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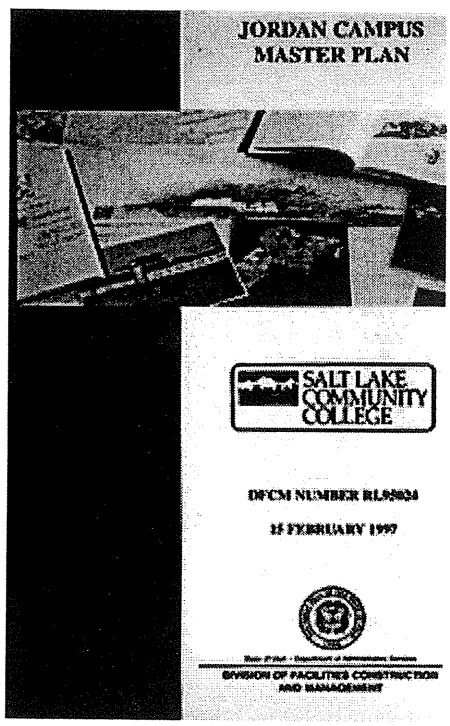
PURPOSE OF THE DESIGN GUIDELINES

This document has been prepared to guide the physical development of the Salt Lake Community College Jordan Campus in a manner consistent with the goals and visions articulated in the *Campus Master Plan* and *Development Plan*. The intent of the ***Guidelines*** is to ensure the quality, order, and consistency of the campus without unduly restricting the creativity of those involved in the process of designing, developing, and maintaining it. Reference copies of *Master Plan* and *Development Plan* drawings and other major supporting documents may be found in *Appendix A*.

The framework articulated in this document rests on a series of assumptions:

- Design will have a significant impact, not just on the built environment, but also on the nature of educational, social, and community experience at the campus.
- The first goal of each campus project should be the creation, enhancement, or preservation of the overall character and texture of the campus defined in the *Master Plan* and *Development Plan*, while meeting the program needs of the user.
- All campus projects will be governed by a decision-making and review process based on the criteria outlined herein.
- These guidelines will be binding for all individuals and entities involved in planning, programming, design, construction, modification, and renovation on the Jordan Campus.
- All campus development will be consonant with the campus vision statement.



CAMPUS VISION STATEMENT

The Jordan Campus should be a place that provides for the exchange of ideas and information in a graceful setting conducive to social interaction, which is an essential part of education. The design should provide a hierarchy of spaces that reward a visitor with a rich variety of volumes and vistas. The campus should be a child of its environment, be ecologically responsible, and present a benevolent face to the surrounding communities, for which it will become a focusing element. And finally the plan should create a flexible system that can adapt to ever-changing curricula and technologies and can grow in small or large increments to meet the needs of the future.

JORDAN CAMPUS MASTER PLAN AND CONCEPT DEVELOPMENT

The *90th South Masterplan* and the *Jordan Campus Development Plan* provide the conceptual framework for the development of the site. These documents, by reference, become a part of the criteria and standards defined here. Any discussion of "master plan criteria" or "campus standards" shall be presumed to encompass the contents of the *Master Plan*, the *Development Plan*, and the *Design Guidelines*.

INFORMATION RESOURCES

Preserving a record of the assumptions, data, and concerns that shaped the emerging master plan has been one of the objectives of this process from its inception. The following summary of resources is designed to make that information accessible to those involved in subsequent campus development.

Existing Studies

90th South Campus Masterplan. Hart Fisher Smith & Associates / EDAW / Ira Fink & Associates / Laura Bayer. 29 March 1996.

Jordan Campus Development Plan. Hart Fisher Smith & Associates / EDAW/ Laura Bayer. 15 February 1997.

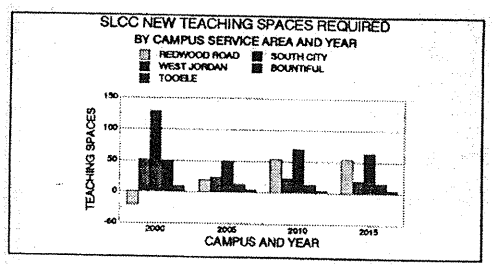
Salt Lake Community College Population and Participation Rate Study. Gordon Storrs, Master Planning Coordinator. December 1993.

Soils Report, Applied Geotechnical Engineering Consultants, Inc., 1996.

Mechanical Report, Bennion Associates, 7 January 1997.

Electrical Report, Spectrum Professional Services, January 1997.

Transportation Study, Fehr & Peers Associates, February 1997.



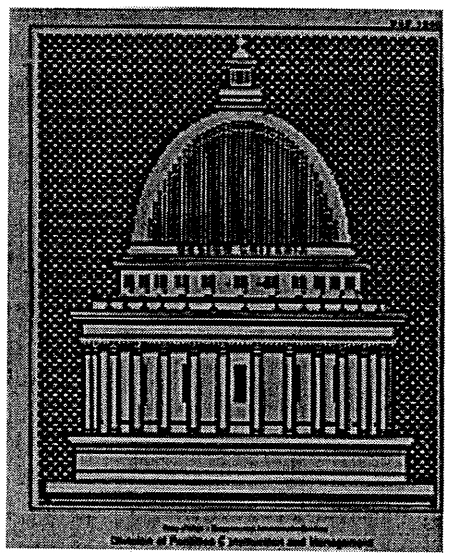
Central Campus Records

Additional materials generated in the planning process are maintained in a central file at the Salt Lake Community College office of Facilities Management and Construction at the Redwood Campus. These materials include records of site review, selection, and purchase; notes from a one-day planning charette held in 1994; large-scale drawings, copies of all

technical reports, notes and meeting minutes; other data generated in the development of the *Master Plan* and *Development Plan*; and samples of approved materials and colors.

Applicable Codes and Standards

Uniform Building Code
Uniform Plumbing Code
American Society of Heating Refrigeration and Air Conditioning Engineers Standard 90.1
National Electrical Code
Americans with Disabilities Act Accessibility Guidelines
Utah State Division of Facilities Construction and Management Design Criteria (latest edition)
Environmental Responsible Guidelines Adopted by the Utah State Building Board, 17 May 1996
Salt Lake Community College Campus Design Standards
Salt Lake Community College Graphic Standards Manual
South Jordan and West Jordan Utility Requirements



This listing is provided as a convenience to planners and designers. All projects will be governed by the codes and standards in force at the time of planning, design, or construction as appropriate. In the event of conflict among any of the relevant codes, design criteria, and standards, the most stringent shall govern unless this requirements is waived in writing by Salt Lake Community College and, if appropriate, the State Division of Facilities Construction and Management.

ADMINISTRATIVE PROCESS

All planning, construction, and renovation on the Jordan Campus will be subject to administrative processes and reviews established by Salt Lake Community College and the State of Utah. Specific requirements will vary with the nature of the individual project, and administrative procedures may change over time, but the following general policies will apply to all projects.

Salt Lake Community College

The selection of project teams, content and format of project submittals, review of project documents, and acceptance of completed projects will require the approval of the ***Campus Review Board***, which will include representatives of the Facilities Division and the College Master Planning Office. At the discretion of the Facilities Division, additional representatives may be selected to sit on the review board if appropriate. The focus of this review will be to ensure that the design effort and the project outcome are consistent with the goals and objectives outlined in these guidelines and the master planning documents. The functions of the ***Campus Review Board*** will include

- serving as the project steering committee or appointing a steering committee to meet regularly throughout the project.
- approving the project at programming, site design, schematic design, design development, and contract documents phases
- informing the College Administration, the Board of Trustees, and the State Board of Regents about the project.
- developing criteria to ensure the participation of the broader community in an advisory capacity during the planning and design process. The participation of college departments, students, faculty, staff, community members, neighborhood residents, representatives of local and state governments, and other stake holders as appropriate will be a requirement for campus projects. This participation may take the form of informational activities, brainstorming and input sessions, opportunities to critique preliminary designs, and other means approved by the ***Campus Review Board***.
- exercising its discretion to waive or add specific requirements as the needs of individual projects dictate.
- determining the appropriate design response in any instance not covered by the ***Design Guidelines***.

State of Utah

By statute, the State of Utah, through the Division of Facilities Construction and Management (DFCM), has responsibility for campus master planning, site planning, programming, design,

and construction projects. The role of the Division of Facilities Construction and Management, acting jointly with the College Division of Facilities, will include

- oversight.
- project management.
- project approval.
- review to ensure compliance with all applicable codes. and standards, and with DFCM Design Criteria.
- appointment of a project representative for campus projects.
- coordination with other state agencies and entities, including the Board of Regents, the Office of the Governor, the legislature, state offices of Risk Management, Security, and Telecommunications, and the State Fire Marshal.
- the establishment of bonding, insurance and other requirements for state projects.
- coordination of special services such as value management reviews and partnering sessions at such times and in such manner as established by statute and state policy.
- coordination of site observation and testing.

In specified circumstances, the law may either permit the State to delegate some or all of these functions to the College Division of Facilities, or allow the College to undertake independent design and construction projects. In such cases, the ***Campus Review Board*** will have responsibility for all relevant administrative functions.

Community and Public Agencies

Projects involving local utilities, services, and easements may also require the approval of the cities of South Jordan and West Jordan and other public agencies, such as the Utah Department of Transportation. As outlined in the *Master Plan*, the development of the Jordan Campus has been undertaken in a spirit of cooperation with neighboring residents, businesses, and communities. In keeping with that objective, whenever it is anticipated that a campus development will have significant impact on adjacent residents and communities, the ***Campus Review Board*** will coordinate a formal presentation of the project to the appropriate community representatives. This presentation may occur in a workshop setting or informational meetings. While community members have no statutory authority over final design approval, they will have a voice in the design direction of campus projects, and every effort should be made to address their concerns as the design evolves.

Commitment to Community Participation

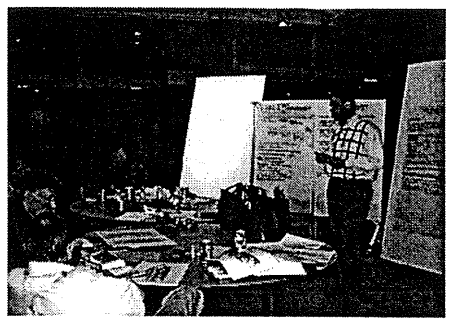
PARTICIPANTS

SALT LAKE COMMUNITY COLLEGE
STEERING COMMITTEE

Robert L. Askerlund	Assistant Director, Facilities
Paul R. Gundersen	Director of Facilities
Carl D. Meyer	Architect, Facilities
David K. Stauffer, AIA	Architect, Facilities
Gordon Storrs	Master Planning Coordinator

STATE DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

Richard Byfield, AIA	Director
Wayne Bingham, AIA	Building Program Director
Rick James, AIA	Lead Project Manager
Benjamin Hutchinson	Project Architect
David C. Racker, FASLA	Landscape Architecture Review
Craig Wessmann	Mechanical Engineering Review
Gaylen Rogers	Electrical Engineering Review



Developing the Design Guidelines

PLANNING TEAM

Hart Fisher Smith & Associates — **Design Team Leader**
Architecture, Programming & Planning

David H. Hart, AIA	Design Principal
Barry Smith, AIA	Principal in Charge
Christine Barton	Team Member

EDAW, Inc. — **Planning and Landscape Architecture**

Russell L. Butler, II, ASLA	Design Principal
Richard Flierl, ASLA	Project Designer

Laura Bayer — **Document Development**
Architectural Planning & Programming

Laura Bayer	Principal

ASSUMPTIONS AND ORGANIZATION OF THE DESIGN GUIDELINES

The goals of the ***Design Guidelines*** include the following:

- creating a system that will give unity, consistency, and coherence to the campus design without suppressing variety and creativity.
- providing further definition of the master plan concept in ways that will not unnecessarily restrict those who translate it into physical form.
- ensuring that no element will be isolated from its physical, environmental, educational, and conceptual context.
- setting the tone for consistent development over time.
- providing a record of assumptions and decisions made in the master planning process.
- encouraging participants from all disciplines to share in the vision for the new campus.
- structuring the document so that it will be an effective tool for project designers, planners, and facilities administrators.
- making the guidelines as clear and accessible as possible to all who have a stake in the outcome.

