UNIVERSITY OF CALIFORNIA, RIVERSIDE

WEST CAMPUS GRADUATE AND PROFESSIONAL CENTER



UCR PROJECT NUMBER: 950449
DETAILED PROJECT PROGRAM
JUNE 2008

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ACKNOWLEDGEMENTS

Appreciation is extended to all who participated in the development of the West Campus Graduate and Professional Center Detailed Project Program (DPP).

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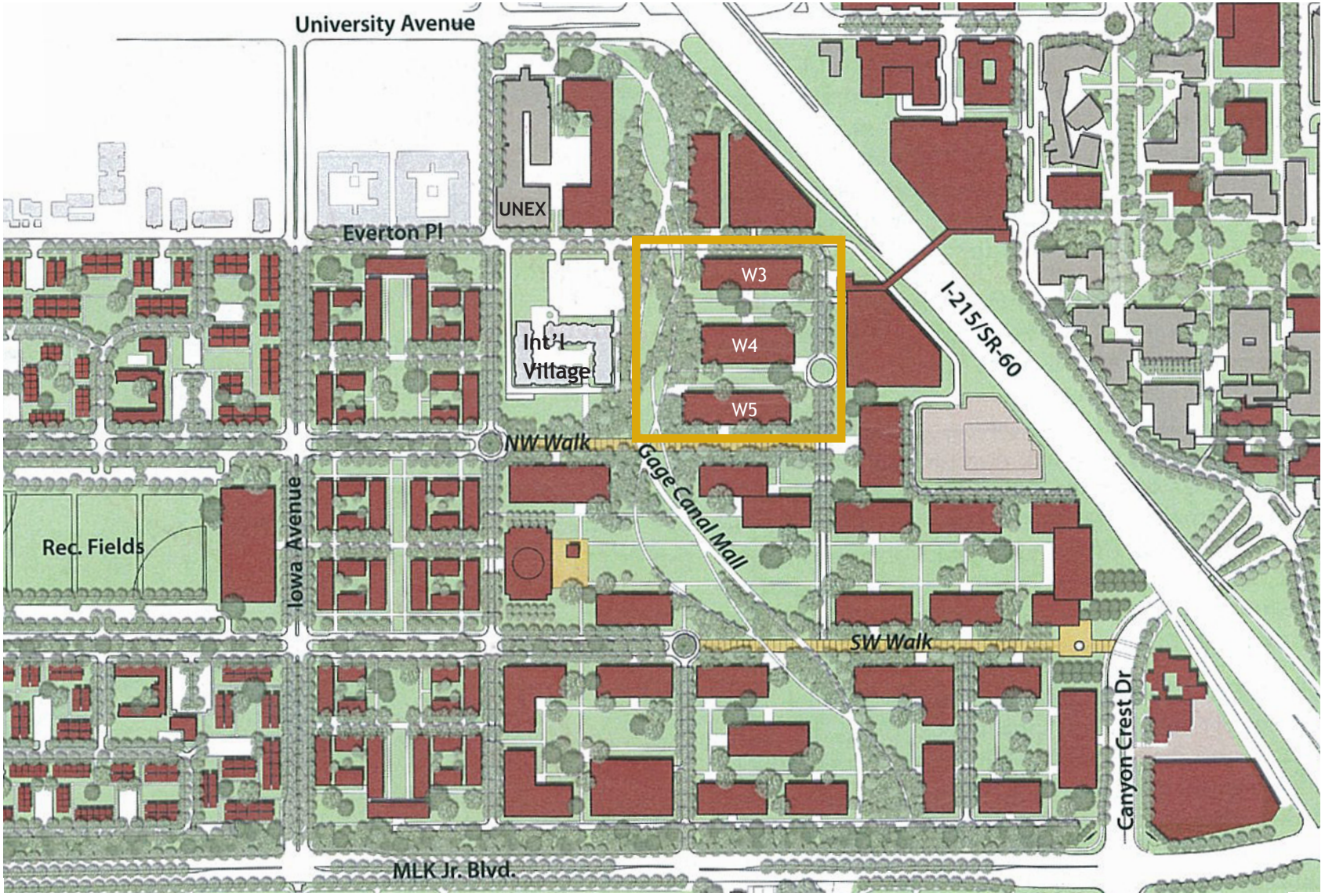
1.2

EXECUTIVE SUMMARY

The West Campus Graduate & Professional Center is the first academic facility to be located on the West Campus. The project will house the Graduate School of Education (GSOE), the proposed School of Public Policy (SPP), and shared core facilities.

The GSOE, currently housed in Sproul Hall, is comprised of the Teacher Education Program, the MA/PhD program (in five academic areas: Special Education, Curriculum and Instruction, Educational Psychology, School Psychology, and Institutional Leadership and Policy Studies), and Research & Scholarly Activities. Future planned growth anticipates an enrollment increase of 45% and a faculty increase of 13% by 2014. Sproul Hall is ill-equipped to support that growth, and the 2005 Long Range Development Plan (LRDP) anticipates the development of graduate and professional school programs on the West Campus.

The proposed School of Public Policy will offer a professional Masters of Public Policy degree (MPP), a doctorate degree (PhD) in Public Policy, as well as other degree programs. Plans call for 120 MPP students and 30 PhD candidates, all supported by a faculty and staff of 19 by 2017. Areas of study will include Social and Environmental Policy with an emphasis on Regional Policy. Executive MPP and Certification programs are also envisioned to serve working professionals.



PARTIAL 2008 CAMPS PLAN

N

LEGEND

- EXISTING
- NEW (PER CAMPS)

PROJECT VISION

The GSOE and the SPP share many goals, key among them the promotion of interdisciplinary synergies, the need for flexibility, and the fostering of connections to the greater regional community. In terms of the building program, this resulted in a large component of shared physical spaces as well as a similar attitude toward the disposition of public versus private space within the facility.

While effort was made to recognize the need for each school's distinction (for the purposes of identity and donor opportunities), shared unit modules are utilized throughout the program. Benefits of the approach include reducing program requirements, increasing space flexibility, and furnishing space that encourages interdisciplinary interactions.

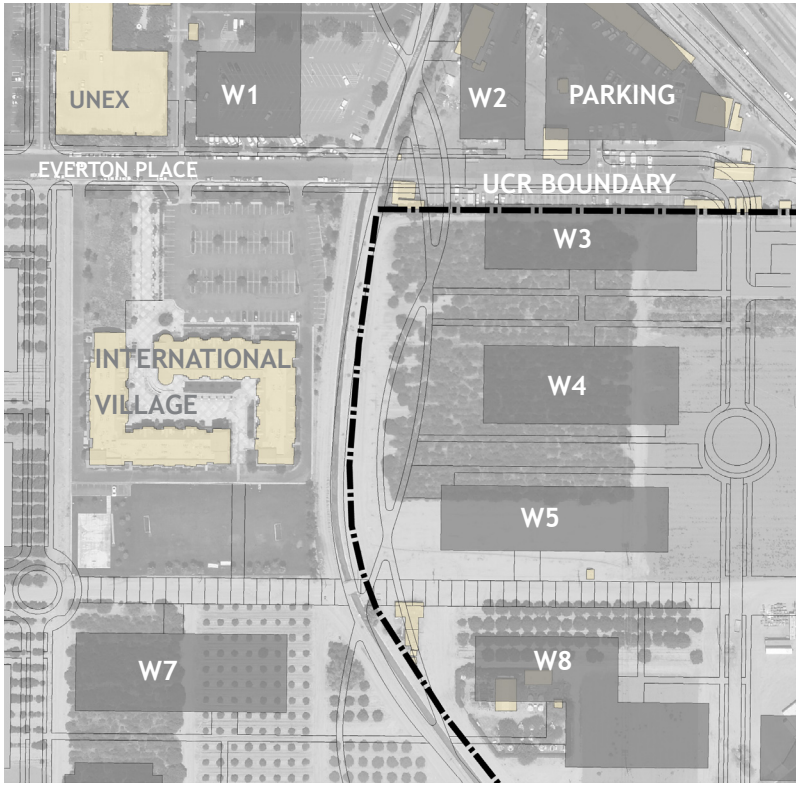
METHODOLOGY

The program for, and accommodation of, the Graduate and Professional Center was realized through a series of on-campus workshops. A rapid consensus was reached on the project direction by virtue of an interactive, iterative, and collaborative process.

The programming was directed by the Design Team in collaboration with the offices of Capital and Physical Planning, Office of Design and Construction, and a Steering Committee represented by the principal stakeholders.

SITE

The West Campus has been planned to accommodate the future growth of UCR's graduate and professional school programs. The development zone designated for the Graduate and Professional Center study is located east of the International Village Student Housing and the Gage Canal, and directly south of the Caltrans Yard, and is represented by the 2008 Campus Aggregate Master Planning Study (CAMPS) parcels W3, W4, and W5. Analysis revealed that the northernmost site, W3, was the most



STUDY AREA

LEGEND

EXISTING

NEW (PER CAMPS)

complementary to the facility's goals and size. The location allows for development of the remaining parcels to achieve the identified carrying capacity.

PROJECT SCOPE

The Graduate and Professional Center will provide approximately 44,105 assignable square feet (ASF) and 73,508 gross square feet (GSF) on four levels.

The program is organized in four major categories, the Graduate School of Education, the School of Public Policy, Shared Core Facilities, and Building Common Areas:

The 6,115 ASF of Shared Core Facilities include:
- Classrooms
- Seminar Room
- Break-out Rooms
- Computer Lab

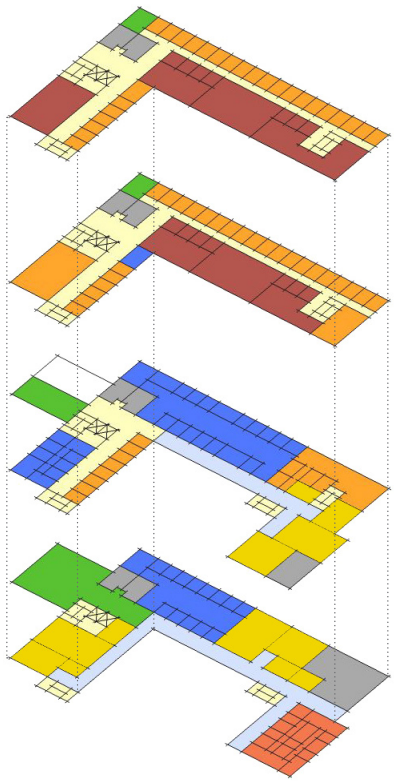
The 26,155 ASF Graduate School of Education includes:
- Administrative Offices
- Faculty and Teaching Assistant Offices
- Teacher Education Program Support Space
- Flexible Research Space
- Clinical Programs
- Dedicated Computer Lab

The 6,135 ASF School of Public Policy includes:
- Administrative Offices
- Faculty and Teaching Assistant Offices
- Flexible Research Space

The 5,700 ASF Building Commons includes:
- Building Entry Forum
- Student Lounge
- Faculty Lounge
- Resource Center
- Conference Rooms

PROJECT SCHEDULE

The West Campus Graduate and Professional Center is scheduled to begin the design phase in the Summer of 2009, the working drawing phase in the Summer of 2010, and Construction underway in the Fall of 2011. Occupancy is slated for the Spring of 2013.



LEGEND

- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED
- CLINICAL
- SUPPORT

1.3

DETAILED PROJECT PROGRAM (DPP) PROCESS

THE PROCESS

As the first new academic building on the West Campus, the new Graduate School for Education (GSOE) and the proposed School of Public Policy (SPP) represent a significant step in the evolving character and structure of the UC Riverside campus. The conversion of a portion of the West Campus from agriculture fields to a new graduate and professional school academic precinct offers both opportunities and challenges. These include physical planning considerations that begin to implement CAMPS and space planning that promotes sharing space and creating a place that encourages intra and interdisciplinary collaborations. The intent of the programming process is to develop a road map for change - to understand thoroughly and completely the implications of the planned project in terms of its functional requirements and its relationship to the greater UCR campus, to current and future academic and non-academic neighbors, and to campus resources. While the process of programming necessarily includes elements of design, the result is not intended as a design solution but rather as a rational and reliable basis for the design process that will follow.

The following section outlines the Detailed Project Program (DPP) process as well as key questions that led to an understanding of the program and of the GSOE and SPP's role in the evolving UCR campus community.

Developing a Common Basis of Understanding

- Understand the role of the existing Graduate School of Education (GSOE) on the UC Riverside Campus and the planned role of the School of Public Policy (SPP)
- Define the project stakeholders (i.e. major tenants of the building)
    - GSOE & SPP
    - What is the relationship between user groups (i.e. any campus group with a project interest, including Capital Planning, Students with Disabilities, Media Services, Physical Plant, Communication Services)?
    - What other campus groups are involved?
    - How will decisions be made?

Existing facilities in Sproul Hall

Existing facilities in Sproul Hall

- Understand the current physical accommodation of the GSOE at Sproul Hall and elsewhere
- What currently works and what doesn't?

Envisioning Opportunities for Innovation

- Possibilities offered by proposed location(s) of new facility in relation to the evolving campus environment, i.e. relationship to the 2005 Long Range Development Plan (LRDP) and/or 2008 Campus Aggregate Master Planning Study (CAMPS)
- Relationship of new facility to the UC Riverside academic plan
- Possible growth of facility and/or program offerings
- Possibilities offered by technology
- Evaluation of comparable facilities at other campuses

Defining the Goals for The New Facility

- Scope (Quantitative)
  - How big, how many, how often, how much?
  - Functional requirements
  - Schedule/timing
- Vision (Qualitative)
  - Image
  - Character
  - Environmental responsiveness

General assignment classroom at CHASS


Hyperstruction Lab

Reconciling Scope, Vision, and Budget

- Balancing program needs and facility character with available budget before design begins

THE APPROACH

To initiate the work, a common understanding of project goals was developed. These goals served as the yardstick by which project progress and resolution was measured. As part of the project kick-off, the project team visited the West Campus site. The visit allowed the team to analyze existing site conditions to help test the future location of the new building.

The project team also toured existing facilities for the Graduate School of Education. The tour provided a basis for understanding existing conditions, space allocations, work patterns, relationships to other service providers, equipment usage, and current type and qualities of work environments.

Other campus facilities were toured to provide a better understanding of existing classroom layouts and available distance learning technology.

Facilities visited:

- General assignment classroom at College of Humanities Arts and Social Sciences (CHASS)
- Hyperstruction Lab (Room 170 Surge Building)
- University Lecture Hall across from Surge Building

Online resources:

- www.classrooms.ucr.edu (information on all general assignment classrooms at UC Riverside)
- www.hyperstruction.ucr.edu (information on equipment available at Hyperstruction Lab - 170 Surge Building)

A four-step, interactive series of workshops was held on the UC Riverside campus. Workshops were separated by intervals to permit consultant reaction, response, and synthesis. These workshops were held during the period of February to April, 2008.

Workshop 1 - Data Gathering

- Define project goals
- Define population to be served
- Understand the project context
- Understand the relationship to the academic program
- Define physical opportunities and constraints

Workshop 2 - Program Definition and Concepts

- Campus planning considerations
- Site planning influences - utilities, access, open space, campus relationships, phasing
- Space descriptions and functional relationships
- Building organization alternatives
- Building system alternatives
- Sustainable strategies
- Preliminary cost model

Workshop 3 - Program Synthesis and Concept Alternatives

- Reconciliation of space needs and room requirements
- Conceptual plan types, functional relationships, vertical organization, density, massing
- Site planning alternatives – utilities, access, open space, campus relationships, phasing
- Identification of cost premiums between alternatives
- Evaluation of alternatives against project goals
- Selection of preferred alternative

Workshop 4 - Preferred Alternative Development

- Incorporate final comments
- Define program, scope, site, proposed budget and schedule
- Identify consensus- based framework for Schematic Design: open space concept, building organization, pedestrian and vehicular circulation, relationship to campus, relationship to LRPD and CAMPS

1.4

PROJECT GOALS

The following project goals were developed during the UC Riverside workshops with the Project Management Team.

The new West Campus Graduate and Professional Center will:

- Foster an immediate sense of ***community***
- Provide an ***interdisciplinary*** environment
- Feature a ***shared*** student/faculty lounge/***gathering*** space
- Promote ***flexibility*** (ability to respond to variable funding for educational research)
- Maintain ***program identity*** while promoting ***synergies*** between users
- Inspire ***donor*** contributions/identify ***donor*** opportunities
- Exhibit ***clarity*** of organization, clear way-finding
- Promote ***openness***/accessibility
- Provide safety/security (***evening hours***/confidentiality requirements)
- Provide a ***variety*** of teaching spaces
    - Lecture (60 + students)
    - Conference/Break-out Rooms (13 - 15 students)
    - Meeting Rooms (5 – 6 students)
- Provide ***clinical*** facilities for:
    - Special Education
    - Educational Psychology
    - School Psychology
- Provide supportive ***technology***
- Be a good ***campus citizen*** (not a "signature" building)
- Be ***demonstrably*** sustainable (minimum LEED® Silver certified)

2.1

CAMPUS PLANNING PRINCIPLES

The University of California, Riverside is projected to increase its enrollment to 22,000 students by the year 2015 and 25,000 students by 2020. Growth projections have been revised since completion of the 2005 LRDP. The plan shows that at least 50% of the students will be housed on the 1,121 acre campus. Several recent plans have been published to guide that growth:

2005 Long Range Development Plan (LRDP)
2008 Campus Aggregate Master Planning Study (CAMPS)
2007 Campus Design Guidelines
2008 West Campus Infrastructure Development Study

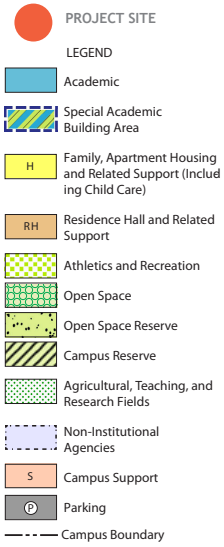
2005 LONG RANGE DEVELOPMENT PLAN (LRDP)

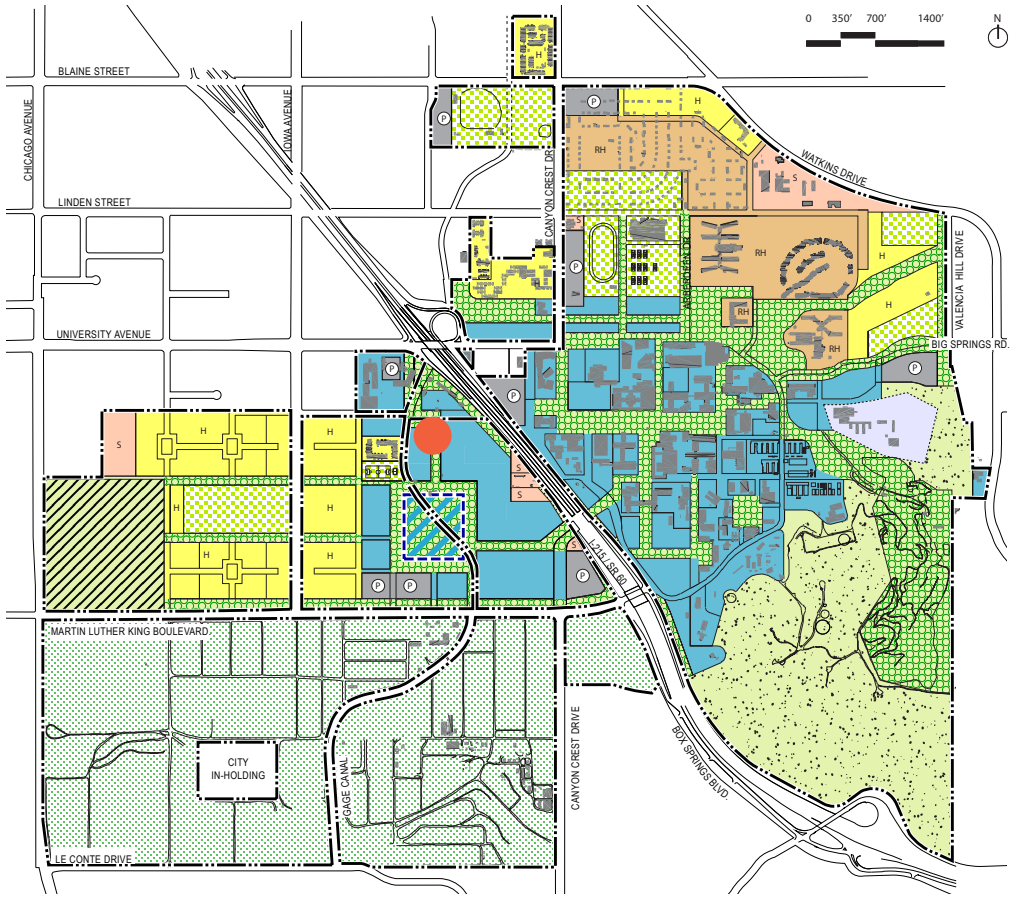
The 2005 LRDP is a physical development and land use plan to meet the academic and institutional objectives for UCR. Key goals among those objectives include:

- Enhance the UCR image and identity;
- Accommodate planned enrollment growth while retaining flexibility for unanticipated additional needs in the future;
- Recognize teaching and research change, encourage interdisciplinary endeavors within a flexible academic zone; and
- Create a regional mode of planning, design and environmental stewardship, protecting the natural environment and incorporating sustainable planning and design practices.

In order to maximize land use, the LRDP targets a density of development of a 1.0 floor-to-area ratio (FAR) as a campus-wide goal. Furthermore, academic uses on the West Campus are planned to occupy the zone immediately adjacent to the 215 Freeway, an extension of the academic uses on the East Campus. Academic uses on the West Campus have been designated for graduate and professional schools and conference centers.

LRDP LAND USE PLAN





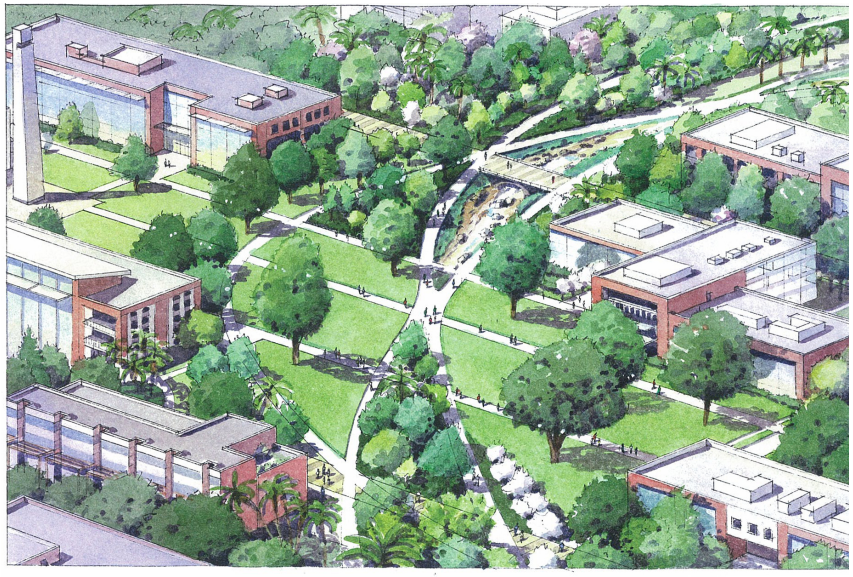
2008 CAMPUS AGGREGATE MASTER PLANNING STUDY (CAMPS)

CAMPS is an all-encompassing examination of the series of detailed area plans that guided the 2005 LRDP. The document weaves the various planning documents together, creating coherence amongst the numerous University districts, focusing on:

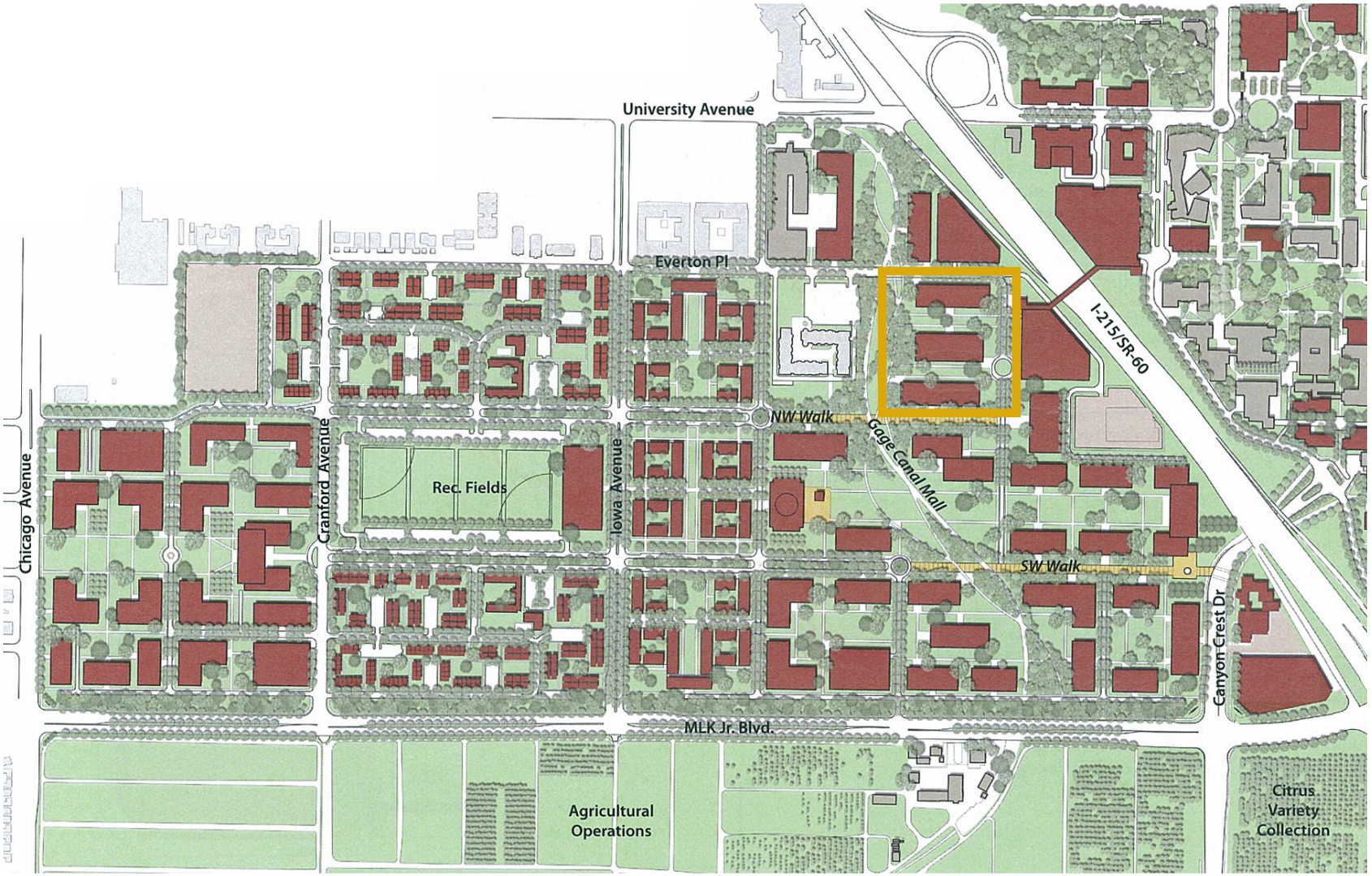
- Circulation Reconciliation
- Campus Gateways
- West Campus Development
- West Campus Capacity
- Implementation
- School of Medicine

Relative to the Graduate and Professional Center, the CAMPS analysis of West Campus Development and Capacity were guiding documents.

The academic core of the CAMPS is organized around the Gage Canal Mall, a “sinuous band of open space, evoking an arroyo or dry wash,” and a series of formal malls framed by academic buildings. The building parcels identified for the Graduate and Professional Center study are among the first to define the Gage Canal Mall open space, a responsibility that greatly influenced the preferred alternative. Furthermore, while it was conceded that the Graduate and Professional Center doesn’t occupy a site demanding a signature building, it does serve as a gateway to the academic precinct from the north.



CAMPS GAGE CANAL OPEN SPACE FEATURE



2008 CAMPS PLAN

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LEGEND

- EXISTING
- NEW (PER CAMPS)

2007 CAMPUS DESIGN GUIDELINES

A guiding principle for UCR's development is to create a campus that is responsive to the intrinsic character of the region. The design guidelines offer the following goals:

- Provide visual connections to the surrounding landscape
- Respect the legacy of the clear, modernist design that established the original campus buildings and utilize the buildings to support the campus open space system
- Strengthen the relationship between buildings and landscape in new construction

The design guidelines, especially as they relate to massing, materials, architectural elements, etc. will become more relevant as the design phases are initiated.

2008 WEST CAMPUS INFRASTRUCTURE DEVELOPMENT STUDY

The West Campus Infrastructure Development Study provides for the planning of utilities, hardscape, landscape, and traffic infrastructure to support the development of the West Campus in six phases.

The Graduate and Professional Center will be designed concurrently with West Campus Infrastructure 1 that will provide basic utility services and basic circulation systems to the area. Initially, the building's heating and cooling requirements will be served by stand-alone systems, designed to allow connection to a future West Campus Central Plant that will be implemented in a later phase of development. Please refer to the Mechanical, Electrical, and Plumbing System Narratives for further information.

2.2

SITE ANALYSIS

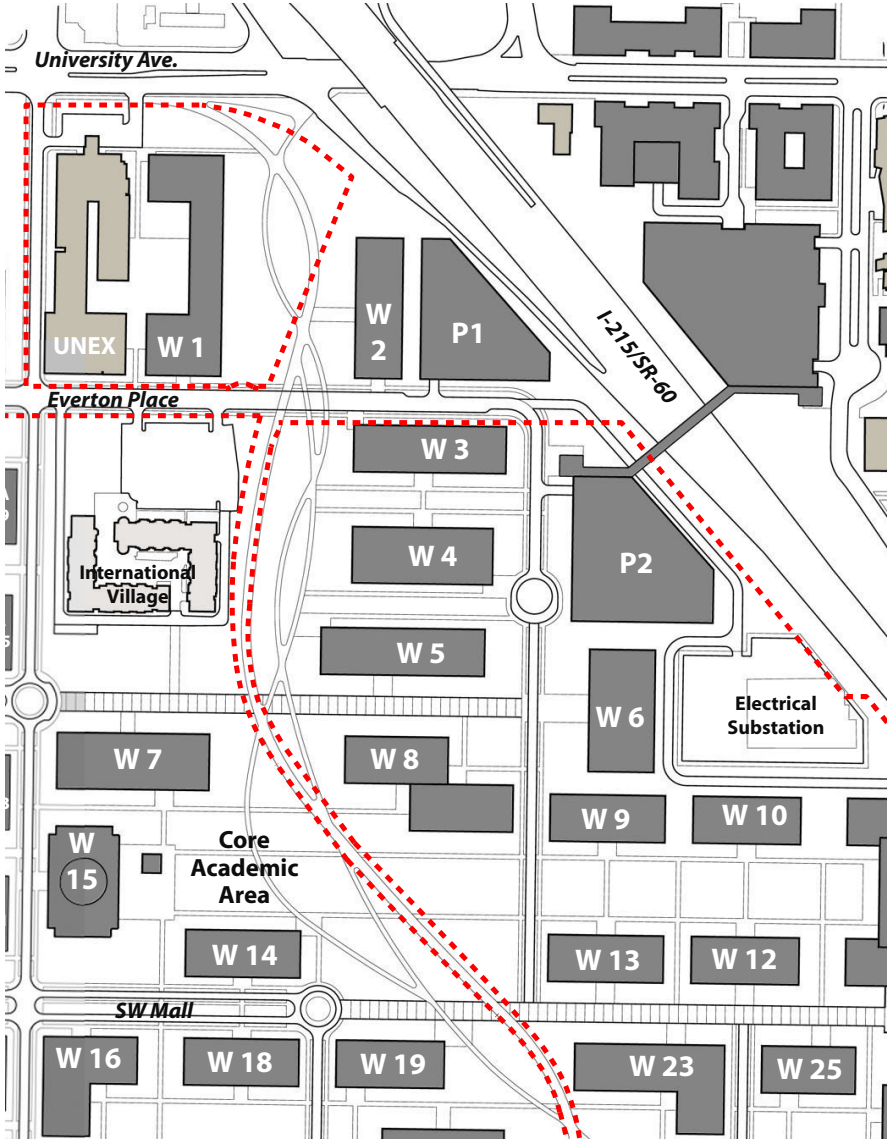
The sites proposed for the West Campus Graduate and Professional Center (WCG&PC) were evaluated based upon existing conditions (views, orientation, access, etc.), the 2008 Campus Aggregate Master Planning Study (CAMPS) goals, as well as goals expressed by the DPP Steering Committee. The parcel identified as W3 by CAMPS was selected as the preferred site. The size of the WCG&PC is smaller than the identified site capacities, thus as the Campus expands, larger buildings would eventually surround this first academic facility. The proposed location strengthens programmatic synergies with existing UCR West Campus facilities (e.g., University Extension), and to the north with University Village, a mixed-used private development. Expanding the campus at this site begins to establish an academic foothold on the West Campus that is supported by adjacent campus buildings, as well as private development. The location is supported by public transit routes servicing the University Village area.

WEST CAMPUS AERIAL

The WCG&PC site currently occupies agricultural fields managed by the University's Agricultural Operations (AgOps) division for agricultural research. The site is bordered by a Caltrans Corporation Yard on the north, by additional AgOps lands on the east and the south, and by the Gage Canal and the International Village student housing complex on the west. The Gage Canal is currently an uncovered irrigation canal with vehicular bridges at Everton Place and at the southwestern corner of proposed building W5 (NW Mall). Everton Place terminates northwest of the project site at the entrance to the Caltrans Yard. Interstate 215/State Route 60 is located approximately 400 feet beyond the AgOps lands to the east. Overhead utility lines cross the site in several places. International Village is currently leased by the University to a 3rd party developer, whose lease expires in 2047. The International Village site is expected to remain in its current configuration through the maturity of the CAMPS plan.

The CAMPS plan proposes that Everton Place will extend easterly along the northern frontage of the WCG&PC once the University acquires the Caltrans property. The CAMPS plan proposes a conference center and a parking garage north of the Everton Place extension. Adjacent to the project site, the CAMPS plan proposes a service drive and a parking garage to the east, an academic building ("Building W4") to the south, and the Gage Canal Mall to the west.

The WCG&PC will be the first academic building built on the West Campus, with the remainder of the West Campus to be built at an undetermined date in the future. The WCG&PC will be the first academic building that visitors will encounter when entering the West Campus from both the north via the Gage Canal Mall and from the East Campus via the proposed pedestrian bridge over the freeway. As such, the WCG&PC will play an important role as an introduction to the West Campus.



PARTIAL CAMPS PLAN

VIEW FROM SITE LOOKING NORTH

VIEW FROM SITE LOOKING EAST

SITE CONSTRAINTS

While clearly preferred, the W3 site has a number of both challenging and inspiring issues that will affect planning and design.

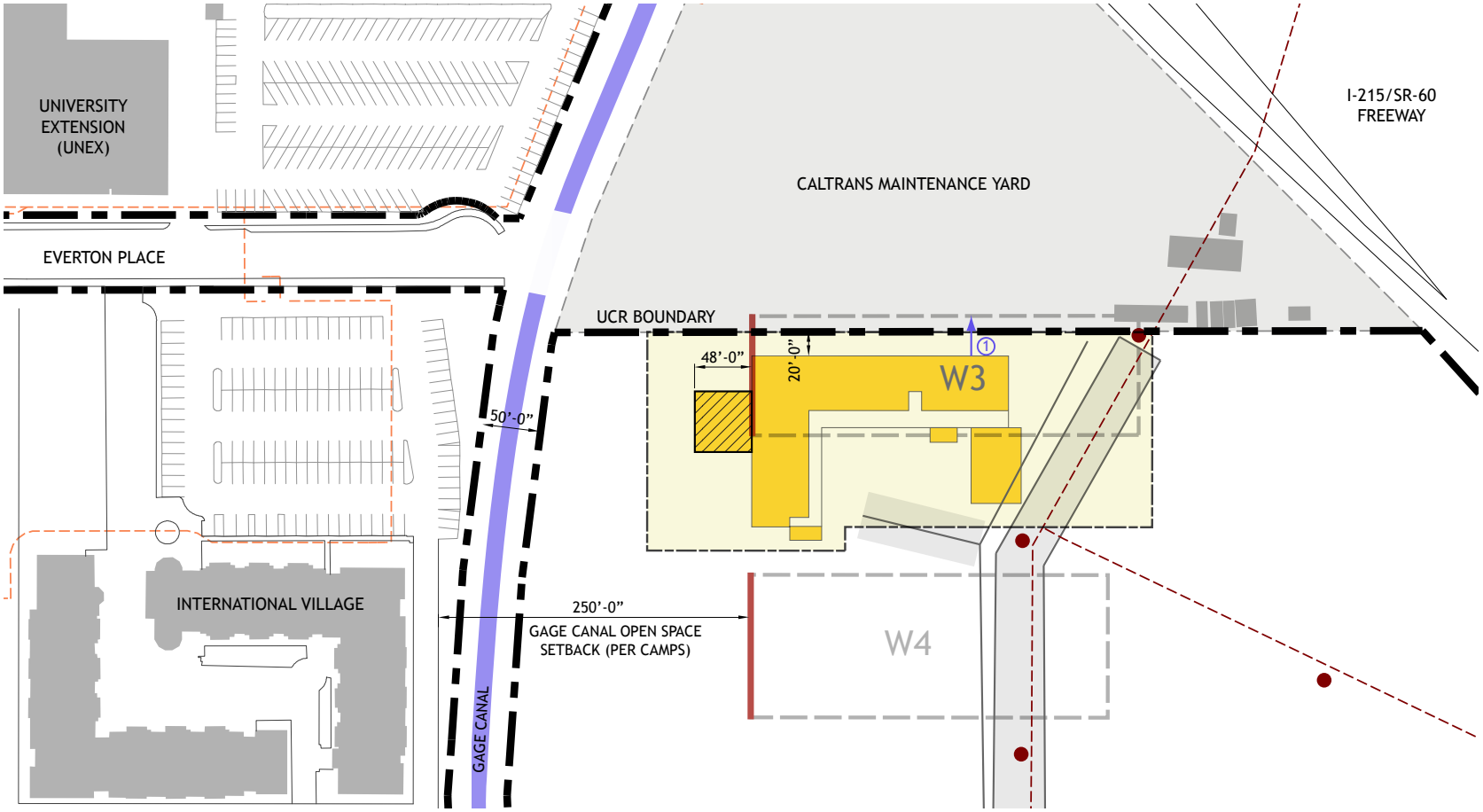
To the north:
The W3 parcel, as delineated in the CAMPS plan, actually overlaps land currently occupied by the Caltrans Yard. While discussions have been initiated by UCR in regards to securing the Caltrans site, or at least access through the Caltrans Yard, the DPP presumes that the existing conditions will remain throughout the design and construction phases. Ultimately, Everton Place road will bound the north edge of the site.

Views to the north from the upper floors of any future facility will offer astounding panoramic vistas of the distant mountains, especially during the winter months when they're often snow-capped.

As the first Academic building encountered along the Gage Canal Mall, the W3 site offers a gateway presence into the West Campus. While not a signature building, the project has both the opportunity and responsibility to help define the institutional character of the new campus.

To the east:
Currently, the east corner of the W3 parcel is clipped by overhead electrical transmission lines and their associated easements. While the long term plan is to relocate the transmission lines, the DPP presumes that the existing conditions will remain throughout the design and construction phases.

Views to the east are characterized by the East Campus 'skyline,' as well as the familiar backdrop of the Box Springs Mountains. This visual connection is an important institutional link, which will be physically reinforced upon execution of the CAMPS-planned pedestrian bridge over the I-215 freeway. The arrival threshold for the pedestrian bridge, shared with the primary entry of a future parking garage, is directly east of the Graduate and Professional Center site.



SITE CONSTRAINTS

The CAMPS plan also stipulates service and vehicular access from a future road to the east, which will double as pedestrian and bicycle ways. Initially, five on-site parking spaces, one of which will be disabled-accessible, will be located adjacent to this road to support the clinical programs. Once CAMPS is realized and the parking garages are built east of the building, clinic and disabled-accessible parking will be transferred to the garages.

To the south:
The southern edge of the W3 parcel is ultimately planned as pedestrian circulation space between buildings, however, initially the southern edge of the Graduate and Professional Center will be fronted by agricultural fields (it's unknown at the time of writing whether those fields will be actively or passively managed) and must be fenced off to maintain security for the fields.

As the preferred orientation for any outdoor program space, the south of the building should be considered an active pedestrian edge, as well as an important exposure for daylighting the building.

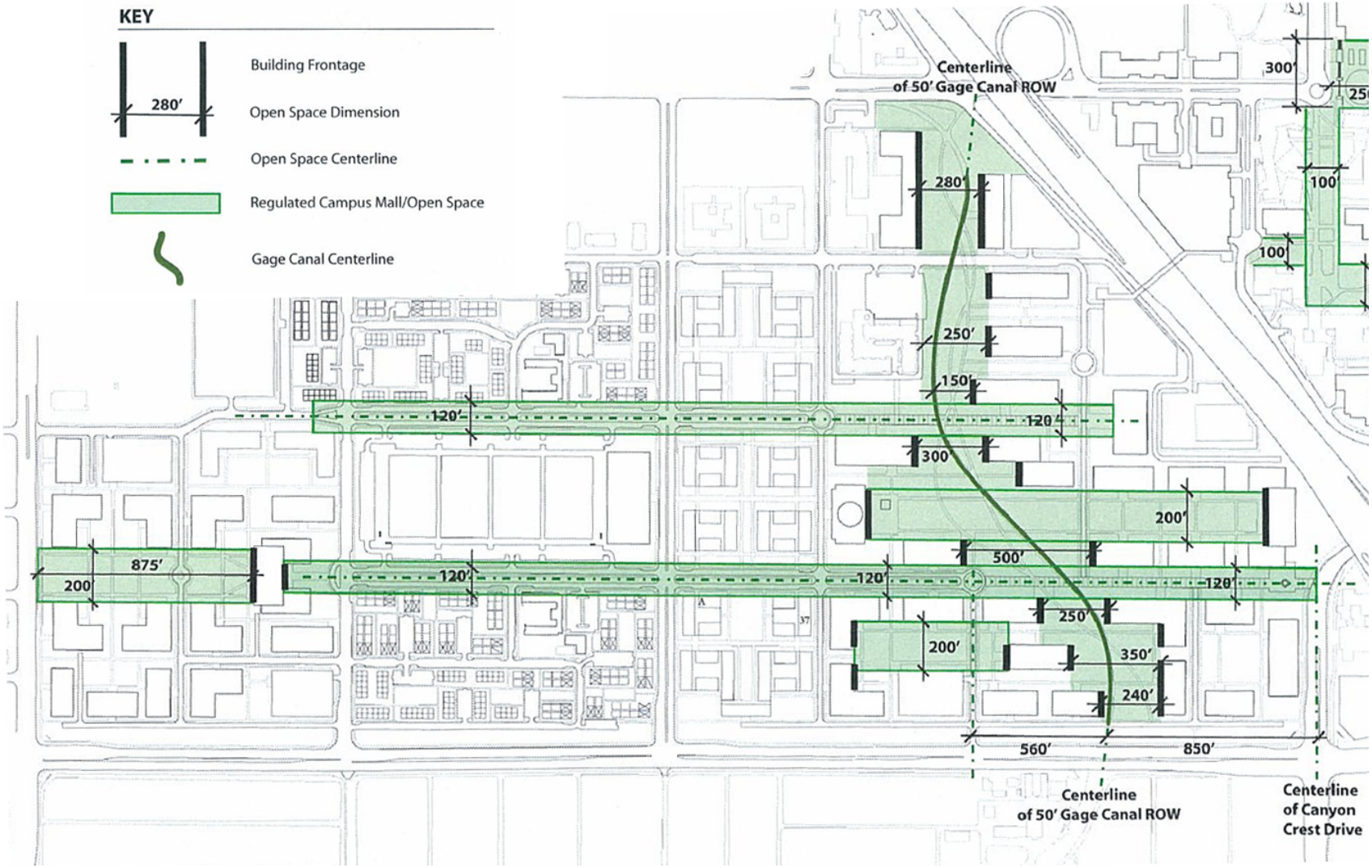
To the west:
The area west of the project site will be defined by the Gage Canal Mall, one of the major character defining landscape elements of the entire West Campus. The initial phases of the 2008 West Campus Infrastructure Development Study will establish the landscape framework for the Mall, which includes capturing the irrigation canal in a pipe underground. Additionally, the CAMPS establishes a Regulating Plan that provides build-to lines for all buildings supporting the Gage Canal Mall, which for W3 results in a 250 foot setback from the east side of International Village.

During the course of the DPP process, the Design Team presented a number of alternative studies that tested the CAMPS Regulating Plan dimensions. After consideration, and with input from UCR's Design Review Board, the direction was to uphold the CAMPS setback limits for the building's primary massing. It was further determined that for this building, certain elements could be considered for encroachment into the Gage Canal Mall, providing they meet the following criteria:

- Are no taller than two stories in height, and should represent double-height volumes of interior space
- Are programmed to contain social meeting space, and/or serve as the primary "Front Door" of the building
- Utilize transparency to showcase views both inside and out
- Encroach no further than 50 feet into the Gage Canal Mall

VIEW LOOKING SOUTH FROM EAST SITE EDGE

VIEW LOOKING EAST ALONG UCR/CALTRANS BOUNDARY



CAMPS REGULATING (SETBACKS) PLAN

SITE ACCESS

As the first new academic building on the West Campus, site access is planned in conformance with the CAMPS recommendations:

Pedestrian Access: will be primarily from the Gage Canal Mall, the NW walk, and the future pedestrian bridge over the I-215.

Bicycle Access: The Gage Canal Mall will include a dedicated bike path; Everton Place will have a bike lane; and the NW walk will have a shared pedestrian/bike pathway.

Service Access: will be primarily from Everton Place to the north and the service road to the east. These roads will also provide fire and emergency vehicle access.

Transit: anticipated from Everton Place as the West Campus develops. University Avenue will remain a key transit line until other locations are initiated. Private vehicle access to the future parking garages is anticipated on Everton Place and the east service road.

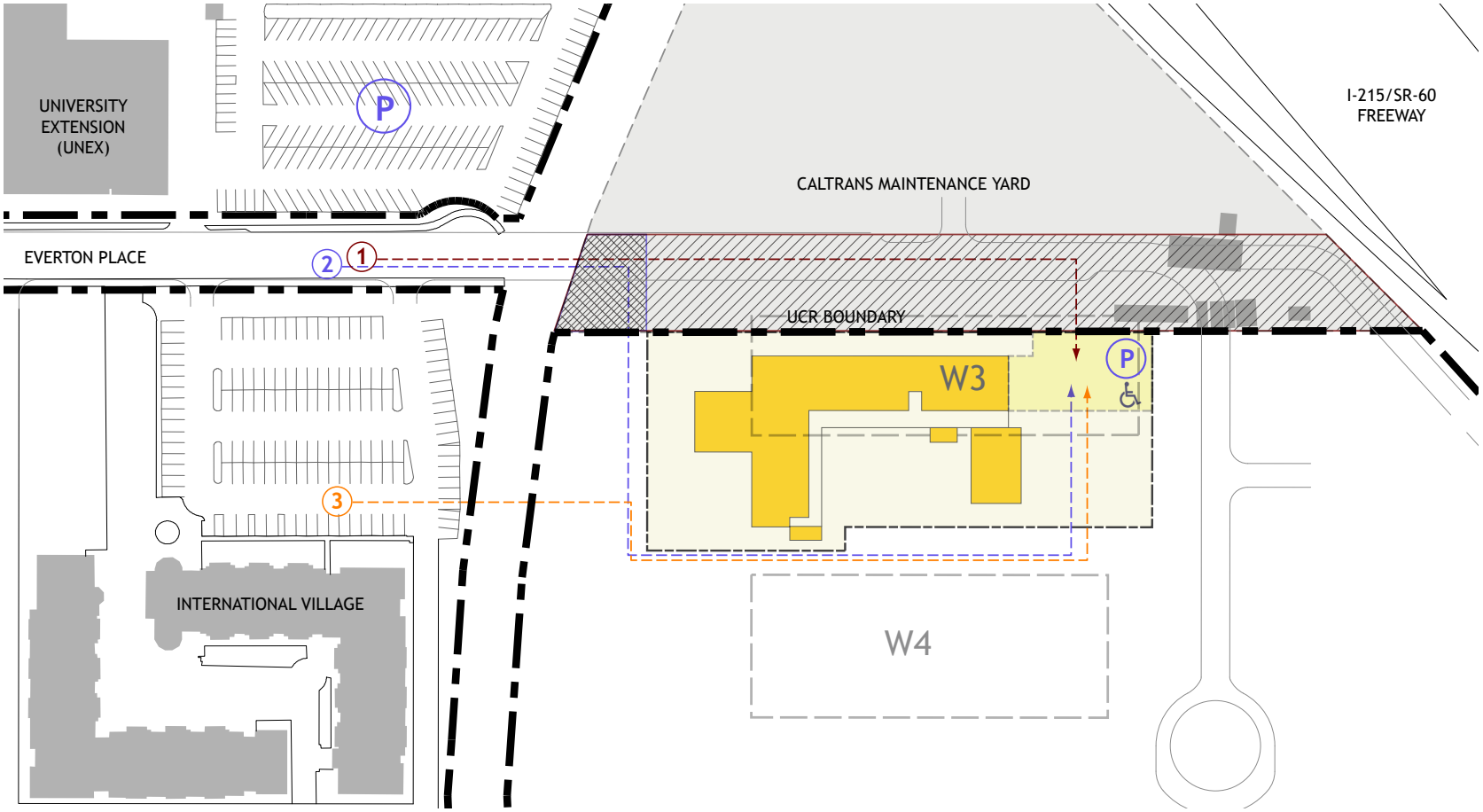
Site access during the interim stages of the West Campus development is impacted by the University's ability to procure the Caltrans Yard north of the project site. During the DPP process, a number of alternatives were considered:

- Procure the entire southern perimeter of the Caltrans Yard (or at least access through), as an extension of Everton Place, to provide access to the project's parking and service area from the north.
- Procure the southwest corner of the Caltrans Yard, east of the Gage Canal crossing, and allow vehicular passage along the western and southern boundaries of the W3 site in order to access the parking area to the east.
- Access the project site along the southern perimeter of the W3 parcel, from the International Village parking lot across the Gage Canal.

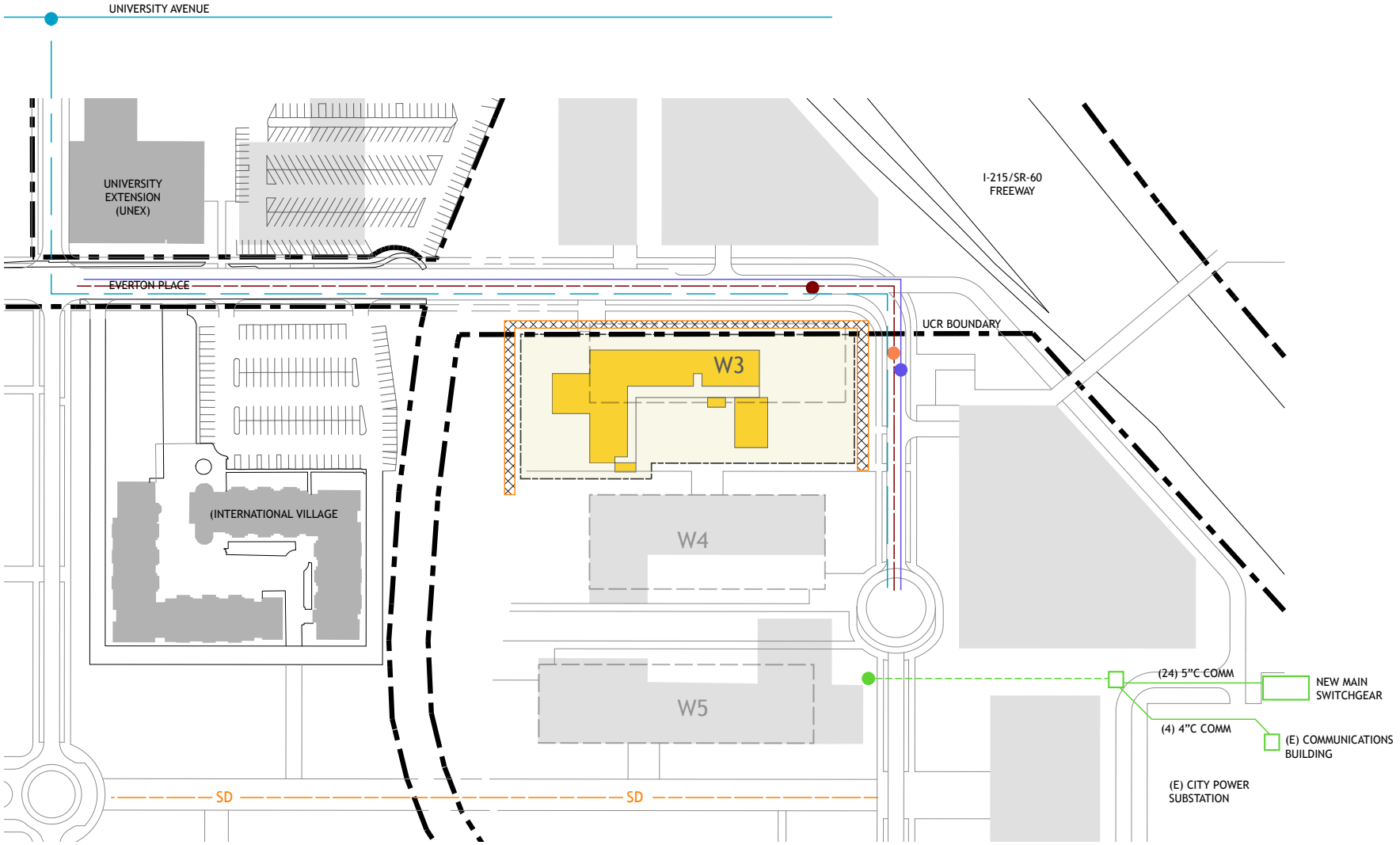
As progress is made in regards to access through, or procurement of, the Caltrans Yard, all intentions will be to support the circulation framework of CAMPS.

