Concept:

The Mining Circle returns as the crossroads of the northeast campus and a grand forecourt to the magnificent Hearst Memorial Mining Building. Replacement of Evans Hall by new twin pavilions restores the historic view to the Golden Gate.

PROJECT GUIDELINES

CORE CAMPUS
DESIGN GUIDELINES

LOCATION GUIDELINES

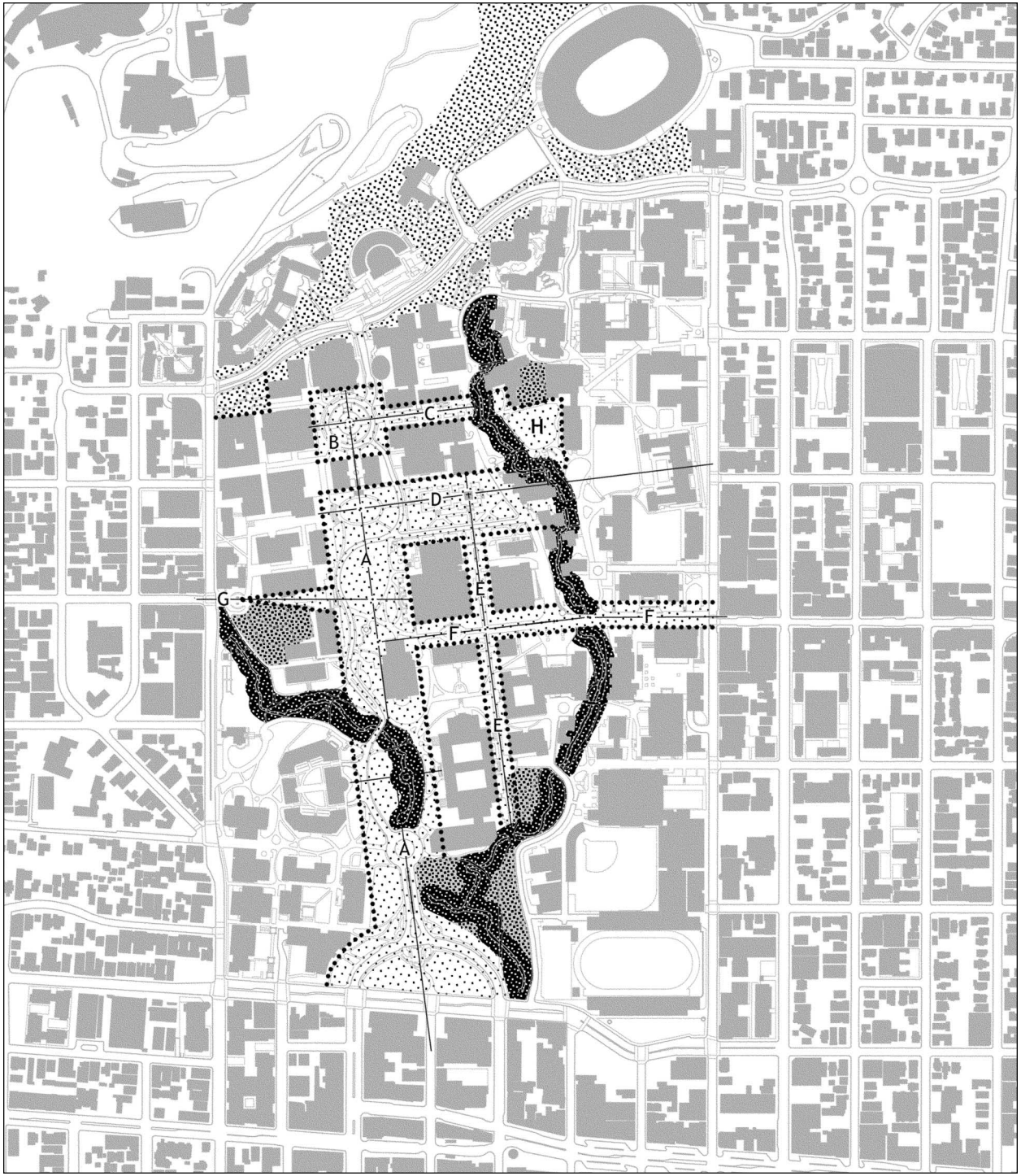
SPACE UTILIZATION GUIDELINES

CORE CAMPUS **DESIGN GUIDELINES**

This section includes general Design Guidelines for the core campus as a whole, as well as for certain specific types of places on campus with particular design conditions. However, as prescribed in policy 3.2, each major project also requires project-specific guidelines, to ensure the unique features of the site and environs are respected, and the project scope includes the site and landscape improvements described in the **Portfolio.**

The use of the word 'shall' in the Guidelines is not meant to entirely preclude alternate design solutions. The best solution for a site should not be rejected just because we could not imagine it in advance. However, while the project architects may present a concept which departs from the Guidelines, they must **also** present a concept which conforms entirely to the Guidelines. As a rule, the campus shall not depart from the Guidelines except for solutions of extraordinary quality.

Figure D.1: Preservation Zones



Natural riparian areas

Rustic campus woodlands

Rustic hill woodlands

View & openspace preservation zones

Key letters refer to individual zone descriptions in guideline D.1.

Figures 2.1 and D.1 are identical: the figure is duplicated here for easy reference to the guidelines.

Design Guidelines

Campus design has always been diverse. John Galen Howard himself broke with the classical vocabulary of his first several campus buildings to design the gothic-inspired Stephens Union; and the classical buildings themselves were departures from the earlier Victorian styles of North and South Halls. However, while the design of each building should reflect its own time and place, it should also reflect the enduring values of elegance, quality and durability, and form a coherent and memorable identity for the campus as a whole.

Moreover, there are several specific locations on campus where more prescriptive guidelines are required:

- New construction and renovation within the Classical Core shall enhance the integrity of this ensemble, and complement rather than compete with existing historic buildings.
- New buildings facing Places of Interaction shall be designed to shape these places, provide enclosure and security, and admit sunlight. Ground level spaces within these buildings shall house uses that observe and activate the place.
- Buildings at the City Interface shall be designed to create a graceful transition from campus to city, and enhance both the visual quality of the street and the pedestrian experience.