Where the *Master Plan* and the *Development Plan* were designed to provide an overview with emphasis on the totality of the concept, the ***Design Guidelines*** are organized to allow a designer to approach the campus concept from the perspective of a single project and, by understanding the criteria for that project, to arrive at a sense of its conceptual integration with the whole. Inevitably -- since the emerging vision depends on a close and complex interrelationship of tangible and intangible elements -- this involves some overlapping. For the convenience of users, and to minimize redundancy, the document is divided into six major categories:

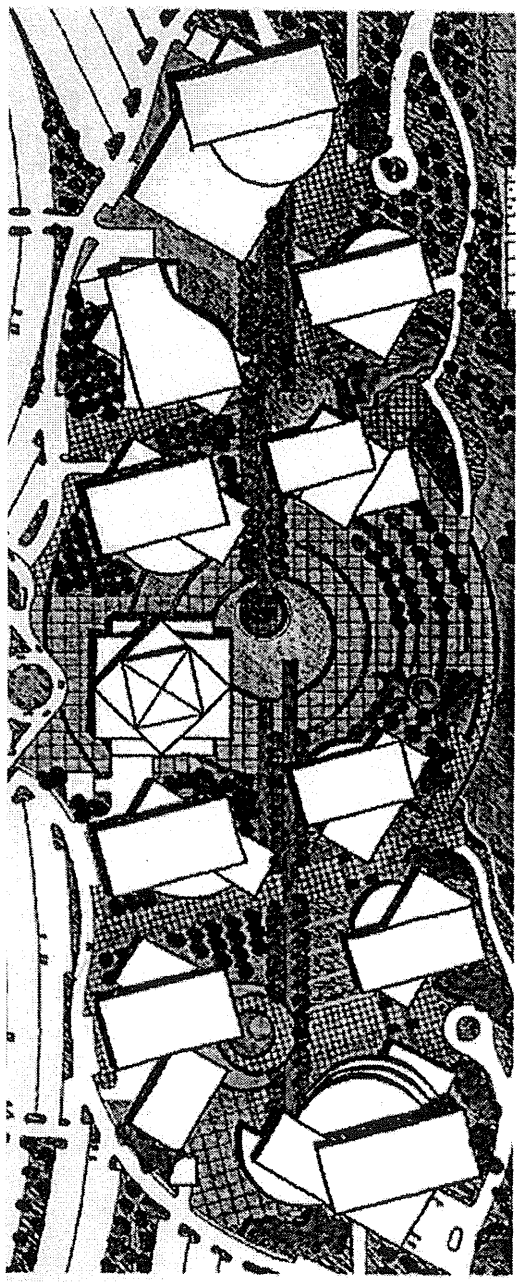
- ❖ ***Plaza***
- ❖ ***Architecture***
- ❖ ***Landscape***
- ❖ ***Site Elements***
- ❖ ***Circulation***
- ❖ ***Utilities***

Each major section is divided into the following subsections:

- **Relationships**
- **Functions**
- **Character**
- **Materials**

PURPOSE

The purpose of the ***Plaza Design Guidelines*** is to focus on the essential role of this significant central gathering space in the realization of the vision articulated in the *Master Plan* and *Development Plan* (see *Appendix A* for copies of drawings and support materials). The Plaza will not only provide physical connections between all campus buildings, courtyards, open spaces, circulation corridors, and parking areas, but also articulate the symbolic links among these spaces through the development of a central narrative metaphor describing the eternal quest for knowledge.



❖ *RELATIONSHIPS*

The Plaza will be both the literal and the conceptual center of the Jordan Campus. It will be

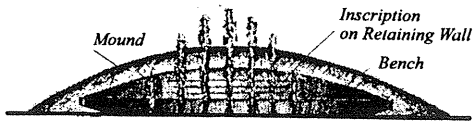
- located with a north - south orientation, extending through the central core of the campus, adjacent to all instructional facilities.
- placed above the campus utility distribution tunnel.
- sited in ways compatible with passive solar principles and prevailing wind conditions to create a "warm" space.
- designed so that the general patterns of hardscape and softscape respond to campus organizational grids.

In addition to fulfilling these basic conditions, the Plaza will be the major element in a symbolic landscape narrative designed to add another layer of meaning to the campus experience.

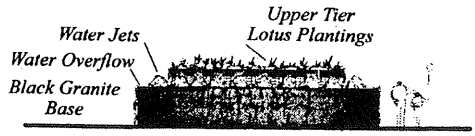
In this landscape narrative, the pedestrian "Main Street" running through the center of the Plaza will represent the path of knowledge. On this path, the student will encounter a series of visual images designed to pique interest and encourage further exploration of the myriad opportunities the campus offers. The journey may begin at the formal north or south gateway, or at an intermediate point along the

"Main Street," but wherever it starts, the pursuit of knowledge will lead to the center of the Plaza.

There, in the heart of the campus, the student will find a major water feature that represents the gathering of knowledge. Like knowledge in the center of learning, water flows into this fountain, pools, and is released, with ripples spreading outward from the source in all directions. From this point, the student will be able to view a second water feature located to the east and aligned with the central campus building At the center of this large water basin will be a flame that is visible but unreachable, symbolic of the eternal quest for knowledge



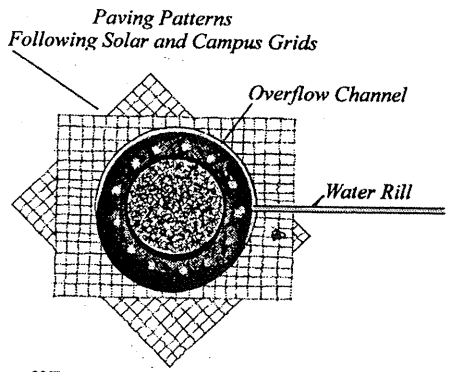
Central Fountain



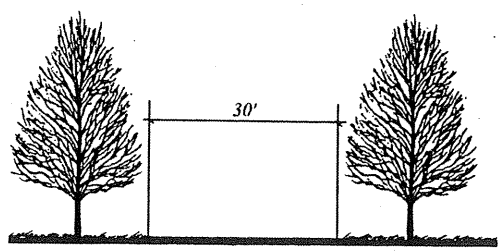
"Innocence" Fountain Concept

Major landscape areas, corresponding to points in this symbolic progression, will include the following:

- A runnel, with a soft edge, will flow through the central lawn space parallel to the path, representing ever-changing, perpetually renewed flow of information.
- A central mound surrounding this water feature will create areas for both group activity and individual contemplation.
- A second water feature, the "Lamp of Knowledge," will be placed at a right angle to the path, aligned on the orthogonal or city grid with the central campus building. The pure circular form of this feature will be an expression of perfection, equality, and infinity; the ever-burning flame at its center, a symbol of the constant light of knowledge that leads the student onward in the journey.
- Major entries at the north and south ends of the path will serve as the formal points of beginning, an initiation that hints at what is to come.
- The North and South Plazas, filled with smaller water features, will focus on the thematic concept of "Innocence," the spontaneous and imaginative elements of knowledge that the student brings to the formal education process.
- A "Cascading Terrace" in the central area will connect the Plaza to the outdoor laboratories



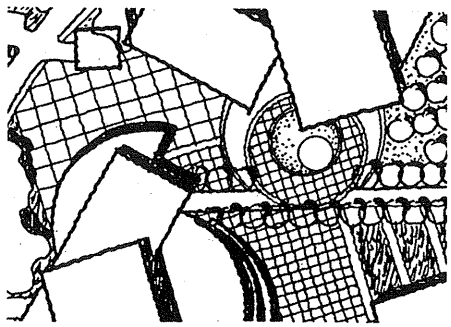
"Innocence" Fountain Concept Plan



Single Path

and open areas to the east and, through them, to the adjoining neighborhood residential areas. The terrace will lead the student on a journey into the environment.

- Views from the central plaza -- partially filtered by a linear canopy of deciduous trees -- will display the vastness of the earth's resources. At the same time, the breadth of these mountain vistas will serve as a reminder that no individual can attain full knowledge and understanding on this earthly journey.

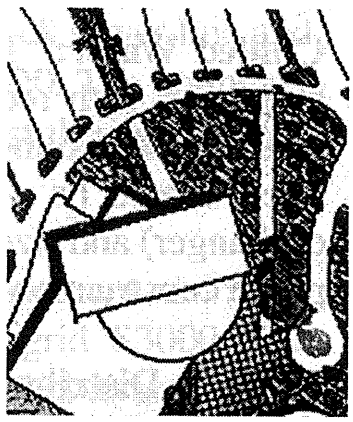


"Innocence" Fountain

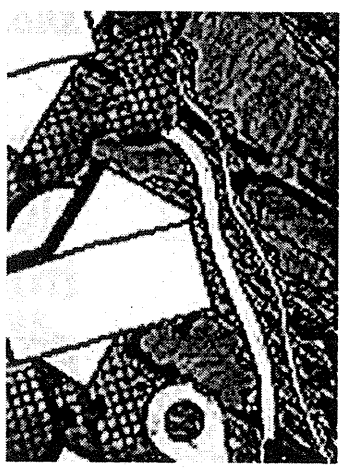
❖ *FUNCTIONS*

The Plaza will provide for the horizontal movement of people and services through the center of campus. The "Main Street" path will be the primary access route through the campus. It must meet ADA accessibility design guidelines. It must also be a minimum of thirty feet (30') wide with no overhead obstructions to serve as an access route for fire and emergency vehicles. In addition to meeting these basic functional needs, the Plaza will

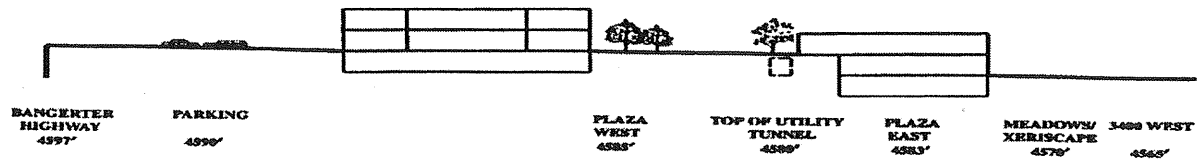
- promote social interaction by offering places that encourage gathering and accommodate groups of varied sizes.
- provide private outdoor areas for individuals and smaller groups.
- accommodate a broad range of activities and functions.
- offer convenient on-grade access to all buildings.
- reinforce the hierarchy of spaces.
- provide emergency vehicular access to central campus areas.
- accommodate snow storage and drainage for winter maintenance.
- incorporate an unobtrusive, easily maintained drainage system.
- accommodate access to the utility tunnel.
- provide visual and physical transitions between vistas, landscape areas, outdoor activity areas, and interior spaces.
- have adequate electrical service, drinking fountains, refuse containers, and bicycle racks to support outdoor activities.



Pedestrian Paths to Plaza and Buildings



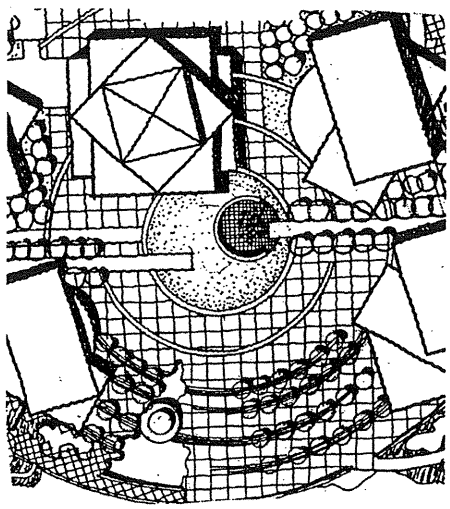
Emergency & Service Access to Plaza



❖ *CHARACTER*

The Plaza should have the character and composition of a pedestrian village street and plaza system, which offers access to a variety of experiences. It should be designed to

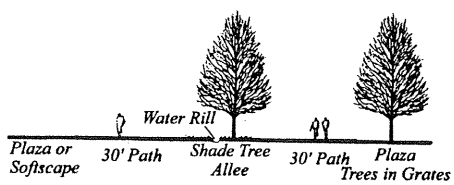
- consist of a maximum of sixty percent (60%) hardscape penetrated at intervals by lawn. panels, planted areas, and site elements.
- make use of varied colors, textures, forms, and scales to reinforce the village concept.
- have flexibility to accommodate diverse academic, cultural, and recreational uses.
- resist damage from snow-removal equipment, the freeze/thaw cycle, and the chemicals used to melt ice.
- have a mean elevation at the central paths that is on grade with and offers direct access to building entries, parking areas, and pedestrian circulation routes through the campus.
- allow variations in elevation to define activity spaces and more private seating areas and to accommodate the utility tunnel.



Central Fountain

The character of the interface between the Plaza and campus buildings will be a major design element. All building - plaza transitions should

- be visually transparent.
- allow a smooth flow of people and activities between indoor and outdoor spaces.
- be contiguous with indoor public and social areas.



Double Path

The Plaza will expand in phases as the campus is developed. Until the campus is built out, the Plaza will have a "working face" that is redefined with each phase of construction. This face will be planted with lines of deciduous trees that create a canopy and screen the undeveloped Plaza area.

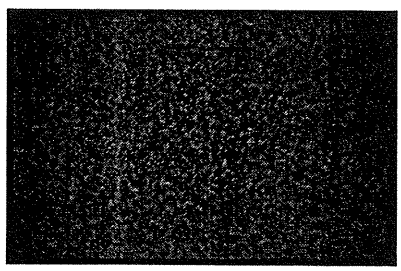
❖ *MATERIALS*

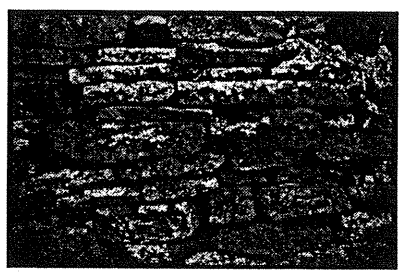
In general, materials should be selected so that

- the main path through the Plaza is of the same material and color from one end to the other.
- the Plaza has a richness created by the use of multiple natural colors.
- the design employs modular dimensions consistent with the campus organizational grids.