GAGE CANAL AT EVERTON

VIEW LOOKING SOUTH ALONG GAGE


UNIVERSITY EXTENSION (UNEX)
P
EVERTON PLACE
2
1
CALTRANS MAINTENANCE YARD
I-215/SR-60 FREEWAY
UCR BOUNDARY
W3
P
3
INTERNATIONAL VILLAGE
W4
SCENARIO 1: PROCURE SOUTHERN PERIMETER OF CALTRANS YARD
SCENARIO 2: PROCURE SOUTHWEST CORNER OF CALTRANS YARD
SCENARIO 3: ACCESS FROM INTERNATIONAL VILLAGE PARKING ACROSS GAGE CANAL
SITE SERVICE AREA
0
25'
100'
N

SITE ACCESS



10" OR 12" DOMESTIC WATER (PHASE 1A)

SD FUTURE 24" STORM DRAIN (PHASE 1)

8" SANITARY SEWER MAIN (PHASE 1A)

(16) 5" C POWER, (18) 4" C COMM. (PHASE 1A)

DATA (PHASE 1A)

6" HIGH PRESSURE GAS (PHASE 1A)

EXISTING SOUTHERN CALIFORNIA GAS LINE

BIO-SWALE FOR STORMWATER TO FLOW TO EXISTING SHEETFLOW

POINT OF CONNECTION (DOMESTIC WATER)

POINT OF CONNECTION (FIRE WATER)

POINT OF CONNECTION (BUILDING SEWER LATERAL)

POINT OF CONNECTION (GAS METER)

POINT OF CONNECTION (ELECTRIC/DATA)

0 25' 100'

N

UTILITIES PLAN

(PER PHASE 1A OF THE WEST CAMPUS INFRASTRUCTURE PROJECT)

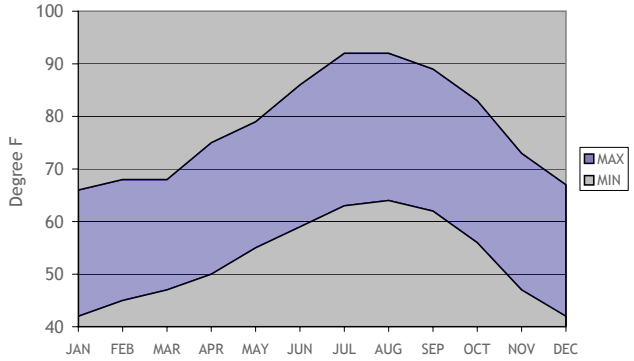
UTILITIES

Site utilities and infrastructure are described further in the Civil Engineering Systems Narrative, as implemented by Phase 1A of the 2008 West Campus Infrastructure Development Study.

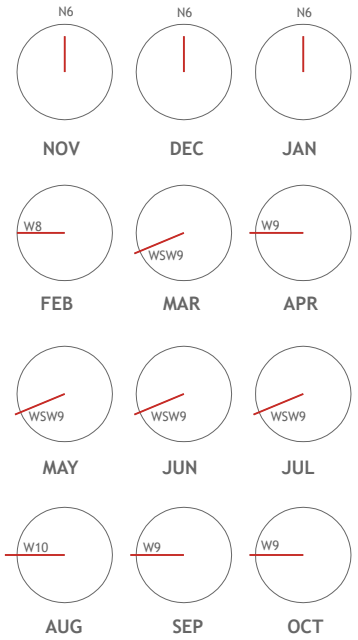
ENVIRONMENTAL FACTORS

Much of what contributes to UC Riverside's "sense of place" can be derived from its physical setting and climate. Set against the rugged backdrop of the Box Springs Mountains, the campus offers a diverse series of open spaces. On the West Campus, CAMPS envisions both formal spaces modeled after the Carillon Mall (on the East Campus) as well as more indigenous spaces similar to the local arroyos and washes. With less than 10 inches of rain annually, along with a yearly temperature average of nearly 79 degrees, shade and solar orientation are important considerations for any sustainable design approach. Prevailing winds are from the northwest; hot dry Santa Ana winds, occurring primarily during winter months, occasionally blow in from the desert areas northeast.

As expressed in the Project Goals, a key objective for this project is to obtain a LEED® Certification of level Silver or higher. The physical expression of sustainable strategies in the design of the building is seen as an appropriate metaphor for promoting the ideologies of the GSOE and SPP, as well as the West Campus in general. Incorporating these strategies has been a guiding factor in the development of the DPP, and will be further refined during the Design Phases of the project.



UCR AVERAGE ANNUAL TEMPERATURE MEANS

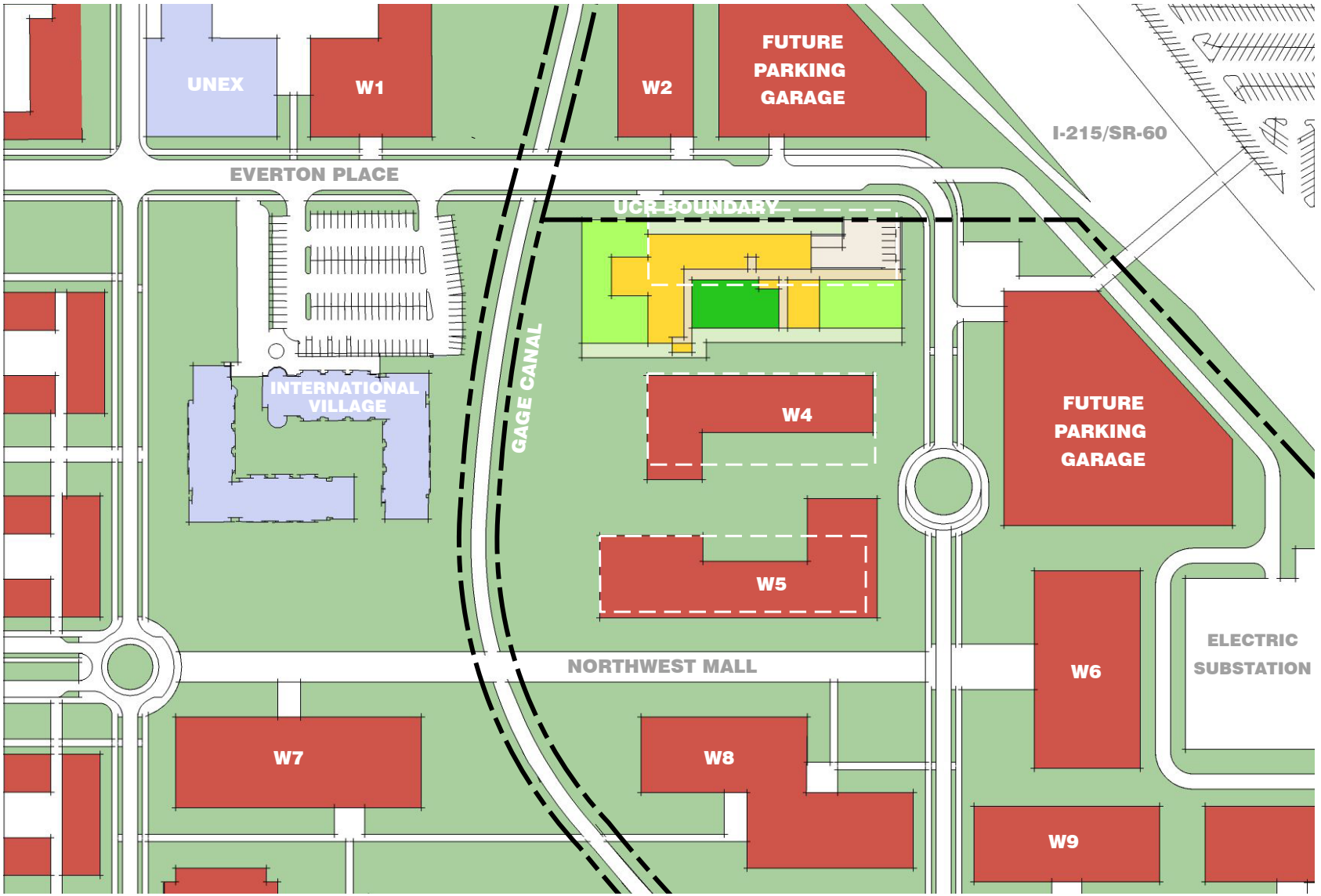


UCR AVERAGE ANNUAL PREVAILING WIND DIRECTION AND AVERAGE SPEED

2.3

PREFERRED CONCEPT

During the DPP process, a number of different site strategies, conceptual floor plans, and building configurations were explored. The selected scheme most effectively met the programmatic requirements and project goals defined by the UCR Project Management Team and Steering Committee.



LEGEND

- EXISTING BUILDING
- FUTURE BUILDING (PER CAMPS)
- PROPOSED GRADUATE & PROFESSIONAL CENTER

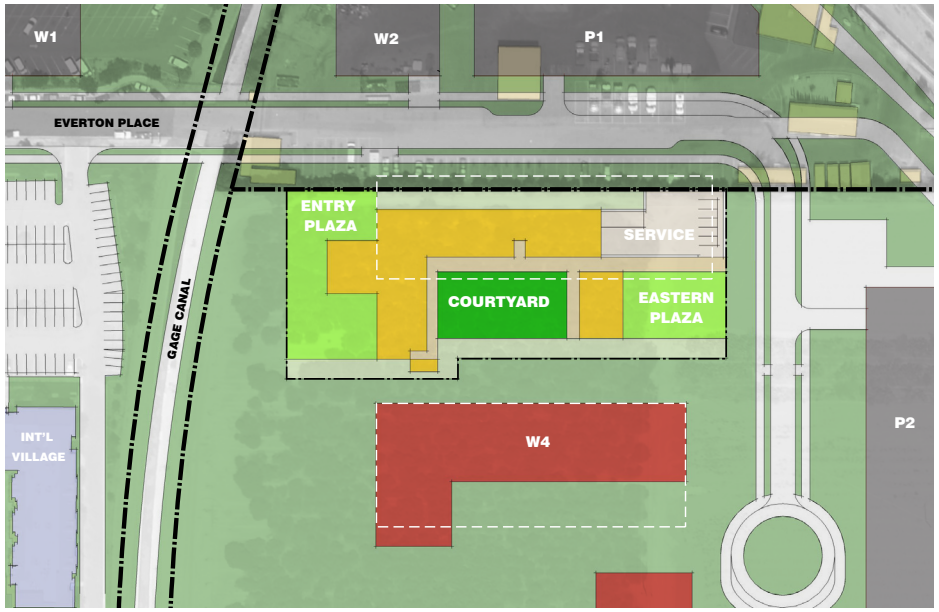
DEVELOPMENT AREA CONCEPT

0 50' 200' N

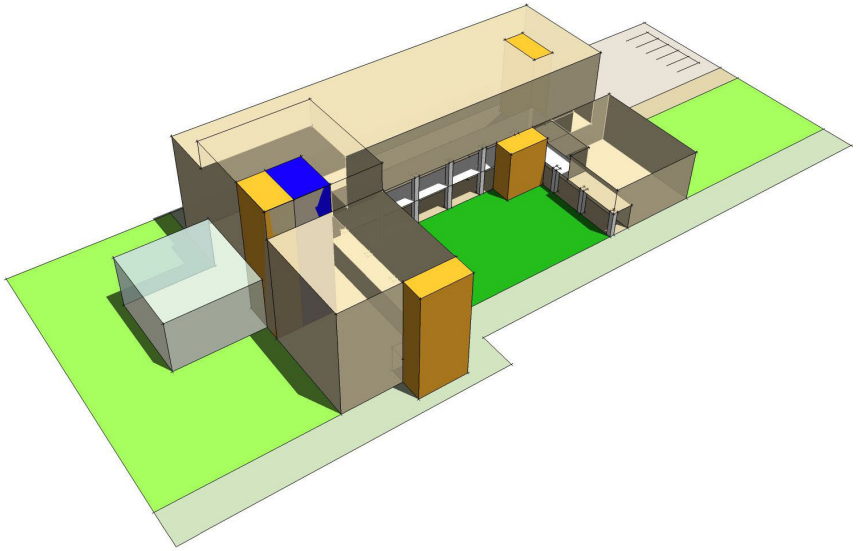
BUILDING ORGANIZATION - PREFERRED CONCEPT

The interpretation of the CAMPS vision for the West Campus greatly influenced the preferred building organization. As much as possible, the intent was to integrate the precinct planning concepts with the program accommodation.

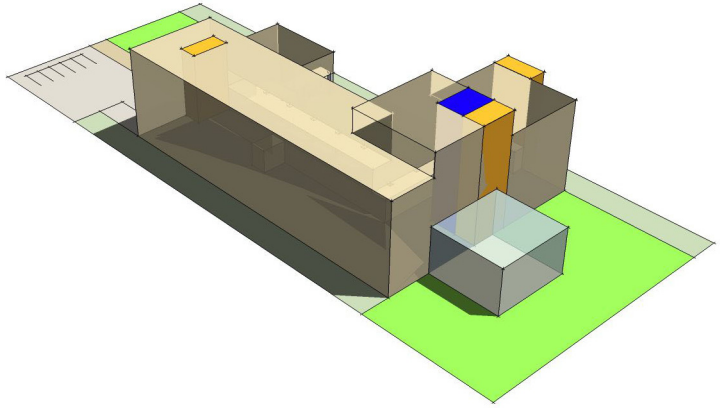
The building's organization on the site acknowledges the fact that all four exposures of the building are potential "Front Doors." The formal entry to the building, however, is oriented towards the Gage Canal Mall, the precinct's primary open space. As discussed in the Site Analysis, the mall setbacks were tested, and ultimately the Graduate and Professional Center's entry vestibule helped define the criteria for encroachment into the easement. This entry houses the Building Lobby, Lounges, and Resource Center in a partially double height space overlooking the Gage Canal Mall. An open stairway and conveniently located elevators link the two levels.



SITE PLAN



VIEW FROM SOUTHWEST CORNER



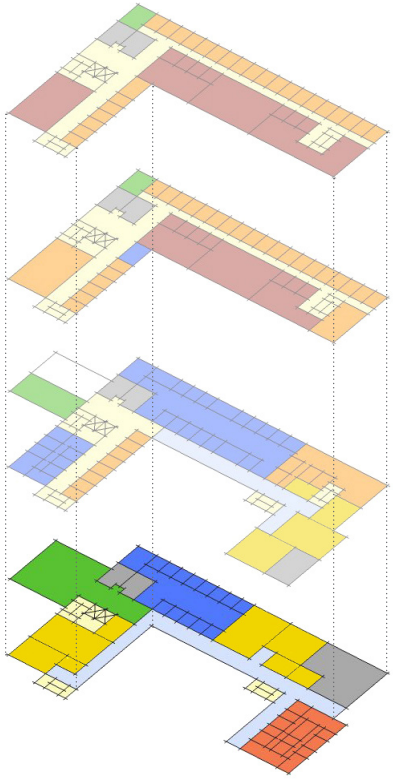
VIEW FROM NORTHWEST CORNER

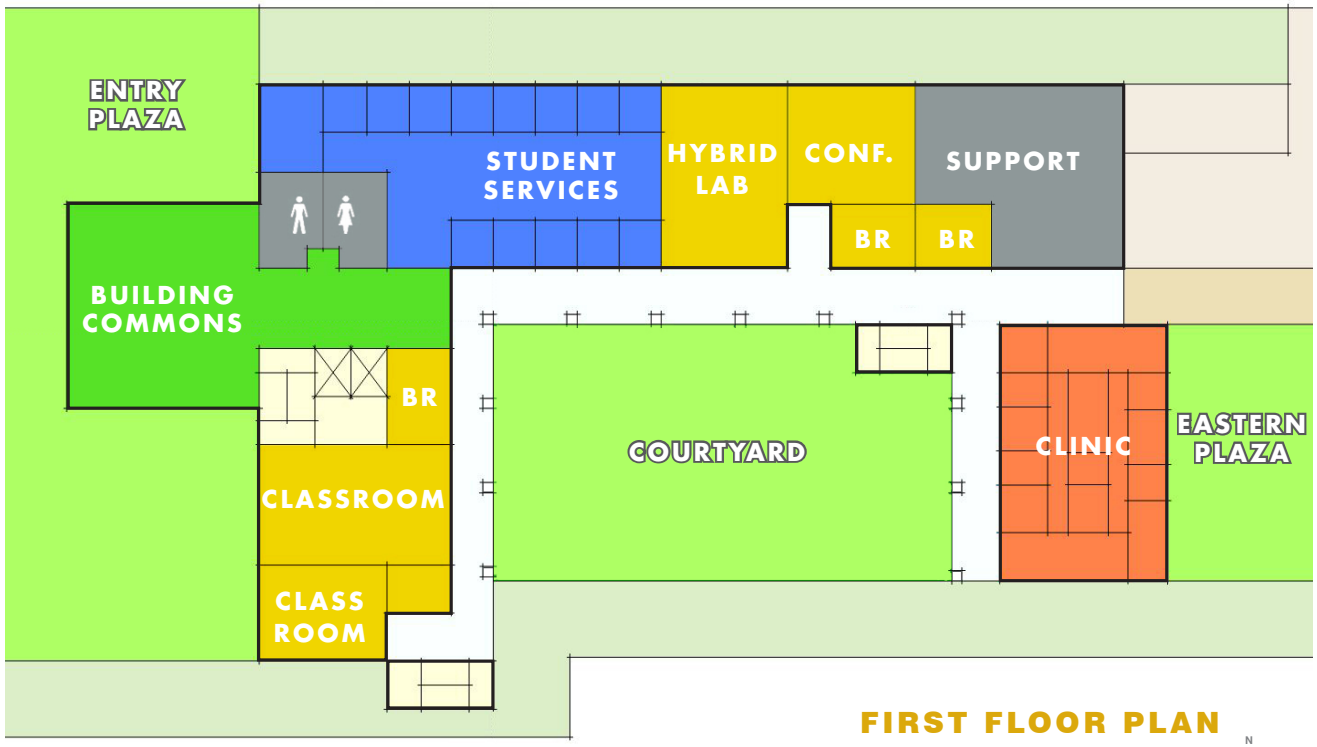
The balance of the building's program is organized around a courtyard along the southern perimeter of the site. The courtyard is envisioned as an alternate pedestrian entry, an outdoor extension of classroom space, a sheltered meeting area, and a means by which to admit light and air to the building. The GSOE Clinical programs anchor the east side of the courtyard, which offers discrete access from the parking and service area to the east.

The functional building program is organized vertically, with the most public spaces (classrooms, labs, administration) at the lower two levels and the more private spaces (faculty offices, research) located on the upper levels. The circulation system expresses this distinction as an exterior colonnade serving the lower levels versus an interior corridor serving the upper floors. The extension of the courtyard colonnade to the east recognizes the future I-215 pedestrian bridge as another significant arrival node, and serves as a framework for potential expansion.

While the SPP and the GSOE are committed to fostering intellectual synergies, interdisciplinary exchange, and shared instructional facilities, there remains a desire for some degree of autonomy, particularly for seeking donor opportunities. Towards that end, the primary massing of the building is rendered as two wings in an "L" shaped configuration, with shared services at the center. As the building stacks in height, the wings become more pronounced as identifying the School of Public Policy and the Graduate School of Education.

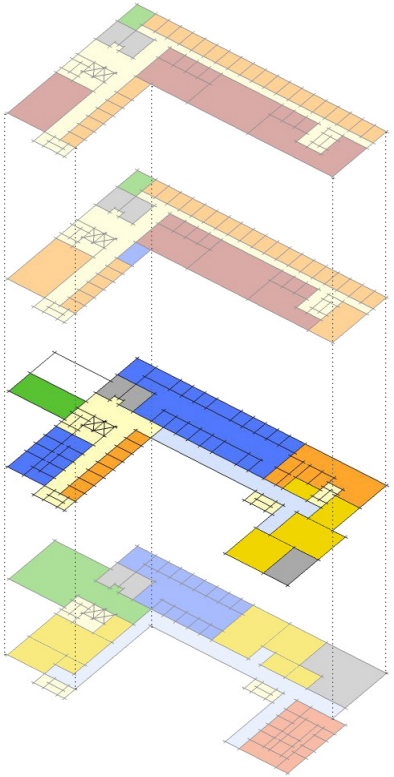
The importance of research, particularly to the GSOE's mission, is expressed on the third and fourth levels as prominently located, flexible space immediately adjacent to the faculty offices. Flexibility also describes the design approach in general, which relies on modular unit programming to ensure that the individual parts relate proportionally to the whole. It's generally presumed that, at some point in the future, one of the two Schools will occupy the entire facility.

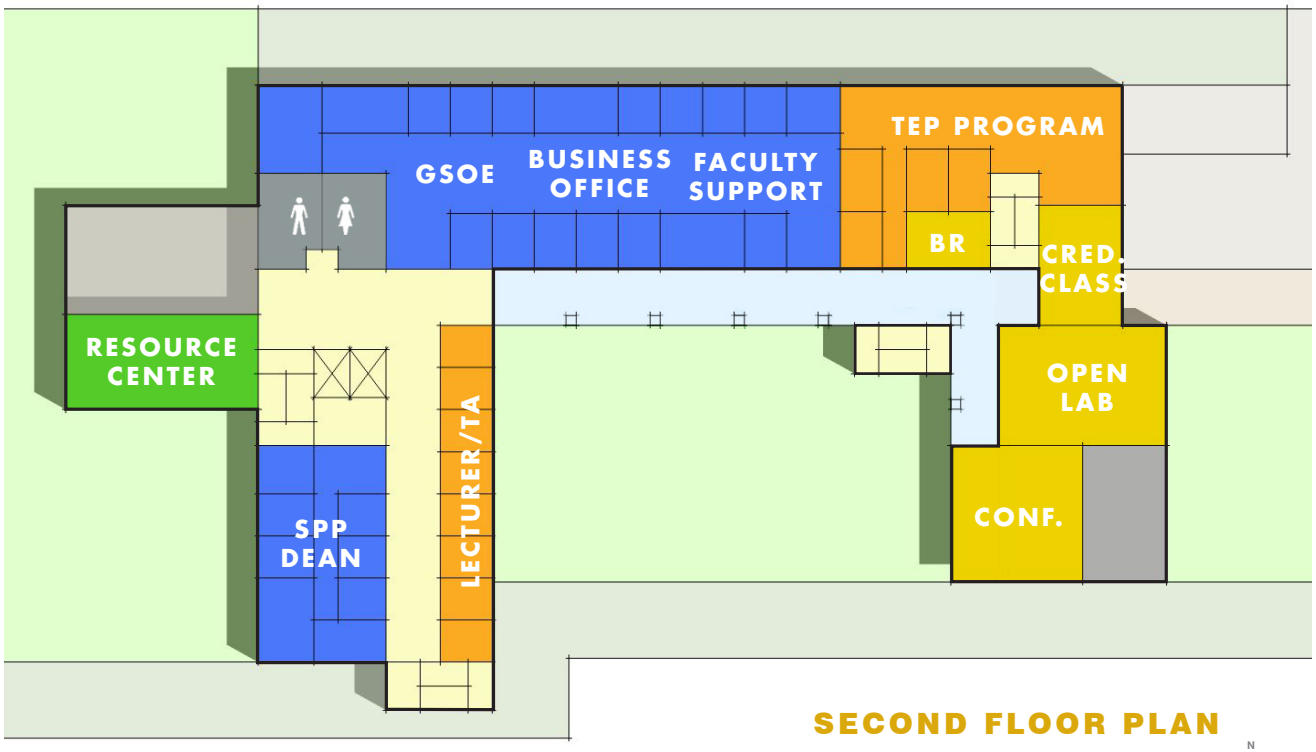




LEGEND

- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED SPACES
- CLINICAL
- SUPPORT

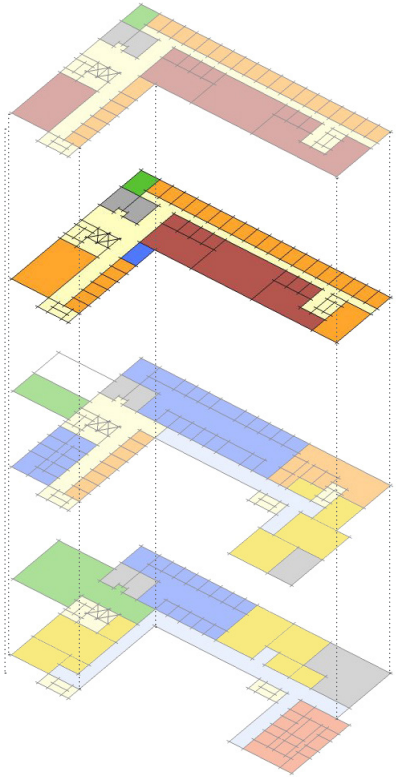


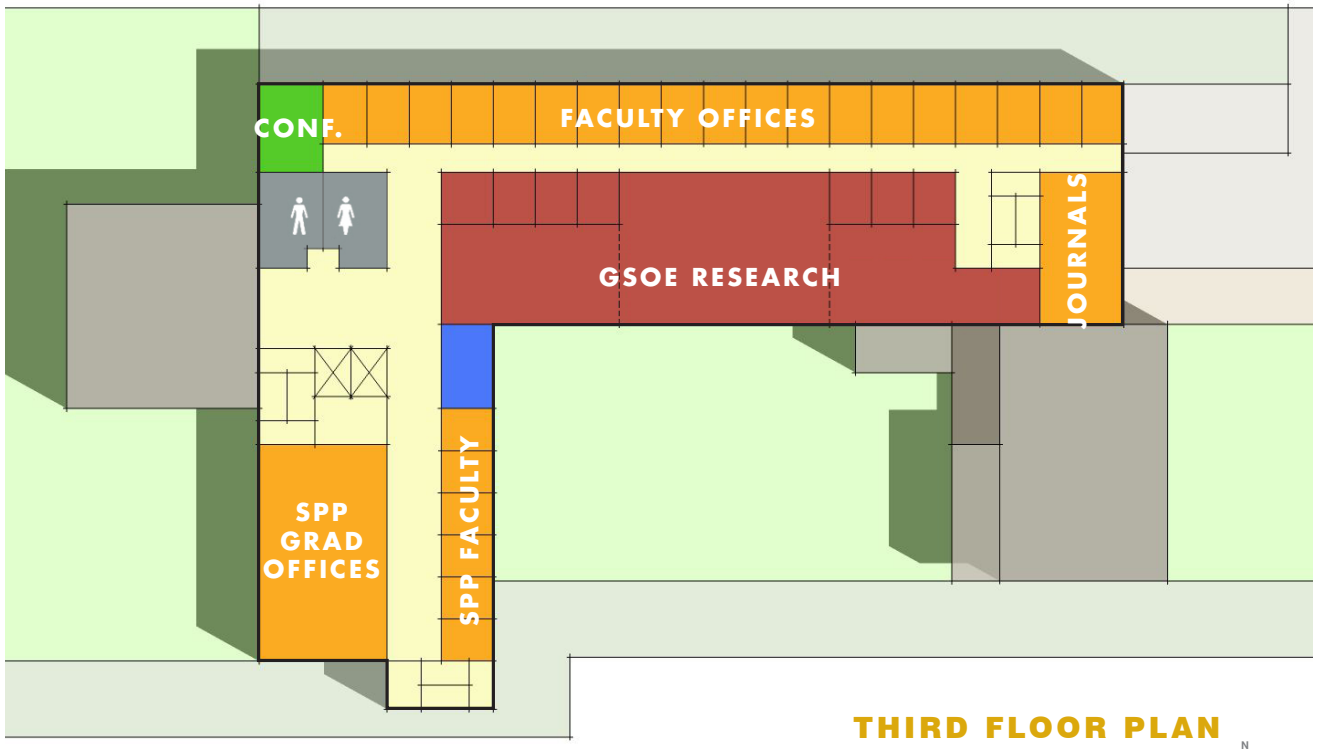


SECOND FLOOR PLAN

LEGEND

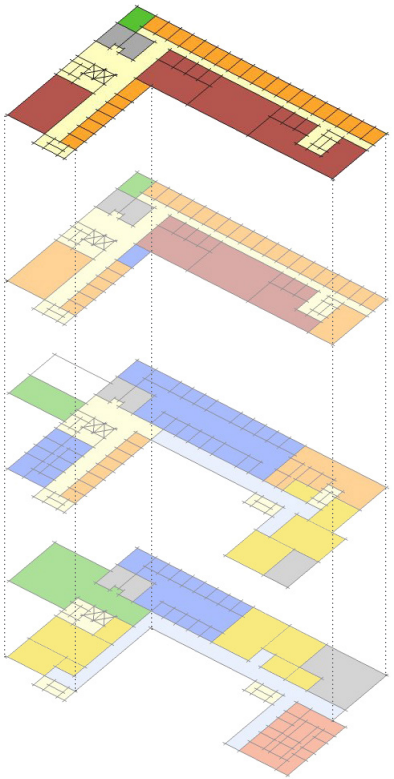
- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED SPACES
- CLINICAL
- SUPPORT

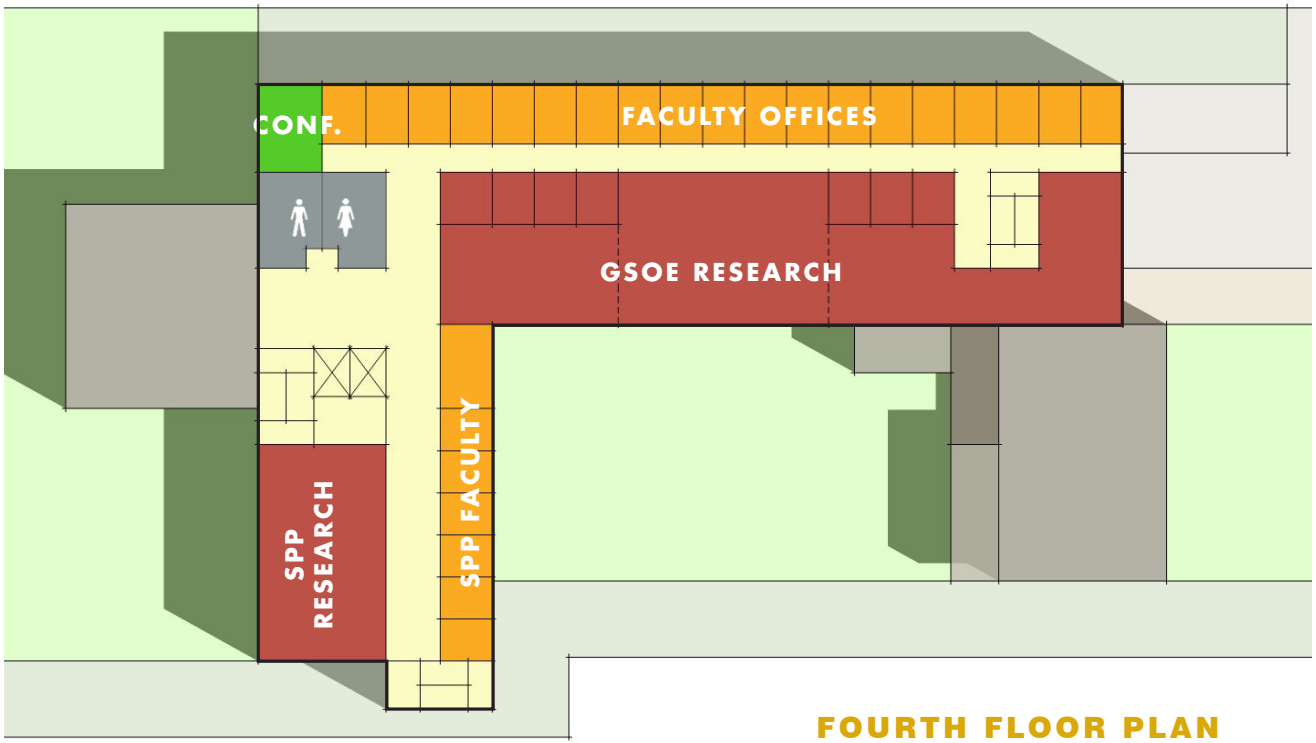




LEGEND

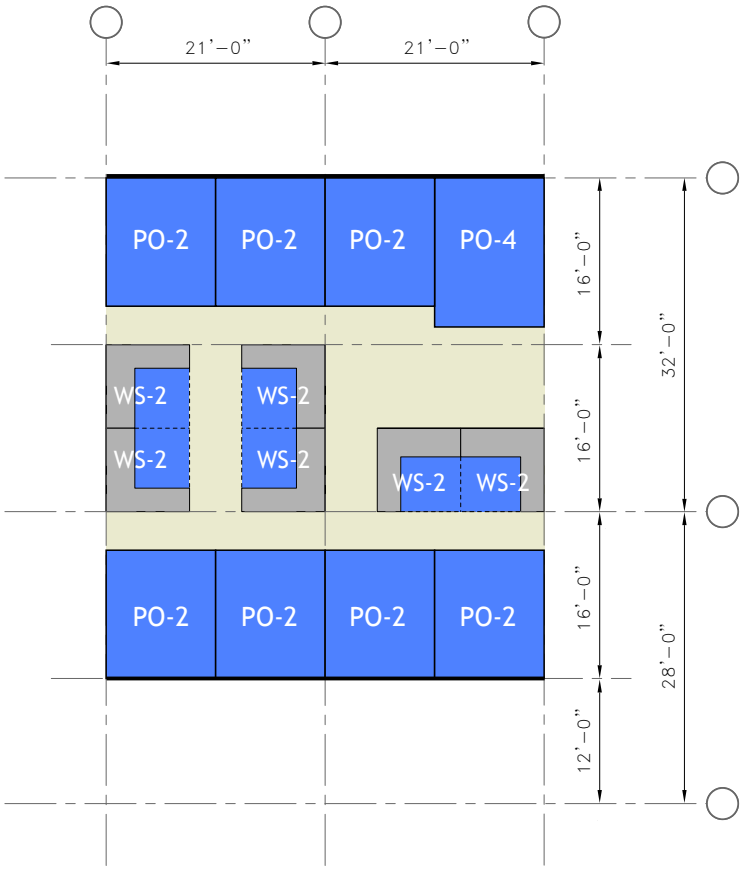
- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED SPACES
- CLINICAL
- SUPPORT



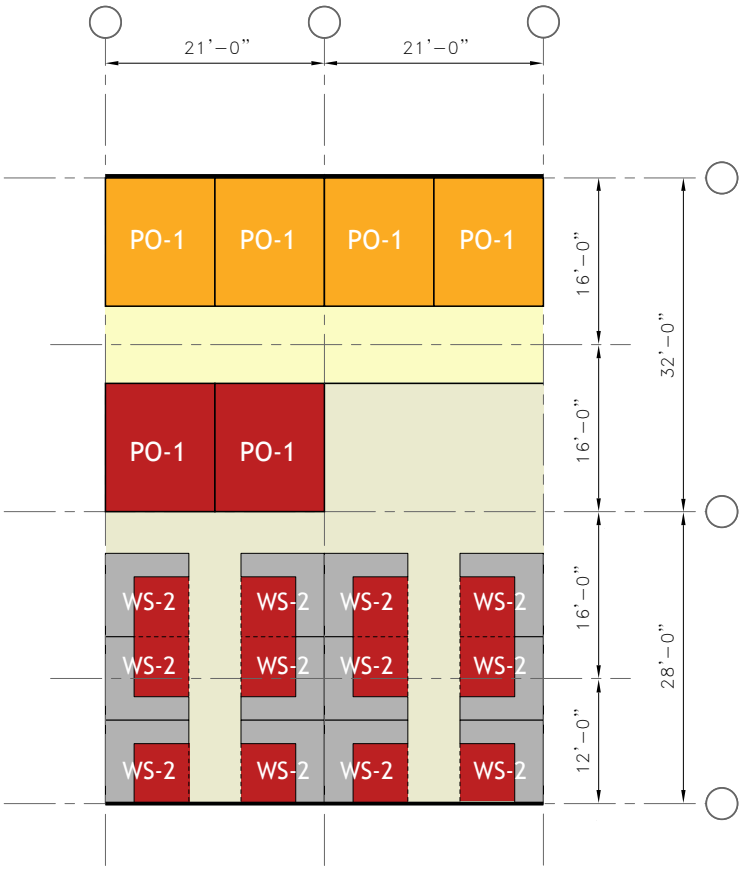


LEGEND

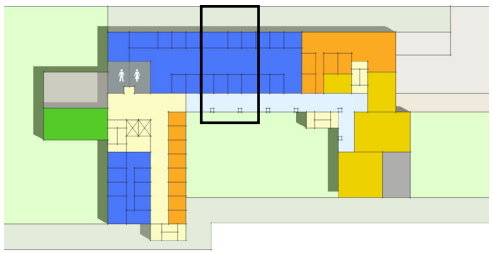
- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED SPACES
- CLINICAL
- SUPPORT

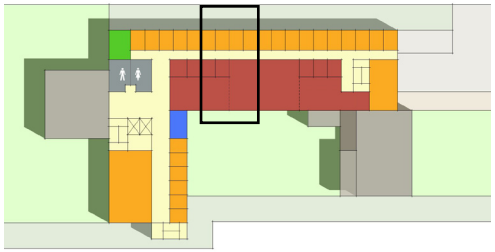


TYPICAL ADMINISTRATIVE BAY



TYPICAL RESEARCH BAY





3.1

PROJECT AREA SUMMARY

The following summary represents the project total assignable square footage required for the West Campus Graduate and Professional Center.

The program is organized into four groups: Core Instructional Facilities, Graduate School of Education (GSOE) Facilities, School of Public Policy (SPP) Facilities, and Building Common Areas (shared spaces between the two schools).

PROJECT TOTAL: **AREA SUMMARY**

CORE FACILITIES	(ASF)
Instructional Space	6,115
Total, Core Facilities ASF	**6,115**

GRADUATE SCHOOL OF EDUCATION (GSOE)	(ASF)
GSOE Administration	
Dean's Office	1,755
Business Office	1,365
Student Services	2,400
Faculty Support Services	845
Records Storage	260
Subtotal, GSOE Administration	**6,625**
GSOE Academic Programs	
Faculty Offices	4,810
Lectures/Teaching Assistants	1,040
Teacher's Education Program	1,320
Journal Offices	520
Subtotal, GSOE Academic Programs	**7,690**
GSOE Research	
Research Center	8,320
Subtotal, GSOE Research	**8,320**
GSOE Clinical Programs	
Clinics	1,870
Subtotal, GSOE Clinical Programs	**1,870**
GSOE Educational Delivery	
Computer Laboratories	1,050
Open Laboratory	600
Subtotal, GSOE Educational Delivery	**1,650**
Total, Graduate School of Education ASF	**26,155**

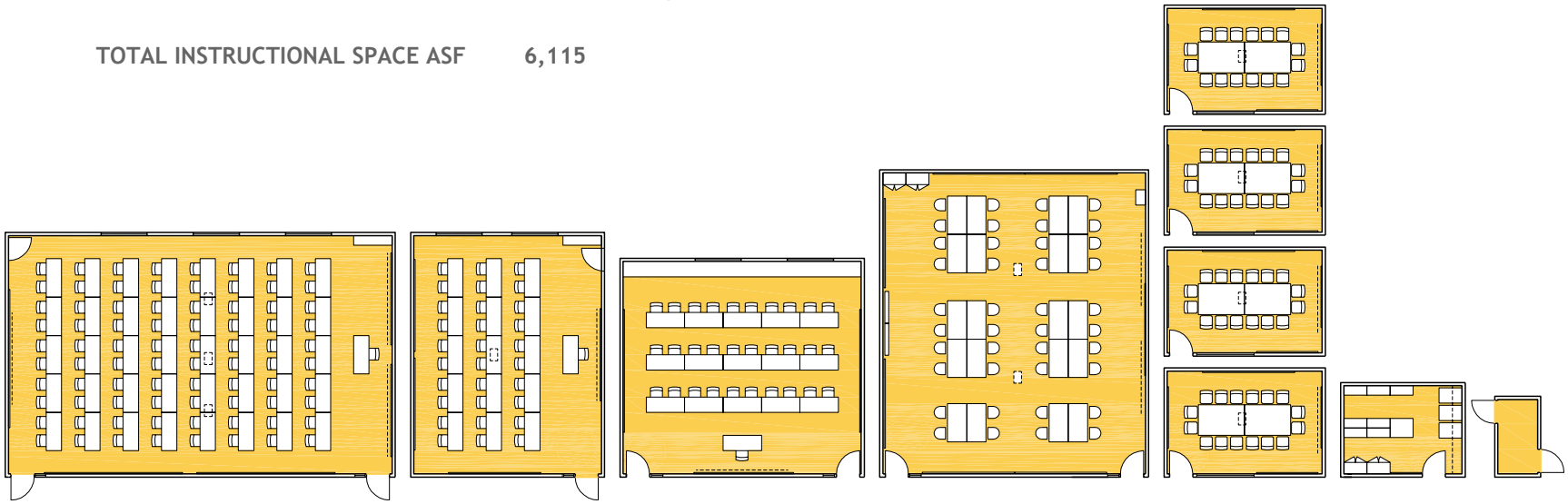
SCHOOL OF PUBLIC POLICY (SPP)	(ASF)
SPP Administration	
Dean's Office	1,795
Subtotal, SPP Administration	**1,795**
SPP Academic Programs	
Faculty Offices	1,560
Subtotal, SPP Academic Programs	**1,560**
SPP Research	
Research Center	2,780
Subtotal, GSOE Research	**2,780**
Total, School of Public Policy ASF	**6,135**

BUILDING COMMON AREAS	(ASF)
Building Commons	2,530
Shared Spaces	3,170
Total, Building Commons ASF	**5,700**

TOTAL BUILDING ASF **44,105**

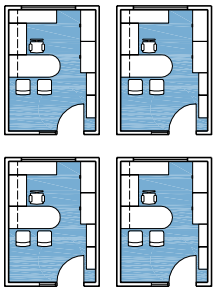
CORE FACILITIES: INSTRUCTIONAL SPACE

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Classroom	CL-1	1	1600	1,600	Large, 80-station classroom
	CL-2	1	750	750	Small, 30-station classroom
Seminar Room	SM-1	1	900	900	Seminar/conference room for 30
Computer Lab	LB-1	1	1400	1,400	40-station hybrid lab with distance learning capabilities
Break-out Room	BR-1	4	300	1,200	For group study and seminar classes, 13-15 people
Classroom Support	CS-1	1	200	200	For instructional technology support; includes storage of rolling carts
	CS-2	1	65	65	Storage of tables/chairs
			TOTAL INSTRUCTIONAL SPACE ASF	**6,115**	

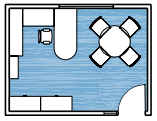


GSOE ADMINISTRATION: DEAN'S OFFICE

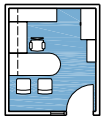
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-2	4	150	600	Associate Deans
	PO-3	1	200	200	Dean's Office
	PO-4	1	130	130	Professional staff
Workstation	WS-2	3	65	195	Includes shared receptionist with Business Office
Conference Room	CR-3	1	300	300	13-15 people
Storage Room	ST-1	1	130	130	Includes shared kitchenette
Waiting Area	WT-2	1	200	200	Shared with Business Office; includes seating for 4
	TOTAL DEAN'S OFFICE ASF			**1,755**	



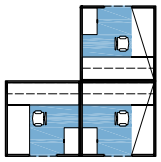
PO-2



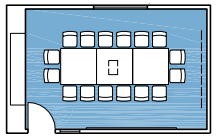
PO-3



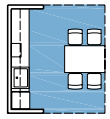
PO-4



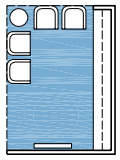
WS-2



CR-3



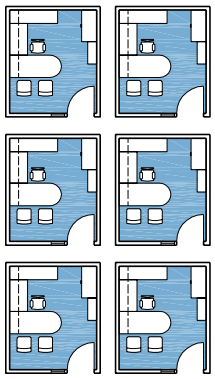
ST-1



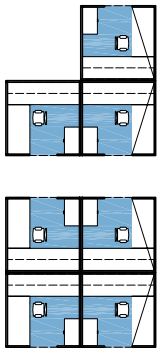
WT-2

GSOE ADMINISTRATION: BUSINESS OFFICE

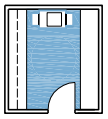
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-4	6	130	780	
Workstation	WS-2	7	65	455	
Work Room	WR-1	1	130	130	Includes copy area, storage
	TOTAL BUSINESS OFFICE ASF			**1,365**	



PO-4



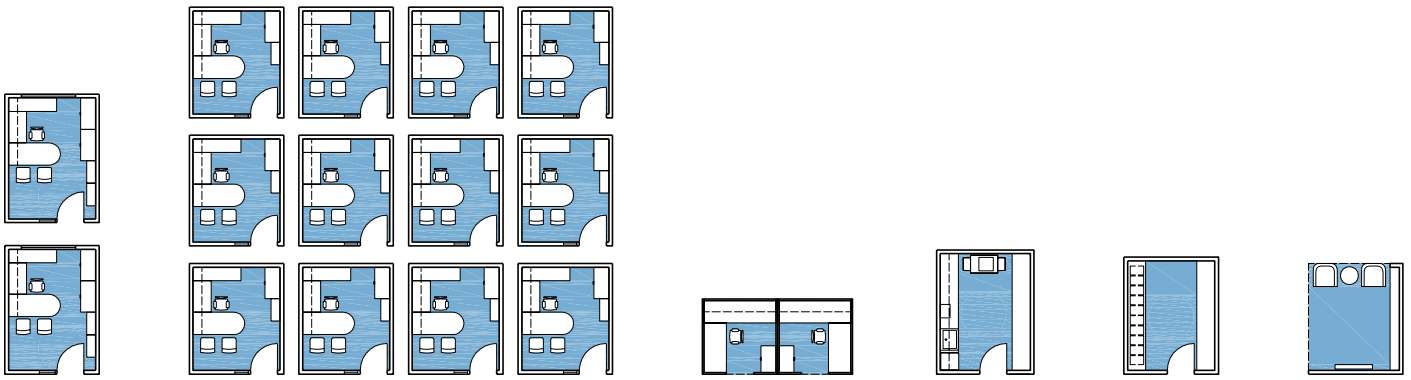
WS-2



WR-1

GSOE ADMINISTRATION: STUDENT SERVICES

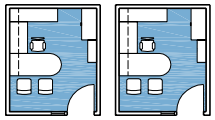
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-2	2	150	300	Directors of TEP and Graduate Programs
	PO-4	12	130	1,560	
Workstation	WS-2	2	65	130	Includes receptionist
Work Room	WR-2	1	150	150	Includes kitchenette and storage
	WR-5	1	130	130	Workroom and storage of student project boxes
Waiting Area	WT-1	1	130	130	
	TOTAL STUDENT SERVICES ASF			**2,400**	



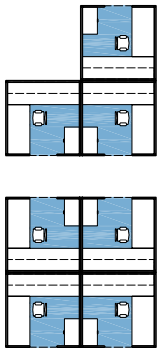
PO-2 PO-4 WS-2 WR-2 WR-5 WT-1

GSOE ADMINISTRATION: FACULTY SUPPORT SERVICES

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-4	2	130	260	
Workstation	WS-2	7	65	455	
Mail Receiving	MR-1	1	130	130	Includes faculty mailboxes
TOTAL FACULTY SUPPORT SERVICES ASF				**845**	



PO-4



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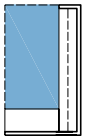
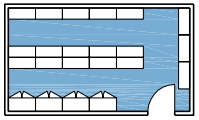


MR-1

GSOE ADMINISTRATION: RECORDS STORAGE

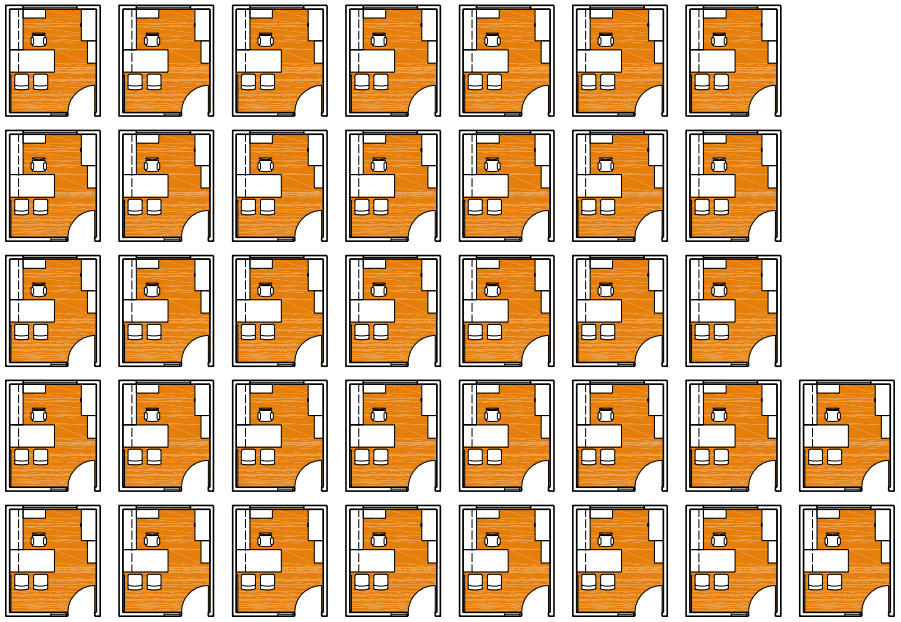
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Storage Room	ST-4	1	260	260	Storage of GSOE archives
		TOTAL RECORDS STORAGE ASF		260	



ST-4

GSOE ACADEMIC PROGRAMS: **FACULTY OFFICES**

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-1	37	130	4,810	
			TOTAL FACULTY OFFICES ASF	**4,810**	



PO-1

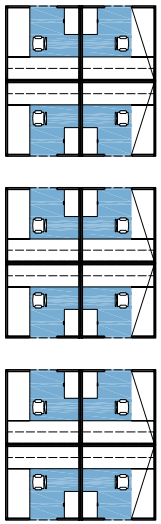
GSOE ACADEMIC PROGRAMS: **LECTURERS/TEACHING ASSISTANTS**

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-5	8	130	1,040	2 lecturers or 3 teaching assistants per office
TOTAL LECTURER/TEACHING ASSISTANTS ASF				**1,040**	

PO-5

GSOE ACADEMIC PROGRAMS: **TEACHER EDUCATION PROGRAM**

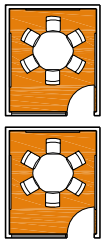
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Workstation	WS-2	12	65	780	
Work Room	WR-3	1	150	150	
Storage Room	ST-2	1	130	130	Secure room to support "hoteling" concept
Conference Room	CR-4	2	130	260	For private conferences/discussions
TOTAL TEACHER EDUCATION PROGRAM ASF				**1,320**	



WS-2

WR-3

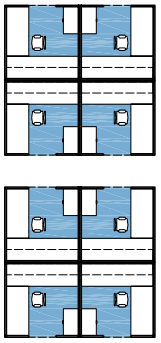
ST-2



CR-4

GSOE ACADEMIC PROGRAMS: **JOURNAL OFFICES**

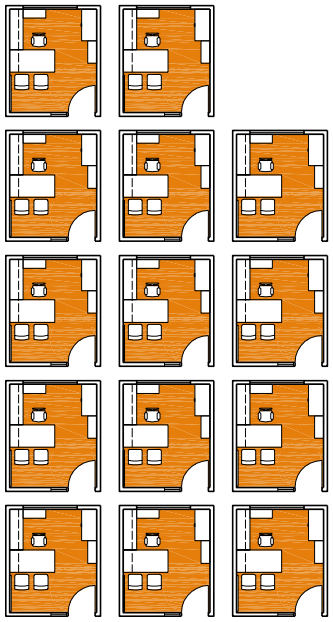
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Workstation	WS-2	8	65	520	
			TOTAL JOURNAL OFFICES ASF	**520**	



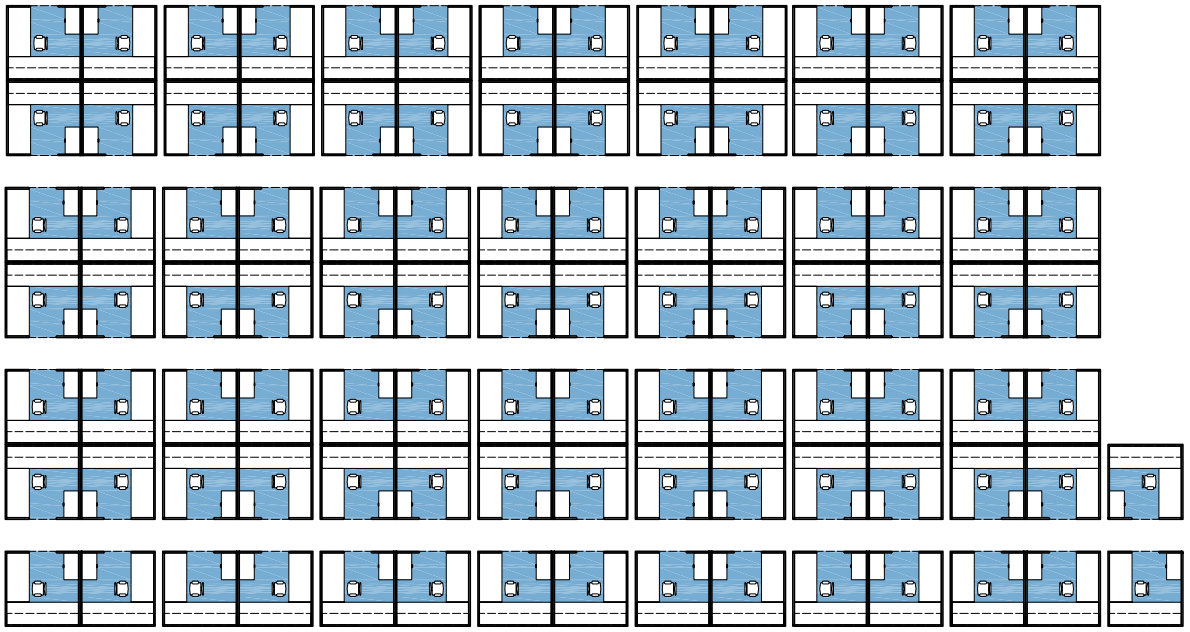
WS-2

GSOE RESEARCH: **RESEARCH CENTER**

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-1	14	130	1,820	GSOE research centers are grant-based, dependent upon funding and schedule. Spaces should be flexibly planned based upon the modules illustrated below; however, actual program composition will be determined by the needs of specific grants.
Workstation	WS-2	100	65	6,500	
TOTAL RESEARCH CENTER ASF				**8,320**	



