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Lewis & Clark College North Campus Master Plan Update

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# INTRODUCTION

In March of 2000, the team of Thomas Hacker and Associates Architects and Walker Macy (landscape architects) completed the North Campus Feasibility Study for Lewis & Clark College. This study considered the feasibility of replacing the current Zendtbauer Swimming Pool with a new auditorium/conference center building, while building a new aquatics center to the west of the Pamplin Sports Center and a new social science building to the east, facing the future academic green.

The feasibility study was prompted by the completion of the "glade," a circular sloping lawn between the Manor House and the Pamplin Sports Center, which was a part of the core area project designed by Walker Macy. The glade created a strong relationship between the Frank Manor House and the site occupied by the Zendtbauer Swimming Pavilion and suggested that this could be a site for an important future building

At the conclusion of the feasibility study, Lewis & Clark College engaged the team of Thomas Hacker and Associates and Walker Macy to study the implications of the new direction on the 1991 Master Plan by Sasaki Associates, as updated in 1998 by SERA Architects. The charge for the team was to integrate the thinking of the feasibility study with the previous master plan and review the assumptions that will guide the next two projects to be undertaken in the academic sector. Those projects are the Bicentennial Hall (restoration and expansion of Albany Quadrangle) and the Social Sciences Building.

The central development concept of the north campus is to construct new academic buildings at the perimeter of the northeast area, focused on the existing Albany Quadrangle in the center. Between the new buildings and Albany, a variety of positive open spaces will be created, and views between the buildings will reinforce the connection to the landscape beyond.

West of the academic sector the relocation of the swimming pavilion, expansion of the Pamplin Sports Center and replacement of the Griswold Stadium pavilion will rejuvenate the athletic sector. The boundaries for the north campus are the stadium on the west, the environmental zone on the north and east and the campus walkway on the south.



The "Glade"

# Master Plan History

Development of the Lewis & Clark College campus is generally guided by the campus master plan developed in 1991 by Sasaki Associates and SERA Architects. The master plan sought to capitalize on the topography, views and history of the college, which was developed around the historic Frank Manor House and gardens of the former Fir Acres Estate. The intention was to create an academic village in the tradition proposed by Thomas Jefferson in the design of the University of Virginia. As expressed in the Sasaki plan, residential campus life is centered in the area south of the manor house and garden, and academic life is centered in the area north manor house and garden. The Frank Manor House and garden form the joint between residential and academic life, and root both aspects of campus life in history and nature: History, as represented by the architecture of the Manor House, and nature, as represented by the axial view of Mount Hood described by the garden. The master plan proposed the creation of positive open spaces around which buildings were organized. Removal of automobiles from the center of campus was a critical prerequisite for the implementation of the plan. The three-building Signature Project, completed by Thomas Hacker and Associates and Walker Macy in 1996, the glade completed in 1999, and the Core Landscape Project completed in 2000, were the first steps in the realization of the academic village.



Historic manor house and garden

# NORTH CAMPUS MASTER PLAN UPDATE DESIGN NARRATIVE

## Landscape Design

The estate and the campus sit on an east-facing slope above a natural ridge, high above the Willamette River valley. Several steep wooded ravines punctuate the terrain. The wooded ravines and sloping topography frame distant views and provide a rustic backdrop to the campus. The current mater plan illustrates several large open space quadrangles throughout the Academic District of the campus. However, the steep grades inhibit the ability to construct traditional flat outdoor spaces and influence site design for disability access.

The plan calls for the circulation routes to become the major open spaces through the Academic District. New buildings are located subordinate to pedestrian routes, creating tree-lined allees that pass between the buildings, allowing views to the surrounding landscape. As the estate garden captures distant views of Mount Hood, the proposed plan extends views from the campus into the forest and beyond. In response to the natural topography and the assets of the Albany building, a terraced courtyard enlarges the open space defined by the Albany Quadrangle. Basalt stone walls lower the courtyard to the level of the entrance to the guadrangle and frame a north/south axis between Watzek Library and the performing arts courtyard. The courtyard is centered on the historic fountain and is envisioned as a gathering place with cobble and cast stone paving, benches, trees and it reinforces the Albany Quadrangle as the center of the Academic District.

