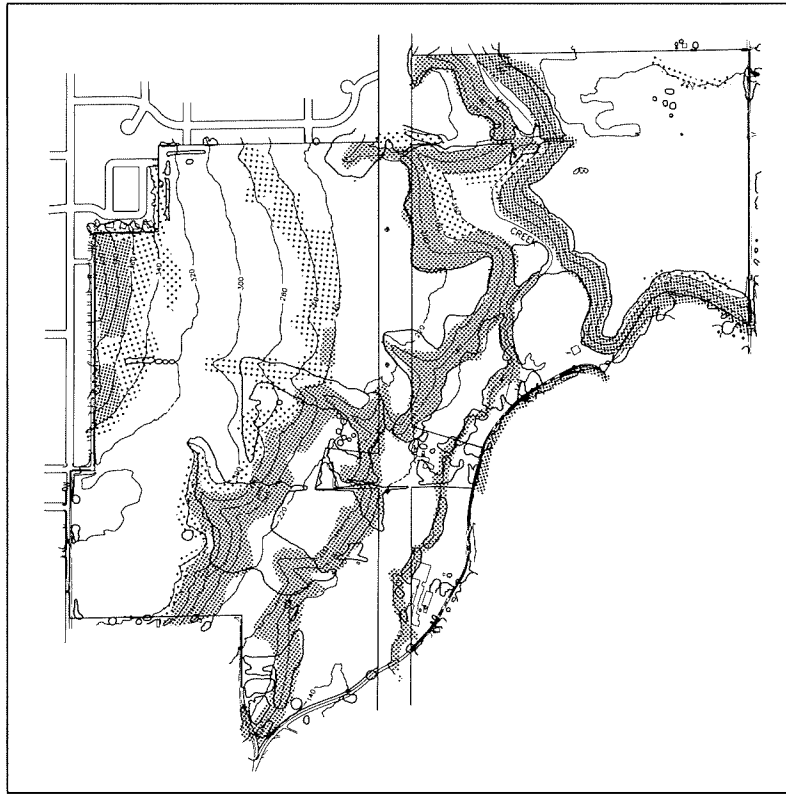
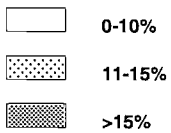


Drainage

Salmon Creek and Mill Creek are the dominant drainage features of the campus site. Mill Creek flows from north to south through the eastern portion of the site, draining into Salmon Creek just across Salmon Creek Avenue. Natural channels and swales convey flows from other portions of the site to the two creeks. Substantial portions of the lower terrace adjacent to Salmon Creek Avenue are within the designated 100-year floodplain of Salmon Creek. Although these areas have not flooded recently, the area near the confluence with Mill Creek could be especially prone to high flows because of backwater flooding. The 100-year floodplain of Mill Creek is confined by steep slopes and is entirely within a riparian corridor to be conserved as open space.

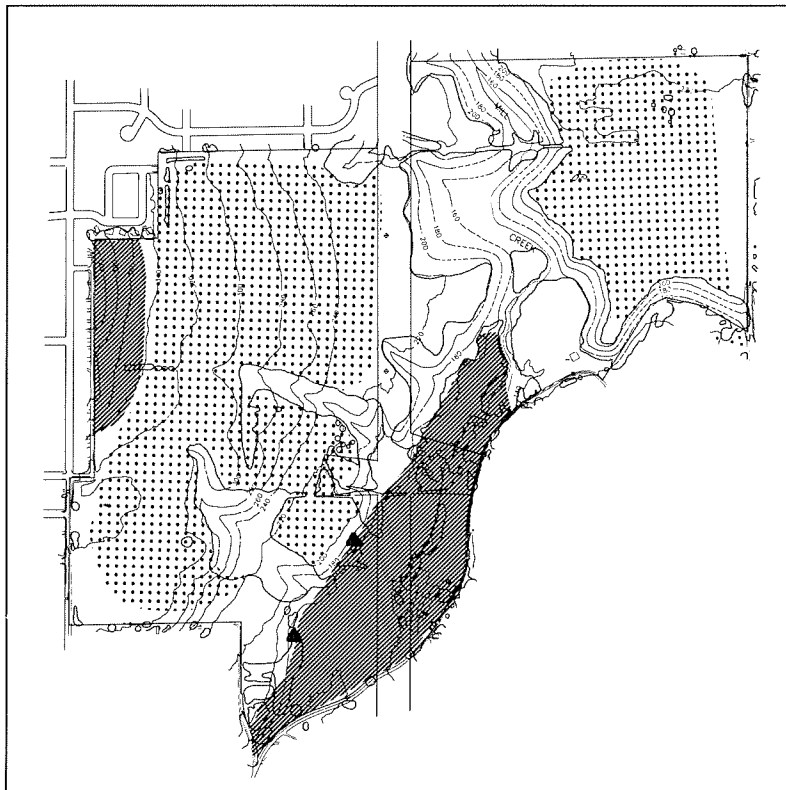
Slope Analysis

Steep terrain divides the campus site into four benches. Slopes in the upper, western bench are mostly within the range of 5% to 10%, with a few slopes up to 15%. Slopes of the intermediate bench range from flat to 5%, although several drainage ravines have slopes of up to 35%. The lowest bench is occupied by the Salmon Creek floodplain; slopes range from 0% to 10%. The fourth bench is a broad and almost flat meadow to the east of Mill Creek, corresponding to the agricultural zone.



Soil

Site investigations indicate that near-surface soils over most of the site are silts with varying percentages of sand and small amounts of clay. Gravelly and cobbly soils were noted on the western edge of the site along NE 30th Avenue, and on the portion of the site in the vicinity of the old dairy along NE Salmon Creek Ave. Subsurface investigations indicate that most of the site is mantled with soils of low to moderate compressibility consisting of various proportions of silt and sand.



Environmental Conditions

The WSU Vancouver site includes a variety of habitats, characterized by different types of vegetation. Habitat areas include creeks, wetlands, riparian woodlands, fragmented upland forests, grasslands, and hedgerows. Grasslands are the areas most amenable to development, while existing woodlands and wetlands are the most ecologically-sensitive areas. No sensitive, threatened or endangered wildlife species have been reported for the site. Such species are unlikely to occur because extensive development in the region has already degraded and fragmented natural habitats. The campus site presents a rare opportunity to incorporate existing habitats and their associated plant and animal communities into a campus design that not only satisfies academic objectives, but also is esthetically pleasing and environmentally sensitive.

Grasslands

About three-quarters of the site consists of hayfields and rough pastures, providing grassland habitats. Grassland habitats provide nesting cover, seed, and foraging areas for birds, rabbits, and rodents. Hayfields, which constitute about half of the entire WSU campus property, consist mostly of non-native grasses. Rough pastures have not been mowed or cultivated for some years and have generally been invaded by diverse types of weedy, herbaceous vegetation. Many wetlands on the property are embedded within the rough pasture habitat and are generally indistinguishable from it.

Woodlands

Woodlands are generally confined to ravines and to the Mill Creek riparian corridor. This important corridor and its edges provide habitat for a wide variety of terrestrial species, including such large mammals as coyotes, and it remains one of the relatively intact portions of the greater Salmon Creek wildlife corridor. Wooded areas consist mostly of even-aged, second-growth trees. The predominant species are Douglas fir, big-leaf maple, red cedar, and red alder.

Hedgerows

Hedgerows are linear habitats that occur where limited grazing or mowing has allowed shrub species to persist. They are generally located in the areas between pastures and hayfields. Plant species include hawthorn, hazelnut, big-leaf maple, various grasses, and invasive species such as Himalayan blackberry. Hedgerows are important for many species of wildlife because they provide travel corridors as well as nesting, hiding, and resting areas. At the campus site, however, existing hedgerows are of secondary importance. Their conservation should not hinder development.

Wetlands




Most wetlands on the campus site are located at low elevations east of the BPA transmission lines. Wetland vegetation includes herbaceous species such as sedges and rushes. The wetlands along the Salmon Creek floodplain are of the greatest ecological value. Although degraded by past land use practices, most notably dairy farming, this riparian area may recover substantially now that grazing has been discontinued. A patchy pattern of wetland areas, some of relatively high quality, occurs at the foot of steep slopes and on adjoining terraces within low-lying portions of the property. A few small and isolated areas of degraded wetland also occur in the hayfield adjacent to NE 29th Avenue. Degradation of these wetlands is largely attributable to the development of houses and streets west of NE 29th Avenue, which have changed original drainage patterns substantially.

Fisheries

Mill Creek is the only perennial stream that supports a fishery on the campus site. The quality and quantity of water in Mill Creek and in other minor drainages on the site also influence the Salmon Creek fishery. Salmon Creek and its tributaries, including Mill Creek, support populations of salmon, trout, and other fish species. Grazing, sedimentation, and a lack of woody debris, however, have degraded the Mill Creek fishery.

Woodlands, Hedgerows and Grasslands



Grasslands on the campus site are extensive, providing habitat for birds, rabbits, and rodents. Woodlands and hedgerows provide cover and travel corridors for a variety of species.

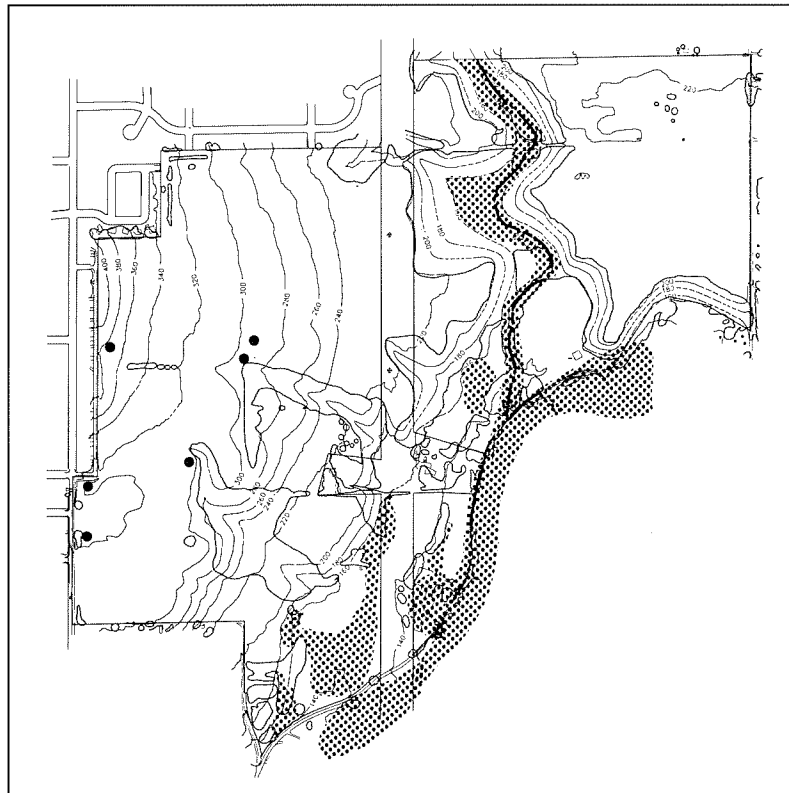
-  Woodland
-  Hedgerow
-  Grassland



Wetlands and Creeks

The most significant wetlands are located along Salmon and Mill Creeks. Both creeks support trout and salmon populations.

-  Wetland
-  Small Wetland Area
-  Creek



Existing Utilities

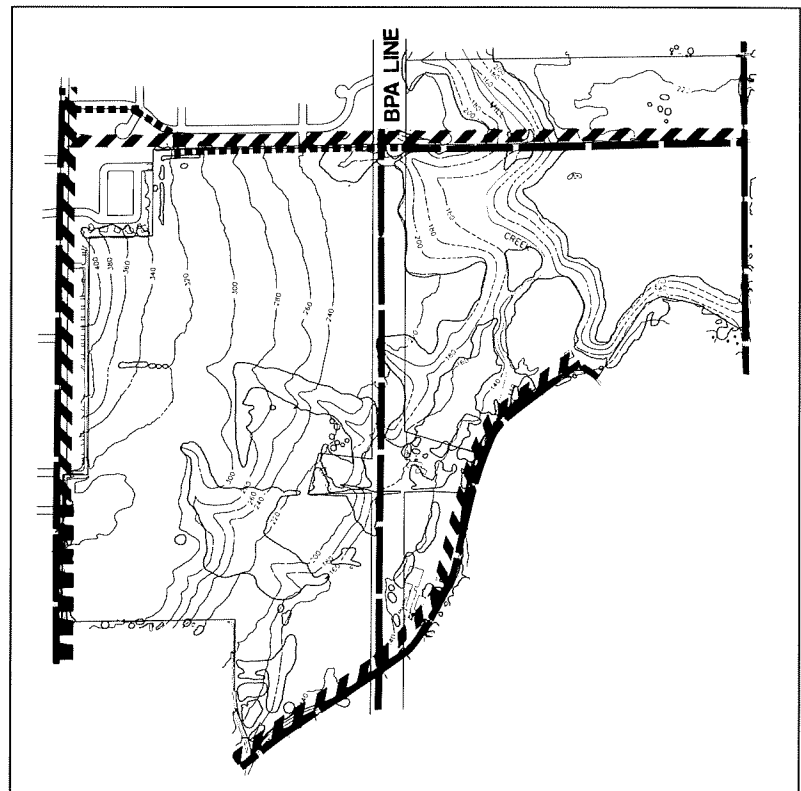
The campus site is served by all basic utilities, some around the perimeter and others nearby. Very few off-campus utility improvements will be necessary to satisfy projected campus needs. Utility information was obtained through contacts with district and agency representatives, and from research of existing system maps and records.

Electricity and Telecommunications

Electrical service at the campus site is under the jurisdiction of the Clark County Public Utility District (PUD) No.1. Two substations currently provide 12.5 kilovolt (kV) electrical service. The Clark County PUD will provide the required service based on projections of future power needs. A Bonneville Power Administration (BPA) overhead transmission line bisects the property from north to south, but this line does not serve the campus directly. Residential-scale telephone and cable service is currently available in the vicinity of the campus site.

Natural Gas

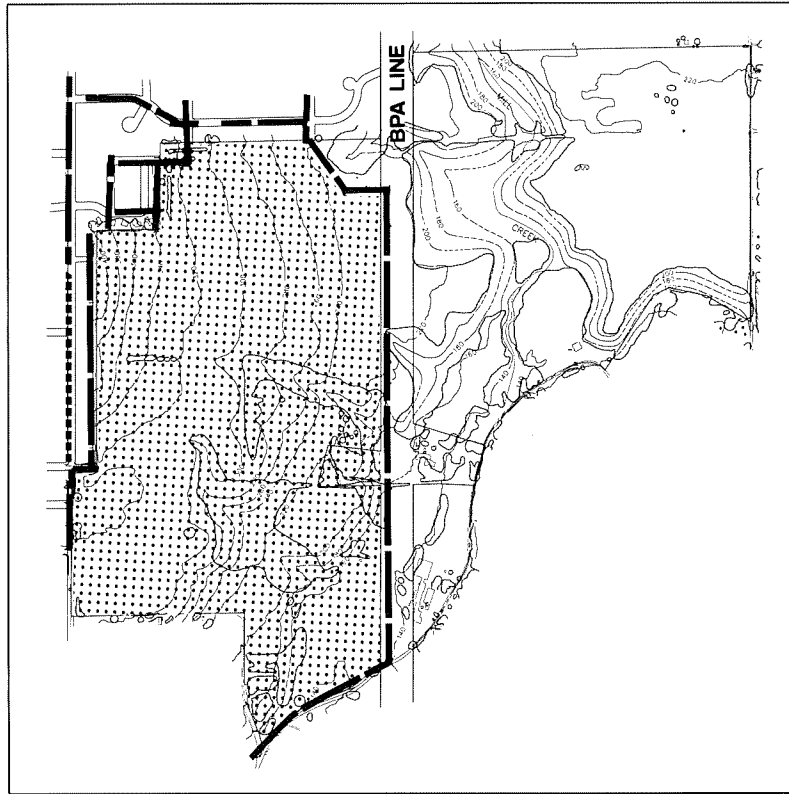
Natural gas service at the site is under the jurisdiction of Northwest Natural Gas. A 4-inch intermediate-pressure (IP) gas main is located along the western site boundary on NE 29th Avenue. Projected demands exceed the capacity of the IP mains. High-pressure service could be obtained by tapping an 8-inch high-pressure main and extending it along NE 144th Street to the site.



Sanitary Sewer

The campus site lies within five separate service basins under the jurisdiction of the Hazel Dell Sewer District (HDSD). The area west of the Bonneville Power Administration (BPA) property falls primarily within the Mount Vista Basin. The 10-inch Mount Vista Trunk extends down the BPA corridor and connects to the 15-inch Salmon Creek Interceptor, which transports sewage to Clark County's Salmon Creek Wastewater Treatment Plant. Campus development west of the BPA corridor could be served by the existing gravity sewer system.

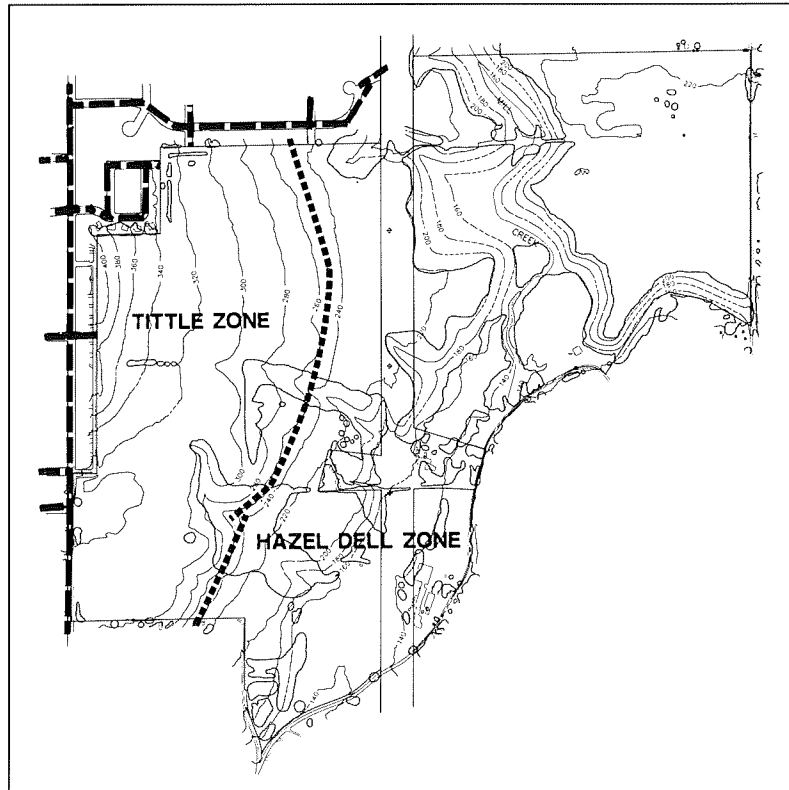
- Gravity Sewer
- - - - Pressure Sewer
- ▒ Areas that can be served by existing Mount Vista Trunk



Water Service

The Clark County PUD supplies water to the campus site. The northern and western portions of the campus above 250 feet in elevation receive water from the 0.5 million gallon Tittle Reservoir, which in turn receives water from the 3 million gallon Wilson Reservoir. The Tittle Reservoir is located east of the site, just south of 159th Street. The southern and western portions of the site below 250 feet in elevation receive water from the PUD's Hazel Dell system.

- Existing Distribution Main
- - - - Approximate Pressure Zone Boundary



3

It is important that the appearance of the campus be consistent with its purpose as a center for higher learning in the region. Such an appearance will reaffirm the quality to which the University is committed and the seriousness of the University's mission. Part of that mission is to become an active partner with the surrounding community, advancing educational, cultural, and social opportunities in southwest Washington. To fulfill its mission, WSU Vancouver must therefore be an open and welcoming institution.

The site of the campus is itself memorable. Campus improvements must underscore significant characteristics of the site, creating a strong identity that is unique to the Vancouver campus, yet related in some respects to the parent institution in Pullman. Through design guidelines, the Master Plan provides a framework for establishing this identity.

Each component of the Master Plan begins with an explanatory text, followed by design guidelines. The purpose of the guidelines is to establish a consistent and appropriate character for the campus throughout all phases of development. The guidelines address the design and placement of all buildings and site improvements, providing a set of principles against which new campus development may be tested. Rather than being proscriptive, the guidelines define key qualities and relationships that can be addressed through a variety of design alternatives.