PO-1



WS-2

GSOE CLINICAL PROGRAMS: CLINICS

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Waiting Area	WT-3	2	150	300	
Testing Room	TR-1	4	130	520	Small testing room
	TR-2	1	200	200	Large testing room
Reception	RP-1	2	130	260	
Observation Room	OB-1	3	80	240	
Video Control Room	VC-1	1	200	200	Research workroom
Storage Room	ST-3	1	75	75	
Restroom	RR-1	1	75	75	
			TOTAL CLINICS ASF	**1,870**	

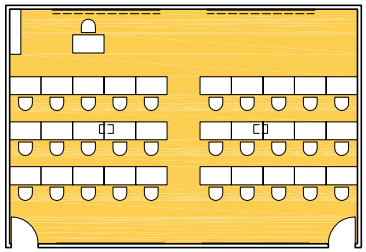
WT-3 TR-1 TR-2 RP-1 OB-1 VC-1 ST-3 RR-1

GSOE EDUCATIONAL DELIVERY: COMPUTER LABORATORIES

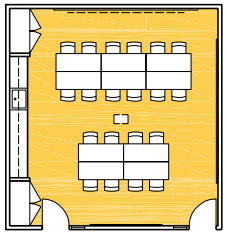
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Computer Laboratory	LB-2	1	1050	1,050	30-station open lab
TOTAL COMPUTER LABORATORIES ASF				**1,050**	

GSOE EDUCATIONAL DELIVERY: OPEN LABORATORY

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Open Laboratory	LB-3	1	600	600	20-station credentials lab for TEP program
TOTAL OPEN LABORATORY GSF				**600**	



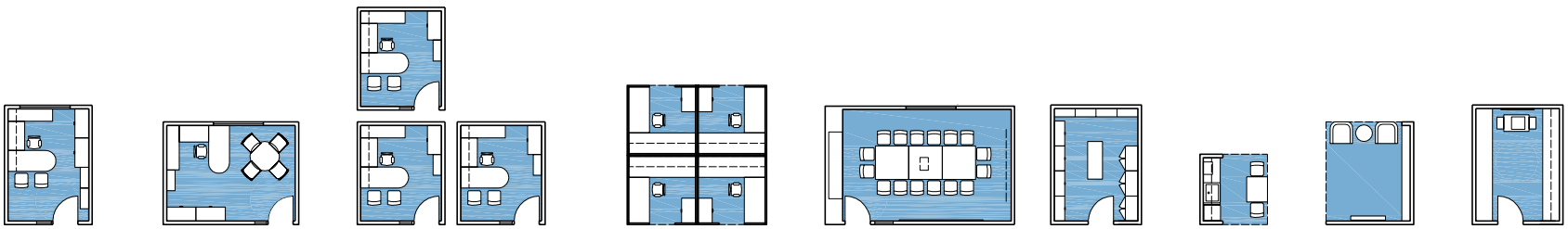
LB-2



CL-1

SPP ADMINISTRATION: **DEAN'S OFFICE**

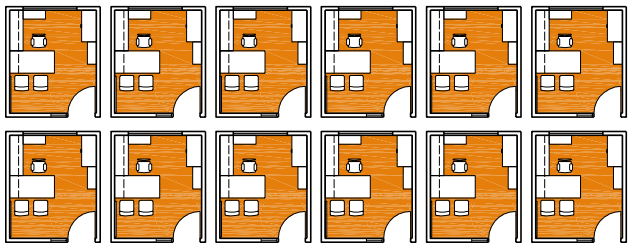
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-2	1	150	150	Associate Dean
	PO-3	1	200	200	Dean's Office
	PO-4	3	130	390	
Workstation	WS-2	4	65	260	Includes receptionist
Conference Room	CR-3	1	300	300	13-15 people
Storage Room	ST-5	1	150	150	File storage
	ST-6	1	65	65	Includes kitchenette
Waiting Area	WT-1	1	130	130	
Mail Room	MR-2	1	150	150	Includes copy area
	TOTAL SPP DEAN'S OFFICE ASF			**1,795**	



PO-2 PO-3 PO-4 WS-2 CR-3 ST-5 ST-6 WT-1 MR-2

SPP ACADEMIC PROGRAMS: **FACULTY OFFICES**

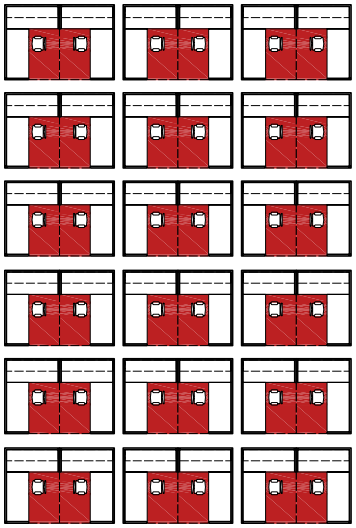
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Private Office	PO-1	12	130	1,560	
TOTAL SPP FACULTY OFFICES ASF				**1,560**	



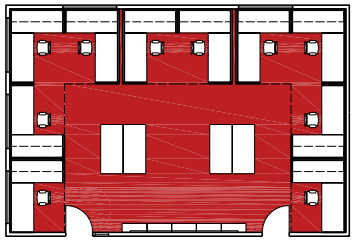
PO-1

SPP RESEARCH: **RESEARCH CENTER**

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Workstation	WS-1	36	50	1,800	Graduate students
Research Center	RS-1	1	980	980	Research space for 10 visiting lecturers/faculty
TOTAL SPP RESEARCH CENTER ASF				**2,780**	



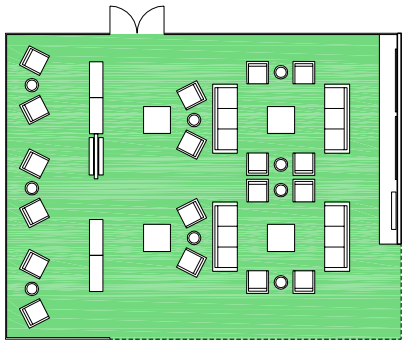
WS-1



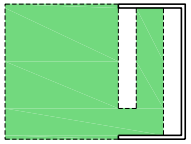
RS-1

BUILDING COMMON AREAS: **BUILDING COMMONS**

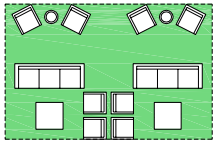
Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Entry Forum	EF-1	1	1500	1,500	Building entry lobby
Entry Service	ES-1	1	200	200	Building lobby service
Student Lounge	SL-1	1	350	350	Shared GSOE/SPP
Faculty Lounge	FL-1	1	350	350	Shared GSOE/SPP
Private Office	PO-4	1	130	130	For GSOE Student Society
	TOTAL, BUILDING COMMONS ASF			**2,530**	



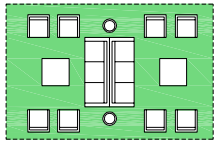
EF-1



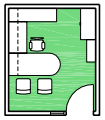
ES-1



SL-1



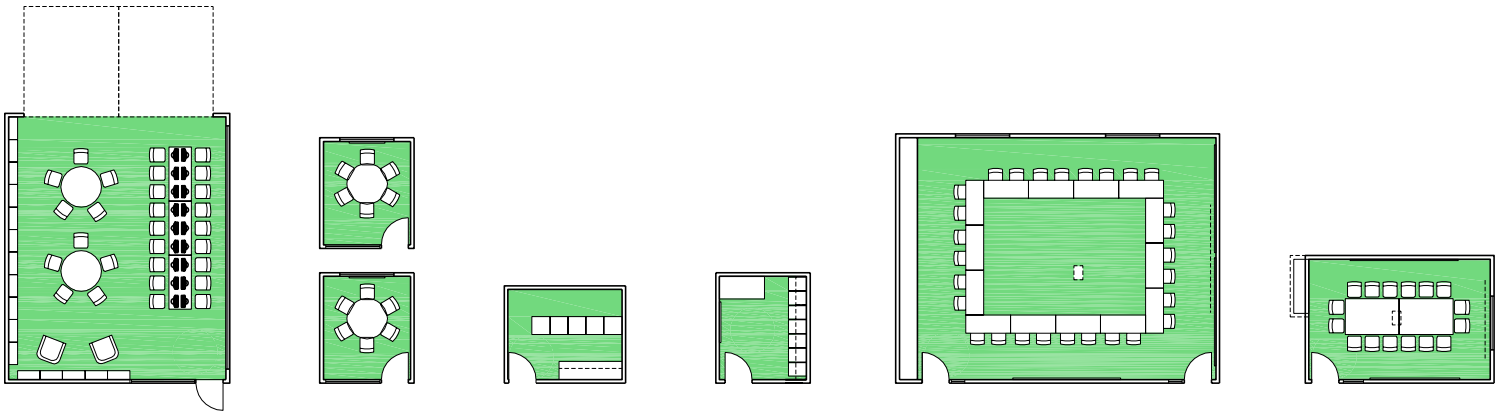
FL-1



PO-4

BUILDING COMMON AREAS: SHARED SPACES

Space Name	Code	Qty	ASF (Sq Ft)	Total ASF (Sq Ft)	Comments
Resource Center	RC-1	1	750	750	Scholarly activities
	RC-1A	2	120	240	Meeting rooms for 5-6 people located in Resource Center
Server Room	SE-1	1	150	150	Shared GSOE/SPP
Work Room	WR-4	1	130	130	IT work room
Conference Room	CR-1	1	1000	1,000	Large conference room for 40
	CR-2	3	300	900	One per floor, shared, 13-15 people
	TOTAL SHARED SPACES ASF			**3,170**	

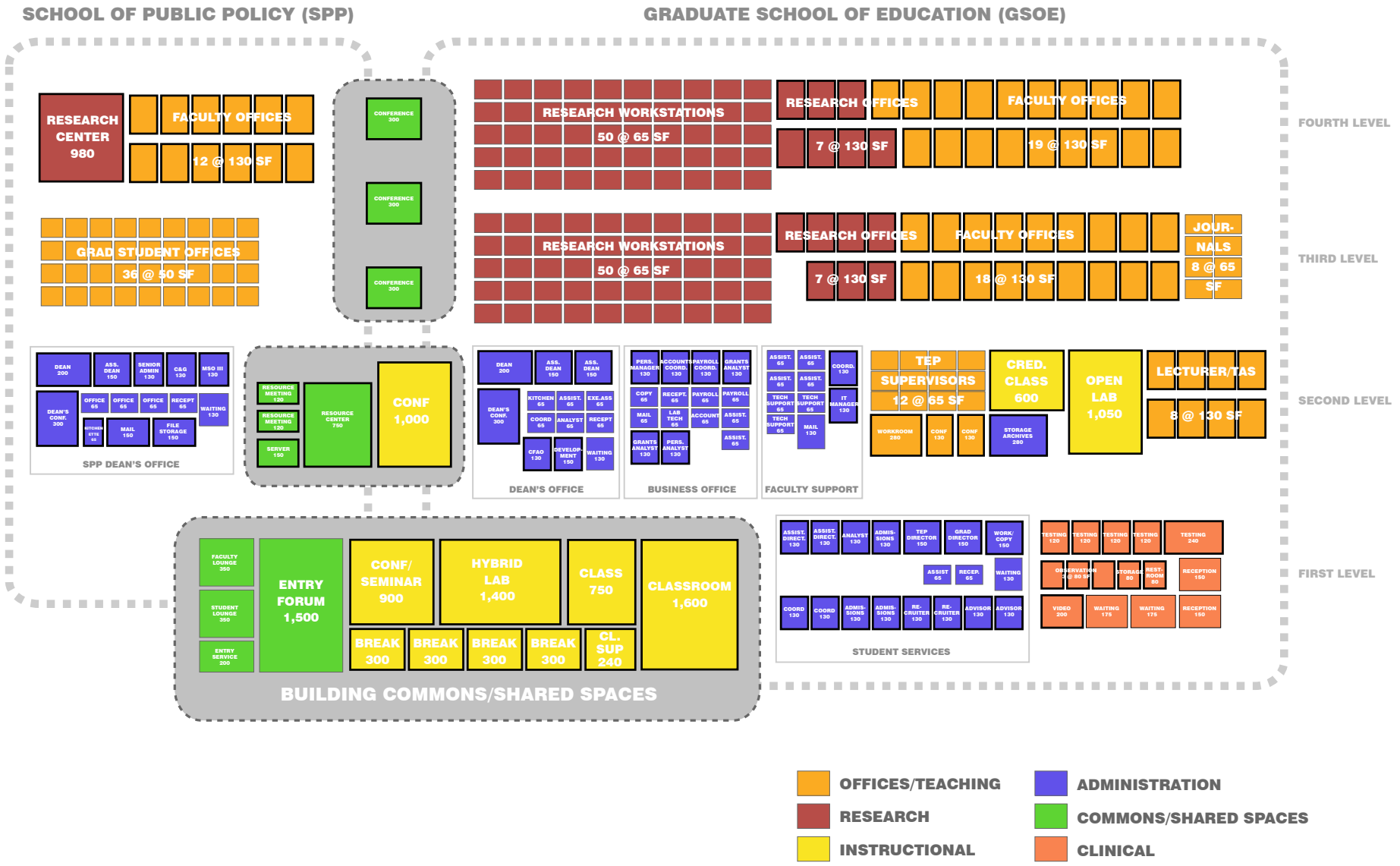


RC-1 RC-1A SR-1 WR-4 CR-1 CR-2

3.2

ADJACENCY DIAGRAM

The following diagrams illustrate the relationship of the program components based on their need for privacy.


SCHOOL OF PUBLIC POLICY (SPP)
GRADUATE SCHOOL OF EDUCATION (GSOE)
FOURTH LEVEL
THIRD LEVEL
SECOND LEVEL
FIRST LEVEL
RESEARCH CENTER 980
FACULTY OFFICES
12 @ 130 SF
CONFERENCE 300
CONFERENCE 300
CONFERENCE 300
RESEARCH WORKSTATIONS
50 @ 65 SF
RESEARCH OFFICES
7 @ 130 SF
FACULTY OFFICES
19 @ 130 SF
GRAD STUDENT OFFICES
36 @ 50 SF
RESEARCH WORKSTATIONS
50 @ 65 SF
RESEARCH OFFICES
7 @ 130 SF
FACULTY OFFICES
18 @ 130 SF
JOUR-NALS
8 @ 65 SF
DEAN 200
ASS. DEAN 150
SENIOR ADMIN 130
C&G 130
MSO III 130
DEAN'S CONF. 300
OFFICE 65
OFFICE 65
OFFICE 65
RECEPT 65
WAITING 130
KITCHEN-ETTE 45
MAIL 150
FILE STORAGE 150
SPP DEAN'S OFFICE
RESOURCE MEETING 120
RESOURCE MEETING 120
SERVER 150
RESOURCE CENTER 750
CONF 1,000
DEAN 200
ASS. DEAN 150
ASS. DEAN 150
DEAN'S CONF. 300
KITCHEN 65
ASSIST. 65
EXE.ASS 65
COORD 65
ANALYST 65
RECEPT 65
CFAO 130
DEVELOP-MENT 150
WAITING 130
DEAN'S OFFICE
PERS. MANAGER 130
ACCOUNT COORD. 130
PAYROLL COORD. 130
GRANTS ANALYST 130
COPY 65
RECEPT. 65
PAYROLL 65
MAIL 65
LAB TECH 65
ACCOUNT 65
PAYROLL 65
ASSIST. 65
GRANTS ANALYST 130
PERS. ANALYST 130
ASSIST. 65
BUSINESS OFFICE
ASSIST. 65
ASSIST. 65
COORD. 130
ASSIST. 65
ASSIST. 65
TECH SUPPORT 65
TECH SUPPORT 65
IT MANAGER 130
TECH SUPPORT 65
MAIL 130
FACULTY SUPPORT
TEP SUPERVISORS
12 @ 65 SF
CRED. CLASS 600
OPEN LAB 1,050
LECTURER/TAS
8 @ 130 SF
WORKROOM 280
CONF 130
CONF 130
STORAGE ARCHIVES 280
FACULTY LOUNGE 350
STUDENT LOUNGE 350
ENTRY SERVICE 200
ENTRY FORUM 1,500
CONF/ SEMINAR 900
HYBRID LAB 1,400
CLASS 750
CLASSROOM 1,600
BREAK 300
BREAK 300
BREAK 300
BREAK 300
CL. SUP 240
BUILDING COMMONS/SHARED SPACES
ASSIST. DIRECT. 130
ASSIST. DIRECT. 130
ANALYST 130
ADMIS-SIONS 130
TEP DIRECTOR 150
GRAD DIRECTOR 150
WORK/ COPY 150
ASSIST 65
RECEP. 65
WAITING 130
COORD 130
COORD 130
ADMIS-SIONS 130
ADMIS-SIONS 130
RE-CRUITER 130
RE-CRUITER 130
ADVISOR 130
ADVISOR 130
STUDENT SERVICES
TESTING 120
TESTING 120
TESTING 120
TESTING 120
TESTING 240
OBSERVATION 5 @ 80 SF
STORAGE 80
REST-ROOM 80
RECEPTION 150
VIDEO 200
WAITING 175
WAITING 175
RECEPTION 150
OFFICES/TEACHING
RESEARCH
INSTRUCTIONAL
ADMINISTRATION
COMMONS/SHARED SPACES
CLINICAL

3.3

ROOM DATA SHEETS

The following section contains schematic diagrams and descriptions of each typical room type. The general requirements that apply to all rooms of a particular type (i.e. classrooms, offices, research spaces, etc.) are noted in the System Narratives. The following room data sheets only list requirements that are specific to that room.

MASTER LIST: **ROOM TYPES**

Space Name	Code	ASF (Sq Ft)	Comments
Break-out Room	BR-1	300	For 13-15 people
Classrooms	CL-1	1600	80-station classroom
	CL-2	750	30-station classroom
Conference Room	CR-1	1000	For 40 people
	CR-2	300	For 13-15 people, one per floor, shared GSOE/SPP
	CR-3	300	Dean's Office conference room, 13-15 people
	CR-4	130	For TEP private conferences
Classroom Support	CS-1	200	For instructional technology support; includes storage of rolling carts
	CS-2	65	Storage of tables/chairs
Entry Forum	EF-1	1500	
Entry Service	ES-1	200	
Faculty Lounge	FL-1	350	Shared GSOE/SPP
Open Laboratory	LB-1	1400	40-station hybrid (computer) laboratory with distance learning capabilities
	LB-2	1050	30-station GSOE open computer laboratory
	LB-3	600	20-station GSOE Credentials laboratory
Mail Receiving	MR-1	130	GSOE faculty mailboxes
	MR-2	150	Mail/copy room in SPP Dean's Office
Observation Room	OB-1	80	Adjacent to Clinic testing rooms
Private Office	PO-1	130	Faculty
	PO-2	150	Directors, Associate Deans
	PO-3	200	Dean's Offices
	PO-4	130	Professional staff offices
	PO-5	130	2 Lecturers or 3 Teaching Assistants per office
Resource Center	RC-1	750	Scholarly activities
	RC-1A	120	Meeting rooms for 5-6 people located in Resource Center

Space Name	Code	ASF (Sq Ft)	Comments
Reception	RP-1	130	Clinical reception areas
Restroom	RR-1	75	Located in clinic
Research Center	RS-1	980	SPP Research space
Server Room	SE-1	150	Shared GSOE/SPP
Student Lounge	SL-1	350	Shared GSOE/SPP
Seminar Room	SM-1	900	Seminar/conference room for 30
Storage Room	ST-1	130	GSOE Dean's Office, includes kitchenette
	ST-2	130	Secure storage for "hoteling"
	ST-3	75	Clinical storage
	ST-4	260	GSOE storage of archives
	ST-5	150	SPP Dean's Office file storage
	ST-6	65	Includes kitchenette in SPP Dean's Office
Testing Room	TR-1	130	Small testing room in Clinic
	TR-2	200	Large testing room in Clinic
Video Control Room	VC-1	200	Research workroom, storage of clinical videos
Work Room	WR-1	130	GSOE Business Office, includes copy area and storage
	WR-2	150	Student Services, includes Kitchenette
	WR-3	150	TEP workroom
	WR-4	130	IT workroom
	WR-5	130	Workroom for storage of student projects
Workstation	WS-1	50	SPP Graduate student stations
	WS-2	65	
Waiting Area	WT-1	130	Student Services waiting area
	WT-2	200	Shared with Business Office
	WT-3	150	Waiting area in Clinic

CODE	BR-1

GENERAL

SPACE NAME	Break-out Room
ASSIGNABLE AREA (ASF)	300
FUNCTION	Informal meetings for 12-16 people
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

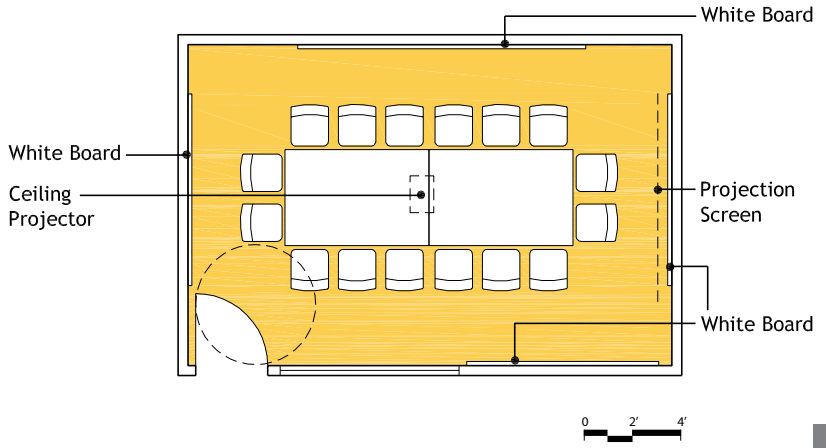
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	• Electric roll-down projection screen • Ceiling mounted digital projector • Ceiling mounted speakers • Video interface infrastructure
SECURITY	Key lock
MEP/TELECOM	• Locate power/data ports in the middle of floor

EQUIPMENT

FIXED EQUIPMENT	• 3 White boards, 8’ x 4’ • 1 White board, 12’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 16 Task chairs • 2 Split Tables
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Sign-up sheet as part of room identification graphics (refer to UCR Campus Sign Program, dated 1/4/08) • Provide blackout capability at windows

DIAGRAM



CODE	CL-1

GENERAL

SPACE NAME	Classroom
ASSIGNABLE AREA (ASF)	1,600
FUNCTION	Large, 80-station classroom
MIN. CEILING HEIGHT	12’-0”; ceiling should be as tall as possible
CRITICAL ADJACENCIES	Adjacent to classroom storage (CS-2)

MATERIALS

FLOOR	Carpet/linoleum
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

SYSTEMS

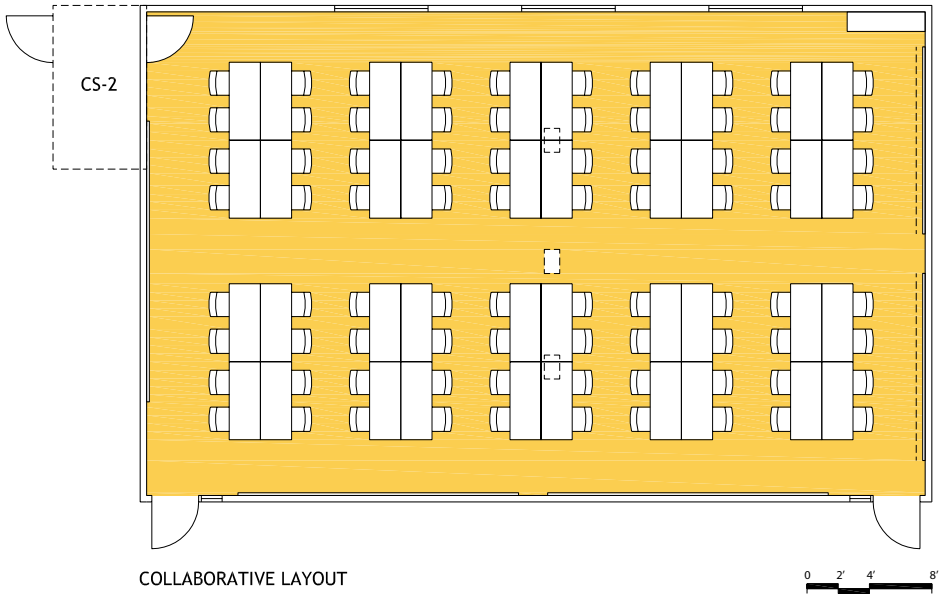
ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	• 3 Electric roll-down projection screens • 3 Ceiling mounted digital projectors • Ceiling mounted speakers • Video interface infrastructure • 1 Smart board, 12’ x 4’
SECURITY	Key lock
MEP	• Focusable, zoned lighting • 6 dedicated data ports to support multi-media cabinet technology

EQUIPMENT

FIXED EQUIPMENT	• 1 White board, 12’ x 4’ • 3 White boards, 18’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 81 Task chairs • 41 Moveable tables • Multi-media cabinet with smart lecturn
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Provide blackout capability at windows

DIAGRAMS

INSTRUCTIONAL LAYOUT



COLLABORATIVE LAYOUT

CODE	CL-2

GENERAL

SPACE NAME	Classroom
ASSIGNABLE AREA (ASF)	750
FUNCTION	Small classroom
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to classroom storage (CS-2)

MATERIALS

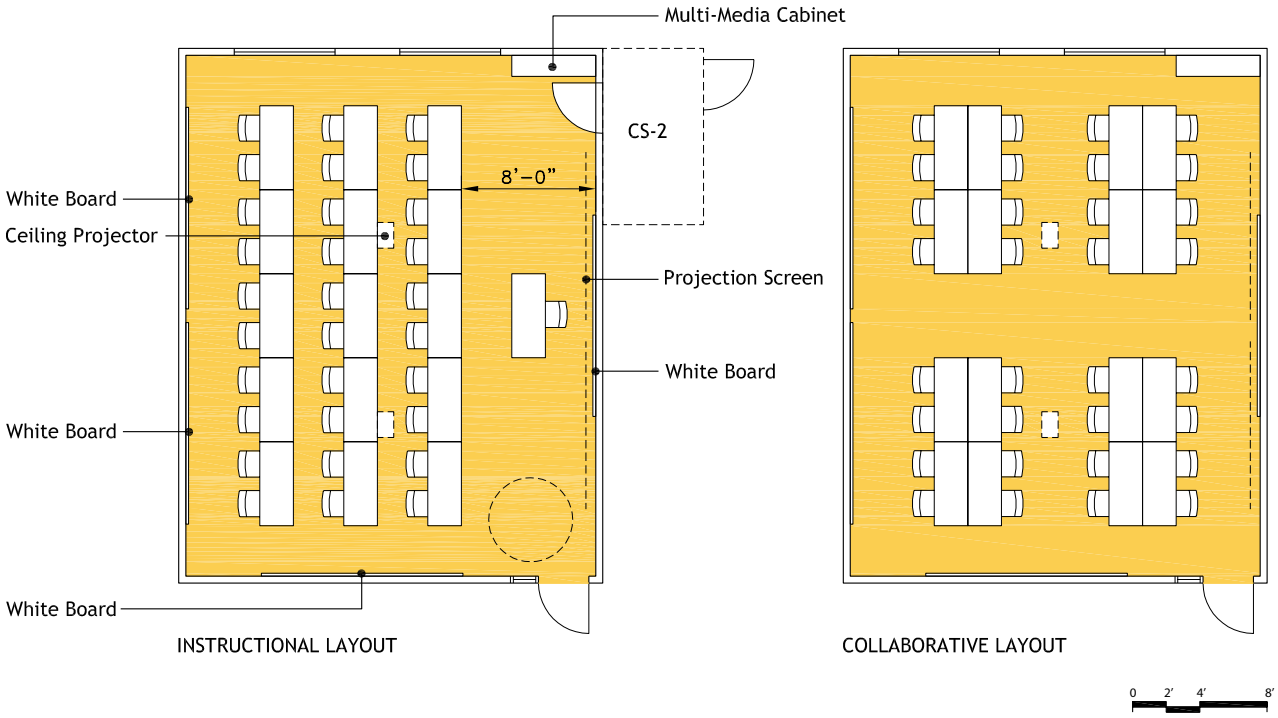
FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

SYSTEMS

ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	• 2 Electric roll-down projection screens • 2 Ceiling mounted digital projectors • Ceiling mounted speakers • Video interface infrastructure
SECURITY	Key lock
MEP	• Lighting control for multiple lighting scenes • 6 dedicated data ports to support multi-media cabinet technology

EQUIPMENT

FIXED EQUIPMENT	• 4 White boards, 12’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 30 Task chairs • 15 Moveable tables • Multi-media cabinet with smart lecturn
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Provide blackout capability at windows


Multi-Media Cabinet
CS-2
8'–0"
White Board
Ceiling Projector
Projection Screen
White Board
White Board
White Board
INSTRUCTIONAL LAYOUT
COLLABORATIVE LAYOUT
0
2'
4'
8'

CODE	CR-1

GENERAL

SPACE NAME	Conference Room
ASSIGNABLE AREA (ASF)	1,000
FUNCTION	Large conference room
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

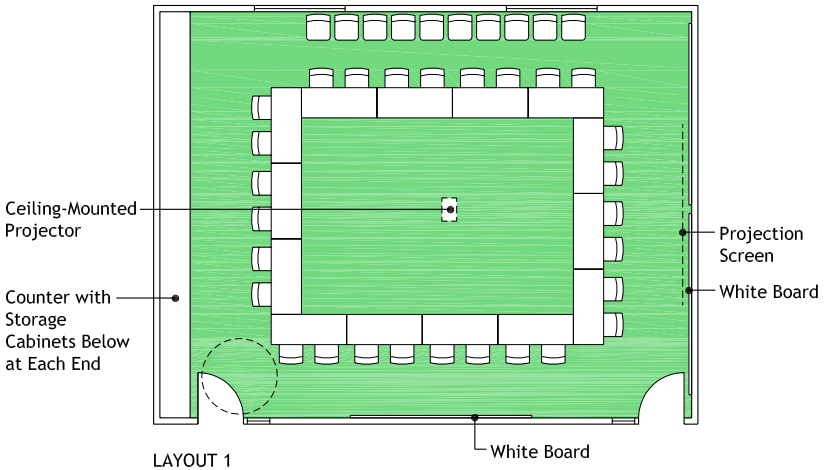
FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

SYSTEMS

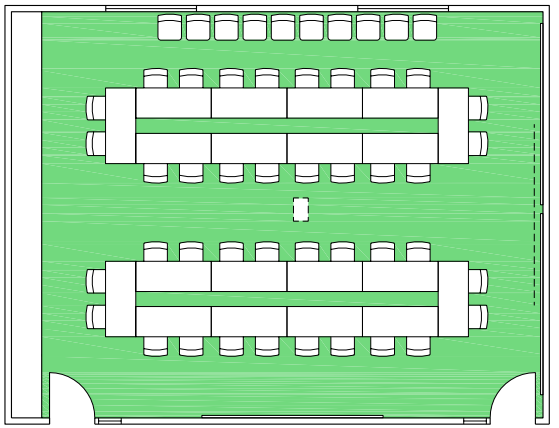
ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	• Electric roll-down projection screen • Ceiling mounted digital projector • Ceiling mounted speakers • Video interface infrastructure
SECURITY	Key lock
MEP	• Focusable, zoned lighting

EQUIPMENT

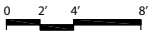
FIXED EQUIPMENT	• 12’ x 4’ White board • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 40 Task chairs • 20 Moveable tables
BUILT-IN FEATURES	• Counter with storage cabinets below at each end
SPECIAL REQUIREMENTS	• Provide blackout capability at windows

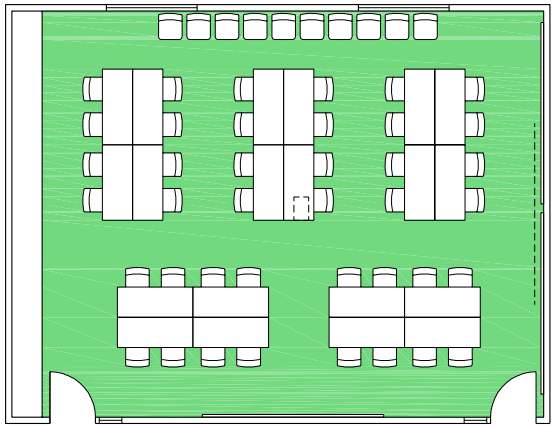


LAYOUT 1



LAYOUT 2





LAYOUT 3

CODE	CR-2

GENERAL

SPACE NAME	Conference Room
ASSIGNABLE AREA (ASF)	300
FUNCTION	Small conference room; one per floor
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

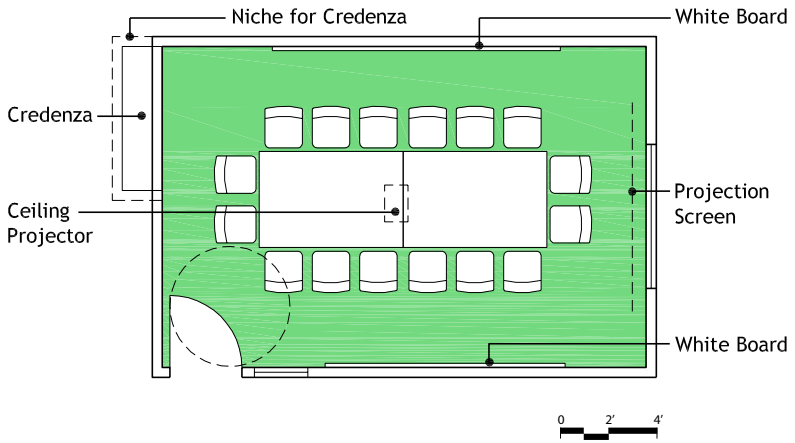
SYSTEMS

ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	• Electric roll-down projection screen • Ceiling mounted digital projector • Ceiling mounted speakers • Video interface infrastructure
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	• 2 White boards, 12’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 16 Task chairs • 2 Split tables • Credenza
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Provide blackout capability at windows • Sign-up sheet as part of room identification graphics (refer to UCR Campus Sign Program, dated 1/4/08)

DIAGRAM



CODE	CR-3

GENERAL

SPACE NAME	Conference Room
ASSIGNABLE AREA (ASF)	300
FUNCTION	Dean's conference room
MIN. CEILING HEIGHT	9'-0"
CRITICAL ADJACENCIES	Adjacent to Dean's Office

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

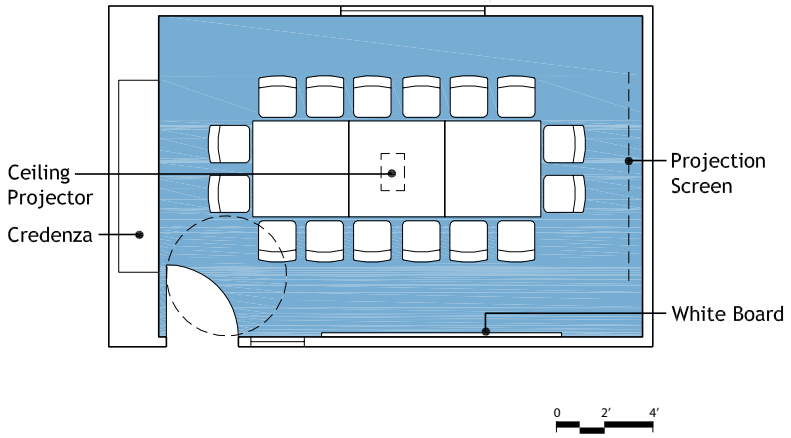
SYSTEMS

ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	• Electric roll-down projection screen • Ceiling mounted digital projector • Ceiling mounted speakers • Video interface infrastructure
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	• 1 White board, 12' x 4' • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 16 Task chairs • 3 Split tables • Credenza
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Provide blackout capability at windows • Banquette located outside of room for catering preparations

DIAGRAM



CODE	CR-4

GENERAL

SPACE NAME	Conference Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	Conference room for private TEP conversations
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Located in TEP suite

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

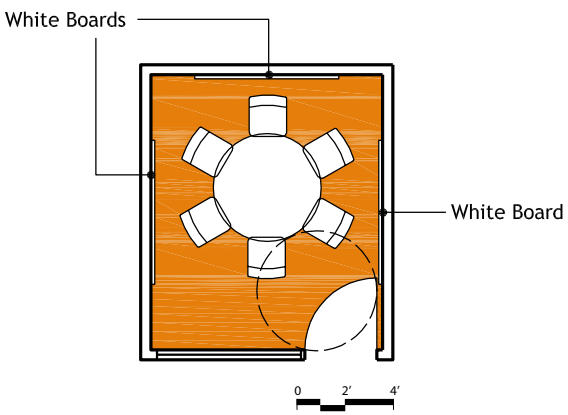
SYSTEMS

ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	• 3 White boards, 6’ x 4’
MOVABLE EQUIPMENT AND FURNITURE	• 6 Task chairs • 1 54” Table
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Glazing should be provided adjacent to door for visual room supervision

DIAGRAM



CODE	CS-1

GENERAL

SPACE NAME	Classroom Support
ASSIGNABLE AREA (ASF)	240
FUNCTION	Storage of classroom equipment and rolling carts
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Near classrooms

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

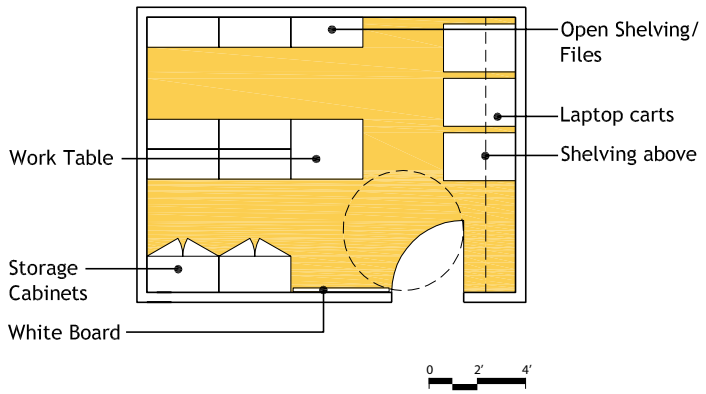
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Controlled access
MEP/TELECOM	• Provide dedicated circuit for laptop recharging carts • Provide data ports at laptop charging station

EQUIPMENT

FIXED EQUIPMENT	• 1 White board, 4’ x 4’
MOVABLE EQUIPMENT AND FURNITURE	• Laptop carts • Work table • Storage cabinets (lockable) • Open shelving/files
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	CS-2

GENERAL

SPACE NAME	Classroom Storage
ASSIGNABLE AREA (ASF)	65
FUNCTION	Storage of tables and chairs
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Between large and small classrooms

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

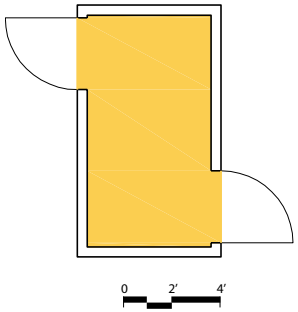
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	None
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	EF-1

GENERAL

SPACE NAME	Entry Forum
ASSIGNABLE AREA (ASF)	1,500
FUNCTION	Building lobby, lounge
MIN. CEILING HEIGHT	Double height space
CRITICAL ADJACENCIES	At main building entry

MATERIALS

FLOOR	Decorative hard surface
CEILING	Painted GWB
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Yes
DOORS/FRAMES	Exterior: glazed

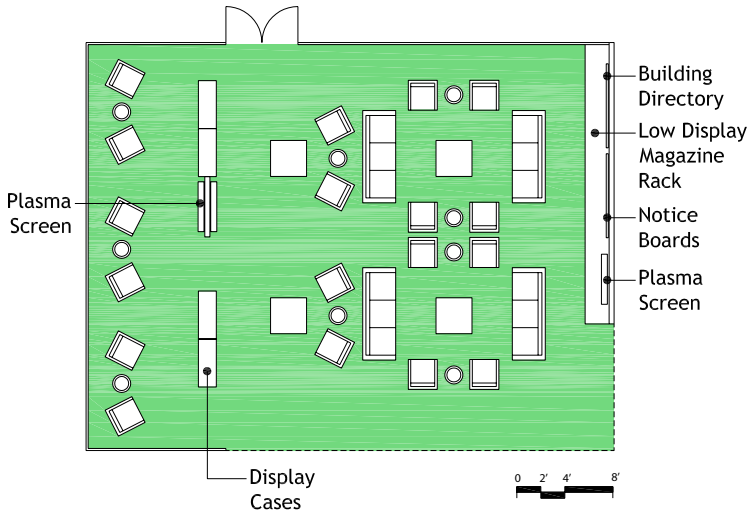
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	• Plasma screens
SECURITY	None
MEP/TELECOM	• Flush floor power/data receptacles • Locate data port in ceiling for Wireless Antenna • Locate power/data receptacle for Plasma Screen

EQUIPMENT

FIXED EQUIPMENT	• Notice board • Building directory • Display cases • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• Coffee tables • Lounge chairs • Lounge couches • Low magazine rack
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Wireless network • Provide passive solar protection

DIAGRAM



CODE	ES-1

GENERAL

SPACE NAME	Entry Service
ASSIGNABLE AREA (ASF)	300
FUNCTION	Building lobby service
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to Entry Forum

MATERIALS

FLOOR	Resilient
CEILING	Painted GWB
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Yes
DOORS/FRAMES	None

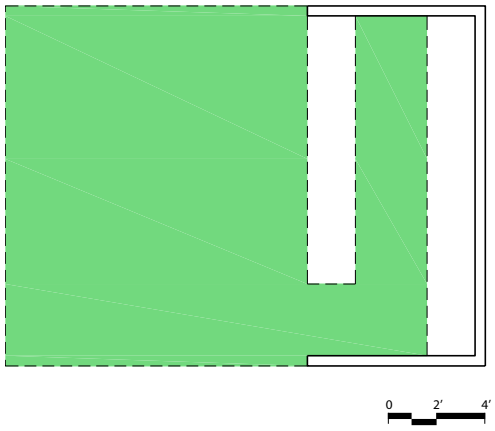
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	Provide plumbing and electrical stub-outs

EQUIPMENT

FIXED EQUIPMENT	• Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	None
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	FL-1

GENERAL

SPACE NAME	Faculty Lounge
ASSIGNABLE AREA (ASF)	350
FUNCTION	Faculty lounge at building commons
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to Entry Forum

MATERIALS

FLOOR	Decorative hard surface
CEILING	Painted GWB
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

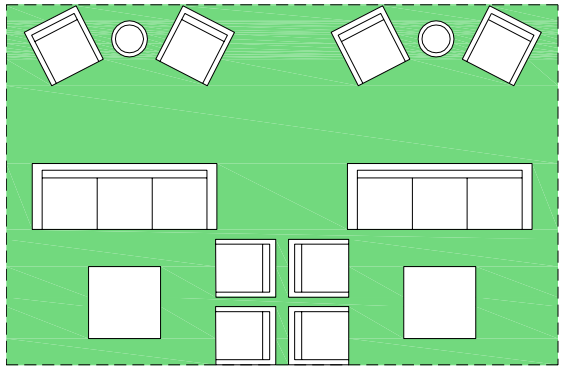
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Flush floor power/data receptacles • Locate data port in ceiling for Wireless Antenna

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Coffee tables • Lounge chairs • Lounge couches
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Wireless network

DIAGRAM



CODE	LB-1

GENERAL

SPACE NAME	Open Laboratory
ASSIGNABLE AREA (ASF)	1,400
FUNCTION	Hybrid computer laboratory with distance learning capabilities, shared between GSOE/SPP
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Not necessary, but should be considered
DOORS/FRAMES	Wood door/aluminum frame with sidelight

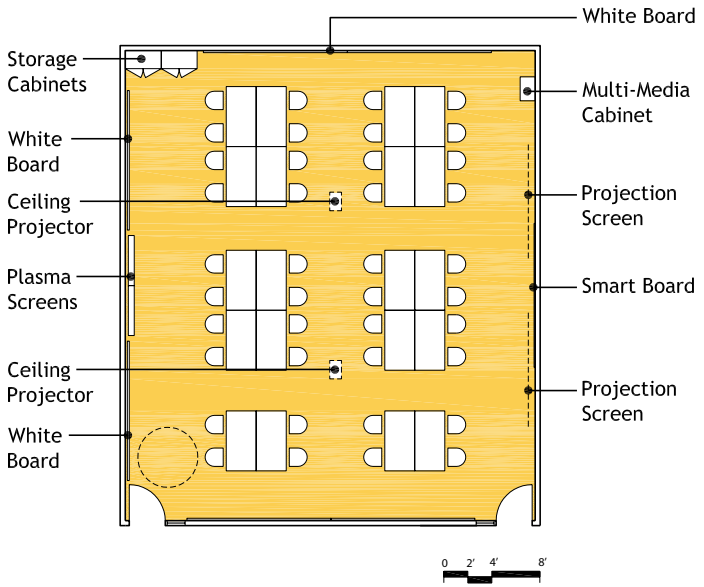
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	• 2 Electric roll-down projection screens • 2 Ceiling mounted digital projectors • Ceiling mounted speakers • Wall-mounted plasma screens • Smart board • Video interface infrastructure • Video-conferencing cameras
SECURITY	Controlled access
MEP/TELECOM	• Power and data outlets on all walls • 6 dedicated data ports to support multi-media cabinet technology

EQUIPMENT

FIXED EQUIPMENT	• 2 White boards, 12’ x 4’ • 2 White Boards, 24’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 40 Task chairs • 20 Moveable tables • Multi-media cabinet with smart lecturn
BUILT-IN FEATURES	• Storage cabinets
SPECIAL REQUIREMENTS	• Provide blackout capability at windows

DIAGRAM



CODE	LB-2

GENERAL

SPACE NAME	Open Laboratory
ASSIGNABLE AREA (ASF)	1,050
FUNCTION	Open computer laboratory for GSOE
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Not necessary, but should be considered
DOORS/FRAMES	Wood door/aluminum frame

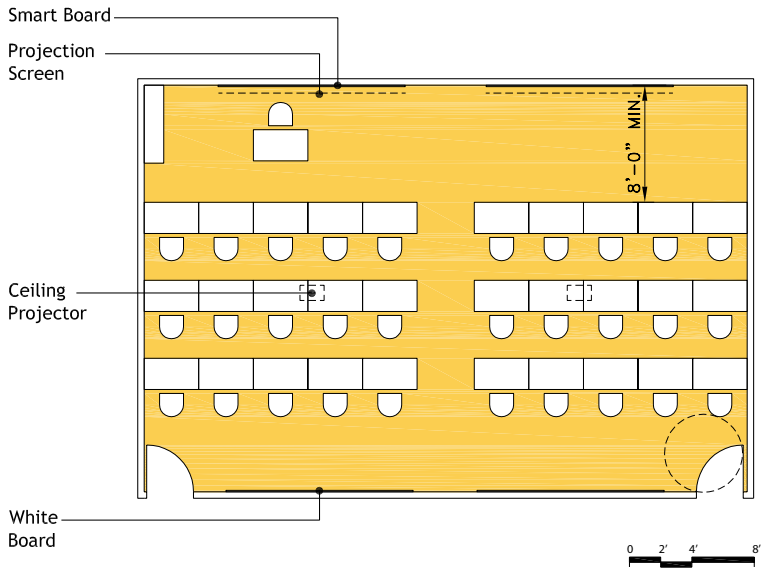
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	• 2 Electric roll-down projection screens • 2 Ceiling mounted digital projectors • Ceiling mounted speakers • Video interface infrastructure • 2 Smart boards
SECURITY	Controlled access
MEP/TELECOM	• Power and data outlets on all walls to support technology as shown • Locate power/data receptacle for Plasma Screen • 6 dedicated data ports to support multi-media cabinet technology

EQUIPMENT

FIXED EQUIPMENT	• 2 White Boards, 12’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 30 Task chairs • 30 Computer stations, 4’W x 2’D • Multi-media cabinet with smart lecturn
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Provide blackout capability at windows

DIAGRAM



CODE	LB-3

GENERAL

SPACE NAME	Open Laboratory
ASSIGNABLE AREA (ASF)	600
FUNCTION	Teacher Education Program (TEP) Credentials laboratory
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Near TEP suite

MATERIALS

FLOOR	Linoleum
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

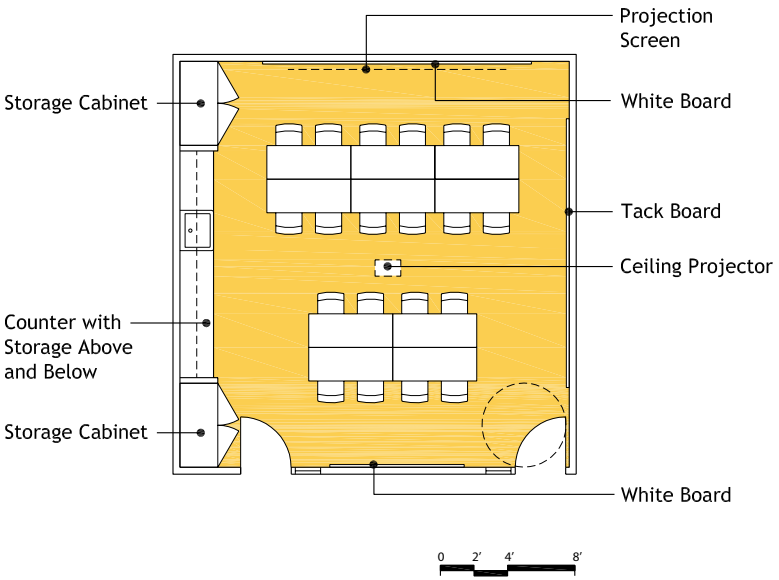
SYSTEMS

ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	• Electric roll-down projection screen • Ceiling mounted digital projector • Ceiling mounted speakers • Video interface infrastructure
SECURITY	Controlled access
MEP/TELECOM	• Sink • Multiple lighting controls

EQUIPMENT

FIXED EQUIPMENT	• 2 White boards, 12’ x 4’ • 1 Tack board, 12’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 20 Task chairs • 10 Moveable tables
BUILT-IN FEATURES	• Storage Cabinets • Counter with storage above and below
SPECIAL REQUIREMENTS	• Provide blackout capability at windows

DIAGRAM



CODE	MR-1

GENERAL

SPACE NAME	Mail Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	Mail receiving and faculty mailboxes
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Located in Faculty Support suite

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

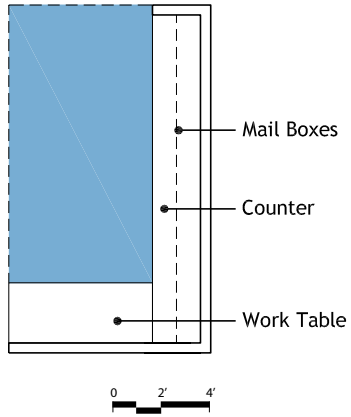
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Provide power and data ports at counter height

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Worktable • Mailboxes
BUILT-IN FEATURES	• Counter
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	MR-2

GENERAL

SPACE NAME	Mail Room
ASSIGNABLE AREA (ASF)	150
FUNCTION	Mail/copy in SPP Dean's office
MIN. CEILING HEIGHT	9'-0"
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

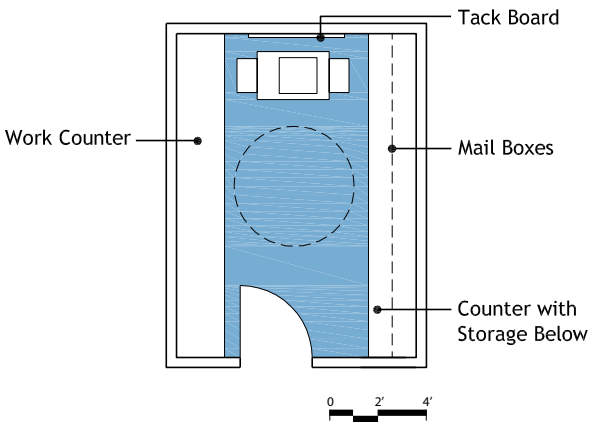
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Power and data outlets for photocopier

EQUIPMENT

FIXED EQUIPMENT	• Tack board
MOVABLE EQUIPMENT AND FURNITURE	• Mailboxes • Photocopier
BUILT-IN FEATURES	• Work counter with storage below
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	OB-1

GENERAL

SPACE NAME	Observation Room
ASSIGNABLE AREA (ASF)	80
FUNCTION	Clinic observation room
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to testing room

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	One-way mirror
DOORS/FRAMES	Wood door/aluminum frame

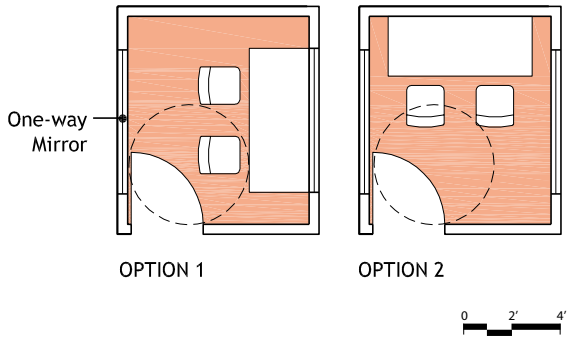
SYSTEMS

ACOUSTICS	Provide for sound privacy
A/V EQUIPMENT	None
SECURITY	Controlled access
MEP/TELECOM	• Power and data outlets on wall

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Table • 2 Task chairs
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	PO-1

GENERAL

SPACE NAME	Private Office
ASSIGNABLE AREA (ASF)	130
FUNCTION	Private office for faculty
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to research spaces

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Yes
DOORS/FRAMES	Wood door/aluminum frame with sidelight