Approved Hardscape Materials

AREA	MATERIAL	DIMENSIONS & FEATURES
"Main Street" path	thermal-finish Dakota Mahogany granite pavers	2" thick
		24" x 48" unit module
		laid with a running bond perpendicular to the path
		30' wide path continuous throughout the Plaza
Plaza and other paths	brick pavers	standard size
	concrete pavers	12" x 12" maximum 4" x 4" minimum
	ceramic glazed concrete tile	
	natural stone pavers	
	concrete	as approved by Campus Review Board
	decomposed granite	reinforced and stabilized
risers, stairs, mow strips, planter walls	concrete	
	natural cut stone in blocks	4" x 8" minimum block size





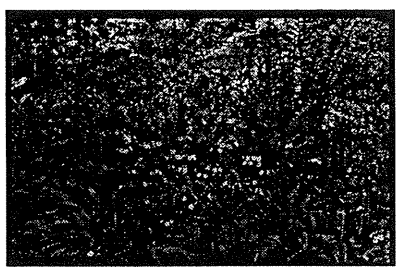
Approved Hardscape Materials

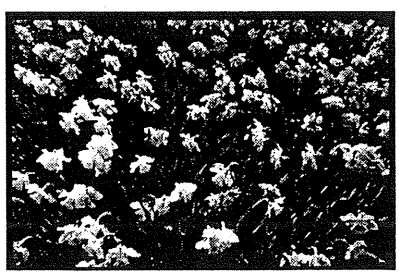
AREA	MATERIAL	DIMENSIONS & FEATURES
walls	natural stone	dry-laid without visible mortar
		plantings in joints and voids to create "green walls'
fountains, pools, streams, waterscape	gunnite edging with color added	acceptable only for the Pond
	tiles	
	natural stone	
	glass	
	precast concrete with integral color	

Approved Softscape Materials

All softscape materials to be selected from the approved plant list (see *Appendix C*).

AREA	MATERIALS	DIMENSIONS & FEATURES
"Green Strip" adjacent to "Main Street"	mowed grass	20' wide [review width for compatibility with spray-head modules]
lawn panels	bluegrass turf	
other horizontal surfaces	ornamental prairie grasses	
	wildflower sod mix	
	ground covers	
	bulbs	
	annuals	
	perennials	
	deciduous shrubs	low maintenance
	evergreen shrubs	low maintenance





Approved Softscape Materials

All softscape materials to be selected from the approved plant list (see *Appendix C*).

AREA	MATERIALS	DIMENSIONS & FEATURES
Vertical elements:		
"orchards"	flowering fruitless trees	
bosques	deciduous trees	
alleé adjacent to "Main Street" path	deciduous trees	
perimeter canopies at the Plaza	deciduous trees	
walls	vines	non-destructive
trellis/arbor	vines	non-destructive
hedges	evergreen shrubs	planted in tight rows
	deciduous shrubs	
accents	evergreen and deciduous trees	selected for seasonal interest and wind control
	evergreen and deciduous shrubs	
	ground covers	
	annual and perennial flowering plants	

❖ *PURPOSE*

The intent of the ***Architectural Design Guidelines*** is to establish criteria to ensure that all campus buildings contribute to the creation of a coherent, ordered environment consonant with the overall vision articulated in the Campus *Master Plan* and *Development Plan*. This section should not be construed to discourage any creative design direction or solution that can be developed in harmony with the principles outlined here.

The overall architectural goal is the creation of campus with an indigenous architectural vernacular. This ***High Desert / Mountain Architecture*** will be characterized by

- a human scale.
- a noninstitutional character.
- the reinterpretation of traditional desert and mountain forms.
- reliance on natural organic materials with a timeless quality.
- a hierarchy of spaces that provides order without rigidity.
- a sense of openness and intimacy.
- the visual enclosure and definition of exterior space.
- a surrounding garden of native and drought resistant plants.
- sustainable and timeless design that takes advantage of solar orientation and allows the penetration of light into and between buildings.
- a "Grand Floor" that extends throughout the core of the campus at the mean plaza elevation, linking indoor and outdoor social and activity spaces and providing connection throughout.

❖ *RELATIONSHIPS*

All campus buildings should be placed in a way that respects

- the existing setting and environment.
- the principle of development at a human scale.
- the organizational grid system, with its solar and view orientations.

- designated view corridors to the east and west.
- the internal focus oriented to the Plaza and the pedestrian "Main Street."
- the organization of campus infrastructure and circulation systems defined during master planning.
- the commitment to preserving campus open and green space as established by master plan ratios for site development.

Every building should create a hierarchy of ordered spaces and reflect that hierarchy through

- relation to the Plaza at the "Grand Floor."
- relation to other buildings.
- placement of public spaces and all social spaces (including student services, recreation, open computer labs, and food service) adjacent to the Plaza.
- location of specialized functions away from the Plaza.

Building relationships should

- be visually apparent.
- stimulate interaction among students, faculty, staff, and community members to enhance the academic process.
- be manifested in direct pedestrian access routes through and around buildings.

❖ *FUNCTION*

Overall campus architecture must perform the following functions:

- Each building shall include at least one major space dedicated to social interaction and gathering. That space will be located adjacent to the Plaza to encourage a flow of activities into outdoor areas.
- Each building will address specific programmatic needs defined prior to architectural design.
- In the initial phases, each building will provide

multipurpose areas capable of accommodating the broad range of college functions and activities.

- Buildings will give form to the spaces between them, define outdoor spaces, and contribute to the creation of a village character expressed in the vernacular of ***High Desert / Mountain Architecture.***
- Buildings will employ solar design to reduce energy consumption and provide daylighting.

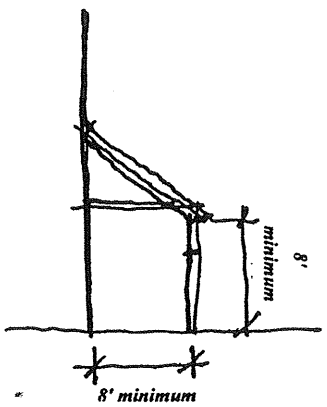
The following architectural components will have additional specific functional requirements:

Entries

- Building entries will provide protection from weather.
- The transition in materials from exterior to interior space will be seamless.
- Each entry will have an entry mat to capture foot-borne debris and protect floors from water damage.

Arcades

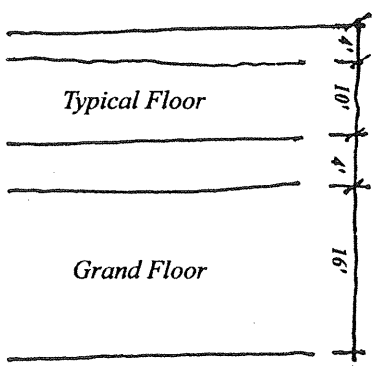
- Each building will have an arcade at least 8'-0" wide and 8'-0" high that creates a covered pedestrian path at the Plaza face, provides a transition from building to Plaza, accommodates diverse activities, establishes a human scale, provides visual connections throughout the campus, and defines exterior space.



Arcade Dimensions

The "Grand Floor"

- The Plaza level or "Grand Floor" of every building will be designed with a 20'-0" floor-to-floor height (with a finish ceiling height of approximately 16'-0") to accommodate larger spaces for public functions and activities.
- The "Grand Floor" will provide a connecting east-west link among buildings.
- Each building will have at least two main entries



Floor-to-Floor Heights

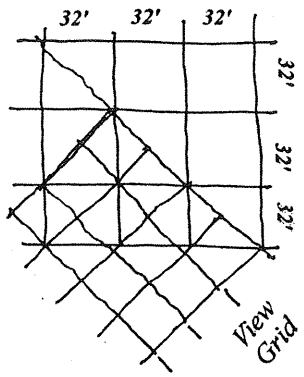
on the "Grand Floor."

- The "Grand Floor" will allow daylight to penetrate into the building and allow building illumination to be seen on the Plaza.

❖ *CHARACTER*

Overall campus architecture should

- reflect historic forms and cultural heritage.
- have a timeless design that will not become dated; avoid faddish and trendy designs, materials, and elements.
- emphasize consistency of attitude and scale rather than uniformity of design style.
- use the solar design grid and the view grid as a significant determinant of architectural form (with the exception of the structure designated as Phase 7 in the *Master Plan*, which will be oriented to the orthogonal grid to emphasize its centrality).



Grid Organization

Any phased building must stand alone. If a building must be developed in multiple phases, the area should be split horizontally, not vertically.

Building Interiors

- A 32'-0" base grid will be used to provide flexibility and continuity.
- Circulation should be designed for flexibility
- The impact of sheer wall location on flexibility should be reviewed.

Building Entries

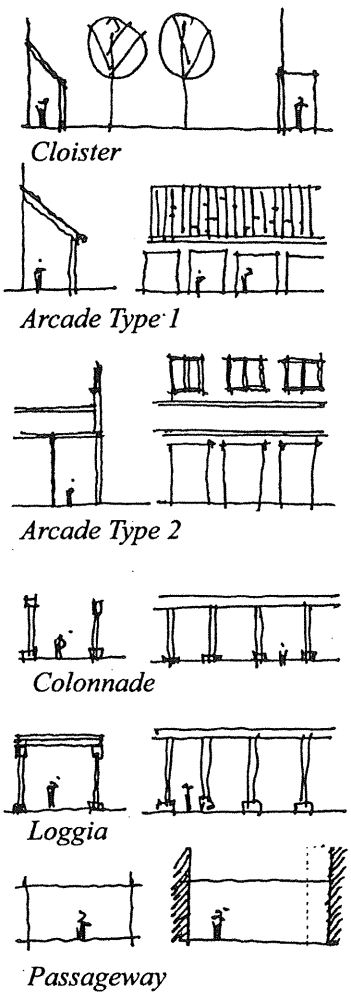
- All building entries should be inviting, open, and easily accessible, not threatening, ominous, or confusing.
- Entries should be well-lit, with accent lighting throughout. This light should spill into adjacent indoor and outdoor areas.
- Each entry should lead to a clear circular path that provides a sense of orientation.

The **"Grand Floor"**

- Each building will have a "Grand Floor" at Plaza level.
- The "Grand Floor" will provide orientation and direction.
- The "Grand Floor" will accommodate public and group activities in a location adjacent to the Plaza.

The **Arcade**

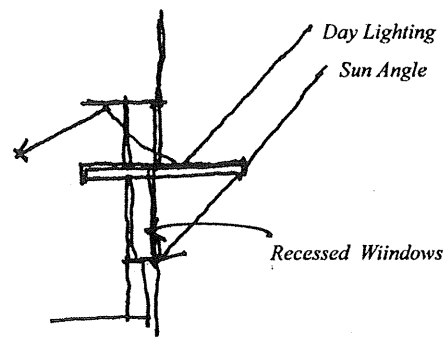
- Building arcades must be integrated with building design, not merely "tacked on"; they should reflect building materials and forms.
- Arcades should have a stone base.
- The arcades should reinterpret a traditional form. Acceptable shapes include a colonnade, a series of arches, or a similar passageway with rectilinear openings.
- The arcade and the main building facade should be oriented to the Plaza.
- The arcade should have supplemental lighting designed to encourage transparency between the building and the Plaza and permit the flow of light from the interior to the exterior.



Arcade Types

Solar Design

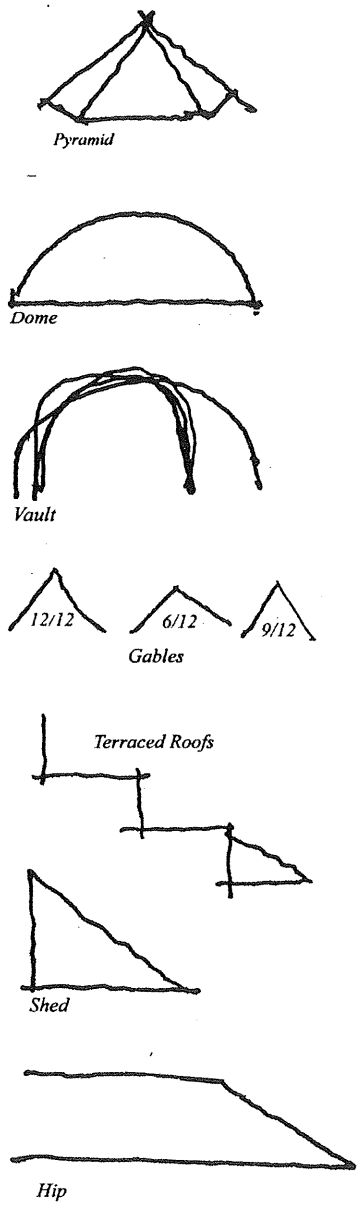
- Design should include the analysis of solar impacts on the north, south, east, and west exposures of each building.
- Buildings should be designed to incorporate daylighting.
- Building orientation should follow solar design principles.
- Roof monitors may be used to bring daylight into the facilities.
- Solar design should be integral to the architecture and contribute to the creation of building image.