Guideline D.1 Preservation Zones

The preservation zones described below and in figure D.1 protect the major elements of the campus landscape armature, as well as its most significant historic exterior spaces. No new buildings shall intrude into the preservation zones.

Natural Preserves. The natural landscape along the two forks of the creek requires careful ecological management, as described in initiative 2.3, as well as protection from development and the impacts of adjacent development. The natural preserves are comprised of two subzones: zone 1, the riparian areas along the streamcourse, and zone 2, the other rustic woodlands adjacent to the riparian areas.

- Zone 1 is dominated by native and naturalized plants forming dense woodlands along the streamcourse. The width of this zone may vary in response to local conditions, but in general shall be at least 100', centered on the streamcourse.
- Zone 2 includes those other rustic woodland areas adjacent to the riparian landscape, which have a strong complementary relationship to the creek, and which also often have a strong historic and symbolic identity in their own right, such as Observatory Hill or Eucalyptus Grove.

Figure D.2: Design Controls

Classical core

City interface

New buildings in these locations shall conform to the frontage and height provisions in guidelines D.5 and D.8.

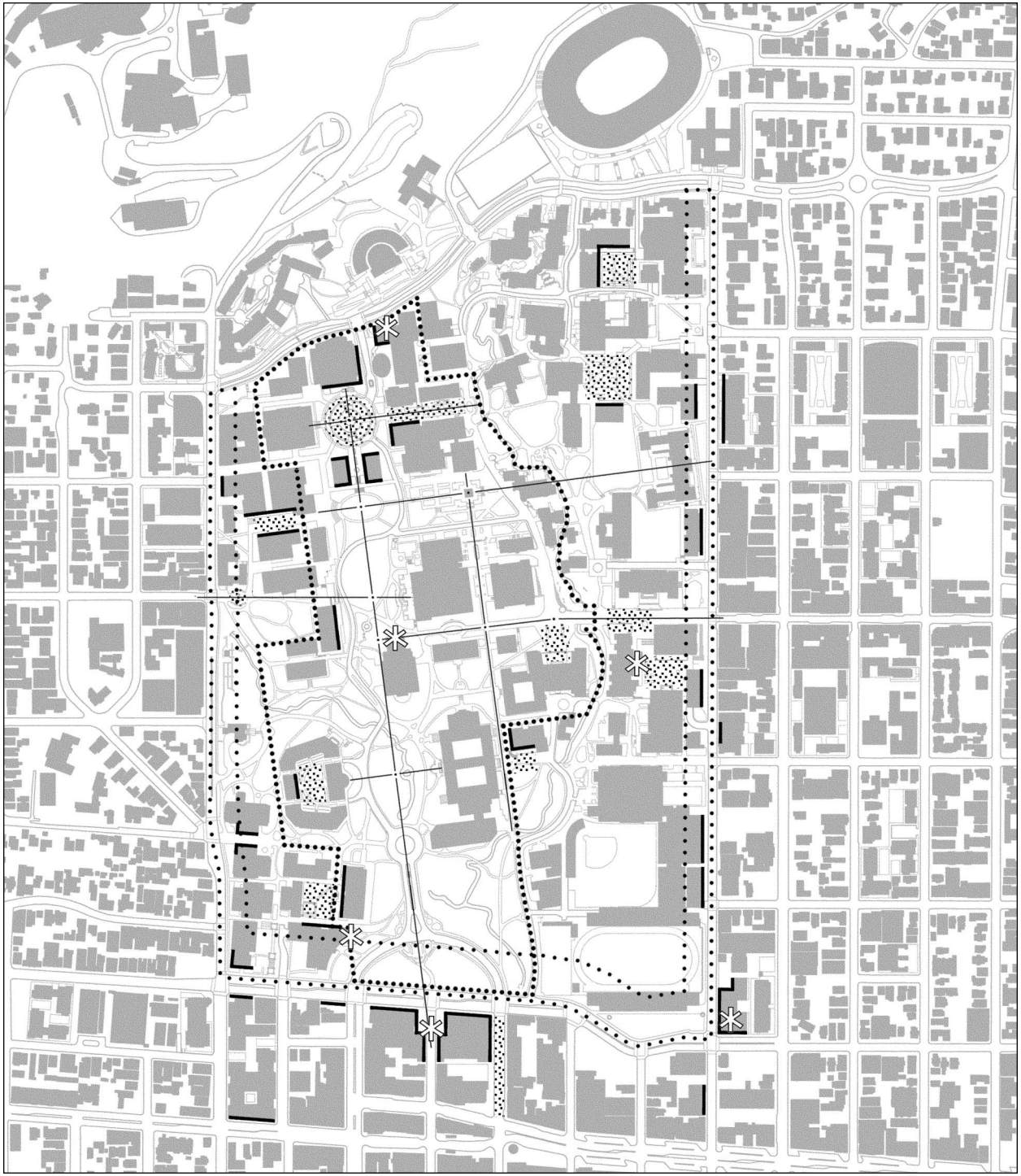
Places of interaction

New buildings facing these places shall conform to the frontage and height provisions in guidelines D.5 and D.8.

Key build-to lines

New buildings in these locations shall conform to the build-to provisions in guidelines D.1 and D.3.

Potential beacons



Hill Woodlands. While the woodlands east of Gayley Road are comprised primarily of introduced species, they provide a forested backdrop to the campus, and a graceful transition to the hills. Those woodlands that remain west of LBNL should be maintained as a preservation zone, to retain the unique rustic character they impart to the student residences, the Greek Theatre, and Gayley Road.

Central Glades (A) The preservation zone for the Central Glades reflects the axial geometry of the classical ensemble of buildings that frame and define them. No building to the north or south shall intrude within 180' of the east-west axis of the Glades: these setbacks coincide with the facades of Doe Library and McLaughlin Hall. The east edge of the preservation zone coincides with the east edge of Campanile Esplanade, below. At the west end of campus, the preservation zone widens to an arc 100' from the curbline of the West Crescent.

Mining Circle (B) The preservation zone is defined as a square 360' by 360' centered on the Circle. In order to reinforce the formal character of the Mining Circle as an outdoor room framed and defined by buildings, at least 75% of any new building facade shall lie on the setback line.