Emergency and service vehicles will access the Academic District from the existing service road north of Watzek Library and from a new access ramp at the northeast corner of the campus. Pedestrian routes will continue to function as service roads, allowing access to all the buildings within the Academic District by circumnavigating the Albany complex. Large trucks will access loading facilities along the north edge of campus

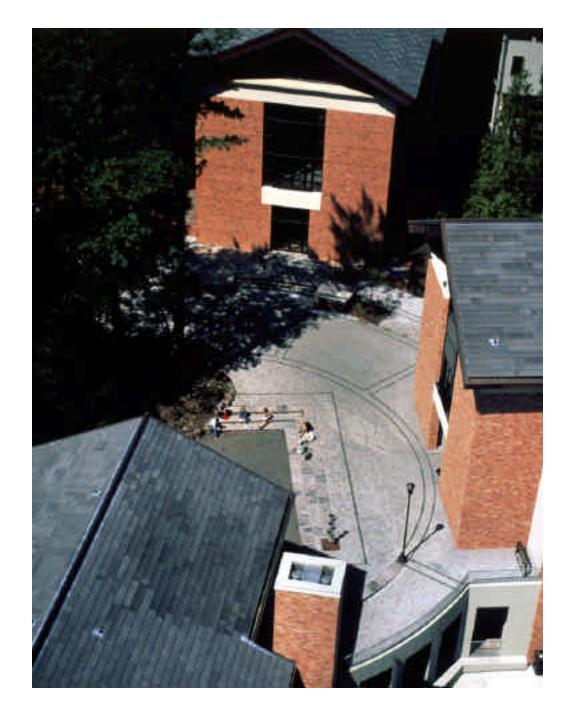


The Academic District of the campus

# **Building Design**

The master plan is focused on the landscape and site organization and the general size and massing of proposed buildings. Representations of the architecture are not illustrative of building designs. However, in the development of the master plan, some architectural concepts were suggested. With the notable exception of the Albany addition, which should be compatible with the original Albany Quadrangle, the architecture should generally follow the precedent established by the Signature Project. The Signature Project is seen as being compatible with the historic features of the campus, particularly the Frank Manor House, while appropriate for the current time in terms of technology and function. The elements of the Signature project which may guide the future buildings are as follows:

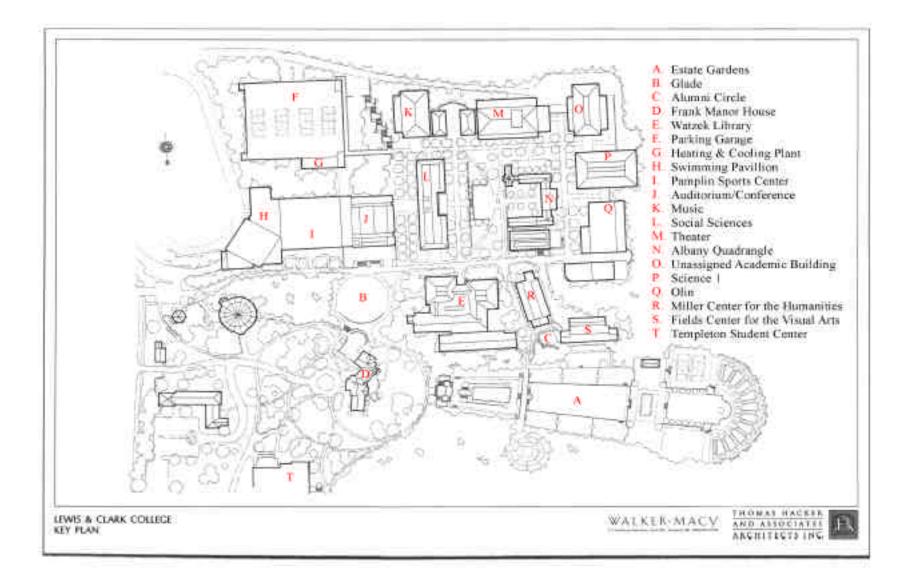
Large buildings should be broken into smaller masses connected below grade, preserving views to the landscape, similar to the way the Humanities and Arts buildings connect beneath Alumni Circle. Building massing should articulate a variation on the relationship between "traditional" masonry forms housing services and fixed program elements, and an expression of an open column structure for flexible space. Roofs should be mostly pitched, gabled or hipped, with significant overhangs.