Solar Design

Roof Design

- Seventy percent (70%) of total roof area should be sloped or terraced.
- Flat roofs will be limited to buildings that require long-span structure. Any use of a flat roof over more than thirty percent (30%) of a structure will require the approval of the ***Campus Review Board.***
- Each building should have a variety of roof levels and roof forms designed to "create the unexpected."
- Acceptable roof forms will include gabled roofs (with a 6/12, a 9/12, or a 12/12 slope), terraced roofs, and, in limited applications, domes or vaults, hip roofs, pyramid roofs, and shed roofs.
- Skylights and sloped glazing will not be permitted on the roof. Monitors with overhangs may be used to provide daylighting.
- Eave overhangs should be a minimum of 2'-0" on the ridge or gable; parapets and hipped ends are not allowed.
- Forms should respond to solar design principles to warm the plaza and allow interior daylighting.
- Gutter systems must be integral, not attached to the roof.
- Exhaust fans should be located in attic/dormer areas.
- Roof penetrations should be kept to an absolute minimum.



Roof Types

Mass-to-Glass Ratio

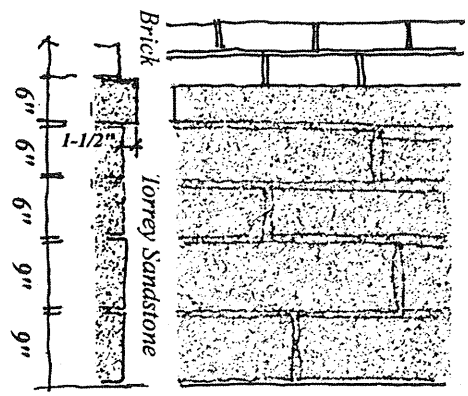
- The overall mass-to-glass ratio should be no less than 60/40.
- The mass at the second floor must be at least ten percent (10%) greater than that of the main floor. To conform with the energy code, overall glass on floors other than the first floor should not exceed thirty percent (30%).
- No single expanse of glass greater than 28'-0" wide will be permitted.

❖ *MATERIALS*

Colors for all elements will be selected from the approved color palette (see *Appendix B*) unless a specific color is identified for the element. See *Appendix D* for product information about selected components.

Approved Building Materials

USE	MATERIAL	NOTES
Major Building Elements		
walls	Interstate Sunset brick	standard height weather joints textures: wire cut, natural finish, cut as fired, blade, matte
exterior base	Torrey Sandstone or equivalent	36" height above mean plaza elevation standard (windows and sills can penetrate)
		6" - 9" high 12" - 24" long
		laid in random running bond pattern with raked joints with natural mortar (rough, face)
cut stone cap	Torrey Sandstone or equivalent	6" high with sill slope to 4" min.
		1½" overhang (with drip) at face
		24" - 48" lengths
		Sill cap must be expressed.



Typical Base Detail

Approved Building Materials

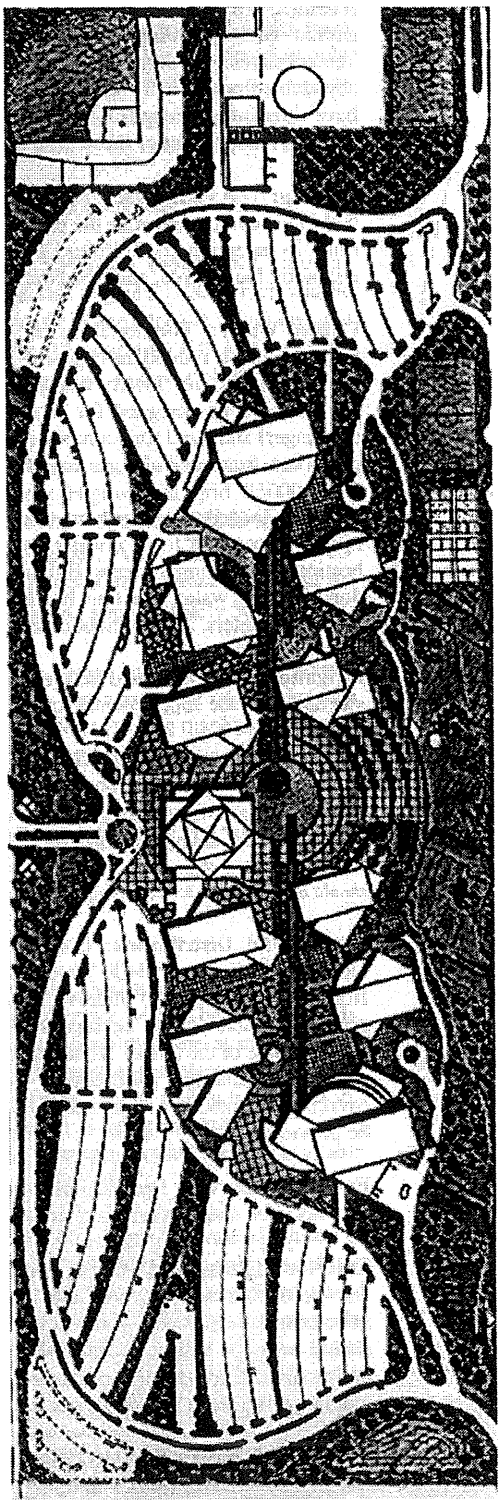
USE	MATERIAL	NOTES
lintels and sills	Torrey Sandstone	
	Interstate Sunset brick	
	precast concrete	
roof tile	flat concrete tile	gray/green color (Pantone 5575U)
glazing	clear glass	required for main-level entries, arcades, storefronts, and full-height windows
		acceptable all areas
	Libbey Owens Ford Evergreen (low-E)	all glazing above first level
		small punched windows on first level
mullions, frames, and other metal elements	aluminum with factory finish	color as approved by *Campus Review Board*

Approved Building Materials

USE	MATERIAL	NOTES
Materials for Accents and Special Uses		
curved forms, banding	precast concrete	
soffits	exposed structure	
	cement plaster	
	wood	
metals	nonferrous metals	
	stainless steel	
	aluminum	
	brass	
	copper	
	bronze	
split-face brick	Interstate Sunset	for accent only
fascia	precast concrete	
	aluminum with a factory finish	
	copper	
accent roofing	standing-seam copper	
handrails	stainless steel	

PURPOSE

The purpose of the ***Landscape Design Guidelines*** is to provide overall direction for the implementation of the landscape strategies outlined in the Campus *Master Plan* and *Development Plan* (see *Appendix A* for drawings and major support materials). This section focuses on general landscape criteria. It does not include detailed discussion of the Plaza (considered separately in *Section 2*) or Site Elements (described in *Section 4*).



The overall conceptual intent is to create a field of drought-resistant plants surrounding the developed campus area. Landscape will be a major element in the overall design of the campus. The campus landscape has been conceived, not as a neutral backdrop, but as a design element equal in importance to architecture in the development of an appropriate educational environment. Thematically, the landscape background will reinforce the central landscape narrative by representing the richness of the natural environment and our responsibility for the world in which we live.

❖ *RELATIONSHIPS*

Campus landscape development should respect

- the existing topography of the site.
- the natural and historic environment.
- the organizational grid systems.
- the significance of the central plaza areas.
- the location and design of individual campus buildings.
- the potential impact of prevailing winds.
- the village concept.
- ecologically responsible design principles.

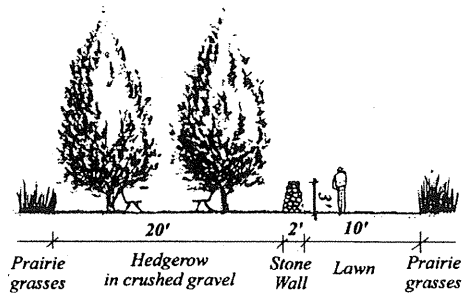
Landscape subareas, as defined in the *Master Plan* and *Development Plan*, are intended to create a variety of specific relationships, including

- proximity of outdoor laboratories and activity areas to related indoor academic functions.
- transition to and separation from adjacent residential areas through a "green edge."
- a sense of identity and significance at entry points and other major nodes.

- orientation for pedestrians.
- movement from small enclosed areas to broad open ones, to enhance the sense of wonder as the expanse of knowledge opens up.

The general landscape design will include the following distinct subareas:

- perimeter areas along the Bangerter Highway, and the north, south, and east property lines.
- parking lots.
- a line of deciduous trees to create a canopy at the perimeter of the Plaza, which will filter the vistas beyond, enhancing the contrast between foreground and background.
- a second line of deciduous trees, planted as a temporary screen at the "working face" of the Plaza during interim construction phases, which will be relocated as necessary while the campus is under development.
- a tree farm, located near the 90th South entrance to the campus, which will be planted, managed, and owned by the college to develop trees for college plantings.
- athletic fields and recreation areas.
- outdoor lab areas.
- retention/detention pond and meadow areas.

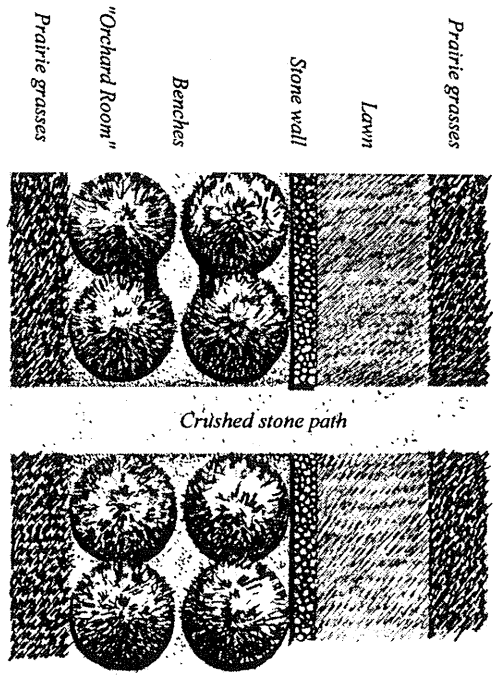


Section at Hedgerow

❖ *FUNCTIONS*

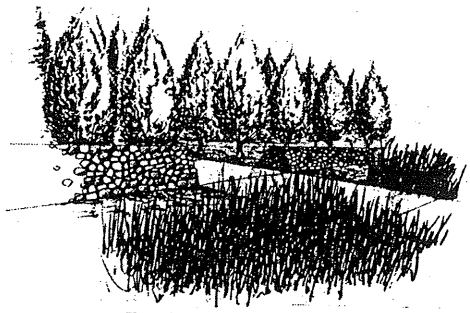
Recognizing the importance of landscape in successful campus designs, the Jordan Campus master plan has focused on the development of a landscape concept intended to be an integral part of the campus experience. Landscape will fulfill multiple functions in the campus design, including

- creation of outdoor "rooms" and spaces of varied size and character to offer an array of educational and recreational opportunities.
- extension of college activities throughout the site.
- enhancement of campus open spaces.



Path at Hedgerow & Stone Wall

- creation of buffers to provide visual separation from neighboring residential areas and the Bangerter Highway.
- visual screening of elements such as surface parking, service areas, and roadways.
- creation of retention/detention areas for storm drainage.
- enhancement of passive solar design and daylighting.
- creation of windbreaks.
- incorporation of site elements to enhance the symbolic and interpretive landscape narrative.

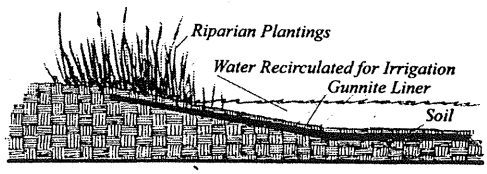


Path at Stone Wall

❖ *CHARACTER*

The landscape as a whole will provide

- diversity of form and texture.
- seasonal variability.
- a sense of human scale.
- design based on ecological principles, including the conservation of water, the recirculation of well and drainage water for irrigation, and the use of indigenous materials where feasible.

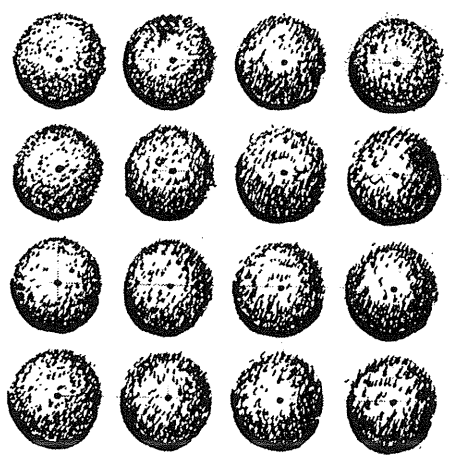


Pond Edge

Each landscape subarea will have a distinctive character:

Perimeter Landscape will include

- native and drought tolerant plantings where appropriate.
- "orchards" or bosques of flowering fruitless trees and deciduous shade trees planted on the solar grid, at a spacing of no more than 20' on center.
- massed plantings of trees to create gathering spaces.
- hedgerows of evergreen or deciduous shrubs, planted at a spacing of no more than 15' on center.
- site walls, corresponding with the hedgerows, oriented to the view grid.
- earth berming to provide screening.



Bosque

- an 8' wide jogging trail.
- pedestrian pathways.
- a manicured and mowed lawn edge planted along the entire perimeter of the site to create a refined edge along all vehicular drives and provide transition to neighborhood communities. This lawn area may vary from 8' to 24' in width; the design should be reviewed to ensure the that modules are compatible with efficient and effective irrigation.

