

Implementation of these guidelines can proceed along two parallel fronts: design and construction of new facilities and management of undeveloped lands.

### *Design of New Facilities*

A major avenue of implementation for the guidelines will be in the design and construction of new facilities. Every project, no matter how small, can respond in some way to the guidelines, either by reflecting the general concepts or by adopting specific techniques.

The techniques themselves may change over time. Some of them are tested, an articulation of historical patterns, some are relatively new. To measure the effect of the guidelines and to ensure that projects fully consider them, it may be advisable to develop a review process between Facilities Project Management and the Planning Office. The intent of this review would be to test the guidelines and to ensure that opportunities to preserve rural character and strengthen academic connection are considered in each project. The dialogue is also intended to raise the awareness of outside consultants—architects, landscape architects, engineers—about Stanford's commitment to preserving rural character and historical context.

### *Management of Undeveloped Lands*

Up till now, management of undeveloped lands has received minimal planning attention. Maintenance budgets rarely allow for long range consideration of habitat or rural character. Except for clearing of brush or herbiciding of drainage ditches, the undeveloped lands have been largely left to take care of themselves.

As these undeveloped lands become increasingly scarce they will require greater care to maintain a rural character. Management practices will need modification to maintain or enhance habitat and landscape value of these rural lands. To develop these new maintenance practices, it is suggested that a Design Guidelines Management Group be convened. This group, consisting of representatives from Operations & Maintenance Grounds and Water Departments, the Planning Office, Lands Management, and other appropriate University offices would meet regularly to develop and implement mutually beneficial maintenance practices within the spirit of the guidelines. Other University organizations such as the Center for Conservation Biology and Friends of the Arboretum may be invited to participate.

Items to be considered by the Management Group could include:

- retaining dead wood
- allowing grasses to remain unmowed
- pruning to express native growth habits
- minimization of herbicide and pesticide use
- management of seasonal streams and ponds
- Arboretum restoration and maintenance
- temporary storage of topsoil and other construction materials
- establishment of a "Habitat Restoration Fund"

In the preceding pages we have considered the essential elements of the Stanford landscape and sought to articulate guidelines for preserving and enhancing them. To preserve the Farm while simultaneously expanding academic facilities presents a challenge. Some will say it's not possible. But as the University grows to meet academic needs, it is worth exploring methods of growth that respect our environment and history. To implement these ideas requires a willingness to experiment.

We must also recognize that the effort to preserve the Farm does not mean a return to the actual landscape of a working agricultural enterprise. Instead, we must strive to capture the *feeling* of the Farm. We can make progress in this direction by adopting more environmentally responsive, historically based design. Using these old principles, new landscape forms and practices will evolve.

Many people will need to contribute to the preservation of the Farm— either in design, approval or implementation of projects. This effort will require a concerted, collaborative approach among Operations & Maintenance, Facilities Project Management, the Provost's Office, the Planning Office, outside consultants and others. Yet most of the suggestions can be tested by modest increments and evaluated by traditional means. Each project, no matter how small, can make a contribution to preserving or enhancing Stanford's landscape character. Over time some ideas may be discarded as inappropriate, some new ones may be discovered. The basic criteria for evaluating a technique will be its contribution to landscape character and its enhancement of academic interaction.

Some of the techniques may at first seem to be a radical departure from present landscape practices, and perhaps they are. But just as the source meaning of “radical” is from the Latin word for “root,” many of these recommendations represent a return to the traditional landscape practices from the days of the Founding.

Much of the natural beauty of Palo Alto that impressed David Starr Jordan in 1891 remains. To preserve this atmosphere while expanding the University’s academic facilities will require dedication to environmental principles, respect for historical precedent and a willingness to explore new ideas.

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*With appreciation for the use of the following photographs...*

Stanford University Libraries, Special Collections and  
University Archives: cover, pp. 2, 28, 40.  
Stanford News Service: pp. 14, 22 (right), 30, 32, 34, 35, 36,  
42, 52, 56, 58.





## Appendix A:

### Site furnishings

- *This appendix contains descriptive guidelines for the most common site furnishings found on campus. Exceptions may be proposed for special applications. Manufacturer's addresses current as of January 1989.*

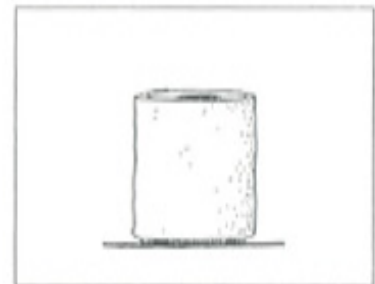
#### Bench

Wooden slats with curved back, usually without arms. Redwood not recommended because of splintering. Length generally 6' or 8'. Mounting varies. Manufacturers vary.



