



UNIVERSITY OF CALIFORNIA, RIVERSIDE • CANYON CREST DPP • FINAL



1.0 INTRODUCTION

- 1.1 Project Summary
- 1.2 Project Goals, Parameters and Programming Process
- 1.3 Program Component Summary
- 1.4 Program Phasing

2.0 PROGRAM SUMMARY

- 2.1 General Program Statement
- 2.2 Housing
 - 2.2.1 Apartments
 - 2.2.2 Residence Halls
- 2.3 Dining Hall
- 2.4 Conference Services Facility

3.0 SITE AND PROJECT ANALYSIS

- 3.1 Location and Context
- 3.2 Site Definition
- 3.3 Site Characteristics and Open Space
- 3.4 Natural Site Attributes
- 3.5 Accessibility
- 3.6 Sustainability
- 3.7 Reviews, Codes and Regulations

4.0 BASIS OF DESIGN

- 4.1 Program Concept
 - 4.1.1 The Individual Student
 - 4.1.2 The Residential Community
- 4.2 Site Concept
- 4.3 Circulation and Connections
- 4.4 Landscapes Concept
 - 4.4.1 Plazas and Courtyards
 - 4.4.2 Irrigation System
 - 4.4.3 Hardscape and Fencing
- 4.5 Architectural Concept and Project Identity

5.0 SYSTEMS CRITERIA

- 5.1 Life Cycle Costing
- 5.2 Site Utility Piping
 - 5.2.1 Domestic Water and Fire Protection
 - 5.2.2 Sanitary Sewer
 - 5.2.3 Storm Drainage
 - 5.2.4 Natural Gas
- 5.3 HVAC Systems
 - 5.3.1 Codes and Standards
 - 5.3.2 Design Criteria
 - 5.3.3 Mechanical Systems
 - 5.3.4 Controls and Energy Management

- 5.4 Plumbing and Fire Protection
 - 5.4.1 Estimated Loads
 - 5.4.2 Criteria
 - 5.4.3 Systems Description
- 5.5 Electrical Systems
 - 5.5.1 Codes and Standards
 - 5.5.2 Design Loads
 - 5.5.3 Main Electrical Service
 - 5.5.4 Electrical Distribution
 - 5.5.5 Emergency Power
 - 5.5.6 Voltage
 - 5.5.7 Site Lighting
 - 5.5.8 Field Lighting
 - 5.5.9 General Lighting
 - 5.5.10 Grounding
 - 5.5.11 Fire Alarm System
 - 5.5.12 Voice/Data Signal and Communication System
- 5.6 Structural
 - 5.6.1 Housing Units
 - 5.6.2 Dining Hall
- 5.7 Noise and Acoustics
- 5.8 Security
- 5.9 Utility Diagrams

6.0 FACILITY REQUIREMENTS

- 6.1 Housing Components
- 6.2 Dining Hall / Student Services Components
- 6.3 Conference Service Components
- 6.4 Recreation Fields

7.0 PROJECT BUDGET AND SCHEDULE

- 7.1 Budget
 - 7.1.1 Basis of Cost Plan
 - 7.1.2 Project Budget
 - 7.1.3 Inclusions
 - 7.1.4 Exclusions
 - 7.1.5 Overall Summary
 - 7.1.6 Building Component Summary
 - 7.1.7 Sitework Component Summary
- 7.2 Schedule
 - 7.2.1 Overview
 - 7.2.2 Graphic Schedule

8.0 APPENDIX 1

- 8.1 Meeting Minutes

9.0 APPENDIX 2

- 9.1 Family Apartments as Phase 1
- 9.2 Program Summary
- 9.3 Phasing Diagram
- 9.4 Room Data Sheets
- 9.5 Cost Data

10.0 APPENDIX 3

- 10.1 Parking Garage
- 10.2 Site Diagram
- 10.3 Floor Plans

11.0 APPENDIX 4

- 11.1 UCR, Chancellors Policy on Green Building Design and Clean Energy Standards
- 11.2 UCR, Campus Green Building Baseline Substantiation, FINAL DRAFT, June 30, 2005