*Site Development
Background*

*Features of the Master
Plan*

Campus Axes

Campus Center

Orchard

Meadow

Woodlands

Site Development Background

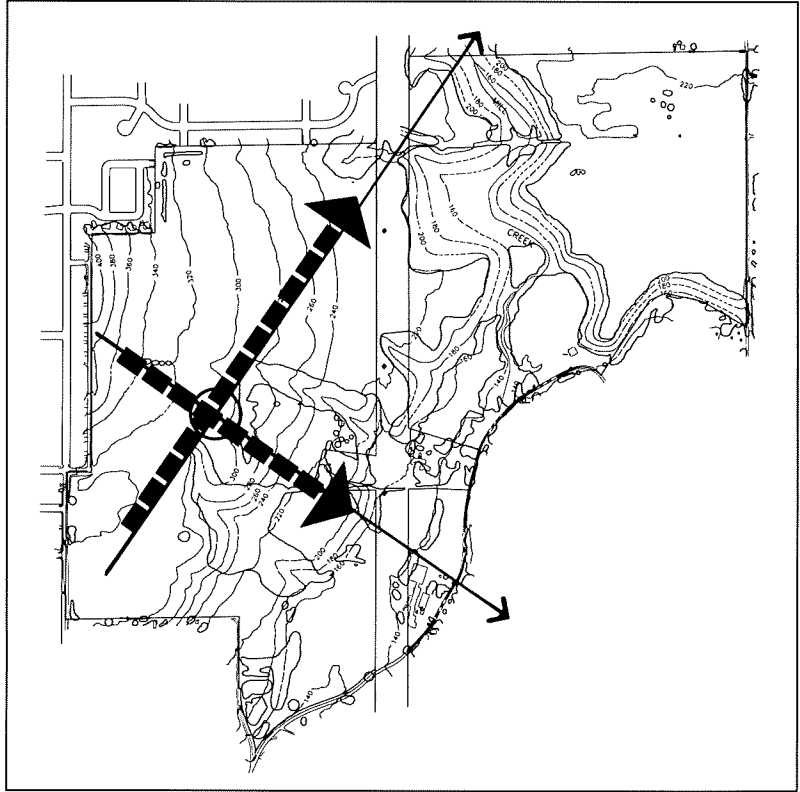
Three conceptual patterns of growth were studied in the early stages of the project. All the alternatives responded directly to a prominent characteristic of the site: two exceptional views, one toward Mount Saint Helens and the other toward Mount Hood. Each alternative related mountain views to view corridors and dedicated pedestrian zones.

The relationships between campus buildings and topography were different for each alternative. Concept A proposed campus development along two axes aligned with two intersecting view corridors. Concept B sought to create a campus oriented toward the existing landscape with a focus toward nearby wooded ravines. At the same time, it capitalized on views over the treetops toward the Cascades. Concept C developed a campus on high ground with a curved pedestrian street following existing contours. Buildings were arranged to maximize panoramic views of the mountains.

The Physical Planning Committee assessed the alternative concepts using the previously-identified goals for the Vancouver campus as criteria—access to a higher education of quality, partnership with the community, and environmental responsibility. In comparing the alternatives, Concept A had the most flexibility to accommodate future growth and change. Furthermore, organizing the campus around two intersecting axes provided an opportunity to establish, at the outset, an identifiable campus core that would endure as the campus grew. Because of its physical flexibility, Concept A had greater potential than the other schemes for the development of facilities shared with the community. Finally, Concept A engaged a broader range of site conditions and therefore had the greatest opportunity to enhance the overall environmental setting. Concept A was selected as the alternative most capable of producing a campus that could flexibly and creatively implement the goals of the University.

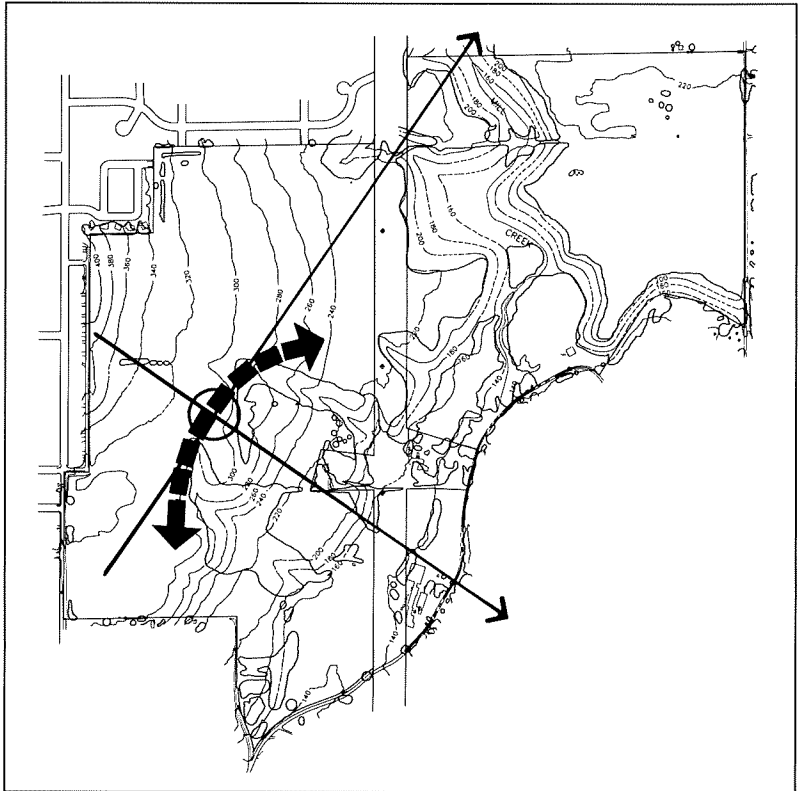
Concept A

Concept A proposed organizing the campus around two intersecting view axes. The Physical Planning Committee selected this concept as the basis for the Master Plan.



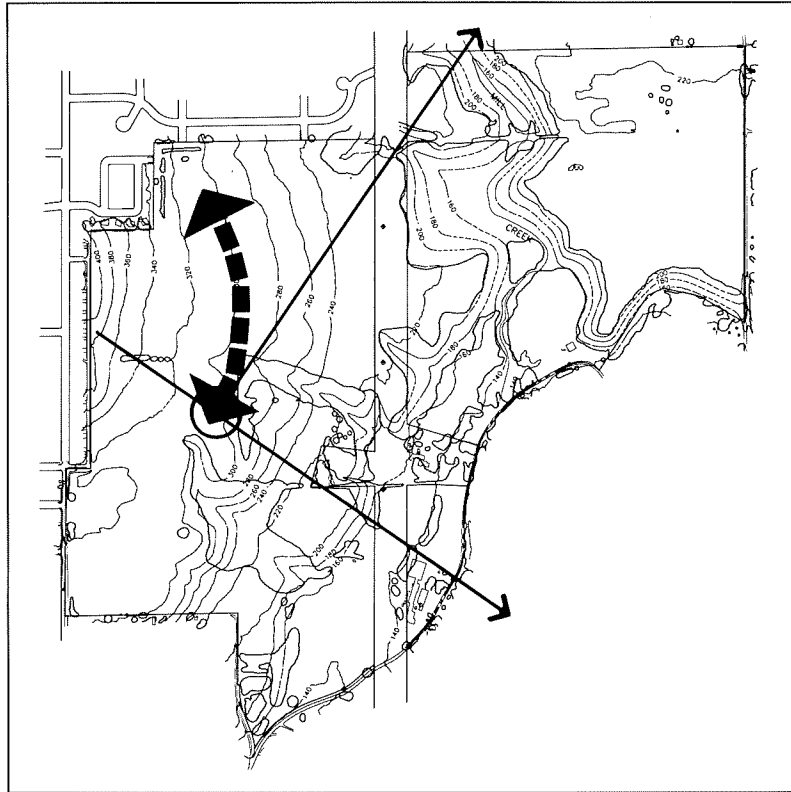
Concept B

Concept B oriented campus development toward the immediate landscape, focusing on wooded ravines.



Concept C

Concept C developed the campus along site contours, creating a curved pedestrian street with undirected, panoramic views.



Features of the Master Plan

The Master Plan establishes a basic concept for the campus based upon the selected site development concept. The campus concept is an organizational scheme that is intended to endure over time, guiding future development. The concept consists of five primary elements: intersecting view axes, a permanent Campus Center, a parking orchard, a meadow, and woodlands. These elements are described in detail in the following five sections. Subsequent sections describe additional components of the Master Plan that support the basic concept. The primary elements of the Master Plan are summarized below and on the facing page.

View corridors to Mount Saint Helens and Mount Hood will form the basic framework for the campus.

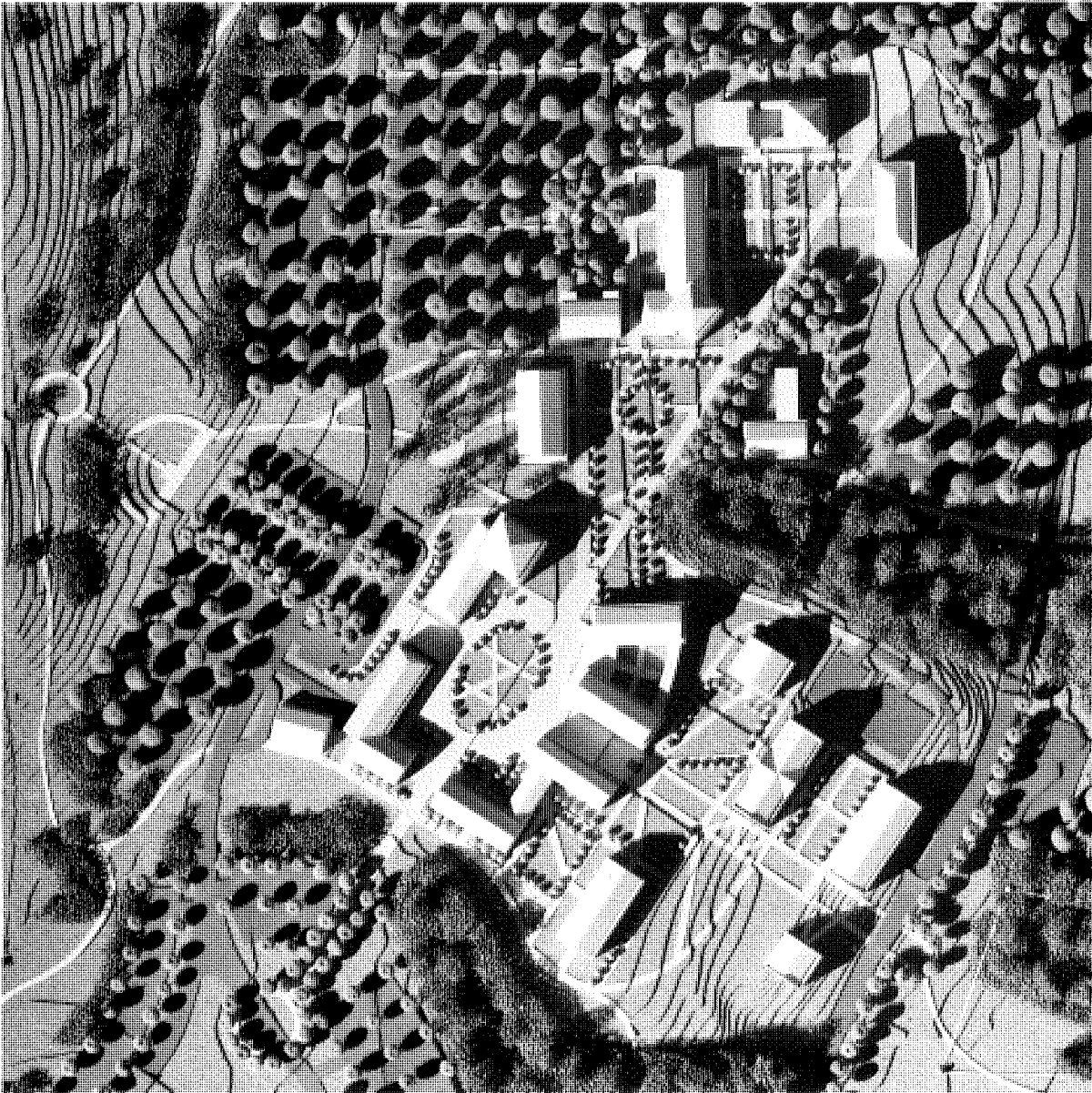
The primary pedestrian routes will be coincident with the view corridors.

The Campus Center will be located at the intersection of the view corridors.

Trees planted in an orchard pattern will order outdoor spaces and parking areas adjacent to the campus core.

A meadow bordered by woodlands will link the campus core to its rural site.

A wooded edge will border the campus and form a low buffer for nearby residences to the north and west.



Campus buildings will be arranged around two view corridors designed for the exclusive use of pedestrians and bicyclists. The Campus Center, with convenient access for transit passengers and disabled people, will be at the intersection of the two view corridors. An orchard-like arrangement of shade trees will integrate parking areas into the campus landscape.

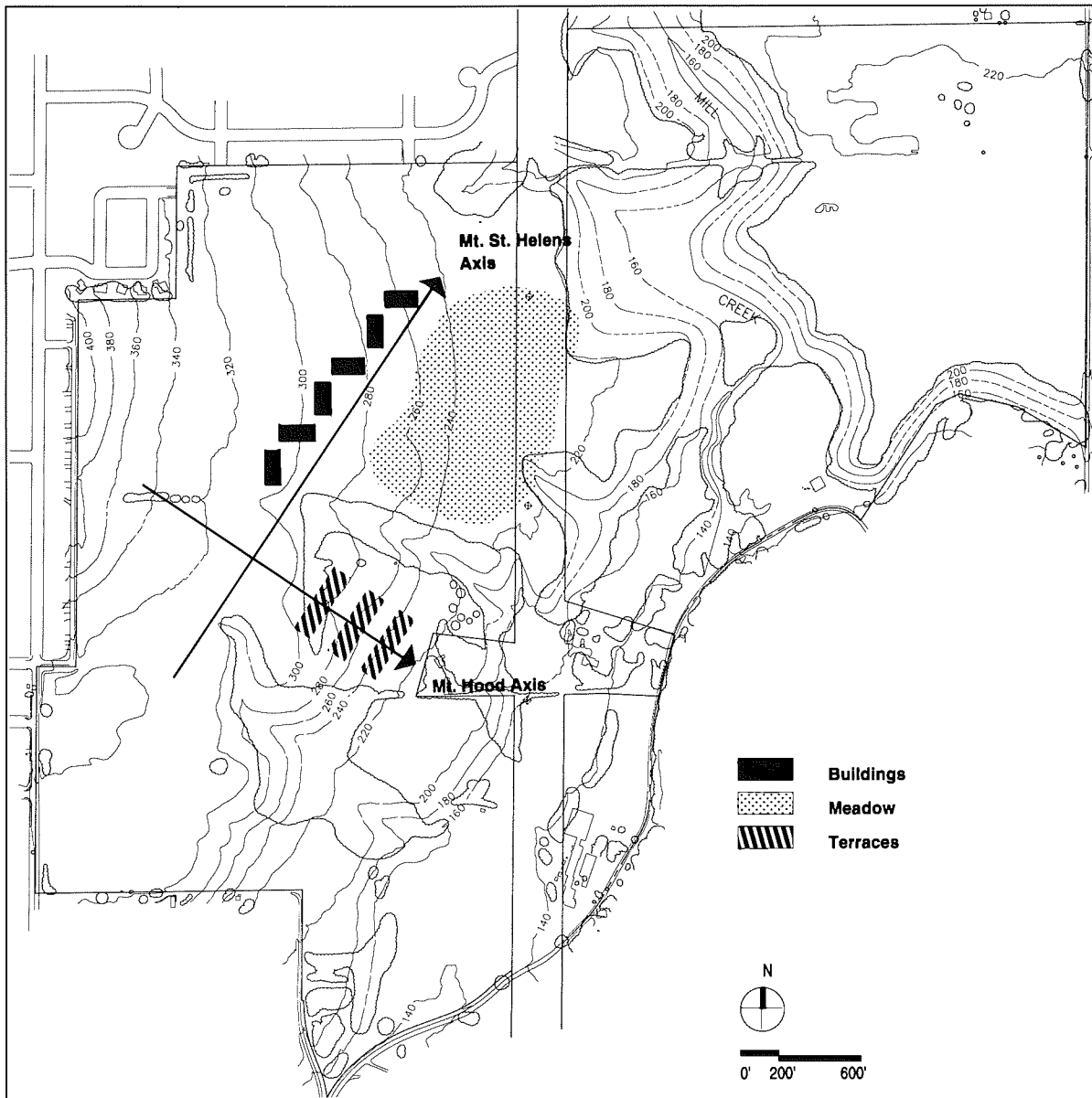
Campus Axes

Two axes will organize the development of the campus core, the central area of the campus where academic buildings will be located. Both axes will be developed as view corridors, with the primary axis directed toward Mount Saint Helens and the secondary axis directed toward Mount Hood. The two axes will be reinforced by buildings and will act as central pedestrian thoroughfares for the campus.

The degree to which the two view axes are established and preserved over time will largely determine the strength of the sense of place evoked by the campus. The width of the corridors, once established, should not be eroded. The corridors need not extend from property line to property line. The most important segment to preserve will begin at the central plaza and extend toward the mountain view until the grade drops to a point at which the mountain is no longer visible. Rather than fading out, each corridor should have a strong terminus. The axes should extend beyond the perimeter loop road in every direction.

Guidelines

- Establish and preserve the central axes as view corridors.
- View corridors should average 100 feet in width, but should not be less than 60 feet in width.
- Within the two axes, select plantings that will not block views or detract from the openness of the corridors.
- Construct distinct beginning and end points for each axis.
- Ensure that the axes remain the primary pedestrian corridors by locating major pedestrian destinations along the corridors.
- Relate all new campus developments, regardless of location, to the central axes. Developments that reinforce the axes should be encouraged; developments that detract from them discouraged.



The Mount Saint Helens axis will be predominately one-sided, with buildings on the uphill side and an open meadow on the downhill side. Buildings may be arranged either along or across the contours of the gently-sloping corridor. Buildings along the Mount Hood axis will be arranged around terraced open spaces that step down the hillside.

Campus Center

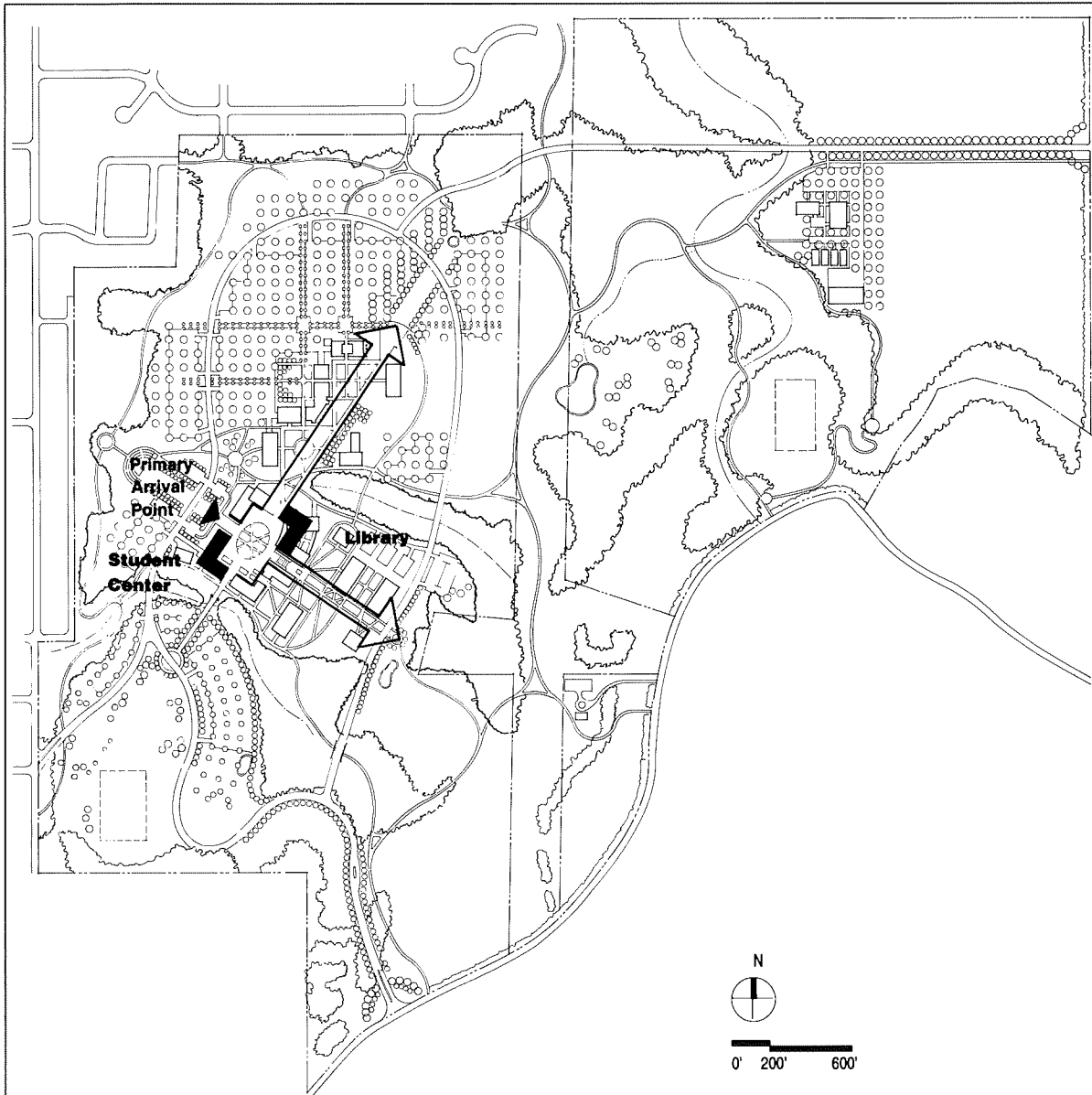
The intersection of the view corridors coincides with a natural point of focus on the landscape. This point falls within a grassland, on higher ground than most of the campus. The gently-sloping grassland, flanked by wooded ravines, is buffered from adjacent development to the west by a change in elevation. Buildings and a large plaza at the intersection of the two axes will form the Campus Center, which is programmed to be the most intensely-used area of the campus. It will be home to the library and other University functions that need to be universally accessible.

