

01400S03 Quality Requirements Design Principles

SPACE AND ENCLOSURE

Architecture has been called the art of making spaces. Space and the sense of enclosure are important concepts in campus design. At the root of these concepts are basic human needs for shelter and comfort. The concept of space comes into play in both architecture and landscaping architecture. Within and without a building or group of buildings, the architect should be creating attractive, inviting rooms and spaces that people will want to spend time in. This is achieved through careful attention to size and placement of walls and ceilings; in the way walls are articulated and the materials used; and the amount and quality of light admitted.

Even when only one building is involved, a good designer is always mindful of the spaces created (such as arcades, plazas, or seating niches), and whether these are pleasant spaces which will draw people to them. With a group of buildings, the designer's task is to place them in relation to one another in such a way that they create useful and enjoyable courtyards, plazas, malls, and streets.

The landscape designer works in a similar way by creating outdoor spaces using walls, trees, fences, or hedges as the architectural elements that enclose an area. The most successful public spaces have this quality of enclosure, although it may be very subtle

WEIGHT AND MASS

The opposite of space created between buildings or plant areas is the structures themselves. Mass refers to the apparent weight and size of a building. Two buildings of the same size may appear to have a very different mass if one is divided into sections and the other presents a single imposing facade. The weight of a building derives from both its size and the materials used to create it. Traditional and modern architecture appear to have strikingly different weights.

Modern building materials on the other hand can make buildings seem dramatically weightless. The minimal materials, details, and simple shapes of modern architecture can contribute great elegance to a building. Unfortunately, modern building materials can also appear insubstantial sometimes, creating a harsh, cheap, or tinsel look.

It is not only materials and construction techniques that add or subtract or subtract weight in a building. Composition, decoration, surface articulation do the same. Symmetry, repetitive columns and windows, and three dimensional walls all lend weight and stability to buildings.

LINE, SHAPE, AND PROFILE

Designers must think in terms of form since it is their role to give shape to the University's needs. The lines and shapes of the surrounding environment are usually more evident to the designer than to the average passer-by. Although these elements register with everyone in a subconscious way, the designer is used to looking for them and considering them consciously.

At a campus scale, the designer may site and align buildings and plant areas in terms of an overall geometric pattern or a pattern tailored to the contours of the landscape. At the scale of a building or group of buildings, the designer will consider what basic profile is appropriate—either to blend or contrast with the surrounding neighborhood. Vertical contrast is sometimes used for accent at campus gateways, significant sites or important campus buildings.

On a smaller scale, a designer may take inspiration from certain elements of adjoining buildings, such as lines of decoration or windows. A landscape architect may use the height of an adjacent balustrade in determining the height of a wall or hedge, or may reinforce the line of the street with a row of trees.

This is quite apart from contextualism, which is an important principle in design and planning of a campus. Contextualism usually dictates that the choice of material and style must be sympathetic to surrounding buildings rather than just the form. Attention to line, shape, and profile may be based on context or upon other variables. Contextualism has been a valuable concept in campus design and it implies a concern for the building users as part of the building's context.

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GEOMETRY, SCALE, AND PROPORTION

The success of the space, the effect of the mass, the elegance of the lines, shape, and profile, and the impact of light and shadow all depend on the designer's manipulation of geometry and proportion. Skilled manipulation of these elements is essential to the designer's task as mathematical precision is to the engineer.

THE PLAY OF LIGHT AND OTHER SUBTLETIES

The play of light on certain materials or forms is an example of beauty or subtlety that is hard to communicate. This is where a designer's greatest insights and frustrations often arise. Beautiful, harmonious details in the decoration of a building, and not merely gimmickry, create a subtle pleasure that is often lacking in contemporary buildings. The absence of such detail represents low budgets more often than the designer's lack of imagination or poor craftsmanship. Still, a quality of artistry should be sought, appreciated, and purchased, when possible. It pays for itself in the pride and delight it provides the campus community, often extending the life of a building.