1.1 Project Summary

1.2 Project Goals, Parameters and Programming Process

1.3 Program Component Summary

1.3.1 Housing

- Residence Halls
- Resident Services Office
- Student Apartments

1.3.2 Dining

- Dining Hall
- Campus Deli / Convenience Store
- Express Café
- Student Mail Boxes
- Game room

1.3.3 Conference Services

- Multipurpose room
- Seminar and classroom space

1.3.4 Recreation

- Recreation Fields

1.3.5 Site Development

- Infrastructure
- Trash and Recycling
- Parking

1.4 Program Phasing



Strategic Housing Plan - 2003



Strategic Housing Plan - 2003

1.1 Project Summary

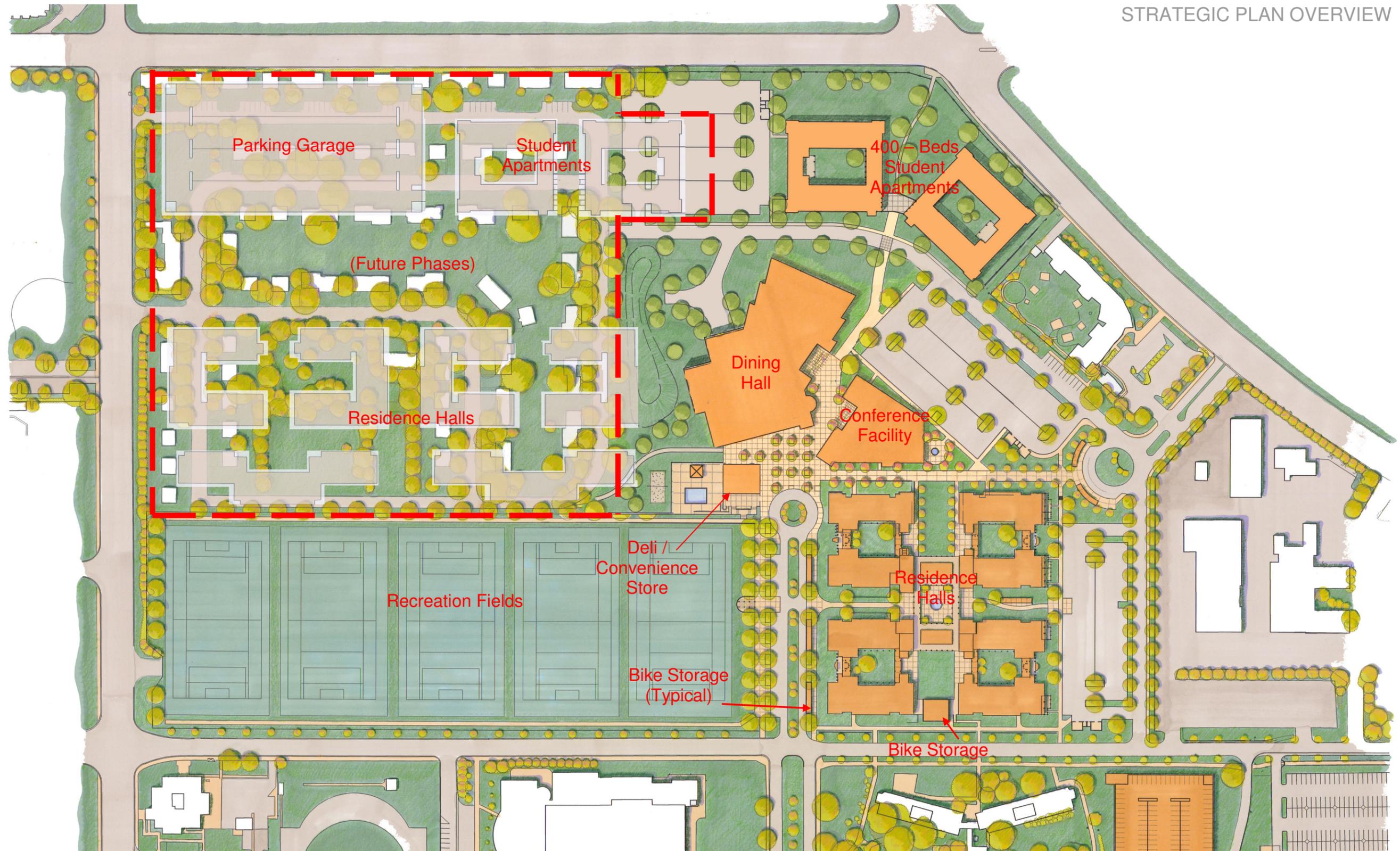
In response to statewide growth projections for higher education, the University of California, Riverside (UCR) is anticipating a 56% growth in its student population up to 25,000 students by 2015. UCR's 2005 Long Range Development Plan (LRDP) recognizes the University's goal to provide on campus housing for 50% of students and 75% of freshmen. Additionally, the University has established goals to enhance their student retention efforts through building a strong sense of community within the campus core by creating new identifiable student neighborhoods with amenities appropriate to each student group.