Model photograph looking north







Perspective view looking northeast



Perspective view looking north



Model photograph looking south

# **Civil Engineering Design**

## **Utility Distribution**

Steam and chilled water are distributed to the North Campus from the Central Utility Plant at the north end of Zentbauer. The Central Utility Plant is relocated under the revised Master Plan to the south end of the Parking Structure. Timing for the relocation is flexible. Existing boilers, chillers and cooling towers can be relocated during seasonal shutdowns. The steam and chilled water routing concept, outlined in the North Campus Utility Master Plan, remains intact with two modifications. The south route through Zentbauer will be replaced with a tunnel adjacent to or through the new Social Sciences Building; and a new tunnel will connect the new plant location to the old. Natural gas and electrical service to the Central Utility Plant must be changed when the Parking Structure is built.

## Storm Water System Design

In general, all storm runoff flows either north or east to natural ravines that convey flow to the Willamette River. The existing system is described in the North Campus Utility Master Plan dated January 1994. The City of Portland requires stormwater management from all new and redeveloped projects within the City. The Bureau of Environmental Services has implemented the Stormwater Management Manual, Revision 1, dated September 2000.

## **Stormwater Management Levels**

All new development and redevelopment projects will fall under one of three management levels. The work proposed exceeds the scope of levels 1 and 2. The redevelopment falls under management level 3 because the footprint of the replacement development is greater than 500 square feet after mitigation measures have been applied.

The stormwater management measures for pollution reduction and flow control outlined in the manual are required to treat and control runoff from all (non-mitigated) impervious areas in the development footprint. Note: For projects under 15,000 square feet that are required to control flows, surface infiltration facilities are encouraged. Because of minimum orifice size specifications, structural flow control facilities for projects under 15,000 square feet are not effective and will not be required.

A summary of the major design criteria, as related to Lewis & Clark College, is as follows:

- Complete a Form MIT for any proposed project that will create over 500 square feet of impervious area. This will identify the type and amount of mitigation measures that will be implemented to treat and detain stormwater runoff. A minimum of 20 percent of impervious surfaces must be mitigated, unless site/project conditions preclude approved mitigation measures. Approved mitigation measures include eco-roofs, roof gardens, landscape planters, porous pavement, new trees and saving existing trees. This form will also identify the amount of unmitigated impervious surface area to be managed.
- Apply simplified measures for unmitigated impervious areas less than 15,000 square feet. If approved, simplified measures are implemented for all unmitigated impervious areas. Then no further stormwater management measures are required. Stormwater detention is not required for projects with less than 15,000 square feet of unmitigated impervious area.
- 3. For any phase of development in which the total unmitigated impervious surface area exceeds 15,000 square feet, water quality facilities shall be designed to remove 70% of total suspended solids (TSS).
- 4. For any phase of development in which the total unmitigated impervious surface area exceeds 15,000 square feet, water quantity facilities shall be designed to limit developed peak runoff rates to the undeveloped (forested) condition for the storm events equal to \_ of the 2-year, 5-year, 10-year and 25-year events.
- 5. Porous pavement shall only accept precipitation, not stormwater runoff. It may be used for walkways, patios, plazas, driveways, parking lots and some portions of streets. Porous pavement must be installed and maintained to manufacturer's specifications to receive mitigation credit.

 Parking lot redevelopment may use simplified measures for stormwater management by breaking the contributing areas into 15,000 square feet or les sub-basins. Any coderequired landscaping must be used for stormwater management unless the Bureau of Environmental Service's plan review staff approve otherwise.

The north campus should be developed in accordance with the Stormwater Management Manual, Revision 1, dated September 2000. Mitigation measures will be implemented to the fullest extent possible in an effort to reduce the unmitigated impervious surface area of each phase of development. The redevelopment should strive to manage stormwater runoff as close as possible to each phase of development with "green" type facilities such as landscape swales, vegetative filters, stormwater planters, landscape infiltration and sand filter systems.

Due to the size and difficulties associated with the topographical and geological conditions of the campus, it may become necessary to manage portions of each phase by mechanical methods. Mechanical means of stormwater management include buried oversized pipes or vaults for flow control (water quantity) and approved mechanical water quality devices.

# SANITARY SEWER

In general, the sanitary sewer system flows to the southeast and is conveyed to the public system located in the ravine adjacent to the Humanities and Arts buildings south of Olin. The existing system is described in the North Campus Utility Master Plan dated January 1994.

The existing Pamplin Sports Center has within the building a sewage ejector pump required to serve the lower levels. A similar pump may be required for the re-located swimming center, depending on finished floor elevations.

The 1994 master plan indicates a new gravity piped system along the north and east sides of the campus. This system is planned to run south to the connection with the public sewer system south of Olin. This system should be analyzed for feasibility with new topographic information and the reconfigured master plan.