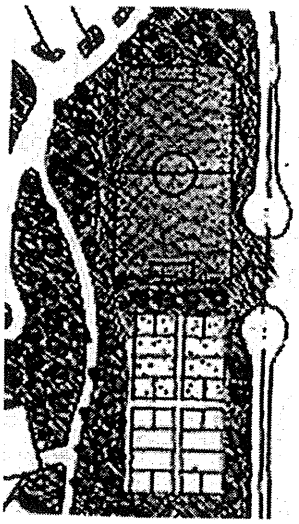
Parking Area Landscaping will include

- an extension of the native landscaping in the perimeter areas.
- traffic islands that contribute to the overall landscape effect.
- paved pedestrian walkways in larger islands.
- berms that provide physical and visual separation from the loop road.

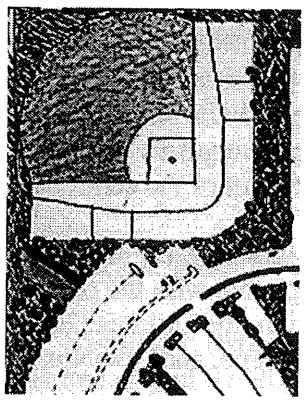
Athletic Fields and Recreation Areas will be planted with hardy special-purpose turf grasses tolerant of heavy traffic.

Detention Areas will employ plant materials selected for resistance to salt, oils, gasoline, and other components of highway runoff.

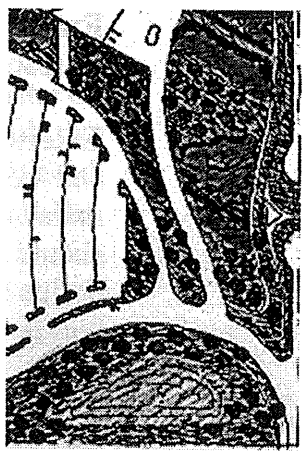
The **Pond**, which will capture roof water and well water for irrigation use, will have a constructed, erosion-resistant edge at the east side and a combination of grass edges and steps that extend into the water on the west side.



Soccer Field and Tennis Courts



Baseball Diamond

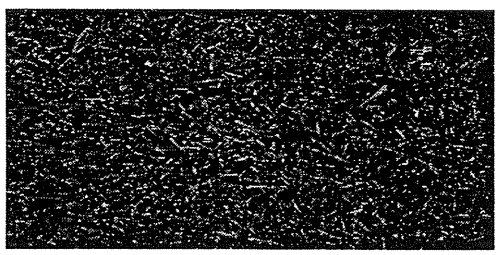


UDOT Detention Area

❖ *MATERIALS*

All campus plantings will be selected from the approved plant list (see *Appendix C*) and in accordance with the guidelines listed below. They will be planted in accordance with the standards of the American Association of Nurserymen (AAN). In all areas, careful attention should be paid to the ultimate height and form of plantings, which may, where appropriate, include

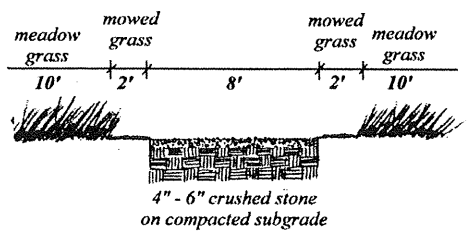
- plants indigenous to the region
- plants hardy in USDA Zone 5.
- drought tolerant species that contribute to conservation of water.
- materials and forms that reflect the area's history and cultural heritage.
- limited areas of water- and maintenance-intensive landscape, such as manicured bluegrass lawns and formal plantings (acceptable only in high traffic areas, athletic fields, and transition zones).



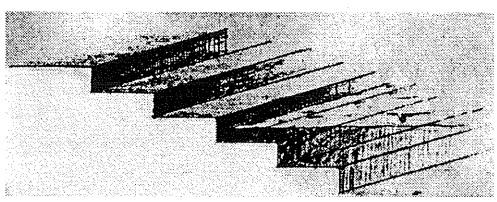
For irrigation systems and materials, see *Section 6, Circulation.*

Hardscape Materials Approved for Landscape Use

AREA	MATERIAL(S)	SIZE(S)
roads, pedestrian nodes, paths, and service drives	concrete pavers See *Circulation, Section 6,* for detail.	
Plaza	See *Plaza, Section 2.*	
jogging trail	crushed stone stabilized with a binder	
constructed edging at Pond	gunnite liner with integral color	
steps at Pond	natural stone	



Jogging Path

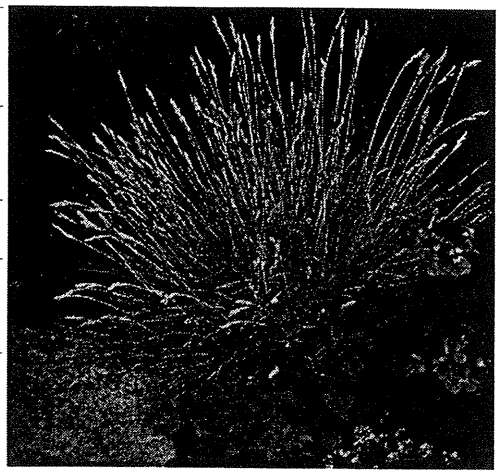


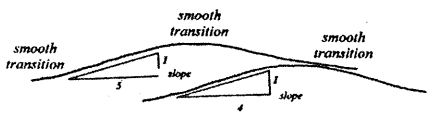
Riser at Water Edge

Softscape Materials Approved for Landscape Use

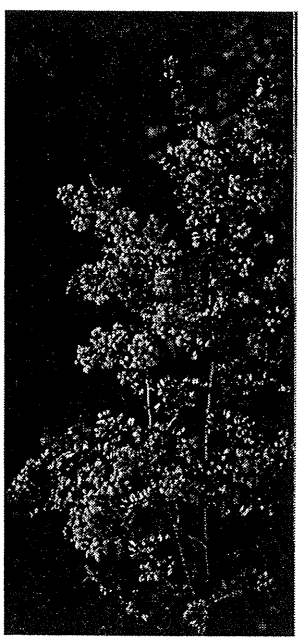
All softscape materials to be selected from the approved plant list (see *Appendix A*).

AREAS	MATERIAL(S)	SIZES
Plaza plantings	see *Section 2, Plaza.*	
berms	flowering fruitless trees	side slope no greater than 4 to 1; height dictated by slope and space
	deciduous shade trees	
	native and drought-tolerant plants	
	grasses	
canopy and screen plantings	deciduous trees	2½" caliper minimum
"orchards"	flowering fruitless trees	1½" caliper minimum
bosques	deciduous shade trees	2½" caliper minimum
accent plantings	evergreen trees	
	deciduous trees	
	flowering trees	
	evergreen shrubs	
	deciduous shrubs	
	annual flowers	
	perennial flowers	
	ornamental grasses	





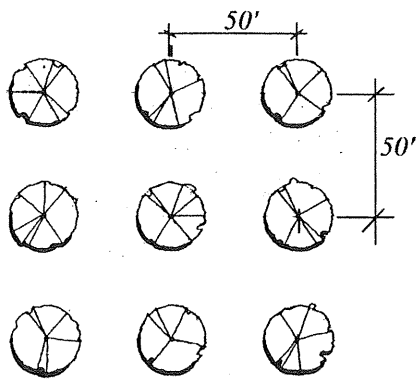
Typical Graded Slopes



Softscape Materials Approved for Landscape Use

All softscape materials to be selected from the approved plant list (see *Appendix A*).

AREAS	MATERIAL(S)	SIZES
hedgerows and hedges	evergreen shrubs deciduous shrubs	4' to 6' tall, minimum
ground plane, general	wild flowers	
	native and drought-tolerant grasses	
	native and drought-tolerant shrubs	
athletic fields and recreation areas	hardy special purpose turf grass	capable of withstanding heavy traffic
perimeter lawns	mowed bluegrass turf	
	flowering bulbs	bulbs should not be interplanted with turf grass
	ornamental grasses	
mulch	shredded bark materials	



50-foot Tree Grid

PURPOSE

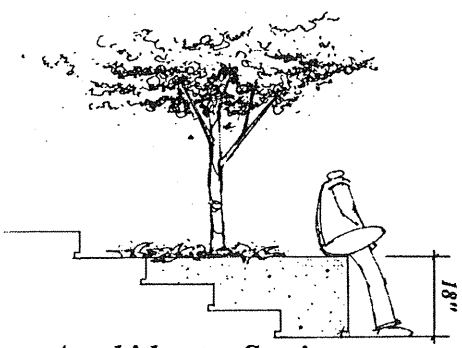
The ***Design Guidelines for Site Elements*** are intended to direct attention to the importance of the smallest individual components within the landscape design. These elements should be selected and designed to add color, excitement, interest, and fun to the campus; to support outdoor activities; and to reinforce the overall landscape narrative. Elements covered by this section include

amphitheater
arbors
art / sculptures
banners
benches
bike racks
bollards
bus shelters
campus directories
drinking fountains
fencing
flags
food service carts and vending
gateway elements
handrails
kiosks
lighting
manhole covers
outbuildings
outdoor seating
plaza site elements
planter pots
power outlets and covers
railings
signage and graphics
site walls
telephone booths
tree grates
tunnel access vents
umbrella tables
waste receptacles

❖ *RELATIONSHIPS*

Site elements will occur throughout the campus. Each should be selected and placed so that it will be sensitive and appropriate to

- site topography and landscaping.
- the overall design character of the campus.
- the organizational grid systems.
- the character and use of adjacent areas and structures.
- the campus context of specific materials and forms.



Amphitheater Seating

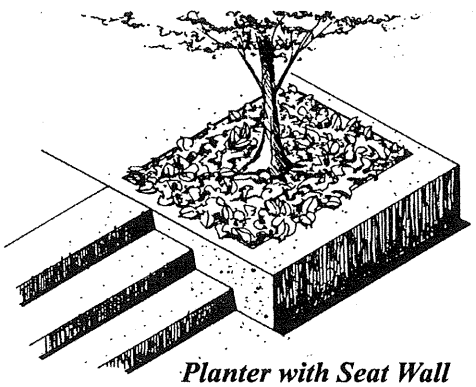
Specific locations for site elements will include

- significant campus areas, such as entries, where site elements will create and reinforce a sense of identity and arrival.
- the Plaza, where all site elements should be at pedestrian scale.
- the cemetery to the north of the campus, where site elements can be used to enhance and take advantage of open space.
- special use and activity areas, which will have clusters of furnishings and other site elements.
- distributed placements of seating, signage, and waste receptacles throughout the campus area.
- spaces reserved throughout the site to allow ongoing acquisition of artwork.

❖ *FUNCTIONS*

In addition to meeting obvious utilitarian needs, each site element should be selected and placed to enhance, support, and develop the overall conceptual direction identified for the campus. This should include

- encouraging social interaction and group activity.
- meeting ADA accessibility criteria.
- supporting the landscape narrative.
- defining the hierarchy of spaces.



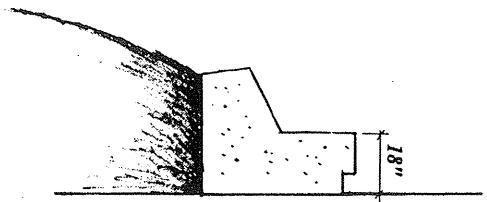
Planter with Seat Wall

❖ *CHARACTER*

All site elements must be

- appropriate to the vernacular of ***High Desert / Mountain Architecture***.
- of a timeless character.
- of a contemporary design that reinterprets traditional forms.
- compatible with the local climate.
- made of durable materials and finish.
- in conformance with a standard palette of materials and colors.
- evaluated for life-cycle cost effectiveness.

If the same site element occurs in multiple campus areas of a similar type or function, a common design must be employed for all occurrences. Variations may occur in areas with distinct use or architectural character, such as the arcades and courtyards associated with individual buildings. Specific areas where consistency will be enforced include the extent of the main plaza, all parking lots, structures such as bus shelters, and all fencing.



Bench at Central Fountain

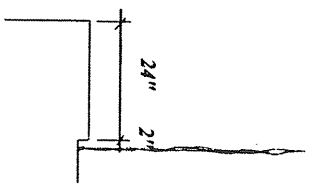
❖ *MATERIALS*

Approved Colors for Site Elements

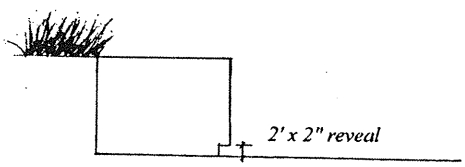
Elements that may employ any approved base color(s):

For the following elements, colors may be selected from any of the shades in the Approved Color Palette (see *Appendix B*). All elements of a common type, however, must be of consistent color(s) unless variations are approved by the Campus Review Board.

USE/AREA	COLOR(S)
arbors	any color on the approved palette
architectural elements (outbuildings, bus shelters, and other minor structures)	
bike racks	
bollards	
drinking fountains	
gateways	
kiosks	
paving	
plaza furnishings	
planter pots	
poles	
site walls	
telephones	
tree grates	



Wall at Water Edge



Section at Seating Wall

Approved Colors for Site Elements

Elements limited to specific base color(s):

For the following items, only the colors listed below are approved.