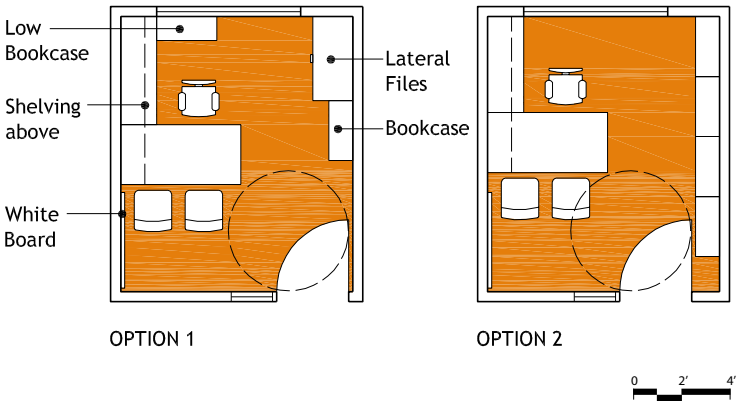
SYSTEMS

ACOUSTICS	Provide sound privacy
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Power and data outlets on wall

EQUIPMENT

FIXED EQUIPMENT	• White board • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• Task chair • L-shaped desk with overhead storage • Lateral files • Bookcases • Task lamp
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	PO-2

GENERAL

SPACE NAME	Private Office
ASSIGNABLE AREA (ASF)	150
FUNCTION	Private office for Directors and Associate Deans
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Yes
DOORS/FRAMES	Wood door/aluminum frame with sidelight

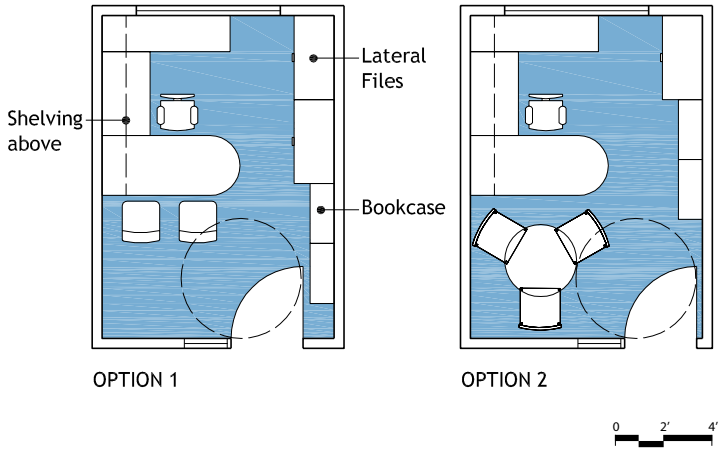
SYSTEMS

ACOUSTICS	Provide for sound privacy
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Power and data outlets on wall

EQUIPMENT

FIXED EQUIPMENT	• Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• U-shaped desk with overhead storage • Task chairs • Lateral files • Bookcases • Round table (optional) • Task lamp
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	PO-3

GENERAL

SPACE NAME	**Private Office**
ASSIGNABLE AREA (ASF)	200
FUNCTION	Private office for the Deans
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Yes
DOORS/FRAMES	Wood door/aluminum frame with sidelight

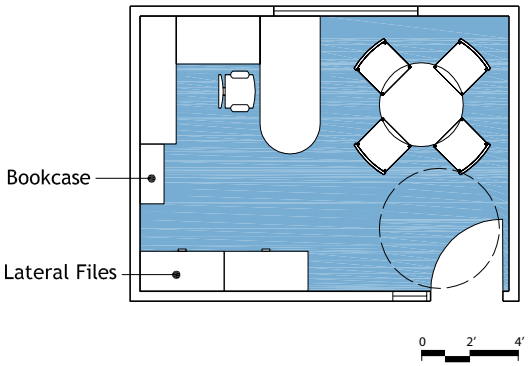
SYSTEMS

ACOUSTICS	Provide sound privacy
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Power and data outlets on wall

EQUIPMENT

FIXED EQUIPMENT	• Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 5 Task chair • 42” Table • U-shaped desk with overhead storage • 2 Lateral files • Bookcase • Task lamp
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	PO-4

GENERAL

SPACE NAME	Private Office
ASSIGNABLE AREA (ASF)	130
FUNCTION	Private office for professional staff
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Desirable, but not necessary
DOORS/FRAMES	Wood door/aluminum frame with sidelight

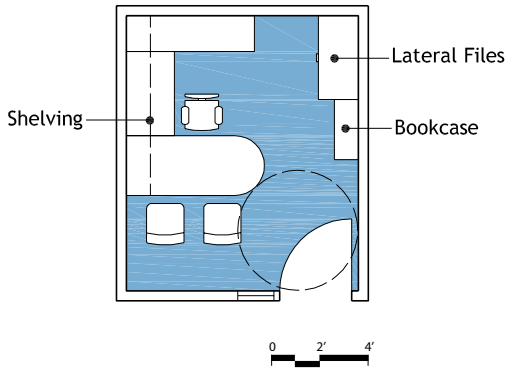
SYSTEMS

ACOUSTICS	Provide for sound privacy
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Power and data outlets on wall

EQUIPMENT

FIXED EQUIPMENT	• Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• U-shaped desk with overhead storage • 3 Task chairs • Lateral file • Bookcase • Task lamp
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	PO-5

GENERAL

SPACE NAME	Private Office
ASSIGNABLE AREA (ASF)	130
FUNCTION	Private office for lecturers (2 per office) and teaching assistants (3 per office)
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Yes
DOORS/FRAMES	Wood door/aluminum frame with sidelight

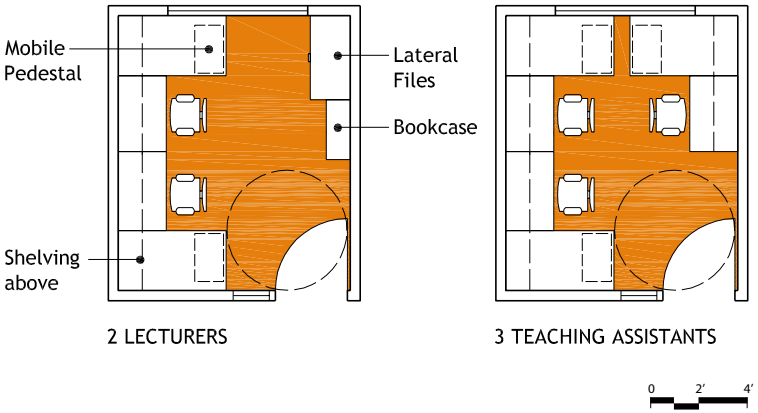
SYSTEMS

ACOUSTICS	Provide sound privacy
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Power and data outlets on wall

EQUIPMENT

FIXED EQUIPMENT	• Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 2 or 3 Task chairs • L-shaped desks with overhead storage • Lateral file • Bookcase • 2 or 3 Mobile pedestals • Task lamp
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	RC-1

GENERAL

SPACE NAME	Resource Center
ASSIGNABLE AREA (ASF)	750
FUNCTION	Place to access books, journals, digital materials
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to Resource Center meeting rooms, overlooking Entry Forum

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame

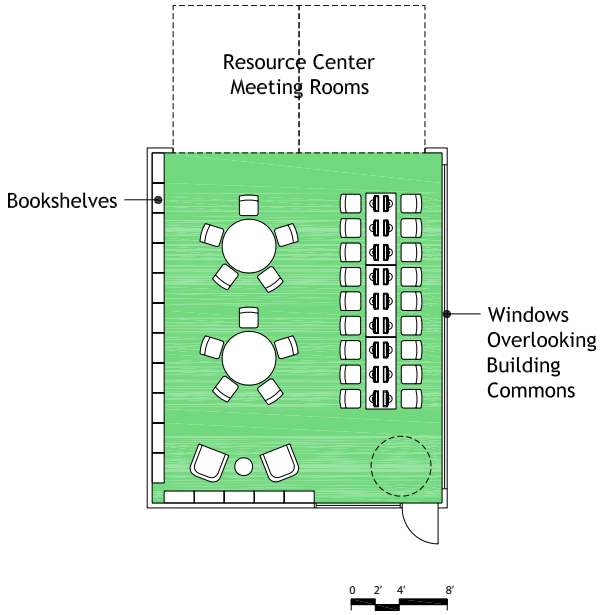
SYSTEMS

ACOUSTICS	Provide for sound privacy
A/V EQUIPMENT	None
SECURITY	Controlled access
MEP/TELECOM	• Flush floor power/data receptacles

EQUIPMENT

FIXED EQUIPMENT	• Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 3 Computer tables • 28 Task chairs • 54” Tables • Coffee table • Lounge seats • Bookshelves
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	RC-1A

GENERAL

SPACE NAME	Resource Center Meeting Room
ASSIGNABLE AREA (ASF)	120
FUNCTION	Meetings for 5-6 people
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to Resource Center

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Desirable, but not necessary
DOORS/FRAMES	Wood door/aluminum frame with sidelight

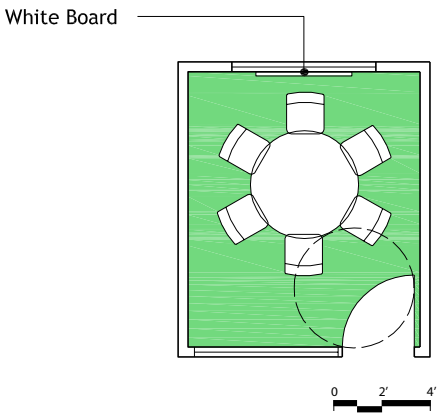
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Flush floor power/data receptacles

EQUIPMENT

FIXED EQUIPMENT	• White board • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 6 Task chairs • 54” Table
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Sign-up sheet as part of room identification graphics (refer to UCR Campus Sign Program, dated 1/4/08)

DIAGRAM



CODE	RP-1

GENERAL

SPACE NAME	Reception
ASSIGNABLE AREA (ASF)	130
FUNCTION	Reception area for clinic
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to clinic waiting area

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Desirable
DOORS/FRAMES	None

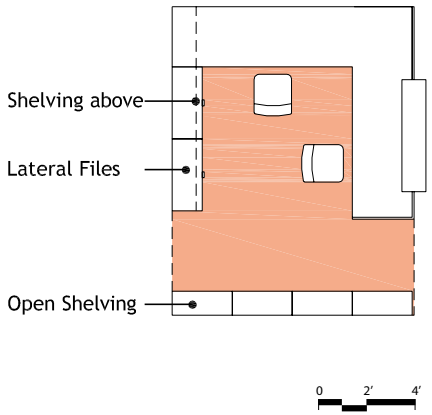
SYSTEMS

ACOUSTICS	None
A/V EQUIPMENT	None
SECURITY	Panic/emergency button at desk
MEP/TELECOM	• Flush floor power/data receptacles

EQUIPMENT

FIXED EQUIPMENT	• Security monitors • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 4 Open shelves • 2 Task chairs • 2 Lateral files
BUILT-IN FEATURES	• Reception counter with shelving above. Provide duplex receptacles above and below counter.
SPECIAL REQUIREMENTS	• Desk located to control entry to clinic

DIAGRAM



CODE	RR-1

GENERAL

SPACE NAME	Restroom
ASSIGNABLE AREA (ASF)	75
FUNCTION	Clinic restroom
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Ceramic tile
CEILING	Moisture-resistant GWB
WALLS/BASE	Ceramic tile wainscot
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

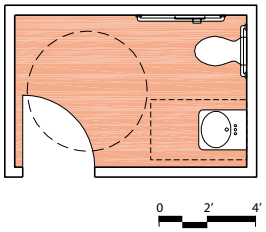
SYSTEMS

ACOUSTICS	Provide for sound privacy
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Smaller fixtures for kid use

EQUIPMENT

FIXED EQUIPMENT	• Toilet accessories
MOVABLE EQUIPMENT AND FURNITURE	None
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	RS-1

GENERAL

SPACE NAME	Research Center
ASSIGNABLE AREA (ASF)	980
FUNCTION	Research space for School of Public Policy
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Yes
DOORS/FRAMES	Wood door/aluminum frame

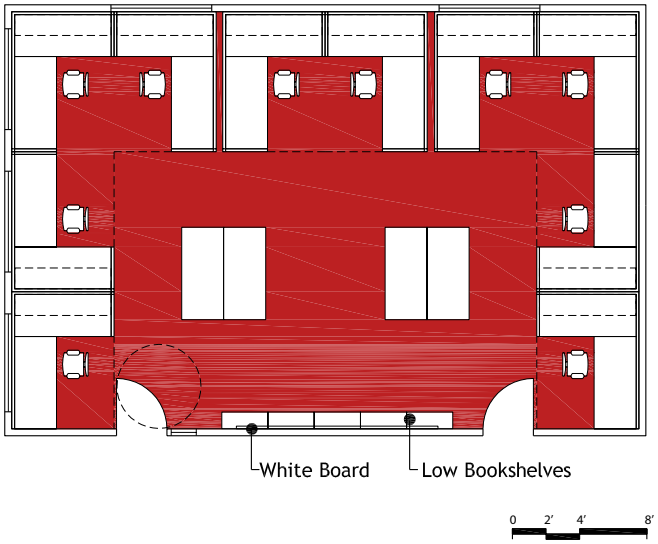
SYSTEMS

ACOUSTICS	None
A/V EQUIPMENT	None
SECURITY	Controlled access
MEP/TELECOM	• Flush floor power/data receptacles

EQUIPMENT

FIXED EQUIPMENT	• 1 White board, 12’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 10 Task chairs • 10 Workstations • 4 Tables • Low bookshelves
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	SE-1

GENERAL

SPACE NAME	Server Room
ASSIGNABLE AREA (ASF)	150
FUNCTION	Shared server room between GSOE/SPP
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to IT office and IT workroom

MATERIALS

FLOOR	Resilient, anti-static
CEILING	Exposed
WALLS/BASE	Painted GWB and plywood/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

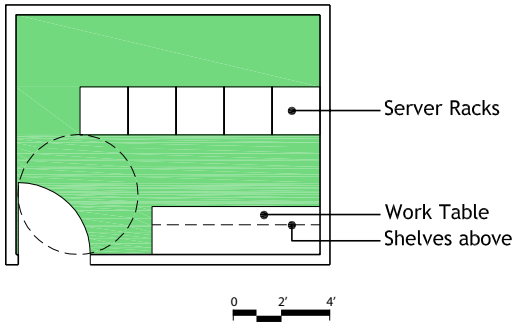
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Controlled access, alarmed
MEP/TELECOM	• Emergency backup outlets on several circuits • 24 hour HVAC • Separate thermostat • Power and data ports to support servers and at work table

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Work table
BUILT-IN FEATURES	• Server racks • Shelves
SPECIAL REQUIREMENTS	• Fiber network connection

DIAGRAM



CODE	SL-1

GENERAL

SPACE NAME	Student Lounge
ASSIGNABLE AREA (ASF)	350
FUNCTION	Student lounge at building commons
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to Entry Forum

MATERIALS

FLOOR	Decorative hard surface
CEILING	Painted GWB
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

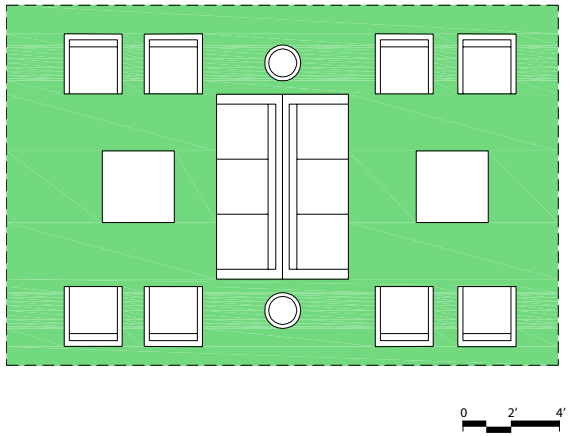
SYSTEMS

ACOUSTICS	None
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Flush floor power/data receptacles • Locate data port in ceiling for Wireless Antenna

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Lounge couches • Coffee tables • Lounge seats
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	• Wireless network

DIAGRAM



CODE	SM-1

GENERAL

SPACE NAME	Seminar Room
ASSIGNABLE AREA (ASF)	900
FUNCTION	Seminar/conference for 30
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

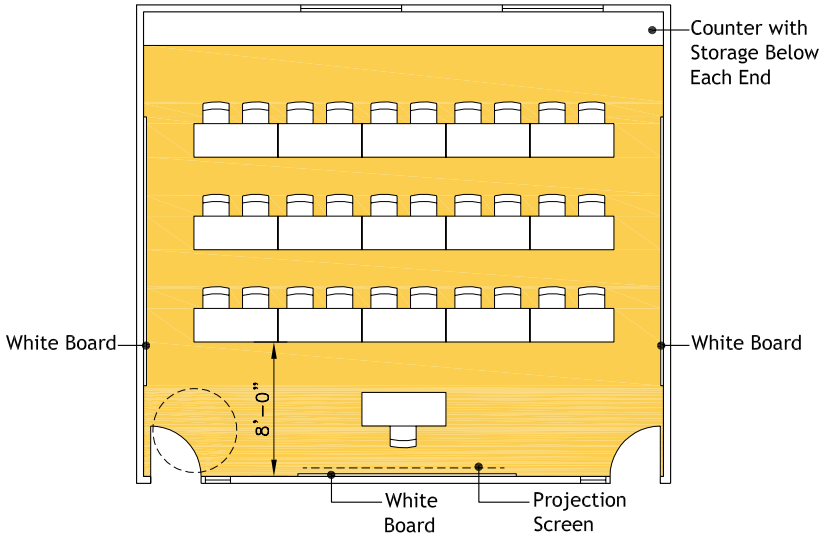
FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient; provide chair rails
WINDOWS	Desirable
DOORS/FRAMES	Wood door/aluminum frame with sidelight

SYSTEMS

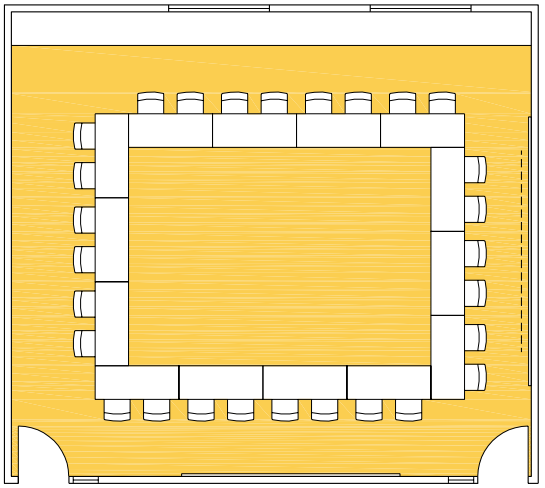
ACOUSTICS	Walls: STC 45, NC25-30
A/V EQUIPMENT	• Electric roll-down projection screen • Ceiling mounted digital projector • Ceiling mounted speakers • Video interface infrastructure
SECURITY	Key lock
MEP	• Focusable, zoned lighting • Flush floor power/data receptacles

EQUIPMENT

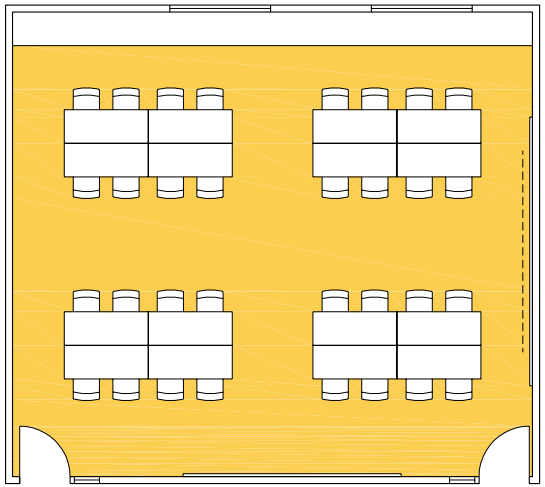
FIXED EQUIPMENT	• 2 White boards, 16’ x 4’ • 1 White board, 9’ x 4’ • Roller shades at windows
MOVABLE EQUIPMENT AND FURNITURE	• 31 Task chairs • 16 Moveable tables
BUILT-IN FEATURES	• Counter with storage below at each end
SPECIAL REQUIREMENTS	• Provide blackout capability at windows



INSTRUCTIONAL LAYOUT



SEMINAR LAYOUT



COLLABORATIVE LAYOUT

CODE	ST-1

GENERAL

SPACE NAME	Storage Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	GSOE Dean and Business Office kitchenette and storage
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Optional

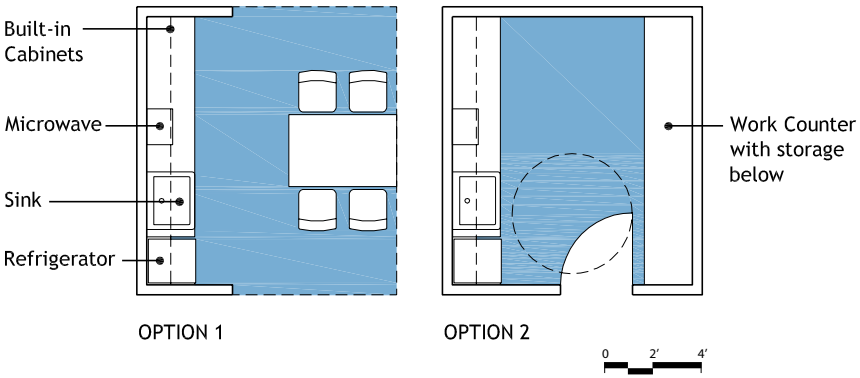
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Sink

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Refrigerator • Microwave • 4 Chairs (option 1) • Table (option 1)
BUILT-IN FEATURES	• Counter with cabinets above and below
SPECIAL REQUIREMENTS	• Additional storage needs handled within suite

DIAGRAM



CODE	ST-2

GENERAL

SPACE NAME	Storage Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	TEP storage to support “hoteling” concept
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Located in TEP suite

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

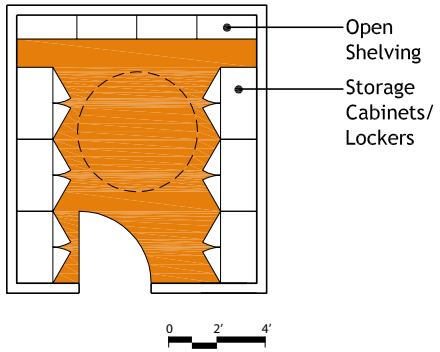
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• 6 Storage cabinets/lockers • Open shelving
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	ST-3

GENERAL

SPACE NAME	Storage Room
ASSIGNABLE AREA (ASF)	75
FUNCTION	Clinic storage
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

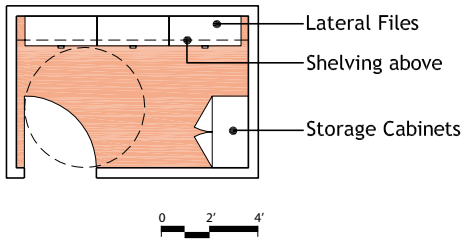
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Controlled access
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• 3 Lateral files • Storage cabinet • Open shelving
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	ST-4

GENERAL

SPACE NAME	Storage Room
ASSIGNABLE AREA (ASF)	260
FUNCTION	Storage of GSOE archives
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

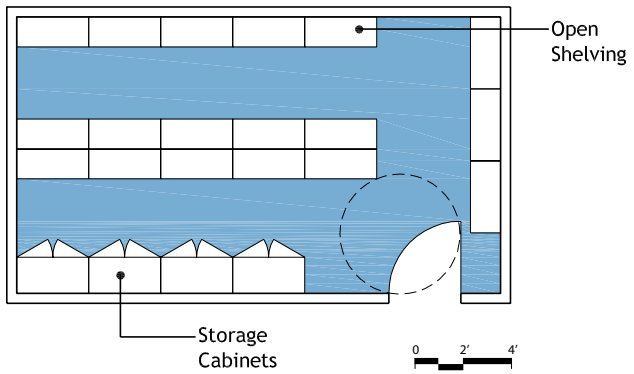
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• 4 Storage cabinets • Open shelving
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	ST-5

GENERAL

SPACE NAME	Storage Room
ASSIGNABLE AREA (ASF)	150
FUNCTION	SPP Dean's Office file storage
MIN. CEILING HEIGHT	9'-0"
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

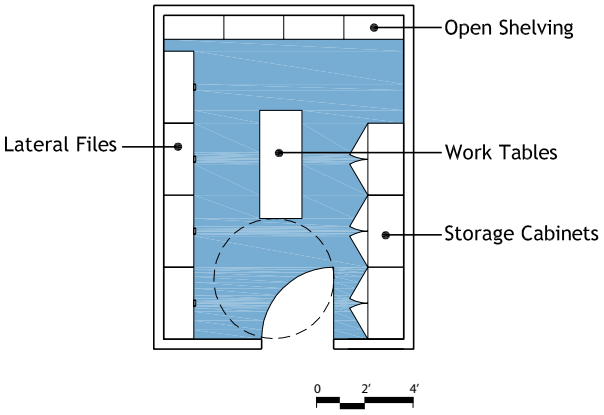
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• 4 Lateral files • 3 Storage cabinets • Work table
BUILT-IN FEATURES	• Open shelving
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	ST-6

GENERAL

SPACE NAME	Storage Room
ASSIGNABLE AREA (ASF)	65
FUNCTION	SPP storage and kitchenette
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

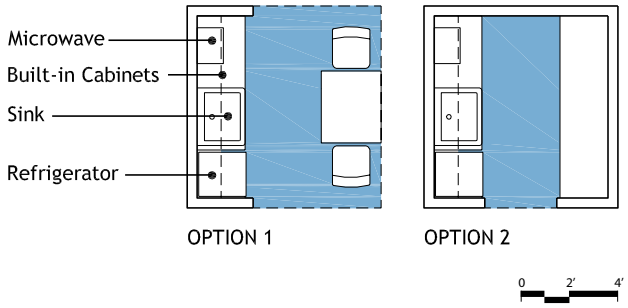
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Sink • Provide power and data ports at counter height

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Refrigerator • Microwave • Table (option 1) • 2 Chairs (option 1)
BUILT-IN FEATURES	• Counter with cabinets above and below
SPECIAL REQUIREMENTS	• Additional storage needs handled within suite

DIAGRAM



CODE	TR-1

GENERAL

SPACE NAME	Testing Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	Small clinical testing room
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to observation room

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	One-way mirror
DOORS/FRAMES	Wood door/aluminum frame

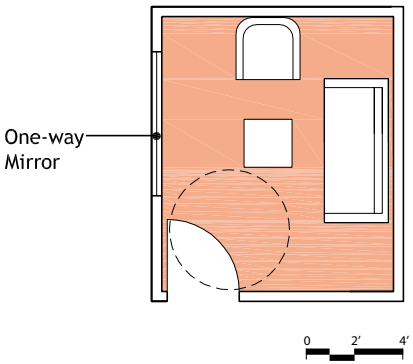
SYSTEMS

ACOUSTICS	Provide sound privacy
A/V EQUIPMENT	• Cameras
SECURITY	Controlled access
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Lounge seat • Couch • Coffee table
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	TR-2

GENERAL

SPACE NAME	Testing Room
ASSIGNABLE AREA (ASF)	200
FUNCTION	Large clinical testing room
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to observation room

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	One-way mirrors
DOORS/FRAMES	Wood door/aluminum frame

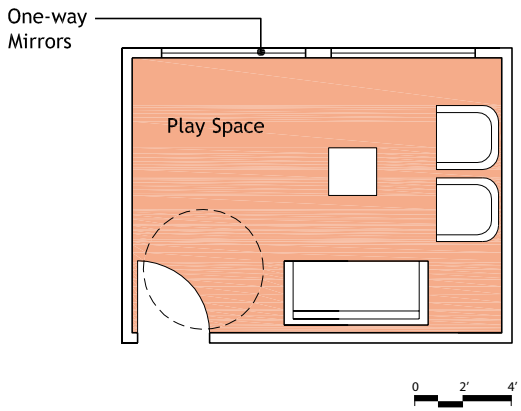
SYSTEMS

ACOUSTICS	Provide sound privacy
A/V EQUIPMENT	• Cameras
SECURITY	Controlled access
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Lounge seat • Couch • Coffee table
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	VC-1

GENERAL

SPACE NAME	Video Control Room
ASSIGNABLE AREA (ASF)	200
FUNCTION	Clinic use of video viewing and storage
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

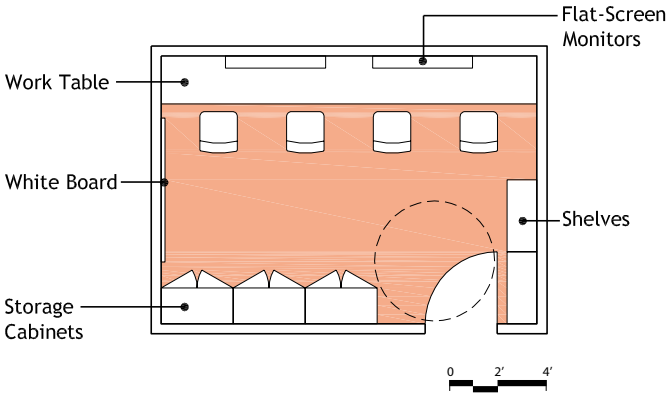
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	• Flat-screen monitors
SECURITY	Controlled access
MEP/TELECOM	• Power and data outlets for flat-screen monitors

EQUIPMENT

FIXED EQUIPMENT	• White board
MOVABLE EQUIPMENT AND FURNITURE	• 4 Task chairs • 3 Storage cabinets • Work table • Shelves
BUILT-IN FEATURES	• Open shelving
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WR-1

GENERAL

SPACE NAME	Work Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	GSOE Dean and Business Offices shared copy and storage area
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

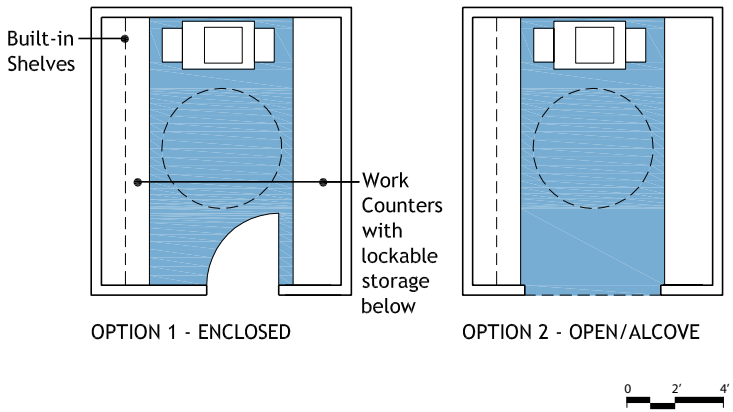
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	No special requirements
MEP/TELECOM	• Power and data outlets for photocopier

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Photocopier
BUILT-IN FEATURES	• Counters with cabinets below • Built-in shelves on one side
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WR-2

GENERAL

SPACE NAME	Work Room
ASSIGNABLE AREA (ASF)	150
FUNCTION	Student Services work room with kitchenette
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

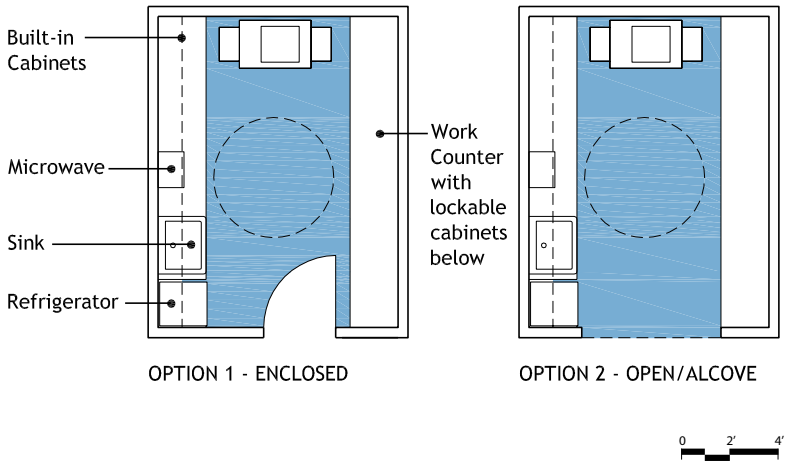
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Sink • Power and data outlets for photocopier

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Photocopier • Refrigerator • Microwave
BUILT-IN FEATURES	• Counters with lockable cabinets below • Built-in cabinets above on one side
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WR-3

GENERAL

SPACE NAME	Work Room
ASSIGNABLE AREA (ASF)	150
FUNCTION	TEP work room for supervisors
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	Desirable
DOORS/FRAMES	None

SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	• Power and data outlets for photocopier

EQUIPMENT

FIXED EQUIPMENT

- White board
- Roller shades at windows

MOVABLE EQUIPMENT AND FURNITURE

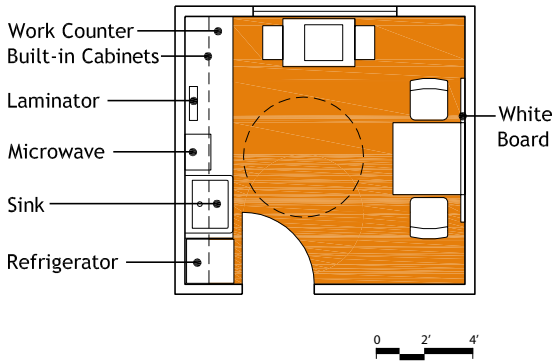
- Refrigerator
- Sink
- Microwave
- Laminator
- 2 Task chairs
- Table
- Photocopier

BUILT-IN FEATURES

- Counter with cabinets above and below

SPECIAL REQUIREMENTS None

DIAGRAM



CODE	WR-4

GENERAL

SPACE NAME	Work Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	IT work room for storage of equipment carts and machines in transition
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to server room and near IT manager’s office

MATERIALS

FLOOR	Resilient
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

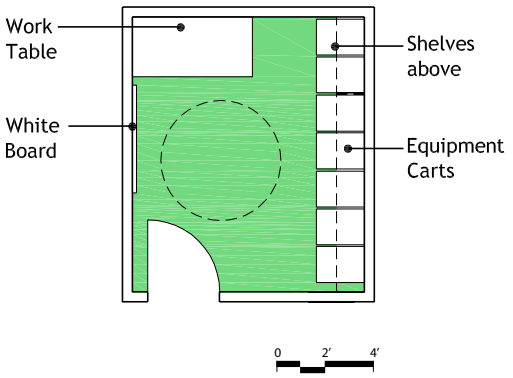
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	Key lock
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	• White board
MOVABLE EQUIPMENT AND FURNITURE	• Equipment carts • Work table
BUILT-IN FEATURES	• Open shelving
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WR-5

GENERAL

SPACE NAME	Work Room
ASSIGNABLE AREA (ASF)	130
FUNCTION	Work room and storage of student project boxes
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Located in Student Services suite, adjacent to waiting area

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	Wood door/aluminum frame

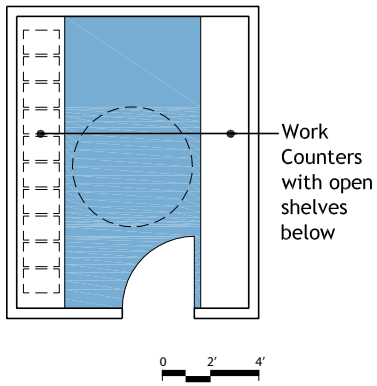
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Provide power and data outlets at work counter height

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	None
BUILT-IN FEATURES	• Work counters with open shelving below
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WS-1

GENERAL

SPACE NAME	Work Station
ASSIGNABLE AREA (ASF)	50
FUNCTION	SPP Graduate student work station
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

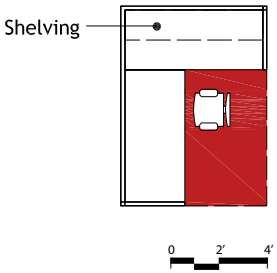
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Provide power and data outlets at work surface height

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Task chair • Work surface and storage per diagram • Work station: with potential for work surfaces, power and data, storage above and below, task light and keyboard drawer. See diagram. Panels may be glass or fabric covered, varying heights.
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WS-2

GENERAL

SPACE NAME	Work Station
ASSIGNABLE AREA (ASF)	65
FUNCTION	Typical work station
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	None

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

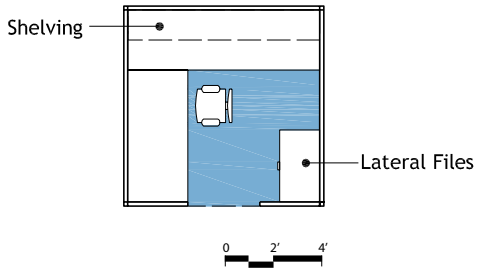
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	• Provide power and data outlets at work surface height

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Task chair • Work surface and storage per diagram • Work station: with potential for work surfaces, power and data, storage above and below, task light and keyboard drawer. See diagram. Panels may be glass or fabric covered, varying heights.
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WT-1

GENERAL

SPACE NAME	Waiting Area
ASSIGNABLE AREA (ASF)	130
FUNCTION	Waiting area
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Located in Student Services suite

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

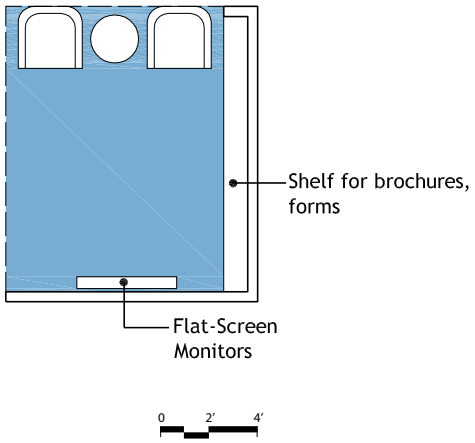
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	• Flat panel monitor
SECURITY	None
MEP/TELECOM	• Power and data outlets for flat-screen monitor

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Coffee table • Lounge seats
BUILT-IN FEATURES	• Built-in shelf for brochures, forms
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WT-2

GENERAL

SPACE NAME	Waiting Area
ASSIGNABLE AREA (ASF)	200
FUNCTION	Shared waiting area in Dean and Business Offices
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to Dean’s Office reception

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

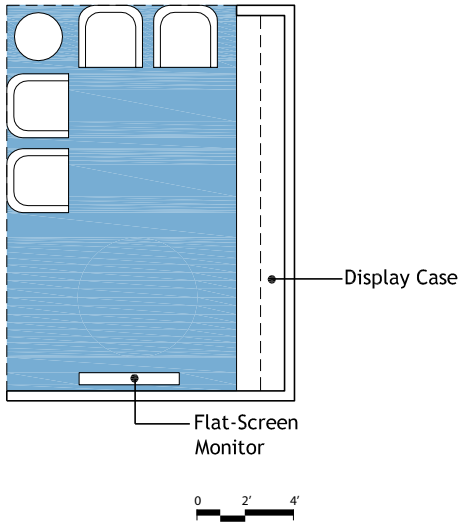
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	• Flat panel monitor
SECURITY	None
MEP/TELECOM	• Power and data outlets for flat-screen monitor

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Coffee table • Lounge seats
BUILT-IN FEATURES	• Display case
SPECIAL REQUIREMENTS	None

DIAGRAM



CODE	WT-3

GENERAL

SPACE NAME	Waiting Area
ASSIGNABLE AREA (ASF)	150
FUNCTION	Waiting area for clinic
MIN. CEILING HEIGHT	9’-0”
CRITICAL ADJACENCIES	Adjacent to reception

MATERIALS

FLOOR	Carpet
CEILING	Acoustical panels in suspended grid
WALLS/BASE	Painted GWB/Resilient
WINDOWS	None
DOORS/FRAMES	None

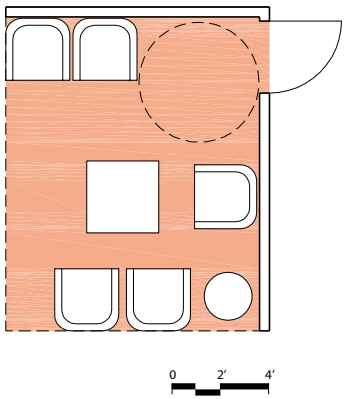
SYSTEMS

ACOUSTICS	No special requirements
A/V EQUIPMENT	None
SECURITY	None
MEP/TELECOM	No special requirements

EQUIPMENT

FIXED EQUIPMENT	None
MOVABLE EQUIPMENT AND FURNITURE	• Lounge seats • Coffee tables
BUILT-IN FEATURES	None
SPECIAL REQUIREMENTS	None

DIAGRAM



4.1

SYSTEM NARRATIVES

The following section contains narratives for:

- Landscape
- Civil
- Structural
- Mechanical System
- Plumbing and Fire Protection Systems
- Electrical

LANDSCAPE

Existing Conditions

The UC Riverside West Campus Graduate and Professional Center (WCG&PC) site is currently located among agricultural fields managed by the University's Agricultural Operations (AgOps) division for agricultural teaching and research. The eastern portion of the site includes rows of *Jojoba spp*. shrubs, while the western portion of the site is currently not planted and is covered with bare soil.

2008 Campus Aggregate Master Planning Study (CAMPS)

The landscape proposed in CAMPS for the areas near the project site includes the Gage Canal Mall to the west, and smaller landscape spaces between the WCG&PC and adjacent buildings. The Gage Canal Mall will be a sinuous landscape space that follows the route of the Gage Canal, which will flow underneath this space in a covered culvert. This curvilinear north-south trending space will connect the axial east-west trending pedestrian malls proposed for the West Campus. CAMPS, following direction provided in the 2005 Campus LRDP and Campus Design Guidelines, encourages the creation of shaded courtyards and plazas that reflect the character of outdoor spaces established in the historic core of the East Campus.

Landscape Plan

The landscape plan for the WCG&PC proposes the following spaces:

1. An ***entry plaza*** at the west side of the building. This plaza welcomes faculty, staff, students, and visitors to the front door and lobby of the building. This space can be combined with similar spaces serving the proposed conference center north of Everton Place to create both a public space at the intersection of Everton Place and the Gage Canal Mall and a gateway into the West Campus. This space also serves as a forecourt from the Gage Canal Mall to the building. The materials and furnishings in this plaza will include poured-in-place integral-colored concrete, concrete unit pavers, fixed seating, site lighting, trash receptacles, shade trees, and low-water use/ drought-tolerant plants.
2. A ***courtyard*** immediately south of, and framed by, the WCG&PC. This space provides the exterior component to a shared indoor/outdoor space where faculty, staff, students, and visitors within the Graduate School of Education and School of Public Policy communities can relax, mingle, and form informal collaborations. In the future, this courtyard will be framed by the northern façade of the proposed Building W4 to provide a shared courtyard space for both buildings. The materials and furnishings in the courtyard will include concrete unit pavers, movable or fixed tables and chairs, site lighting, trash receptacles, shade trees, and low-water use/drought-tolerant plants.
3. An ***eastern plaza*** immediately east of the WCG&PC. This space welcomes faculty, staff, students, and visitors from the parking garage and pedestrian bridge over Interstate 215/State Route 60 proposed in CAMPS. The materials and furnishings in this plaza will include poured-in-place integral-colored concrete, fixed seating, site lighting, trash receptacles, shade trees, and low-water use/ drought-tolerant plants.
4. A s***ervice area and parking lot*** at the eastern side of the WCG&PC. This area will provide access to the electrical and mechanical rooms at the east side of the building, emergency access to the northeast and east sides of the building, and limited parking for Graduate School of Education clinic visitors. Initially, access to this area will be from along the south side of the building. However, as the Campus LRDP and CAMPS are implemented, access to this service area will be from the proposed service drive to the east. The materials and furnishings for this area will include asphalt pavement and site lighting.
5. A temporary ***emergency access road*** along the west and south side of the parcel. This road will allow emergency and service access from Everton Place across the Gage Canal. The materials and furnishings for this road will include asphalt or resin pavement and site lighting.

The remainder of the landscape spaces will be transitional spaces between the building and the adjacent proposed campus landscape with low-water use and drought-tolerant plants included on the campus plant palette wherever possible. Planting on the project parcel in areas not adjacent to the building will be important for erosion and dust control as CAMPS is implemented over the years.

CIVIL

Existing Site Conditions

The proposed building shall be sited to avoid the existing City-owned electrical transmission poles and wires. The electrical easement document shall be followed for building restrictions. Initial conversations with Riverside Public Utilities provided information that requires at least 12 feet of clear space from the centerline of the pole. The 40 foot easement width exceeds this dimension and will take precedence.

Several cylindrical concrete agriculture irrigation components currently extend up about a foot from ground surface around the site. Demolition of these components around the building and adjacent areas will be required prior to new development on the site. The integrity of the remaining system must be retained to service adjacent fields.

Coordination with Caltrans will be required to obtain access from Everton Place. Extending Everton Place east would require an agreement (easement) or possible acquisition of the Caltrans Yard.

According to the 2008 West Campus Infrastructure Development Study (WCIDS), the Gage Canal will eventually be piped and capped for its entire length adjacent to this project. The facility design effort will need to be coordinated with the proposed Gage Canal mall improvements to provide a continuous relation at this west edge.

Exterior Fire and Domestic Water Distribution System

Per the West Campus Infrastructure Development Study a new water main will extend through Everton Place and also on the east side of the building through proposed access roadways. Initially, this design will utilize the City water system, but will eventually tie into the East Campus water supply system.

Domestic and fire water will connect from the north side of the property from Everton Place. Both domestic and fire water sizing shall be based on plumbing demand sizes for the building. Proper connections and valves will be implemented from the infrastructure water main. Metering for the domestic and irrigation water connection for the building will be required.

Backflow preventers (double detector check assembly) will be required for the building domestic and fire water. The fire water service to the building will require a fire department connection and post indicator valve after the backflow preventer. This connection will require a fire hydrant within 50 feet of the fire department connection.

Concrete thrust blocking shall be provided at all pipe joints. Quantity of concrete and the area of bearing in undisturbed soil shall be as shown on the standard drawings or as indicated in National Fire Protection Association, NFPA 24.

National Fire Protection Association (NFPA): All fire service mains and appurtenances shall comply with NFPA Latest Edition. In addition, the Campus Fire Marshal requirements and input shall be followed for the design. Fire hydrant spacing will include design to accommodate 150 foot fire hose lays to all exterior portions of the building.

The irrigation system will be supplied by potable water from the campus infrastructure network on the West Campus. The system will be operated by a programmable controller linked to a central system, and equipped with moisture sensors and a rain gauge. All irrigation heads will be water-efficient components providing adequate irrigation to sustain plant growth and match precipitation rates. The irrigation heads will minimize overspray, excessive overwatering, and unwanted run-off over paved surfaces.

Exterior Sanitary Sewer System

Sanitary sewer per the West Campus Infrastructure Development Study will extend through Everton Place with a new 8 inch pipe. A sewer lateral will then be routed to service the new building. Sanitary sewer sizing for the lateral shall be based on plumbing demand sizes for the building.

The system consists of polyvinyl chloride (PVC) pipe, cleanouts, and connections. Cleanouts shall be installed at a maximum of 100 foot spacing.

All rules of the State Department of Health Services, relative to crossing and parallel lines shall be complied with. In addition, all UC Riverside Campus Design Standards shall be followed along with the California Plumbing Code.

Storm Drainage System

Long-term connections to proposed storm drain systems rely on subsequent West Campus Infrastructure Development projects. Based on the Study, there will be a new 24 inch reinforced concrete pipe installed at the south of Family Housing per the Phase 1A Infrastructure. The line will extend eastward along the NW mall to the NS walk, east of W5.

The short-term plan for the WCG&PC is to install a bioswale. The grassy bioswale will divert the storm water away from and around the building to the south and then disperse it in sheet flow similar to pre-construction conditions. Coordination with the proposed West Campus Infrastructure 1 project will be important for this portion of the project.

Area drain inlets shall be, with riser extensions and size adaptors as required for the depths needed to maintain positive drainage from the site. A drainage report during design shall indicate storm drain and inlet sizing.

Installation of post construction treatment control Best Management Practices for storm water quality and quantity will require input from the University and be directed by UCR's Storm Water Management Plan. Several options are currently available as treatment control such as hydrodynamic separator units, drainage inserts, biofilters, detention and/or retention basins, and filtration.

Storm water quantity may be addressed with the use of pervious paving, detention or retention basins, or other means as determined by required standard urban stormwater mitigation plans or water quality technical reports during design.

A Stormwater Pollution Prevention Plan will be required (over 1 acre disturbed) for this project, and shall be submitted to the State Water Resources Control Board along with a Notice of Intent.

STRUCTURAL

Design Criteria

Live loads:

Office/Classrooms:	80 psf
Stairs and Corridors:	100 psf
Roof Areas (without Equipment):	20 psf
Areas with Mechanical Equipment:	100 psf or equipment weight + 50 psf

Floor Vibration Criteria:
Walker-induced floor velocity - .005 G (acceleration)

Code:
California Building Code – 2007 CBC
Seismic Parameters per 2007 CBC and USGS Hazards Program:

Seismic Occupancy Category:	II
MCE Parameters:	Ss=1.5 g S_1 =.6g
Soil Profile:	Type SD
Site Coefficients:	Fa=1.0 Fv=1.5
Adjusted MCE Parameters:	SMs= 1.5g SM_1 = .9 g
Design Parameters:	S_{ds} = 1.0g, S_{d1} = .6g
Seismic Design Category:	D

Wind Analysis:

Basic wind speed	85 mph
Exposure	C
Importance Factor	I_w = 1.0

Selection of Basic Material Type

Typically, for low rise office/classroom construction, steel construction is favored over concrete for its speed of installation, flexibility of design and lower installed cost. Concrete becomes competitive with steel when there is a desire to have exterior concrete elements as the façade and the structural elements then serve a dual purpose, i.e. load bearing shear walls and façade. However, even in these circumstances it can become cost prohibitive if there is a desire to have a high degree of finish to the appearance of the concrete. For the purposes of this report, we have assumed that the structure will be steel wide flanges with concrete fill over steel decking.

Foundations

Isolated spread footing foundations are typical to this area. Tops of footings are normally depressed 18" below nominal floor line. Grade beams will be provided between footings that are part of the seismic lateral frames to tie the superstructure to the foundations. We anticipate that the footings will be supplemented by soil anchors to resist uplift induced by the seismic forces on the steel frame.

Material Properties:

a. Concrete: Normal Weight Concrete, *f'c* = 3000 psi
b. Soil Anchors: Dywidag high strength bars grouted into the soil 50-60 feet in depth

Floors

Ground floors:
Slab on Grade will be 5-6" thick with thickened edges at the perimeter of the building. The slab on grade is normally under-laid with a moisture barrier over a layer of crushed rock.

Material Properties:

a. Concrete: Normal Weight Concrete, *f'c* = 4000 psi
b. Vapor Barrier: 10 mil. *Stego* over 4-6" of AB grade crushed rock

Elevated slabs
3-1/4" light weight concrete fill over metal deck at occupied floors. 1-1/2" metal deck with no concrete fill at the roof, except areas supporting mechanical equipment which will have insulating concrete fill.

Material Properties:

a. Concrete: Light Weight Concrete, *f'c* = 4000 psi
b. Floor Decking is *Verco* type *W3*, 3" deep, 18 gauge
c. Roof Deck is *Verco* type *B*, formlock, 1 -1/2" deep, 18 gauge

Framing

Gravity Framing:
Wide flange beams varying in depth from 12”-24” deep. Wide flange columns will be 10-12” deep. With normal spans in the range of 21 to 28 feet, we anticipate the framing weight to be around 7-8 pounds per square foot.

Lateral Framing:
Brace frames are the most economical seismic resisting steel system. Buckling Restrained Braces can now be competitively bid and provide the least cost and highest performance braces on the market. Wide flange beams varying in depth from 18”-24” deep. Wide flange columns will be 14” deep. Braces will be 8”-12” square shapes. Lateral framing will add approximately 4-6 pounds per square foot to the steel gravity framing, not including braces.

Material Properties:

a. Wide Flange Steel: A992, grade 50
b. Steel Plates: Either A36, grade 36 or A572, grade 50 depending on the applications
c. Bucking Restrained Braces: Core properties will be specified at a yield strength of 42 ksi, with areas varying form 3-10 square inches.

MECHANICAL

Systems Design Philosophy

HVAC system components and distribution layouts will have the following characteristics:

1. Energy and resource efficient
2. Flexibility for future changes
3. Durability
4. Ease of maintenance
5. Reliability
6. Redundancy of critical components

Codes and Standards

California Building Code, 2007
UCR Campus Standards
California Mechanical Code, 2007
NFPA Codes, current editions, as applicable
ASHRAE Standard 62-2004 Ventilation for Acceptable Indoor Air Quality
ASHRAE Handbooks, current editions
SMACNA Duct Construction Standards

HVAC Design Criteria

Location: Riverside, CA
Latitude: 34.0° N 117.4° W
Elevation: 1,007 ft

Outside Design Conditions:

Summer: 110°FDB/68°FWB (per UCR standards)
Winter: 34°F DB

Indoor Design Conditions:

Occupancy	Summer	Winter
Conference Rooms/ Classrooms/Seminar rooms:	75°F DB, 50% RH*	70°F DB
Offices:	75°F DB, 50% RH*	70°F DB
Research Spaces:	75°F DB, 50% RH*	70°F DB
Computer Labs:	75°F DB, 50% RH*	70°F DB
Support Spaces:	75°F DB, 50% RH*	70°F DB
Telecom/Data Equip Rooms:	70°F DB, 35%-55% RH	70°F DB, 35%-55% RH
Mech/Elec:	95°F DB max	65°F min

* Humidity control is not required in general occupied spaces, but may be necessary in Telecom/Data Equip Rooms, as recommended by equipment manufacturers.
* Where radiant cooling is used, comfort conditions will be maintained by designing to the operative temperature which incorporates both air temperature (DB) and mean radiant temperature.

Outdoor Air Ventilation:

Minimum Outdoor Air Ventilation rate will be 20 cfm / occupant, as recommended by ASHRAE for General Office spaces, based on maximum number of people in each space taken from Project Room Data Sheets, whichever is higher. Where the LEED® EQ Credit dictates a higher air flow will be used.

Internal Heat Gains:

Heat gain from occupants will be calculated according to ASHRAE guidelines for maximum number of people in each space taken from Project Room Data Sheets.

Heat gain from lighting will be calculated based on the actual layouts and fixture types obtained from the electrical drawings. For energy efficiency, the lighting design will employ lower ambient lighting levels with task lighting.