## WATER

The backbone of the water system for the entire College is an eightinch main that connects to the City's public system in two locations. The eight-inch main loops through the north and south campus. This private system provides both domestic and fire service and is metered at both connections to the public system. Both connections to the public system have backflow devices that are no longer acceptable devices by the Oregon State Health Division and are required to be replaced prior to redevelopment. In the summer of 2000, the City constructed a new 16-inch water main to provide increased volume for fire protection to the college and surrounding area. There is a new 8" domestic and 8" fire line in the North Road.

In general, the north campus redevelopment will require a new fire and domestic looped system per the 1994 master plan. The relocation of the swimming center may require slight modification to the existing eight-inch main looped system.

# **PROGRAM ELEMENTS**

The following sections summarize program assumptions about the academic facilities used to guide this study.

## SOCIAL SCIENCES BUILDING

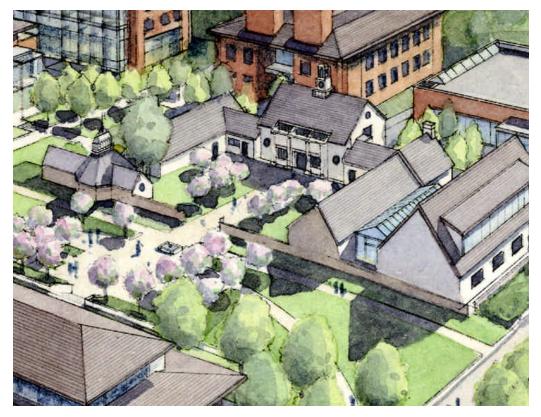
31,200 nsf and48,000 gsf

The program is based on the North Campus Feasibility Study, dated March 31, 2000. However, subsequent to that work, it was concluded that the building should be reduced from four stories to three stories in height. The area is therefore reduced from 56,000 square feet to approximately 48,000 square feet. The revised program includes a minimum of one flat floor lecture room, 12 large classrooms, four small classrooms plus approximately 50 faculty offices, conference rooms, administrative and support spaces. The College is currently developing detailed space and functional criteria that will guide the final design

### BICENTENNIAL HALL Albany Restoration and Addition

14,500 gsf existing, plus 12,000 -15,000 gsf addition

The addition is assumed to be two-story plus basement located on the south side. The plan proposes a simple gable roofed addition connected to the existing south wing by a glass covered circulation space. A smaller second floor would have dormer windows. The completed addition and renovation of the existing building will accommodate short-term and long-term programs. Initially it will house offices for the Bicentennial Council and temporary classrooms and offices during the construction of the Social Sciences Building. Over the course of the Bicentennial, (2003 to 2006), it will be the focus for Bicentennial-related events. In the long term it will be developed as the Faculty academic center and a student academic resource center. It may include offices for the Dean of the College of Arts and Sciences, office for Core Curriculum and other support for the College of Arts and Sciences, the Registrar's Office, offices for Student Academic Planning, the Writing Center, Math Skills Center, a food service venue and other programs focused on student academic achievement.



Albany Quad with Addition

# Olin Science Addition, and Science Building I 42,000 nsf and 70,000 gsf

For the renovation and addition to Olin, and the new Science Building I, the program is based on a draft document prepared by SRG Partnership, dated July 8, 1998. The program calls for a total of 75,400 nsf or 123,600 gsf. The existing building has 53,600 gsf. resulting in a need for an additional 70,000 gsf. The concept for the renovation is to combine the administrative offices of the biology, chemistry, psychology, math science and physics departments on the top (third) floor and to expand that floor by building over the east terrace and adding a new facade on the west side. Facilities for the "dry" sciences, psychology, math and physics, would be located on the lower two floors of the existing building. The new Science Building I would be devoted to the "wet" sciences of biology and chemistry. General use classrooms would be located in the existing or new building as space allows. The new Science Building I would be connected to Olin at the lower two levels to share services and access, while preserving a view to the ravine between the buildings.

# UNDESIGNATED ACADEMIC BUILDING 48,000 gsf

A future building with an undetermined program is proposed to be located in the northeast corner of the site. It can have a footprint of approximately 12,000 gsf.

# AUDITORIUM/CONFERENCE CENTER BUILDING 31,500 nsf and 52,500 gsf

The program is based on the North Campus Feasibility Study, dated March 31,2000. The program includes a 750-seat auditorium (12,000 nsf) and conference spaces ranging in size from 300 to 4000 nsf, plus kitchen and service areas. Some Administrative functions may also be included.