As a result of UCR's continuing support for the 1st year student and their commitment to developing infill sites on the East Campus adjacent to the academic core the 2005 LRDP identified the Canyon Crest site as the location for expansion of its undergraduate student housing program. The proposed site is currently used as family housing, which will be relocated to the West Campus. The 2003 Strategic Plan for Housing (SPH) advanced the goals stated in the LRDP and identified 9 phases of construction on the Canyon Crest site, providing a total 3,000 residence hall beds and 800-student apartment beds. The initial 3 phases of construction advanced in this document include:

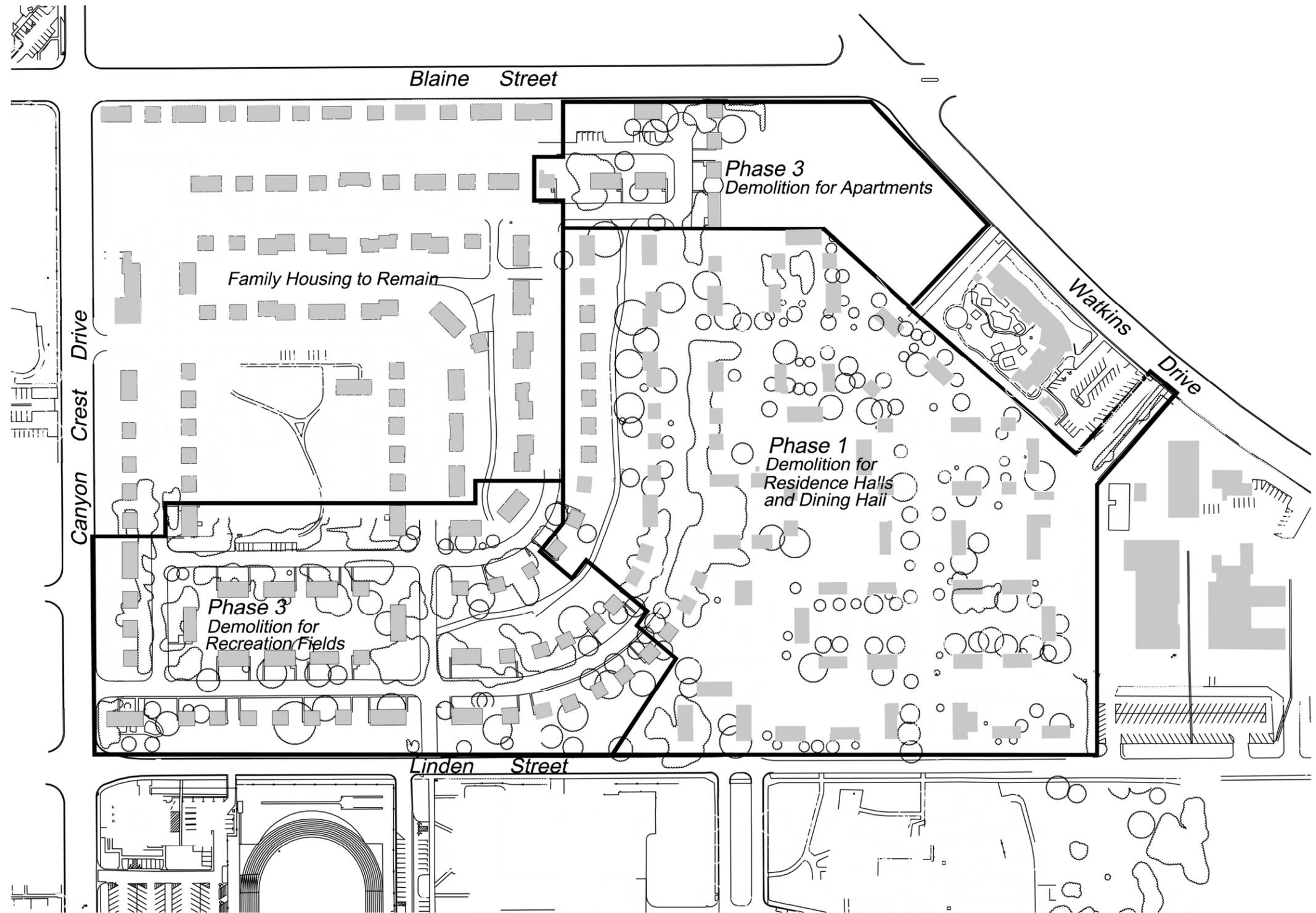
- Demolition of 168 existing family units including the family housing Resident Services Office, community center and KUCR radio station;
- 1,250 residence hall beds;
- Surface parking for students in residence halls at a ratio of 1 space for every four student beds;
- An 1,100 seat Dining Hall/Express Café /Campus Deli and Convenience Store;
- Conference Services Facility;
- Five recreation fields to augment student intramural programs and serve summer conference demand; and
- 400 single student apartment beds with surface parking at a ratio of 1 space for every two students.