The Campus Center plaza will function as the most intensely-used pedestrian and bicycle circulation space. During both the day and the night, it will be a gathering space for groups—large and small, scheduled and impromptu, formal and informal. The plaza will also serve as the symbolic center of the campus, with the library, the intellectual center of campus life, forming one of the plaza's edges. The student services building will provide a social focus, as well as orientation for the first-time or occasional visitor.

Although the plaza will be defined during the first phase of campus development, the character of the Campus Center will evolve over time as new demands are placed on the plaza, and as the buildings around the plaza expand and change usages. A successful plaza will be of sufficient size to accommodate the growth of the campus for generations, yet will be designed in a manner that will not overwhelm its users in the early years.

Guidelines

- Develop and preserve a plaza as part of the Campus Center.
- Maintain the view corridors through the plaza.
- Establish a scale that anticipates future growth, yet accommodates initial uses.
- Locate the most heavily-used campus buildings at the perimeter of the plaza.
- Locate major building entries on the plaza.
- Design the plaza for maximum flexibility to accommodate a broad range of activity.
- Provide a strong edge definition to the plaza by incorporating the facades of surrounding buildings. Buildings should unify the appearance of the plaza through the use of common materials, textures, forms, and massing.
- Provide large areas of paved surface for heavy pedestrian traffic, relieved by landscaped areas. Paving materials should be durable, attractive, and capable of supporting emergency vehicles.



Buildings will define the edges of the Campus Center plaza, and also frame the view corridors that originate from the Center.

Orchard

Trees will be planted in an orchard-like grid for the purposes of screening extensive parking lots and relating the lots to the arrangement of buildings and axes at the campus core. The orchard will consist of non-fruit-bearing trees, planted in a grid that is oriented north-south. The orchard will provide, from the outset, a pattern that will guide campus development into the future. The regular grid of trees will suggest order and consistency as a counterpoint to the free form of surrounding natural vegetation and variable topography. It will also establish a sense of direction by aligning with the points of the compass.

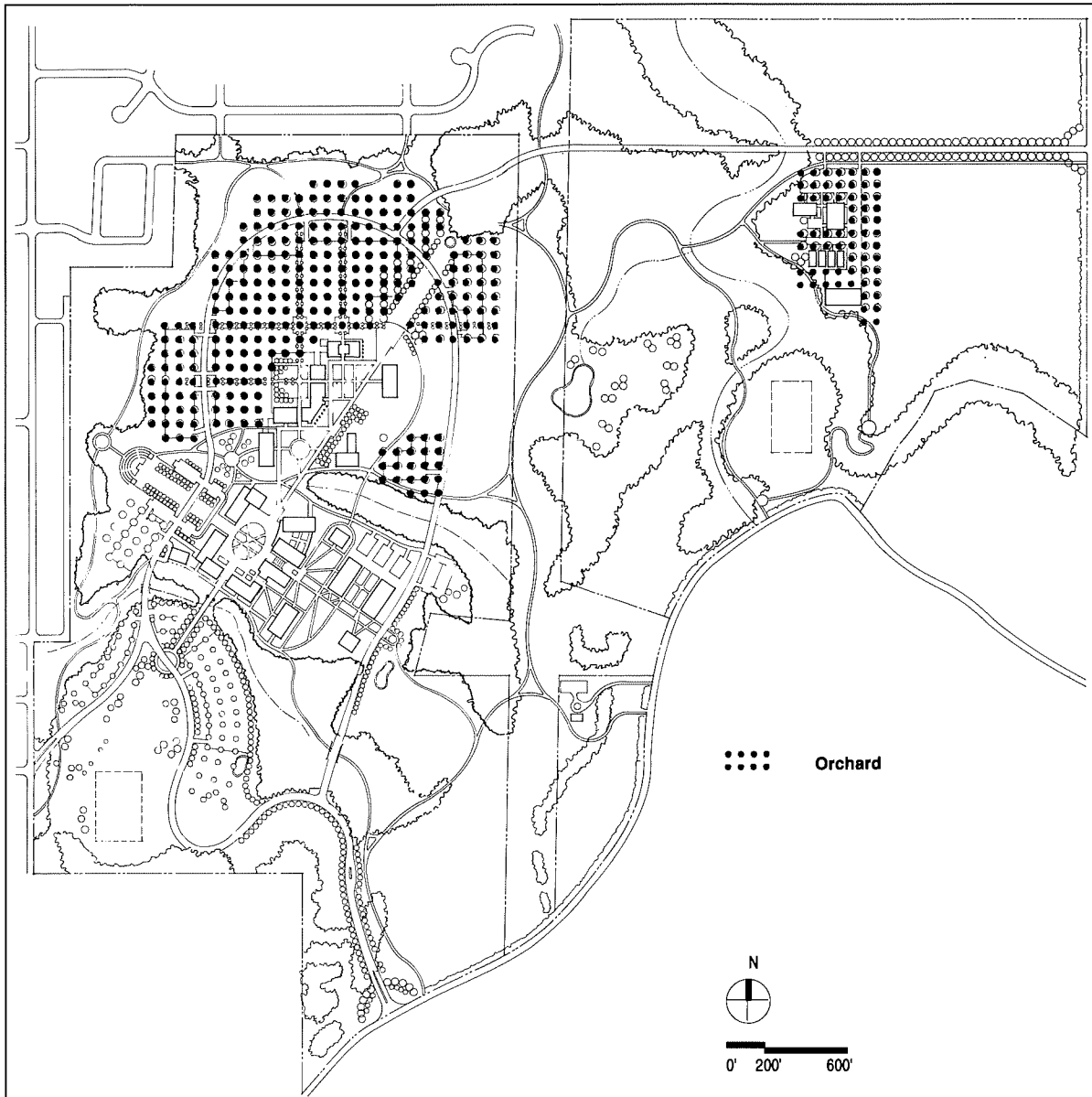
The orchard will screen all parking areas and extend into adjacent open spaces. The grid will be dimensioned to accommodate parking spaces and driveways efficiently. It will also accommodate direct footpaths between parking areas and campus buildings. The planting pattern should be continuous where possible and of sufficient size to make a strong visual statement. The intent is to integrate the campus core and the necessarily extensive parking facilities into a coherent landscape composition.

Guidelines

- Orient the orchard grid to the points of the compass and maintain consistency in spacing.
- Establish a pattern consistent in spacing with parking requirements. Where trees are planted in future parking areas, subgrades for the parking should be established prior to the planting of trees.
- Plan for frequent, direct, and safe footpaths between parking lots and campus buildings.
- Avoid fragmentation of the orchard.
- Select broad-spreading, high-branching deciduous trees known for longevity. More than one species may be used, but each species should be planted in large blocks.
- Select tree species to minimize falling limbs, sap deposits, and other characteristics undesirable for parking areas.
- Plant the entire orchard during the early stages of campus development to maintain consistency in age.
- Consider neighborhood views in the selection of species and in the placement of trees.

The parking orchard will screen all parking areas and extend into adjacent open spaces. It will include frequent and safe footpaths leading directly to the campus core.





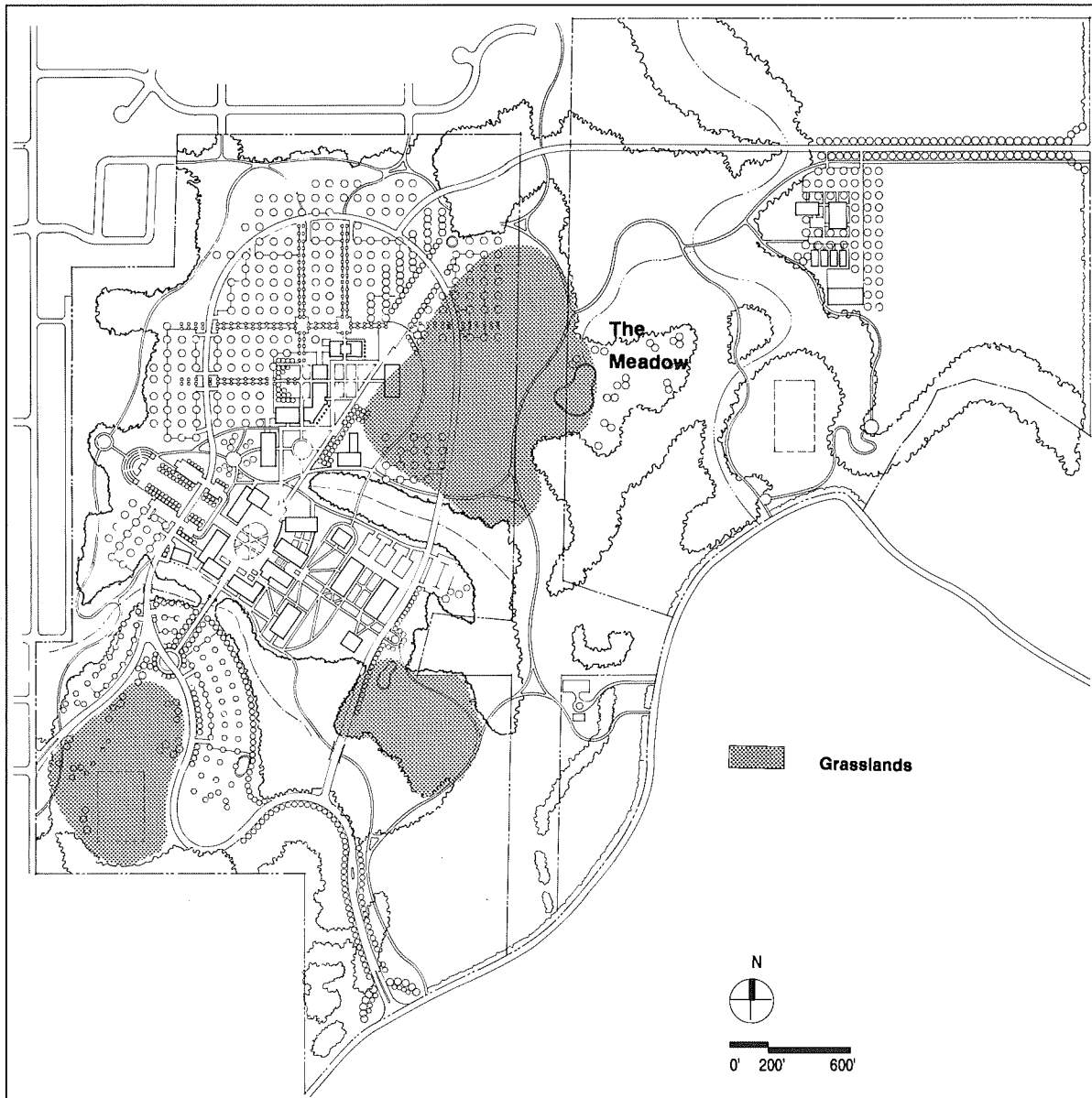
The parking orchard will organize outdoor spaces adjacent to the campus core. It will integrate the extensive parking areas with the rest of the campus and provide screening.

Meadow

A prominent feature of the campus site is the grassland on the western half of the property, upon which the main campus will be built. The expansive grassland provides a dramatic sense of openness and spectacular views of the Cascades, characteristics of the site that should not be lost when the campus is built. Significant portions of the grassland should be preserved. The primary area to be retained is a large meadow that will serve as a foreground to natural woodlands east of the campus core. The intent is that the view from the campus core will remain largely unchanged for generations. The meadow should be large enough to allow expansive views and to suggest a rural character. Campus development should not infringe on the meadow. Existing woodlands will border the meadow on three sides, forming a distinct edge. Additional grasslands will be preserved in other areas of the site adjacent to the campus core.

Guidelines

- Reserve an open meadow between wooded areas and the campus core.
- Preserve views from the meadow.
- Preserve any existing native grasses in the meadow.
- Mow the meadow regularly but infrequently.



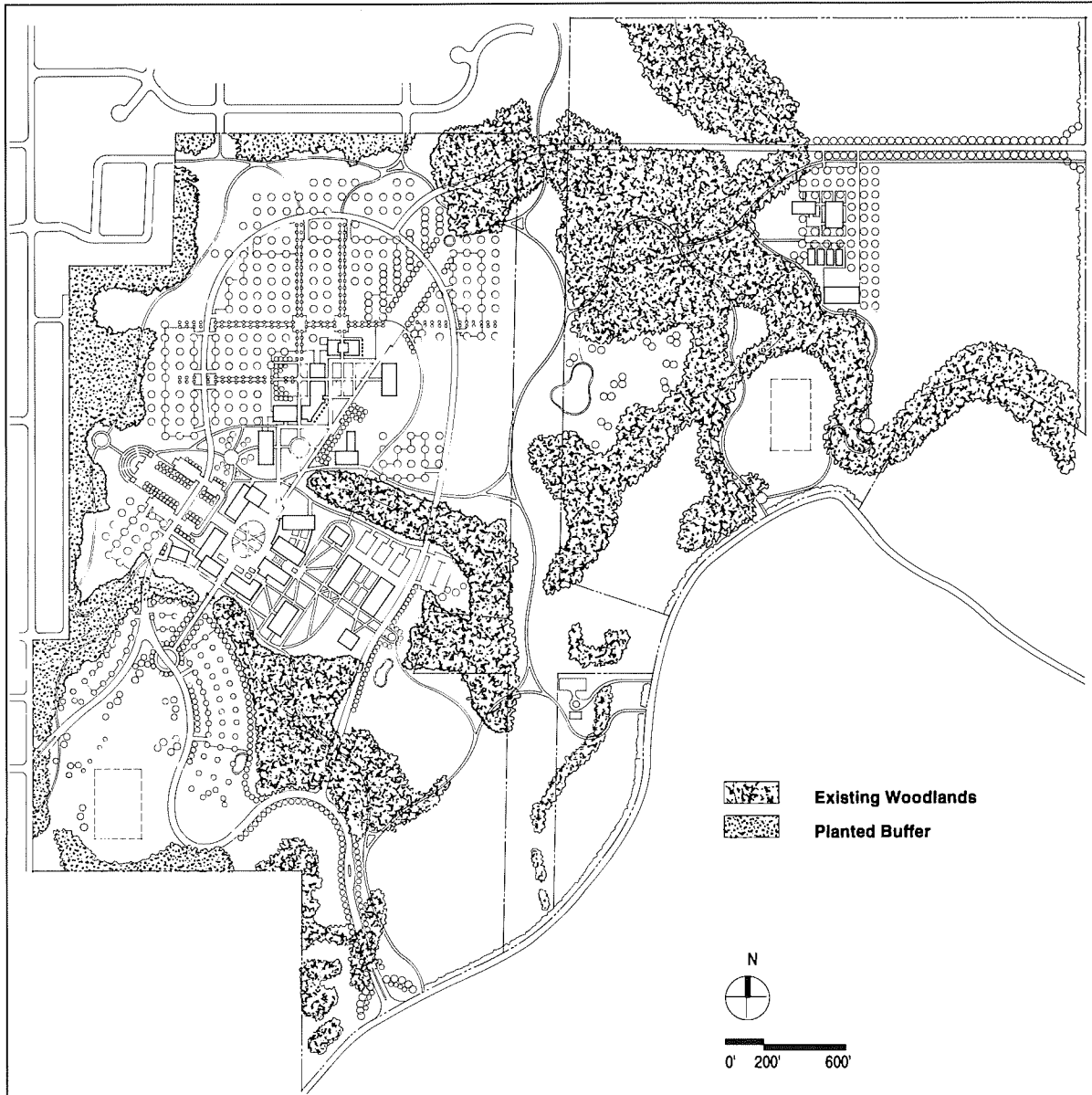
The large meadow and additional, smaller grasslands will form a foreground to existing woodlands, preserve views, and maintain the openness of the campus site.

Woodlands

Existing woodlands contribute much to the unique character of the site, and therefore will be preserved. Woodlands are both an educational and ecological resource, and will also provide a remarkable backdrop for the campus. They contrast sharply with adjacent grasslands, defining the edges of the grasslands and giving form to open areas of the site. Woodlands will be extended along the northern and western boundaries of the site with small trees and shrubs, forming a continuous edge for the campus. This edge will unify the foreground meadow, the orchard, and the campus core, at the same time serving as a buffer between the campus and adjacent residential areas. Plantings should be configured to preserve existing views of the distant mountains from adjacent residences.

Guidelines

- Preserve existing woodlands on the campus site.
- Select and plant various species of trees and shrubs along neighborhood boundaries to maintain privacy without obstructing views. Wooded buffers should appear natural and vary widely in depth.
- Buffers along residential boundaries may vary in character, but should always maintain a cohesive appearance and provide adequate screening for neighbors.
- Configure wooded buffers so they are not perceived as barriers.
- Use low-maintenance and primarily native species for all campus edge treatments.



*Existing woodlands will be preserved as an edge for the campus core.
The woodlands will be extended to form low landscape buffers adjacent
to residences.*

The WSU Vancouver campus will offer programs in a variety of disciplines, emphasizing interdisciplinary cooperation. It is therefore important that buildings be arranged to facilitate interaction among disciplines. At the same time, each discipline must retain its own identity. Over time, the combination of uses in buildings or clusters of buildings will change, and new affiliations will develop. The campus layout must anticipate and accommodate this circumstance.

The extensive campus site will allow for a humanly-scaled density of development, as at the Pullman campus. Open spaces will be organized as components in a cohesive landscape system that includes neighboring properties and sensitive riparian areas. Both incidental views and formal view corridors will connect campus open spaces to surrounding areas, reinforcing links between the campus and the community.

4

Building Treatments

Landscape Treatments

Hierarchy of Open Spaces

Building Clusters

Linking Buildings to Open Spaces

Outdoor Meeting Areas

Recreational Facilities

Public Art

Viewpoint

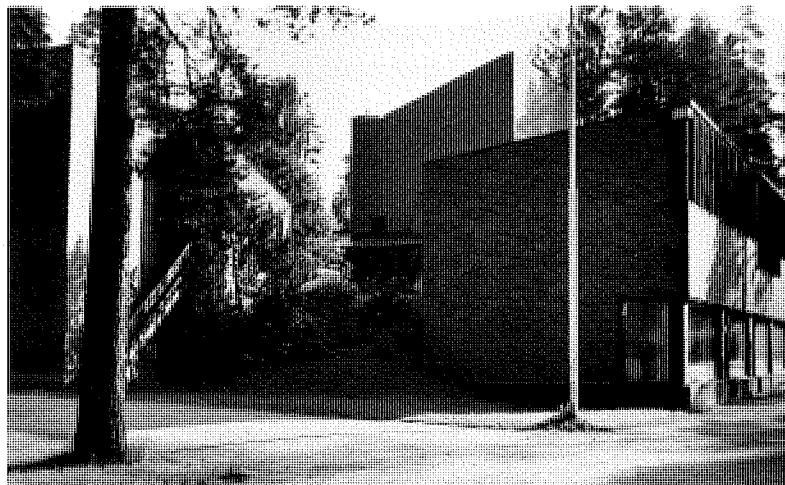
Building Treatments

Architecture throughout the campus should share a consistency of design that can accommodate different building types. Architecture should reinforce the image of the campus as a permanent seat of learning that serves the citizenry of southwest Washington. The intent is to create design continuity among campus buildings through a consistent and harmonious use of materials, massing and detailing. In addition, buildings should be sited and scaled to give the campus a feeling of intimacy and friendliness, at the same time respecting topographical conditions and views. Buildings need not conform to a rigid stylistic format or palette of materials. Instead, they should be designed to be compatible with other buildings, contributing to a unified campus. Architecture should express a character appropriate to the Pacific Northwest and should reference the parent institution at Pullman.

