Design Guidelines
What are Design Guidelines?

• Institution Character
• Continuity of Fabric
• Accelerate Design Process, constrained options
Buildings on the campus reflect many styles, and the essential quality of the campus is one of buildings that speak in their own voice about their purposes and the era in which they were built. It is the landscape and public spaces that integrate these buildings into a coherent whole.  

- Penn
"The principle of unified campus architecture rather than single-building exhibitionism is most important. The CU-Boulder campus is cut from whole cloth, never from patchwork parts."

- CU-Boulder
Understanding the language
Landscape

- Existing campus plan
- Diagram of spaces
- Plant life and scale

Landscape Character & Planting

Policy: Planting designs should consist predominantly of mass plantings of shrubs and groundcovers, native to the region, in arrangements that are simple in geometry and form, do not require significant maintenance, and are appropriate to scale for their specific context.

Plant Life and Values:
The appropriate use of vegetation in the built environment is a major influence on the quality of human life. Shrub, herbaceous plant material, and tree filter pollutants in the air and water, mitigate wind and solar heat gain, stabilize soil to prevent or reduce erosion, and provide an aesthetic counterpoint to the built environment. These attributes are essential in balancing the efforts of humans on the land. Furthermore, the native plants of a region provide some of the strongest cues to the unique identity of a place. In turn, the creation of a healthy growing environment for the plants requires the collaboration of arborists, horticulturists, landscape architects, and native plant ecologists.
Building Types

• Data
• Diagram studies
• Imagery
• Historical documentation

An apparently big and homogenous building that encloses a private yard as its central organizing space. The internal court is either open to the outside or glass enclosed. It can also be defined as a "compact arrangements of linked structures forming enclosed or nearly enclosed courtyards, inward-turning and inclusive in nature." — Alvar Aalto

Guideline

- Protect each new building with community space, although opportunities exist to be introduced to lobbies. Use an architectural image of repulsion and avoiding forms for interior and exterior of commissions.
- Ensure each building is comprised as a simple sequence into the campus fabric from an exterior.
- Ensure neighboring structures and surrounding open space, including new and existing compounds, are harmonized to create a cohesive campus.
- Place the prime example of "courtyard" concepts from the historic building prototypes into the design.
- Maintain the human scale, particularly at ground levels.
- Identify places for future open spaces that would capture views in relation and improve. Spread out building forms from a central one, creating pleasant variations in scale and form. Leave room for well-scaled courtyards and open spaces.
- Enrich perimeter entries, but avoid extensive imposing. Third, prudent and fluid entry ways must feature entries to which the essential primary work is added efficiency to the campus.
- Maintain an articulated setting, including the visual experience while reflecting a contemporary functionality.
Materials

- Imagery
- Precedents

CONCRETE

While little of the Harvard campus is concrete, the buildings that are concrete are highly visible: the Carpenter Center, the Holyoke Center, the Science Center, Peabody Terrace, the Mather Tower, and Gund Hall. The oldest and largest example of concrete architecture on campus is Harvard Stadium.

GLASS

Glass as a building material has not been used frequently on campus. The absence of glass, in fact, might be telling in terms of the character of the campus architecture, with its earthiness and severity. Glass is often a material of celebration, light, and lightness. The most notable examples on campus are Gund Hall, with its glass roof for providing light to the studio area, and the Harvard Business School Chapel.
Building the vocabulary
Landscape

- Scale
- Plant Species
- Set Standard
Buildings

- Proportion
- Geometry
- Sustainability

Sustainability Criteria

Issues regarding sustainability are addressed in detail in Stanford University Guidelines for Sustainable Buildings (2003) and should be integrated into the design of Stanford buildings to ensure that these guidelines are followed.

Solar Orientation

Buildings should be sited and designed to take maximum advantage of sunlight and natural ventilation, in order to enhance user comfort and energy conservation. Whenever possible, the following criteria should be addressed in order to take advantage of a building’s orientation on its site:

- A solar/shadow analysis must be submitted for review during the design review process; the impact of this analysis should be reflected in the design landscaping and surrounding activity areas, as well as the affect on adjacent facilities.
- Shading devices such as building sunscreen, louvers, or façade articulation must be regarded in the overall building design.
- Use of landscape screening such as deciduous trees or trellises to allow control of the sun at various times of the year should be considered.
- Outdoor activity areas should be located with southern or southwestern exposure to take advantage of the sun.
Materials

- Establish parameters
- Measurements

Roofs

Special attention should be paid to the arrangement and design of the roof and its various elements. Roofs should be organized and designed as carefully as the other primary exposures of the building. Equipment must be placed within enclosures well integrated with the roof space.

The major roof form should be sloped at an angle of 27°-39° degrees and should have an overhang (eave) proportioned to its size and height (7'-4-1/2' exh). Secondary portions of roofs may have a flat roofed area to accommodate mechanical equipment or scientific instruments, in visually unobstructive areas.

Roof slopes normally will continue around all corners (flapped rather than shed or gable roofs).

Stacks

Exhaust and plumbing stacks should be grouped and incorporated into the architectural composition of the building they serve. When large in circumference, stacks should be articulated to reduce their scale.

As the stacks will be visible from a distance, it is important that they be designed with a certain degree of uniformity so that the overall image from a distance is composed.

Placement and configuration of buildings and exhaust stacks should recognize that while prevailing winds are from the northwest, open air flow paths should be created and stagnant air pockets eliminated. (Note: All stacks should extend above each building's boundary layer and will be subject to wind tunnel analysis.)

Sandstone Wall Guidelines

- Decide by ray tracing balances through open spaces with available common color options and colors usually used in such projects.
- Specify colors resistant (white, red, yellow, and blue) and unique to sun-bleached sandstone buildings. Use a semi-reflective, washable finish, or a flat paint.
- Do not use the pattern of faulted walls in urban areas and town sites that reflect the appearance of the prehistoric walls. Follow the natural pattern and accompanying series of stacked elements.
- Lay up stones with the frictioned face adhering to each other. Randomize the natural vertical lines. Choose rougher than smooth as the smooth will out from the vertical mortar lines.
- Select control wall as a straight vertical low expansion.
- Generally keep above length parallel, shorter than a 5-foot length and to viewable criteria. Avoid any lines that are thicker than 5/-2 heights to height ratio. Usually, limit stone to 7-7 in maximum thickness.
- Inspect window cutbacks to be consistent in proportion and location in the plate. Specify sandstone masses with dropouts or multifacial insulations, break, and fuel. Select window glazing that matches the millwork with emphasis in setting, especially at ground level where perimeter controls.

Stanford
CU-Boulder

Moore Building roof stack, 2000
[Flat-Couch-Snedig and Partners]