Gilman Esplanade (C) The preservation zone is defined as 50' on either side of the north-south axis centered on the Mining Circle and extending to the creek zone. To reinforce the continuity of spatial enclosure, at least 75% of any new building facade shall lie on the setback line.

Campanile Esplanade (D) The preservation zone for Campanile Esplanade reflects the formal geometry defined by the north-south axis of Sather Tower, and is defined as 100' east and 200' west of this axis: these setbacks coincide with the facades of Birge Hall and Bancroft Library. To reinforce the continuity of spatial enclosure, at least 75% of any new building facade shall lie on the setback line.

Campanile Way (E) The preservation setback is defined as 50' on either side of the east-west axis centered on Sather Tower and extending to the creek zone. To reinforce the continuity of spatial enclosure, at least 75% of any new building facade shall lie on the setback line.

Sproul Plaza and **Sather Road** (F) This 120' wide zone preserves the primary north-south route through campus as a gracious, generous space with unobstructed views of Sather Gate. The zone is defined by the facades of Doe Library, Wheeler and Sproul Halls on the east and King Union, Durant and California Halls on the west.

North Gate (G) This zone is defined as a view cone originating at the center of the North Gate circle, with the east and west sides aligned with the corners of the north facade of Doe Library.

Faculty Glade (H) The preservation zone for Faculty Glade is defined by the Strawberry Creek natural preserve to the north and west, Morrison Hall to the south, and Hertz Hall and Faculty Club to the east.

Guideline D.2 Perimeter Setbacks

Campus edges and entrances should create a positive first image of both the campus itself and its synergy with the city around it. New buildings at the core campus perimeter should be sited and designed to accommodate a more coherent and unifying landscape treatment.

Hearst & Bancroft Frontages. Buildings shall be set back at least 20' from the curbline to accommodate a formal, urban, but generous landscape treatment along both frontages. The Landscape Master Plan shall define a palette of planting and paving materials and typical details for these setbacks.

Oxford Frontage. The majority of the Oxford frontage is comprised of green open space: the Crescent, the Creek, and the proposed Edwards Green. In order to create a more coherent landscape treatment in the picturesque style along this frontage, new buildings along Oxford shall be set back a minimum of 60' from the curbline.

Gayley Road. One of the most memorable aspects of the campus is its setting at the base of the eastbay hills, and Gayley Road should be reinforced as the 'seam' linking the campus with the hill landscape. Each building shall be set back an average of 40' from the curbline to accommodate an informal landscape treatment along both sides of the roadway. While building edges should be articulated to vary the setback depth, no portion of a building shall be closer than 20' to the curbline.

Individual perimeter sites may have spatial relationships that require wider setbacks: for example, to align facades with neighboring buildings. These shall be prescribed in the project-specific guidelines.

Note: The setbacks prescribed in Guidelines D.1 and D.2 apply to all above-grade structures. Below-grade structures may extend into the setbacks, but only if they are invisible at the surface; provide soil depth adequate to support landscaping at grade; and do not compromise the integrity of sensitive landscapes. Any elements of below-grade structures that project above grade, such as vents, entry pavilions, or skylights shall be sited outside the setback.

Guideline D.3 Build-To Lines

Guideline D.1 prescribes build-to lines for certain historic campus open spaces. There are also certain other places on campus where build-to lines are desirable to shape, frame and activate streets and open spaces, and/or to relate positively to existing buildings. Figure D.2 designates critical build-to lines for potential building sites. While some variation is desirable to allow for entrances and facade articulation, at least 75% of the facade shall lie on the build-to line.

Guideline D.4 Orientation & Exposure

Each new building shall be oriented and designed to take advantage of solar angles and wind direction to reduce energy consumption. The design shall include consideration of shading options on south and west exposures to reduce heat gain in summer but admit natural light in winter. Shading options shall include landscape elements, such as deciduous trees, as well as architectural elements.

The design shall also include consideration of facade treatments that respond to the characteristics of each exposure with respect to heat, light and ventilation. For example: more glass on the north and east exposures, less glass and greater thermal mass on the south and west, and vents and operable windows located and designed to optimize natural airflow.

Classical Core. Within the classical core the axial, orthogonal relationships of the historic ensemble shall take precedence in determining building orientation.

Guideline D.5 Active Frontages

Places of Interaction. Ground level spaces in each building facing a place of interaction shall house functions with a high frequency of human presence and public activity, such as lounges, libraries, cafes, display spaces, and walk-up services. The main building entrance shall be located in the facade facing the place of interaction.

City Interface. In the city General Plan, several sections of blocks adjacent to campus are designated 'commercial': ground level spaces in university buildings within those areas shall include retail and/or storefront services at ground level. Other university buildings at the campus perimeter or on adjacent blocks shall house functions with a high frequency of human presence and activity at ground level.

Guideline D.6 Entry Plazas & Terraces

Each new building shall be sited and designed to create a plaza or terrace at the main entrance, to serve as a casual gathering place for its users. The plaza or terrace shall be distinguished as a place by design treatment - paving, lighting, furnishings - and shall incorporate provisions for disabled access.

Guideline D.7 Services

All bulk trash containers and building equipment shall be concealed within enclosures designed as integral elements of the architecture. Loading docks shall be concealed and secured when not in use.

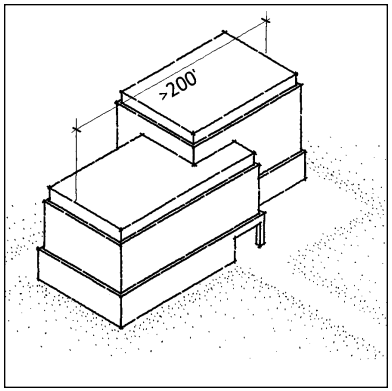
Guideline D.8 Height

Places of Interaction. Buildings facing places of interaction shall be scaled to admit sunlight to the place and impart a comfortable human scale. As shown in figure D.5, buildings shall be no greater than 65' in height within 75' of the build-to line. Beyond this distance, height may increase 1' for every 1.5' of distance from the build-to line.