USE/AREA	COLOR(S)
	[Colors for individual elements to be selected].

***Elements that may employ approved accent color(s)*:**

Accent colors should be used in concentrated applications and limited quantities; they should be generally limited to pedestrian activity areas unless otherwise noted.

USE/AREA	COLOR(S)
banners	any approved accent color(s)
flags	
food service/vending	
furnishings other than those on the Plaza	
receptacles	
sculpture	
tables other than those on the Plaza	
umbrellas	
waste receptacles	

Approved Materials for Site Elements

For approved colors, see listing above and *Appendix B.*
For product information about specified items, see *Appendix D.*

All recurring elements of similar type or function must be of a common design throughout the campus.

APPLICATION	MATERIALS	NOTES
outbuildings	Torrey Sandstone	See *Section 3, Architecture,* for additional details.
	Interstate Sunset brick	
outbuilding roofs	flat precast concrete shingles	See *Section 3, Architecture,* for additional details.
	standing-seam copper	
	built-up roofing	
Metal Elements		
Handrails	stainless steel	
Light Poles Flag Poles Mullions	factory finish aluminum	
Grates	cast iron	
Details Accent panels Site furnishings Decorative accents	miscellaneous metals	durable, low maintenance finish required
Signage		see *Jordan Campus Signage Manual* [to be developed]
Concrete and Masonry		
Natural stone	all applications	dry-laid
Cultured stone	accent items	

Approved Materials for Site Elements

For approved colors, see listing above and *Appendix B.* For product information about specified items, see *Appendix D.*

All recurring elements of similar type or function must be of a common design throughout the campus.

APPLICATION	MATERIALS	NOTES
Split-face concrete masonry units	site elements	
Precast concrete	accent elements	
Woods		
accents		in well-protected areas only
exterior walls		not acceptable
exposed elements and furnishings		not acceptable
Glass		
windows, light panels, screens, and accents in outbuildings and minor structures	Clear	See *Section 3, Architecture,* for additional detail.
	Libbey Owens Ford Evergreen	
skin element in outbuildings		not acceptable
Ceramic Tile		
accents	in approved colors	

Site Lighting

For approved fixture colors, see the site element listing above and *Appendix B.*
For product information about specified items, see *Appendix D.*

All recurring elements of similar type or function must be of a common design throughout the campus. Variations may occur *only* at individual building arcades, where dictated by architectural design

Wherever possible, fixtures should have common lamping to reduce inventory.

Approved Fixture Types and Lamping

LOCATION	FIXTURE TYPE	LAMPING
"Main Street" path	pole type	metal halide
Building perimeter arcades	wall-mounted fixtures not acceptable	metal halide
Trees	tree-mounted fixtures not acceptable	metal halide
	up-lighting	
General		metal halide

Site Lighting Levels

Minimum light levels are based on standards established by the Illuminating Engineering Society (IES) and are expressed in foot-candles (FC).

LOCATION	MINIMUM LIGHT LEVELS
maintained level across campus: dusk to 11:00 PM	1 FC
maintained level across campus: 11:00 PM - dawn	Security lighting only
parking areas	1 FC
arcade	5-8 FC
Plaza at "Main Street"	5 FC
between arcade and Plaza	1 FC
between buildings	1 FC
secondary plazas	1 FC

PURPOSE

The ***Circulation Design Guidelines*** further identify the hierarchy of transportation and circulation systems described in the *Master Plan* and the *Development Plan.* See *Appendix A* for traffic plan and circulation master plan drawings.

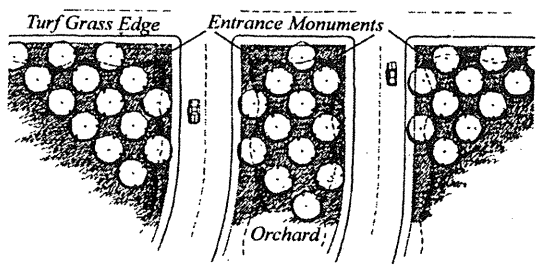
The overall goal of campus circulation design is allowing the unobstructed movement of people, goods, and services throughout the campus in ways compatible with the village concept.

❖ *RELATIONSHIPS*

All circulation elements should follow existing site contours wherever possible and be sited in accordance with the master plan concept. The circulation hierarchy will include:

Vehicular Routes, with connections to the Bangerter Highway, 90th South, and 3400 West.

- Main roadways, to handle vehicular traffic, located at the periphery of the site.
- Services routes to the east and west of the central campus core area, adjacent to the Plaza.
- Emergency access around and through the plaza.



Entrance Road

Vehicular and Transit Drop-off Nodes in three locations at the northeast, southeast, and west.

Parking Areas designed in terraced sections related to campus buildings, plaza areas, and phasing.

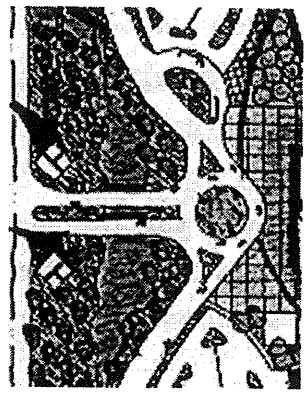
Cul-de-sacs at 3400 West at the north and south ends of the campus, which will be the joint responsibility of the College and neighboring communities.

Pathways and Walkways

- Bicycle and jogging paths surrounding the campus, with connections to adjacent city streets.
- Pedestrian paths, linking campus buildings and the Plaza to various site activity areas, to pick-

up and drop-off areas, and to walkways at the perimeter of the site.

- Covered arcades at buildings (see *Section 3, Architecture*).
- Enclosed pedestrian links between buildings, which may take the form of bridges at the second level or an underground passageway separate from the utility tunnel.



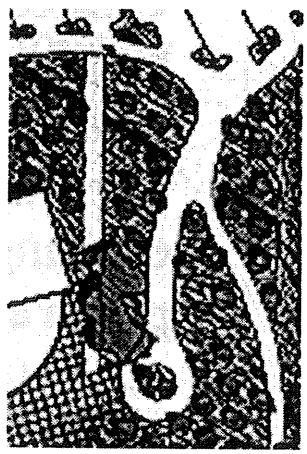
Roundabout at West Entry

Interior Building Circulation Elements should relate to the organizational grids, the Plaza, and exterior elements. The Arcades, Grand Floors, bridges and enclosed subterranean Pedestrian Links will be major circulation elements. Additional requirements for individual building circulation elements will be determined by program needs (see *Section 3, Architecture*).

❖ *FUNCTIONS*

Campus circulation systems will provide a hierarchy of routes to allow the orderly movement of people, goods, and services throughout the site. They will be designed to accommodate

- automobiles.
- service and delivery vehicles.
- emergency vehicles.
- public transportation.
- pedestrians.
- bicycles.
- those who use wheelchairs and other assistive devices.

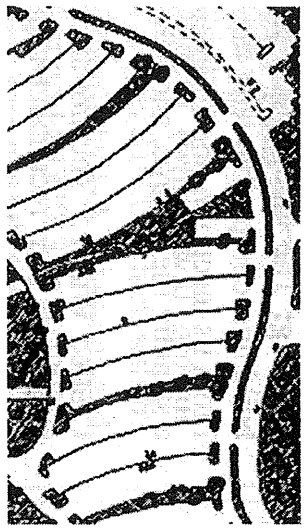


Transportation Drop-off Loop

Providing direction and orientation, and reinforcing a sense of arrival and a sense of place, will also be a primary function of the circulation system.

❖ *CHARACTER*

Because the circulation system will be developed in phases, designers must take care to see that each element is consistent with the overall master plan concept, as well as the immediate phase.



Parking

Circulation design should

- be in harmony with site contours.
- employ graceful curvilinear forms, as shown in the *Master Plan*.
- provide contrasts of hard and soft materials and forms.
- include adequate lighting for safety, visibility, and campus enhancement.
- reinforce the sense of transparency
- provide visual orientation to the campus.
- create a sense of arrival, subtle transitions from one area to another, and a sense of place.
- express the hierarchy of forms and systems.

❖ *MATERIALS*

Approved Materials for Circulation Systems

AREAS	MATERIAL(S)	NOTES
roads	concrete	
curb and gutter	concrete	
parking lots	asphalt	
service drives and service areas	concrete	

Approved Materials for Circulation Systems

AREAS	MATERIAL(S)	NOTES
special paved areas (including east service drives, roundabout, and drop-offs)	pavers	See *Section 4, Landscape.*
	concrete.	
	concrete pavers	
primary pedestrian circulation areas	pavers distinct in form / materials from those used in vehicular areas	
secondary pedestrian paths between buildings	concrete	
jogging path	crushed stone stabilized with a binder	See *Section 4, Landscape.*
Plaza circulation		See *Section 2, Plaza.*
signage in circulation areas		See *Jordan Campus Signage Manual* and *Section 5, Site Elements.*
lighting in circulation areas		See *Section 5, Site Elements.*

PURPOSE

The ***Utilities Design Guidelines*** focus on the general configuration of the central utilities distribution system and the ways in which it will serve the campus.

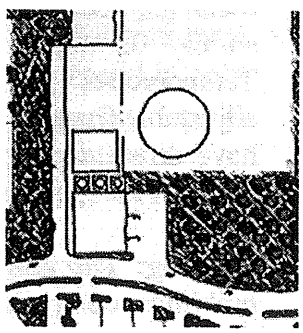
The general goal of the utility system is to provide centralized services for campus support and life safety without compromising the village concept. Utilities will be developed in a manner that is environmentally conscious, cost effective over the anticipated life cycle of the campus, and considerate of campus users.

❖ *RELATIONSHIPS*

- A utility corridor will run from 90th South to a central distribution facility at the north end of campus and from that facility through a central utility tunnel below the plaza. All utilities will be connected to the Utilities Distribution Center from 90th South.

The campus utility system will

- respect the organizational grid system.
- connect with all campus buildings via an underground utility tunnel.
- be located to minimize the costs of distribution.
- allow access, control, and monitoring from. individual buildings and plaza areas as well as from the distribution center.



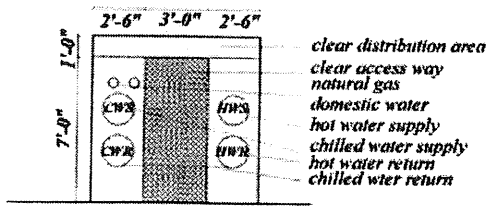
Utility Distribution Center

All utility systems must

- provide redundant capacity.
- be compatible with "people spaces" and human uses.
- be sized for long-term or ultimate loads.
- ensure acceptable air quality.
- demonstrate environmental respect and life-cycle cost efficiencies.
- be run below grade, with a minimum of 24" clear between the top of the utility tunnel and the roads, walkways, Plaza, and plantings.

Mechanical system distribution should be designed so that

- No primary or secondary supply or return lines should be run through the Plaza area unless they are within the central utility tunnel.
- Any distribution lines perpendicular to the central utility corridor will run over or under the tunnel, not through it.
- Access points are provided at the Utilities Distribution Center, the Utility Tunnel, and at each building. At a minimum of every two hundred feet (200'-0"), all utility tunnels (including both the central utility tunnel and branch tunnels to individual buildings) must provide minimum access (12" x 21") for pipe installation and entry.

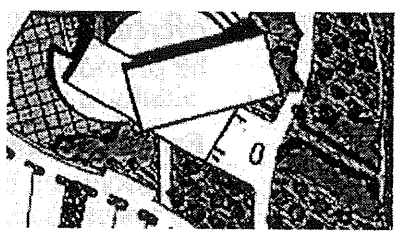


Utility Tunnel

❖ *FUNCTIONS*

- The utility system will distribute products that support campus operations.
- Utilities will be designed both to serve interim needs and to support and enhance the ultimate development of the campus. Piping and other distribution elements should be sized to handle long term or ultimate loads.

Individual utility system components will be designed to meet the following criteria:



Building Service Access

Utilities Distribution Center

The Utilities Distribution Center will be responsible for receiving, distributing, and monitoring all campus utilities, including Centralized services will include heating, cooling and ventilation systems; domestic water and irrigation; power; communications (including phone systems, data, fiber optics, microwave, satellite, fire alarm systems, a central clock system, security, cable TV, and the campus One Card system); and lighting.

The center should

- provide redundant systems.
- accommodate phased development.
- provide metered natural gas for campus distribution.
- include an underground storage tank (35,000 gallons) for #2 fuel oil.

Utility Tunnel

The utility tunnel shall

- accommodate piping for hot and cold supply and return water, domestic water (cold), and natural gas, as well as electrical wiring and cable tray for phone, data, and communications lines.
- provide a minimum clear access area 3'-6" wide and 7' high for workers.
- provide adequate ventilation for worker health and comfort.
- maintain negative pressure in relation to the buildings, or be completely sealed off from them.
- be placed approximately 24" below the Plaza surface to allow perpendicular utility lines to cross over it.
- be designed with drainage.
- have the capacity to distribute compressed air and other gases and liquids that may be required by building functions
- be accessible from the Utilities Distribution Center, the Plaza, and material access points spaced no more than 200' apart in the landscape area along its extent.
- have unistrut at the sides and above the clear access area to support utility runs.