An alternate scenario that advances the student apartments to the initial phase of construction is provided in 9.0 Appendix 2. The SPH called for the relocation of family housing to the West Campus prior to residence hall construction at the Canyon Crest site. At the time of this writing this relocation is pending and may be delayed. To accommodate the loss of family housing unit capacity and the displacement of residents, 400 apartment beds with a mix of 2 and 3 bedroom units can be constructed and used as interim family housing.

The Design Team was asked by the University to evaluate the option of providing a 400-car parking garage to be located on the east side of the Aberdeen/Inverness residence halls on what is currently Lot 22. This garage is intended to augment the declining parking stock on the East Campus due to infill construction and the expected increase in the student population as new student beds are added to campus. The site plan and cost analysis for the garage is provided in 10.0 Appendix 3.



SITE DEMOLITION PHASING



1.2 Project Goals, Parameters and Programming Process

The planning team, committee and constituent groups have identified the following goals of the program:

- Maintain a viable family housing component until the final phases of residence hall construction
- Establish identifiable residential communities within the Canyon Crest site
- Provide buildings that will stand the test of time, are efficient and easy to maintain
- Create communities and dining areas that populate and invigorate pedestrian paths and connections to campus
- Provide services that meet the diverse dining needs of residents, as well as after hours services
- Organize residential relationships to facilitate informal gatherings, chance encounters, contact between neighbors and encourage resident interaction
- Student common spaces shall be visible, accessible and centralized to the neighborhood
- Balance individual living needs of students with social opportunities through the creation of dedicated open space and outdoor room/gathering spaces
- Create communities with strong campus connections and appropriate access to on-site parking
- Provide housing with competitive rents and amenity choices
- Neighborhoods shall respond to regional climate and shall protect and enhance the native environment
- Neighborhoods shall have a unique design expression and shall complement the campus fabric through materials and landscape
- Protect the native landscape and incorporate sustainable planning and design practices
- Provide recreational fields for intramural sports to serve the adjacent student housing, the general student population and conference activity
- Support residents of Canyon Crest and the campus community, as well as pedestrians and visitors

The detailed planning program for Canyon Crest was developed through a series of workshops held on campus during the spring of 2004. The Planning Team and Project Management Team (PMT) held a series of meetings with the Project Programming Committee and representatives of the various campus user groups to compare existing residential and dining programs with their aspirations for the new community and Dining Hall. The information gathered was evaluated by the Planning Team and the PMT to develop a program that met all project objectives and created a community that represented UCR's goal of optimum efficiency.