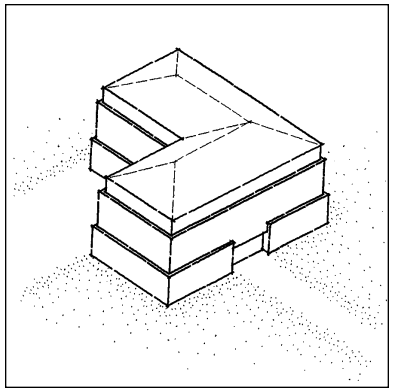
Individual sites may present spatial relationships that require lower heights along the build-to line: for example, to align cornice lines in order to create a more formal sense of enclosure. These shall be specified in the project-specific guidelines.

City Interface. Buildings at the campus edge shall be designed to create a graceful transition in scale from campus to city. Along the Hearst and Bancroft frontages of the core campus, buildings shall be no greater than 65' in height within 100' of the curbline. On sloping sites, parts of the building may be greater than 65' but not over 80' in height, but the average height within the 100' wide zone shall be no greater than 65'.

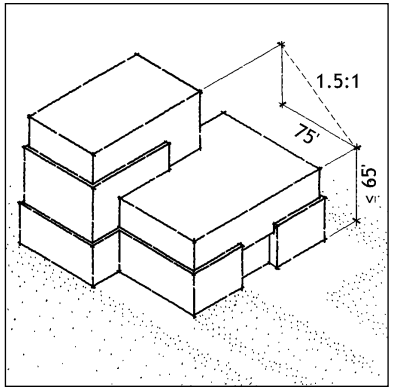
Along the Oxford frontage, buildings shall be no greater than 95' in height within 200' of the curbline. On sloping sites, parts of the building may be greater than 95' but not over 110' in height, but the average height within the 200' wide zone shall be no greater than 95'.



D.3 Variations in plane and height in long buildings.



D.4 Articulated base and top. (Pitched roof form required only within the classical core.)



D.5 Heights of buildings facing places of interaction.

Guideline D.9 Composition

Large buildings shall be designed to reduce their perceived mass and impart a human scale to the campus. Each building with a horizontal dimension greater than 200' shall incorporate changes in both facade plane and vertical height to reduce its perceived scale and bulk, as shown in figure D.3.

Each building over 3 stories shall have both an articulated base and an articulated top, as shown in figure D.4. Flamboyant architectural gestures are discouraged: rather, the top should create a simple and graceful terminus for the building.

Classical Core. Each new building within the classical core shall be composed of elements orthogonal in plan and composition, and sited to reinforce the axial relationships of the historic core buildings and the Central Glades.

Guideline D.10 Roof Forms

Roof top equipment shall be enclosed and concealed in every new building, and the enclosure shall be designed as an integral element of the building architecture. In new buildings, the design shall include consideration of roof forms that accommodate passive and active solar energy devices as elements integral to the building architecture.

Classical Core. Each new building within the classical core shall have a hip or gable roof, with a pitch similar to existing historic core buildings.

Guideline D.11 Facades

Each building shall be a coherent architectural composition, and shall employ a single, unifying vocabulary of forms, details and materials on all building facades.

In each new building, facades shall be composed primarily of solid planes with punched windows. While metal and glass wall systems may be employed as special architectural features, in general the pattern of solid and transparent elements shall respect the structural grid.

Classical Core. Each new building within the classical core shall be fenestrated exclusively with individual punched windows, having a greater vertical than horizontal dimension. Windows and doors shall be inset at least 6" from the exterior wall surface. Windows may be large and paned, but shall not span structural elements.

Guideline D.12 Architectural Materials

Exterior materials shall be selected to convey an image of quality and durability. Suitable primary exterior materials include granite, concrete and true plaster. Metal and glass wall systems may be used sparingly as special architectural features; however, dark, opaque or reflective glass is prohibited.

Visual interest shall be created by the articulation of planes and volumes, not by arbitrary changes in materials. Changes in materials shall occur only at the inside corners of changes in surface plane.

Classical Core. Each new building within the classical core shall utilize the following materials palette:

- Roofs: unglazed red clay mission tile.
- Walls: light grey granite or architectural concrete, sand finish.
- Windows: clear or lightly tinted glass, copper or bronze frames.
- Skylights: copper or bronze frames.

Guideline D.13 Site and Landscape Materials

The Landscape Master Plan, building on the Policies & Initiatives in this framework, will prescribe more detailed palettes of site and landscape materials for the campus.

Plant Materials. Landscapes within creek preservation zones 1 and 2 shall follow the guidelines prescribed in initiative 2.3 for plant selection. Elsewhere, plant materials shall be selected to fit the desired structural form and function, while also contributing to a campuswide landscape which is both diverse and well suited to its site, climate, and intensive use.

In general, plants with similar water and maintenance needs shall be grouped into zones to optimize both water use and maintenance. High maintenance zones shall be limited to building entrances and other heavily used places.

Site Materials. Presently nearly all routes on the central campus are surfaced with asphalt. While this material is suitable for vehicular roads and narrow, secondary pathways, major plazas and pedestrian routes deserve better: not only to improve their visual quality, but also to clarify the hierarchy of routes and the primacy of the pedestrian.

Suitable paving materials for major plazas and primary pedestrian routes include brick, cast and natural stone, and concrete. Paving materials, lighting and furnishings shall be selected with care to ensure the identity and continuity of pedestrian routes are clearly discernable. Paving materials shall also be selected to maximize the amount of pervious surface. Paving materials that allow water infiltration are encouraged, particularly for secondary paths and roads.

Program Guidelines

Campus buildings endure far longer than their initial contents, and should be designed to maximize their flexibility and adaptability. Although the future is unpredictable, a few basic conventions should be followed in the design of all new buildings to ensure these major investments have a long and productive life.

Guideline D.14 Ground Floor Spaces

Guideline D.5 prescribes specific programming for buildings facing Places of Interaction and at the City Interface. However, the program of every new building on campus shall seek to optimize its contribution to the quality of campus life. The ground level spaces of each building shall be reserved for its most public functions, and those spaces facing public areas shall be as transparent as the program allows. Main entry lobbies shall be designed as inviting places for waiting and engagement, with features commensurate with the scale and functions of the building.

Guideline D.15 Floor Heights

Each new building on the core campus shall have a floor-to-floor height of at least 15', in order to accommodate a wide range of instruction and research functions and the infrastructure they require. A greater height on the ground floor may be desirable to accommodate larger public and assembly spaces, such as libraries or lecture halls.