Guidelines

- Design buildings to reflect human scale and habitation in their components and massing.
- Design buildings to respond to adjacent topography.
- Design and site buildings to be sensitive to both distant and nearby views. Campus buildings should respect the views of nearby private residences.
- Use building materials that suggest permanence and dignity, and that are appropriate for the Northwest.
- Use building materials that create a fine texture. These materials may be used throughout a building or in selected areas as accents.
- When adding new buildings to the campus, use materials, colors, and massing to complement adjacent buildings and the campus as a whole.
- Design buildings to contribute to a visually interesting campus roofscape. Roofs should conceal mechanical equipment and be designed with views from up the hill in mind.
- Design buildings that interact with their environments to conserve energy and to create comfortable conditions for habitation. When siting and designing buildings, consider factors such as orientation to sunlight, orientation to prevailing winds, and views from the building. Use deciduous trees to control sunlight and solar heat gain in the summer.
- Connote an affiliation with the Pullman campus through the appearance and scale of buildings.

Buildings should create a unified campus through a consistent and harmonious use of materials, massing, and detailing.



Landscape Treatments

The campus will harmoniously combine existing site features with new structures and plantings that reinforce the basic organization of the campus. Campus landscape design should be compatible with its immediate context, and it should convey a Pacific Northwest character. All areas should be designed to receive a level of maintenance appropriate to their uses. Plantings requiring a lower level of maintenance will generally be preferred over higher maintenance plantings, except where a particular use or a prominent location justifies higher maintenance. All plants should be hardy and appropriate to the Northwest climatic conditions and microclimate conditions particular to the site. Plants should be disease- and pest-resistant, and strong-growing in structure and habit.

Landscape treatment near buildings should be ornamental in nature. Ornamental landscapes are lawn, tree, shrub, and ground cover areas with permanent underground irrigation systems. These areas will require a higher level of maintenance than areas more distant from the campus core. Measures such as mulch application, close spacing of ground cover, and mechanical or chemical treatment may be required for weed control. Plant materials selected should be a mixture of natives and exotics. All natives should have ornamental characteristics and all exotics should be reliably hardy and require a reasonably low level of maintenance. Mowed lawns should be provided in the campus core anywhere light foot traffic might be expected or desired. Planting design should emphasize building entries, screen service areas, and avoid creating blind corners or opportunities for concealment.

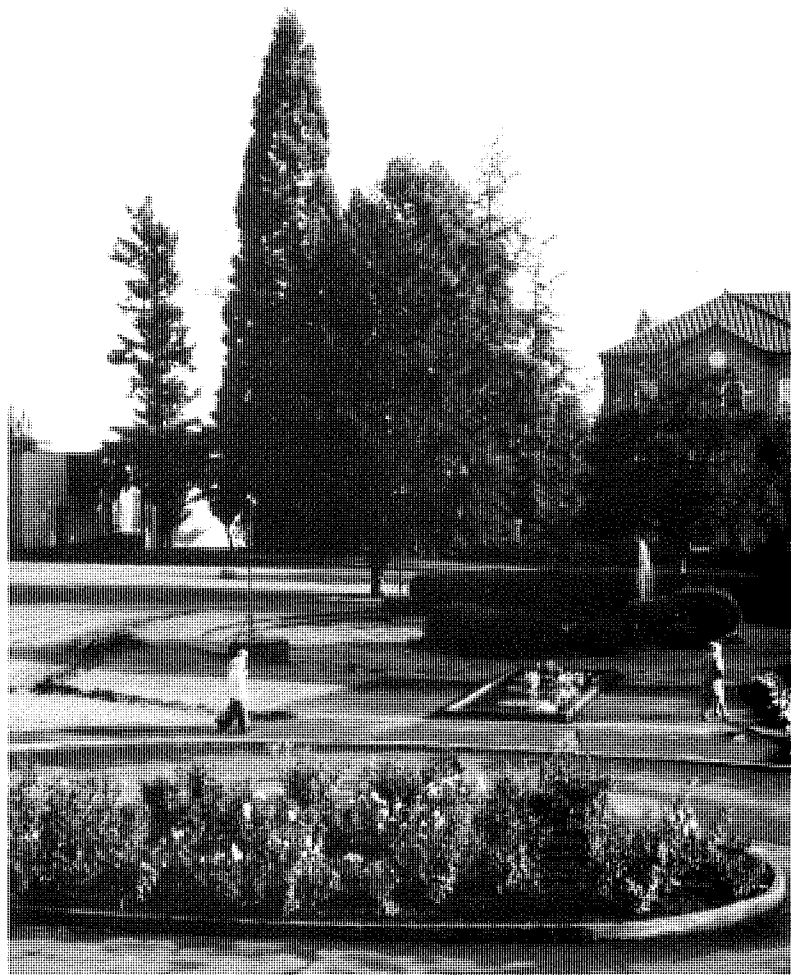
Site furnishings such as bicycle racks, benches, trash containers, ash urns, bollards, and planters should be provided throughout the campus wherever appropriate. They should create a unified theme with matching materials, textures, styles, and colors. Outdoor furniture should conform with accepted WSU standards. All ornamental landscape areas should have permanent automatic underground irrigation systems. In addition, other areas may require temporary irrigation systems for establishment of plant materials. Irrigation should be centrally controlled, with filtered water coming from on-site sources such as wells or detention ponds.

While no formal arboretum will be created, the campus itself should be regarded as such. It is expected that over time the campus will have a substantial number of specimen trees and shrubs in its collection. Some areas should be designated for arboretum plantings, but any tree planted on the campus will be a specimen in the collection. It is important to remember that the campus is first and foremost a campus and that arboretum characteristics are secondary; all tree selection and placement must be subject to the overall landscape guidelines.

Guidelines

- Use low-maintenance and environmentally-sensitive landscape design,
- Allow the natural landscape to penetrate the campus where appropriate.
- Use appropriate landscape transitions to integrate the campus with its surroundings.
- Use native or non-native but 'reliable' materials in ornamental landscapes.
- Avoid plants with brittle branches, messy seed pods, aggressive root systems, and weeping habits in the campus core and the parking orchards. Avoid plants that are known allergens.
- Use native plants adjacent to natural areas.
- Do not plant lawns in areas with slopes exceeding 25%.
- Maintain accurate records of all trees planted. Provide permanent markers on specimen plantings.
- Select durable site furnishings constructed of vandal-resistant materials. Secure all site furnishings.
- Design irrigation systems to provide adequate water pressure and to accommodate future expansion.

The campus landscape will harmoniously combine existing site features with new structures and plantings, reinforcing the basic organization of the campus.



Hierarchy of Open Spaces

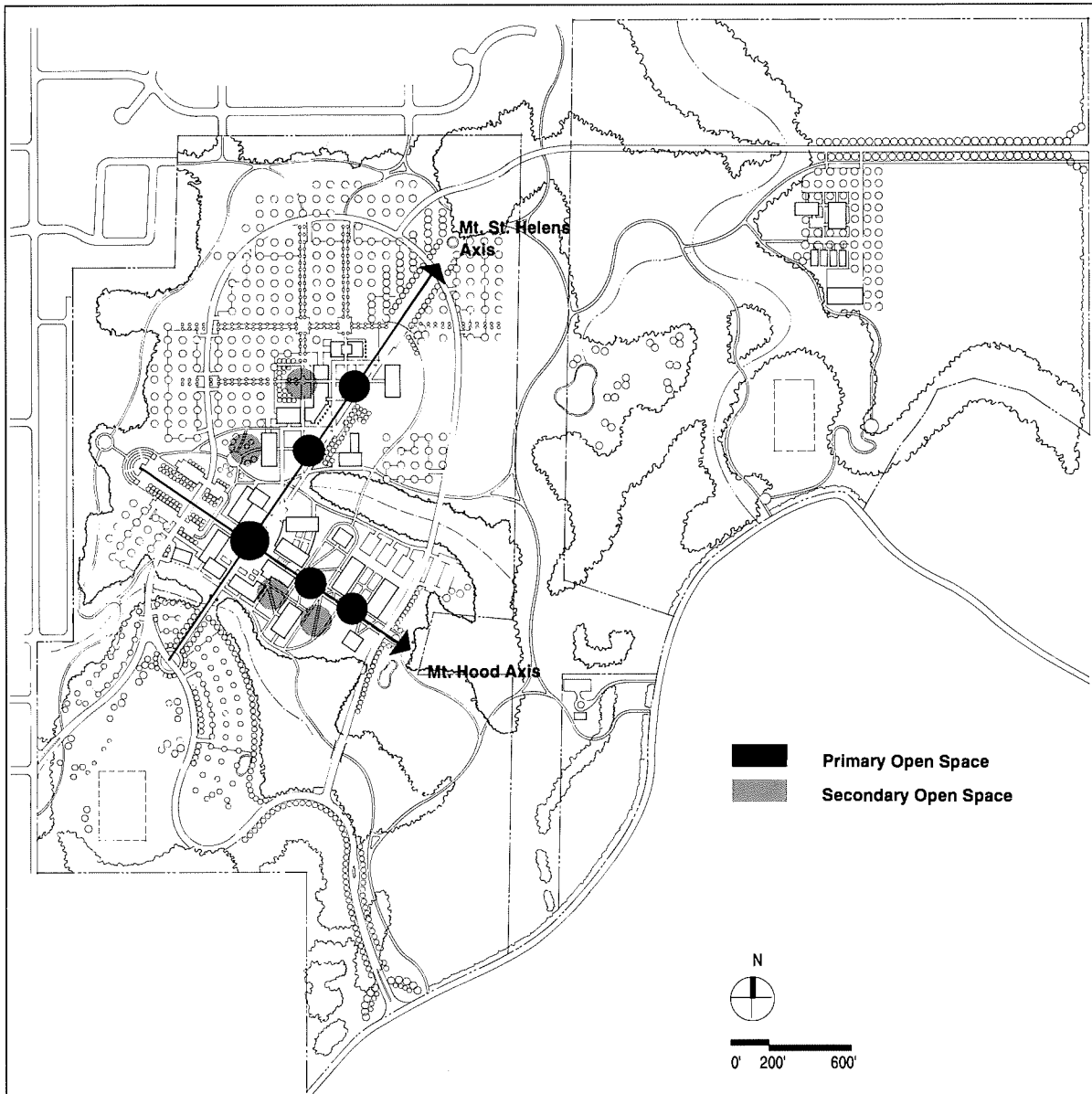
All constructed open spaces will be part of a hierarchical system defined primarily by scale and intended level of use. The primary open spaces will be the Campus Center plaza and the two view corridors that intersect at the plaza. The Campus Center plaza will be the focal point of the campus; no other space within the campus core should diminish its importance.

A variety of secondary open spaces will complement the Campus Center plaza and the two axes. The secondary spaces will provide areas suited to small gatherings, studying, or solitary reflection. Many of these spaces will be located within building clusters. Secondary spaces should have clear relationships with the primary spaces, but they should be of a smaller and more intimate scale. All open spaces should be interconnected.

Guidelines

- Design and furnish open spaces in a manner appropriate to their importance in the hierarchy. The most important spaces will be the Campus Center plaza and the view corridors, followed by the secondary open spaces.
- Consider the relationships between primary and secondary open spaces. While a degree of visual connectivity is desirable, the secondary spaces should be defined as discreet entities that are subordinate to primary spaces.
- Connect all open spaces with a network of pedestrian pathways as components of an open space system that extends across the entire campus and beyond.

Hierarchy of Open Spaces



51

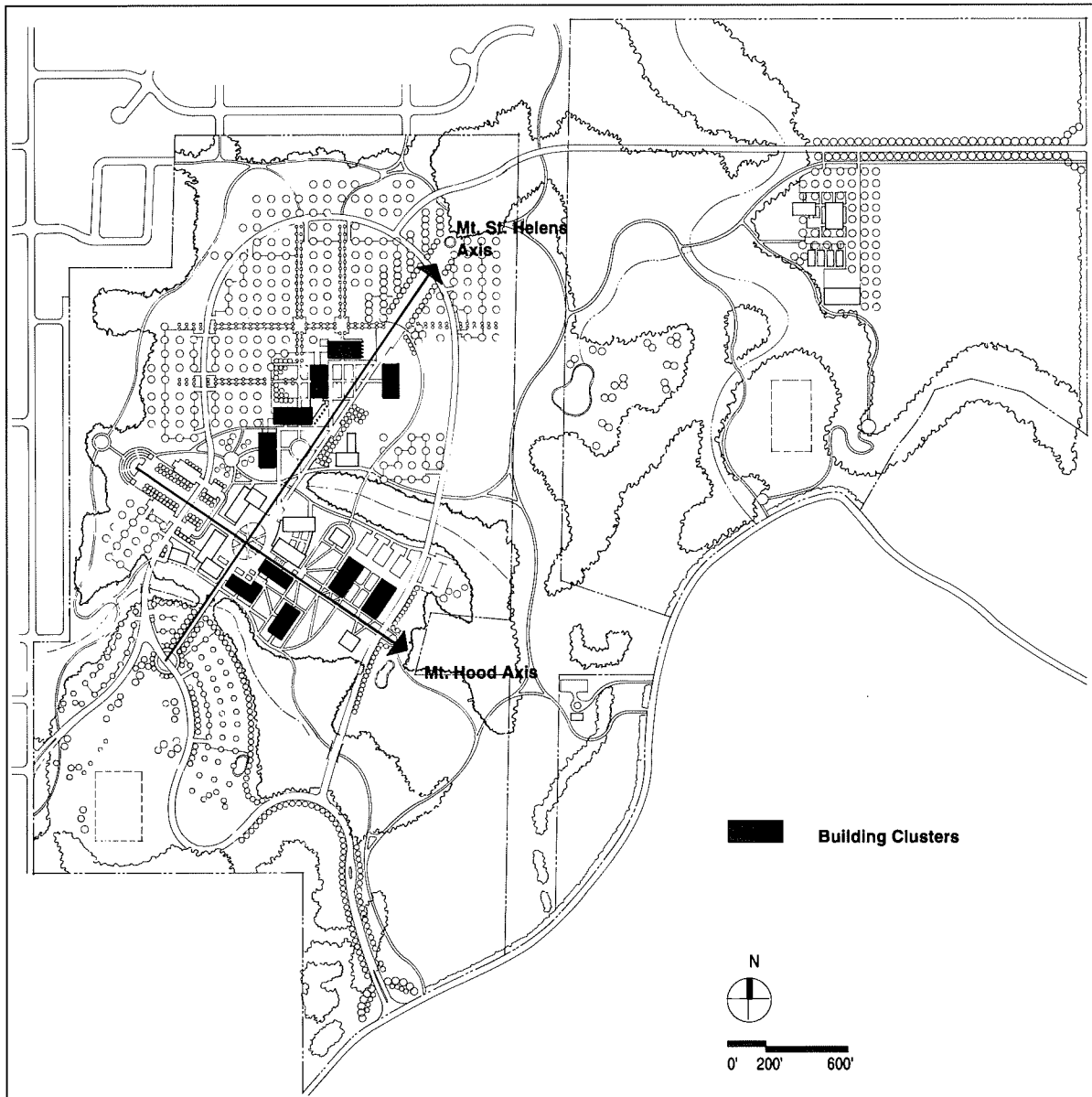
All constructed open spaces will be part of an interconnected system. Secondary open spaces will connect to the primary axes, but will be subordinate to both the axes and the Campus Center.

Building Clusters

A basic planning unit of the campus will be the building cluster. Buildings should be grouped to reflect curricular overlaps and relationships, forming shared open spaces. Clusters should have an internal logic, but they must also relate to one another and to the primary campus axes. In general, building clusters should be configured to form the edges of the two major view corridors, and their primary orientation should be toward those corridors. The clusters should also be linked to one another via walkways, shared open spaces, or shared buildings. The goal is to accommodate changing academic programs within an interlinked configuration of buildings.

Guidelines

- Configure building clusters to strengthen the edges of the primary view corridors.
- Design multi-directional buildings rather than buildings with traditional fronts and backs. The architecture should acknowledge multiple directions of arrival, including arrival from parking lots.
- Consolidate service areas for groups of adjacent buildings and segregate them from principal pedestrian routes.
- Design adjacent building clusters to share facilities or to overlap with one another. If clusters are discrete, create usable open spaces between them.



Building clusters, the basic planning units for the campus, may be developed in a variety of configurations along the two view corridors. Areas for social activity within each cluster should be connected to pedestrian routes.

Linking Buildings to Open Spaces

The clustering of buildings should go beyond a mere adjacency of buildings. Clusters instead should be configured to create inviting linkages among buildings and their occupants. Outdoor spaces should link with building entries, promoting interaction among the users of adjacent buildings.

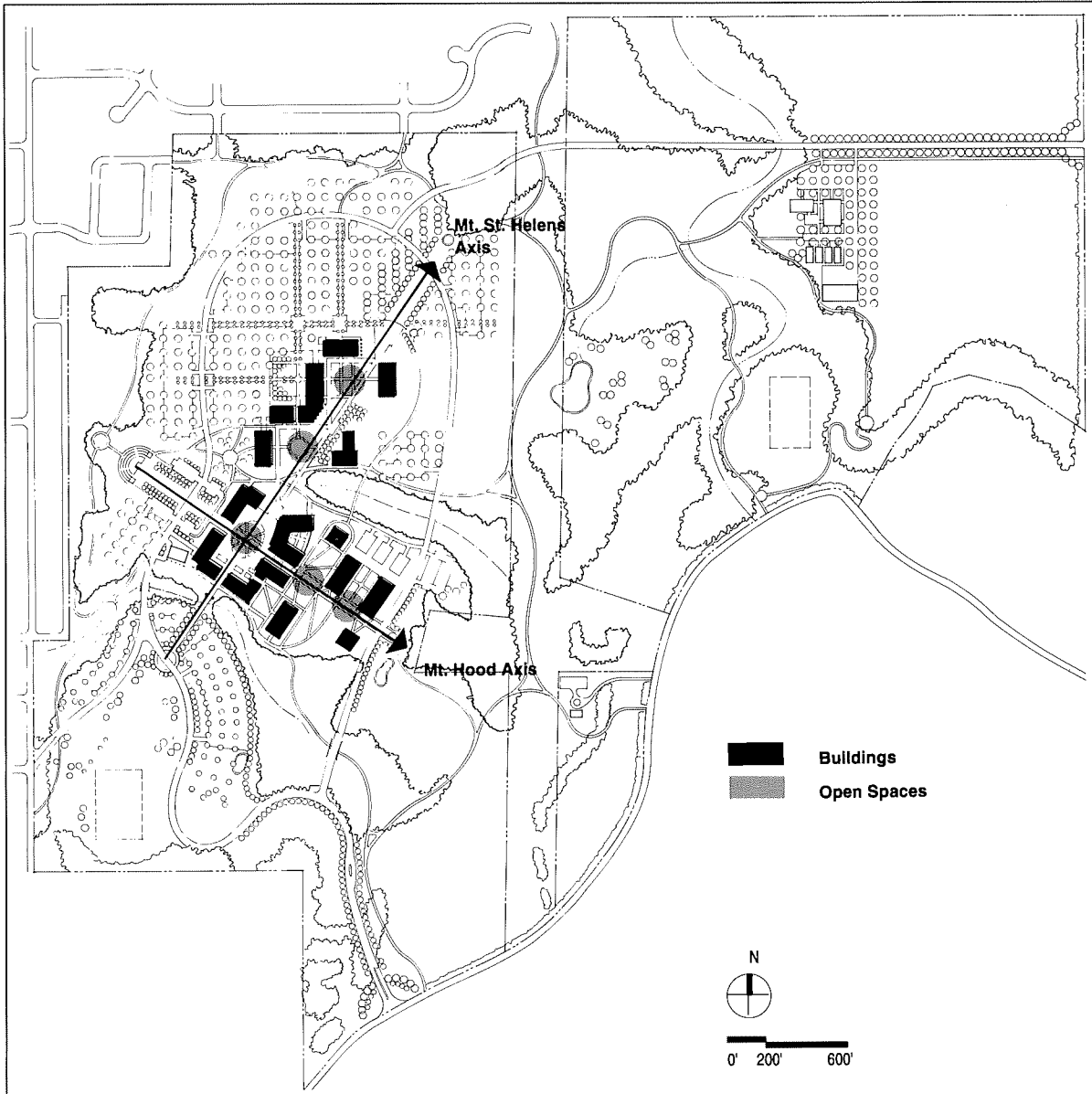
Open spaces at building entries serve a variety of social functions that vary with building use. An entry area is a transitional space. It is a place to dismount a bike, to extinguish a cigarette, or to discard a paper cup. It is a place to close an umbrella or to meet a classmate. All open spaces adjacent to buildings should be designed to accommodate such uses without compromising circulation into or out of the building. Outdoor entry spaces should be treated as extensions of building interiors. They should be inviting spaces that visually enhance the building entrance.