Heat gain from equipment will be based on information taken from Project Room Data Sheets.

Energy Efficiency

The UC system mandates that all new buildings are required to beat Title 24 by a 20% margin. The building will need to incorporate sustainable design measures to meet the requirement of LEED® Silver Rating. The building envelope shall be designed to exceed the T-24 minimum requirements by a margin of 20%. T-24 prescriptive envelope requirements for California Climate Zone 10 are given below:

- Roof R19

  Wall R13

  Floor R11
- Glazing

  U factor 0.47

  RSHG

	Non-North	North
0-10% WWR	0.47	0.61
11-20% WWR	0.36	0.51
21-30% WWR	0.36	0.47
31-40% WWR	0.31	0.47

Glazing systems shall be selected to provide optimum Shading Coefficients / Solar Heat Gain Coefficients and U-factors on each exposure of the building. External shading is recommended where possible for non-north exposures.

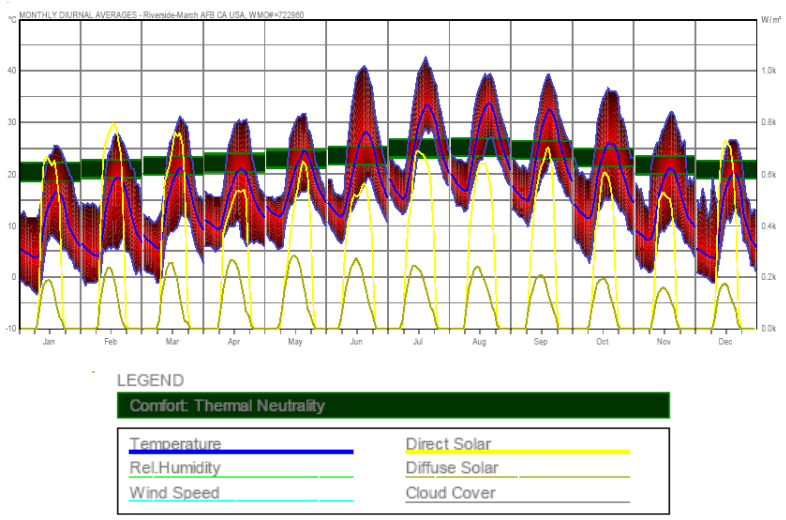
- Glazed areas shall be optimized to maximize effective use of natural day-lighting and allow views to the exterior.
- Operable windows will provide natural ventilation of rooms in perimeter zones. Operable windows shall be under the control of occupants and the users will maintain the windows in the appropriate position when supplemental heating or cooling is provided from the mechanical system.

HVAC systems will incorporate energy conserving features known to be economically feasible. The design will first focus on passive systems, such as thermal mass and natural ventilation which provide the most energy benefit at the least cost. Once the cooling and heating loads have been minimized, then the most efficient active systems will be explored. Technologies to be explored include radiant cooling and heating, chilled beams, active thermal mass, heat recovery, dedicated 100% outside air economizer cooling cycle for air handling systems, CO2 sensors utilized to control minimum outdoor air, variable frequency drives for control of fans, and premium efficiency motors. Additional energy conserving features, such as variable speed drives for pumps, indirect evaporative cooling of outdoor air, and heat recovery from exhaust systems will be evaluated during the Schematic Design phase and provided if shown to be economically feasible.

Utilization of renewable energy sources, such as solar panels for water heating, wind power and/or photo-voltaic power for supplemental power generation will be evaluated during the Schematic Design phase and incorporated into the project if shown to be economically feasible. Three additional LEED® credits are available for renewable energy.

HVAC Systems

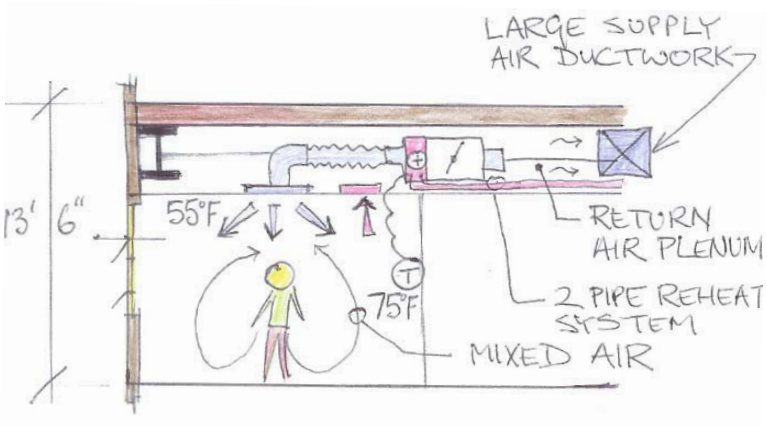
The graph below shows an annual plot of temperature in Riverside as it relates to human comfort. As can be seen, there is a defined heating and cooling season. In the peak of the cooling season, there is a 15˚F diurnal variation which allows for a night time purge cycle; however, there are periods where the night time temperature is above interior comfort conditions so the purge cycle would be limited in these months.



Thus the building will need to be conditioned (heating and cooling), but will be done in a mixed mode fashion so that natural ventilation can be used in periods where conditions allow.

Four ventilation and conditioning systems appropriate for the building are being proposed for evaluation during the Schematic Design phase. The evaluation will be based on a life-cycle analysis considering capital first cost, projected energy/operating costs, and maintenance cost.

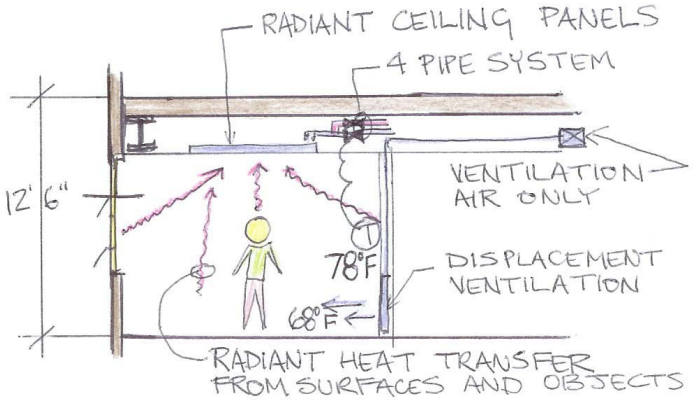
Option 1 is a base case design of a single duct, overhead variable air volume (VAV) systems, with hot water reheat. Estimated total air flow is 110,000 cfm. Based on current thinking for building organization, this is likely to be split into 3 air handling units.



This system has the following characteristics:

Benefits	Cons
Conventional system with known installation and maintenance procedures.	VAV boxes create noise. A ceiling is often used to limit noise transfer, adding cost to the system. Acoustical tile or gypsum board ceilings, whether installed for acoustic or aesthetic reasons also limit the opportunity to use exposed structure as a thermal mass that would moderate the temperature swings.
The users may prefer finished ceilings below mechanical equipment for aesthetic and acoustic reasons.	Added cost to provide individual control at each perimeter office per LEED® IEQ Credit 6.2.
	Higher fan pressure reduces energy efficiency. Estimate system performance between 10-15% below ASHRAE 90.1 Achieving the mandatory 20% below T-24 is a challenge with this system.
	Reduced IAQ (Interior Air Quality) and comfort compared to other systems described below.
	Higher floor to floor heights required, increasing cost for building structure and envelope.

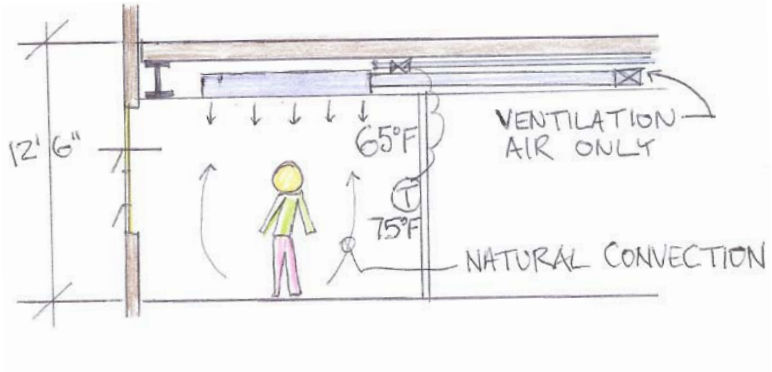
Option 2 is a dedicated outside air system with radiant floors and ceiling panels. For costing purposes, 5/8" tubing on 6" centers may be assumed for radiant floors. The complete ground floor would be radiant with combined heating and cooling zones in a 15 foot perimeter band. The interior zones would be cooling only. The other floors would have an active radiant ceiling coverage of 60% of the total floor area. Perimeter zones would be 15 feet deep and would be both heating and cooling. Individual control of offices and enclosed spaces would be provided. The ventilation system would be 1/3 the size of the system described in Option 1 above. The optimum location for the ventilation air is at low level so the displacement effect can be used.



This system has the following characteristics:

Benefits	Cons
Excellent IAQ.	Unconventional system with which some subcontractors are unfamiliar.
Excellent control.	Limited load capacity. Must be comprehensively designed to balance demand with capacity. May require building occupants to moderate heat gain from lighting, computers, equipment, etc.
Excellent comfort.	If ceiling is covered for aesthetic reasons , the non-exposed thermal mass would not allow passive cooling.
Reduced floor to floor height.	
Very responsive system	
Can work in tandem with natural ventilation with control monitoring.	
Very energy efficient. Both hydronic cooling and displacement AHUs run at higher chilled water higher temps allowing the central plant to run at its max efficiency.	

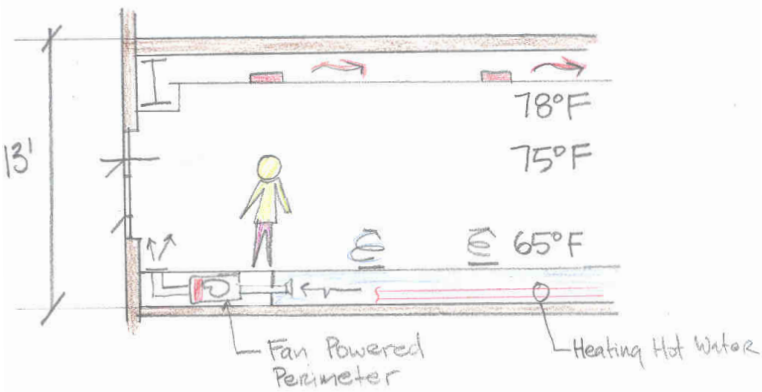
Option 3 is a dedicated outside air system with active chilled beams. The active beam density at the perimeter would be one 6 foot beam per 100 sq.ft. Individual control of offices would be provided.



This system has the following characteristics:

Benefits	Cons
Very good IAQ. The system is not displacement but the dedicated outside air system provides constant rates of outside air.	Unconventional system with which some subcontractors are unfamiliar.
Very good control.	Limited load capacity. Must be comprehensively designed to balance demand with capacity. May require building occupants to moderate heat gain from lighting, computers, equipment, etc.
Excellent comfort.	If ceiling is covered for aesthetic reasons, the non-exposed thermal mass would not allow passive cooling.
Night time cooling with low energy. This option allows more ceiling to be exposed	
Very energy efficient due to higher chilled water temperatures. Achieving the mandatory T-24 energy performance is readily accomplished and further LEED® credits could be achieved.	
Can work in tandem with natural ventilation as the air which is dehumidified runs over active beam.	

Option 4 is a full-height raised floor system. A 16" raised access floor will provide full air conditioning to all spaces. Perimeter booster fan coils will provide supplementary cooling and heating at the perimeter zones. The booster fans will have a heating coil fed from a 2 pipe heating loop. If the floor plate is narrow and multiple shafts can be placed to minimize the return air travel to a radius of 30 feet, return air can be achieved without any horizontal ductwork in the ceiling space.



This system has the following characteristics:

Benefits	Cons
Excellent IAQ.	Required very good site supervision and testing to avoid underfloor leakage
Excellent control.	Is not suited to large program areas that require many full height slab to slab walls.
Excellent comfort.	Supply air outlets in floor along exterior walls can pose a problem for furniture placement.
Night time cooling by activating the thermal mass in the exposed floor slab.	
Energy efficient due to higher chilled water temperatures. Volume flow is similar or above that of the VAV option but with lower fan energy. Increases economizer hours over VAV scheme. Achieving the mandatory 20% T-24 performance is readily accomplished and further LEED® credits could be achieved.	
Can work in tandem with natural ventilation as the ventilation air is dehumidified.	
Allows cost effective electrical and cable distribution	

In each option, air handling system(s) will be draw-thru unit(s) with supply air fan, return/exhaust fan, outside air, return air and exhaust air dampers for 100% outside air economizer cooling cycle operation (option 1), chilled water cooling coils, hot water heating coils, air filters, and acoustic attenuators as required to achieve design space noise levels. Indirect evaporative cooling units will be considered and evaluated for 100% outdoor air supply.

Separate systems will be provided for areas with distinct functional or occupancy requirements and/or operating schedules, continuous cooling/heating requirements, and/or other unusual requirements. Equipment will be selected with sufficient capacities to satisfy calculated building heating and cooling loads with allowances for future growth/remodeling of the facility as determined in collaboration with Campus facilities personnel.

Cooling and heating coils will be selected in accordance with the requirements of the Campus Standards as follows:

- Chilled water cooling coils:
- Hot water heating coils:
- 450 fpm maximum coil face velocity.

Minimum air filter efficiencies will be selected to meet LEED® IEQ 5 criteria:

- MERV 13 for air handling systems serving all spaces.

Temperature control zones will be provided as required by the building envelope design, space uses, occupancy, required times of operation, and/or other special requirements.

Any night time cooling strategies will take into account the occupant load profile so that morning temperatures are within the comfort range.

Supply air (or ventilation air) will be distributed throughout the building via insulated sheet metal ductwork and industry standard air diffusion devices. Supply ductwork in the raised floor (option 4) will not require insulation. Displacement diffusers will be used in options 2&4.
There will be no exposed fiberglass duct liner installed in supply ducts downstream of the air filters. Noise control will be achieved by the use of attenuators.

Return air will be ducted where required, or transferred back to the air handling unit(s) via the ceiling plenums where the building design permits.

Toilet rooms, janitor's rooms, and other areas where heat and/or odors are generated will be ventilated with mechanical exhaust systems.

Exhaust fans will discharge minimum 10 feet above grade level and minimum 10 feet away from air intakes or other openings into the building.

Mechanical rooms will be designed to accommodate equipment with adequate access and clearances for maintenance and replacement of components during the life of the equipment. Roof top air handling units are envisioned for the project and will be screened from ground level view.

Mechanical Options Life Cycle Considerations

The following table represents a comparative analysis of the life cycle costing of the systems proposed. The chilled beam option is the apparent preferred option. All options should be reviewed in Schematic Design.

Option	Energy Performance Range	First Cost Ranking(4=high)	Maintenance cost Ranking	Preferred Option Ranking(1=preferred)
1.VAV	10-15% below Title 24	2	4	3
2. Radiant ceilings	25-35% below Title 24	4	2	4
3.Chilled Beams	20-30% below Title 24	1	3	1
4.UFAD	10-20% below Title 24	3	1	2

Cooling System - Chilled Water Supply & Return

Cooling loads estimated using performance of 20% below T-24 and using 73,000 GSF are calculated at 225 Tons. This load would be spread over two chillers, each sized at 60% of the full load. The chilled water system will be arranged so that it can be connected to a future central plant and the building chillers can be used as supplemental chillers to the Central Plant in the future. It is likely that the actual loads will be less given the sustainable goals for this project. Actual loads will be verified during Schematic Design.

Two chilled water pumps, each sized for 60% of design flow (165 gpm x 2), will be located in a mechanical room in the building. The arrangement and control of the pumps for alternating lead-lag operation will be in accordance with the Campus Standards. Variable frequency drives (VFDs) will be used if it is shown to be cost effective to do so. VFDs will be located in cooled spaces or where they can be effectively cooled by general building exhaust air.

A cooling tower with two cells will be installed to provide condensing water to the chiller. The cooling tower will be close coupled to the chiller and co-located. Two condense water pumps will be each sized at 60% of the full load.

Cooling coils will be controlled by modulating control valves with DDC (direct digital control) actuators.

Chilled water supply and return piping will be insulated Schedule 40 black steel, or Type L copper.

Heating System

The heating loads are estimated at 1,700,000 Btu for the project. Two gas fired boilers, each rated at 1.1 MBtu will be provided. Allowance for a future campus connection will be made. Actual loads will be verified during Schematic Design.

Two heating hot water pumps, each sized for 60% of design flow (50 gpm x 2), will be located in a mechanical room in the building. The arrangement and control of the pumps for alternating lead-lag operation will be in accordance with the Campus Standards. Variable frequency drives (VFDs) will be used if it is shown to be cost effective to do so. VFDs will be located in cooled spaces or where they can be effectively cooled by general building exhaust air

Heating coils will be controlled by modulating control valves with DDC (direct digital control) actuators.

Heating hot water supply and return piping will be insulated Schedule 40 black steel, or Type L copper.

HVAC Controls

A direct digital control (DDC) system will be provided for all HVAC equipment and systems. The system will include field panels wired to a PC control front end and will be capable of stand-alone operation. DDC controls shall be BACnet per the WCIDS.

The PC front end will have full color graphics, simulation of all systems, capable of monitoring, remote set point adjustment of all devices, trending, lighting control and other functions as required. The system will be linked to the Campus energy management and control system. All control valves and motorized dampers will have DDC operators to be controlled and monitored by the DDC control system.

Testing, Adjusting and Balancing and Commissioning

All testing and balancing of HVAC systems will be by an independent test and balance company hired directly by the University, as agreed during the design phases of the project.

Air systems will have manual dampers where required for balancing.

Hydronic systems will have manual balancing valves where required for balancing, together with Pete's plugs or similar devices for measurement of temperatures and pressures at coils, pumps, control valves and other strategic locations.

All systems shall be commissioned to the campus protocol. Additional commissioning to qualify for the LEED® EA3 credit should be costed as a separate line item.

PLUMBING AND FIRE PROTECTION SYSTEMS

Codes and Standards

California Building Code, 2007
California Plumbing Code, 2007
California Fire Code, 2007
NFPA Codes, current editions, as applicable

General

Site utilities: construction of the building will require any existing or abandoned West Campus irrigation systems to be relocated or removed. Phasing of this work and provision of stubouts for lateral connections to the new building will be coordinated with the Agricultural Operations department and the project Civil Engineering Consultant. Disruption of additional existing Campus utilities for the new connections will be coordinated with Campus facilities personnel (Physical Plant).

New infrastructure per the West Campus Infrastructure Development Study (WCIDS) shall be brought to the edge of the site by the associated West Campus Infrastructure 1 project. WCIDS provisions are adequate for the proposed building. Demands will be verified during Schematic Design. Given the LEED® aspirations for the building, it is envisioned that the use of low flow fixtures will result in the lower projected water demand.

Plumbing systems for the building include sanitary sewer and vent, roof drains and rainwater piping, domestic cold water and hot water, and natural gas supply piping inside the building. The building will be fully protected by an automatic wet-pipe fire sprinkler system.

Plumbing utility piping beyond 5 feet outside the building will be designed by the project Civil Engineering consultant.

Plumbing Fixtures

Fixtures will be provided as identified by the room data sheets and will be selected to comply with Campus Standards.

Plumbing fixtures will be commercial quality with water conserving technologies to meet the LEED® aspirations of the project.

Water closets shall be dual flush 0.8/1.6 gallon per flush and urinals shall be 1/8 gallon per flush or waterless urinals upon prior approval by UCR facilities staff. Fixtures will be wall hung. Metering faucets with 0.5 gpm flow control aerators, fully complying with ADA and other relevant regulations will be used at lavatories. It is estimated that all non-irrigation LEED® Water Efficiency credits could be achieved using these low flow fixtures.

Domestic Cold Water

Domestic cold water will be supplied to the building from the campus utility main, with an approved water meter installed inside the mechanical room and reduced pressure backflow preventer. Maximum pressure in the building will not exceed 80 psi. A pressure reducing station will be provided if necessary.

Piping will be copper, designed in accordance with Campus Standards and industry standard sizing methodology to meet the building demands.

Shut-off valves will be provided in accessible locations to allow for isolation of each toilet room or small groups of fixtures to facilitate maintenance and future modification.

Industrial (Non-potable) Water

Industrial water for HVAC systems and/or other non-potable uses, will be supplied from the potable domestic cold water supply system with a separate reduced pressure backflow preventer.

Piping will be copper, designed in accordance with Campus Standards and industry standard sizing methodology to meet the calculated demands.

Shut-off valves will be provided in accessible locations to allow for isolation of each piece of equipment to facilitate maintenance and future modification.

Domestic Hot Water

Base building design for generation of domestic hot water will be to utilize gas fired water heaters. An in-line circulation pump will be

included to circulate hot water through the heating systems as necessary to maintain temperature in the distribution piping.

Hot water piping will be copper, designed in accordance with Campus Standards and industry standard sizing methodology to meet the building demands.

Hot water supply and circulation/return piping will be insulated.

Sanitary Waste and Vent

Sanitary waste and vent system will be connected to the Campus sanitary sewer as coordinated with the project Civil Engineer.

Piping will be cast iron, designed in accordance with Campus Standards and industry standard sizing methodology to meet the building demands.

Roof Drains

Roof drains and overflow drains will be provided and connected into the Campus storm sewer as coordinated with the project Civil Engineer.

Overflow provisions will be by roof drains with a separate piping system or scuppers, as determined during Schematic Design phase.

Piping will be cast iron, designed in accordance with Campus Standards and industry standard sizing methodology to meet the building requirements.

Fire Protection Systems

The building will be fully protected by an automatic fire sprinkler system designed in accordance with NFPA 13 and the Campus Standards. Occupancy Hazard classification(s) will be from NFPA 13 as approved by the Campus Fire Marshal. Special extinguishing systems will be provided if required to protect sensitive electronic equipment.

System control valve and fire department connection will be located outside the building.

ELECTRICAL

Codes and Regulations

All electrical work shall comply with the following codes and standards:
- National Electrical Code (2008 Edition)
- National Fire Protection Association (NFPA 72)
- California Energy Conservation Code, Title 24 CCR
- Illumination Engineering Society of North America (IES)
- Local Utility Company Rules and Regulations
- Local Fire Authority

Electrical Design Criteria

The building is approximately 73,500 gross square feet. Based on a preliminary approximation of 10 watts/sf, which includes 4.5W/sf for HVAC load, 2W/sf for lighting loads, 1.5W/sf for receptacle, 1W/sf for appliances and 1W for miscellaneous loads, the building will require a 1000 kVA transformer at 12kV-277/480V with a switchboard rated at 1200A, 277/480V, 3-phase, 4-wire. The pad mounted transformer should be located near the electrical room in order to reduce conduit runs and related costs.

Building Power Distribution Systems

The 480/277V incoming service shall be used to provide power to motor loads rated 1HP or higher and all lighting loads. In order to supply motor loads rated less than 3/4HP, and other receptacle loads, an indoor rated dry-type transformer will be located in the main electrical room. Both 480/277V, and 208/120V, switchboards shall be located in an electrical room, preferably, located on the first floor of the building. The exact number of panels will be determined once the final floor layout is decided.

In all classrooms, conference rooms, and seminar rooms, flush floor power and data receptacles shall be provided. In addition, empty conduit shall be provided to enable future distance learning.

Grounding System

Grounding system will be installed per NEC Section 250. A central grounding system will be provided for the main service. All grounded busses from switchboard, transformers, and panelboards will be connected at a central grounds bus in the electrical room.

Load management

In order to reduce power demand in the building, it is recommended that laptops be used instead of desktops in the building. Additionally use energy efficient lighting fixtures integrated with occupancy sensors and photocells will help reduce loads in the building even further.

Emergency Power

No emergency power generation will be needed for this project, unless otherwise asked for by the University. In order to provide lighting for path of egress, all emergency fixtures will be equipped with battery packs which will power the fixtures in case of a power outage.

Lighting

Lighting Level

Lighting system level will be designed in accordance with Illuminating Engineering Society (IES) recommendations, California Code of Regulations (CCR), and Title 24. The following chart will be adopted as reference:

LIGHTING LEVELS GUIDELINE

Type of Area	Recommended Footcandle Level at WorkStation*
Support Spaces	5-10
Classrooms, Conference and Seminar Rooms	40
Computer Labs	35-45
Work circulation areas, surrounding work stations, bathrooms, work areas where critical visual tasks are not performed	20-30
Research Spaces	50-65
Offices	30-50

*Where general lighting levels fall below UCR Standards, supplementary task lighting shall be used.

Lighting Control

All lighting will have means of automatic shut-off to comply with Title 24 except where this may create a hazard in areas such as clinic spaces and workrooms. This will be achieved through the use of occupancy sensors and lighting control panels. A lighting control panel will be located in the electrical room. Lighting in open areas, corridors, and exterior lighting will be controlled by the lighting control panels. Individual offices, classrooms, restrooms, electrical and mechanical rooms will be controlled by occupancy sensors. All areas greater than 100 square feet will have bi-level switching to comply with Title 24.

Areas greater than 250 square feet with areas fifteen feet or more away from windows will have daylighting control zones to comply with Title 24. The zones will be controlled by ceiling mounted photosensors and will be capable of dimming the lights in the associated zone. The daylighting zones will also have bi-level switching to allow 50% of the lights to be switched off.

Fire Alarm System

An addressable fire alarm system complying with Campus Standards will be provided and consist of the following:

A. A main fire alarm control panel located in a Fire Alarm Control Room, if possible.

B. Heat detectors will be installed in the main electrical room and elevator machine room. Smoke detectors will be installed in accordance with code and as required by State Fire Marshal.

C. Audio-visual alarm stations will be provided along all egress routes, toilet rooms, lobbies and other areas of assembly.

D. Pull station will be provided along egress routes.

The fire alarm system will initiate mechanical air supply system shut-down in the event of smoke detection.

The fire alarm system will be linked with elevators for return to a predetermined floor and mechanical air supply system for shut-down in the event of fire alarm signal.

The fire alarm system will also be linked to the sprinkler flow switches and valve monitors.

The fire alarm system will be tied to the campus main fire alarm system through telephone interface. All devices shall be addressable.

Telecommunication and AV System

The electrical system shall provide all necessary conduits for telecom installation. The telecom infrastructure for the building shall be designed per Campus Standards.

In classrooms, conference rooms, seminar rooms, and computer labs, power/data ports should be located in the ceiling to support digital projectors and wireless access should be provided (in private offices, as well). Wireless antenna locations will be determined during the design phase.

Refer to UCR Communications Infrastructure Planning Guidelines (latest version dated May 24, 2006) for campus communications standards.

4.2

CODE ANALYSIS

APPLICABLE STATE BUILDING CODES

2007 California Building Code
California Code of Regulations
Title 24, Part 2

DESCRIPTION

The UC Riverside West Campus Graduate and Professional Center is planned as a four-story academic building housing the Graduate School of Education, the School of Public Policy, and shared common and educational facilities.

OCCUPANCY

Based upon the program requirements of the two schools, the building will be considered a mixed-occupancy building that includes the following occupancy groups:

B - Professional Offices and Educational Occupancies above the 12th Grade
A3 - Lecture Halls

CONSTRUCTION TYPE

CBC Table 503, Allowable Height and Building Areas, per story:

	Type III A	Type III B	Type V A
B	5 Stories, 28,500 SF	4 Stories, 19,000 SF	3 Stories, 18,000 SF
A-3	3 Stories, 14,000 SF	2 Stories, 9,500 SF	2 Stories, 11, 500 SF

Per CBC Section 504.2 and Section 506.3, buildings equipped with an approved automatic sprinkler system can be increased in height by one story and in area limitation by 200 percent. Frontage increases, based upon the WCG&PC's site location along Everton Place and the Gage Canal Mall should result in additional allowable area considerations.

CBC Table 601, footnote "e" allows approved automatic sprinkler systems to be substituted for one-hour fire-resistance-rated construction, provided the system is not used for an allowable height or area increase. This might suggest that classifying the building as a Type III A structure, and substituting the sprinkler system for the fire-rating, may be the most cost effective strategy. Further research and analysis during the design phase will be necessary to evaluate the benefits of the different classifications.

4.3

SUSTAINABLE DESIGN

The University of California system is committed to minimizing the University's impact on the environment and reducing the University's dependence on non-renewable energy. A Presidential Policy was first established by The Regents in 2003 to promote ". . . the principles of energy efficiency and sustainability in the planning, financing, design, construction, renewal, maintenance, operation, space management, facilities utilization, and the decommissioning of facilities and infrastructure to the fullest extent possible, consistent with budgetary constraints and programmatic requirements." Since then, the Policy has continually been reviewed and new sections, including sustainable transportation practices and building renovations, have been incorporated.

This project will comply with the most recent 2007 Policy Guidelines for Sustainable Practices. See the UC website at http://www.ucop.edu/facil/sustain/greenbldg.html.

As required by the Policy and UCR sustainability benchmarks, all new buildings should be designed to a minimum standard equivalent to the latest US Green Building Council Leadership in Energy and Environmental Design (LEED®) "Silver" rating. These "green buildings" should also outperform California Energy Code (Title 24) energy-efficient standards by at least 20%. The Policy encourages the use of resource-efficient, energy-efficient, water-efficient products and "recycled and rapidly renewable content for building materials, subsystems, components, equipment, and supplies."

In addition, real economic benefits are accrued by pursuing Green Design. Sustainable design has proven to:

- Reduce operating costs,
- Create local benefits by reducing the burden on utilities, roads, landfills, etc.,
- Increase productivity and reduce building occupancy absenteeism, and
- Reduce liability by improving workplace environments.

This DPP offers several strategies for realizing a LEED®-certified West Campus Graduate and Professional Center. From a preliminary planning perspective, sustainability is manifested by:

- A building orientation and massing that maximizes the potential for daylighting, minimizes solar gain, and provides a usable, exterior courtyard space,
- A pedestrian focused site, relying on existing parking and public transportation,
- Creating narrow floors in conjunction with operable windows to promote natural ventilation and thermal comfort, and
- Use of a chilled beam mechanical system that can work in tandem with natural ventilation.

One of the project goals identified for this facility was to be "demonstrably sustainable." Toward that end, the project is committed to achieve a LEED® Silver, or higher, certification with the USGBC.

PRELIMINARY LEED® CHECKLIST

Item	Item	Prerequisite	UCR Baseline	Additional	Notes
SS Prereq 1	Construction Activity Pollution Prevention	Y			
SS 1	Site Selection		0	1	Per USDA definitions, site is considered “unique farmland,” not “prime farmland”
SS 2	Development Density & Community Connectivity		0	1	Ten basic services within 1/2 mile
SS 3	Brownfield Redevelopment		0	0	Site is not a brownfield redevelopment
SS 4.1	Alternative Transportation - Public Transportation Access		1		Verify two or more bus lines within 1/4 mile
SS 4.2	Alternative Transportation - Bicycle Storage & Changing Rooms		1		Install bike storage, showers, and changing rooms in building
SS 4.3	Alternative Transportation - Low Emitting & Fuel Efficient Vehicles		0	1	TAPS has no current policy on parking preference for low-emitting vehicles; however, credit can be easily obtained at little cost if a policy is developed
SS 4.4	Alternative Transportation - Parking Capacity		0	1	No new parking for FTE; innovation point can be achieved by developing a comprehensive campus-wide transportation management plan
SS 5.1	Reduced Site Disturbance - Protect or Restore Habitat		0		
SS 5.2	Reduced Site Disturbance - Development Footprint		1		Campus will designate an open space area equal to the development footprint of new construction
SS 6.1	Stormwater Management - Quantity Control		0		Will require a 25% reduction of storm water volume
SS 6.2	Stormwater Management - Quality Control		0	1	Capture and treat storm water - use of CDS hydrodynamic separator and bioswale
SS 7.1	Heat Island Effect - Non-Roof		0	1	50% of site hardscape; Solar Reflectance Index of at least 29
SS 7.2	Heat Islands Effect - Roof		0	1	75% of roof - Solar Reflectance Index of 78
SS 8.1	Light Pollution Reduction		0	1	
	SUSTAINABLE SITES SUBTOTAL:		3	8	
WE 1.1	Water Efficient Landscaping - Reduce by 50%		0	1	Utilize native plants, drip irrigation technology
WE 1.2	Water Efficient Landscaping - No Potable Use or No Irrigation		0		
WE 2	Innovative Wastewater Technologies		0		
WE 3.1	Water Use Reduction - 20% Reduction		1		Use of dual-flush, low-flow toilets and bathroom sink sensors
WE 3.2	Water Use Reduction- 30% Reduction		0	1	40% Reduction = Innovation Point
	WATER EFFICIENCY SUBTOTAL:		1	2	

PRELIMINARY LEED® CHECKLIST

Item	Item	Prerequisite	UCR Baseline	Additional	Notes
EA Prereq 1	Fundamental Building Systems Commissioning	Y			
EA Prereq 2	Minimum Energy Performance	Y			
EA Prereq 3	Fundamental Refrigerant Management	Y			No CFC-based refrigerants will be used in new base building HVAC and refrigeration systems
EA 1.1	Optimize Energy Performance - 14% New/7% Existing		2		
EA 1.2	Optimize Energy Performance - 21% New/14% Existing		2		
EA 1.3	Optimize Energy Performance - 28% New/21% Existing		0	2	Use of chilled beam system
EA 1.4	Optimize Energy Performance - 35% New/28% Existing		0	2	
EA 1.5	Optimize Energy Performance - 42% New/35% Existing		0		
EA 2.1	On-Site Renewable Energy - 2.5%		0	0	
EA 2.2	On-Site Renewable Energy - 7.5%		0	0	
EA 2.3	On-Site Renewable Energy - 12.5%		0	0	
EA 3	Enhanced Commissioning		0	1	Independent Commissioning Agent (CxA) required; Commissioning can significantly reduce repairs, construction change orders, energy costs, and maintenance and operation costs
EA 4	Enhanced Refrigerant Management		1		
EA 5	Measurement and Verification - Building Systems		0	1	Requires investment in metering equipment and campus commitment and plan for verification
EA 6	Green Power		0		Two year contract for 35% energy; available through City of Riverside Green Power Premium program
	ENERGY & ATMOSPHERE SUBTOTAL:		5	6	

PRELIMINARY LEED® CHECKLIST

Item	Item	Prerequisite	UCR Baseline	Additional	Notes
MR Prereq 1	Storage & Collection of Recyclables	Y			Campus Standards
MR 1.1	Building Reuse - Maintain 75% of Existing Walls, Floors and Roof		0	0	
MR 1.2	Building Reuse -Maintain 95% of Existing Walls, Floors and Roof		0	0	
MR 1.3	Building Reuse - Maintain 50% of Interior Non-Structural Elements		0	0	
MR 2.1	Construction Waste Management - Divert 50% From Disposal		1		
MR 2.2	Construction Waste Management - Divert 75% From Disposal		0	1	
MR 3.1	Materials Reuse - 5%		0	0	
MR 3.2	Materials Reuse - 10%		0	0	
MR 4.1	Recycled Content - 10% (post-consumer + 1/2 pre-consumer)		0	1	
MR 4.2	Recycled Content - 20% (post-consumer + 1/2 pre-consumer)		0	1	
MR 5.1	Regional Materials- 10% Extracted, Processed, Manufactured Regionally		1		500 mile radius
MR 5.2	Regional Materials- 20% Extracted, Processed, Manufactured Regionally		0	1	
MR 6	Rapidly Renewable Materials		0	1	2.5% of material costs; consider rapidly renewable materials if can be sourced locally
MR 7	Certified Wood		0	1	50% of wood-based materials to be FSC Certified; consider if can be sourced locally
	MATERIALS & RESOURCES SUBTOTAL:		**2**	**6**	

PRELIMINARY LEED® CHECKLIST

Item	Item	Prerequisite	UCR Baseline	Additional	Notes
EQ Prereq 1	Minimum IAQ Performance	Y			
EQ Prereq 2	Environmental Tobacco Smoke (ETS) Control	Y			
EQ 1	Outdoor Air Delivery Monitoring		0		
EQ 2	Increase Ventilation		0		Depends upon ventilation system
EQ 3.1	Construction IAQ Management Plan - During Construction		1		
EQ 3.2	Construction IAQ Management Plan - Before Occupancy		1		
EQ 4.1	Low-Emitting Materials - Adhesives & Sealants		1		
EQ 4.2	Low-Emitting Materials - Paints and Coatings		1		
EQ 4.3	Low-Emitting Materials - Carpet Systems		1		Carpet must be Green Label Plus certified
EQ 4.4	Low-Emitting Materials - Composite Wood & Agrifiber Products		0	1	
EQ 5	Indoor Chemical & Pollutant Source Control		1		
EQ 6.1	Controllability of Systems - Lighting		0	1	Task lighting plus individual offices
EQ 6.2	Controllability of Systems - Thermal Comfort		1		Based upon Mechanical Zones
EQ 7.1	Thermal Comfort - Design		0	1	ASHRAE 55-2004
EQ 7.2	Thermal Comfort - Verification		0	1	UCR would need to commit to conducting post-occupancy survey to achieve credit 6-18 months after occupancy
EQ 8.1	Daylight and Views - Daylight 75% of Spaces		0	1	Min 25 footcandles in min 75% of occupied spaces
EQ 8.2	Daylight and Views - Views for 90% of Spaces		0	1	Direct line of sight for building occupants in 90% or regularly occupied spaces
	INDOOR ENVIRONMENTAL QUALITY SUBTOTAL:		**7**	**6**	

PRELIMINARY LEED® CHECKLIST

Item	Item	Prerequisite	UCR Baseline	Additional	Notes
ID 1.1	Innovation in Design		0	1	"Building as education"
ID 1.2	Innovation in Design		0	1	
ID 1.3	Innovation in Design		0	1	
ID 1.4	Innovation in Design		0	1	
ID 2	LEED Accredited Professional		1		
	INNOVATION IN DESIGN SUBTOTAL:		1	4	

Subtotal Baseline:	**19**	
Subtotal Possible Additional:		**32**
TOTAL Baseline + Possible Additional:		**51**

LEED® NC 2.2 RATING

Certified	26-32 points
Silver	33-38 points
Gold	39-51 points
Platinum	52-69 points

4.4

SCHEDULE

The project schedule for the West Campus Graduate and Professional Center project is multi-phased and dependent upon contingent funding.

DPP AND PPG

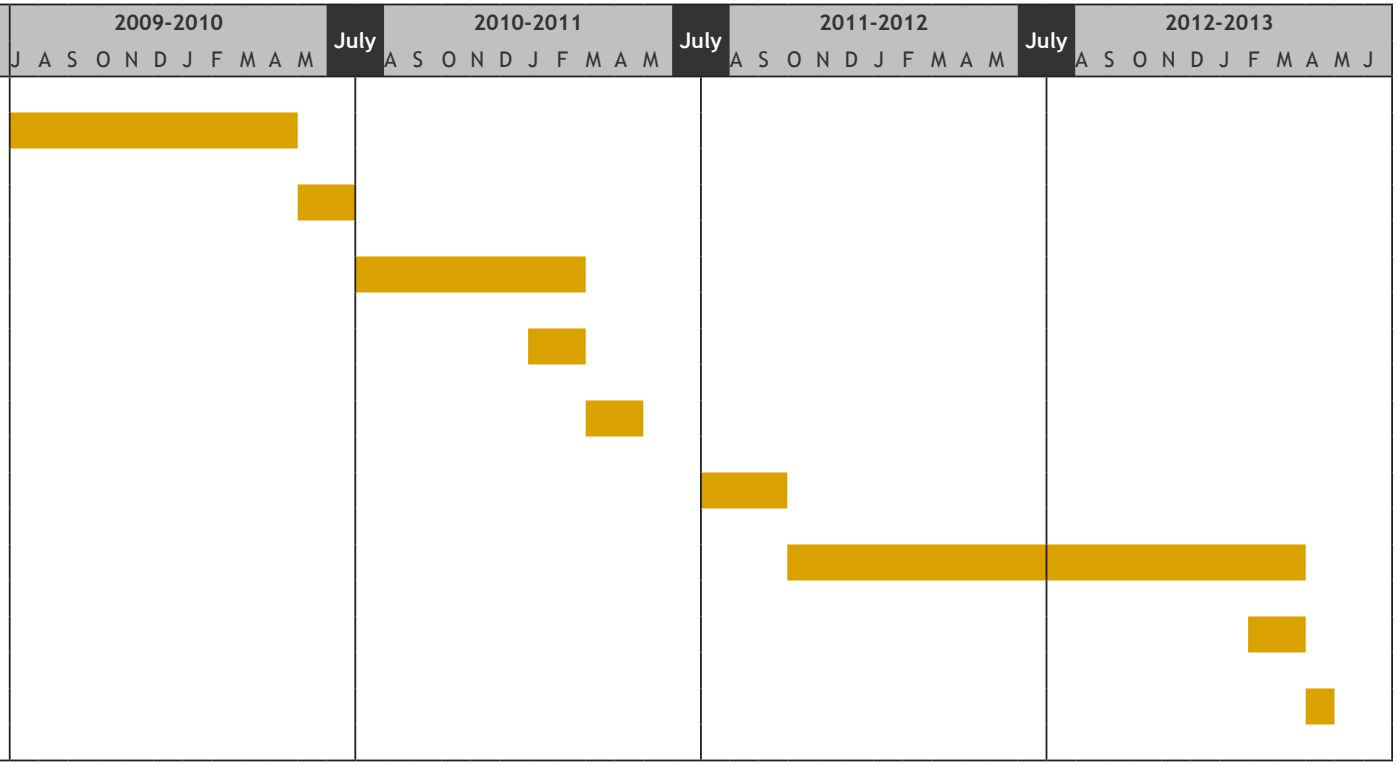
The Detailed Project Program (DPP) and Project Planning Guide (PPG) are both derived from the preparation of the DPP. The DPP defines a project program, confirms the site fit, identifies potential building systems, and prepares a cost model. The DPP is scheduled to be completed in June 2008. The PPG provides space and cost data to the Office of the President (UCOP) and becomes the written contract.

DESIGN AND DOCUMENTATION

Schematic Design and Design Development are scheduled to begin in July 2009.

SCHEDULE

Activity	# of months
Preliminary Plans	10
SPWB Review	2
Working Drawings	8
Agency Review	2
DOF Review	2
Bid / Award Contract	3
Construction	18
Equipment	2
Occupancy	1



Total Cumulative Calendar Months	46

CONSTRUCTION DOCUMENTS

Pending further capital improvement budget approval, the project can proceed with construction documents. The construction document process includes agency approvals as follows:

- General campus (UC Riverside) review and approval
- Division of the State Architect (DSA), for accessibility compliance
- Peer review, for general constructability and structural peer review

Construction documents begin in July 2010; this schedule will be coordinated with the authorization funding the physical construction of the project (bidding and construction).

BIDDING AND CONSTRUCTION

Pending further capital improvement budget approval, the project can proceed with bidding, project award, and construction. Bidding is scheduled to begin in July 2011, with an award date (start of construction) of October 2011. The Construction duration is assumed to be 18 months, with projected occupancy in the Spring of 2013.

5.0

COST MODEL SUMMARY

The following section contains the construction cost summary and basis of estimate. The detailed component cost is found in the Appendix.

CUMMING CORPORATION

BUILDING VALUE THROUGH EXPERTISE

University of California, Riverside
West Campus Graduate and Professional Center
Riverside, California

DPP Cost Model
June 27, 2008
CCorp Project No.08-00055.00

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BASIS OF ESTIMATE

1. Basis Of Estimate

This statement is based on program plans by Sasaki Architects, along with verbal direction from the architect and engineer.

2. Conditions of Construction

The pricing is based on the following general conditions of construction

Start date of construction July 2011

A construction period of 18 months

Construction contract procurement method is potentially CM at risk

Contractors performance bond is deemed to be included by the general contractor

Builders all risk insurance is deemed to be included by the general contractor

There are no phasing requirements

The general contractor will have full access to the site during normal business hours

3. Items Not Included Within Estimate

The following cost items are excluded from this estimate.

A Professional fees, inspections and testing
B Cost escalation beyond the midpoint of construction
C Plan check fees and building permit fees
D Furnishings, fixtures and equipment (FF&E), except built-in cabinets, counters and other casework indicated
E Major site and building structures demolition
F Costs of hazardous material surveys, abatements, and disposals
G Costs of offsite construction
H Construction contingency costs
I Blasting or excavation of rock
J CM fee (See below the line alternate)
K LEED commissioning and Certification fees (See below the line alternate)

BASIS OF ESTIMATE

4. Notes

We recommend that the client review this statement, and that any interpretations contrary to those intended by the design documents be fully addressed. The statement is based upon a detailed measurement of quantities when possible, and reasonable allowances for items not clearly defined in the documents.

The statement reflects probable construction costs obtainable in a competitive and stable bidding market. This estimate is based upon a minimum of four (4) competitive bids from qualified general contractors, with bids from a minimum of three (3) subcontractors per trade. This statement is a determination of fair market value for the construction of the project and is not intended to be a prediction of low bid. Experience indicates that a fewer number of bidders may result in a higher bid amount, and more bidders may result in a lower bid result.

I bidder	add	15% to 40%
2 to 3 bids	add	8% to 12%
4 to 5 bids		-4% to +4%
7 to 8 bids	deduct	5% to 7%

5. Escalation

For the purpose of this report cost escalation has been assumed at the following levels

2008	5%
2009	5%
2010	4%
2011	4%
2012	4%

University of California, Riverside
West Campus Graduate and Professional Center
Riverside, California
DPP Cost Model **June 27, 2008**

CONSTRUCTION COST SUMMARY

Section	Area	Cost / SF	Total
Graduate and Professional Center	73,508 SF	$492.32	**$36,189,355**
TOTAL ESTIMATED BUILDING & SITEWORK CONSTRUCTION COST		**$492**	**$36,189,355**

Alternates

LEED Fee & Commissioning	$210,000
Construction Management Fee	$1,047,988

University of California, Riverside
West Campus Graduate and Professional Center
Riverside, California
DPP Cost Model

Plant Account Number:
Date: **June 27, 2008**
Budget Year:
CCCI of Budget Year:
OGSF: **73,508**

UC COMPONENT COST SUMMARY WORKSHEET

Element		Construction Cost with markups broken out $/OGSF	Cost ($x1,000)
1. Foundations		11.17	$821,397
2. Vertical Structure		20.95	$1,540,050
3. Floor & Roof Structures		37.04	$2,722,419
4. Exterior Cladding		86.38	$6,349,627
5. Roofing, Waterproofing & Skylights		7.19	$528,773
A) Shell (1-5)		***162.73***	***$11,962,266***
6. Interior Partitions, Doors & Glazing		33.59	$2,469,341
7. Floor, Wall & Ceiling Finishes		24.67	$1,813,383
B) Interiors (6-7)		***58.26***	***$4,282,723***
8. Function Equipment & Specialties		18.71	$1,375,640
9. Stairs & Vertical Transportation		7.97	$585,753
C) Equipment and Vertical Transportation (8-9)		***26.68***	***$1,961,393***
10. Plumbing Systems		17.97	$1,321,236
11. Heating, Ventilating & Air Conditioning		65.16	$4,790,118
12. Electric Lighting, Power & Communications		34.67	$2,548,791
13. Fire Protection Systems		5.45	$400,770
D) Mechanical and Electrical (10-13)		***123.26***	***$9,060,914***
Total Building Construction (1-13)	(Sub 1)	**370.94**	**$27,267,296**
14. Site Preparation & Demolition	(Sub 0)	3.12	$229,273
15. Site Paving, Structures & Landscaping	(Sub 4)	14.10	$1,036,446
16. Utilities on Site	(Sub 2)	11.23	$825,384
Total Site Construction (14-16)		**28.45**	**$2,091,103**
TOTAL BUILDING & SITE (1-16)		**399.39**	**$29,358,399**
General Conditions	9.5%	37.94	**$2,789,048**
Contractor's Fee	4.0%	17.49	**$1,285,898**
		454.83	**$33,433,344**
Escalation	8.2%	**37.49**	**$2,756,011**
ESTIMATED CONSTRUCTION BUDGET		**492.32**	**$36,189,355**

6.1

MEETING NOTES

date	29 February 2008		
project name	UCR West Campus Graduate and Professional Center	project #	74105.00
meeting date	February 15, 2008	time	9:00am - 5:00pm
location	Surge 333		
recorded by	Grace Leung – Sasaki Associates		
distribution	Jon Harvey, John Coons, Tim Stevens, Fiske Crowell, Richard Tepp, Mark Eischeid		
purpose	Kick-off Meeting/Workshop #1		

ATTENDEES

See attached attendance sheet

KICK-OFF MEETING

9:00-12:00p

- Powerpoint introduction by Sasaki to the programming process and workshop schedule (attached)
- March 14th date of PPG is the basis for DPP schedule

EXISTING AND FUTURE ROLES OF TWO SCHOOLS ON UCR CAMPUS

Graduate School of Education (GSOE)

- Origins of GSOE – started in 1969 as an expansion from the 5th year teacher's credential program to include a Social Science Department focused on research related to education
- Two distinct groups:
  1. Teacher's Education (150 students)
     - Program lasts 1 academic year + summer
     - Most work is done offsite, at the schools they teach in
     - Challenge: How to develop a community and identity and to link to rest of campus?
     - 8-10 students in a "cohort" module assigned to an advisor
     - Little current synergy with academic program (Master's, PhD program)
     - Workshop labs in methods courses at Sproul are quite isolated from core academic activity
     - They offer some pre-professional courses to 600-800 undergrads from Humanities and Liberal Studies – how to engage them from across the freeway?
  2. MA/PhD program (150 students)
     - All tenure faculty; currently 20FTE, 40 lecturers
     - 5 programmatic specialty areas:
       - Institutional Leadership and Public Policy
       - Curriculum and Instruction
       - Special Education
       - Educational Psychology
       - School Psychology
     - Each area group operates independently from each other
     - Goal is for more collaboration, interaction – breaking down the silos
     - There is a permanent open search for faculty that cross cuts all areas (generalists)
     - A possible sixth area in Higher Education Policy – possibility for integration with School of Public Policy
     - Separate identities are important (can't wipe out labels that students recognize), but through spaces, hope to allow for separate programmatic identities while cultivating synergies
     - Goal is to move toward a more interdisciplinary approach
- Most students are off campus, one-half of MA students have jobs, therefore, the school operates on a late afternoon/early evening schedule
- Growth model geared regionally to inland southern California
- 38.78 FTE due to UC mandate that all schools of education double their teacher education enrollment
- May add as many as 10 professional master's program over next 6-7 years, adding 150 part-time students over two years to "liberate" 18 FTEs
- UCR is first UC to allow rollover hours from extension courses into a master's program
- Goal – 30 FTEs in 2011-12; 35 by 2015
- Possible initiation of a 3-year EDD program (executive doctoral program) with cohort sizes of 10-12 students
- Another challenge is traffic congestion; most teachers can't leave schools until 3:30 pm and they can't get to campus on time; therefore, most classes start at 4:40 pm
- Need to move aggressively toward distance learning
- Need to have broadcast classroom technology
- Research environment is very volatile due to sudden shifts in federal or state funding; therefore, need for very flexible research spaces and storage of data; flexible furniture
- Steve's idea of the warehouse with moveable walls, central shared conference rooms
- Clinical facilities:
  - For Educational Psychology, Special Education, School Psychology
  - Serve special needs populations and often low income families
  - Key issues are accessibility, friendliness of access, privacy, ADA access
  - The thee programs are asking for separate spaces but that won't happen **(confirmed by Steve)**
  - Special Education requires access (separate entrance, parking, identity), but all can share spaces such as reception

School of Public Policy (SPP)

- Public Policy is a professional program but currently has pre-professional undergrads in the College of Humanities Arts and Social Sciences (CHASS)
- 120 master's students (MPP), 30 PhD (5+ years, 6 students entering per year)
- Mix of methods but fairly uniform core course requirements that will occur in lecture classes (60 students/class)
- 2nd year electives will have several tracks – Education Policy (synergy with GSOE), Environmental Pollution (strength of UCR), and Health Policy (synergy with Medical School)

- 2nd year will consist of seminar type classes (15-20 students/class)
- There are long-term plans for launching Executive Education, for those in mid-career such as city officials to refresh their skills; they would only take classes on weekends or at nights
- Lab format:
  - Students work intensively on projects in groups of 5-6 to propose a series of policy options
  - The classrooms are not useful for team work
  - Similar to a design studio environment
  - Projects last 1 or 2 quarters
  - Space is not necessarily assigned; they could check out rooms
- Concept of modular offices – practitioners from outside academic realm often come in to teach a specific course or adjunct professors who do not require a separate office but need some space
- 12 FTE faculty at full build-out
- Public Policy is inherently interdisciplinary; extracting policy from established disciplines from other academic departments
- Contact with rest of campus is very important
- Growth depends on success of the School, but Public Policy is one of the fastest growing fields at this time
- Flexibility to add to School if the need arises, might be important
- SPP approval process:
  - Approved by Divisional Academic Senate of UCR
  - Now, has 2/3 approvals with the system-wide Senate in Oakland
  - Will get approval by Spring quarter
  - UC President approval and Regents approval
  - Next quarter, will start to recruit faculty and develop program; first students in 2010 and housed in CHASS

<u>Commonalities, Synergies</u>

- There will be fairly distinct courses between the two schools; other than elective on public policy in education, there won't be too many overlaps
- Unlike GSOE students who come in late afternoon/evening, SPP by and large are full-time students – potential overlap in scheduling?
- Less than a third of course offerings for GSOE (excluding undergraduate pre-professional program) occur during the day and will increasingly move into the weekends
- Some classes will overlap, such as statistical methods; GSOE currently has a computer lab for statistics
- Some high-end software packages are not affordable for students to have on their own
- GSOE has 2 labs; one exclusively used for statistics and open for study (but not amenable to group projects); the other a hybrid lab
- Both are scheduled labs and have periods where they're open to students
- In SPP, there is a lot of emphasis on statistics and using data (evidence based policy making) so there are high-end statistics classes where students will be at computer stations while instructors go over how to find and analyze data
- Most students have their own laptops
- How can proximity to University Extension (UNEX) as well as future conference facilities be utilized to augment meeting/conference space?
- Acknowledge that the new building will be isolated for a while

- International Village was built for English as Second Language students and visiting faculty; due to downturn in Asian economy, most of the beds are occupied by UCR undergraduates with UCR Housing Programs
- How can food/café activate space? Staffed café? Grab n' go?
- Given location on campus, food and other services in the new building will be very important, especially for students coming in the evenings
- University Avenue: how to forge a connection with the community?
- Perhaps everything – eating, classes, parking, can occur in one building
- Notion of educational library? GSOE does need space for teacher education students to have access to latest texts and textbooks; more of a resource center for current materials, with electronic media
- Almost everything now is available on the web and most intellectual work will be done off-campus
- The ideal would be to build cohorts around teachers in the same school district and have all resources be electronic and available at that school site
- 'Conference Center' space in preliminary program will be absorbed as 'shared space'
- Next facility on West Campus hasn't yet been developed conceptually; likely candidate – general graduate student center with social, instructional spaces and some elements of Graduate School of Management
- "Colloquium space" for large school functions (seminar series for SPP currently uses Humanities 1500 that seats 100); although ideally, it would be held in new building, it could realistically occur on East Campus
- The five areas of GSOE each has a faculty convener, but there is central administrative support and there are no physical boundaries between them
- For GSOE students, they need a lounge, break-out rooms
- Currently, students have a little cubby room with furniture 30/40 years old – that's where they hang out in between; need flex space accommodating both team and individual study
- The lounge can be shared between two schools; possibly a lounge with different seating arrangements in different parts so groups can congregate in different areas
- Example of Whitman building at Syracuse where there is a large glass atrium with tables and ottomans that can be moved around
- Opportunities for outdoor space (most students are away in summers when it's too hot to use outdoor spaces)
- Example of Mission Bay UCSF Campus where the atrium serves as the student lounge at times as well as reception area at other times
- Important to think of opportunities for accidental relationships, chance encounters, and synergies that we can't even think of right now
- Example of Sasaki's Student Resource Building at UCSB with the large atrium space; everyone can have their separate identities alongside this central space where everyone can mix; natural ventilation as a side benefit
- No need for two separate student lounges; otherwise, we're making a statement that these two programs are different and separate
- SPP will not be doing too much distance learning in the foreseeable future
- Both schools have no need for restricting access for students to upper floors where research and offices might be located; the building should be completely open access with secure storage areas
- Only the clinical areas need to be secure and restricted
- One computer server room for both programs might be more efficient

- Although there will be wireless access, there is a need for some hardwire for data security reasons (i.e. access to major database in Sacramento)
- GSOE classroom types are identical to SPP
- GSOE does not need “lecture” classrooms, but would use SPP lecture hall for assembly
- Besides achieving LEED silver status, how to make building visibly "sustainable"? An integrated design opportunity
- While the new building is a landmark, it can't be a signature building
- Although not a signature building, it needs elements to draw people to it since it will be isolated for a while
- How will design express and encourage donor opportunities? If the two schools are in the same building, that may discourage naming gifts for the building
- Perhaps building could be two separate wings of the same building
- General categorical differentiation in LRDP – East = undergraduate campus, West = graduate/professional campus
- The reality is that UCR doesn’t know how fast it will grow; therefore, need to be practical and start development from existing infrastructure (NE corner of West Campus)
- Shared Goals:
  - Open/access
  - Safety/security
  - Good campus citizen
  - Inspire donor opportunities

<u>Proposed User Interview Groups for Workshop #2</u>

- Food service/catering
- Registrar
- Real estate services – future projects and extensions to housing in International Village
- Sharon Duffy is the interim dean of UC Extension and also the assoc. dean of GSOE
- GSOE – Ann Jones, Marcia Iamanaka, Prof. John Levin; Jan (autism program), Dr. Linda Scott-Hendrix
- Current SPP faculty will not be in new building; therefore, Anil will meet with those faculty members and report the outcome back to Sasaki

FACILITY TOURS

1:00-4:00 pm

- Site
- Sproul Hall
- Humanities Building

WRAP-UP MEETING WITH PMT

4:00-5:00 pm

- Although students come into campus from the south (parking lot 30), need to look to the north for best facility access
- Highlander Hall will be torn down since it costs too much for seismic upgrade
- Current space for Highlander Hall will become a temporary parking lot
- Only impediment is Caltrans yard

- Caltrans states that when it becomes an incompatible land use, it will move; however, it is already incompatible to International Village but it's still around
- UCR will be contacting Caltrans to discuss the need to relocate their service yard
- Another issue – UCR wants to create a sense of community and a sense of place for the transient GSOE students; don’t want them to think of UCR as a commuter school
- Notion of clarity, identity, etc. is very important
- Challenge: we want to build a sense of community and belonging with students who are only with us for very short time (either in duration or during the day). Are there elements that can be put in that when someone walks up as potential student, it becomes their building?
- Arrival narrative; approach and movement through building is important to achieve a sense of belonging and place; it's not enough to create four walls – the sequencing from parking lot to building and through building, etc. is most important
- Building efficiency: 67% net to gross is very aggressive
- Outdoor spaces should be designed to focus energies of people using that building
- Look at Engineering Building 2 and Interdisciplinary Building for efficiencies; combines exterior and interior circulation systems
- There will always be storage issues for GSOE – half paper copy, half electronic
- Site Environmental Issues:
  - Wind
  - Overhead power lines
  - Noise level from freeway (Caltrans only builds sound walls for existing conditions)
  - Views north to mountains
  - Utilities and access

NEXT STEPS

- Scheduling conflicts:
  - Will move conference call scheduled for March 5th to earlier that week or the end of previous week
  - Possibly move Workshop #4 from April 10th to April 11th
- Sasaki to fit in a visit to the Eady Center.
- Documents needed: copy of Infrastructure Plan, CAD plans of Interdisciplinary Arts Building and CHASS, UCR Design Guidelines, GSOE Marketing Study
- Steve Bossert to have program summary by next workshop.