Olin Science Addition

## PERFORMING ARTS CENTER

51,600 nsf and86,000 gsf

#### **Drama and Dance**

The drama and dance program is proposed to be increased from its current size of 15,500 nsf to a total of 26,200 nsf. The primary program elements will include a 400-seat theater (8,000 nsf), Black Box (2,300 nsf), dance studio (2,300 nsf), rehearsal studio (1,400 nsf), scene shop (2,800 nsf), design lab (600 nsf) and a large classroom (2,000 nsf). The theater should have a lobby with box office. Performance support spaces include a control booth, green room, costume shop, dressing rooms and storage. Additional administration space includes a reception area, eight faculty offices, two administrative offices, a work room, a seminar/conference room, faculty/staff lounge and a kitchen. Service spaces include a loading dock, toilet rooms, mechanical spaces, bike storage and general storage.

#### Music

The Music program is assumed to grow from its current size of 16,500 nsf to 20,000 nsf. In addition it is assumed that the primary performance space will be a 750-seat hall in the nearby proposed auditorium/conference center building. The space in the existing auditorium (5,300 nsf), plus the additional 3,500 nsf, is proposed to be allocated to additional practice spaces and other needs required by the department.

#### **AQUATICS CENTER ADDITION**

19,000 nsf and 31,900 gsf

The program is based on the North Campus Feasibility Study, dated March 31,2000. The program includes a new pool (8,000 nsf), weight room (3,500 nsf), aerobics room (1,600 nsf) and fitness lab (700 nsf) plus a classroom, offices, locker and shower facilities and other support spaces. The program for new space depends on the renovation of the lower level of the existing Pamplin athletic building for new locker rooms, shower rooms, and team rooms distributed equitably between genders.



Academic Green and Performing Arts Center

#### PARKING/FACILITIES SERVICES BUILDING 172,200 gsf

### **Facilities Services**

The program is based a program prepared by SERA Architects, dated July 24, 1998. The program anticipates growth in the Facilities Services Department from 19,000 gsf to 38,500 gsf. The areas of growth include common use areas, communications, construction, electrical/mechanical, events, housekeeping, and purchasing. It is proposed that this department be located on the ground floor of the threestory parking structure.

## **Facilities Services Parking/Vehicle Pool Area**

The program is based on a program prepared by SERA Architects, dated July 24, 1998. The 19,000 gsf program includes spaces for van pool, service vehicles, vehicle washing, storage yard and fueling station. It is proposed that this area be located on the ground floor of the threestory parking structure.

## Parking

There are 328 parking spaces on the second and third floor of the parking structure. If it is determined that Facilities Services, including parking and vehicle pool, is not to be relocated from the south campus, or an additional (fourth) level were to be added, the parking structure could accommodate an additional 164 cars per floor. Further analysis of the parking supply and demand will be necessary before construction of the buildings.

# **Tennis Center**

Four courts, located in an inflatable structure, are proposed to be located on the roof of the parking structure.

# **CENTRAL UTILITY PLANT**

9,300 gsf

It is to be relocated from the current location to a new structure adjacent the parking structure. The program includes boilers (3,100 gsf), chillers (3,100 gsf) and cooling tower (3,100 gsf).



Model photograph looking east

# **Master Plan Implications**

The master plan update was guided by the principals embodied in the Conditional Use Master Plan #97-00074 CU MS approved by the City of Portland on June 4, 1998. Significant changes from that document include the following:

## Section 4 Development Standards

- \_ Height of auditorium/conference center and science II may exceed 50 feet.
- Section 5 Proposed Development Projects
  - The parking structure is proposed to be reduced from 850 spaces to 328 spaces. This is justified by a greater use of transportation alternatives and improvements in on-campus living accommodations
  - The proposed addition to Olin has been redefined as a separate building (Science Building I)