Guideline D.16 Floor Configuration

Each new building shall be configured to accommodate a broad range of functions. The need to provide for a specific program in the near term must be balanced against the rapid pace of cultural and technological change, and the long lives of campus buildings. In general, a building width of 75-80' can accommodate a variety of office, lab and classroom layouts.

Guideline D.17 Internal Partitions

Each new building shall be designed to consolidate fixed, immovable elements at the core and perimeter. and minimize or eliminate such elements elsewhere. Spaces shall be demised with easily reconfigurable partitions.

Guideline D.18 Top Floor Spaces

In tall buildings, particularly those with a view to the west, at least some top floor space with views should be reserved for conference/event rooms available for use by the entire campus. This is an emerging campus tradition, begun in Barrows and continuing through Wurster, Tan and Haas, and should be encouraged as a way to foster intellectual collaboration.

LOCATION GUIDELINES

The contiguity of the core campus as a guiding principle of future campus growth is established in the Academic Plan, and reflected in the framework for growth described in strategic goal 1. But because core campus land is a scarce and finite resource, and the potential of the core campus to accommodate further growth is therefore limited, it is neither feasible nor desirable to house every university function on campus. Some units do not require physical campus proximity, while others are unsuitable for the campus and its urban environs due to scale, service requirements, or environmental considerations.

As prescribed in policies 1.5-1.7, the Location Guidelines in this section shall ensure the use of space on and around the core campus follows the goals articulated in the Academic Plan:

- to accommodate future academic growth on the core campus and adjacent blocks,
- to reserve core campus space for functions that serve and/or involve students, and
- to reserve adjacent blocks for research, cultural and service units that require core campus proximity.

Table L.1: Campus Location Guidelines

Use	Priority	Definition	Location	
Instruction & Research	1	Classrooms and class labs	Core Campus	
	1	Faculty office, research and conference spaces	Core Campus	
Academic Support	1	Libraries, computer labs, student workspaces	Core Campus	
	1	Deans and chairs, academic advisors, academic senate	Core Campus	
Research Units	1	Primarily shared departmental research facilities and primarily faculty and student participation	Core Campus	
	2	Primarily dedicated sponsored research facilities and/or primarily staff and postdoctoral participation	Adjacent Blocks	B
	3	Facilities incompatible with campus location due to scale, service demands, or environmental impact	Urban Eastbay	C
Institutional Support	1	Chancellor and individuals and groups who require frequent, direct interaction with the Chancellor	Core Campus	
	1	Critical on-site plant operations services	Core Campus	
	2	Visitor-intensive: frequent visitors from outside campus	Adjacent Blocks	B
	2	Service-intensive: frequent visits to/from core campus units	Adjacent Blocks	B
	3	Process-intensive: primarily document-based or computer-based functions rather than face to face interactions	Urban Eastbay	C
	3	Computer and telcom centers, industrial production, materials handling and storage, plant administration	Urban Eastbay	C
Student Services	1	Student organizations	Student Center	A
	1	Walk up information and transaction services	Student Center	A
	2	Counseling and health services	Student Center	A
	2	Student programs administration	Student Center	A
	2	Auxiliary programs administration	Adjacent Blocks	B
Public Services	2	Museums, performance venues	Adjacent Blocks	B
	3	University extension	Urban Eastbay	C
University Housing	-	Lower division and first year transfer students	One mile radius of Doe Library	
	-	Upper division and graduate students	20 min transit trip to core campus	
	-	Faculty and staff	30 min transit trip to core campus	

A *Student Center includes those buildings fronting on Sproul and Lower Sproul Plazas, plus Bancroft frontages from Barrow Lane to Oxford. Locate priority 1 functions on sites within the core campus, and priority 2 functions on sites on adjacent blocks.*

B *Adjacent Blocks include the area defined in Figure 0.1.*

C *Urban Eastbay includes cities of Oakland, Berkeley, Emeryville, Albany, El Cerrito and Richmond*

SPACE UTILIZATION GUIDELINES

Given the physical limits to the capacity of the central campus, and the scarcity of capital for new facilities, UC Berkeley must optimize the use of existing assets. Reasonable and credible space utilization guidelines can serve as an objective baseline to:

- evaluate space requests for new or growing functions,
- project space demand for new projects, and
- ensure each campus unit is adequately and equitably housed.

Because campus units are not charged for the space they use, the tendency in any new project is to maximize the program. For its future tenants, who may have spent many frustrating years in substandard facilities, this is understandable. It is not, however, in the interest of the campus as a whole. Each dollar spent on unnecessary space is one less dollar available for durable and sustainable materials, adequate common spaces, and decent landscaping. Campus buildings endure far longer than their initial contents, and must be designed for the ages.

Table U.1: Academic Space Guidelines

Space Type	Research Space Description	Position	Ofc ASF	Res ASF	Total ASF
A	Office-based research: team project/conference spaces.	Faculty	225	50	275
		Grad Instructor	150		150
		Postdoc/Researcher	150	50	200
		Grad Student		50	50
B	Combination office and lab-based research: labs, project & observation rooms often shared by several teams.	Faculty	225	150	375
		Grad Instructor	150		150
		Postdoc/Researcher	150	100	250
		Grad Student		100	100
C	Individual or team studios for rehearsal or production. Moderate service/support, some special equipment.	Faculty	225	150	375
		Grad Instructor	150		150
		Postdoc/Researcher	150	150	300
		Grad Student		150	150
D	Laboratories with moderate infrastructure and environmental controls. Core space and equipment shared among research teams. Service/support 10-25% of lab space.	Faculty	225	350	575
		Grad Instructor	150		150
		Postdoc/Researcher	150	180	330
		Grad Student		180	180
E	Large individual studios for creative activity. Special service/support required, often for equipment-based activity such as fabrication, editing and production.	Faculty	225	500	725
		Grad Instructor	150		150
		Postdoc/Researcher	150	250	400
		Grad Student		250	250
F	Complex team-based laboratories: high demand for utility infrastructure, environmental controls, and built-in and movable equipment. Service/support 25-50% of lab space.	Faculty	225	500	725
		Grad Instructor	150		150
		Postdoc/Researcher	150	250	400
		Grad Student		250	250

Precise campus standards for space utilization are elusive, due to the enormous variety and complexity of research space: but precision is not the point. What UC Berkeley requires is a simple and objective, but flexible, set of guidelines to ensure space is responsibly used and equitably distributed.