1.3 Program Component Summary

The Canyon Crest site includes the following primary program components:

- Housing
- Dining
- Conference Services
- Recreation
- Site Development

1.3.1 Housing

Residence Halls

Approximately 100 existing family units will be demolished in preparation for the two phases of residence hall construction. Phase 1 will consist of 750 beds and Phase 2 will consist of 500 beds. Included in the total beds are six staff apartments provided in the residence halls; two faculty-in-residence, and two resident directors. Each of these apartments will have a private patio and entrance and be located at the east end of the residence halls adjacent to the parking areas.

Each residence hall floor is based on a student community of between 40 and 48 students and includes a floor lounge with kitchenette, and mechanical and building support spaces. Two residence hall floors are configured to take advantage of the prevailing northwest and westerly breezes. The two floors will be connected by open corridor/bridges creating a secure, interior courtyard. Laundry facilities will be located on each floor and be easily accessible to the residents of the entire floor.

At the outside edge of the courtyards each floor's lounge shares an adjacency with an outdoor patio/living room at the first floor and balconies at the second, third and fourth floor. At the opposite end of the courtyard, adjacent to the core, is the main student entry.

At the center or core area of the four residence halls are the seminar rooms, computer labs, small study rooms and the Resident Services Office (RSO). These shared amenities provide a central point of access and community interaction. An open-air colonnade connects the halls to these common areas at the first floor. Card access at pedestrian gates provides a 24-hour secure environment at the perimeter of the neighborhood.

Bicycle storage will be accommodated in secure, covered shelters. Three shelters accommodating approximately 30 bicycles each will be provided along the east side of Aberdeen Drive; one shelter accommodating approximately 30 bicycles will be provided between the Phase 1 and Phase 2 residence halls on the east side of the site; and a larger shelter accommodating approximately 150 bicycles will be provided on the south side of the site between the Phase 2 residence halls. All bicycle storage areas will be accessible via card access gates.

Resident Services Office

The RSO will be located on the north side of the core and will be the hub of activity for the 1,250-student community and will accommodate the resident director and resident staff offices. The RSO will be the starting point for tours for prospective students, the main desk for check-in/check-out at the beginning and end the academic year and for conference attendees housing accommodations. The public restrooms will be located outside the offices adjacent to a plaza with abundant shade and seating easily accessible to a diverse group of users. The RSO staff conference room will be located in close proximity to the office with access off the colonnade so that student groups can also use it after hours.

Student Apartments

Student apartments will be located on the south side of Blaine Street in Phase 3. The apartment unit mix will provide a majority of four-bedroom units. Each bedroom will be sized to accommodate a single bed with a side table, desk, dresser and closet. Each unit will have two bathrooms containing a shower, toilet, vanity and sink. A full-size kitchen and living room sized appropriately to include a dining table will allow a variety of uses. Each unit will have a hot water tank in a mechanical closet accessible from the corridor.

The apartment building will be configured around a central courtyard. The building will be four stories with a two-story component on one end and open breezeway connections between floors at the other to allow prevailing breezes to penetrate the courtyard. Upper floors will be accessible via both an elevator and open stairs. Laundry facilities will be provided on each floor oriented to face the courtyard. One bicycle storage room will be located at the ground floor of each apartment building located conveniently to the path to campus. Each room will be accessible via a card access door.

1.3.2 Dining

Dining Hall

The 1,100-seat Dining Hall building will be constructed in two phases; 500 seats in Phase 1 with the remainder provided in Phase 3. The dining operation will be a dispersed marketplace concept, with a variety of exhibition cooking style service platforms integrated with restaurant quality seating areas. This style of service will emphasize product quality as well as interactively engage customers in the preparation process. Seventy percent of the dining seating will be interior and 30% will be exterior.