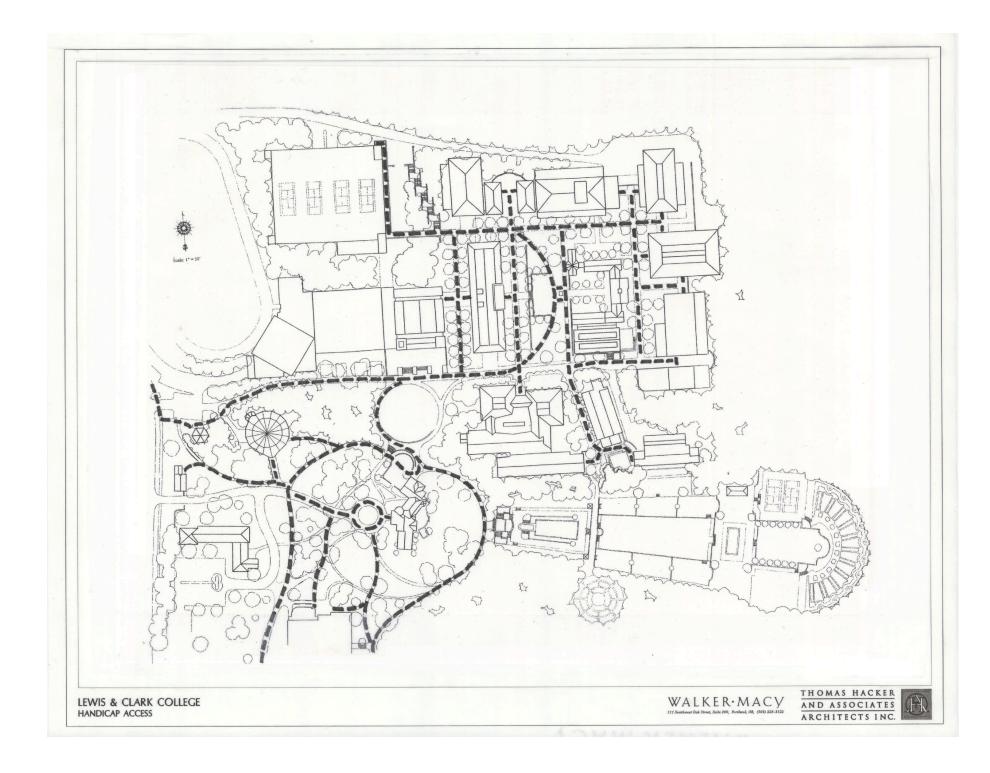
# Section 6 Development Schedule

- The restoration and expansion of Albany Quadrangle is scheduled to begin in the third quarter of 2001.
- Social Sciences Building (Academic II) is scheduled to begin in the third quarter of 2002.
- Section 7 Building Square Footage
  - The addition to Albany is proposed to be 12,000 square feet as compared to the 5,000 proposed in the Conditional Use Approval.
  - The auditorium/conference center building (32,000 square feet) is additional to the buildings proposed in the master plan.
  - \_ The remainder of the proposed buildings are smaller in size than the allowance written

- Social Science building (Academic Hall II): Proposed to be 48,000 square feet within an allowance of 65,000 square feet
- Theater and Music (Academic Halls III and IV): Proposed to be 86,000 square feet within an allowance of 195,000 square feet
- Science II (Academic Hall V): Proposed to be 48,000 square feet within an allowance of 120,000 square feet
- Section 8 Transportation and Parking
  - 328-space parking structure is proposed which is within the allowance of 850 spaces approved in the master plan.

# Section 15 Review Procedures

- The proposal for a new auditorium/conference center and a new aquatic center was not a part of the approved master plan and will be subject to a Type III Land-Use Review.
- If the height of the auditorium/conference center and Science II exceeds 50' they will be subject to a Design Review and Type II Land-Use Review.
- The Albany addition may need to have a Type I or II approval because the proposed size is larger than that approved in the master plan, although the excess is less than 10,000 square feet, which by itself would not require a review procedure.







## **APPENDIX B: North Campus Feasibility Study**

The construction of the glade in the location of a former parking lot created a gracious and bucolic amenity in the center of campus and lent credibility to the promise of the master plan. The glade is framed by the Manor House on the south, the library on the east, and a stand of trees on the west. However, because the topography slopes downward to the north, the glade is focused on the existing Zendtbauer pool facility and the central heating plant to the north. The location of the existing pool structure is an obvious place for an important new building.