By far the most significant users of space on campus are the office and research functions of academic programs: they comprise over half of all core campus space. Until now, the nearest thing to space utilization guidelines UC Berkeley has had are the standards developed in 1990 by the California Postsecondary Education Commission, based on a massive nationwide study. The CPEC standards prescribed typical asf/person ratios for academic office and research space. Office standards are uniform, and include allowances for support space. Research standards, on the other hand, vary by discipline: CPEC defined six categories, with a typical standard for each.

Office Space

Since 1990, two major trends have influenced office space design: the growth in demand for conference and other interactive work spaces, and the expansion of the personal computer to every desktop. In light of these trends, table U.1 reflects several adjustments to the CPEC standards:

- **Individual workspaces.** 150 asf for faculty and 75 asf for postdocs and graduate instructors. Postdocs and instructors do not require workspaces as large as faculty: the typical workspace for these positions now is half of a shared 150 asf office.
- **Conference space, including informal team workspaces.** 10 asf per person, based on the average person spending a third of his or her workday in some form of interactive activity, and on conference spaces averaging 30 asf per seat.
- **Workspace for support staff.** The ratio of academic staff to support staff at UC Berkeley varies by discipline, from roughly 1.5:1 to 3:1. A reasonable individual workspace for support staff is 100 asf: using the midpoint ratio of 2.25 yields an allowance of approximately 45 asf of support staff space per academic staff.
- **Service and storage space.** A typical ratio for service and storage is 10% of all individual and group workspace, or roughly 20 asf per person.

Research Space

Research space is a more complex problem. Changes over the past decade have no doubt been even more profound for research space than office space: but those changes are unique to each discipline, and to identify and characterize them would be a significant project in itself, on the scale of the original CPEC study.

However, the original CPEC taxonomy remains valid in terms of the basic types of research space. While specific factors may need to be recalibrated – for example, to reflect the increased use of simulation rather than field experiments – this may be done iteratively, as new program data become available from actual projects.

Implementation

The basic methodology for space guidelines is already in place at UC Berkeley. The designations of research space categories for each department are already used to prepare our yearly reports of campuswide space utilization to UCOP. In order to make the guidelines in table U.1 practical tools for space management, the campus should consider the following protocols:

- **No capital investment should raise the asf of a college, division or school more than 10% above its guideline.** While the guidelines should allow exceptions for unique circumstances, such exceptions should be granted only if the campus finds:

  the guideline can not be met at reasonable cost,
  the historic or architectural quality of a building must be significantly compromised for the guideline to be met, *or*
  the program requires equipment or modes of work not anticipated in the guidelines.

- **Space guidelines should be enforced only at the level of college, division or school.** The guidelines for individual departments shall be summed to yield a figure for the college, division or school as a whole. As long as this figure conforms to the 110% limit prescribed above, deans should have the discretion to allocate space among their departments.

- **Space guidelines should apply only to the core campus and environs.** As an incentive to relocate priority 3 functions to more remote sites, any space located outside the core campus and environs, as defined in figure 0.1, should be exempt from the guidelines calculations.

- **Special types of space unique to particular disciplines should not count against the guidelines.** However, if the guidelines are to be credible, the campus must minimize these special designations; otherwise, units would simply reclassify their space to meet the guidelines. Presently, each such designation requires both campus and UCOP approval: the campus should continue to hold such requests to a rigorous standard.

- **The guidelines should be augmented to cover other types of core campus space as required.** For example, the guidelines for academic office space could serve as a basis for similar guidelines for administrative offices.

PROJECT APPROVAL

A strategic plan is only as effective as its means of implementation. The Berkeley campus has been the subject of many outstanding analyses over the years, yet decisions on individual projects tend to be ad hoc: not because the campus lacks sound decisionmaking principles, but because there has been no clear linkage of those principles to a practical decision sequence.

The campus has already taken the first steps to change this paradigm, by forming the Executive Campus Planning Committee (ECPC) and by establishing a new, clear approval process for capital projects. This section describes how the policies and guidelines articulated in this Plan shall be integrated into the approval process, to ensure investment decisions both optimize the use of resources and help to realize the campus vision.

The capital projects approval process is a sequence of seven phases, as described on the following pages. However, the scale, form and character of a project is defined in the first three phases: Concept Review, Feasibility Analysis, and Program Development.

Phase 1: Concept Review. In this phase, Capital Projects manages the **Policy Review** of the concept proposed by the sponsor, which includes a review of its alignment with the strategic goals, policies, guidelines and initiatives in the New Century Plan. Space Management & Capital Programs collaborates with Capital Projects on those strategic goals which fall within its expertise and authority. Capital Projects also consults with other campus units and committees in their respective areas of interest and expertise. The **Policy Review** provides the basis for the analysis and recommendation presented to the Executive Campus Planning Committee (ECPC).

Phase 2: Feasibility Analysis. In this phase, based on a preliminary space program developed with the Preprogram Committee, Capital Projects identifies a range of options, or alternate solutions. As a rule, the set of options should include retrofit and systems renewal; renovation; replacement; and, if relevant, noncapital solutions such as physical reorganization. As described in strategic goals 1 and 10, the options should also include alternate models for project delivery as well as sustainable design features.

Capital Projects then manages a **Policy Review** of the set of options, to ensure their conformance with the New Century Plan, followed by an **Options Analysis** leading to a proposed solution. Capital Projects then prepares design guidelines, manages the **Campus Review** of the proposed solution, and prepares and presents its recommendation to ECPC.

Phase 3: Program Development. The sequence in this phase is similar to the previous two. Based on a detailed program and design concept prepared by the Architect and Program Committee, Capital Projects manages a **Project Review**, including a preliminary environmental analysis as well as an analysis of surge requirements. It then manages the **Campus Review** of the program and design concept, and prepares and presents its recommendation to ECPC.

Phases 4-7. Capital Projects continues to monitor project quality and manage campus reviews as the project proceeds through the design and construction sequence.