Heating, Cooling, and Ventilation Systems

The campus will employ a variable flow water system to provide heating and cooling. All heating and cooling facilities should be centralized. Intakes must be separated from exhaust.

Boilers will be located in the Utilities Distribution Center. They should vary in size to allow different options for meeting seasonal loads economically. Boilers should have the capacity to operate on either natural gas or fuel oil to provide redundancy and allow cost-effective operation in erratic fuel markets.

Chillers will be located in the Utilities Distribution Center. Open circuit ceramic cooling towers will be provided. Cooling water will be dual feed dual meter.

The design will employ medium temperature hot water and chilled water.

Domestic Water and Plumbing

Domestic water (cold) will be run through the Utility Tunnel. Heat exchangers located in each building will provide domestic hot water.

Irrigation

A looped irrigation system, extending throughout the campus, will provide

- a computerized central automatic control system linked to the Jordan Campus Utilities. Distribution Center and the Redwood Campus
- a hookup to the domestic water system that can be disconnected, as code permits.
- links to the existing well on the site.
- links to the pond, with an irrigation screen to allow recirculation of water.
- pop-up irrigation heads in the lawn area that meet the SLCC Campus Design Standard.
- irrigation sleeving, as approved by the Campus Review Board, under all hard surfaces.

- state-of-the-art technology for nozzles, pressure compensating screen, automatic valves, drains, and pressure regulators, as approved by the Campus Review Board

The Pond will be designed to capture roof drainage and well water and recirculate it for irrigation. Development of the Pond should begin in Phase One to allow immediate use of this irrigation system.

A secondary irrigation loop will encircle the campus outside of the Plaza.

Life Safety

All buildings should be have fire sprinkling for life safety.

A perimeter fire protection line will encircle the buildings. Domestic water and fire protection for the Plaza will be provided from the utility tunnel. Pressure in these lines must be equalized.

Drainage, Sewage, and Waste Disposal

Wherever possible, parking lots and Plaza areas where runoff may be contaminated with gas, oil, salt, and other pollutants generated by vehicular uses will drain to the UDOT detention basin at the southwest corner of the site. Parking lots will have basins for temporary detention of runoff; This runoff will subsequently be released into the UDOT drainage area. The Plaza will drain to the east in line running parallel to and beneath the utility tunnel. Some parking lots will drain to storm drainage facilities on 3200 West.

With the exception of slopes and ramps specifically designed for accessibility as mandated by the ADA guidelines, plaza areas should be designed using flat surfaces (slope no greater than 2%) to minimize hazards under icy and snowy conditions

Sewage will drain to the east, beneath the Plaza, by gravity feed, to municipal sewer lines. No pumping of sewage will be permitted.

The drainage system should have the capacity to dispose properly of any wastes that may be generated by building activities.

Power

A loop feed medium voltage system (12470/7200) will serve the campus. In the initial phases, a single feed from the north will supply the system. As design proceeds, the Campus Review Board will review the option of adding a second feed from the southwest. Each feed shall be metered.

All switch gear will be located below grade, in expanded areas off the utility tunnel. Access will be provided through a 4'-0" x 4'-0" crawl tunnel opening on the Plaza. Switch gear should be standardized (G&W VFI switchgear) and water resistant (SF6 submersible).

A digital multimeter, readable from the central plant, should be provided to meter secondary service for each building.

Backup generators, sized for ⅓ of building capacity, should be provided in service yards 200 to 300 feet from each building. Uninterruptible power service (UPS) should be provided for

- emergency and life safety service and alarms.
- elevators.
- food service cooling equipment.
- cooling for telephone/data/communications rooms.
- tunnel lighting.
- programmed needs identified by building users.

Generator duct bank should be encased in concrete.

Transformers should be located on the service-yard side of the buildings; they may be placed either in the building or in the service yard. If they are located outside, they should be screened / enclosed in a manner consistent with the architectural quality and materials of the building.

Communication

Communication systems shall include

- telephone.
- data.
- One Card.
- security.
- fire and emergency alarm systems compatible with communications protocol and other SLCC campuses.
- central dedicated clock system (to serve all classrooms and public spaces).
- central satellite dishes, microwave dishes, and antennae at the Utilities Distribution Center.
- provision for satellite dishes and antennae at each building.

An aluminum cable tray system in the utility tunnel, will provide capacity for future expansion of communication systems and for the addition of new technologies.

Building communication service should be centralized, organized, and integral to the building design.

Lighting

Lighting shall be designed in accordance with the standards of the Illuminating Engineering Society (IES). For minimum design lighting levels for exterior lighting, see *Section 5, Site Elements.* All exterior lighting shall use cutoff technology to prevent glare. Fixtures should be selected for maximum light output (ideally a rounded top with a concealed light source and a conical shade).

❖ *CHARACTER*

Campus utility systems should

- incorporate flexibility to allow expansion and permit the addition of emerging technologies.
- be designed in harmony with campus building and landscape elements.
- have clarity and order.

- provide redundancy.
- allow options to meet seasonal variations in load efficiently.
- be designed with the needs of operation and maintenance in mind.
- be sized, wherever possible, to meet ultimate campus needs so that elements will not have to be replaced in subsequent phases.

Utilities Distribution Center and Other Utility Structures

All structures, visible utility system elements (such as access points and exhaust systems), and screening shall be designed to be compatible with the architectural vernacular of ***High Desert / Mountain Architecture***.

- Wherever possible, any visible components should be integral with building and site elements.
- Smaller utility structures, if required, will be integrated with buildings, landscape areas, and the tunnel system.
- The Utilities Distribution Center building will be visible from all sides and must be designed so that all four faces have an architectural character compatible with the campus and the adjacent community areas.

Mechanical Systems

Mechanical systems will be designed to

- provide efficient service to the campus under varied loads and conditions
- take advantage of energy conservation measures such as the use of the Pond to recirculate water for irrigation

Electrical Systems

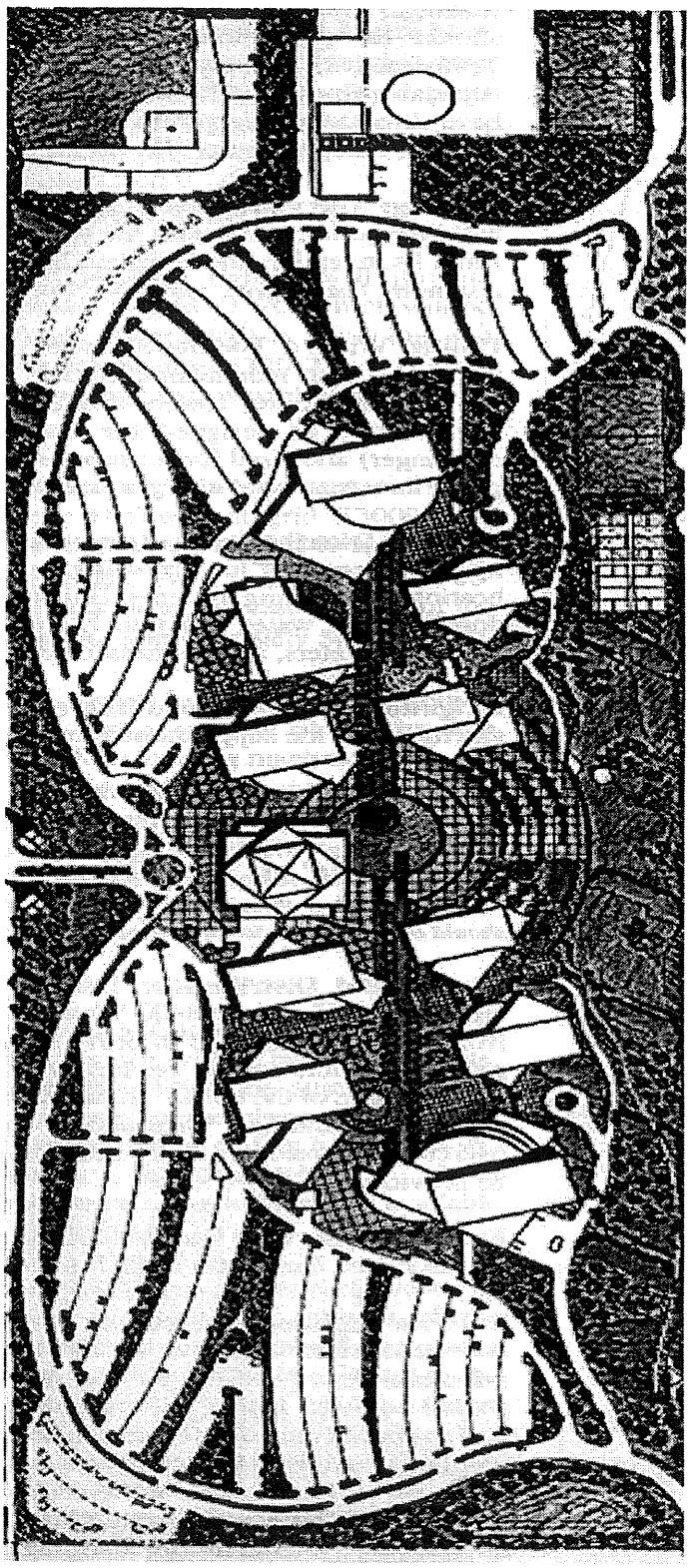
Electrical systems will be designed to

- create power nodes to energize campus facilities..
- provide electronic pathways that will allow effective distribution of state-of-the-art technology now and in the future.
- provide lighting for campus security and safety, ambiance, accents, and functional needs.
- coordinate the use of artificial lighting with daylighting.
- encourage energy conservation.
- ensure that visible elements are screened or enclosed in a manner compatible with building design and materials.

❖ *MATERIALS*

Utility system elements shall be made of durable, easily maintainable materials with a long life expectancy approved by the ***Campus Review Board.***

Utility system buildings and visible components shall be designed with or screened by materials approved in *Section 3, Architecture,* and *Section 5, Site Elements*, as appropriate. Colors for any publicly visible utility elements shall be selected from the list of approved base colors (see *Appendix B*). For additional information about specific products approved, see *Appendix D.*



The colors listed below have been approved by the Campus Review Board for general use on the Jordan campus. Specific colors are required for some design elements; these are indicated in the appropriate text sections. All colors have been designated by reference to the Pantone Number System. Color samples and names have been provided for convenience, but in the case of any discrepancy, the Pantone Color Number will take precedence.

Base Colors

USE/AREA	COLOR	DESCRIPTION
All campus elements for which no specific color is designated.	Pantone 131U	sand
	Pantone 194U	tuscan red
	Pantone 342U	dark green
	Pantone 484U	terra cotta
	Pantone 549U	periwinkle
	Pantone 696U	sienna
	Pantone 703U	rouge
	Pantone 1205U	cream
	Pantone 5575U	jade green

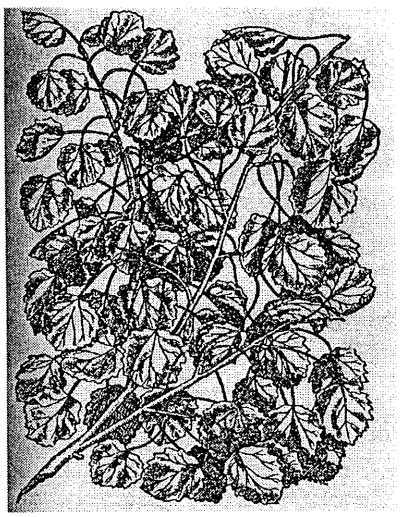
Accent Colors

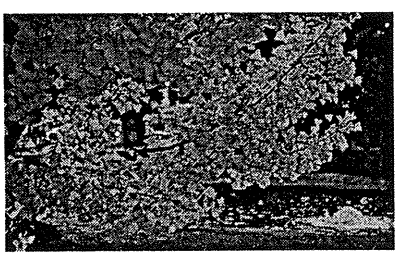
Limited quantities used in concentrated applications for interest or emphasis, particularly in pedestrian and activity areas	complementary to standard colors	

Trees

The following trees are appropriate for Zone 2 areas with well-drained soil and neutral pH (6.5-7.5). Specific characteristics (including availability, drought tolerance, suitability for natural plantings, rapid growth, and low maintenance requirements) are noted in the third column.

BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Acer circinitum	Vine Maple	
Acer platanoides	Norway Maple	
Acer rubrum	Scarlet or Red Maple	rapid growth
Acer saccharinum	Silver Maple	natural; rapid growth
Aesculus carnea	Red Horsechestnut	natural; rapid growth
Ailanthus altissima	Tree of Heaven	drought tolerant; natural; rapid growth
Albizia julibrissin	Silk Tree	readily available
Alnus rhombifolia	White Alder	readily available; rapid growth
Betula pendula	European White Birch	readily available; rapid growth
Cornus nuttallii	Pacific Dogwood	natural; rapid growth; low maintenance
Crataegus oxycantha	English Hawthorn	
Fagus sylvatica	European Beech	
Gingko biloba	Maidenhair Tree	readily available; low maintenance
Gleditsia tricanthos	Honey Locust	
Juglans nigra	Black Walnut	rapid growth
Juniperus Californica	California Juniper	low maintenance
Magnolia soulangiana	Saucer Magnolia	readily available; natural
Malus spp.	Crabapple	natural; low maintenance





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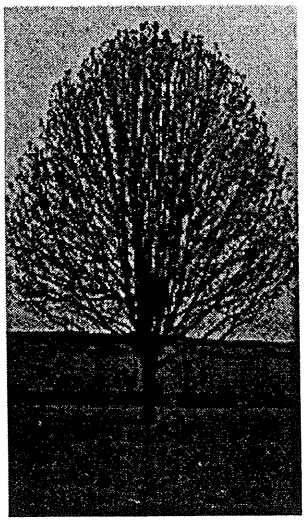
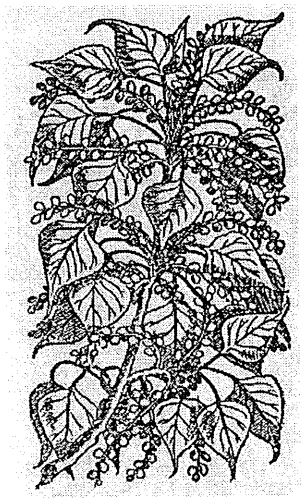
BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Morus alba	Fruitless Mulberry	
Picea abies	Norway Spruce	natural; rapid growth; low maintenance
Picea engelmannii	Engelmann Spruce	natural; rapid growth; low maintenance
Pinus attenuata	Knobcone Pine	drought tolerant; natural; rapid growth; low maintenance
Pinus jeffreyi	Jeffrey Pine	drought tolerant; low maintenance
Pinus lambertiana	Sugar Pine	natural; low maintenance
Pinus ponderosa	Ponderosa (Yellow) Pine	natural; rapid growth; low maintenance
Pinus sylvestris	Scotch Pine	
Pinus thunbergiana	Japanese Black Pine	readily available; natural; low maintenance
Platanus acerfolia	London PlaneTree	readily available; natural; rapid growth
Populus alba	White Poplar	rapid growth; low maintenance; avoid placement near water and sewer lines; tends to produce suckers
Populus canadensis	Carolina Poplar	avoid placement near water and sewer lines; rapid growth





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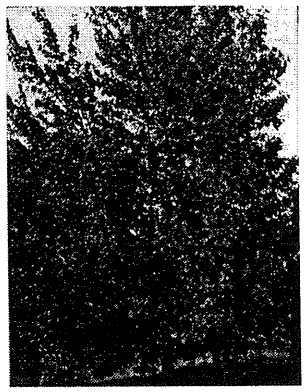
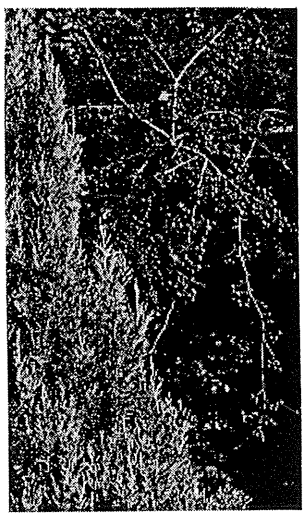
BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Populus fremontii	Fremont Poplar / Cottonwood	to eliminate "cotton," plant only male trees; avoid placement near water and sewer lines; rapid growth; drought tolerance
Populus nigra 'Italica'	Lombardy Poplar	rapid growth; invasive roots, tends to sucker
Populus tremuloides	Quaking Aspen	natural; rapid growth; low maintenance; avoid placement near water and sewer lines
Populus trichocarpa	Black Cottonwood	rapid growth; low maintenance
Prunus blireiana	Blireiana Plum	natural; rapid growth; low maintenance
Prunus cerasifera	Flowering Plum	
Prunus serrulata 'Kwanzan'	Kwanzan Cherry (Japanese Flowering Cherry)	readily available; rapid growth
Pseudotsuga macrocarpa	Bigcone Spruce	drought tolerant; low maintenance
Pseudotsuga menziesii	Douglas Fir	natural; low maintenance; rapid growth
Pyrus calleriana 'Bradford'	Flowering Pear / Bradford Pear	natural; low maintenance
Quercus douglassi	Blue Oak	natural; low maintenance
Quercus lobata	Valley Oak	drought tolerant; natural; low maintenance



Trees

The following trees are appropriate for Zone 2 areas with well-drained soil and neutral pH (6.5-7.5). Specific characteristics (including availability, drought tolerance, suitability for natural plantings, rapid growth, and low maintenance requirements) are noted in the third column.

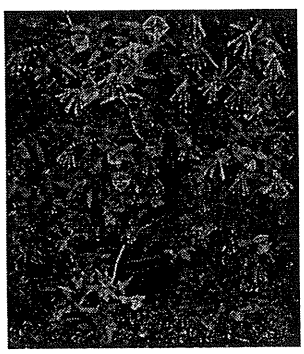
BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Salyx babylonica	Weeping Willow	readily available; rapid growth
Salix babylonica 'Crispa'	Corkscrew Willow	rapid growth
Sambucus caerulea mexicana	Blue Elderberry	natural; rapid growth
Sophora japonica	Japanese Pagoda Tree	natural
Thuja occidentalis	American Arborivitae	
Tilia cordata 'Greenspire'	Greenspire Linden	
Tilia cordata	Little-leaf Linden	
Ulmus americana	American Elm	rapid growth



Shrubs

The following shrubs are appropriate for Zone 2 areas with well-drained soil and neutral pH (6.5-7.5). Specific characteristics (including availability, drought tolerance, suitability for natural plantings, rapid growth, and low maintenance requirements) are noted in the third column.

BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Archtostaphylos uva ursi	Bearberry (Kinick)	readily available; natural; low maintenance
Artemesia pycnocephala	Coast Sagebrush	drought tolerant; natural; low maintenance
Berberis darwinii	Darwin Barberry	natural; low maintenance
Berberis thunbergii 'Atropurpu'	Redleaf Japanese Barberry	readily available; natural
Chaenomeles japonica	Flowering Quince	natural



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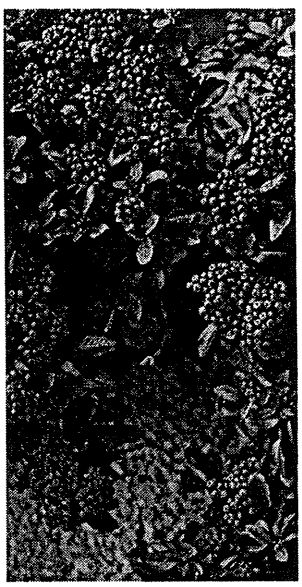
BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Cornus stolonifera	Redtwig Dogwood	natural; rapid growth
Cotoneaster dammeri	Bearberry Cotoneaster	readily available; natural; rapid growth; low maintenance
Cotoneaster franchettii	Franchet Cotoneaster	readily available; natural; rapid growth; low maintenance
Cotoneaster horizontalis	Rock Cotoneaster	natural; rapid growth; low maintenance
Cotoneaster microphyllus	Rockspray Cotoneaster	natural; low maintenance
Eleagnus angustifolia	Russian Olive	natural; rapid growth
Fallugia paradoxa	Apache Plume	drought tolerant; natural; rapid growth; low maintenance
Forsythia intermidia	Forsythia	natural
Hibiscus syriacus	Rose of Sharon	natural
Holodiscus discolor	Cream Bush	natural; low maintenance
Hydrangea macrophylla	Bigleaf Hydrangea	rapid growth
Juniperus chinensis	Chinese Juniper	readily available; natural; low maintenance
Juniperus communis	Common Juniper	readily available; natural; low maintenance



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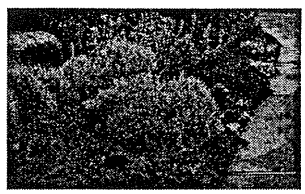
BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Juniperus scopulorum	Rocky Mountain Juniper	readily available; natural
Juniperus squamata		readily available; natural; low maintenance
Juniperus Virginiana	Red Cedar Juniper	readily available; natural; low maintenance
Kerria japonica		drought tolerant; natural
Lonicera involuctrata	Twinberry	natural; low maintenance
Mahonia aquifolium	Oregon Grape	readily available; natural; low maintenance
Mahonia aquifolium 'Compactum'	Dwarf Oregon Grape	readily available; natural; low maintenance
Mahonia bealei	Leatherleaf Mahonia	natural
Mahonia repens	Creeping Mahonia	natural
Philadelphus lewisii	Wild Mock Orange	natural
Pinus mugo mugo	Mugho Pine	natural; low maintenance
Pyracantha coccinea	Firethorn	readily available; drought tolerant; natural; rapid growth
Rhamnus frangula	Alder Buckthorn	
Rhamnus prushiana	Cascara Sagrada	natural; rapid growth; low maintenance
Ribes aureum	Golden Currant	natural; low maintenance



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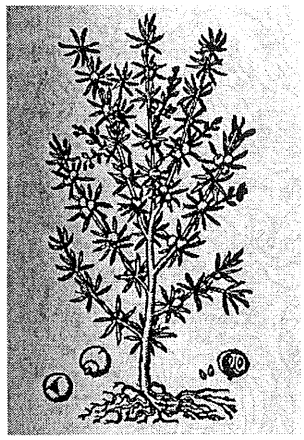
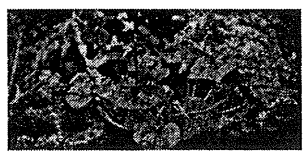
BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Spiraea contoniensis	Reeve's Spiraea	natural; rapid growth
Spiraea vanhouttei	Vanhouttei Spiraea	natural; rapid growth
Symphoricarpus albus	Common Snowberry	drought tolerant; natural; low maintenance
Syringa vulgaris	Common Lilac	natural
Viburnum opulus 'Roseum'	Common Snowball	natural; rapid growth
Viburnum Rhytidophyllum	Leatherleaf Viburnum	natural; rapid growth
Weigela florida	Weigela	rapid growth

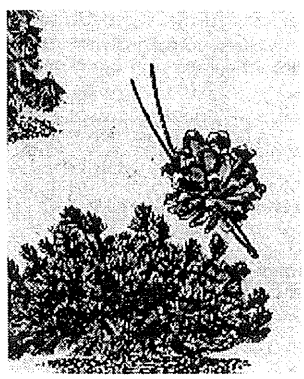




Vines and Groundcovers

The following vines and groundcovers are appropriate for Zone 2 areas with well-drained soil and neutral pH (6.5-7.5). Specific characteristics (including availability, drought tolerance, suitability for natural plantings, rapid growth, and low maintenance requirements) are noted in the third column.

BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Armeria maritima	Common Thrift	readily available; low maintenance
Bellis perennis	English Daisy	rapid growth; low maintenance
Bergenia crassifolia	Winter-blooming Bergenia	readily available; rapid growth; low maintenance
Campanula sp.	Bellflower	readily available; low maintenance



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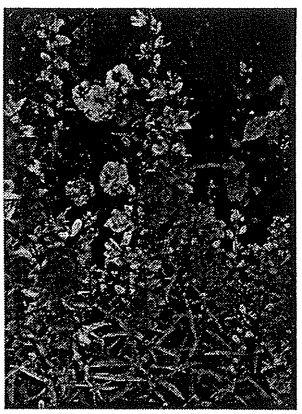
BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Cerastium tomentosum	Snow-in-summer	readily available; drought tolerant; natural; rapid growth; low maintenance
Chamaemelum nobile	Chamomile	natural; rapid growth; low maintenance
Euonymus fortunei	Creeping Euonymus	natural; rapid growth
Festuca ovina-glauca	Blue Fescue	readily available; drought tolerant; natural; rapid growth; low maintenance
Hedera helix	English Ivy	readily available; rapid growth
Herniaria glabra	Green Carpet	readily available; rapid growth; low maintenance
Hypericum calycinum	Aaron's Beard	readily available; natural; rapid growth
Juniperus horizontalis	Prostrate Juniper	readily available; drought tolerant; natural; rapid growth; low maintenance
Liriope spicata	Creeping Lily Turf	rapid growth
Lonicera japonica halliana	Hall's Honeysuckle	readily available; natural; rapid growth
Lysimachia nummularia	Moneywort	rapid growth; low maintenance



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BOTANICAL NAME	COMMON NAME	CHARACTERISTICS
Potentilla cinerea		natural; low maintenance
Potentilla verna	Spring Cinquefoil	readily available
Ranunculus repens 'Pleniflorus'	Creeping Buttercup	rapid growth
Sagina subulata	Irish Moss / Scotch Moss	rapid growth
Santolina chamaecyparissus	Lavender Cotton	drought tolerant; natural
Santolina virens	Green Santolina	drought tolerant; natural
Sedum album		natural; rapid growth; low maintenance
Sedum anglicum		natural; rapid growth; low maintenance
Sedum spurium	Dragon's Blood	natural; rapid growth; low maintenance
Tecrium chamaedrys 'Prostatum'	Creeping Germander	drought tolerant; rapid growth
Thymus praecox-articus	Mother of Thyme	readily available; natural; rapid growth; low maintenance
Thymus pseudolanuginosus	Woolly Thyme	natural; rapid growth; low maintenance
Viola odorata	Sweet Violet	readily available; low maintenance
Wisteria sinensis	Chinese Wisteria	rapid growth