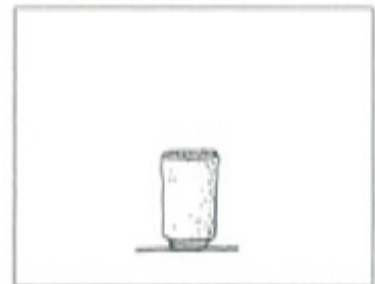
#### Trash receptacle

Round sandstone colored concrete formed trash receptacle. Holds 30 gallon container. Approximate dimensions: 36-42" tall, 22" outside diameter, spun aluminum lid with 12" opening. Manufactured by Dura Art Stone (P.O. Box 8A, Newark, CA. 94560, 451 707-9980) or approved equal.



#### Ash urn

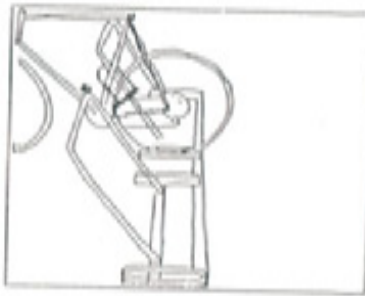
Round sandstone colored concrete formed ash urn, filled with sand. Approximate dimensions: 12-18" tall, 12" outside diameter. Manufactured by Dura Art Stone (P.O. Box 8A, Newark, CA. 94560, 451 707-9980) or approved equal.





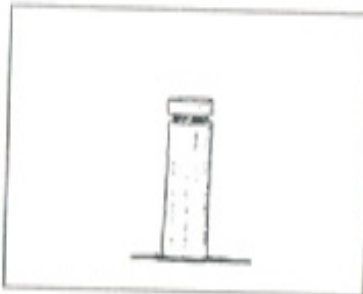
**Lindcraft bike rack**

Galvanized iron wheel slot attached to g. i. pipe. Space 20" o.c. For use in vehicle exclusion areas and near buildings of high architectural value. Available from Lindcraft, P.O. Box 966, Elk Grove, CA. 95624, 916 685-5022.



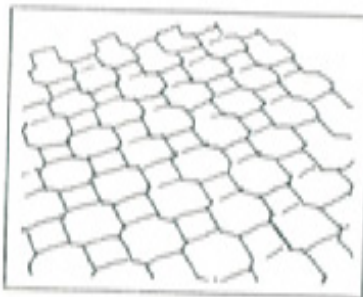
**Bike Bar**

Galvanized iron bike rack designed to accept u-bolt locking devices. For use outside the vehicle exclusion zone and where bicycles are typically parked overnight, especially at student residences. Available from Urban Accessories, First St. & Avenue A, Snohomish, WA. 9290, 206 568-3143.



**Bollard**

Wooden round 8 or 10" diameter, approximately 36" tall, with routed top detail. If chain is required to connect bollards, use 3/8" blue chrome plated steel. Available from L&S Stakes, Mountain View, CA.



**Plaza paving**

Interlocking pavers used in the Inner Quad. Available from Mueller Supply Compay, 424 So. Main Street, Lodi, California 95240, 209 334-3781. Uni-decor module, custom color.



**Path lighting**

Holophane 350 with high pressure sodium lamp. Mounting height: 10'.



**General lighting**

SU I fixture. Use mercury vapor within campus core, high pressure sodium outside core. Mounting height: 10'.



**Parking lot lighting**

Gardco Form 10 with high pressure sodium lamps. Mounting height at student residences: 18 or 20', elsewhere: 25'.



For further details on lighting, refer to "Lighting Plan- 1985" available from the Stanford Planning Office.

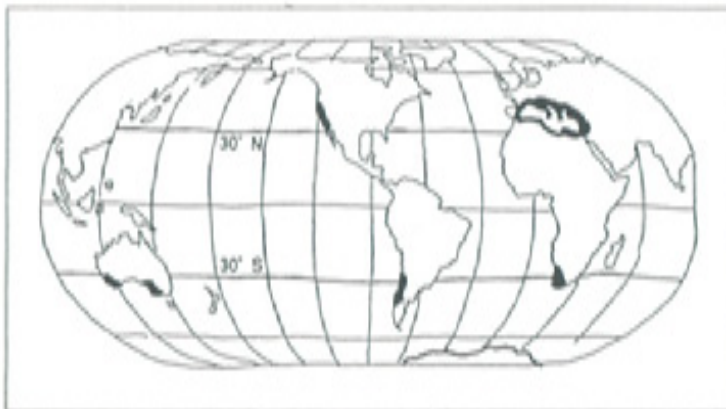


*Mediterranean plant communities*

Land and climate have played a fundamental role in the evolution of the Stanford campus. Though we have developed technologies that allow us to manipulate our environment—irrigation, air conditioning, new materials—land and climate continue to provide the underlying parameters for campus design.