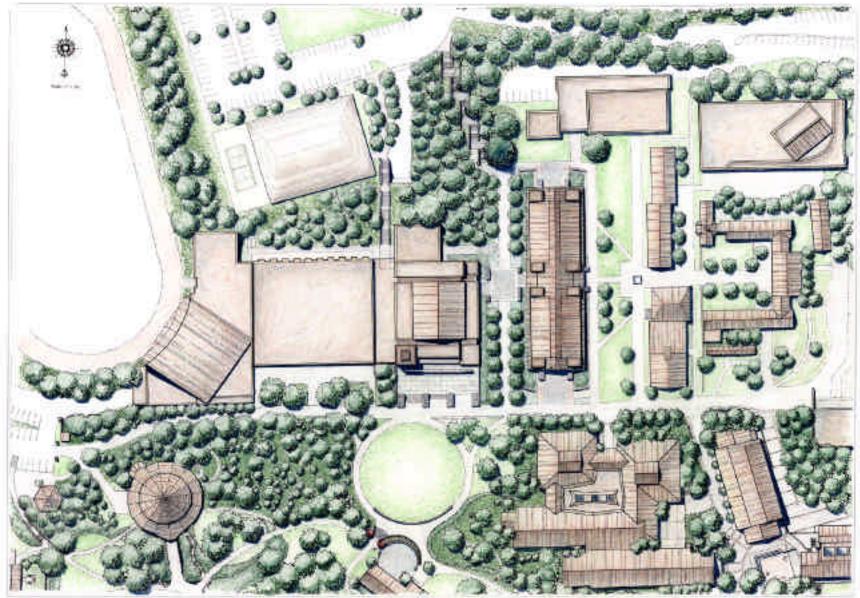
The feasibility study considered the following new projects:

- Auditorium/conference building on the site of Zendtbauer
- Social Sciences Building facing the proposed academic green
- Aquatic center to the west of Pamplin Sports Center
- Renovation of the Pamplin Sports Center

The design creates a vision for the future that reinforces the principles of the master plan and exploits new opportunities. Replacing the Zendtbauer Pool with an important new signature building provides a new focus in the campus and enhances the new glade. The proposal to relocate the pool provides additional benefits to students and prospective students, as the expanded, light-filled facility will be better integrated with other athletic facilities. Options for the future development of the area north of the Pamplin Sports Center, including future racquet sports, parking and vehicular entrance, are preserved. And finally, the general size and location of the Social Sciences Building and phasing options for the implementation of the academic green confirm the direction for the next phase of the implementation of the master plan.



Perspective Looking North



LEWIS & CLARK COULICE

NORTH CAMPUS FEASIBILITY STUDY

WALKER-MACV THOMAN HACKER AND ACCOUNTS

## **APPENDIX C: Alternate Plans**

## **Olin Replacement Courtyard**

The existing Olin Science Building is generally understood to be not in the architectural character of the evolving campus. The master plan proposes that it is completely renovated and enlarged with additions on the east and west sides. As an alternative to the renovation and additions, the team was asked to consider the possibility of replacing the existing building with new structures that would reinforce the overall master plan goals.

The proposal assumes that the facilities in Olin would be replaced in Science Building II, adjacent to the Science Building I, and a new humanities building would be built to the south, adjacent to the Miller Center for the Humanities. The existing Olin is 55,000 square feet. The new Science Building II could be 55,000 square feet and the new humanities building could be approximately 23,000 square feet.