The information above will stand as recorded unless Sasaki receives written comments within five days of the distribution date from a recipient requesting an amendment.

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minutes

date	29 February 2008		
project name	UCR West Campus Graduate and Professional Center	project #	74105.00
meeting date	February 19-21, 2008	time	As noted below
location	February 19: Bannockburn J-102 February 20, 21: Bannockburn F-101		
recorded by	Grace Leung – Sasaki Associates		
distribution	Jon Harvey, John Coons, Tim Stevens, Fiske Crowell, Richard Tepp, Mark Eischeid		
purpose	Programming Workshop #2/Program Definition & Preliminary Concepts		

ATTENDEES

See attached attendance sheets

STAKEHOLDER'S MEETING

February 19, 2008 – 8:30 AM

TAPS (Andrew Stewart)

- Existing infrastructure is main reason for proposed site of GSOE
- Parking Lot 30 is underutilized in the evenings so there's no need to build a surface parking lot to the east of W4
- Two options for parking:
  - Highlander Hall demo provides good opportunity for parking (path of travel issues with Caltrans yard and traffic at Everton)
  - Extend diagonal road from Lot 30 to the new building and provide sidewalks and accessible paths
    - Lot 30 is best lit parking lot on campus
    - Good presence of security
    - Quick access to freeways
    - Ease for shuttle access
    - If open fence into AGOPs land, need to extend fence all the way to the building
    - Concerns about security since Lot 30 is an area of isolation
    - Conflicts with 'social' connection and community-serving facilities to the north (UNEX, University Ave)
    - Lot 30 will eventually go away, so if there's an extension, possibly just single lane asphalt with no curb and gutter
- Main issue – getting fire access and coverage on the site
- Other issues of Gage Canal and Caltrans yard
  - One strategy: to get an easement in the first couple hundred feet south of Caltrans lot
- Clinic program requires direct access to facility from parking
  - Deals with autistic children and their families
  - Currently 25 families, but will increase to 100-120 families by the time building is constructed
  - Special Education and School Psychology clinics will be bringing in families with very small children who can't walk very far
  - Clinic is daytime use only; will close at 7pm
- If Highlander comes down, there's a possibility that the Highlander site could serve as parking for UNEX, while current UNEX parking lot area to the south could serve new building (400 spaces)
- Since campus doubled in square footage, very few parking lots have been constructed, with the exception of residential parking and parking Lot 30
- Currently, GSOE students walk from Lot 30 to Sproul Hall
- Another issue: part-time faculty often bring suitcases of materials (they get to park across the street from Sproul)
- Already a problem with starting classes late due to traffic; increasing distance for students and instructors to walk to class will cause later classes and loss in revenue
- If we decide to build on W4, could use W3 for lay-down area and immediate access parking

COMMUNICATIONS (Dan Martin)

- Currently, there are 2 pathways that cross freeway; investigating a possible 3rd
- Three 4" conduits in University Ave. are currently full; project in place to vacate one conduit
- Planning 2 nodes in West Campus – one off future recreation center and another at future medical school
- If Highlander demo doesn't occur first, there is a conduit that borders service road on east side of UNEX
- Preferred access will be from manhole at UNEX/International Village but it's a capacity issue
- Alternate method from the south
- Wireless where needed in building
- Building standard provides data and phone connections to classrooms and outlets to offices
- Media Services provides A/V hardware; Communications provides connectivity
- Network is copper/fiber optic

PHYSICAL PLANT (Pat Simone, Earl LeVoss), EH&S (Brian Kermath)

Brian Kermath – EH&S Sustainability Manager
Earl LeVoss – Superintendent, Building Commissioning
Pat Simone – Assistant Director, Energy Use and Utility Services

- Refer to UCOP Sustainability Guidelines
- UC system has adopted a LEED Silver "Equivalent" minimum but it's only an average *minimum* since there are a lot of existing buildings that are costly to renovate
- To attain climate neutrality goal in the future, LEED Silver for new buildings is not enough
- EH&S building on West Campus hopes to achieve LEED platinum
- GSOE may be partnering with schools that will be built to LEED platinum standard so the building they're trained in should also attain a similar standard
- Initially, buildings on West Campus won't be connected to any central plant; must be stand alone

- Important to identify areas that need to be ventilated after hours and have them be separated from other parts of building
- Evaporative cooling is a potential strategy since it uses a lot less energy than an efficient chiller
- LEED certification is ideal, but cost may be an issue (ie. commissioning may add 1-2% to building costs)
- Physical Plant points out that commissioned buildings cost less since you're not spending a year tuning the building (but they're funded differently)
- SPP has an environmental policy focus, so if building is not at least LEED gold, there will be problems raising money for the school
- Opportunities for funding and naming may be negatively impacted if building is not certified
- Water use represents 19% of embodied energy of project
- Every drop of water should be captured and reused on landscape
- Irrigation water should be separated from domestic water
- Costs can be minimum for doing a LEED building if it comes early in design and there is good coordination among members
- Rather than depending on MEP systems only, the programming/design team must also look at architectural elements
- Importance of integrated design
- Carry commissioning costs as a separate item (below the line)
- Get approved LEED baseline for UCR (baseline falls short of LEED silver)
- There is opportunity for drilling a well on West Campus but it would appear that UCR must sell water to the City and buy it back
- Need to be ambitious about energy approach; new buildings need to be carbon neutral
- There is a separate West Campus infrastructure project paralleling this project – water, sewer, electric, data, storm water

RECAP MEETING

February 19, 2008 – 10:00 AM

- Concerns were expressed about using evaporative cooling
  - Per Timmons, evaporative cooling would only be an energy savings strategy so when capacity is exceeded (on excessively warm/humid days), will go to a conventional cooling system
- The benefit of orienting the facility toward the north to satisfy "community building" vs. parking and academic presence to the south, and Gage Canal to the west

Summary of Project Goals:

- Maintain program identity while promoting synergies
- Flexibility (responsiveness to variable funding for educational research)
- Openness/access
- Safety/security (evening hours)
- Clinical facilities – Special Education, Educational Psychology, School Psychology
- Foster immediate sense of community
- Shared student lounge gathering space
- Inspire donor opportunities
- Good campus citizen (not a signature building)
- Supportive technology

- Variety of teaching spaces
  - Lecture (60+ students)
  - Seminar (15-20 students)
  - Lab (5-6 students, team space)
- Interdisciplinary environment
- Clarity of organization, way-finding
- Demonstrably sustainable (LEED Silver *certified* minimum)

Sustainability

- Explore reaching goal of LEED Silver certification by being cost-neutral
- Make LEED an integrated cost rather than additive cost (ie. transfer money from MEP systems to interior materials, façade, etc.)
- To reach aggressive approach outlined in Infrastructure Report (45% below Title 24), only an integrated approach gets you there
- Cumming to do cost analysis between different LEED levels
- Budget is fixed; since it's a State-funded building, the idea is to be as sustainable as you can without adding a premium to the project, so an integrated approach is necessary
- The State budgeting process for new construction doesn't recognize operational cost savings in the future
- It may be possible to come up with alternatives that achieve LEED Gold without a premium
- Currently, the project budget does not recognize "commissioning" as a cost item

Siting

- Executive Education is oriented toward the north
- No "back door"; instead, possibly four front doors and idea of internal front door
- A possible landscaped space to receive people from all directions; like East Campus, landscape spaces that collect and funnel people into the buildings
- Less than ¼ of GSOE and SPP students living on campus
- If Caltrans leaves, W3 is preferred location (further north)
- Sasaki to study both W3 and W4 sites; even W5 if there's a compelling reason
- Gage Canal piping will start at Everton; costs associated with need to structurally reinforce canal
- Power lines – still in discussion with City
- If building is sited to the west, there are implications with the Gage Canal; if building is sited to the east, implications with power lines
- Footprint should be nothing less than 3 stories
- If building is small enough, maybe it could be pushed from one side or another to allow for expansion in future
- Kieron suggests Sasaki should have discussion with Infrastructure consultants

Cost (Philip Mathur)

- Precaution: do as much analysis as you can now
- Current softening of market influenced by housing, but healthcare is going strong
- Biggest impacts to cost:
  - Schedule (possibility of delays)
  - Program
  - Site boundaries – should be set right away
  - Soils conditions (any historical data?)

- Labs are dry labs and clinics are office/counseling spaces (50-60 clients/week)
- Building efficiencies are very important
- Phase 1A infrastructure brings all service points to 5' outside of property line
- $405/sf in today's dollars (excluding site) for classroom building in LA; although the proposed new building is less a classroom building and more an academic office building
- Open vs. closed offices have huge impact on costs (open offices have cheaper construction costs but higher Furniture, Fixtures & Equipment (FF&E) costs)
- New building will house professional and graduate students, so it can't look like a junior college; professional quality finishes necessary
- CM-at-risk: add 3% contingency for preconstruction services (below the line)
- Important for CM-at-risk to be visionary and to embrace process and responsibilities early on

Site Planning Influences

- Site Influences:
  - Fire access
  - Relationship to UNEX
  - Parking (one to north at Highlander Hall/UNEX site, other is at Lot 30) and walking distances
  - Isolation factor – how to establish community based on location?
  - Access from University Ave.
  - All services (i.e. shuttles) at Lot 30 and at University Ave.
- Sasaki to articulate/analyze tradeoffs
- AGOPs poised to decant out of area
- The goal of the master plan is to put in phasing and plan for the future so don't have to tear stuff out later
  - "Maximize the value of transitional moments" (Tim Ralston) or "Don't build stuff you have to tear out later" (Tim Stevens)
- Rectangular forms on master plan are building envelopes, not building footprints
- Possibility of compressing distance between rectangular forms (W3, W4, W5)
- Two issues:
  1. Do transmission lines need to be relocated in the first phase or can we live with them?
  2. Everton may need to be widened to the south sometime in future to accommodate increase volume of traffic

REGISTRAR

(Bracken Dailey, Margaret Stewart)
February 19, 2008 – 1:00 PM

- Assumption that classrooms will be general assignment classrooms
- All current general assignment classrooms are very centrally located
- One challenge is issue of utilization – question of whether they're full general assignment classrooms or a different type of classroom with a separate code
- For GSOE, flexibility of classroom is really important; ability to move tables and chairs
- There are only a few classes where lectures are large; with smaller groups, they really like the ability to reconfigure
- Registrar does not schedule labs (schedule is department-based)
- Any room for 80+ is considered a large lecture room; generally, has fixed furniture
- If you build a 120 station classroom, the registrar *will* use it

- Currently, Registrar fills up everything on East Campus first before sending people over to the West Campus; some people do request the Village due to media equipment needs
- Parking is important; the Village has parking and other benefits like coffee, ease of access
- GSOE and SPP will get priority for the general assignment rooms in the building due to proximity; hours remaining will get filled by other programs
- Some GSOE faculty are "mature", elderly, disabled and need to be close to classrooms
- Grad seminar rooms are prioritized for grad school use
- What professors look for in classroom spaces:
  - Moveable tables and chairs (new trend)
  - Top of the line media (LCDs, wireless, DVDs, blue ray, clickers, infrastructure for one laptop per student)
  - New/functional/comfortable
- GSOE classes are mostly "non-standard" hours
- Registrar schedules standard times (M/W/F on the hour, T/Thu every one and one half hours) first; then fit in the non-standard times
- Grad classes get priority scheduling
- GSOE has pressure finding space since they're scheduling non-standard times
- Don't have classes later than 9pm
- If more than one department wants a room, Registrar looks at enrollment history for past 3 quarters for priority
- Registrar has a scheduling algorithm but can manually enter in other inputs (ie. professor with a physical disability, etc.)
- Use of UNEX for symposium and lectures?
- Jon Harvey unsure of source of original preliminary program; suggests Sasaki use the preliminary program as a general reference and start over (based on data provided by GSOE)

SASAKI WORK SESSION

February 19, 2008 – 2:30 PM

WRAP-UP WITH PMT

February 19, 2008 – 4:00 PM

- Source of origin for program that budget is based on: developed internally based on interviews with Steve and Anil in 2005; person who worked on it no longer works at UCR
- Based on GSOE requirements, the building square footage is rapidly increasing
- Need to accommodate conference program elsewhere (ie. UNEX or new conference center)
- Recent traffic study suggests the eventual widening of Everton (parking structures will place too much pressure on Everton)

Sasaki's Initial Site Analysis

- Size of our program (75,000 SF) vs. capacity of W3, W4, W5 (450,000 SF) based on FAR of 1.0
- Proposed open space along Gage Canal – huge scale similar to other large east-west open spaces; need to differentiate a hierarchy of open spaces modulated to pedestrian scale
- If the proposed building were in W4, future buildings that need to absorb additional square footage to maintain the precinct floor area ratio (FAR) may overwhelm the building

- Challenge "build-to" lines outlined in CAMPS; explore possibility of placing building in W3 site, but closer to Gage Canal (technical setback of 25' on each side of centerline) to be a "gateway building" from University Ave.
- Propose to combine conference center pieces W1 and W2 while keeping some program on the ground level of parking structure to activate pedestrian level space
- Buildings can reinforce sinuosity of Gage Canal open space
- Everton as main entry point and possible vehicular turnabout; access point to conference center, grad school, and parking structure
- Series of open spaces/courtyards created between building and future buildings
- Visibility/presence of new Graduate Center from University Ave.
- Proposed siting does not require Caltrans to move in near term; building could set back from Everton or create own easement in short-term
- Possible access to site even with Caltrans encroachment (need to study in greater detail)
- Overhead transmission lines need to be moved; otherwise, opportunities for siting the building at all becomes narrowed; the sooner they go away, the better
- Instead of a background building, it becomes "gateway"…still not "signature"
- Space between building, parking structure, conference center could become a mixed-mode plaza that acts as a terminus to Everton
- Another advantage to staying closer to northern edge is having to treat less of the overall site
- North also makes sense in terms of infrastructure point of view
- This building and future buildings will be configured to create open spaces
- Connections between buildings – open air gateways? Need to define at larger scale
- Confirmed that Sasaki is not designing the buildings, but rather a framework of open spaces for the future
- Sasaki to discuss site placement with Walker Macy
- International Village has option to expand to northwest side
- Design intent of Walker Macy for the Gage Canal open space (of sinuosity) would not seem to be met with their current master plan
- Perhaps introduce greater modulation – opening and closing – of this space
- Using building edges to help define the curvature and flow of the Gage Canal supports Walker Macy's intent
- Opportunity to first define the open space and then plan buildings around open space
- Possibility of clearing out area of W4 and W5 and putting in an orange grove or more attractive landscape since the building might be the only building there for a long time
- Two ways of access – vehicular down Everton vs. pedestrian
- Scheme does not necessitate Caltrans moving but there could be a relaxing of open spaces if they moved or granted an easement
- Next steps: address character of the open spaces and gateway space

MEDIA SERVICES

(Larry McGrath, Israel Fleter)
February 20, 2008 – 8:30 AM

- Media Services have outfitted and designed over 80 classrooms on campus; Israel is the primary designer
- Latest building, CHASS, has 12 general assignment classrooms designed to be very flexible and with high-end technology (specialized furniture, chairs on wheels, dual-projection media system, whiteboards on all walls)
- UCR Campus has 17 total flex rooms that average 45 stations/room; all tables on wheels that can be reconfigured easily
- Fire marshal requires a minimum of 20-25 ASF/student
- More difficult to have flexibility in a large 60+ student lecture room
- CHASS has a large lecture hall that holds 300, but it has fixed, tiered seating; there, the focus is on technology (3 big screens, LCD panels, etc.) rather than on space
- www.classrooms.ucr.edu – shows classroom layouts, capacities, furniture, equipment, etc.
- Israel's email: israel@ucr.edu
- Distance learning: not much on campus; only the Hyperstruction Lab ("Sandbox") has distance learning capability and videoconferencing
- All rooms at the Palm Desert campus have videoconferencing
- Lighting is often a critical issue in distance learning rooms
- Central control room and a full-time person (if cost allows) to support distance learning
- GSOE has a strong outreach component and hope to develop their video technology;
- Video archival/storage component for internal video technology for research
- When rooms get to a size for more than 15-20 students, there's a camera coverage issue; therefore, need tiered camera system
- Instead of having a server in every room, there could be centralized hardware that serves several rooms; cameras capture data and bring it to central location to be stored;
- The control room doesn't need to be next to the classroom or even in the same building; it could be located across campus
- Media Services only handle general assignment classrooms; others use their service for a fee
- Everyone with non-general assignment classrooms have their own staff
- Smartboards used in Sandbox (hyperstruction.ucr.edu) for large display

Tour of Hyperstruction Lab, CHASS flex classroom, large lecture hall across from Surge

EDUCATION – ADMINISTRATION, IT

(Marcia Iamanaka, Robert Wolfer)
February 20, 2008 – 10:15 AM

<u>IT Requirements</u>

- Variable grant environment impacts IT greatly; some grants need own dedicated server (that could be located in a single server room) and constant need to move equipment around for new grants
- "Accordion" effect with grants and staff made difficult by current lack of flexibility

- Issue of where to place the jacks: should not be placed where furniture is located now, but also where furniture might go in future; ideal to have jacks on all four walls
- Campus standards – two outlets per office
- GSOE has two computer labs:
  1. General Purpose Lab:
     - Dual use – instructional purpose (statistics class) and open to everyone
     - Placement on external wall would be great so students can access lab even when the building is closed
     - Holds 20 but needs to be adjusted for growth
     - Students use it as a computer lab to check email, do work
  2. Instructional Lab/Hybrid Lab:
     - High-tech lab
     - Used for exams
     - Priority for instructors; student cards cannot access lab
     - Original intent of lab was to showcase distance learning
- Most students have own laptops, but access campus network to print
- 3 tech classes with 75-150 students; instructors gear courses around the lab tech/software
- Instructors use software programs that are prohibitive size-wise or price-wise, so many students do their homework in the lab
- Current space is not laid out ideally; ideally, all computers would face forward toward instructor or have screens on different walls
- Assignments are individual-based; little collaboration occurs between students; however, that may change; two professors are using software that's so complex it requires groups to use it together
- Instructional lab is ideal for collaborative learning
- In credential program, many students have little or no experience with computers while others have a lot of experience
- Videotape requirements:
  - Teacher's credential program; State/federal requirements for supervisors to videotape students at their school site
  - Videotaping of children with autism
  - Video recording of School Psychology counseling and group therapy sessions
  - IT staff currently edits all student tapes
- Server room requirements:
  - GSOE is one of few places that keeps social security information (State requirement)
  - Physical layout of server room – 8x8 or 10x10
  - Currently, Copernicus project is server-intensive; their servers could be collocated in same space (GSOE servers on one wall, research grant servers on another)
  - Perhaps a rack for other projects that come and go
  - New state requirements regarding the environment housing secure data
  - Perhaps in close proximity to telecom room and videotape room
  - Ideally, there will be three spaces for IT:
    - IT office from which Robert can direct things
    - Workroom type space for storage of machines in transition (size of office space and capacity to put racks, shelves, boxes, work table) and for trolleys and AV carts – 100 – 120 SF
    - Server room
  - Staff projections – 3 (one staff and 2 faculty support) + Robert (GSOE IT Manager)

  - Look to Hybrid Lab space for future distance learning
  - Student helpdesk is currently Robert's office; he hopes to offer very personal IT service since the student base is very small
  - Preference for lab to be close to IT office

GSOE Administration, Adjacencies

- Student Services – for current and prospective students, admissions, advising
- Student Services should be located on lower level for easy public access
- Business Office – personnel, accounting
- Faculty Support – instructional support (ordering of books, syllabus, petition for change, scheduling of classes)
- Mail/copy is currently in Dean's office so Dean can see the faculty regularly
- Faculty Support, Journal Offices, and Student Services should be close to academic programs (faculty)
- Possibility of a mail center/dock for the receiving of books, computers
- Currently, everything (mail, packages) comes directly to the Dean's office so there's always stuff everywhere; consider separate mail center + faculty mailboxes
- Director of Development does all the fundraising
- Grants need a workroom
  - Workrooms can be multipurpose – one per floor – used by grants, journals, development
- Business Office and Dean's Office should share central receptionist

Storage Needs

- Current storage areas:
  - Individual offices (current records within 2 years)
  - The "dungeon" (older files - Grant records need to be kept for 5 years and personnel records for 10)
  - Offsite storage
- New building should have large storage space to accommodate all storage needs

Faculty + Supervisors

- Clustering faculty together might run into space problem when a new faculty is hired
- Dean also wants to break down the "silos"
- Make sure if one faculty has a window, all have one
- There's currently a caste system; tenured faculty and supervisors of Teacher's Ed don't want to be together
- Tenure faculty see office space as a privilege
- Teacher's Ed personnel collaborate more than faculty
- Lecturers and TAs should be closer to the students (assume students will go to their offices more often than to faculty offices)

Research

- Assumes 4FTEs per faculty
- Enthusiastic about the idea of open warehouse-type space and furniture on wheels to allow for ebb and flow

Clinical

- Eady Center was an endowment
- Must keep original square footage and be a separate piece
- Eady was intended for disability learning
- Clinic for Research and Teaching is for School Psychology and Educational Psychology

FOOD SERVICES

(Susan Marshburn)
February 20, 2008 – 12:00 PM

- Food services is a business; therefore, need to figure out how to serve larger population in order to make money
- Possibility of a grab n' go where you get salads and sandwiches
- While this building is alone, additional business could come from parking structures, International Village, and West Campus family housing (as they pass through to get to campus)
- If central area is activated, plan for outdoor venues
- UNEX has food service
- Possibility of "late night" service (requested by students at International Village)
- Food service needs to be visible for all traffic – not necessarily at the entrance to the building, but at the 100% corner
- No food prep – point of sale only
- If there are plans to host catered events, consider a separate area for catering needs (you don't want carts in the hall)
- Consider option of putting catering spaces outside meeting rooms – centralized, pre-function breakout area
- Food service space - 150 ASF, with a storefront location to service other customers
- Will provide healthy salads, cold sandwiches, candy, chips
- For catering functions, there won't be any warming carts; could use faculty/staff lounge for catering prep

GSOE FACULTY

(Michael Vanderwood, George Marcoulides)
February 20, 2008 – 1:00 PM

Faculty Research

- Most of our faculty have or want research labs; serves as recruitment tool
- Only faculty with funding get office space (and even with funding, might not get space)
- Faculty offices and research facilities should be connected in order for faculty to immediately access research group
- Prefer access to research group than to other faculty
- Every faculty has some kind of research so need an office for 3-4 grad students
- Possibility of a minimum module, so when a professor gets money, can get two, three, or more of those modules
- 2 or 3 grad students in a 140 ASF office would make them ecstatic
- 95% of faculty would agree with having research space near their offices

Journals

- Prof. Marcoulides is a journal editor; journals require editorial staff
- Four journals per room (current conditions) is not a good idea
- Ideal environment – where journal space and faculty office space were somehow connected
- Different components – editorial component, tracking aspect, paperwork, and production
- Often rotating editors; but depends on journal
- Faculty office is typically the size needed for a journal office

Lab

- All faculty have a need to use the lab teaching space, high demand
- Prof. Marcolides uses the open access lab for his core statistics class (3 hour lecture followed by 4 hour lab); students often take half an hour to move from lecture to lab
- Would benefit from tiered seating
- Only 4 faculty teach labs
- There should be separate facilities – classroom lab vs. open lab
- Many students work on team projects

Faculty + Teacher's Ed

- Faculty and Teacher's Ed supervisors are currently completely separate
- Preferable to group faculty by specialty area
- Goal to have two departments someday:
  1) A department combining School Psychology, Educational Psychology, and Special Education
  2) A department combining Curriculum and Instruction and Institutional Leadership and Policy

Clinical Needs

- Michael Vanderwood is the Director of the School Psychology program
- School Psychology students are full-time students and currently have their own lounge
- Search Center:
  - Focus on assessment and treatment of autism by Dr. Jan Blanchard
  - Search will bring in students from around the area and students will conduct assessment and intervention (counseling, etc.); use of one or two way mirrors
  - Needs easy parking, first floor access
  - Provides community outreach
  - It's a clearinghouse for information; transitioning into a Center but there's currently no funding for treatment
- School Psychology Clinic:
  - Would like about 10 viewing rooms since cohort size is 10
  - Students need immediate interaction and feedback; therefore, recording to DVD for later viewing does not work
  - One video room with five different monitor might be possible
  - Needs office space and a waiting room
  - Observation via cameras or viewing rooms
  - Use of 5-6 rooms at a time
  - Another possibility – individual rooms with an observation corridor at the back (Cal State Long Beach)

  - 1-2 grad students per testing room with a child - instructors watch and pull the students back to debrief
  - Privacy in back corridor not an issue; only privacy issue is that one client cannot hear the client in the next room
  - Easier to watch through a window than on 3 or 4 video screens in a separate room; but you need both (analogy of Las Vegas where you have a pit boss watching the floors as well as video monitoring going to a central location)
  - 10 clinical parking spaces nearby would be sufficient
  - A larger group therapy room would be nice
  - No need for outdoor space for kids (liability issue)
- Eady Clinic:
  - Currently underutilized because it's not truly accessible
  - Might require autonomy within the larger clinic setting
- All clinics could share same facility; from outside, looks like 3 separate facilities, but inside, it's the same space (example of UCLA facilities)
- Clinics need a room for storage of video recording system
- Windows may be a safety issue, but can have windows with shades
- Three scenarios in clinics – testing, teaching, or counseling a child

Vision

- More seminar rooms for 8-10 students around a table
- More flex style classrooms
- Not too much storage needs; most research labs only need one or two file cabinets since faculty typically destroy records that are two+ years old
- Only one faculty is doing a longevity study requiring records to be kept for 20+ years
- Enthusiastic about idea of central area rather than separate lounge areas; ie. Borders or Starbucks model
- Important to maximize interaction between all constituents, a central device with modular, moveable lounge furniture
- Movement of students from classroom should not occur anywhere near faculty offices – that creates a huge disturbance for faculty
- Given a choice between research space or large conference space, faculty would definitely opt for research
- Biggest student complaint is parking (first come first served for all staff and students)
- Consider lactation stations or "family restrooms" with shower(s) (LEED point)
- Social mixing usually occurs around mail and food
- Only 25% of faculty use faculty support so it doesn't really matter where it's located
- Student lockers not necessary; research spaces serve as grad student 'desks'
- Bike parking – many faculty use bikes and there is a goal to have faculty live closer
- Engineering Building 2 has two secure bike lock areas, one of them is in a partially open indoor stairwell
- EB2 also has conference area that meets Susan's catering needs
- Library or resource center? Nice for GSOE to have a place to access journals and books
- University of Minnesota has a shared faculty/student lounge with books around perimeter
- The central library might not allow another library within a school; although moving education collection out of Rivera Library would be ideal
- Research work is generally online now or at libraries near the students' homes because it's so hard to access the material now

- Perhaps consider a "Learning Resource Center" (with computers) instead of "library": adjacent to tech group and classrooms; for students to gather and study during the day

WRAP-UP MEETING

February 20, 2008 – 4:00 PM

GSOE Issues

- Undergraduates will stay in East Campus **(confirmed by Steve)**
- The GSOE computer lab is used for instruction and by students; space is in high demand
- Question of resource center – need to have a librarian to keep track of all materials; also need access to digital materials
- Computer lab = resource center?
- GSOE and SPP have own servers to access completely different software programs
- Notion of shared computer lab between GSOE and SPP is appealing (GSOE teaching lab is separate)
- Access to big storage digital capacity is important due to large statistical modeling programs
- For Food Service, it needs to be called something else to get funding through (EB2 allocated a certain amount of "activity space" to their food area)
- Steve confirmed that only faculty with grant funding will be assigned a lab
- Projections - $8 mil in grants ($5 mil currently)
- Not correct to assume all research groups consist of grad students; many are service/tech assistants and are full-time or part-time employees
- Steve's warehouse model consists of standard dividers, locked storage in each office, shared conference rooms in center, and secure dedicated storage areas for data needs
- Common administration and open office with a couple of conference rooms for meetings
- Need a conference room with appropriate ambience for hosting high-end advisers, community college presidents
- Segregation between faculty and Teacher's Education Program (TEP) supervisors – Steve hopes to break down all barriers between two in 5-10 years; just hired a faculty member that crosses both sides
- UCR is very conservative in making the distinction (ie. UCR is only UC where teacher's ed students are not considered 'grad students')
- Idea of a Building Commons for interaction opportunities
- Steve advised that the faculty do not need separate journal space since they can use own office; it's partly prestige and identity; however, they do often need several assistants with storage needs but the current concept is viable
- Journal editorship generally lasts 10 years and rotates
- Mailboxes in Dean's office not necessary since Dean's office needs separation while being the center core of activity
- How to convey an image and ability to be accessible but be protected from all the activity when donors come in?
- Dean's office should exhibit a certain formality and separateness to receive visitors
- Sproul feels like an "Elementary school"
- Need a work/class room for 60 people, 2 to 3 times a month max or two 35 station rooms with moveable wall between
- No need to separate faculty from TAs and lecturers; they largely teach undergrad classes

Teacher's Ed

- Do Teacher's Ed supervisors need offices? Steve believes this is a status issue – Teacher's Ed does not feel equal to faculty
- Standard complaint for supervisors to share offices due to privacy concerns
- Supervisor offices are mostly empty since they're on campus one day a week max.
- Consider hoteling concept – secure carts
- Really a status issue, not a spatial one
- Safety and security of personal goods and materials is only concern
- Instead of giving them separate offices, perhaps there are design elements that would set them apart from faculty offices (ie. ceiling sculpture, or whatever)

Clinical Program

- Eady Center restrictions? Students with learning disabilities; recently, that also includes autism
- Clinics can be small spaces
- Clinical program not in original square footage
- Budget is fixed so there may be tradeoffs with research space
- Possibility of phasing – phase one: share with SPP, phase two: take over building
- If GSOE gets a major naming gift for a clinic, may have a separate clinical building nearby
- The Clinic for Research and Training is a "pie in the sky" right now
- Search Center is a definite go; at full build-out, will need roughly the space of Eady Center (play area, reception area, shared office space, interview rooms, record security)
- Current Eady Center has a price tag to it and that space needs to move into this new building; can we add that square footage to this project?

TEACHER'S EDUCATION PROGRAM

(Ann Jones, Paula Sutton, Patricia Parr)
February 21, 2008 – 8:30 AM

Ann Jones – Director of Teacher's Ed program
Paula Sutton – Assistant Director of Teacher's Ed program
Patricia Parr – Coordinator for Single Subject

- Need a facility to accommodate 150-200 people at a time (150 students + 12-15 supervisors + staff)
  - For orientations every Fall, collaborations with schools, guest speakers, panelists, information sessions & recruitment (undergrad) every month
  - Lecture facility may be shared with other inhabitants of building
  - UNEX has large lecture rooms but there's a fee and is first come first served
  - Jon advised that a room that size needs to generate consistent use
  - Ideally, a stepped classroom-type space
- Teacher's Ed lounge (2213) is the most desirable room currently (650+ SF)
  - Contains all equipment needed but has zero technology
  - Convenience and comfort
  - Material storage
  - Need a room about size of 2213 for 20 people to work at a time

  - Important attributes: storage space, tables and chairs, counter space for refreshments, technology ability, central screen, whiteboards (currently on one wall), bulletin space (whole back wall), sink, carpeting
  - Accommodate 12-15 cohorts
  - Need two rooms; could be shared
- Student work space (currently a 4' diameter table in Student Services) – work tables, textbooks, laminator, butcher paper
  - A place to gather 3-4 at a time to organize materials, with a fridge, microwave, seating
- Constant need for mailboxes for Teacher's Ed students
- No need for lockers
- Teacher's Ed offices:
  - Cubicle style with nice conference area for confidential discussions
  - Technology is key since every monitor has a laptop (docking stations and printers)
  - Supervisors in different areas: Single Subject (5), Educational Specialist (2), Multiple Subject (7), Administrative Service Credential (ASC) (1); separate areas for each program
  - Ideally, shared space for 4 supervisors at a time
  - Most files are electronic; hard copies will eventually be phased out
  - All supervisors are around for meetings only
- Student Services
  - "One stop shop" for both Teacher's Ed and Grad programs
  - Should be more centralized, less linear
  - Need a receptionist, copy/work room, storage, conference
  - Proximity to Dean's office is desirable but ground floor access important for disabled students

WALKER MACY MEETING

(Mike Zilis)
February 21, 2008 – 10:00 AM

- How to deal with expansion? Challenge idea of adding additional 75K buildings rather than adding square footage to other buildings
- The width of Gage Canal is a currently a diagram; it needs to accommodate bike path and capped canal, but actual width needs to be studied
- Mike is OK with site ideas but not sure about encroachment into Gage Canal "build-to" lines
- Focus on area northwest of W3
- Visibility of building from University Ave. might be a challenge
- "West Carillon Mall" space allows for a "well-ventilated" area from west to east
- Important that if Sasaki considers diagonal movement through open spaces (i.e. treating the spaces between buildings as places rather than corridors), need to look at perceived open space connection and scale of buildings, views through
- Important to factor in future widening of Everton to the south

PUBLIC POLICY

(Anil Deolalikar)
February 21, 2008 – 10:30 AM

Public Policy

- It makes sense to pull out common shared spaces from their program summary
- Idea of 2 wings or vertical separation
- In 10-15 years, one program may occupy entire school; plan for expansion and growth
- Opportunities for shared administration are limited because they're two separate schools
- Small conference rooms/group study spaces adjacent to open computer lab to be signed out
- 2 or 3 of these spaces are sufficient, can be scheduled (not utilized for long periods of time)
- Size of computer lab – need about 50 stations (although GSOE has 2 other labs)
- SPP does not need full-time IT person; shared IT and server room possible
- Not common for SPP students to work with large data sets but there are a lot of proprietary software applications that are too expensive for students to buy

Other Issues

- Challenge of net to gross ratio (efficiency of 60%?)
- Challenge of clinic spaces (5,000 SF) that weren't originally allocated
- Eady Center is currently 1,200 SF
- Discrete entries for each clinic with shared administration
- Conference program in UNEX
- Although some programs hold back lectures, etc. because they can't find space on campus
- Slightly larger mech room for stand-alone chiller and boiler (incorporate into shell)
- UCR will provide Sasaki with telecom campus standards

CAMPUS FIRE MARSHAL

(Scott Corrin)
February 21, 2008 – 12:00 PM

- Key: on-site water
- Campus Fire has two on-site hydrants at International Village; that main system could potentially be extended?
- Concern regarding phasing of West Campus infrastructure plan
- Currently, can't get water from existing water service on East Campus
- Fire flow and water must be in place before combustible construction
- Minimum code requirements for fire flow is 1,500 GPM at 20 psi
- Is UCR or the developer paying for fire service for International Village and is there a way to negotiate a way to connect to it?
- Does UCR limit how much we provide on that one fire service?
- City has rights to say how much they will allow to come off one connection (may be 6")
- Existing potable water line through Lot 30 is not large enough to connect to the new building
- If EH&S project goes in first, then there's potential to feed from that direction
- Fire access from the west – each project may contribute its own elements (hardscape, turf block, engineered system) – hardscape is best; complete looping around sites not required
- Emergency access from the south, extending fence?
- Fire access for this project will probably be through Everton rather than Lot 30
- From security and police perspectives, there may be a desire to get pedestrian and vehicle flow through from Lot 30 to the north. Scott recommends trying to limit through access
- If there is space over covered Gage Canal, the Graduate Center could share some of the access of International Village to create the turnaround proposed
- Bridge considerations of Gage Canal (and weight issues)

- With Caltrans existing, need to develop a turnaround on-site
- Good to get emergency vehicle access point to within 30' or 40' of an exterior wall; not specifically written in any codes but it's their preference (for ladders)
- All portions of all exterior walls have to be within 150' as fire hose lays; may achieve this from an extension off Everton, may achieve part of it off Everton and part off Lot 30, or all from Lot 30
- If the Caltrans structure and roadbed are sound for emergency vehicles to get through, another strategy could be for Caltrans to move its fence, give up some of its yard space and create shared access drive over Gage
- International Village's water: 70 psi static, 60 psi residual, flow 877, 2,100 at 20 pounds, so that's enough to build; pressure's a little low but may just need to upsize the main; it's feasible (historic information provided for reference purposes)
- It's fairly economical to expose and daylight a pipe across the Gage Canal but need to talk to the developer of International Village

GSOE DEAN'S OFFICE

(Steve Bossert, Marcia Iamanaka, Margaret Herrara, Marie Schultz)
February 21, 2008 – 1:00 PM

- Development goal: "Lifetime relationships" with alumni
- Need different opportunities for donors
- Shared community spaces are excellent naming opportunities because they create a sense of accessibility for alumni when they visit
- Naming opportunities inside and outside buildings (ie. walkways, common areas, plaza or courtyard, sculpture, fountains, landscaping feature)
- Separate wings – good idea for naming; identity
- Alumni base will double by 2013 (6,000)
- Within Dean's Suite, need something that allows external constituents access to the Dean in an upscale way
- No need for alumni center; can re-purpose a larger common space
- Need for a space (breakout rooms?) to host donor lunches (3-4 members of a family) + 2
- Can use UNEX and new conference piece for larger events (200-300 people)
- 10 clinical rooms is "pie in the sky"
- Private entrances (Search on one side, Eady on another) with shared spaces between make sense
- Vanderwood's projections of 4-5 faculty in School Psychology are not realistic
- Idea of clinical suite; double use out of observation rooms
- Search needs a suite with a director and assistant; accessible to donors
- Steve thinks the diagram showing two separate entries with shared reception and viewing rooms is workable
- Some ancillary spaces like research spaces, etc. that are usually associated with clinic can be on another floor
- Resource center should not be on first floor; locate in same cluster as supervisor/TAs
- Dean's Office –
  - possibly on second floor looking down on lobby; provides visual accessibility but is private, secure, separate
  - Should not contain Faculty Services
  - Dean's Office should not be tucked in a corner

  - Immediate neighbors – Business Office
  - Conference room adjacent to suite – something fun and innovative that allows multi-use
  - Kitchenette nearby to facilitate small, catered lunches
- Conference/reception space for 150+ requested by Teacher's Ed will not happen in the building (2-3 receptions/year); alternative will be UNEX or perhaps outdoor spaces (issues of shade, wind, freeway noise…)
- Kitchens and bathrooms can be shared facilities
- Academic support staff tend to gravitate toward kitchenettes rather than common areas
- Workroom for assembling gifts, etc.
- 100 level courses in Teacher's Ed are large undergrad classes that will remain in CHASS
- Don't need mailboxes for every student in credentials program
- Cardkey access to upper floors is not necessary; otherwise, it would cut off a lot of interdisciplinary traffic
- Great opportunity to challenge traditional assumptions; if we make a statement for what the West Campus can be and convey that to the faculty, there would be lots of excitement
- Tradeoffs – push activities of 100+ to UNEX or outdoors in favor of smaller necessary needs
- General assignment classrooms should be on first floor

GSOE FACULTY

(John Levin)
February 21, 2008 – 2:30 PM

- John Levin represents Higher Education within Institutional Leadership and Policy (ISLP) group; distinct in that they don't do education and is heavily into research; exurban policy
- The biggest challenge is technology; many private universities are using distance learning
- Higher education (within ILSP) is a collaborative and connected to everyone in region; it's very fluid and needs warehouse-like space and good communications system because it's highly interactive
- Possible Student Affairs program within Higher Ed = more daytime students
- Need for high tech equipment
- One idea – ask a group of faculty how they expect to continue to teach
- Plan for social interaction between students and staff
- It would be beneficial for research offices to be close to faculty offices
- Faculty should be in an area together
- Classrooms should be flexible so they can accommodate 20-30 but also as few as 10-12 students without seeming uncomfortable
- Go away from fixed arm desks
- Operable windows would be great
- Favors a community room/library/learning center with lounge seating, internet access, desks
- Need Student Office for a Student Society in the GSOE; about 130 ASF for two desks, a computer, file cabinets; this is important to integrate students into the school culture

WRAP-UP MEETING

February 21, 2008 – 4:00 PM

- Consider possibility of conference rooms doubling as classrooms

- GSOE numbers are based on the projected number of students planned for the new certificate program (160 new part-time students)
- Student Office is necessary; it should be as visible as possible or mixed in with faculty offices
- Lecturers can be in clusters with a private office nearby for private student meetings
- Faculty Support is where faculty congregate, meet, so there should be adjacent space to continue conversation for a few minutes
- Hybrid Lab will morph into main distance learning facility
- Teacher's Ed will need built-in cabinets so they don't need to worry about taking storage elsewhere

NEXT STEPS

- Sasaki to flesh out program space details for School of Public Policy and send to Anil (through Jon).
- Sasaki to provide Jon with a range of site areas for various alternatives to assist in his infrastructure discussions.
- Sasaki to provide times to Jon Harvey for a conference call with Linda Scott-Hendrick.
- Sasaki to check on live conferencing software.
- Sasaki to provide Jon Harvey with missing documents list.
- Sasaki to do PowerPoint presentation to faculty focus groups on Mar 6/7.
- Marcia from GSOE to check the number of general assignment classrooms needed based on current enrollment numbers.

The information above will stand as recorded unless Sasaki receives written comments within five days of the distribution date from a recipient requesting an amendment.

G:\74105.00\Admin\Meeting Notes\2-19-08 Workshop #2\Meeting Minutes - workshop#2.doc

date	10 March 2008		
project name	UCR West Campus Graduate and Professional Center	project #	74105.00
meeting date	February 27, 2008	time	10:00 – 11:00 AM
recorded by	Grace Leung – Sasaki Associates		
distribution	Jon Harvey, John Coons, Tim Stevens, Fiske Crowell, Richard Tepp, Mark Eischeid		
purpose	Conference Call with Linda Scott-Hendrick		

ATTENDEES

UCR Capital & Physical Planning: Jon Harvey
GSOE: Linda Scott-Hendrick
Sasaki: Tim Stevens, John Coons, Grace Leung

SUMMARY

- Linda has been the GSOE Director of the Teacher's Professional Development Program unit since 1993
- All her funding is extramural (state and federal funding)
- There are some smaller grants and two large grants:
  1) $750,000/year for Beginner Teacher's Support serving 82 school districts
  2) $11.5 million – 5 year grant for science education
- Linda provided Sasaki a list listing the desired attributes of the research space and including all the comments from her staff (attached)
- Flexible space is very important
- Everything needs to be high-tech (videoconferencing, communication with other facilities)
- They are "electricity hogs" since everyone works with laptops
- Core research people work at desks; there are only a few who telecommute due to space needs but this is not necessarily desirable
- Linda has a staff of 20 and there is a need for a sense of community in the group
- Secure storage for confidential data is essential (currently, servers are in cages)
- Secure cardkeys at doors to research space
- The staff often work late hours (10-11 pm)
- Both paper and electronic storage needed; paper storage must be onsite because the documents are accessed often
  - Currently, they have 4 vertical files (4 drawers each), 3 lateral files
  - The University has a 5-year file retention policy
- Multiple computer labs
- A central server room is not desirable since there are 2 network administrators who live with the servers
  - However, Steve Bossert's goal is to remove territoriality
- Acoustic separation necessary between different research spaces
  - Maggie Herrera's glass partitioned office cited as desirable example: open but quiet
- Need lecture room for 25-30
- Provide freight elevator access for moving things around constantly
- Good signage for visitors, students is necessary
- Safety issues with parking: good lighting is necessary
  - Phones in every meeting room with reverse 911
  - More Blue light phones
- Outdoor spaces are very important, especially for staff lunches
- Quiet lounge for resting; preferably separate areas for male/female
- Separate bathrooms for faculty/staff and students are desirable due to heavy student use following classes
- Provide adequate temperature controls, air quality, natural light
  - An environment to foster happy workers
- Need to achieve appropriate balance between collaboration and privacy needs

NEXT STEPS

Sasaki needs to schedule a conference call with the PMT before March 5th.

The information above will stand as recorded unless Sasaki receives written comments within five days of the distribution date from a recipient requesting an amendment.

G:\74105.00\Admin\Meeting Notes\ Meeting Minutes - conference call #1.doc

date	10 March 2008		
project name	UCR West Campus Graduate and Professional Center	project #	74105.00
meeting date	February 29, 2008	time	2:00 – 4:00 PM
recorded by	Grace Leung – Sasaki Associates		
distribution	Jon Harvey, John Coons, Tim Stevens, Fiske Crowell, Richard Tepp, Mark Eischeid		
purpose	Workshop #3 Preview Conference Call with PMT		

ATTENDEES

UCR Capital & Physical Planning: Tim Ralston, Kieron Brunelle, Jon Harvey, Nita Bullock, Berent Pippert
UCR Office of Design & Construction: Daniel Vargas
Sasaki: Tim Stevens, Richard Tepp, Grace Leung

SUMMARY

- Sasaki was informed that Anil had no additional changes to the School of Public Policy program
- At the start of the conference call, the total program ASF was 48,185 ASF; the target is 45,000 ASF in order to achieve an efficiency of 60% (recommended by Sasaki)
- The following major revisions were made as a group during the call:
  - Addition of a 750 SF classroom
  - Standardization of spaces: administration and faculty offices (130 SF), workstations (65 SF)
  - The types and sizes of program spaces for Clinical Center were revised
  - Hybrid lab was taken out of GSOE program and put into General Assignment Space as a shared computer lab with SPP
  - One credentials classroom is sufficient
  - The 300 SF conference rooms were taken out of the GSOE program and added into building shared spaces, with the intent of distributing one per floor
  - SPP graduate offices station sizes reduced to 50 SF/station because there will be 3 students per office
  - There will be a central server room shared between GSOE and SPP
  - The Building Support program is part of the GSF and therefore, was not counted as part of the total ASF
- The above revisions (see attached Program Revision #5) resulted in 44,020 ASF

Sasaki presentation of the three program organization schemes

- Sasaki has not studied a 3-storey building scheme due to the height of existing and future structures surrounding the building (i.e. UNIX is 6-storey, parking structures will be 3 or 4-storey)
- A security concern was raised given the number of exterior doors on the ground level in schemes B & C
- Other buildings on campus (i.e. CHASS, EB2) have classrooms with doors leading directly to the outside
- The location of mechanical equipment (boiler, chiller, cooling tower) has not been determined, but the equipment may possibly be located in the support area on the east side of building; the cooling tower could be located on the second level, on top of the clinic
- The schemes show the proper adjacencies and are headed in the right direction
- Assuming SPP moves out in the future, the building still needs to work
- The amount of "site area" needs to be determined
- The Caltrans easement is becoming crucial
- The covering of the Gage Canal – is this part of the infrastructure project?

NEXT STEPS

Sasaki to continue refining the three schemes for presentation at Workshop #3.

The information above will stand as recorded unless Sasaki receives written comments within five days of the distribution date from a recipient requesting an amendment.