The function of a particular building will influence the design of its entry spaces. Libraries or large lecture halls, for instance, may be used by members of the community who are unfamiliar with the campus. In such cases, entry areas should be easily identifiable. Some entry spaces may also be used for special functions or ceremonies, in which case they should be designed to accommodate formal occasions. Finally, an entry space should reflect the importance of the building with which it is associated. Artwork, special landscaping, shelter, or other amenities may be used to enhance the entryway of an important building.

Guidelines

- Provide a variety of formal and informal outdoor spaces shared between buildings. Use open spaces to link buildings rather than to separate them.
- Provide a secondary open space within each building cluster to unify activities and to serve as an entry area for the cluster.
- Anticipate social uses of spaces near buildings in all weather conditions, by day and by night.
- Provide exterior spaces at building entries appropriately scaled and furnished to complement interior uses.
- Configure building entrances so that the most public interior spaces of the building become associated with outdoor areas. All building entrances should open onto an appropriately-scaled space. Most should relate to the view corridors.
- Locate bike racks, benches, trash containers, and ash urns at each major building entry.
- Locate entrances to adjacent buildings in close proximity to one another. Entrances should be vestibuled with exterior covered protection.
- Provide outdoor spaces with amenities that will promote small gatherings. Amenities may include steps, benches, tables, low walls, and water features. Also provide secluded outdoor spaces for studying and reflection

**Linking
Buildings to
Open Spaces**



Open spaces should link buildings and accommodate social interaction at building entrances.

Outdoor Meeting Areas

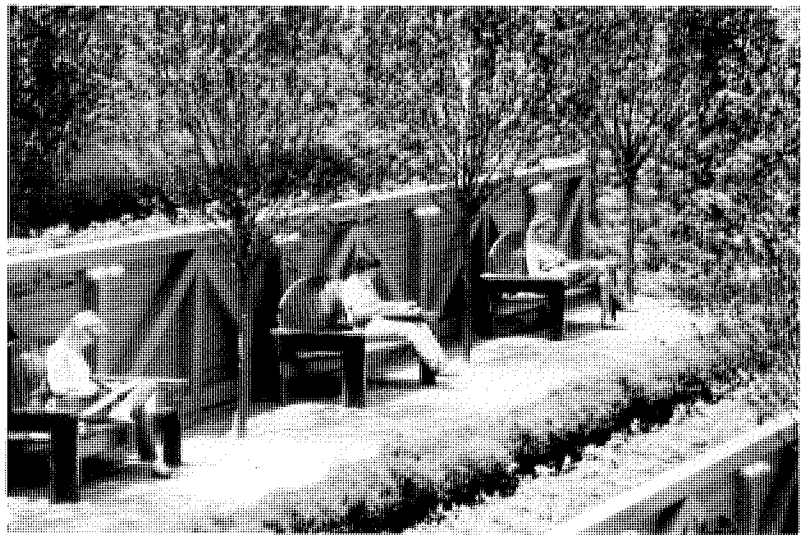
Outdoor areas for both formal and informal meetings will enhance the academic and social environment of the campus. Such outdoor spaces may be used for eating, for class meetings, for discussions, for socializing. They should be located in accessible areas to facilitate interaction among students and faculty. In some cases, outdoor meeting areas with secured access may be associated with a particular building, such as the child care center or the library. In all cases, the goal is to provide pleasant environments that will bring people together.

An amphitheater will be located on the Mount Hood axis near the campus arrival point. Its purpose is to provide a vantage point, a special place for study and instruction, and, occasionally, a place for formal ceremonies or performances. The amphitheater should be a popular and identifiable feature of the campus landscape.

Guidelines

- Provide seating areas for informal meetings adjacent to academic buildings or within building clusters.
- Provide areas for outdoor dining adjacent to interior dining spaces.
- Provide outdoor classrooms in quiet areas adjacent to classroom buildings. Arrange outdoor classrooms in an amphitheater formation with seating space for an instructor facing seating spaces for thirty to forty students.
- Protect outdoor meeting areas from the wind, and provide opportunities for seating in both sun and shade.
- Provide appropriate access control for secured outdoor spaces associated with buildings.
- Scale and furnish all spaces in a manner appropriate to their uses. Design spaces so that detached furnishings can be secured when supervisory personnel are not present.
- Provide adequate and convenient storage space for outdoor furnishings and movable equipment.
- Provide an amphitheater with a formal seating capacity equivalent to the largest lecture hall on campus. Align the stage with the Mount Hood axis. Design the amphitheater so that secured access is possible.

Outdoor meeting areas will be located and designed to encourage interaction among students and faculty.



Recreational Facilities

Informal recreational fields will be located in the level area at the southwestern corner of the site. Recreational fields will be designed to accommodate a variety of sports, with soccer, football, baseball, and softball the most probable uses. The main recreational uses are anticipated to be intramural sports, club sports, and informal activities. Community use of recreational facilities is also expected. Fields should be as flexible as possible with removable fixtures such as football goalposts and soccer goals. Bleachers and night lighting are not necessary.

Bike paths and pedestrian trails will serve recreational functions in addition to providing access to and across the campus. Trails that do not connect directly with off-campus streets or county trails will be planned to provide diverse recreational loops that display the natural features of the site. At least one wheelchair-accessible route will connect all campus facilities.

Guidelines

- Orient recreational fields north-south.
- Provide irrigation.
- Design recreational fields to withstand heavy use even in rainy months. Pay particular attention to drainage and slope.
- Provide drinking fountains, benches, bike racks and trash containers at field sidelines.
- Connect sideline areas to the campus bikeway system.
- If a baseball/softball field is provided, it should not share a skinned infield with soccer and football fields.
- Provide basketball courts and tennis courts near the recreation fields, but away from noise-sensitive uses.
- Provide soft-surface trails for jogging and hiking. Construct an exercise course along the trails. Place benches in strategic locations.

PUBLIC ART

Public Art will be esthetically important for the campus, but it will also be a valuable educational resource. Its scale, placement, and visibility should in every case reinforce the principles of campus organization and building expressed in the preceding sections. Collections are expected to be modest at first, but to grow in size and diversity as the institution matures. Locations for artworks cannot be anticipated in most cases, but special opportunities for integrated artwork may be identified with each phase of campus development. Focal points on the campus grounds and within buildings and building clusters should be considered as potential sites for art pieces.

Guidelines

- Coordinate artist involvement, artwork selection, and artwork installation with the requirements of the Washington State Arts Commission.
- Integrate public art into selected indoor and outdoor locations.
- Involve artists in early planning and design stages in order to maximize the integration of public art with building design and site development.
- Use regional and local themes in selecting public artwork, when appropriate.

VIEWPOINT

A viewpoint will be located on the Mount Hood axis above the amphitheater. From this vantage point it will be possible to view not only Mount Hood, but also Mount Saint Helens, Mount Adams, the foothills, the Salmon Creek basin, and most of the University campus. The viewpoint should be sited at a high enough elevation to take advantage of all these views, but should not be constructed too close to the residences on NE 30th Avenue.

Guidelines

- Provide hard surface paving, benches, seating and low level, non-glare lighting.
- Connect the viewpoint to bikepaths and pedestrian walkways.
- Provide a trail to the viewpoint that is accessible to the disabled.

5

Circulation System

Transportation Management

Entrance & Orientation

Pedestrian & Bicycle Access

Public Transit

Off-Site Improvements

Roadways

Parking Facilities

Service Areas

Nighttime Access

Access for the Disabled

Emergency Access

Control of Access

Panoramic views from the campus and its two axes will symbolize the connection between WSU Vancouver and the regional community. The campus will be designed to complement this symbolic connection with physical connections. It will be inviting, projecting a sense of openness and accessibility to the surrounding community and the region. In order to be fully accessible, the campus must also be safe and secure.

Because the WSU Vancouver campus will be non-residential, it is important to ensure that students can travel to and from it conveniently. The campus will be easily accessible by foot, bicycle, automobile, and transit. It will be accessible to bicycle and pedestrian traffic from all directions, but particularly from adjacent developed areas. On-campus vehicular routes will connect to nearby freeways and major streets, but access routes should clearly favor modes of transport other than single-occupant automobiles. Improvement of some off-site streets will be necessary to accommodate transit and to satisfy increasing traffic demands in this part of Clark County, including those of the WSU campus.

The campus circulation system will function at several levels: it will link the campus to the community; it will link the campus core to the periphery; and it will link the buildings of the campus core to one another. Pedestrian and bicycle routes will directly serve all buildings in the campus core, with automobile routes, parking, and separate public transit and service routes located on the periphery of the core. Pedestrian, bicycle, and automobile circulation routes will encircle the campus and connect the core to the campus edges.

Circulation System

Pedestrian, bicycle, automobile, transit, and service traffic will all be important to the proper functioning of the campus, yet each type of transportation has the potential to conflict with the others. The Master Plan clearly gives priority to transit, pedestrian, and bicycle travel over automobile travel. It accomplishes this by making the preferred modes of transportation the most convenient to use. The transit stop will be closer to the Campus Center than most parking spaces, and it will feed directly into the principal pedestrian routes along the Mount Saint Helens and Mount Hood axes.

The circulation system will be designed to reflect the function of each transportation mode on campus. A fine grained-network of footpaths will criss-cross the campus core, interconnecting all buildings and outdoor areas. Transit will run between the 29th Street entrance and a single stop at the Campus Center, though in the future it may cross the campus using two or three of the planned entrances. Automobile circulation on the campus will serve a drop-off point close to the Campus Center, and then access parking lots along the perimeter of the campus core. Service access to each building will be overlaid on the other circulation systems.

Some portions of the circulation system will be shared by different modes of transportation; other portions will be exclusive to one mode. Where different modes cross or share a route, there is a potential for conflict. Roadways and paths should be designed and routed to minimize conflicts without compromising the priorities outlined above.

Guidelines

- Construct a safe and convenient circulation network that is an integral component of the campus landscape.
- Funnel pedestrian and bicycle traffic to street crossings with adequate sight distances and appropriate traffic control.
- Restrict vehicular traffic in pedestrian areas to emergency, handicapped, and service vehicles.
- Provide transit routes and stops that give public transit priority over other vehicles.

Transportation Management

Transportation management will be an important complement to the campus circulation system. A series of transportation demand management (TDM) measures will be implemented to reduce the automobile traffic associated with campus development. A trip reduction program will be the primary TDM strategy. The intent of the trip reduction program is to reduce reliance on single-occupant automobiles as a means of access to the campus. The State of Washington Transportation Management Act requires that trip reduction programs be developed for all employers with more than 100 employees at a single site. Target goals for such programs include a 15 percent reduction in trips from the 1992 baseline by 1995, with additional reductions in future years. At full Phase I development in 1998, WSU is expected to employ more than 100 people on the Vancouver campus, so a trip reduction program will be required. The University intends to extend trip reduction programs to all campus users.

Guidelines

- Provide public transit to the campus and investigate progressive improvements to transit service.
- Develop and implement rideshare programs for all campus users.
- Manage auto parking on campus to encourage car pooling and to discourage off-campus parking.
- Encourage walking or bicycling as means of traveling to and from the campus.

Public Transit

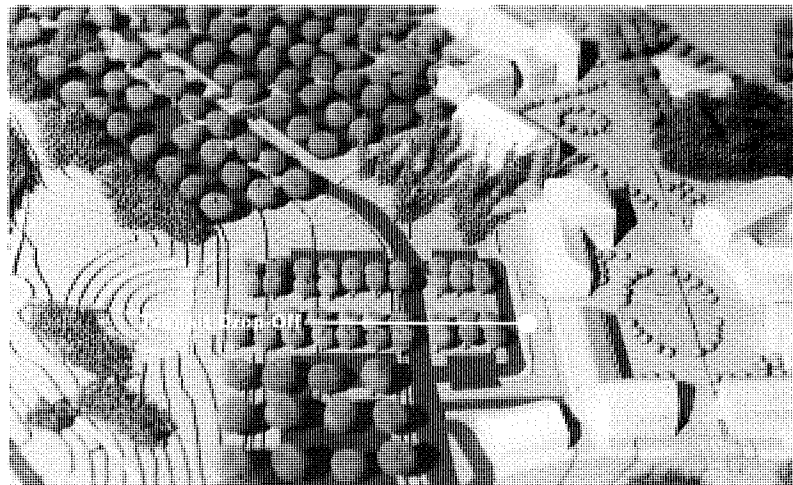
Public transit should be promoted as an attractive alternative to automobile use, with bus movement on the campus taking priority over automobile movement. One key to the success of public transit is convenience. Stops must be close to destinations. Service must be frequent and direct. Weather protection must be effective. Safety and the perception of safety must be ensured.

The initial transit route between the campus and Interstates 5 and 205 will be via NE 20th Avenue, NE 139th Street, and NE 29th Avenue. Other routes, including two-way service through the campus, are anticipated for eventual implementation. All transit improvements should be coordinated with C-TRAN. Bus routes must meet minimum turning radius and maximum slope requirements that are more limiting than requirements for automobile routes; roadways connecting the campus entrances to the stop at the Campus Center should meet these standards. Long-term planning should also consider the extension of light rail service to the campus.

Guidelines

- Design campus transit routes to meet minimum standards for bus access. Observe maximum grades, minimum turning radii, and weight standards.
- Design campus bus routes to meet bus operational requirements. Through routes are preferable to routes that terminate on campus. Provide layover space separate from bus stops.
- Construct a convenient transit station close to the Campus Center. If multiple campus stops are provided, stops should be as close to destinations as possible.
- Provide adequately-lit, secure bus stops. Bus stops should be flat and accessible to the disabled. Provide adequate seating, shelter and other furnishings as appropriate.
- Promote new bus lines to the campus from local colleges and major population centers in southwest Washington.
- Consider a possible route for future light rail service.

A transit stop and bus turnaround will be provided close to the campus center.



Entrance and Orientation

The entrances to the University will be the most conspicuous points of connection to the community. All auto, transit, bicycle, and pedestrian entries should convey an image of openness and accessibility, at the same time marking the campus boundary. The major entrances should also project an air of permanence and dignity. Entrance to the university should be a rich visual experience providing immediate orientation. A system of signage should supplement an implicit sense of orientation and identification imparted by the layout and the architecture of the campus. In addition, parking should be easy to find from the campus entrance.

The primary campus entrance will be on NE Salmon Creek Avenue just east of NE 35th Avenue. The road from the main entry will climb a gentle slope to an arrival point close to the Campus Center. The direction from the main entry to the campus core should be clear even without signage, and there should be no stops or turns required at intersections along the way.

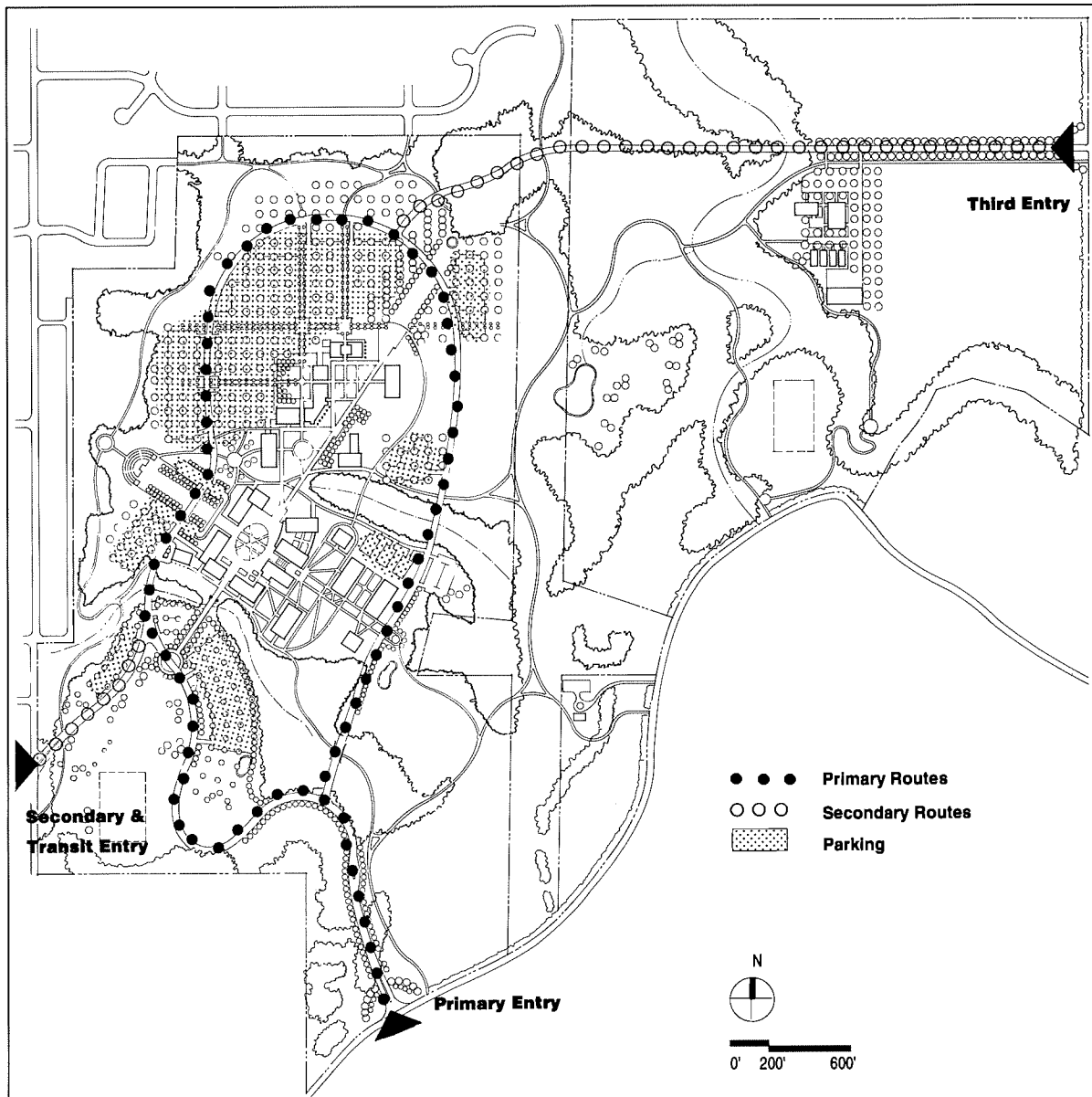
A second entrance at NE 29th Avenue will provide transit access to the campus core, primarily for buses using NE 139th Street. The configuration of this entrance will preclude direct access from the north to protect the Mount Vista neighborhood from increased traffic.

A third entrance will be built at NE 50th Avenue during phase II or III to provide access from the northeast. This entrance may initially serve only the Agricultural Research Facility that is to be located in the northeastern portion of the campus. A road will eventually cross Mill Creek to connect the northeastern entrance with the campus core.

Guidelines

- Design the main entrance as the major gateway to the campus.
- Minimize traffic impacts on the NE 29th Avenue residential district through the design of the main entrance intersection.
- Provide each campus entry with a permanent monument and landscape treatment appropriate to its context.
- Provide a comprehensive system of campus directional signage consistent with the system used on the Pullman campus.
- Configure lighting and signage so that those arriving at the campus after dark can find their destinations easily.
- Name important places such as the central plaza.
- Provide permanent landmarks at important places to endow them with a visual identity. Landmarks may be structures, landscape features, or view corridors.