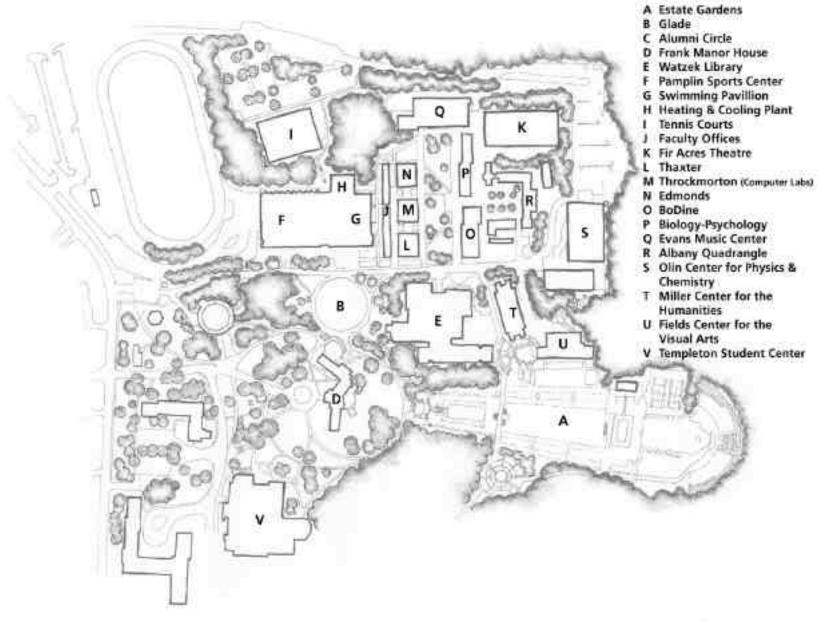
**Olin Replacement Courtyard** 

## **Pamplin Sports Center Replacement**

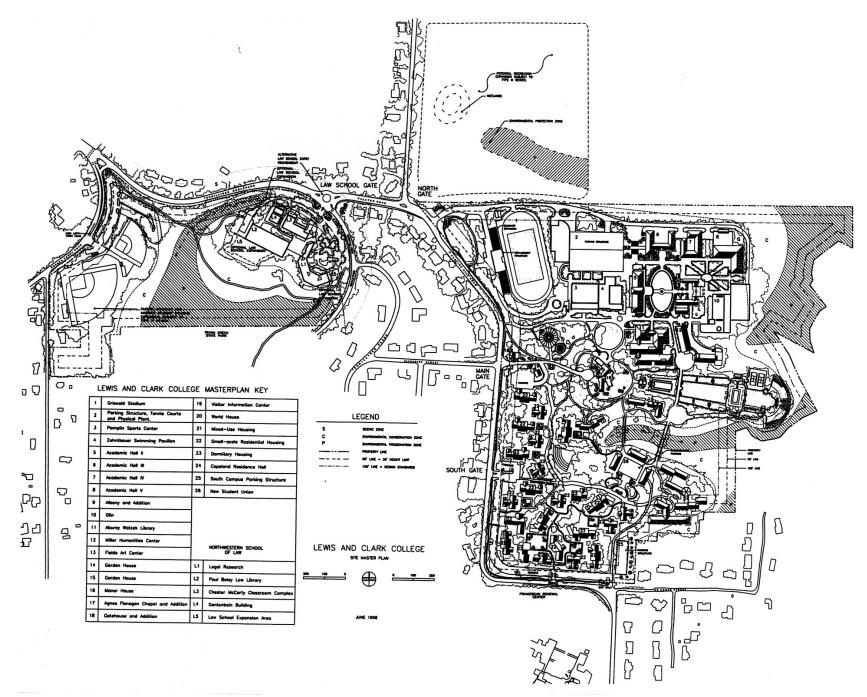
Because of the site constraints of the environmental zone on the north and east and the historic garden on the south, the potential for expansion of the academic portion of the campus beyond that shown in the master plan is very limited. The only possibility would be to relocate the Pamplin Sports Center to a location not currently within the campus master plan, and utilize that space for an additional academic quadrangle. The design team studied that possibility. The development of a landscaped quadrangle is limited by the extreme change in elevation across the site. In order to provide sufficient space for a landscape quadrangle, it is recommended that the proposed auditorium/conference center be located to the west, in lieu of the site opposite the glade as proposed in the master plan. This would allow the construction of two 27,000 square feet academic buildings defining the north and south sides of the quadrangle. The east and west sides of the guadrangle would be defined by the Howard Social Sciences Building and the auditorium/conference center.



Pamplin Sports Center Replacement



Existing Conditions Key Plan



1998 Master Plan SERA Architects

APPENDIX E: Design Team

Client:	Lewis & Clark College 0615 SW Palatine Hill Road Portland, Oregon 97219	
Architect	Thomas Hacker and Associates 34 NW First Avenue, Suite 406 Portland Oregon 97209 <i>Thomas Hacker</i> <i>William Dann</i> <i>Sarah MacDonald</i>	
Landscape Architect	Walker Macy 111 SW Oak Street, Suite 200 Portland Oregon 97204 <i>Doug Macy</i> <i>Eric Bode</i> <i>Molly Hitchcock</i>	
Civil Engineers	Harper Houf Righellis 5200 SW Macadam Avenue Portland, Oregon 97201 <i>Ron Peterson</i>	
Mechanical Engineers	CBG Consulting Engineers 6650 SW Redwood Lane, # 355 Portland, Oregon 97224 <i>Robert Gulick</i>	
APPENDIX F: RESOURCES		
Conditional Use Master SERA Architects	aster Plan, dated 1994 Gulick Kohn Consulting Engineers plan, dated November 6, 1998 ty Study (Draft), dated March 31,	
Olin Expansion Ideas, M Lewis & Clark Co		
Olin Expansion Preliminary Program, dated July 23,		

1998

SRG Partnership