***Note**: the process described on the following pages applies to projects over $1 million. For smaller projects, a more streamlined process is available, as described at the end of this section.*

Phase 1: Concept Review *(projects over $1 million)*

1.1 Sponsor submits proposal with VC signature, including funding strategy

1.2 Capital Projects meets with Sponsor to explain process

1.3 Sponsor prepares abstract of proposal: objectives, justification, alternatives considered, and funding strategy: Capital Projects consults on range of alternatives.

1.4 Capital Projects reviews abstract for adequacy of information: may require revision by Sponsor

1.5 Capital Projects manages **Policy Review**

- 1.5a Capital Projects reviews for conformance with New Century Plan strategic goals, in collaboration with Space Management & Capital Programs.
- 1.5b Committee on Academic Planning & Resource Allocation reviews for academic implications
- 1.5c University Relations and Community Relations review for communications implications
- 1.5d University Relations and Budget & Finance confirm funding strategy

1.6 Capital Projects manages **Technical Review**: technical implications and preliminary cost projection

1.7 Capital Projects compiles reviews, prepares **Concept Analysis** and recommendation

1.8 VC Capital Projects reviews analysis, confirms recommendation

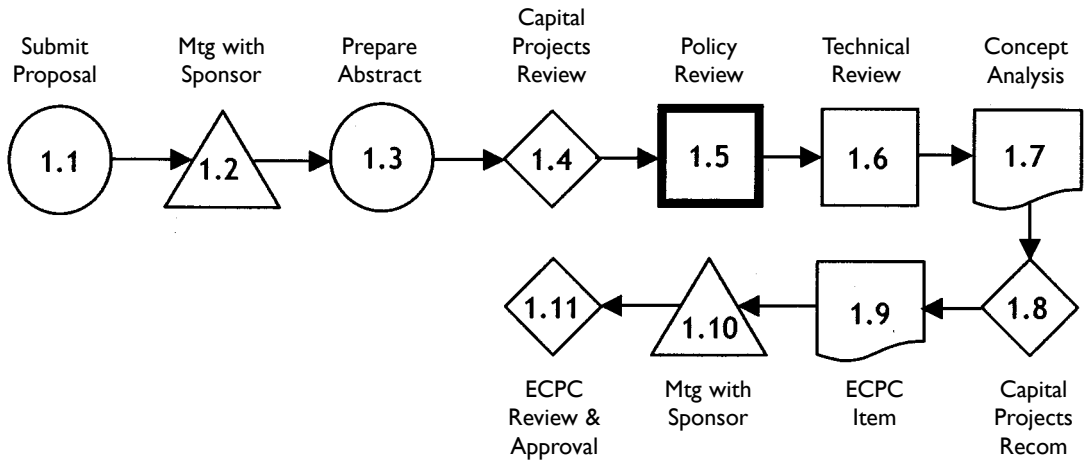
1.9 Capital Projects prepares draft ECPC item

1.10 Capital Projects reviews draft ECPC item with Sponsor

1.11 ECPC recommendation and Chancellor approval

(projects under $5 million may be delegated to Vice Chancellors' Administrative Council)

1.12 Funds allocated to cover phases 2 and 3

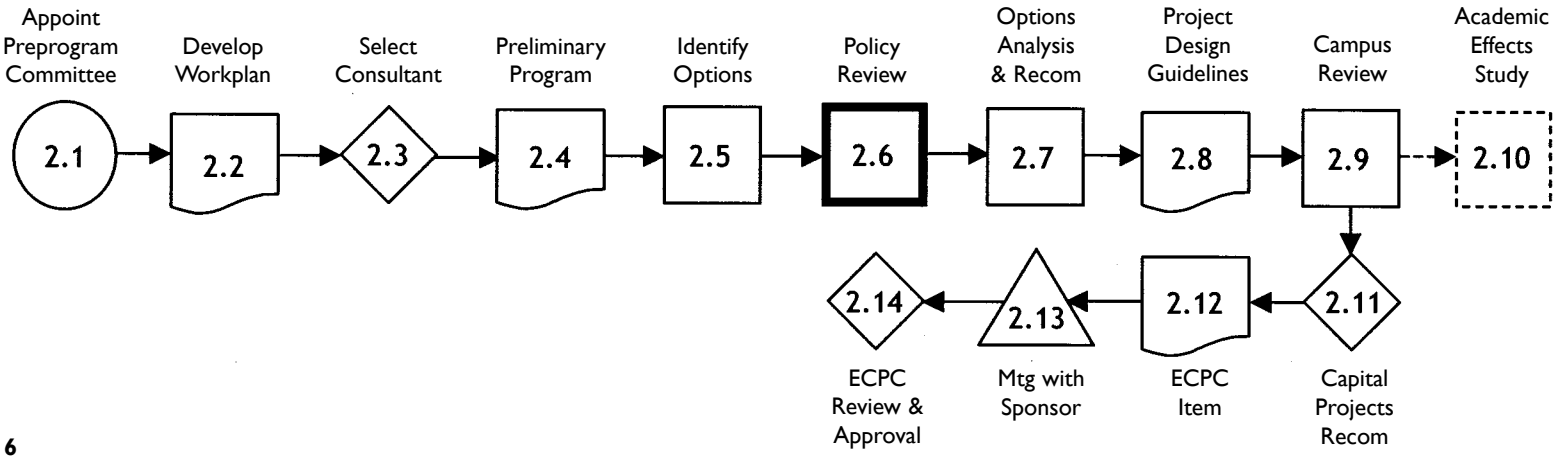


Phase 2: Feasibility Analysis *(projects over $1 million)*

2.1 Sponsoring VC appoints Preprogram Committee
2.2 Capital Projects prepares workplan for phase 2: scope, timeline, staff budget and, if required, consultant budget
2.3 If required: Capital Projects prepares scope of consultant services, identifies prospective consultants, obtains and reviews proposals, and recommends selection to Preprogram Committee
2.4 Capital Projects or Consultant develops preliminary space program and diagrams
2.5 Capital Projects identifies options: range of alternate solutions plus 'no action' option
2.6 Capital Projects manages **Policy Review** of options
- 2.6a Capital Projects reviews for conformance with New Century Plan strategic goals, in collaboration with Space Management & Capital Programs
- 2.6b Capital Projects identifies environmental implications of options