Entrance and Orientation



65

The primary entrance to the campus will be located on NE Salmon Creek Avenue. A transit entrance will be provided off NE 29th Avenue, and a third entrance from NE 50th Avenue will access agricultural facilities in the northeastern corner of the property. This entrance will eventually connect to the loop road encircling the campus core. Campus entrances for pedestrians and bicyclists will connect to off-campus streets and trails at various places along the campus perimeter.

Washington
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September 1992

Pedestrian and Bicycle Access

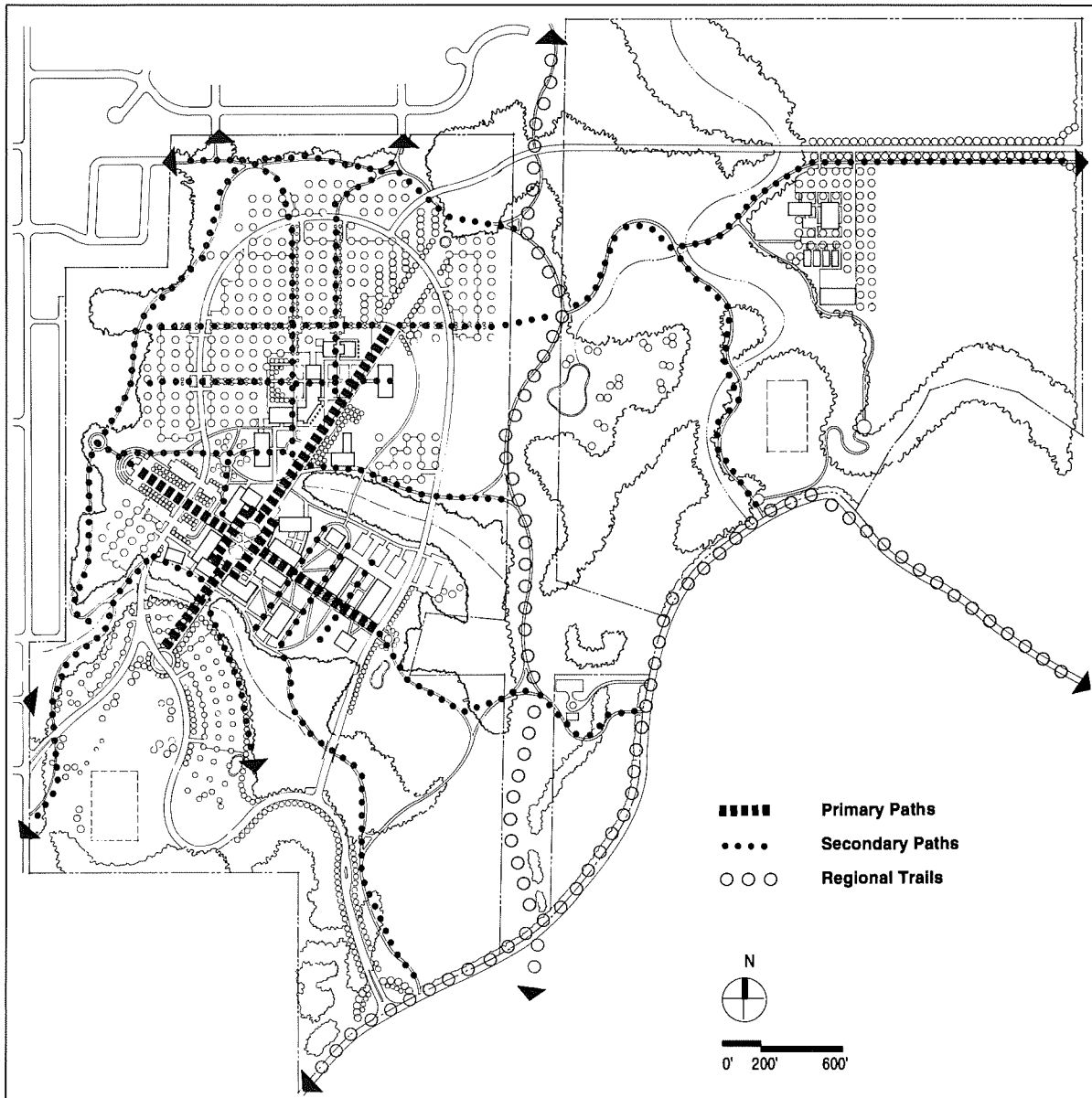
The campus will give priority to those on foot, recognizing this to be a safe and environmentally-responsible way to move around the campus. The campus core will be planned as a pedestrian zone, with the heart of the circulation system being the pedestrian streets aligned with the two view axes. Additional pedestrian paths will connect all areas of the campus to each other and to off-campus pedestrian systems. These paths will serve as both circulation routes and recreational facilities. Expected pedestrian traffic patterns should determine the layout of walkways, taking into account the locations of major pedestrian destinations. Walkways should follow the most direct routes between building entrances, transit areas, and parking lots, channeling foot traffic to crosswalks at street crossings. Walkways should be constructed of a variety of materials compatible with their locations and functions.

Bicycle use should be promoted as an alternative to automobile transportation. Recreational bicycle use should also be encouraged on the campus. Clark County anticipates that two regional, multiple-use trails will intersect at the campus site. The campus bicycle and pedestrian systems will connect with these regional trails. All bicycle paths should be designed to accommodate light traffic such as campus security and maintenance vehicles. Removable bollards or other devices should be used to control traffic.

Guidelines

- Develop campus pedestrian and bikeway systems. Wherever major conflicts are probable, systems should be separated.
- Construct paths with widths and materials that will accommodate expected uses. Paths adjacent to heavily-used buildings, for example, may need to be larger than usual. Add width to accommodate site furnishings, lights, and other amenities that are placed on walkways. Add width where walkways are adjacent to curbs or buildings.
- Integrate all pathways with site contours and other landscape features.
- Construct boardwalks where required to protect sensitive wetlands. Boardwalks need not be designed to accommodate vehicular traffic if alternate vehicular routes exist.
- Avoid indirect connections that encourage short-cutting.
- Anticipate future expansion of pathways, but avoid dead ends.
- Connect both pedestrian and bicycle systems to the proposed Clark County multiple-use trails.
- Provide convenient access to all adjacent neighborhoods.
- Provide secure and weather-protected bicycle racks at all major bicycle destinations.
- On bikeways, maintain sight distance clearances appropriate to design speeds for bicycle traffic.
- Provide bollards with lights or reflectors to prevent vehicular entry into pedestrian areas. Avoid the use of chains to connect bollards.

Pedestrian & Bicycle Access



67

Pedestrian and bicycle paths will serve the entire campus. They will also connect to off-campus pedestrian and bicycle systems, such as the Clark County regional trail system. The campus core will be the primary pedestrian zone.

Washington
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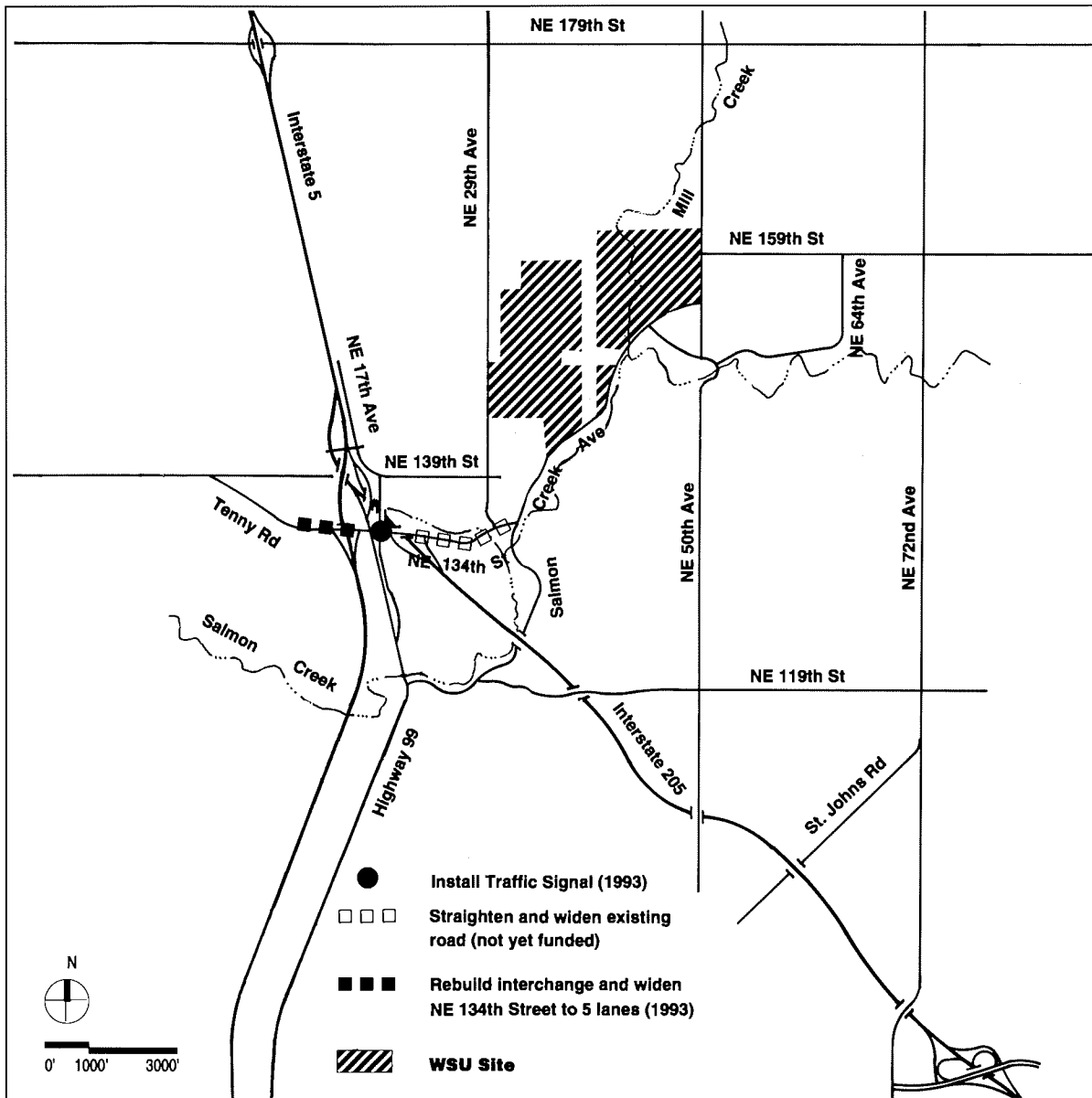
Off-Site Improvements

In order to provide convenient access, off-site routes to the campus must be direct, safe, and well-marked. Streets providing primary access to the campus should be widened and improved. Directional signage marking routes to the campus should begin at freeway exits and major intersections. The campus site is located one mile east of the Interstate 5-Interstate 205 interchange, one of the most heavily-traveled intersections in southwest Washington. Because some roads have limited capacities, this mile is the weakest link in vehicular access to the campus. A Regional Transportation Task Force is meeting with state and local agencies to discuss street, intersection, and transit improvements, including funding sources that could be used for the improvements. Roads being considered for improvement are NE Salmon Creek Avenue, NE 134th Street, NE 139th Street, and NE 29th Avenue.

Guidelines

- Develop a clear system of directional signage to guide motorists to the campus.
- Route campus automobile traffic to bypass residential neighborhoods. Where necessary, use traffic management devices to discourage use of residential streets.
- Provide on-street bike paths in accordance with the Clark County Trails Plan to link the campus to regional bikeways.
- Connect off-campus streets and trails with campus trails to encourage access on foot from all directions.
- Consider adding street trees or planted medians to streets providing primary access to the campus.

**Off-Site
Improvements**



Off-site improvements will be designed to provide access to the campus along NE Salmon Creek Avenue, NE 134th Street, NE 139th Street, and NE 29th Avenue.

Roadways

Roadways will provide vehicular access throughout the campus. The primary road will be a loop encircling the campus core and connecting to the campus entrance driveways. The loop road will provide vehicular access to all facilities, but its primary function will be providing access to the parking lots that serve buildings along the two axes. The loop road will cross the campus axes at four locations, with the axis emphasized at each crossing. The crossing near the west end of the Mount Hood axis will receive the greatest emphasis, because it will be the main arrival point at the Campus Center. View corridors should be maintained at axis crossings. Street trees may be planted along roadways where appropriate, but their placement should be coordinated with other campus landscape features.

Guidelines

- Provide direct, non-stop access from the main entry to the Campus Center.
- Design roads to encourage driving at appropriate speeds.
- Design roads and driveways to conform with the existing topography, minimizing cutting and filling, yet adhering as closely as possible to transit gradient and turning parameters.
- Maintain sight distance clearances appropriate to design speeds for vehicular traffic.
- Reconcile the placement of street trees with the geometry and spacing of the orchard. Orchard tree plantings should take precedent over street tree plantings.
- Do not place street trees in the view corridors.

Parking Facilities

Parking lots will inevitably be a conspicuous feature of the campus because of the large area of land they occupy. They should be located close to buildings, but must not compromise the convenience or safety of pedestrians, bicyclists, or transit users. Because they will be extensive, parking lots will be acknowledged as a major element of the campus landscape. A grid of shade trees, configured to accommodate parking efficiently, will integrate the parking lots with the campus and make parked vehicles less conspicuous. The trees will be a part of the larger orchard planting that will extend beyond the parking areas. Parking lots will also be terraced so cars are not obtrusive when viewed from above or below.

Parking lots will be located at the periphery of the campus core, primarily to the west of the Mount Saint Helens axis on both sides of the loop road. They should not be located in designated open spaces, such as the foreground meadow. Parking areas should be oriented to provide clear, safe, and convenient routes between parking spaces and campus buildings. Routes to and from parking lots should be designed for both day and night use.

Campus parking lots should be more convenient to use and more easily accessible than nearby residential streets, so that University users will be discouraged from parking off campus. The configuration of parking areas should facilitate future implementation of controlled access, segregated by user type.

Guidelines

- Provide convenient but inconspicuous parking.
- Design parking areas to accommodate the orchard tree pattern.
- Provide landscape buffers between roadways and parking lots.
- In order to break up the visual impact of continuous paved surfaces, terrace surface parking areas to conform with the natural topography of the site.
- Provide landscape buffers to screen all parking areas from the campus core, surrounding residences, and other sensitive viewpoints. The buffers should be dense enough to screen headlights, but should not enable personal concealment.
- Provide walkways to campus buildings. Walkways should be safe and convenient by day and after dark.
- Plan for the possibility of access control for parking areas.

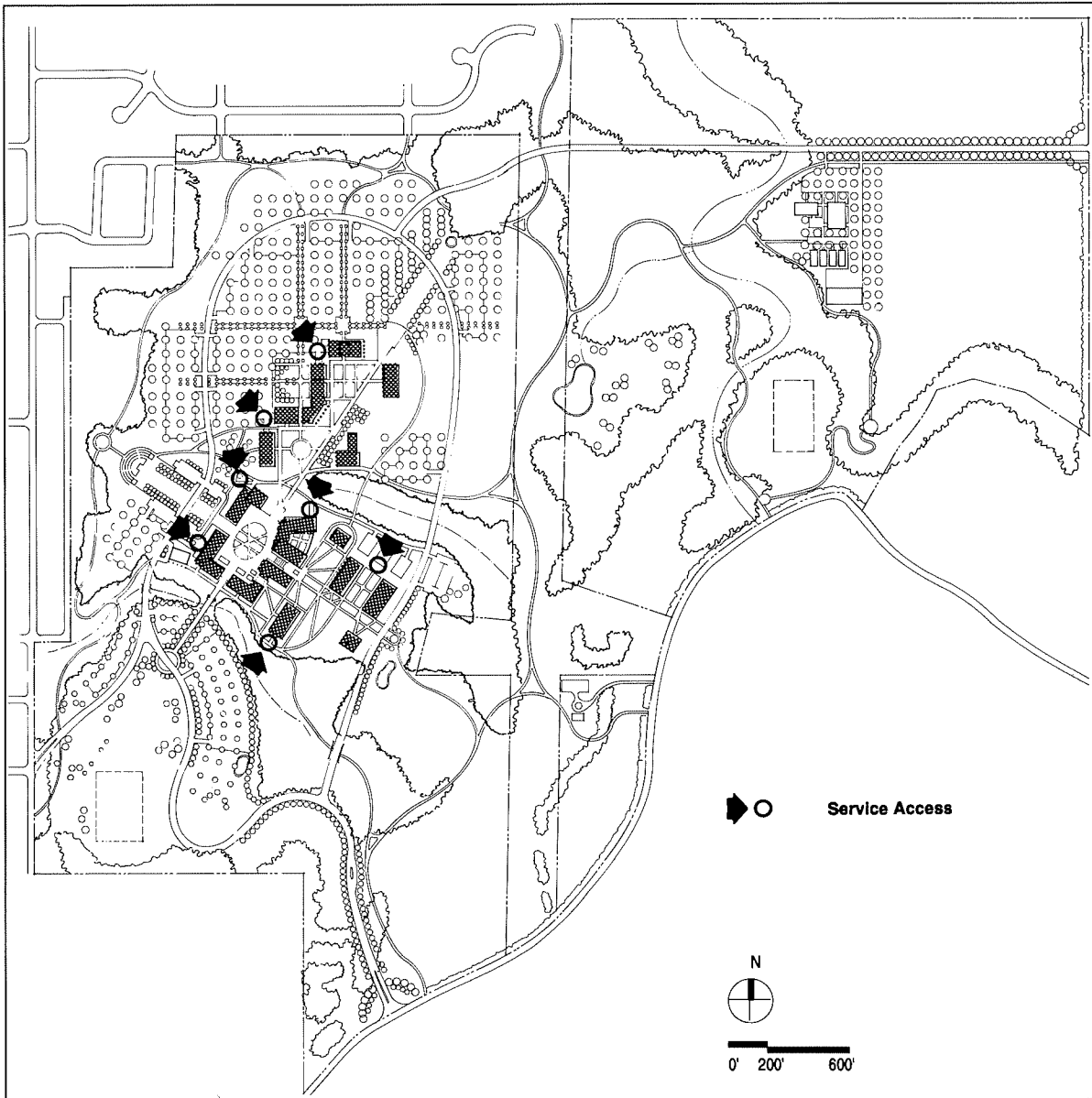
Service Areas

Service routes in the central campus should form an autonomous system, conflicting with other uses as little as possible. Service areas should be shared by neighboring buildings wherever possible, and they should be separated from pedestrian routes.

Guidelines

- Locate service roads and service areas so they do not create traffic hazards for other vehicles, pedestrians, or bicycles
- Locate service areas for convenient access by large vehicles, but minimize conflicts with views, building functions, classrooms, or other activities.
- Provide a fenced, paved yard for vehicular maneuvering, materials storage, and other uses adjacent to the central utilities plant.
- Use earth mounds and landscaping to screen visual problems associated with service roads and service areas.

**Service
Areas**



Service areas will be located along the periphery of the campus core. They will be designed to minimize conflicts with other circulation systems.

NIGHTTIME ACCESS

Many classes will be held in the evening to serve students who work during normal business hours, so the security and appearance of the campus after dark will be an important consideration in campus design. The campus should be both welcoming and safe at night. Plantings, lighting, and buildings should be designed to maximize safety, to provide orientation, and to create an inviting atmosphere after dark. The design and arrangement of lighting and signage should be coordinated to guide students around the campus. In addition to providing security, exterior lighting should make a positive contribution to the campus appearance. Lighting should create a nightscape that is not only safe, but also attractive and vibrant. This will require accent lighting in addition to the illumination of large areas.

Guidelines

- In the campus core and close to pathways, avoid creating dense plantings that may aid in concealment.
- Configure buildings and plantings to make all outdoor spaces visible to passersby.
- Provide appropriate lighting levels for streets, service areas, pedestrian paths, bicycle paths, building entrances, parking areas, and open spaces.
- Design a coordinated lighting system that unifies standards and luminaires for streets, walkways and parking areas. Install light poles in locations that are easily accessible for lamp replacement and maintenance. Coordinate tree plantings with light fixture locations.
- Provide accent lighting on buildings, monuments, artworks, trees, water features, flagpoles, bridges, and anywhere else it is appropriate.
- Choose the colors and intensities of light carefully to avoid glare and harsh lighting.
- Design lighting so that adjacent residential areas are not adversely affected.

ACCESS FOR THE DISABLED

All campus facilities must be accessible to the disabled. Carefully-designed relationships among buildings, walkways, and the land should be the primary means of providing this access. In most cases, primary circulation routes rather than special facilities should provide access for the disabled. Mechanical devices, such as lifts, are permissible, but, because they have high maintenance requirements and are awkward for users, reliance on them should be minimized.