G:\74105.00\Admin\Meeting Notes\Meeting Minutes - conference call #2.doc

date	10 March 2008		
project name	UCR West Campus Graduate and Professional Center	project #	74105.00
meeting date	March 6-7, 2008	time	As noted below
location	Surge 333		
recorded by	Grace Leung – Sasaki Associates		
distribution	Jon Harvey, John Coons, Tim Stevens, Fiske Crowell, Richard Tepp, Mark Eischeid		
purpose	Programming Workshop #3: Site Analysis, Space Program/Concept Design Alternatives, Budget Analysis		

OVERVIEW MEETING

March 6, 2008 – 8:30 AM
Attendees:
UCR: Tim Ralston, Kieron Brunelle, Jon Harvey, Nita Bullock, Daniel Vargas, Brian Kermath (Campus Sustainability Manager)
GSOE: Steven Bossert
Consultants/Sasaki: Philip Mathur, Ray Keane, Tim Stevens, Grace Leung

Powerpoint presentation of graphic program and site analysis (attached)

- The building should take into account the fact that one program will take over the entire building at some point in the future
- More importantly, it needs to be flexible enough to grow
- Fire access – through International Village or the corner of Caltrans
- Elevation changes across the Canal should be studied to ensure a fire engine can make the grade (since verified)
- Site boundaries seem large for all schemes
- Pedestrian access will be across the Gage
- Infrastructure will come within 5' of property line so it's important to define project property line
- Parking – provide onsite (ADA and clinic parking) or have agreement with International Village to use a few spaces for clinical needs; Nita believes it will be difficult to negotiate with International Village
- Parking available at UNEX and Highlander Hall, but if clinic is located in the southeast corner, there will be a 600-900 ft walking distance
  - Currently, the walking distance is not a problem; it may be in the future when the clinics start dealing with infants
- The clinical parking need – 5 spaces maximum, according to Steve
- The walk from parking to the building needs to be very pedestrian-friendly
- The length of the Canal from Everton to the south side of site should be covered, which would require the reinforcing of the Gage Canal
- If UCR takes over Caltrans property, will put in the road extension of Everton to the east service turnabout and provide several parking spaces on the east side of the building for clinical use
- Even if Caltrans moves out, the proposed building setback will remain

Sasaki presentation of the three schemes

- From a service standpoint, if Caltrans remain, all vehicles will come from the south side and disrupt courtyard
- Fedex, UPS, etc. can park on Everton and enter through the front door
- The schemes should invite people to use the stairs instead of the elevators
- Clinic space should be directly accessed from the outside without entering the building
- The schemes may be pushing the Gage Canal easement too much
  - Buildings should be pushed back east another 50' to ensure they do not impose on an important view shed
  - It's OK to challenge set-back lines from the CAMPS plan slightly, but important to leave as open as possible
- Scheme B:
  - The clinic should be turned 90 degrees to form a more enclosed courtyard (like Scheme C)
  - This scheme lends itself better to daylighting and ventilation throughout
- Schemes B & C create an oasis
- There is a cost difference between all three since Schemes B and C are not as efficient as Scheme A
- All three schemes are in the right square footage targets

Timmons presentation of four different MEP systems

- VAV System – price depends on the number of zones
  - Discourages the opening of windows because it's based on air exchange
  - There is a sensor that indicates when it's OK to open windows (based on outdoor temperature and humidity)
  - Achieves at best, 20% better than Title 24
- Radiant Ceiling
  - Uses a lot of copper hydronic piping and therefore, is a very expensive system
  - Very flexible and efficient system
  - Optimal comfort (no draft) and indoor air quality
  - Encourages users to open windows
  - Air quality may be an issue depending on proximity to freeway and noise
  - Concerns with dust problem and management (who opens/closes the windows)
  - Faculty would want to open windows
  - Achieves approximately 35% under Title 24
- Chilled Beam System
  - Uses a lot less copper than Radiant Ceiling system
  - Each office will have a chilled beam with individual control
  - Good quality ventilation air
  - 30% reduction to the size of fans (fans provide ventilation air only)
  - The air must be dehumidified first

  - Flexibility: Can move walls around on a module system
  - More cost effective than other systems
  - Can be exposed (for maximum daylighting) or can have a ceiling system
  - Achieves approximately 30% below Title 24
  - Avoids draft problem of VAV system
- Full-height raised 18" access floor
  - There may be problems with furniture placement and leakage if contractor doesn't seal well
  - Very good system energy-wise, but not as good as the two hydronic systems
  - Allows night-time ventilation without using any chillers
  - Achieves approximately 20% below Title 24
  - Not a good system for the building due to the huge number of closed offices
- The number of occupants expected to stay the same, even in future expansion
- It is possible to have exposed ceilings in the research space for a higher ceiling height
  - An Epic deck (exposed metal deck) can be used
- Given environment (cultural and geographic), chilled beams seem to be the most viable option
  - Stanford Engineering Building has a chilled beam system
  - Chilled beams is not a new system, but pricing has decreased over the years
  - Has been used in the UK for 15 years
  - LEED criteria is driving this system
  - Uses a lot less embodied energy (less material) in the chilled beam system as opposed to the massive amounts of ductwork in a VAV system
  - Relatively easy to maintain; there are no moving parts, fans, or filters
  - In large assembly spaces where loads fluctuate, will use a different, ventilation driven approach

Cumming presentation of the cost models

- The three schemes do not vary much in cost
- The main cost driver is exterior cladding
- With walkway schemes, there are exterior decks that need waterproofing, etc.
- Foundations are assumed to be slab-on-grade with footings and grade beams
- All schemes have a very standard structural system - steel brace framed buildings, metal deck with lightweight concrete fill, and no concrete fill on roof except where there is mechanical equipment
- Exterior cladding have traditional, medium-level finishes
  - UCR full brick with drywall backing (25%)
  - Metal panels (25%)
  - Glazing (30%)
  - Cement plaster (20%)
- Costs do not differentiate between punched windows and full-height curtain wall, but assumes curtain wall at the front entry
- Typical interior finishes: gypsum and carpet, ceramic tile in restrooms
- There are no real cost drivers in the schemes or anything unusual that results in a premium
- Hydronic options have lower costs due to lower CFM and less ducting (1/3 of VAV system)
- Philip's MEP team needs to coordinate with Timmons' team to ensure the right system is costed out
- All numbers are fully-loaded (includes GC markups, contingency, fees, escalation)

- Escalation is a huge worry; the good news is that there is a downturn shift in the market over the next few years;
  - Currently, estimating 4-5%, but it's very subjective and can change vary quickly
  - Assumes a September start date and 18-month construction schedule
  - If date moves one year, will add 4% to budget
- 2.5% needs to be taken out of design contingency because UCOP does not acknowledge anything over 10%
- Project will go out to bid July 2011; Philip's numbers assume a year later so this will be adjusted
- Infrastructure project will occur at the same time; therefore, should we assume a more conservative start date?
- Costs may be slightly inflated to capture unknown costs; for example, the doors category accounts for fire rated doors, doors with side lites, etc.
- MEP costs assume a VAV system, so costs may be lower with a chilled beam system and the resulting lower floor-to-floor heights
- The target construction budget is $37 million
- Key factors in determining cost: accommodating all program in a smaller footprint; increasing square footage increase costs significantly
- Five-stop hydraulic elevator to access roof
- Roof screening is covered in exterior cladding
- Passive solar screens are covered in cost
- Site runs about $25/sf; biggest unknown is utilities
- Carry a CM-at-risk fee (about 3%) below the line
- There have been no discussions yet regarding whether or not this needs to be CM-at-risk
- LEED items are pulled out; commissioning included in cost is a standard-type and not LEED related
- The problem with the site is the size
- To lessen the cost burden, shared fire access can be taken out of this project
- Infrastructure project does not have any landscape budget so the scope of landscape in this project should not be reduced
  - Due to the building's isolation, the landscape element will be a crucial piece
- Include escalation assumptions in cost report
- Timmons to provide upfront costs + operating costs of different MEP options
- Rationale for full bricks vs. half bricks:
  - Half bricks have adherence issues – thermal expansion/contraction might pop them off
  - Authenticity issue – half bricks look like tile
  - This building should be a symbol of excellence so it must look good

PROGRAM VERIFICATION MEETING

March 6, 2008 – 11:30 AM
Attendees:
UCR: Tim Ralston, Kieron Brunelle, Jon Harvey, Nita Bullock
GSOE: Steven Bossert
Consultants/Sasaki: Tim Stevens, Grace Leung

Revision of program based on Marcia's comments

Key decisions by Steve and PMT:

- Dean's Office, Business Office, and Faculty Support will be located adjacent to each other and therefore, will share a kitchenette, receptionist, and waiting area
- Student/Faculty conference room in Student Services is not required since Student Services is located near many shared conference rooms and break-out rooms
- TEP supervisors and graduate students will remain in workstations (since the more spaces that are enclosed, the less daylight that can reach all spaces)
- Server and Video Room will be a shared space with SPP
- One credentials classroom will be sufficient since TEP can use other shared classrooms

LUNCH MEETING

March 6, 2008 – 11:30 AM
Attendees:
UCR: Tim Ralston, Kieron Brunelle, Jon Harvey, Nita Bullock, Daniel Vargas, Don Caskey (Campus Architect)
GSOE/SPP: Steven Bossert, Anil Deolalikar
Consultants/Sasaki: Ray Keane, Tim Stevens, Grace Leung

Powerpoint presentation of graphic program and three schemes to Campus Architect
Presentation of four building system options

- Building should be LEED-certified
- Timmons to provide a list of local examples using the chilled beam system
- Chilled beam system must be coupled with an efficient building

USER GROUP: GSOE FACULTY PRESENTATION

March 6, 2008 – 1:30 PM
Attendees:
UCR: Kieron Brunelle, Jon Harvey
GSOE: Steven Bossert, Rollanda O'Connor, John Levin, Mike Vanderwood, Sharon Duffy
Consultants/Sasaki: Ray Keane, Tim Stevens, Grace Leung

Powerpoint presentation of graphic program and three schemes to Faculty
- Classroom space in the schemes does not appear sufficient
- Most Graduate classes occur between 4:40 – 7:00 pm and can be accommodated by conference rooms/breakout rooms
- Current classrooms at Sproul are unacceptable
- Typically, there are 7-16 students per class
- Faculty prefer rooms with movable tables and chairs rather than fixed rows
- Most classes are discussions rather than lectures
- The projected number of students for the new building assumes 150 students in TEP, 150 in MEd, and 150 in the Graduate/PhD program
- Concerns about lack of daylighting in the third floor research spaces in Scheme A
- Scheme B – exterior entrances on upper floors are unacceptable (similar to current conditions at Sproul)
- Professor Levin prefers the mixture of interior vs. exterior circulation in Scheme C
- The faculty agree that the mixing of faculty office and research space is preferable

  - Preferred adjacency of half research and half faculty offices rather than split by floor level
- In Scheme A, the exterior spaces simply function as entries/exits, whereas Schemes B and C encourage people to use outdoor spaces
- The 80 station classroom requested by SPP could also be used for GSOE lectures and orientation
  - Cannot be divided due to problems with acoustics
- The location of Student Services in the north corner works well, according to Steve
- At peak hours, 9-10 classroom/seminar spaces are needed at the same time
- Open space adjacent to faculty offices for casual conversations is important
- Parking may be required adjacent to clinic; however, parking onsite is not ideal in the short term if access through Caltrans yard is not obtained
- One lab shared, one lab dedicated to GSOE
- Computer labs:
  - Possible need for 3 labs rather than 2, especially if one is shared with SPP
  - Lab needed for evening statistics courses and TEP use it for technical training
  - The TEP and Graduate Program often schedule labs at the same times in the evenings; therefore, will need an open lab for drop-ins
  - Lab is shut off to the public when in use by a class
  - There is a need to balance use – building cannot be programmed to accommodate worst-case peak scenarios; otherwise, building spaces will be empty half the time
  - The resource center can also be a shared computer lab
  - The bulk of SPP teaching occurs during the day
- Scheme C provides a building buffer for a windy and dusty site and in the long term, provides a beautiful open space
- UNEX can be used for large meetings
- Third party developer is planned for future conference center
- The faculty unanimously agreed on Scheme C – daylighting issue, mix of faculty offices/research space

PMT MEETING

March 6, 2008 – 4:00 PM
Attendees:
UCR: Tim Ralston, Kieron Brunelle, Jon Harvey, Nita Bullock, Daniel Vargas
GSOE/SPP: Steven Bossert, Anil Deolalikar
Sasaki: Tim Stevens, Grace Leung

- The site issue needs to be addressed; the schemes currently include a lot of landscape area
- Chilled beam system:
  - Possibly becoming the system of choice
  - Philip should take into account that chilled beams reduce floor-to-floor heights
- Computer Labs:
  - The need for more computer labs was brought up by the GSOE faculty
  - Steve described a cart-based system – rolling carts that securely store a large number of laptops can be rolled into any space and convert it into a computer lab
  - The server room could be made larger to store these carts or the carts could be stored in the classroom support room
  - There is no need to add any computer lab space **(confirmed by Steve)**

- Classrooms:
  - In GSOE, there will be more faculty, but the student size of the TEP and grad programs will stay constant; the MEd program will be taught mostly offsite
  - The breakout rooms are currently the right size **(confirmed by Steve and Anil)**
  - Typical GSOE cohort sizes are 8-12 and SPP cohort sizes are 7-14; therefore, there is no need for more classrooms that hold more than 15
  - According to Steve, in all schemes, the amount of classroom space seems appropriate
  - Should the 80 station classroom have fixed, tiered seating or flat floor with moveable tables?
    - Flat floor classroom to allow greater instructional flexibility (i.e. movable tables and chairs) **(decision by Anil and Steve)**
    - Even with a flat floor, there will need to be higher floor-to-ceiling heights
  - The 1,500 SF conference room with moveable walls will have a sound issue if used for instruction; therefore, it cannot be separated into smaller classrooms
    - There is not really a need for such a large conference room; therefore, the 1,500 SF conference room could be replaced by one 1,000 SF (40 stations @ 25SF) conference room and an additional standard 300 SF conference room (to allow an equal size conference room on every floor) **(decision confirmed by Anil and Steve)**
- Total Classroom/Conference Room count **(confirmed by PMT)**:
  - 1,600 SF Large Classroom (80 stations @20 SF/station)
  - 1,400 SF Hybrid Lab (40 stations @ 35 SF/station)
  - 900 SF Seminar (30 stations @ 30SF/station)
  - 750 SF Small Classroom (30 stations @25)
  - 300 SF (x 4) Breakout Rooms
  - 1,050 SF Open Lab (30 stations @ 35SF/station)
  - 600 SF Credentials Classroom
  - 1,000 SF Conference Room (GSOE)
  - 300 SF (x 3) Conference Rooms (one per floor)
  - 750 SF Resource Center
  - 120 SF (x 2) Resource Center Team Meeting Rooms
- Janitor's closet is included in gross square footage
- Building diagrams will not be needed for the PPG
- Kieron does not think there is a need to defend the net to gross ratio since the number is close enough

USER GROUP: STUDENTS WITH DISABILITIES

March 7, 2008 – 8:30 AM
Attendees:
Students with Disabilities: Suzanne Trotta
UCR: Jon Harvey, Nita Bullock
Sasaki: Tim Stevens, Grace Leung

- Important considerations for students with disabilities:
  - Two elevators preferable (cost model currently includes two elevators, with one going up to the mechanical penthouse/roof)
  - Clarity at building entries

  - Follow ADA guidelines
  - Power-operated entry doors and if there's a vestibule, additional ones after the entrance
  - Good acoustics
  - Counters where a seated person could reach everything
- The site location on the west campus will require that people drive over on the van; the cart cannot cross the freeway
- A drop-off area in front of the building will be needed
- Lot 30 has a bus shelter where the vans as well as shuttles pick students up
- Important issues: Parking and path of travel (how to designate parking spaces)
- Since Everton is a city street, students should not be expected to cross it, especially with trucks constantly moving in and out of Caltrans
- Parking is required right next to the building
- Temporarily, service parking needs to be provided on site; it can also serve as accessible parking
- In the future, there will be two adjacent parking garages or the parking structure site could temporarily serve as surface parking
- Nita emphasizes that the building should not expect to use International Village parking
- Students with Disabilities services: academic support, on-call rides, provide testing facilities for students with disabilities, campus tours
- Automatic door openers for classrooms are not required; however, they should be provided at classrooms with exterior access
- Automatic door openers should be provided on clinic doors, doors into the building from the future parking structure to the east, and any large lecture rooms
- This building should do more than meet minimum accessibility standards on campus; it should raise the bar given that it's the first building on the West Campus
- Temporary, worst-case scenario: cover portions of the Gage Canal and use the area adjacent to the front entrance as drop-off, loading, and temporary handicap parking

SITE PLANNING REVIEW

March 7, 2008 – 10:00 AM
UCR: Tim Ralston, Kieron Brunelle, Jon Harvey, Nita Bullock, Daniel Vargas, Don Caskey (Campus Architect)
GSOE/SPP: Steven Bossert, Anil Deolalikar
Sasaki: Tim Stevens, Grace Leung

Powerpoint presentation of graphic program and three schemes

- Issue: how far west to move the building to not encroach on Gage Canal setback vs. how far east to move the building to not impact power lines
- Should there be an elevator at the east end for freight/service? It might dilute the reinforcement of the Building Commons as being the core of the building
- The moving of large items (i.e. furniture) is not expected after initial move-in
- For light packages, UPS, Fedex, etc. can park on Everton and enter through the front door
- Parking issue:
  - Disabled parking needs to be close to building
  - International Village parking does not belong to UCR, but it's currently used by UNEX as an overflow lot
  - Parking/site access options:
    - Through Caltrans lot

- Explore potential of using International Village parking
- Cover the Gage Canal and go over it to access site
- Do some improvements on the future service road to the east of the building
- It might be possible to cut the corner at Everton and access the site without entering Caltrans property

- For the budget, there should be a cushion of about 5%
  - The cushion could be changes made during the design phase to material finishes or site area; however, those items should be identified in the programming stage

Excel matrix of pros/cons of each scheme

- The analysis of the pros/cons of each scheme led to the conclusion that Scheme C is the preferred scheme **(unanimous decision by PMT)** with a few changes:
  - Pull clinic away from the building to allow a straight, open path from entry lobby to service area
  - Greater setbacks off Gage Canal
  - Adjust the main entrance (move bathrooms away from Commons)
  - Check distances to elevators

USER GROUP: UCR REAL ESTATE SERVICES

March 7, 2008 – 1:30 PM
Attendees:
UCR: Jon Harvey, Nita Bullock, Daniel Vargas, Lisa Hjulberg (Director of Real Estate Services)
Sasaki: Tim Stevens, Grace Leung

- Due to budget crisis, the process to move Caltrans will take a long time
- Different options for fire/emergency access to site:
  - Plan A – UCR buys the Caltrans property and implements CAMPS, can proceed as planned
    - UCR has already found Caltrans 5 good alternative sites
    - Caltrans has emphasized its lack of money (since they need a 10-acre replacement site and they currently only have a 3-4 acre site)
    - UCR insists that there is no better time for Caltrans to move because prices are currently low and land is still available
  - Plan B – UCR buys a piece of the Caltrans site (the southern portion, running the entire length of the Everton expansion all the way to the freeway)
    - If UCR moves the Caltrans fence and gate, is the University prepared to cover that cost?
    - To better understand what needs to be moved or rebuilt, it's important to study the current gate structure
    - UCR can build the curb for the south side of Everton
    - Sasaki to confirm whether there are code issues with regard to the proximity of the refueling station to the new building
    - Fuel tanks are above ground
  - Plan C – share the Caltrans corner for fire/emergency access
  - Plan D – go through International Village
    - This plan is not preferable due to uncertain lease terms with International Village
- Lisa will check the lease with International Village to confirm who has access to the parking spaces

- Discussions with the City of Riverside are necessary in order to relocate power lines and cover the Gage
- Sasaki to provide Lisa the following images by next week: aerial photo, CAMPS master plan, aerial showing the easement line, timeline for the building project, plan showing utilities from Infrastructure Plan

WRAP-UP SESSION

March 7, 2008 – 3:30 PM
Attendees:
UCR: Kieron Brunelle, Jon Harvey, Nita Bullock, Daniel Vargas
GSOE: Steven Bossert
Consultants/Sasaki: Philip Mathur, Tim Stevens, Grace Leung

- Agenda for Workshop #4 (April 10)
  - LEED checklist – 3rd party commissioning, energy modeling, USGBC submittal
  - Review of room data sheets
  - Preferred alternative review + cost model
  - Administrative draft report review
  - Time allotment:
    - 1 hour – presentation of preferred alternative and site
    - 3 hours – comments from PMT and faculty on room data sheets
    - 1 hour – LEED checklist
    - 1 hour – building system round-table
    - 1 hour – lunch
- Cost savings with the chilled beam system will not be as great as estimated in the draft cost model, but there will still likely be a cost savings
- Approximately 0.67% of budget to do LEED certification (75K Sasaki fee, 30K energy model, 110K commissioning agent)
- Intent of Library/Resource Center – the library program was pulled out of SPP and serves as a shared resource center with books/journals and digital materials **(Decision confirmed by Steve)**
- Distance learning capabilities: conduits will be put in every classroom, seminar room, and conference room and can be outfitted at a later time **(Decision confirmed by Steve)**
- DRB meeting set for 11-2pm on April 1st

NEXT STEPS

- Sasaki to schedule a live meeting with Hendrikson Owen (infrastructure team) after PPG for feedback on infrastructure planning
  - Sasaki to present the proposed building plan and Hendrikson Owen to review infrastructure plan phase 1A for any disconnects

- Jon Harvey to provide Philip an example of the PPG cost layout

- Timmons to provide upfront vs. operating costs of each MEP system alternative.

- Timmons to provide a list of local examples using the chilled beam system

- Jon Harvey to provide Sasaki PMT comments on the Meeting Minutes for Workshops #1 & 2.
- Sasaki to provide Jon Harvey diagrams for Lisa's Caltrans discussion by early next week.
- Sasaki to provide PMT a draft DPP (including a LEED checklist, room data sheets, system narratives, and preferred alternative documentation) the week of March 24th in order for everyone to review and come to the April 10th workshop with comments.
- Sasaki to provide Jon Harvey the April 10th Workshop #4 agenda next week.

The information above will stand as recorded unless Sasaki receives written comments within five days of the distribution date from a recipient requesting an amendment.

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minutes

SASAKI

date	11 April 2008		
project name	UCR West Campus Graduate and Professional Center UCR Project Number: 950449	project #	74105.00
meeting date	April 10, 2008	time	As noted below
location	Bannockburn J-102		
recorded by	Grace Leung – Sasaki Associates		
distribution	Jon Harvey, John Coons, Tim Stevens, Richard Tepp		
purpose	Programming Workshop #4: Preferred Alternative Analysis, Sustainability Discussion, Draft DPP Review		

ATTENDEES

See attached attendance sheet

OVERVIEW MEETING

8:30 AM

Summary of DRB meeting and presentation of revised site diagram

- The current clinic configuration allows it to provide a buffer against the wind and the sun in the near term; rotating it would not be preferable
- The building mass protruding into the Gage Canal open space will be very transparent
- Sasaki should include in DPP:
  - criteria for what should be allowed to protrude into the Gage Canal open space
  - qualities of specific building spaces, i.e. double-height entry forum
- Gage Canal open space is an arboretum-type walk and therefore, has a different character than the formal courtyards
- Open spaces between buildings are like "fingers" leading from the parking structures into the Gage Canal
- Jeff Cross of Flores Lund spoke with Riverside Utilities – apart from the existing easement, the building needs to stay a minimum of 12'-0" from the pole and 69KV lines (current easement from 1964 calls for 20'-0")
  - Riverside claims they have (and can) underground a 69KV line

ROOM DATA SHEETS REVIEW

9:30 AM

Review of room data sheets

- General comments/revisions:

- Add on room data sheets: temperature requirements, data/voice requirements
- In large classrooms and conference rooms, show alternative furniture layouts and locate where the instructor would teach from
- Remove tack boards from all classrooms (except for TEP credentials classroom) and put in white boards instead
- General assignment classrooms typically do not have carpet; however, this building might want a more professional look
- Carpet is good in small seminar rooms, but for large classrooms, carpet may not be preferable; carpet also gets dirty quickly. It was noted, however, that the "Hyperstruction" classroom is carpeted
- TEP classroom uses paints, does science experiments, etc. and therefore needs another material on the floor that looks good and can be easily cleaned
- The systems narrative in the appendix will note general requirements that apply to all rooms of a particular type, i.e. classrooms, offices, storage rooms, etc. and then the room data sheets will list requirements that apply specifically to that room
- Provide floor outlets in all conference rooms, classrooms
- If a room calls for windows, call out type of window treatment
- 2 exits are required for rooms with 50 or more stations (UCR requirement and code requirement based on occupancy standard of 20sf/occupant)
- Provide storage room between classrooms to store tables when not needed
- Avoid built-ins
- Regularize room sizes around the 130 SF module
- Add a section to the DPP that addresses the modularity of offices
- In Student Services, there needs to be an area for students to drop off student projects
  - 30-40 boxes a quarter; each box the size of paper boxes
  - Needs to be a secured area
- Check Cummings estimate relative to carpet pricing and compare to the square footage of carpet required per room data sheets
- Lighting level in electrical narrative – check footcandle criteria (i.e. below normal limits); need to address offices; confirm whether electrical narrative assumes task lighting to augment general ambient lighting
- It's too early to develop furniture budget **(confirmed by Kieron)**; BKM can provide estimate for office fit-out to establish fund-raising goal for Steve Bossert
- This project pays for classroom furniture
- In the "comments" section of summary sheets, add the capacities of rooms
- Sign-in sheet as part of room identification graphics (refer to Campus standards)
- Add chair rails at rooms with flexible furnishings to protect walls from furniture movement
- Provide cardkey access for all clinic spaces, CL-3, resource center, labs
- "cardkey access" should be changed to "controlled access"
- Carve out a space/niche between two classrooms to store tables/chairs and this allows counters to be shortened (refer also to comment above regarding table storage)
- Locate storage rooms with sinks in close proximity to plumbing (i.e. restrooms)
- Use conference room and storage room as separation between Dean's Office and Business Office
- Add room use codes to summary sheets (pages 58-59)
- Revisit modularity of clinic rooms

- Specific comments for each room type will be addressed in the administrative draft DPP

LEED DISCUSSION

1:30 PM

Review of LEED checklist

- Unsure if current site is considered prime farmland, Sasaki to check
- Campus standard includes parking preference for low-emitting vehicles
- Parking will be provided as part of demo of existing Highlander Hall. The project provides no on-site parking for FTEs, just parking for clinic visitors
- Water from Gage Canal is not potable once the Canal daylights southwest of the I-215/SR-60 and University Avenue intersection; the Gage Canal is not part of the storm water system
- Hydrodynamic separators are sumps that allow particulate matter to settle
- White roofs are used everywhere in UCR on academic buildings
- Physical Plant has a negative reaction to waterless urinals, therefore, should look into the reuse of graywater to achieve water efficiency credits
- There is low water use in building, so it may be possible to achieve 40% water reduction (innovation point)
- It's possible to get WE credit 2 even without the use of waterless urinals
- City of Riverside has gone to dual flush toilets
- Energy & Atmosphere credits 2.1-2.3 could be purchased if the building wants to be visibly sustainable, i.e. PV panels
- EA credit 5.0 – measurement and verification – Pat Simone wants to make this point a part of the UCR baseline
- Since it's a stand-alone building with a new central plant, it's possible to spec a HVAC system that uses no refrigerants
- City of Riverside might already use green power, Sasaki to check
- Vinyl and rubber flooring are very similar in cost; corn-based products (rapidly renewable products) are an alternative to vinyl
- Materials and Resources – getting the credits is a matter of specifying the right products
- For MR credit 4.4, many particleboard products have phased out the use of formaldehydes so one no longer pays a premium for them; however, problem might be with durability of alternatives, e.g. wheatboard
- If project uses VAV system, it would be very hard to achieve EQ credit 6.2
- EQ credits 8.1 and 8.2 are very hard to get but great to target; since we have a narrow building, it might be possible
- "Building as education" is an innovation point
- LEED platinum always requires a premium/cost investment
- Specific items for Steve Bossert to target for donor opportunities:
  - On-site renewable energy generation
  - Harvesting rainwater/graywater for reuse – provides several credits and can help express green technology
  - It'll be helpful to know the premiums associated to each of these points in order to establish fund-raising goals
- Budget does not allow for consideration of PV panels as part of base building
- Budget covers LEED silver *certification* (i.e. not just equivalence)

DRAFT DPP REVIEW

2:30 PM

Review of draft DPP

- General comments/revisions:
  - Include UCR project number on cover
  - "Change" should be replaced with "innovation"
  - Distinguish between stakeholders and user groups
  - LRDP (2005) is the primary document while CAMPS (2008) is the supporting document; LRDP should always be listed first
  - Provide a list of abbreviations in Appendix
  - Add dates to campus plans, documents
  - Character sketches not necessary; current sketchup models are sufficient **(confirmed by Tim Ralston);** the DPP should stay away from design
  - In all drawings, change "Gage Canal easement" to "Gage Canal", "UCR/Caltrans boundary" to "UCR boundary", add north arrow, legend, scale
  - Keep W4 and W5 footprints simplified
  - Label highway
  - Include north arrow, scale, color key in all diagrams, drawings
  - Provide visual cue between building and site using a darker outline
  - Include aerial photo, context drawings, site photos
  - Include dimension of courtyard in comparison to CHASS courtyard
  - Include narrative regarding high power lines
  - Show two options of building siting depending on the success of obtaining the Caltrans yard (i.e. will move the building north if Caltrans moves)

WRAP-UP

3:30 PM

- School of Public Policy research center (RS-1) will be used by visiting researchers/faculty so it needs to be a flexible space
  - Will change layout to show workstations (10 is sufficient) and collaborative tables between workstations (similar to Sasaki's office layout) **(confirmed by Anil)**
- Currently, there are 12 faculty offices and a Dean's office. Since there is a possibility the Dean will not be a part of the faculty, therefore, keep 12 faculty offices **(confirmed by Anil)**
- 50 SF vs. 65 SF workstations – 50 SF for grad students, 65 SF for staff
- In section 5.0 of DPP, include a summary of cost model and then move the cost model to the appendix
- Pathways between buildings are not meant to be broad pedestrian malls, but rather, more intimate, interconnecting open spaces with pedestrian paths

NEXT STEPS

- Sasaki to provide Jon Harvey with a schedule for the completion of the DPP.
- Sasaki to provide Jon Harvey an approximate schedule of the design and construction process, based on a traditional type delivery.
- Jon Harvey to provide Sasaki with comments on systems narratives by Tuesday, April 15th.
- Sasaki to provide Jon Harvey a draft of the C3 presentation by Monday, April 14th.
- Cummings to review/revise costs based on information outlined in the room data sheets.
- Sasaki to provide Jon Harvey images supporting the "hoteling" concept.
- Sasaki to provide Steve Bossert images for faculty presentation.
- Jon Harvey to send room data sheets of classrooms to Media Services for comments.
- Jon Harvey to ask EH&S input on LEED checklist.
- Sasaki to send out administrative draft by May 5th, 2008.
- Sasaki to provide Jon Harvey hard copies of the administrative draft and an electronic copy. Sasaki to confirm the number of copies before sending.

The information above will stand as recorded unless Sasaki receives written comments within five days of the distribution date from a recipient requesting an amendment.

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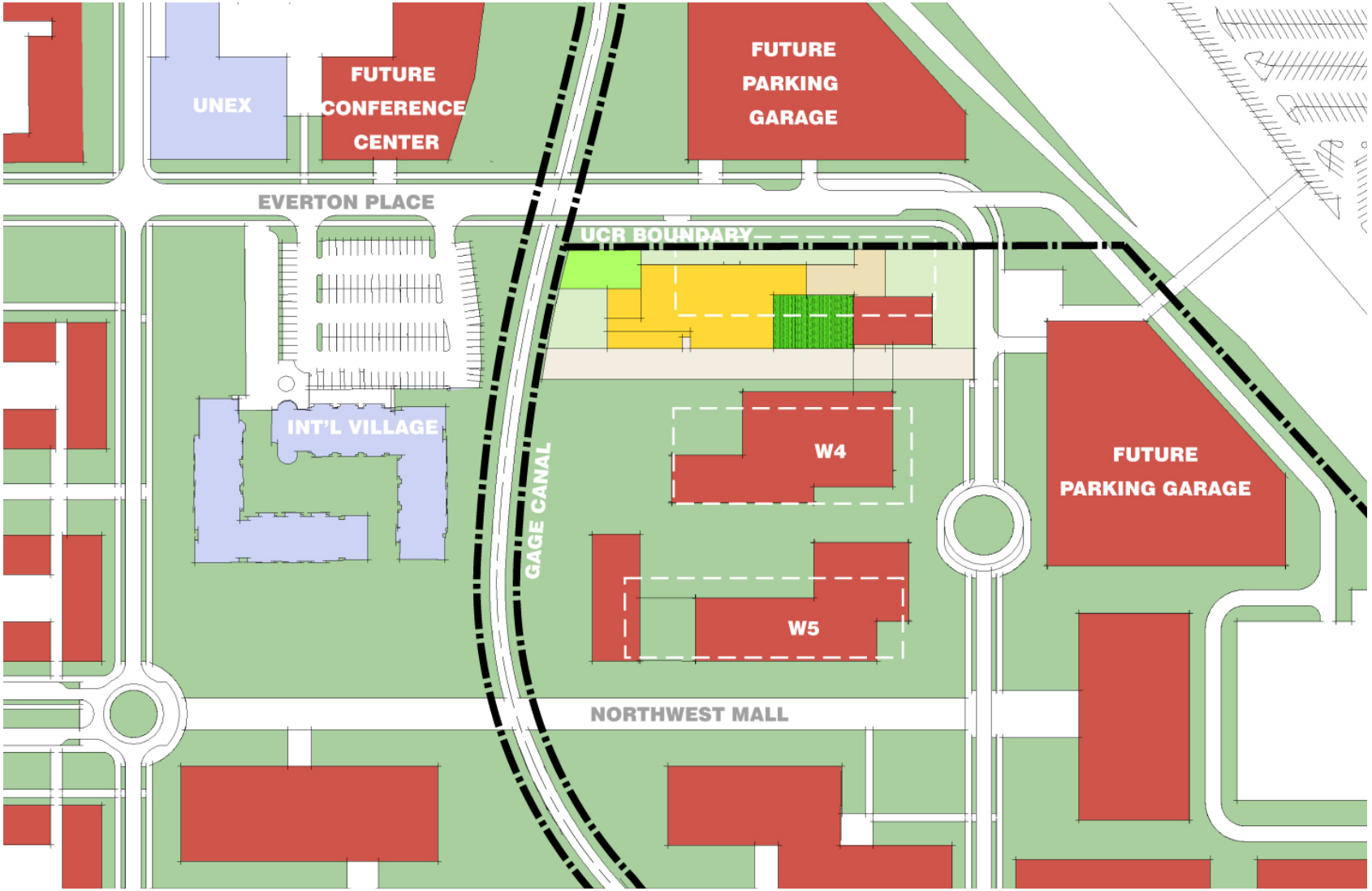
6.2

ALTERNATIVE SCHEMES



SCHEME A DEVELOPMENT AREA PLAN

LEGEND

- EXISTING BUILDING
- FUTURE BUILDING (PER CAMPS)
- PROPOSED GRADUATE & PROFESSIONAL CENTER

0 50' 200' N

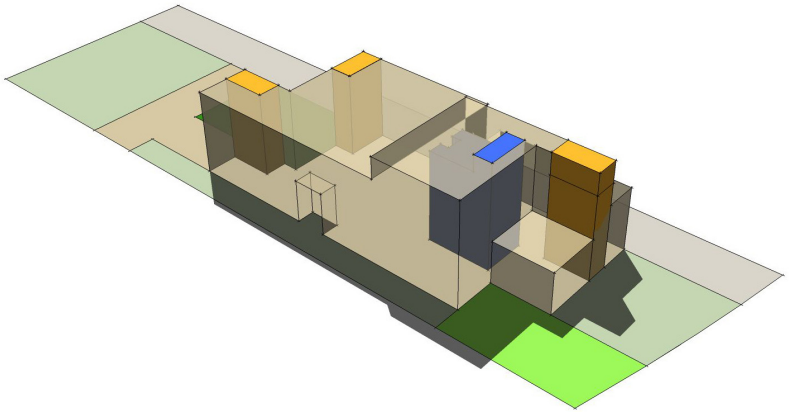
SCHEME A

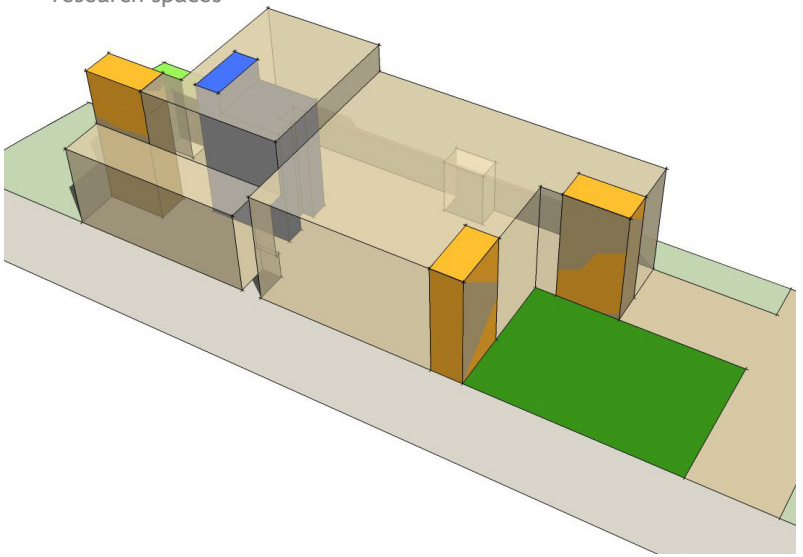
PROS

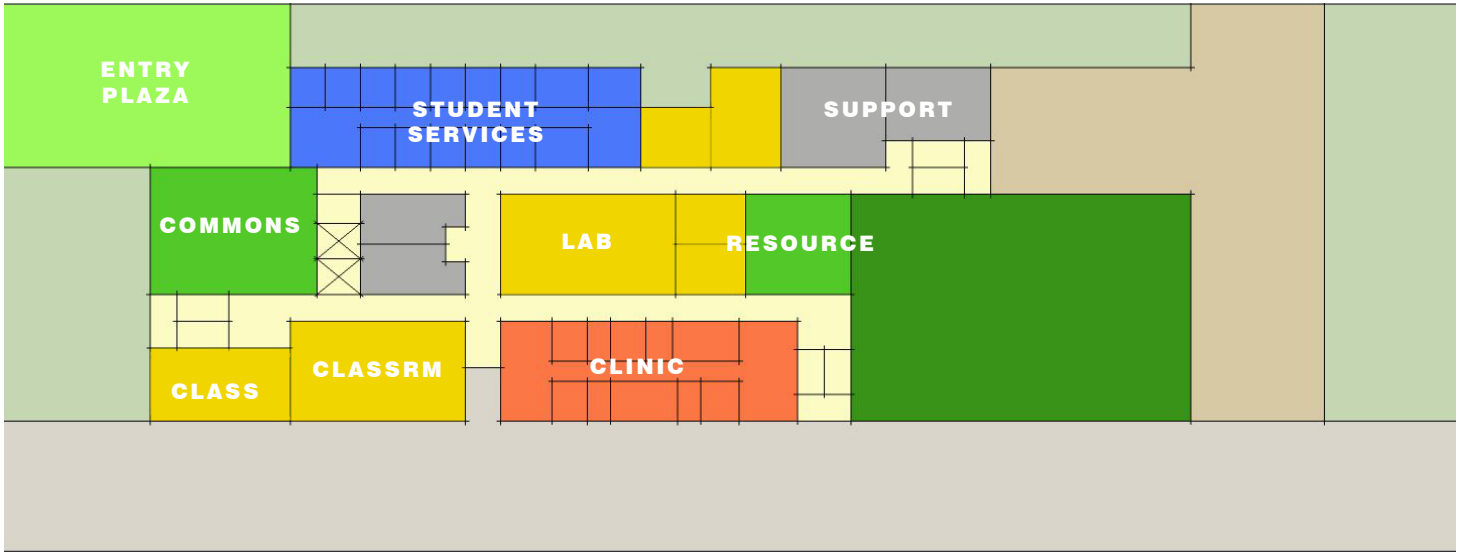
- Most compact building footprint
- Good front entrance
- Faculty offices are mixed with research space
- Building is very easy to secure since the ground floor has all internal circulation
- The restrooms are tucked away from the Commons
- There are opportunities for internal interaction on upper floors
- Better flexibility if one school takes over

CONS

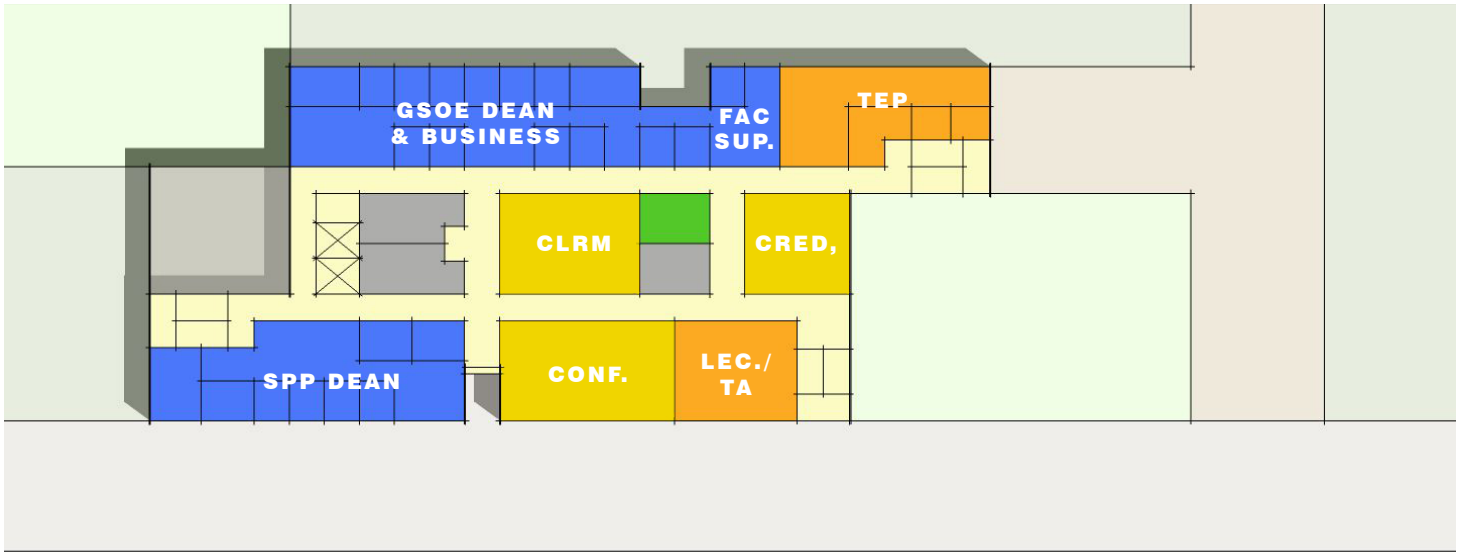
- Quality of open space depends on future open space development on the east side of the building
- The character of open space is not attractive
- The building does not shape open space
- The clinic is not distinguished in way-finding
- Classroom spaces can only be accessed internally
- Similar “donut in donut” layout as Sproul Hall
- Lack of flexibility in internal spaces
- Another building is necessary to enclose landscaped courtyard
- The building is a big box
- The “two wing” concept is most subtle
- Not site or regionally specific; does not feel like a UCR building
- Cannot take full advantage of the proposed chilled beam heating/ cooling system
- Less cross ventilation
- Faculty concerns regarding lack of daylighting reaching third floor research spaces



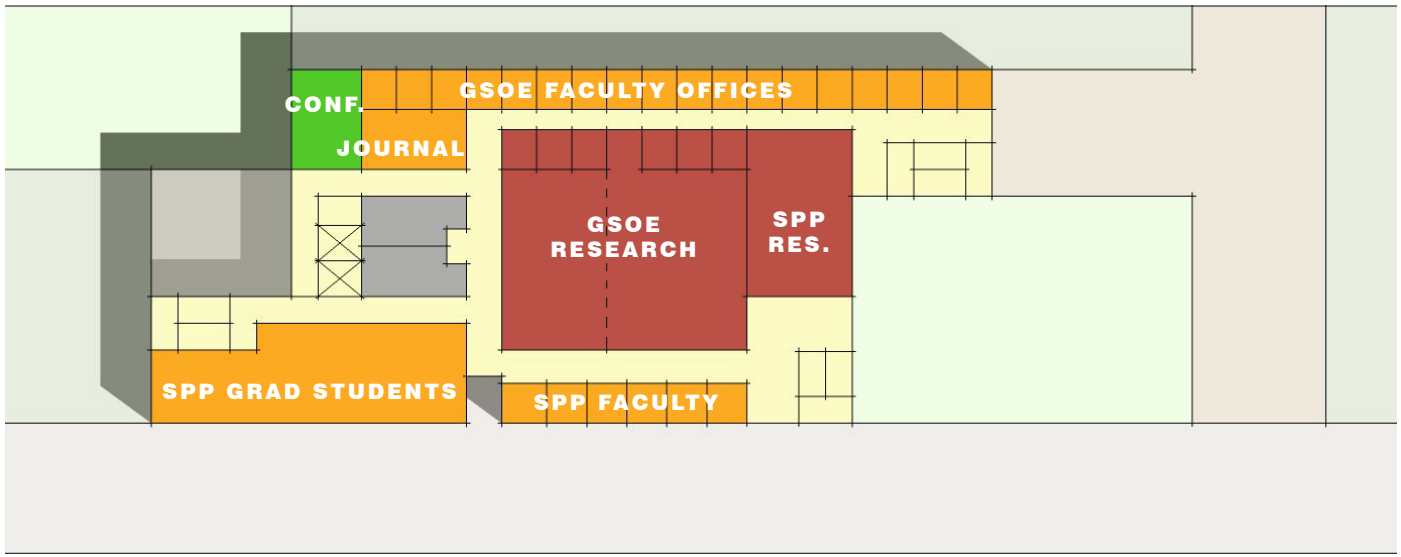




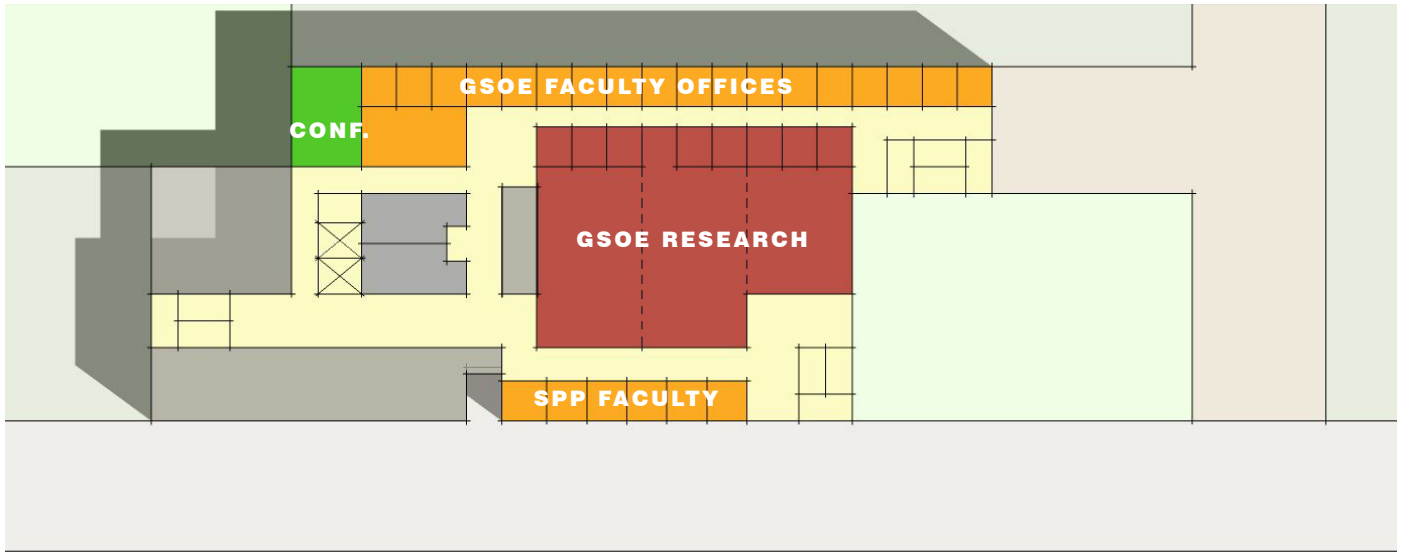
FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN



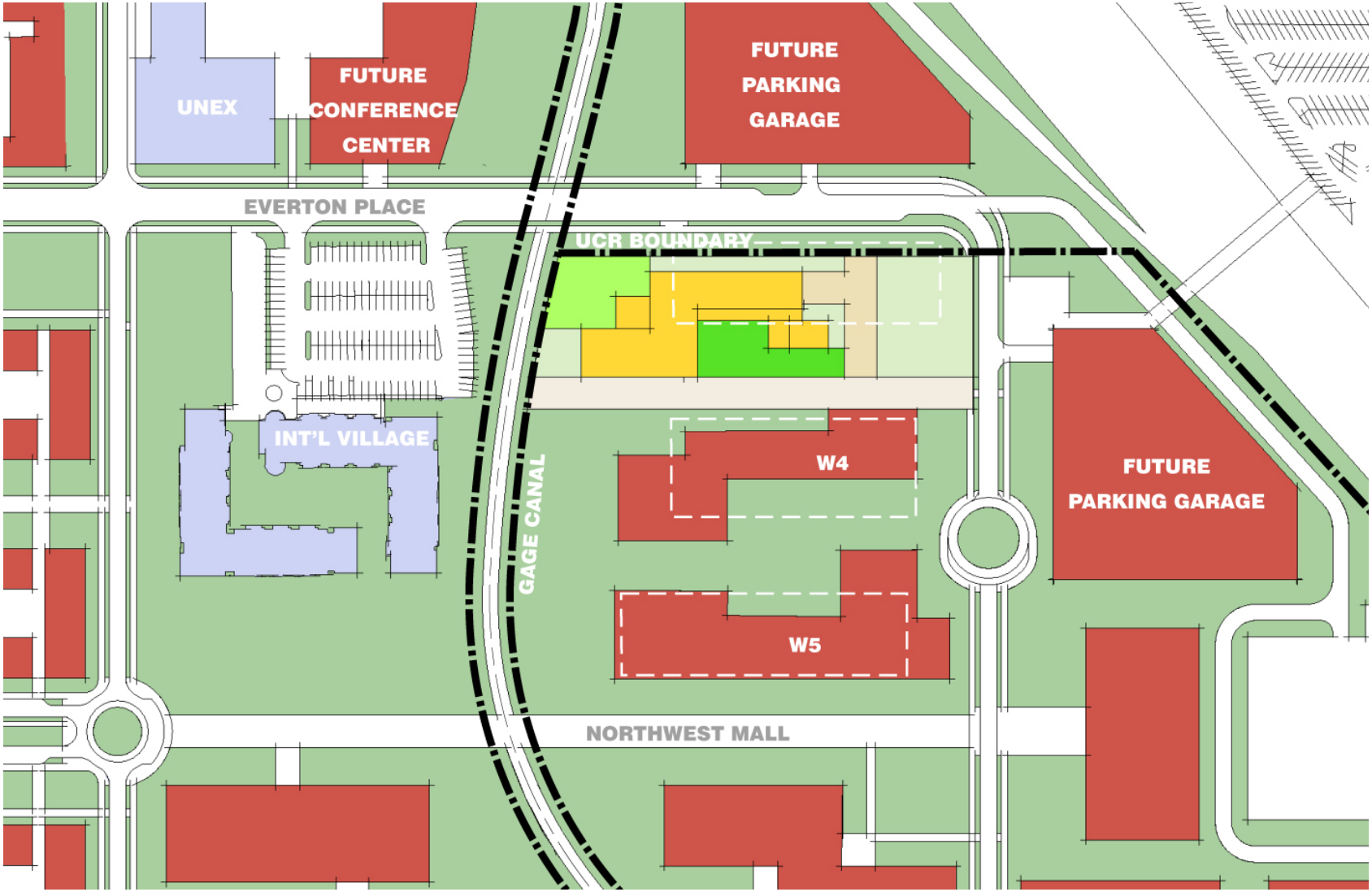
FOURTH FLOOR PLAN

LEGEND

- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED
- CLINICAL
- SUPPORT

0 10' 40'

N



SCHEME B DEVELOPMENT AREA PLAN

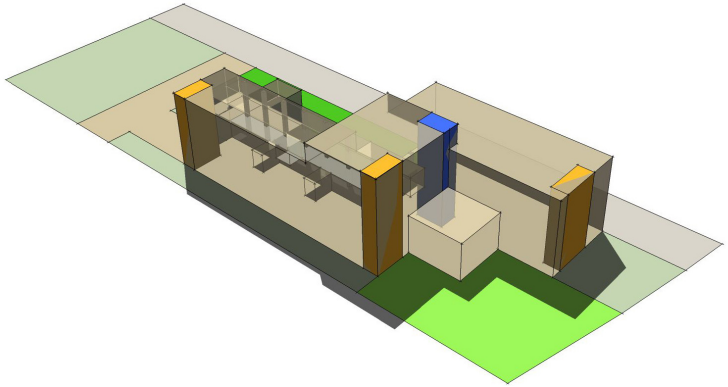
SCHEME B

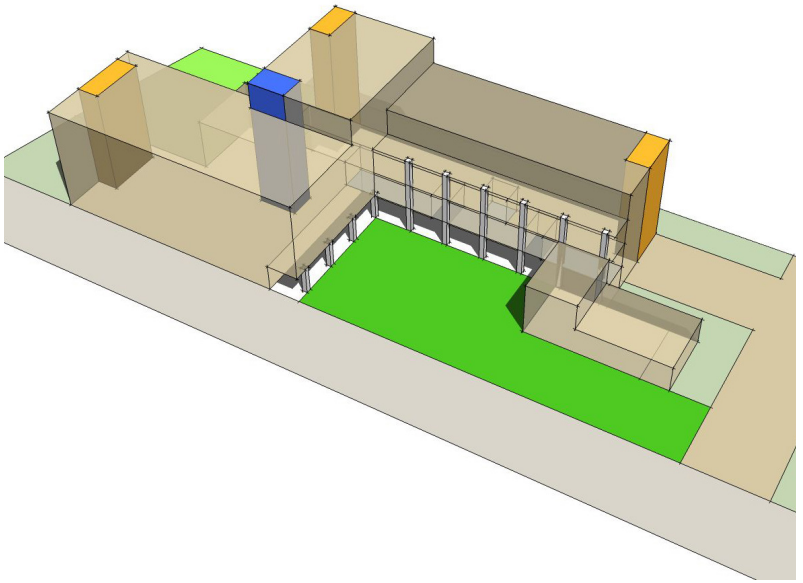
PROS

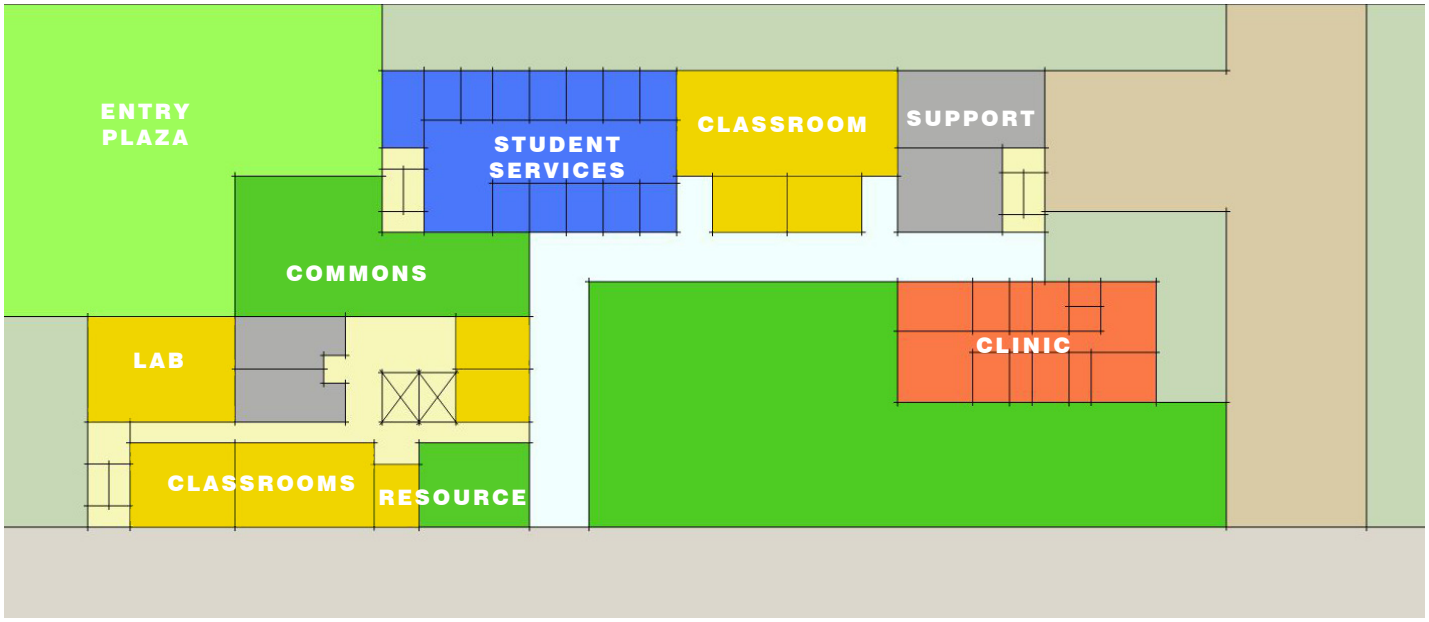
- Works as a stand-alone piece
- The open space courtyard has real potential
- Invites use of outdoor space
- More direct access to vertical circulation
- Classroom spaces can be accessed externally
- There are opportunities for the crossing of paths to promote interaction
- East-west spine can be expanded
- The distinct wings keep the identity of two schools separate
- Feels like a UCR building
- Strong as a gateway building
- It has qualities that other buildings would want to replicate (open court, arcade)
- It opens itself to future buildings to the south
- Scheme lends itself to a hydronic system (i.e. chilled beam or radiant ceiling)
- Good daylighting, natural ventilation