Stanford lies within a mediterranean climate zone. Mediterranean-type climates are found in lands surrounding the Mediterranean Sea, West Coast of California, Central Chile and the southernmost strips of South Africa and Australia. Caused by the relation of ocean air currents to land mass, mediterranean climates are found on the west coasts of all six inhabited continents between latitudes 32° and 40° north and south of the equator. The mediterranean climate is characterized by three factors:

- a concentration of rainfall in the winter months
- a level of rainfall just enough to support continuous vegetative cover (generally between 11 and 35 inches annually)
- a distinct winter, generally defined as a month with average temperature below 58°F (15°C) but not below 32°F (0°C).



Mediterranean climates around the world.

Similarities are not confined to climate and weather, but extend to vegetation, land use patterns and general land form. Mediterranean ecosystems are characterized by rugged topography, which leads to wide variability of climate over short distances. Native plant materials in mediterranean ecosystems have similar morphology, and there has been a massive interchange of cultivated and weed species of plants between the world's five mediterranean type ecosystems. Finally, the mediterranean climate has produced a sort of ecological-cultural identity linking the settlements of mediterranean type climates. In other words, people living in mediterranean climates exhibit surprisingly similar land use patterns, architecture and culture.

Winter rainfall, because of lower evaporation, is more effective in sustaining plant growth than is warm season rain. However, the concentration of rainfall during the cool winter months means that supplemental water is least available during the hot months when plants transpire the most. This leads to a severe water deficit in the summer. Plants native to mediterranean climates have evolved strategies to survive these long periods of low water availability and high heat. These strategies include minimizing leaf size to reduce transpiration (manzanita), harvesting condensation from summer fogs (redwood), light colored foliage to reflect sunlight (sage), tapping stored water from the soil (oak) and shedding leaves in the dry season (buckeye). Non-mediterranean plants must receive continuous supplemental irrigation to survive the long periods of summer drought in a mediterranean climate.

The use of plants from mediterranean communities helps to conserve water, energy and labor. In addition, projects which systematically adopt mediterranean plants offer opportunities for academic programming to educate people about mediterranean ecology.

A program using mediterranean plants may be applied to the design, restoration, or renovation of outdoor spaces on the Stanford Lands and Central Campus. Oak Regeneration in the Foothills and Arboretum Restoration ("Memorial Marsh") are two projects which have recently used mediterranean plant materials as key elements of their design.

Additional rural areas that may apply mediterranean plant communities include:

- The Foothills
- Setbacks on Academic Reserve Lands
- Central Campus Edges
- Campus Drive Loop Road setbacks
- West Campus
- Red Barn Area
- Frost Region

Potential projects that may apply mediterranean plant communities include:

- Stanford West
- Manzanita Housing Site
- Malls (Galvez, Panama, Lomita)
- Geology Corner Area
- Serra Street Grove
- Oak Grove by Old Chemistry
- Frost Amphitheater
- Old Chemistry Courtyard
- Canfield Court



**Partial list  
of mediterranean plants.**

*(Note: this list is not exhaustive, but representative. Many other species not listed here are appropriate to the Stanford campus.)*

**Trees**

Aesculus californica  
Araucaria bidwillii  
Arecastrum romanzoffianum  
Brachychiton populneus  
Casuarina species  
Ceratonia siliqua  
Chamaerops humilis  
Eucalyptus species  
Geijera parviflora  
Laurus nobilis  
Oleo europaea  
Pinus pinea  
Pinus sabiniana  
Pistacia atlantica  
Prosopis chilensis  
Quercus agrifolia  
Quercus douglasii  
Quercus ilex  
Quercus lobata  
Quercus suber  
Rhus lancea  
Schinus latifolius

**Shrubs**

Cassia artemisioides  
Nerium oleander  
Pittosporum phillyraeoides  
Toyon  
Viburnum tinus

**Ground Covers**

Baccharis pilularis  
Carissa grandiflora  
Carpobrotus edulis  
Carruanthus  
Gazania rigens  
Osteospermum fruticosum  
Rosmarinus  
Santolina chamaecyparissus  
Tecomaria capensis  
Trachelium species

**Special Accent Plants**

Aloe saponaria  
Arundo donax  
Opuntia species  
Strelitzia reginae  
Vitis vinifera