Guidelines

- Adhere to all Americans with Disabilities Act (ADA) standards.
- Provide barrier-free routes to all campus facilities. At least one bike route from the campus core to the eastern campus must be barrier-free.
- Design exterior walkways with grades that permit wheelchair access. Provide edge definition on paths.
- When made possible by sloping topography, provide direct access to the upper floors of buildings. Arrange building elevators to provide access up steep slopes.
- Provide power-actuated opening devices at primary entrance doors.

EMERGENCY ACCESS

Driveways, bicycle paths, and footpaths in the vicinity of campus buildings should be designed with the clearance and loading characteristics necessary to admit ambulances and fire-fighting equipment sufficient to reach all necessary destinations on campus. Emergency routes should be kept clear of parked vehicles and other obstructions at all times.

Guidelines

- In all areas of the campus that are not normally accessible to vehicles, provide pathways with loading capacities, widths, and vertical clearances adequate for emergency vehicles.
- Use breakdown bollards and curb cuts to provide vehicular access onto pedestrian and bicycle paths.
- Pave primary pathways with materials that will support emergency vehicles.
- Equip all developed areas of the campus with access to a water supply for fire-fighting.

CONTROL OF ACCESS

The desirable image of campus accessibility must be reconciled with security concerns. Access must be subject to appropriate controls. All access control devices should be appropriate to the level of security required.

Guidelines

- Limit campus access to established entries. Reconcile security and access concerns along the campus perimeter.
- Select access control methods and devices that are inconspicuous but effective.
- Provide access to remote areas of the campus for service vehicles.
- Restrict access to the following areas:
 - Agricultural testing fields
 - Central utilities plant
 - Motor pool
 - Outdoor areas of child care facility
 - BPA transmission towers

6

Grasslands

Naturalized Landscapes

Native Landscapes

Drainage

Habitat Protection

The campus plan is founded upon existing characteristics of the site, so it is important that those characteristics be conserved and enhanced. The built landscape must respect existing site conditions. The campus can be seen as a demonstration project for environmentally-responsible design in the urban environment. Efforts should focus on conserving the landscape, on enhancing biodiversity, and on maintaining the quality of surface water and groundwater.

Most of the site will be managed rather than 'maintained' in the traditional sense. The campus site will be divided into four different landscape management areas, each having a different type of landscape design appropriate to its location and use. Ornamental landscapes, which will occur primarily in the more developed portions of the campus, are described in the section entitled 'Landscape Treatments' (page 48). The following sections describe the remaining three categories: grasslands, naturalized landscapes, and native landscapes. Grasslands are areas of the site having a history of agricultural use. Naturalized landscapes are areas that will be planted but then left to grow in a 'wild' state with minimal maintenance. Native landscapes are either preserved natural areas or disturbed areas in which natural landscapes will be restored. Native landscapes on the site include woodlands and wetlands. For existing grasslands, woodlands and wetlands which are to remain, grasslands are to be perpetuated, woodlands are to be protected, and degraded wetlands are to be restored. Intervention in natural processes should be minimal.

GRASSLANDS

Virtually all of the flatter portions of the site were adapted to agricultural use in the past. These grasslands give the site its open character and allow dramatic views of the Cascades from the upper portions of the site. While much of this open space will be occupied by campus development, the open character should be maintained to the extent practicable. Certain areas are to be preserved as open space and maintained in their existing condition indefinitely.

Although consisting primarily of grasses, grasslands may also contain other herbaceous perennial and annual species, such as wildflowers. Trees may be introduced to grasslands on a limited basis in widely-dispersed groupings. Grasslands are not to be permanently irrigated but may require temporary irrigation for re-establishment. Some grasslands on the site, such as those in the northeastern corner of the property, are still used for agriculture. Agricultural use may continue as appropriate.

Guidelines

- Preserve the open character of the site.
- Manage grasslands with periodic but infrequent mowing. Only under exceptional circumstances should trees and shrubs be planted in grasslands.
- Control costs through low-maintenance management techniques.
- Continue agricultural use of selected grasslands in the northeastern corner of the site.
- Avoid management practices that contribute to the degradation of water quality

NATURALIZED LANDSCAPES

Naturalized landscapes are areas that will be planted with natives and other species having compatible horticultural requirements. The primary naturalized landscapes will be buffer zones along the campus perimeter, adjacent to residential areas. These areas will consist of small trees and shrubs. Naturalized landscapes may require temporary irrigation for establishment, but they will be drought tolerant and require minimal maintenance once established. Management of naturalized landscapes will consist of thinning and pruning every three to five years and controlling unwanted, invasive species such as blackberries.

Guidelines

- Emphasize native plantings in naturalistic patterns.
- Select plants that have ornamental characteristics but do not require pruning to maintain desired heights.

NATIVE LANDSCAPES

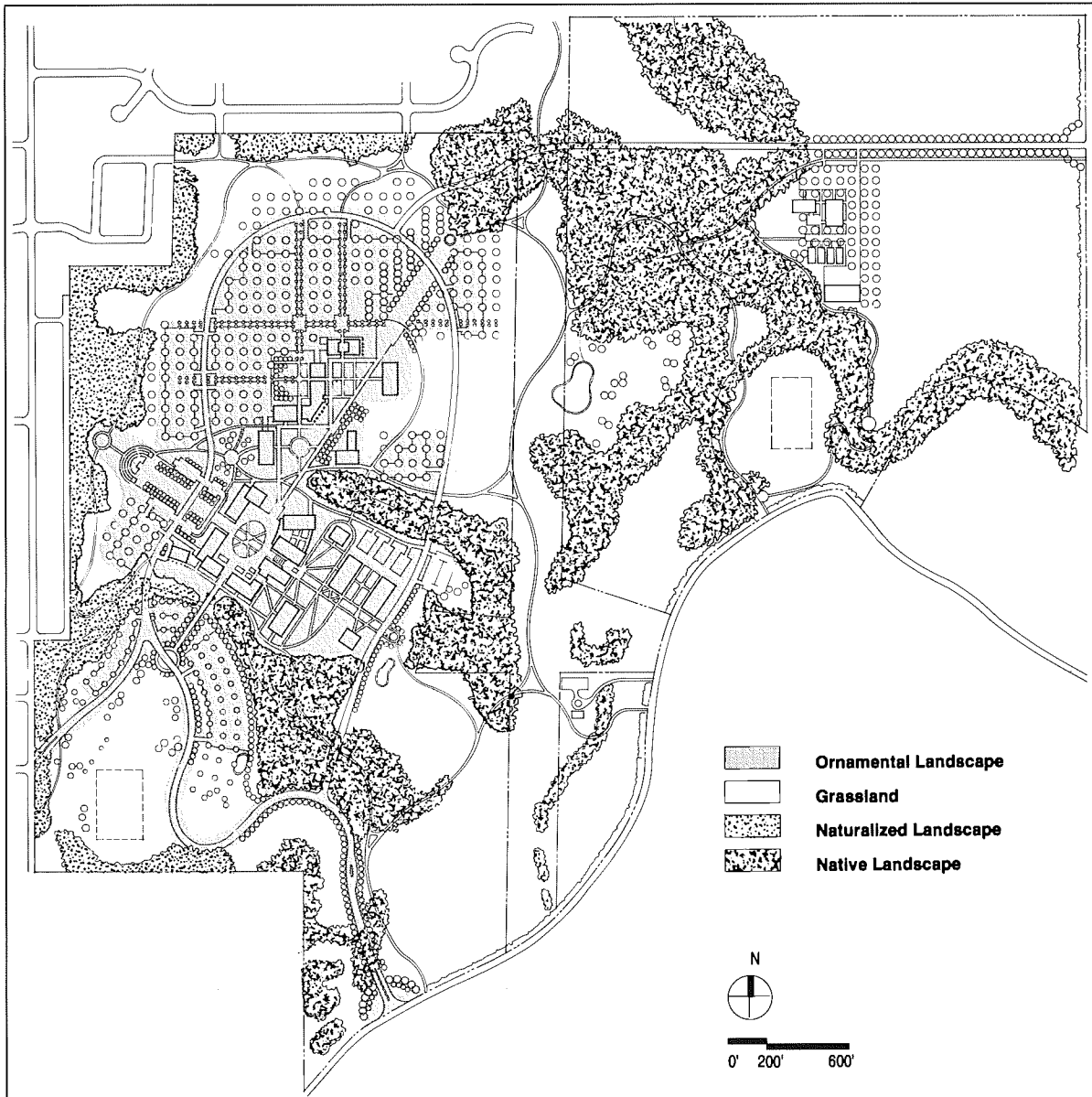
Native landscapes on the campus site occur primarily on steep slopes and on the Salmon and Mill Creek floodplains. Enhancement of wildlife habitat and overall ecosystem health are the primary considerations in managing native landscapes. Plantings should be selected from native plant communities and should reflect the approximate natural proportions of species. Ornamental considerations are secondary, but highly-visible areas should not appear unmaintained.

Both existing woodlands and wetlands are native landscapes. Several wooded ravines are located adjacent to Mill Creek. Any development within or adjacent to these wooded areas should be located to minimize disturbance. Protection and enhancement of the wetlands associated with Mill and Salmon Creeks is vital for maintaining water quality and for preserving wildlife habitat. Wetlands are also a valuable visual and educational resource. To avoid damage, access to wetlands should be limited, with an emphasis on educational use. Drainage and circulation systems should be planned to avoid contaminating or disturbing wetlands.

Guidelines

- Do not allow ornamental landscape plantings or invasive exotic species, such as English ivy and Himalayan blackberry, to displace existing native vegetation.
- Do not irrigate native landscapes.
- Protect steep slopes from erosion.
- Protect and restore existing wetlands. Plant buffers of woody vegetation along upland areas bordering wetlands.
- Construct boardwalks or bridges where pathways must cross sensitive areas such as wetlands or ravines. Avoid filling ravines.
- Use native plantings on fill slopes in native areas. Use native plantings or appropriate ornamental plantings on cut slopes.
- Provide ecologically-sound access for educational and recreational purposes. Roads and paths through wooded areas should be routed and graded to minimize disturbance. Access to wetlands should be limited to educational uses.
- Avoid disturbing native landscapes during campus construction.
- Maintain campus safety and security through selective trimming or removal of trees and shrubs.

Landscape Management Areas



The site will be divided into four landscape management areas, each receiving a level of maintenance and intervention appropriate to its character. Ornamental landscapes, located primarily in the campus core, will receive a relatively high level of maintenance. Grasslands, naturalized landscapes, and native landscapes will be left in a more natural state.

DRAINAGE

Campus drainage systems will be configured to prevent contamination or degradation of nearby wetlands. It is intended that the campus incorporate state-of-the-art storm water runoff management systems. The most environmentally sound practices will be used to the extent practicable, with emphasis on groundwater recharge. Where it is not possible to recharge all surface runoff, biological techniques will be used to slow runoff, trap sediments, and remove impurities. While conventional catch basins and underground pipe systems may be appropriate in some areas, their use will be limited to areas where more sensitive techniques are not appropriate.

Major drainage features will be incorporated into the campus landscape. They are not intended to be strictly utilitarian elements, but will also contribute to the appearance of the campus.

Guidelines

- Emphasize on-site groundwater recharge over detention and metered release of runoff.
- Minimize impervious surfaces. Preserve native soil structure by minimizing site grading.
- Use appropriate methods, such as bioswale techniques, to remove sediment and other contaminants from runoff.
- Avoid landscape maintenance practices that contribute to the contamination of waterways.
- Minimize contamination of surface water and groundwater, especially during construction projects.
- Maintain pre-development discharge rates from the site.

HABITAT PROTECTION

Although the site does not harbor any rare or endangered species, care should be taken to maintain habitats for indigenous fauna. Because development in the region has fragmented natural habitats, habitat enhancement and maintenance on the campus must target disturbance-tolerant species. Although human intrusion should be discouraged in some areas, such as wetlands, virtually no portion of the site should be exclusively reserved for wildlife.

The quality of wildlife habitat should be improved by providing shelter opportunities, by improving forage conditions, and by enhancing the continuity of habitat areas. Large and continuous areas of dense, native vegetation provide valuable escape and nesting cover, especially when isolated from development. Logs and boulders also provide important cover for many small species of wildlife that can be expected to persist in the campus area. Woody vegetation corridors, such as hedgerows along paths, can be useful in linking fragments of natural and semi-natural habitat.

Guidelines

- Maintain and restore linkage among habitat areas. Create wildlife travel corridors in areas where wildlife habitat is fragmented.
- Preserve downed trees and cut limbs as structural habitat elements within native landscape areas.
- Preserve native plants that provide food and shelter for wildlife.
- Restrict pedestrian access to sensitive areas.
- Minimize the widths of disturbance zones when constructing trails.

To ensure the long-term success of the campus plan, the campus core must be able to expand without losing its established identity. The basic layout of the campus will provide flexibility to respond to a variety of needs as the University grows. Buildings may be added along either of the two view axes, forming new building clusters and new linkages between the axes. The basic organization of the campus, however, should be preserved. All new construction should adhere to the guidelines outlined in the previous sections.

7

*Maintaining the Integrity
of the Campus*

New Buildings

Additions to Buildings

Phasing

MAINTAINING THE INTEGRITY OF THE CAMPUS

All building within the campus should respect the basic framework of the campus plan. Buildings should be constructed along the two major axes, but they should not infringe upon the boundaries of the view corridors. The campus should appear complete at all times.

Guidelines

- Build along the two major axes, proceeding from the center outward.
- Preserve and enhance the Campus Center.
- Preserve the coherence of the parking orchard. Buildings may displace portions of the orchard, and parking may be added underneath, but the orchard should not become fragmented.
- Phase the construction of circulation routes to form complete loops and interconnections. Avoid the construction of dead-end roads and trails.
- Use plantings to visually complete outdoor spaces when an anticipated building can not yet be constructed.

NEW BUILDINGS

The campus as a whole should be capable of accommodating new programs that were not originally anticipated. Because changing academic programs may require new buildings or new linkages between buildings, the arrangement of campus buildings should be loose enough to accommodate insertions and changes in relationships. The program requirements of a particular discipline will help to identify an appropriate site for a new building. New buildings should respect and enhance existing buildings and important open spaces. Temporary buildings, because they compromise the quality and consistency of the built environment, often for many years longer than originally planned, are not appropriate for the campus.

Guidelines

- Arrange buildings with enough flexibility to accommodate the placement of new facilities.
- Plan all new buildings as permanent additions to the campus, with linkages to existing buildings.
- Avoid temporary buildings.

ADDITIONS TO BUILDINGS

Because the uses of buildings may change or shift in the future, both the interiors and exteriors of buildings should be planned for maximum flexibility. Buildings should be designed so that they can, if necessary, accept additions. Buildings that are intended to undergo expansion, however, should not be left with an unfinished or temporary facade. Additions should be compatible in design, massing, and scale with pre-existing buildings.

Guidelines

- Design buildings that can be expanded in modular units.
- Design building interiors so conversion to different uses is possible without major disruption to mechanical and electrical systems, circulation, and quality of space.
- Leave adequate open space adjacent to buildings that have pre-determined expansion needs. Provide short-term uses such as temporary plantings adjacent to buildings with long-term expansion requirements.

Phasing

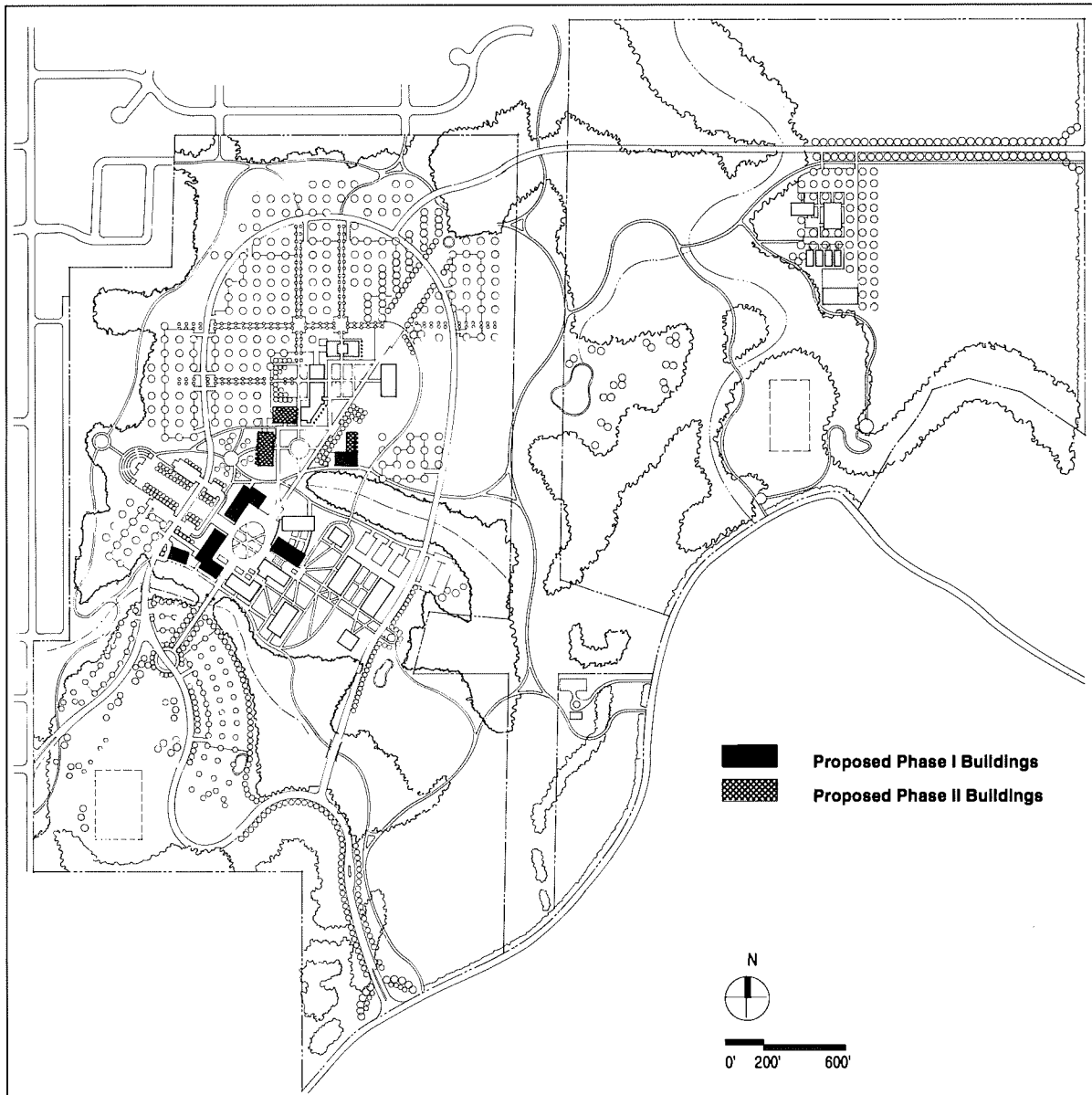
Three phases of development have been examined for the WSU Vancouver campus. Although only the first two have been programmed in detail. The Master Plan is intended to guide all three development phases. Programming of the first two phases relates to student enrollment projections for the years 1998 to 2010. Enrollment and building projections are summarized below and in the 'Academic Programs' section (page 5).

The first phase of campus construction is expected to be completed by 1998, serving a total of 2,275 students. Development in the first phase will be concentrated at the intersection of the two view axes. It is intended that the Campus Center and its plaza be defined at the outset of the project. The second phase, bringing the number of students to 4,160, is expected to be completed by 2010. The third phase is projected to be completed in 2025, accommodating 8,320 students.

The University has identified the facilities required to accommodate projected enrollments for the first two phases of campus construction.

BUILDING PROJECTIONS SUMMARY

Year	Phase I 1998	Phase 2 2010
Students (full-time equivalent)	1,400	1,100
Students (head count)	2,275	1,885
Faculty	74	50
Staff	95	75
	ASF	ASF
Classrooms	10,200	14,500
WHETS	5,770	0
Lecture Hall	6,150	0
Teaching Labs	13,810	11,420
Graduate/Faculty Labs	10,700	7,700
Offices	24,790	16,825
Library	30,800	0
Computer Labs	6,580	5,880
Open Labs/Instructional Media	2,900	1,750
Student Services/Union	21,258	11,800
Child Care	6,300	0
Physical Plant	17,750	23,635
Total	157,008	93,510



The first campus buildings will be located adjacent to the Campus Center plaza. Buildings will later be constructed along the view axes.