2.7 Capital Projects prepares **Options Analysis** and proposed solution
2.8 Capital Projects prepares project design guidelines for proposed solution
2.9 Capital Projects manages **Campus Review**
- 2.9a University Relations and Community Relations
- 2.9b Design Review Committee
- 2.9c Space Assignment & Capital Improvements Committee
- 2.9d Committee on Academic Planning & Resource Allocation

2.10 SMCP prepares Academic Effects Study, to be completed prior to start of phase 3
2.11 VC Capital Projects confirms proposed solution
2.12 Capital Projects prepares draft ECPC item
2.13 Capital Projects reviews draft ECPC item with Sponsor
2.14 ECPC recommendation and Chancellor approval

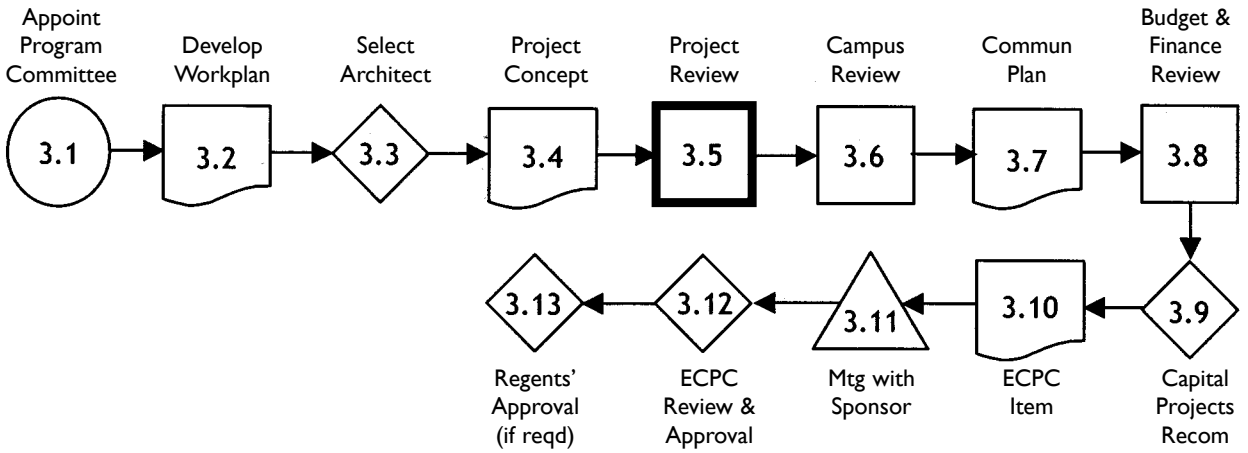


Phase 3: Program Development *(projects over $1 million)*

3.1 EVC/Provost appoints Program Committee
3.2 Capital Projects prepares workplan for phase 3: scope, timeline, staff and consultant budget
3.3 Capital Projects selects architect for project
3.4 Architect and Program Committee prepare program and design concept: space program, conceptual site plan, conceptual floor plans, conceptual massing, proposed budget and schedule
3.5 Capital Projects manages **Project Review** of program and design concept
- 3.5a Capital Projects reviews for conformance with design guidelines
- 3.5b Capital Projects prepares preliminary environmental analysis/initial study
- 3.5c Capital Projects prepares surge analysis

3.6 Capital Projects manages **Campus Review**
- 3.6a University Relations and Community Relations
- 3.6b Design Review Committee
- 3.6c Space Assignments & Capital Improvements Committee
- 3.6d Committee on Academic Planning & Resource Allocation

3.7 University Relations and Community Relations prepare communications plan
3.8 Budget & Finance reviews project in relation to capital budget
3.9 VC Capital Projects confirms program and design concept, budget and schedule
3.10 Capital Projects prepares draft ECPC item
3.11 Capital Projects reviews draft ECPC item with Sponsor
3.12 ECPC recommendation and Chancellor approval
3.13 UCOP and Regents' approval of budget/capital improvement program amendment for projects over $5 million
(extent of UCOP and Regents' review depends on size of project budget)
3.14 Funds allocated to cover phase 4



Phase 4: Schematic Design *(projects over $1 million)*

4.1 Architect completes schematic design
4.2 Capital Projects reviews for conformance with project design guidelines
4.3 Capital Projects manages **Campus Review**
- 4.3a Design Review Committee
- 4.3b Seismic Review Committee
- 4.3c Committee on Removal of Architectural Barriers
- 4.3d Program Committee *(if changes to scope/budget/schedule)*
- 4.3e Space Assignments & Capital Improvements Committee *(if changes to scope/budget/schedule)*

4.4 Capital Projects presents schematic design to ECPC, plus any scope/budget/schedule changes
4.5 ECPC recommendation and Chancellor approval
4.6 Regents' design approval for projects over $5 million
4.7 Sources for 85% of project funds must be identified before starting phase 5

Phase 5: Design Development *(projects over $1 million)*
Phase 6: Working Drawings *(projects over $1 million)*
same sequence in both phases

5.1/6.1 Architect completes design development (phase 5) or working drawings (phase 6)
5.2/6.2 Capital Projects reviews for conformance with project design guidelines and schematic design
5.3/6.3 Capital Projects manages **Campus Review**
- 5.3a/6.3a Design Review Committee *(if changes to exterior design)*
- 5.3b/6.3b Seismic Review Committee *(if changes to structural design)*
- 5.3c/6.3c Program Committee *(if changes to scope/budget/schedule)*
- 5.3d/6.3d Space Assignments & Capital Improvements Committee *(if changes to scope/budget/schedule)*

5.4/6.4 ECPC review *(if changes to exterior design or scope/budget/schedule)* and Chancellor approval
6.5 100% of funds must be in place before awarding construction contract

Phase 7: Bid and Construction *(projects over $1 million)*

7.1 Budget augmentations require review and recommendation by Vice Chancellors' Administrative Council
7.2 Augmentation requests must identify source of additional funds
7.3 Chancellor approval

Projects $1 - 5 million may be delegated to the Vice Chancellors' Administrative Council (VCAC) following Concept Review approval.

Projects Under $1 million are reviewed by VCAC: they may proceed directly from Concept Review approval to a combined Program and Design phase, and then to Bid and Construction.