CONS

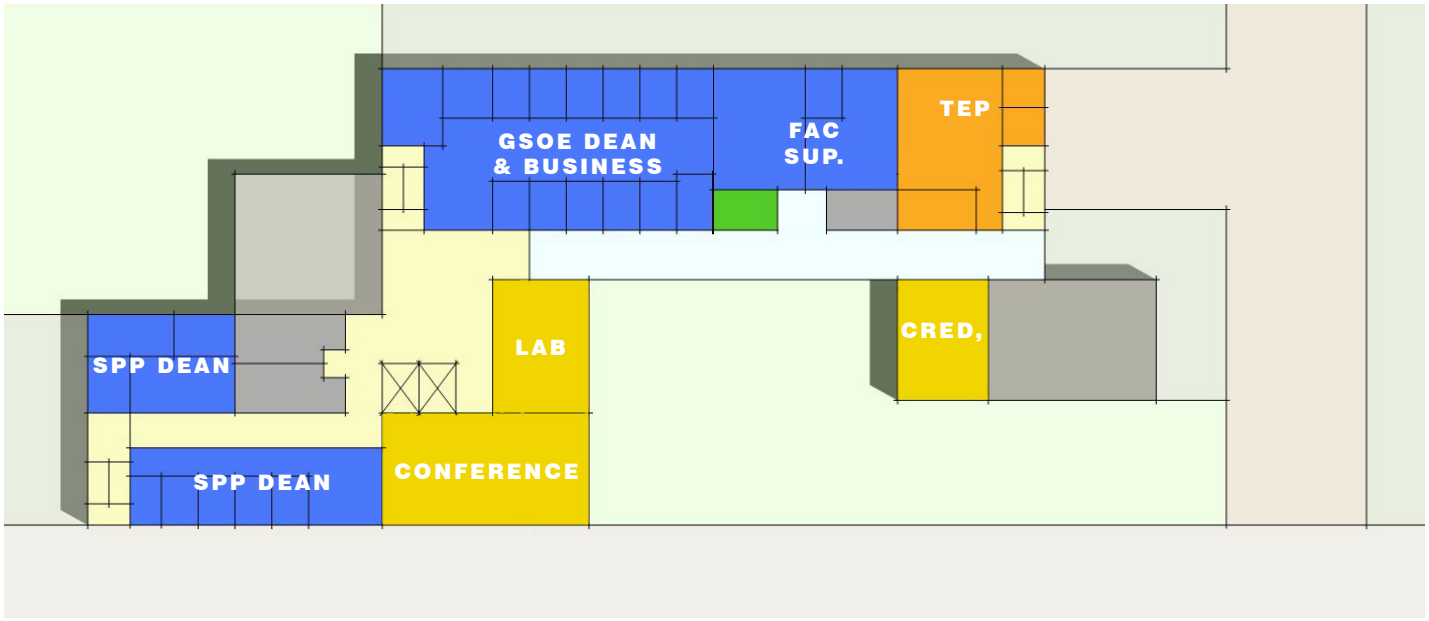
- Faculty offices are separate from research
- GSOE faculty dislike the exterior corridors on the upper floors
- Long distances to elevators
- There is less of a sense of community because the wings are more segregated
- Less flexibility if one school expands







FIRST FLOOR PLAN



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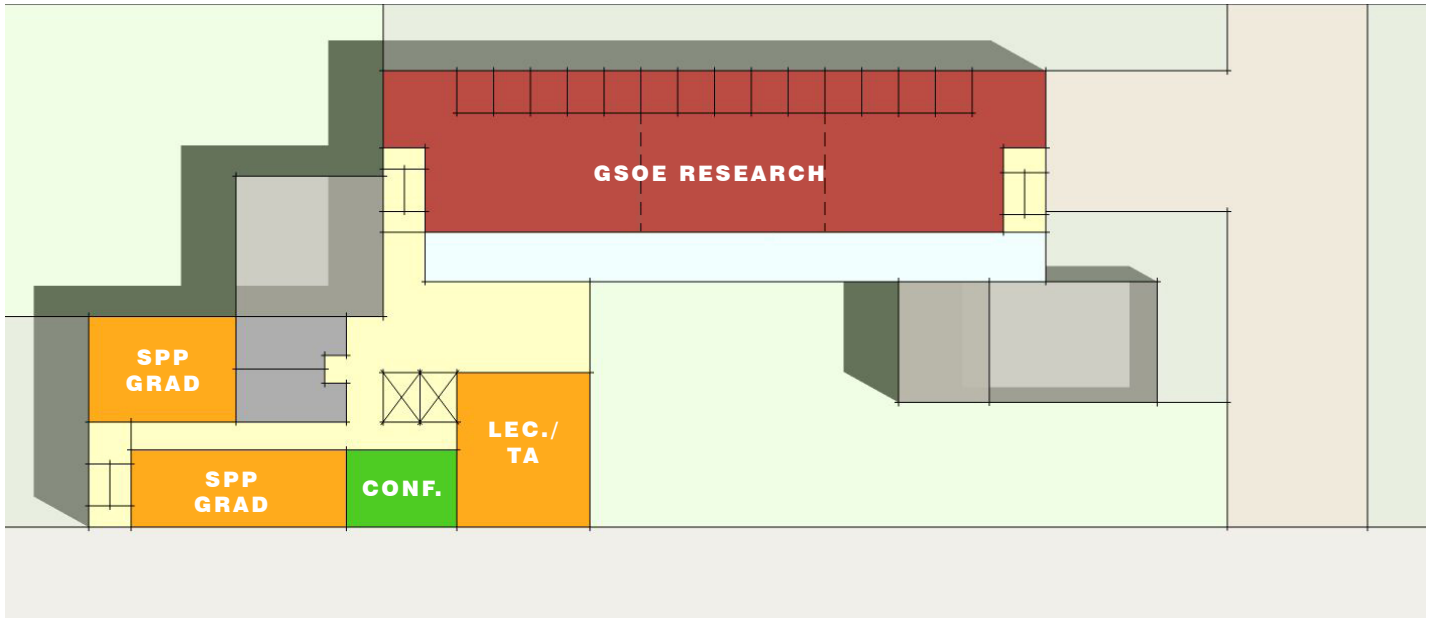

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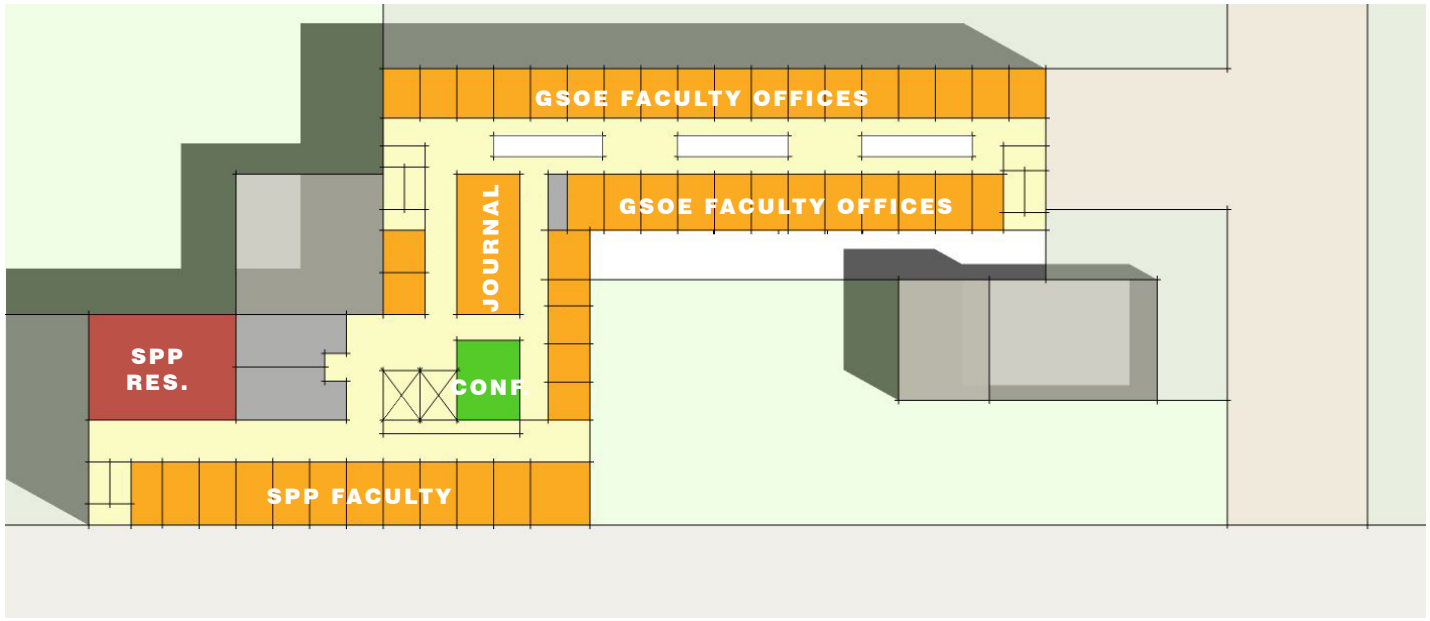


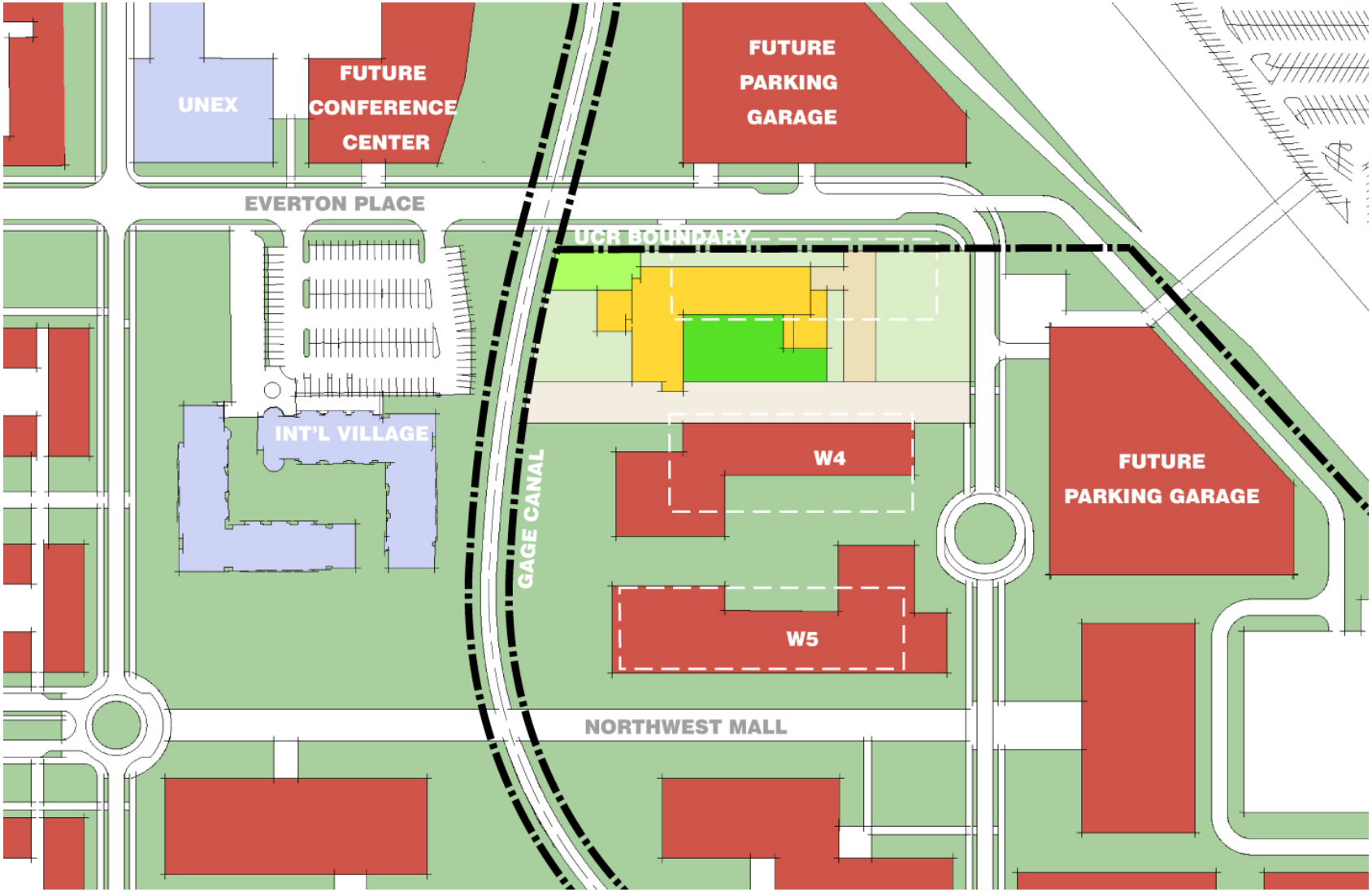
FOURTH FLOOR PLAN

LEGEND

- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED
- CLINICAL
- SUPPORT

0 10' 40'

N



SCHEME C DEVELOPMENT AREA PLAN

LEGEND

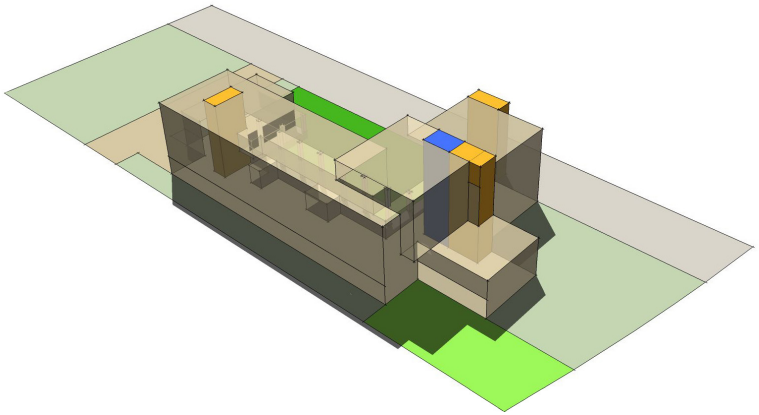
0 50' 200' N

- EXISTING BUILDING
- FUTURE BUILDING (PER CAMPS)
- PROPOSED GRADUATE & PROFESSIONAL CENTER

SCHEME C

PROS

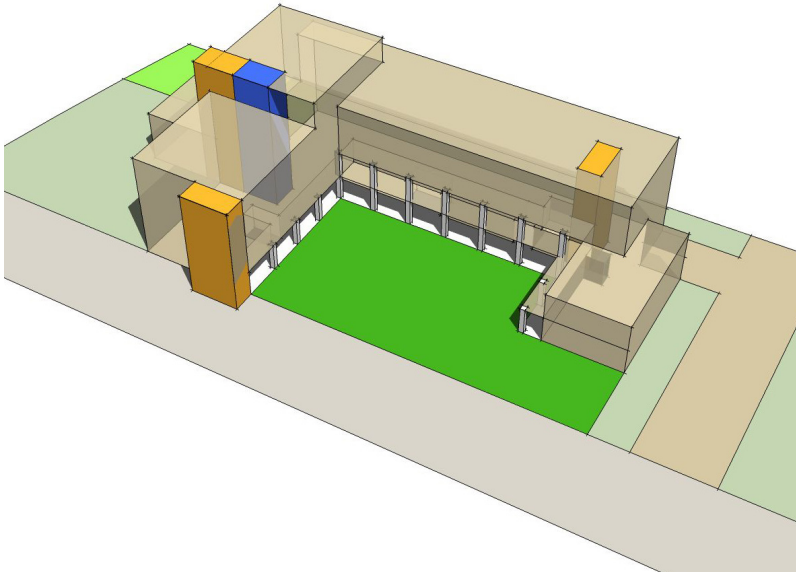
- Entry piece is very visible
- Multiple entries off entry piece to create a better connection to the rest of West Campus
- The quality of open space is defined by the clinic
- Invites use of outdoor space
- It has a better relationship to the Gage Canal: There are two open spaces (one wraps around the building along the Gage and engages the Canal, the second is partly framed by the building
- More direct access to vertical circulation
- Faculty offices are mixed with research space
- GSOE faculty prefer this scheme because of the secure internal circulation on upper two floors
- Classroom spaces can be accessed externally and are very accessible
- Promotes community - open courtyard for receptions and student interaction between classes
- Opportunity for internal interactions; promotes the crossing of paths
- East-west spine can be expanded
- Has a lot of flexibility - upper floor wings can be converted into one master suite
- The distinct wings keep the identity of two schools separate

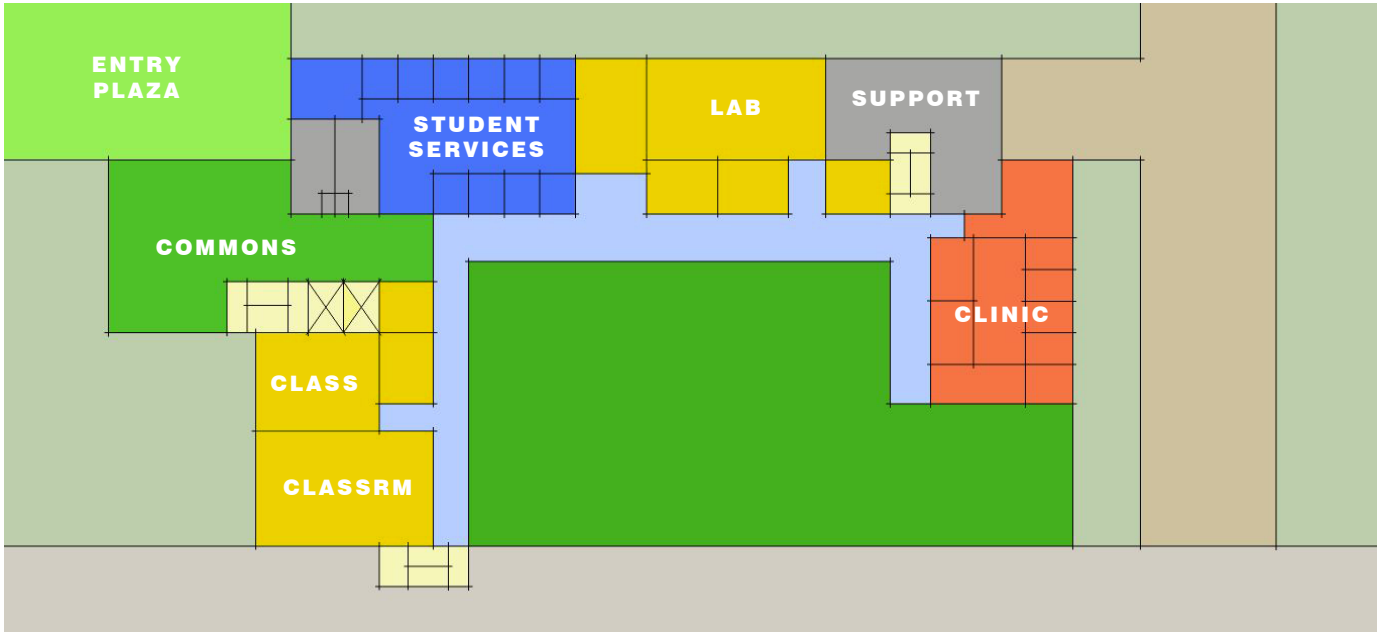


- The building is more articulated and contributes to human scale
- It reflects other UCR buildings to create continuity to East Campus
- It has qualities that other buildings would want to replicate (open court, arcade)
- It opens itself to future buildings to the south
- The entry element as an expression outward is much stronger
- A pleasing entrance can be created from the south
- Best addresses idea of a 4-sidedness building
- Scheme lends itself to a hydronic system (i.e. chilled beam or radiant ceiling)
- Ideal for daylighting, cross ventilation

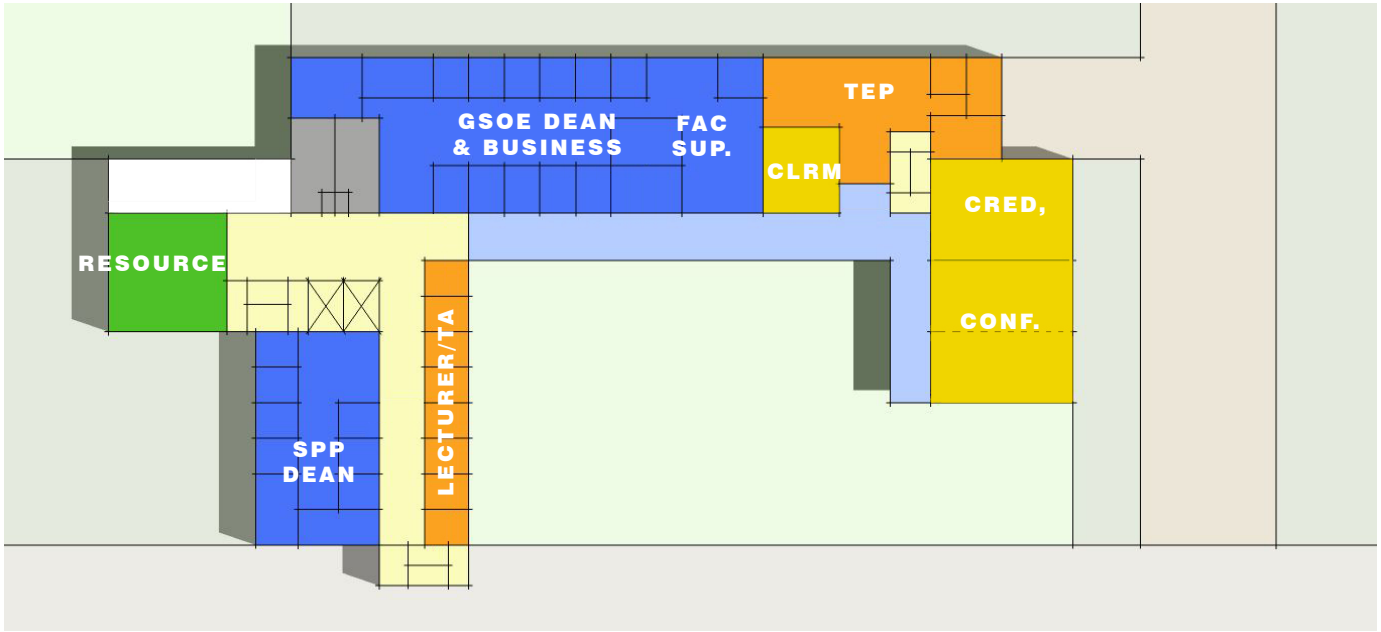
CONS

- Restrooms open onto Building Commons
- SPP administration offices do not have as equal of a presence on Commons

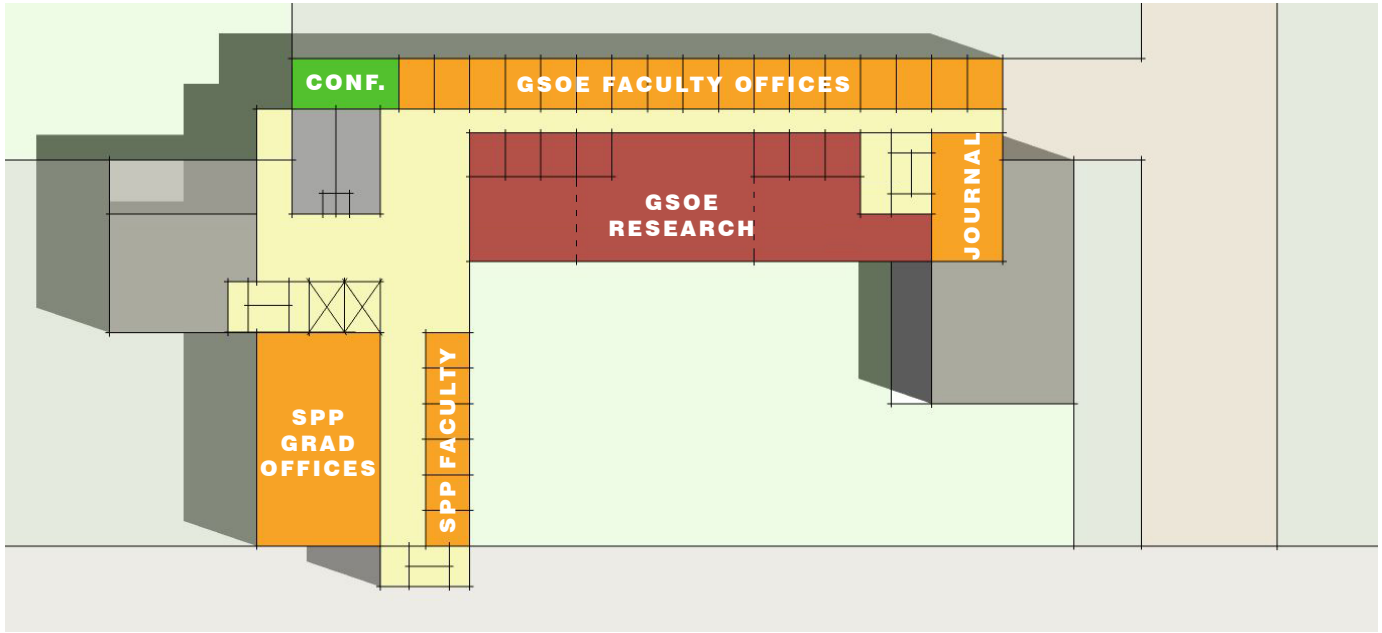




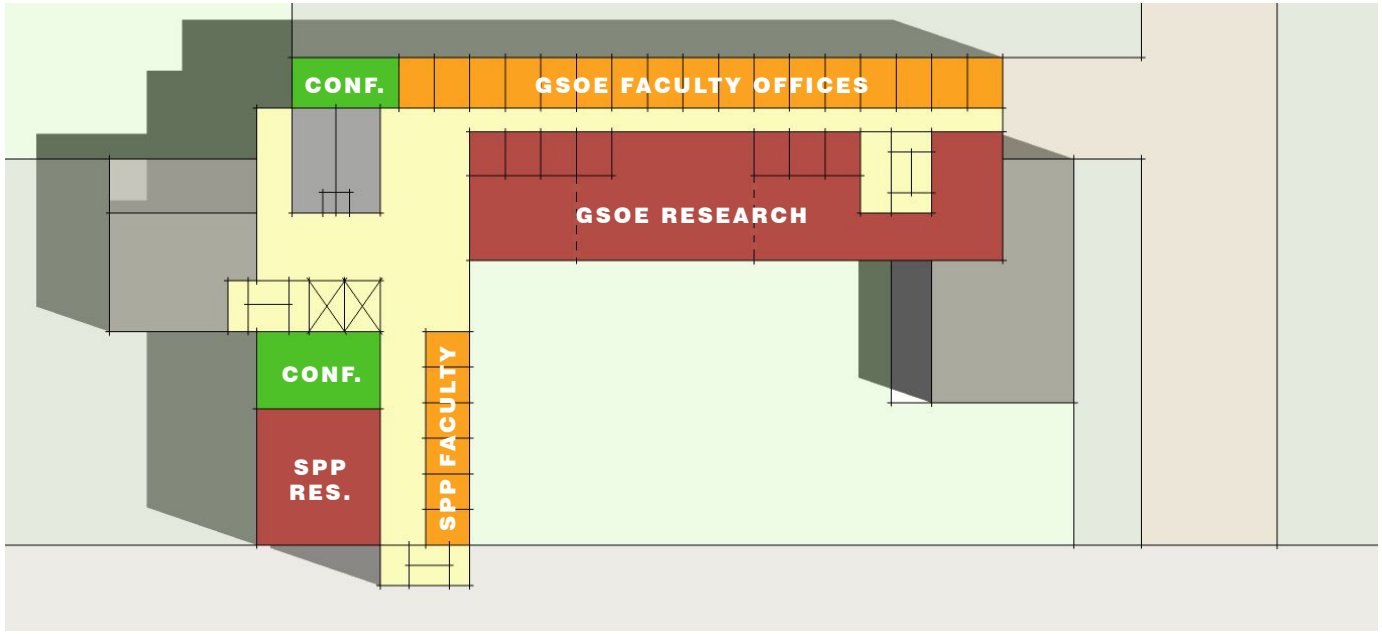
FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN



FOURTH FLOOR PLAN

LEGEND

- OFFICES/TEACHING
- RESEARCH
- INSTRUCTIONAL
- ADMINISTRATION
- COMMONS/SHARED
- CLINICAL
- SUPPORT

0 10' 40'

N

6.3

DETAILED COST MODEL

CUMMING CORPORATION

BUILDING VALUE THROUGH EXPERTISE

University of California, Riverside
West Campus Graduate and Professional Center
Riverside, California

DPP Cost Model
June 27, 2008
CCorp Project No.08-00055.00

660 S. FIGUEROA STREET, SUITE 900 • LOS ANGELES • CALIFORNIA • 90017
PHONE: 213-408-4518 • FAX: 213-408-4665

University of California, Riverside
West Campus Graduate and Professional Center
Riverside, California
DPP Cost Model

Plant Account Number:
Date: **June 27, 2008**
Budget Year:
CCCI of Budget Year:
OGSF: **73,508**

UC COMPONENT COST SUMMARY WORKSHEET

Element		Construction Cost with markups broken out $/OGSF	Cost ($x1,000)
1. Foundations		11.17	$821,397
2. Vertical Structure		20.95	$1,540,050
3. Floor & Roof Structures		37.04	$2,722,419
4. Exterior Cladding		86.38	$6,349,627
5. Roofing, Waterproofing & Skylights		7.19	$528,773
A) Shell (1-5)		***162.73***	***$11,962,266***
6. Interior Partitions, Doors & Glazing		33.59	$2,469,341
7. Floor, Wall & Ceiling Finishes		24.67	$1,813,383
B) Interiors (6-7)		***58.26***	***$4,282,723***
8. Function Equipment & Specialties		18.71	$1,375,640
9. Stairs & Vertical Transportation		7.97	$585,753
C) Equipment and Vertical Transportation (8-9)		***26.68***	***$1,961,393***
10. Plumbing Systems		17.97	$1,321,236
11. Heating, Ventilating & Air Conditioning		65.16	$4,790,118
12. Electric Lighting, Power & Communications		34.67	$2,548,791
13. Fire Protection Systems		5.45	$400,770
D) Mechanical and Electrical (10-13)		***123.26***	***$9,060,914***
Total Building Construction (1-13)	(Sub 1)	**370.94**	**$27,267,296**
14. Site Preparation & Demolition	(Sub 0)	3.12	$229,273
15. Site Paving, Structures & Landscaping	(Sub 4)	14.10	$1,036,446
16. Utilities on Site	(Sub 2)	11.23	$825,384
Total Site Construction (14-16)		**28.45**	**$2,091,103**
TOTAL BUILDING & SITE (1-16)		**399.39**	**$29,358,399**
General Conditions	9.5%	37.94	**$2,789,048**
Contractor's Fee	4.0%	17.49	**$1,285,898**
		454.83	**$33,433,344**
Escalation	8.2%	**37.49**	**$2,756,011**
ESTIMATED CONSTRUCTION BUDGET		**492.32**	**$36,189,355**

University of California, Riverside
West Campus Graduate and Professional Center
Riverside, California
DPP Cost Model **June 27, 2008**

SCHEDULE OF AREAS AND CONTROL QUANTITIES

Schedule of Areas	SF	SF
Enclosed Areas		
First Floor	18,125	
Second Floor	18,260	
Third Floor	16,700	
Fourth Floor	16,700	
Penthouses	300	
SUBTOTAL, Enclosed Areas		**70,085**
Covered Areas		
First Floor	4,373	
Second Floor	2,473	
SUBTOTAL, Covered Areas	**6,846**	
Covered Areas@ 50%		**3,423**
TOTAL GROSS FLOOR AREA		**73,508**

Control Quantities		Qty		Ratio to Gross Area
Number of stories		4	EA	0.054
Gross Area		73,508	SF	1.000
Enclosed Area		70,085	SF	0.953
Covered Area		6,846	SF	0.093
Footprint Area		18,125	SF	0.247
Volume (gross)		987,323	CF	13.432
Gross Wall Area		53,530	SF	0.728
Retaining Wall Area		-	SF	0.000
Finished Wall Area		53,530	SF	0.728
Windows or Glazing Area	30.00%	16,059	SF	0.218
Roof Area - Flat		16,700	SF	0.227
Finished Area		70,085	SF	0.953
Interior Partitions		5,851	LF	0.080
Shelled Area		-	SF	0.000
Elevators		2	EA	0.027
Plumbing Fixtures		70	EA	0.001

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GRADUATE AND PROFESSIONAL CENTER COMPONENT DETAIL

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Excavation				
Over excavation and recompaction of building footprint and 5' around perimeter of building, depth of excavation is 5'	4,375	CY	$14.35	$62,770
Reinforced concrete including excavation				
Reinforced concrete grade beams, column and wall footings; top of footing assumed to be 18" below grade with depth of footing not exceeding 3'	73,508	SF	$9.98	$733,675
Elevator pit	2	EA	$12,476.10	$24,952
				$821,397
2 Vertical Structure				
Columns and pilasters				
Structural steel columns, assume an allowance of 4lbs/gsf for vertical steel members, standard steel sizes and detail connections	146	T	$5,364.72	$783,250
Shear bracing				
Structural steel pipe or tube, assume an allowance of 3lbs/gsf for vertical steel members, standard steel sizes and detail connections	110	T	$5,863.77	$645,014
Fireproofing steelwork				
Sprayed fireproofing to all steel members	256	T	$436.66	$111,786
				$1,540,050
3 Floor and Roof Structure				
Floor at lowest level				
Reinforced concrete slab on grade, 6" thick				
Concrete, 4000psi	410	CY	$311.90	$127,880
Reinforcement, assume 1.65lbs/sf	29,906	LB	$1.37	$41,042
Formwork	2,000	SF	$9.98	$19,962
Vapor barrier	18,125	SF	$0.50	$9,045
Sand cushion	18,125	SF	$1.87	$33,919
Finish and cure concrete surface	18,125	SF	$1.25	$22,613

GRADUATE AND PROFESSIONAL CENTER COMPONENT DETAIL

Element	Quantity	Unit	Unit Cost	Total
Suspended floors				
Structural steel framing, assume 7lbs/sf of floor area	182	T	$5,364.72	$976,380
Verco W3 3" metal deck, 18 gauge	51,960	SF	$6.24	$324,129
Reinforced light weight concrete including mesh reinforcement with steel bar reinforcement as required	51,960	SF	$7.49	$388,955
Finish and cure concrete surface	51,960	SF	$1.87	$97,239
Suspended walkways				
Structural steel framing, assume 7lbs/sf of floor area	7	T	$5,364.72	$37,553
Verco W3 3" metal deck, 18 gauge	2,473	SF	$6.24	$15,427
Reinforced light weight concrete including mesh reinforcement with steel bar reinforcement as required	2,473	SF	$7.49	$18,512
Finish and cure concrete surface	2,473	SF	$1.87	$4,628
Flat roofs				
Structural steel framing, assume 6lbs/sf of floor area	50	T	$5,364.72	$268,236
Verco W3 3" metal deck, 18 gauge	640	SF	$6.24	$3,992
Reinforced light weight concrete including mesh reinforcement with steel bar reinforcement as required	640	SF	$7.49	$4,791
Verco type B, 1-1/2" formlock metal deck, 18 gauge	16,060	SF	$4.68	$75,137
Fireproofing steelwork				
Sprayed fireproofing to all steel members	239	T	$436.66	$104,363
Miscellaneous				
Mechanical equipment pads located on roof, assume 4 pads 16' x 6'	384	SF	$18.71	$7,186
Mechanical equipment pads located on roof, assume 8 pads 5' x 3'	120	SF	$18.71	$2,246
Concrete curbs, not exceeding 12" high and 6" width at first floor building perimeter, mechanical roof and laboratory areas	1,000	LF	$19.96	$19,962
Miscellaneous metals, support framing and wood blocking	73,508	SF	$1.62	$119,222
				$2,722,419

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Element	Quantity	Unit	Unit Cost	Total
4 Exterior Cladding				
Wall framing furring and insulation				
Metal stud framing, 6" at 16" o.c..	53,530	SF	$14.97	$801,415
Gypsum board sheathing, "Densglass"	53,530	SF	$4.99	$267,138
Batt insulation	53,530	SF	$1.93	$103,516
Allowance for firesafing perimeter	1	LS	$74,856.60	$74,857
Applied exterior finishes				
Cement plaster, smooth troweled	10,705	SF	$19.96	$213,691
UCR face brick veneer, including galvanized brick ties to studs (Assume 25%)	13,383	SF	$43.67	$584,387
Prefabricated cladding panels				
Metal panels, assume Centria or similar (Assume 25%)	13,383	SF	$49.90	$667,871
Interior finish to exterior walls				
Gypsum board lining, painted	53,530	SF	$5.24	$280,495
Windows, glazing and louvers				
Glazed aluminum framed windows with 1" insulated low "e" glazing - assume combination of storefront and curtain wall	16,059	SF	$106.05	$1,703,006
Exterior door frames and hardware				
Glazed aluminum framed entrances, hollow metal service doors, etc.	1	LS	$112,284.90	$112,285
Fascias, bands, screens and trim				
Allowance for sunshades and architectural detailing	53,530	SF	$6.24	$333,923
Form arcade arches at first floor				
Metal stud framing, 6" at 16" o.c..	8,120	SF	$14.97	$121,567
Gypsum board sheathing, "Densglass"	8,120	SF	$4.99	$40,522
Cement plaster, smooth troweled	6,090	SF	$19.96	$121,567
UCR face brick veneer, including galvanized brick ties to studs (Assume 25%)	2,030	SF	$43.67	$88,643
Form parapet walls at second floor walkways				
Metal stud framing, 6" at 16" o.c..	560	SF	$14.97	$8,384
Gypsum board sheathing, "Densglass"	1,120	SF	$4.99	$5,589
Cement plaster, smooth troweled	1,120	SF	$19.96	$22,357
Cap piece finish	140	LF	$24.95	$3,493
Handrail	140	LF	$149.71	$20,960

GRADUATE AND PROFESSIONAL CENTER COMPONENT DETAIL

Element	Quantity	Unit	Unit Cost	Total
Canopy				
Including framing and finish (covers second floor walkway and includes soffit finish). Costing assumed standard steel framing with metal deck and a membrane roof covering with a cement plaster finish	2,473	SF	$124.76	$308,534
Soffits				
Cement plaster at first floor arcade, accented	4,373	SF	$43.67	$190,953
Balustrades, parapets and roof screens				
Pre-finished metal louver mechanical screen including galvanized structural steel supports	4,000	SF	$68.62	$274,474
				$6,349,627
5 Roofing & Waterproofing				
Waterproofing				
Terrace/deck waterproofing	2,473	SF	$8.73	$21,597
Waterproofing to elevator pit	2	EA	$2,495.22	$4,990
Insulation				
Tapered rigid insulation at roof	16,700	SF	$4.99	$83,340
Roofing				
EPDM single ply roofing; white faced	16,700	SF	$12.48	$208,351
EPDM single ply roofing; white faced; turning up edges of surrounding walls	3,850	SF	$12.48	$48,033
Roof deck or traffic surfaces				
Terrace/deck paving	2,473	SF	$22.46	$55,536
Walkway pads at roof mechanical bay area	1,200	SF	$7.49	$8,983
Roofing upstands and sheet metal				
Parapet coping and wall flashings and miscellaneous flashings	16,700	SF	$3.12	$52,088
Caulking and sealing				
Miscellaneous caulking and sealing	73,508	SF	$0.62	$45,855
				$528,773

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Element	Quantity	Unit	Unit Cost	Total
6 Interior Partitions, Doors & Glazing				
Partition framing and core				
Metal stud framing forming shaft walls, chase walls, 1 hour fire walls and non rated walls	78,989	SF	$9.98	$788,380
Partition surfacing				
Gypsum board lining	157,978	SF	$4.24	$670,123
Gypsum underlayment at fire rated partitions, 2 hour only and if acoustic requirements are needed	10,000	SF	$3.93	$39,300
Shaft wall liner	6,000	SF	$6.24	$37,428
Paint gypsum board surfaces	157,978	SF	$1.00	$157,676
Sound insulation				
Batt insulation	78,989	SF	$1.43	$113,330
Window walls and borrowed lights				
Interior glazing including door sidelights	1	LS	$112,284.90	$112,285
Interior doors, frames and hardware				
Interior doors, single and double leaf, primarily wood in hollow metal frames	195	EA	$2,744.74	$535,225
Balustrades and guardrails				
Glass guardrail	50	LF	$311.90	$15,595
				$2,469,341
7 Floor, Wall & Ceiling Finishes				
Floors				
Linoleum, carpet, ceramic tile and sealed concrete	73,508	SF	$7.49	$550,256
Bases				
Resilient rubber with ceramic tile in restrooms	73,508	SF	$1.12	$82,538
Walls				
Ceramic tile at restrooms with acoustic treatments to lecture halls	73,508	SF	$2.50	$183,419

GRADUATE AND PROFESSIONAL CENTER COMPONENT DETAIL

Element	Quantity	Unit	Unit Cost	Total
Column furring and finish				
Metal stud framing with painted gypsum board lining to columns, assume 30 columns per floor, clad to 10'	9,600	SF	$27.45	$263,495
Ceilings				
Acoustic tile and suspended gypsum board, painted	73,508	SF	$9.98	$733,675
				$1,813,383
8 Function Equipment & Specialties				
General building accessories				
Allowance for toilet partitions and accessories, code signage, markerboards, tack boards, etc.	73,508	SF	$18.71	$1,375,640
				$1,375,640
9 Stairs & Vertical Transportation				
Staircase flights				
Fire exist stairs, metal pan with concrete infill including balustrade				
Lobby stair	3	EA	$31,190.25	$93,571
Exit stairs, internal (2EA)	7	EA	$19,961.76	$139,732
Exit stairs, exterior (1EA)	1	EA	$21,833.18	$21,833
Elevators				
Hydraulic passenger, 4-stop	1	EA	$149,713.20	$149,713
Hydraulic freight, 5-stop	1	EA	$180,903.45	$180,903
				$585,753

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Element	Quantity	Unit	Unit Cost	Total
10 Plumbing Systems				
General Plumbing Equipment				
Equipment	73,508	SF	$0.40	$29,347
Sanitary Fixtures				
Plumbing fixture	70	EA	$1,215.17	$85,062
Floor drain	25	EA	$213.34	$5,334
Floor sink	3	EA	$631.29	$1,894
Hose bibb	8	EA	$187.14	$1,497
Wall Hydrant	4	EA	$349.33	$1,397
Rough-ins				
Local rough-in at fixture	85	EA	$885.80	$75,293
Rough-in at floor sink or floor drain	28	EA	$451.63	$12,646
Waste / Vent				
Waste/vent piping	73,508	SF	$3.76	$276,045
Domestic Water				
Domestic water piping	73,508	SF	$4.95	$364,086
Roof Drainage				
Roof Drainage, Allowance	73,508	SF	$2.05	$150,403
Condensate Drainage				
Condensate Drainage	73,508	SF	$0.35	$25,679
Natural Gas				
Natural Gas system	73,508	SF	$1.45	$106,383
Miscellaneous Plumbing				
Miscellaneous Plumbing	73,508	SF	$2.53	$186,170
				$1,321,236

GRADUATE AND PROFESSIONAL CENTER COMPONENT DETAIL

Element	Quantity	Unit	Unit Cost	Total
11 Heating, Ventilation & Air Conditioning				
Chilled Water Equipment				
Chillers/pumps/misc	300	TONS	$1,272.56	$381,769
Chemical treatment	300	TONS	$25.95	$7,785
Heating Hot Water Equipment				
Boilers/pumps/misc	2,400	MBH	$36.06	$86,534
Condenser Water Equipment				
Cooling towers, pumps, misc	300	TONS	$264.49	$79,348
Chilled Water Distribution				
Chilled water piping	73,508	SF	$5.30	$389,765
Hot Water Distribution				
Heating water piping	73,508	SF	$5.81	$427,365
Condenser Water Distribution				
Condenser water piping	73,508	SF	$0.90	$66,031
Miscellaneous HVAC				
Misc piping systems	73,508	SF	$0.64	$46,772
Air-Side Equipment				
Ventilation AHUs	38,000	CFM	$5.93	$225,194
Refrigerant lineset for split systems	400	LF	$28.45	$11,378
Split systems	3	EA	$9,606.60	$28,820
Active chilled beams, 6 ft (1 per 100 sf)	800	EA	$1,896.37	$1,517,094
Exhaust fans - misc	18,700	CFM	$1.21	$22,630
Duct sound attenuation	80,000	CFM	$0.24	$18,964
Air Distribution				
Ductwork, galvanized steel with insulation	45,000	LBS	$13.22	$595,110
Combination fire / smoke damper	50	EA	$1,347.42	$67,371
Diffusers, registers, grilles with dampers and flex duct	250	EA	$349.33	$87,333
Louvers	150	SF	$69.87	$10,480
HVAC Controls				
Automatic Temperature Controls	73,508	SF	$5.50	$404,438

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Element	Quantity	Unit	Unit Cost	Total
Miscellaneous				
Test / balance / firestopping / seismic	73,508	SF	$2.69	$198,092
Commissioning	73,508	SF	$1.60	$117,846
				$4,790,118
12 Electrical Lighting, Power & Communication				
Power and Lighting				
Service and Distribution				
General Classrooms area	7,620	SF	$12.48	$95,068
Conference / Meeting Space area	6,140	SF	$14.97	$91,924
Library area	750	SF	$7.49	$5,614
Support area	5,990	SF	$6.24	$37,366
Office area	28,560	SF	$3.74	$106,895
Lab area	2,100	SF	$18.71	$39,300
Retail area	300	SF	$6.24	$1,871
Common BOH area	22,048	SF	$6.24	$137,537
Emergency Service and Distribution				
HVAC Equipment Connection				
Chiller 125 Ton connection	2	EA	$935.71	$1,871
Chiller disconnect 200 amp 480v 3ph	2	EA	$5,614.25	$11,228
Boiler connection	2	EA	$623.81	$1,248
Boiler disconnect 30 amp 480v 3ph	2	EA	$1,372.37	$2,745
Cooling tower 15HP connection	2	EA	$935.71	$1,871
Cooling tower disconnect 60 amp 480v 3ph	2	EA	$2,308.08	$4,616
CWP 20HP connection	2	EA	$935.71	$1,871
CWP disconnect 100 amp 480v 3ph	2	EA	$3,611.83	$7,224
HWP 7.5HP connection	2	EA	$623.81	$1,248
HWP disconnect 60 amp 480v 3ph	2	EA	$1,989.94	$3,980
Fire smoke damper connection	18	EA	$492.81	$8,871
VAV connection 120 volt control	97	EA	$368.04	$35,700
EF connection	18	EA	$311.90	$5,614
EF disconnect 30 amp 480v 3ph	6	EA	$1,372.37	$8,234
EF disconnect switch motor rated 20 amp	13	EA	$517.76	$6,731
AH connection	5	EA	$3,119.03	$15,595
AH disconnect 200 amp 480v 3ph	5	EA	$6,107.05	$30,535
CU connection	3	EA	$623.81	$1,871
CU disconnect 30 amp 480v 3ph	3	EA	$1,372.37	$4,117
FC connection	3	EA	$436.66	$1,310
FC disconnect 208v 1ph 30 amp	3	EA	$717.38	$2,152

GRADUATE AND PROFESSIONAL CENTER COMPONENT DETAIL

Element	Quantity	Unit	Unit Cost	Total
Convenience Power				
General Classrooms area	7,620	SF	$7.49	$57,041
Conference / Meeting Space area	6,140	SF	$11.23	$68,943
Library area	750	SF	$6.24	$4,679
Support area	5,990	SF	$4.99	$29,893
Office area	28,560	SF	$4.99	$142,527
Lab area	2,100	SF	$18.71	$39,300
Retail area	300	SF	$4.99	$1,497
Common BOH area	22,048	SF	$1.87	$41,261
Lighting and Lighting Control				
General Classrooms area	7,620	SF	$11.23	$85,561
Conference / Meeting Space area	6,140	SF	$19.96	$122,565
Library area	750	SF	$19.96	$14,971
Support area	5,990	SF	$8.73	$52,312
Office area	28,560	SF	$8.73	$249,422
Lab area	2,100	SF	$26.20	$55,020
Retail area	300	SF	$8.73	$2,620
Common BOH area	22,048	SF	$7.49	$165,044
Special Systems				
Fire Alarm System	73,508	SF	$3.43	$252,201
Telephone / Data System (conduit, wire, cabletray,	73,508	SF	$2.81	$206,346
Wireless Telephone / Data System (conduit and wire)	73,508	SF	$0.37	$27,513
CATV System (conduit wire and racks)	73,508	SF	$0.44	$32,098
Audio Visual System (rough conduit)	73,508	SF	$0.25	$18,342
Public Address System (rough conduit)	73,508	SF	$0.31	$22,927
Clock System (power, conduit) allowance	73,508	SF	$0.12	$9,171
Controlled Access System (rough conduit)	73,508	SF	$0.25	$18,342
CCTV / Security System (Rough conduit)	73,508	SF	$0.19	$13,756
Miscellaneous				
Commissioning 3rd Party Assist	1	LS	$29,316.24	$29,316
Supervision and site management temporary power	1	LS	$111,914.75	$111,915
				$2,548,791

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Element	Quantity	Unit	Unit Cost	Total
13 Fire Protection Systems				
Automatic Sprinkler System	73,508	SF	$5.45	$400,770
				$400,770
14 Site Preparation & Building Demolition				
Site clearing and grading				
Clear site of existing finish, etc. and grade, etc. for	73,508	SF	$3.12	$229,273
				$229,273
15 Site Paving, Structures & Landscaping				
Hard and soft scape				
New hardscape and softscape	55,383	SF	$18.71	$1,036,446
				$1,036,446
16 Utilities on Site				
General utilities				
Allowance for utilities to 5' outside site boundary	73,508	SF	$11.23	$825,384
				$825,384

ALTERNATES

ALTERNATES SUMMARY

Element	Quantity	Unit	Unit Cost	Total
LEED Fee & Commissioning				
USGBC Submittal and Energy Model	1	LS	$160,000.00	$160,000
Commissioning 3rd Party LEED Assist	1	LS	$50,000.00	$50,000
				$210,000
Construction Management Fee				
Construction Management Fee	3%			$1,047,988
				$1,047,988

6.4

LIST OF ABBREVIATIONS

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AgOps	Agricultural Operations
AHU	air handling unit
AIA	American Institute of Architects
ASF	assignable square footage
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
C	conduit
CAMPS	Campus Aggregate Master Planning Study
CBC	California Building Code
CHASS	College of Humanities Arts and Social Sciences
COMM.	Communications (data)
DB	dry bulb (temperature)
DPP	Detailed Project Program
EA	Energy & Atmosphere (LEED category)
EQ	Indoor Environmental Quality (LEED category)
GSF	gross square footage
GSOE	Graduate School of Education
GWB	gypsum wall board
ID	Innovation in Design (LEED category)
LEED	Leadership in Energy and Environmental Design
LRDP	Long Range Development Plan
MA	Masters in Arts
MEP	Mechanical, electrical, plumbing
MERV	Minimum Efficiency Reporting Value
MPP	Masters in Public Policy
MR	Materials & Resources (LEED category)
mph	miles per hour
NC	Noise Criteria
NFPA	National Fire Protection Association
psf	pounds per square foot
psi	pounds per square inch
PVC	Polyvinyl chloride
RH	relative humidity
RSHG	relative solar heat gain
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPP	School of Public Policy
SS	Sustainable Sites (LEED category)
STC	Sound Transmission Class
TEP	Teacher Education Program
UCR	University of California, Riverside
USGS	US Geological Survey
VAV	variable air volume
WCG&PC	West Campus Graduate and Professional Center
WE	Water Efficiency (LEED category)

SASAKI