Future growth of the campus will depend on the availability of adequate utility services. The first phase of campus construction will include the development of underground systems for chilled water, electricity, emergency power, telecommunications, natural gas, water, sanitary sewers, and storm sewers to serve the campus core. Campus utility systems must be planned for economy, flexibility, and future expansion. Off-site utility improvements may also be required to meet the University's projected needs. Energy conservation will be an important component in planning the University's infrastructure. Conservation will reduce operating costs and result in smaller, more efficient energy delivery systems.

8

Energy Conservation

Distribution Systems

Heating

Chilled Water

BPA Transmission Lines

Electricity

Telecommunications

Natural Gas

Water

Sanitary Sewer

Storm Sewer

ENERGY CONSERVATION

Conservation should be considered in both the technologies of utility systems and the architecture of individual buildings. Energy-saving technologies should be used wherever they are economical. Life-cycle costs should be considered in the selection of systems and equipment throughout the campus. Buildings should be designed and oriented to be energy efficient. They should take advantage of solar radiation and of summer shading from trees.

CENTRAL DISTRIBUTION SYSTEM

Water, chilled water, natural gas, electricity, emergency power, and telecommunications services will be distributed throughout the campus. In addition, separate storm and sanitary sewers will run throughout the campus. These services will be provided through an organized and identifiable system that will allow for future expansion. Three different distribution schemes were considered for the campus: site-built utility tunnels, a prefabricated trench system, and direct burial. Economic considerations, including low first costs, dictated the use of direct-burial piping for chilled water. Chilled water will be carried in plastic pipes with manholes at branch connections. Aside from the main electrical feed, electrical and telecommunications systems will also be located underground, primarily within ductbank systems along the two view axes.

A central utilities plant will provide chilled water and emergency power for the entire campus. Natural gas will also be distributed from a central meter at the plant. The plant, which will be located at the periphery of the campus core, will be designed and sited to provide efficient distribution and recovery systems. A central computer will control utility distribution systems, reducing maintenance requirements and operating costs, and providing remote monitoring capabilities that can be coordinated with systems at other WSU campuses.

HEATING

Each building will have its own gas-fired heating plant. Boilers will be of the condensing type with a minimum efficiency of 93 percent. Both decentralized plants and a centralized plant were considered for heat generation. The decentralized system has several advantages over the centralized system. Separate heating plants have the lowest first cost, the lowest life-cycle cost, and require little or no modification as the campus expands. In addition, they use less energy and have a higher system efficiency.

CHILLED WATER

Chilled water will be provided from the central utilities plant. Initial life-cycle computations suggest that a centralized cooling system will be the most cost effective. This conclusion is based on current energy cost data and should be reviewed before each phase of the campus is implemented. The central chilled water plant will consist of multiple, high-efficiency centrifugal chillers and cooling towers, with one standby chiller and tower. System design will be flexible, allowing the central plant to expand as additional facilities are built. The design will allow for future ice storage, chilled water storage, and direct-fired gas absorption chillers as utility rates change and economics dictate. These options are not economically viable at the present time.

BPA TRANSMISSION LINES

Burial of the Bonneville Power Administration (BPA) transmission lines that cross the campus is a long-term objective. These lines will not serve the campus directly, but are a regrettably prominent feature in the landscape. The University has initiated negotiations with BPA representatives on burial of the lines and on use of land within the 250-foot corridor owned by the Administration.

ELECTRICITY

The Clark County PUD will provide electrical service to the campus. Overhead lines adjacent to 159th Street will deliver electricity to the campus. It is anticipated that additional service will be available from a 12.5-kilovolt (kV) line proposed for the south end of the campus in the future. The campus system will be a single loop of 15 kV underground cable connected to pad-mounted transformers. The cable will have a large enough capacity to serve the entire campus.

EMERGENCY POWER

Emergency power will be required at each building to supply electricity to egress lighting, elevators, and other essential electrical devices in the event of commercial power loss. The central utilities plant will house the main emergency distribution panel and a single, 500-kilowatt generator to provide emergency power for the entire campus. The central plant will include room to add a second generator and paralleling equipment. Switches in each building will allow the transfer of emergency power to the building, and will also be capable of starting the central generator. In addition, arrangements should be made in advance with local vendors to supply a temporary generator that could be rapidly installed in the event of generator failure.

TELECOMMUNICATIONS

Telephone and data transmission lines will interconnect all campus buildings and will connect to outside communication networks. A line under NE 29th Avenue will provide telephone service for the campus, although a new line to the north of the campus may provide service in the future. All on-campus cables will be underground. The campus telecommunications system will be installed in association with the 15 kV electrical system and the emergency power system. The telecommunications system will include manholes separate from the electrical system, connected to one another by six-cell ductbanks. A system using small junction boxes instead of manholes would be slightly less expensive, but much less flexible.

Two 4-inch PVC conduits will be routed from a communication terminal in each building to the nearest manhole. Stub-outs will also be provided to interconnect communication terminals in adjacent buildings without routing through the central manhole system. Smaller ducts within the 4-inch building service conduits and the central ductbank conduits will separate the various communication systems and allow the most efficient use of the conduits.

NATURAL GAS

Northwest Natural Gas will provide natural gas service to the campus through a 4-inch intermediate pressure (IP) line along NE 29th Avenue. A single gas meter will provide natural gas at 5 psi to heating plants throughout the campus. An analysis of gas rates compared the cost of individual meters to that of a central metering system. The analysis indicates that central metering using rate schedule 4 will initially have the lowest overall cost and will provide even greater savings when the campus expands in the future. It also will allow on-site backup of the natural gas system using propane with a gas/air mixer if utility service is disrupted. This backup system could also be used if changing rate schedules justify switching from rate schedule 4 to interruptible gas service.

WATER

Because the campus core will be located on the western portion of the site, water service will be provided from the 10-inch main along NE 29th Avenue. The campus water supply system will consist of a 10-inch main in a loop configuration. This main will be placed in an easement and maintained by the Clark County PUD. Each building or building cluster will have an individual meter.

Although some campus buildings will be located in the Hazel Dell pressure zone (below 250 feet), it is recommended that pressure reducers be installed at these buildings in place of extending service from the Hazel Dell system. At the time the Agricultural Research Facility is constructed, however, the relative merits of supplying water from the Hazel Dell system should be re-evaluated.

SANITARY SEWER

A single-point connection with the Mount Vista Trunk will provide sanitary sewer service for the campus. The system should extend into the site in a manner that will disturb natural drainage courses as little as possible. The proposed gravity system will serve all buildings in the campus core. Buildings outside the core may be served by a septic tank effluent pumping (STEP) system.

STORM SEWER

Clark County stormwater management requirements are currently in a state of transition. The standards for proposed improvements will likely be a combination of Puget Sound Surface Water Regulations and King County, Washington Standards for Stormwater Management. The proposed drainage plan incorporates techniques that were acceptable to the county in recent development projects. The stormwater collection system will include catch basins capable of trapping settleable solids, such as dirt and gravel, and floatable debris, such as oil. Stormwater will travel to detention ponds through vegetated swales and, where necessary, through a system of pipes. The vegetated swales will reduce flow velocities and will provide supplemental treatment before water reaches the detention ponds. The detention ponds will maintain pre-development discharge rates from the campus for the 10-year, 24-hour storm event. Detention ponds will be located in the flatter portions of the campus, above natural drainages to Mill Creek. A suitable buffer will be maintained between the ponds and the natural drainages to allow discharge from the ponds to pass through a system of vegetated swales and wet ponds before entering the creek.

Index

A

29th Avenue, *15, 22, 24, 61, 63, 64, 68, 92, 93*
30th Avenue, *13, 20, 21, 58*
35th Avenue, *64*
50th Avenue, *15, 64*
100-year floodplain, *20*
134th Street, *15, 68*
139th Street, *63, 64, 68*
159th Street, *25, 92*
academic programs, *5, 52, 85*
access for the disabled, *vii, 33, 58, 63, 74*
access, *vii, 3, 4, 12, 15, 33, 56, 57, 59, 61-72, 74, 75, 80, 82*
access, control of, *75*
access, nighttime, *74*
ADA, *74*
additions to buildings, *85*
agencies, federal, *9*
agencies, local, *9, 68*
agencies, state, *9, 68*
Agricultural Research Facility, *64, 93*
agricultural zone, *18, 21*
agriculture, *8, 75, 77, 79*
alternative development concepts, *9, 29*
Americans with Disabilities Act (ADA), *74*
amphitheater, *56, 58*
arboretum, *48*
architecture, *47, 52, 64, 90*
Army Corps of Engineers, *11*
art, *58*
arts and letters, *8*
athletic facilities, *57, 66*
automobiles, *59, 61-63, 68, 71*

B

baseball/softball fields, *57*
basketball courts, *57*
benches, *18, 21, 48, 54, 57, 58*
bicycle racks, *48, 66*
bicycle routes, *vii, 59, 61, 64, 66, 75*
bioswale techniques, *82*
Board of Regents, *ii, 10, 12*
boardwalks, *66, 80*
bollards, *48, 66, 74*
Bonneville Power Administration, *15, 22, 24, 75, 92*
bridges, *74, 80*
buffers, *32, 36, 42, 71, 79, 80, 93*
building clusters, *vii, 50, 52, 54, 56, 58, 93*
building entrances, *36, 48, 54, 66, 74*
building expansion, *85*
building materials, *46*
building permits, *11*
building projections, *5, 86*
building treatments, *47*
buildings and open spaces, *vii, 12, 54, 60, 85*
buildings, additions to, *85*
buildings, new, *85*
buildings, relationships to open spaces, *85*

bus stops, *63*
buses, *63, 64*
business program, *6*

C

C-TRAN, *63*
cable service, *24, 92*
campus access, *vii, 10, 75*
campus axes and view corridors, *28, 32, 34, 36, 38, 50, 52, 56, 58, 66, 70, 71, 85, 86, 90*
Campus Center, *vii, 32, 36, 50, 61, 63, 64, 70, 85, 86*
Campus Center plaza, *36, 50, 87*
campus core, *vii, 29, 32, 34, 36, 40, 42, 48, 50, 61, 64, 66, 70, 71, 74*
campus edge, *vii, 42*
campus vicinity map, *16*
cars, *59, 61-63, 68, 71*
Cascades, *13, 18, 29, 40, 79*
catch basins, *82, 83*
central utilities plant, *72, 75, 91, 92*
chilled water, *91*
circulation system, *61, 66, 80*
circulation, bicycle, *36, 66*
circulation, pedestrian, *36, 66*
circulation, vehicular, *61, 68, 70, 71*
Clark College, *4*
Clark County, *vii, 9-11, 15, 17, 59, 66, 93*
Clark County Public Utility District (PUD) No. 1, *24, 25, 92, 93*
Clark County Trails Plan, *68*
Clark County Wetland Permit, *11*
community colleges, *5, 7*
community partnerships, *vii, 3-5, 12*
conditional use permit, *11*
conservation, *22, 89, 91*
contamination, *82*
continuity of design, *47*
creeks, *20, 22, 23*
crosswalks, *66*
curriculum, *3-6*
curriculum plan, *5, 8*
curriculum projections, *8*
curriculum reform, *5*

D

dairy farm, *11, 15, 20-22*
Department of Ecology, *11*
Department of Fisheries, *11*
design guidelines, explanation, *27*
detention ponds, *48, 93*
directional signage, *64, 68*
disabled access, *vii, 33, 58, 64, 74*
drainage, *vii, 20, 22, 57, 80, 82, 93*

E

edges of campus, *vii, 42, 59*
edges of view axes,
education program, *6*
EIS, *9*
electrical service, *24, 92*
elevation of campus site, *20*
emergency access, *75*
emergency power, *89, 91, 92*
emergency vehicles, *36, 75*
endangered species, *22, 82*
energy conservation, *91*
engineering programs, *7*
engineering management program, *7*
enrollment projections, *86*
entrances to buildings, *36, 48, 54, 66, 74*
entrances to campus, *64*
Environmental Impact Statement (EIS), *9*
environmental conditions, *22*
erosion, *80*
evening classes, *5, 74*
executive summary, *vii*
exercise course, *57*
exotic plants, *48, 80*
expansion of the campus, *83*

F

features of the Master Plan, *32*
federal agencies, *9*
fields, *17, 18, 57, 75*
fisheries, *22*
floodplain, *17, 18, 20-22, 80*
floodplain zone, *18*
football fields, *57*
furnishings, site, *48, 49, 56, 63, 66*

G

general education program, *6*
generators, *92*
grasslands, *vii, 22, 23, 36, 40, 42, 78, 79*
groundwater, *77, 82*
Growth Management Act, *11*

H

habitats, *vii, 22, 23, 80, 82*
handicapped access, *vii, 33, 58, 63, 74*
hayfields, *22*
Hazel Dell Sewer District, *25*
health and human services program, *5, 6, 8*
heating, *91*
HEC Board, *3, 5, 10*
hedgerows, *22, 23, 82*
hierarchy of open spaces, *50*
Higher Education Coordinating Board, *ii, 2, 10*
humanities,
humanities and social sciences degree, *6*
Hydraulic Project Approval, *11*

I

instructional program projections, 8
integrated undergraduate program, 6
interdisciplinary programs, 6
interdisciplinary exploration, 3, 5
Interstate 5, 15, 16, 68
Interstate 205, 16, 68
irrigation, 48, 49, 57, 78, 79

J

jogging trails, 57

K

King County Standards for Stormwater Management, 93

L

laboratory facilities, 6, 7
landscape buffers, 32, 36, 42, 71, 79, 80
landscape design, 48, 49, 77
landscape management areas, 77, 81
landscape transitions, 49
landscape treatments, 48, 64, 77
landscape zones, 18
landscapes, native, 77, 80
landscapes, naturalized, 77, 79
landscapes, ornamental, 48, 49, 77
lawns, 48, 49
library, 5, 36, 54, 56, 86
light rail service, 63
lighting, vii, 57, 58, 64, 74, 92
linking buildings to open spaces, 54
local agencies, 9, 68
location of campus, 15, 16
loop roadway, vii, 34, 70, 71
Lower Columbia College, 4

M

main entrance, 64
management of the site, 77
map, campus vicinity, 16
map, regional, 15
massing of buildings, 36, 47, 85
mathematics, 6, 7
meadow, 40
metering of utilities, 91, 93
Mill Creek, vii, 11, 15, 17, 18, 20-22, 64, 80, 93
mission of WSU, 3
Mount Adams, 17, 58
Mount Hood, 17, 29, 32, 34, 58
Mount Hood axis, 34, 56, 58, 61, 70
Mount Saint Helens, 17, 29, 32, 34, 58
Mount Saint Helens axis, 34, 61, 71
Mount Vista, 17, 20, 64
Mount Vista Trunk, 25, 93
multiple-use trails, 66

N

native landscapes, 77, 80
native plants, 49, 79, 80, 82
natural gas, 24, 89, 91, 93
naturalized landscapes, 77, 79
night classes, 5, 74
Northwest Natural Gas, 24, 93

O

objectives of the Master Plan, 12
off-site improvements, 68, 89
open spaces, vii, 12, 20, 38, 45, 50, 52, 54, 71, 74, 79, 85
open spaces at building entries, 54
open spaces, linkages to buildings, 54
open spaces, primary, 50
open spaces, secondary, 50, 54
orchard, vii, 32, 38, 42, 70, 71, 85
orientation, vii, 12, 36, 47, 52, 64, 74
ornamental landscapes, 48, 49, 77
outdoor classrooms, 56
outdoor dining areas, 56
outdoor furniture, 48, 56
outdoor meeting areas, 56

P

parking, vii, 32, 38, 61, 64, 66, 70, 71, 74, 85
partnerships with the community, vii, 3-5, 12
pastures, 22
paths, vii, 38, 50, 52, 57, 58, 61, 66, 74, 75, 80
pedestrian routes, 32, 52, 58, 61, 66, 71, 74
permits, 11
phasing, 86
Physical Planning Committee, ii, 3, 4, 9, 10, 12, 29
physical plant, 72, 75, 91, 92
planning process, 9
preservation of the site, vii, 13, 18, 34, 36, 40, 42, 77, 79, 80, 82, 83, 85
primary open spaces, 50
Principles of Physical Planning and Decision Making, 12
programming, 9, 86
public art, 58
public meetings, 9
public transit, vii, 10, 59, 61-64, 66, 68, 70, 71
Puget Sound Surface Water Regulations, 93
Pullman, 4-6, 10, 27, 45, 47, 64

R

rare species, 22, 82
ravines, 17, 18, 21, 29, 36, 88
recreational facilities, 57, 66
Regional Transportation Task Force, 10, 68
regional map, 15
regional trails, vii, 57, 66, 68
research centers, 6
residential areas, 10, 15, 32, 42, 46, 58, 64, 68, 71, 74, 79
rideshare program, 62
riparian zones, vii, 4, 9, 17, 18, 20, 22, 45, 80
roadways, 68, 70

S

Salmon Creek, vii, 11, 17, 18, 20-22, 58, 80
Salmon Creek Avenue, 15, 17, 20, 21, 64, 68
Salmon Creek Interceptor, 25
Salmon Creek Wastewater Treatment Plant, 25
sanitary sewer, 25, 89, 91, 93
science programs, 5-8
secondary open spaces, 50, 54
Section 401 Water Quality Certification, 11
security, 56, 59, 63, 66, 74, 75, 80
SEIS, 9, 11
sensitive areas of the site, 4, 12, 18, 22, 45, 49, 66, 71, 80, 82
SEPA, 9
septic tank effluent pumping (STEP) system, 93
service areas, 48, 52, 72, 74
sewer, sanitary, 25, 89, 91, 93
sewer, storm, 93
Shoreline Substantial Development Approval, 11
signage, vii, 64, 68, 74
site analysis, 20
site description, 17
site development background, 29
site furnishings, 48, 49, 86, 63, 66
site management, 77
site plan, 33
Site Plan Approval, 11
site preservation, vii, 13, 18, 34, 36, 40, 42, 77, 79, 80, 82, 83, 85
slope analysis, 21
soccer fields, 57
social sciences, 6, 8
soil, 21, 82
southwest Washington, vii, 3, 5-7, 9, 15, 47, 63, 68
sports facilities, 57, 66
State of Washington Environmental Policy Act (SEPA), 9
state agencies, 9, 68
STEP system, 93
storm sewer, 93
street trees, 68, 70

student services building, 36, 86
Supplementary Environmental Impact
Statement (SEIS), 10
swales, 20, 93

T

TDM, 62
telecommunications, 89, 91, 92
telephone service, 24, 92
tennis courts, 57
texture of building materials, 47
Tittle Reservoir, 25
topography, 17, 20, 29, 38, 47, 70, 71, 74
trails, jogging, 57
trails, regional, vii, 57, 66, 68
transit, vii, 10, 61, 63, 64, 66, 68, 70, 71
transit routes, 61, 63
transitional zone, 18
Transportation Demand Management
(TDM), 62
Transportation Management Act, 62
Transportation Task Force, Regional, 10,
68
trash containers, 48, 54, 57
trees, vii, 18, 22, 32, 38, 42, 47, 48, 49, 68,
70, 71, 74, 79, 80, 82
trip reduction program, 62

U

undergraduate programs, 6, 7
United States Geological Survey (USGS), 5
upper meadow zone, 18
urban growth boundary, 11
utilities, distribution system, 91
utilities, existing, 24
utilities, future,

V

Vancouver, 5-7, 9, 14
vicinity map, 16
view axes/corridors, 28, 32, 34, 36, 38, 50,
52, 56, 58, 66, 70, 71, 85, 86, 90
viewpoint, 58
views, vii, 13, 17, 18, 29, 40, 42, 45, 47, 58,
59, 72
views, 17, 34, 38, 42, 47

W

walkways, vii, 38, 50, 52, 57, 58, 61, 66,
74, 75, 80, 82
Washington Higher Education Telecom-
munications System (WHETS), 5
Washington State Arts Commission, 58
water quality, 7, 11, 22, 77, 79, 80, 93
water service, 25, 91, 93
Wetland Nationwide Permit, 11
wetlands, vii, 4, 9, 11, 17, 18, 22, 66, 77,
80, 82
wheelchair access, vii, 33, 58, 63, 74
WHETS, 5
wildlife, 22, 82
wildlife corridors, vii, 22, 82
wildlife habitat, vii, 80, 82
wildlife, endangered, 22, 82
Wilson Reservoir, 23
woodlands, vii, 18, 22, 32, 40, 42, 77, 80