The majority of the program space will be located on the first floor with the student game room and residence hall association offices located on the second floor. A centralized mechanical plant to serve the entire project's heating and air-conditioning needs will be located in the basement level.

Express Café

The Express Café is intended to serve students who would rather “grab-and-go” pre-packed items and will be located on the first floor of the dining facility in proximity to the lobby area.

Campus Deli / Convenience Store

The Deli / Convenience Store will be constructed in Phase 2 located adjacent to the Dining Hall and will be primarily a retail operation. The nature of this facility will be to provide a retail offering and atmosphere for late night venues, services to university and conference users of the sports and conference facilities and an alternate for students. Both operations will be high traffic locations and are intended to serve both resident and non-resident customers over extended service hours.

1.3.3 Conference Services

Conference Services Facility

The 2-story Conference Services Facility will be located adjacent to the Dining Hall and will include a large multi-purpose room that can be configured for 500 in theatre-style seating, a banqueting space for 500 or be subdivided into two equal-sized spaces for separate events. The kitchen in the Dining Hall will provide banquet support via a staging pantry to be located adjacent to the multi-purpose room. Conferencing breakout spaces will be accommodated within the facility; student commons spaces, classrooms and seminar rooms will be used to meet the total breakout space requirements to maximize efficiency.

Mail

The student mailboxes will be located on the first floor of the conference facility adjacent to the Dining Hall and directly across from the Express Café. The mailboxes provided as part of Phase 1 will be constructed as a stand-alone structure that will be incorporated and expanded when the conferences services facility is built in Phase 3. Access to the mailboxes will be configured around an open, colonnaded courtyard with ample outdoor seating that will also be shared by users of the Express Café.

1.3.4 Recreation

Recreation Fields

The remaining 68 existing family units will be demolished as part of Phase 3 to accommodate five multi-use recreation fields. They will be constructed along the southern boundary of the Canyon Crest property and adjacent to the existing Student Recreation Center. This adjacency will facilitate easy access between the two facilities for UCR recreation staff and allow direct connection for contiguous programming. The fields will be used by UCR recreation and club sports and will be an important marketing component for summer conferences. The 11-acre open space will serve as a focal point and a key green space in the total building out of the student neighborhood. The fields will also be an integral component in the capture and absorption of storm water.

A 5-foot high black PVC coated chain link fence shall be located on the north, west and south side of the fields. No fence is required adjacent to the Aberdeen Drive extension. Because the fields are for student use only, one card access control gate will be provided on the northern side of the fields and one on the southern side across from the student recreation facility. An emergency vehicle access gate with Knox key access shall be provided adjacent to Canyon Crest Drive. The gate will be provided at the existing curb cut adjacent to the current family housing community center. Landscaping shall be placed on the outside perimeter of the fence to minimize views to the fields for the adjacent streets and to prevent balls from going into the adjacent streets.

A 355-square foot storage room for recreation equipment shall be provided in the Campus Deli / Convenience Store. Soccer goals will be secured to the perimeter fence for storage while the fields are in use by other sports leagues and activities. Public restrooms for recreation field users will be provided in the Dining Hall. Eight foot wide sidewalks will be provided on the north, south and west sides of the fields to facilitate pedestrian movement between the fields and the Dining Hall.

1.3.5 Site Development

Infrastructure

Infrastructure connections shall be made to existing campus power and water utilities to maximize existing capacity in UCR systems. Electrical service will be connected to the University's 12 KV electrical feed and be accessed from the existing vault in the Corporation Yard on the east side of the site. Circuits 2A and 2B shall be extended to the site.

Telephone service will be available at Linden Street. Fiber optic conduit will be extended from a vault on the east side of Pentland Hills. Fiber optic cable will be extended back to the University's communications building. Telecommunications during Phase 1 shall be sized to accommodate the full build-out capacity for the site. Cable television will be extended from the Student Recreation Center.

Water and sanitary sewer for the work included in this DPP will be connected to existing lines in Linden Street. Sanitary sewer for future phases of construction will require an additional 8-inch line to be provided running parallel the existing line in Linden Street and extended to a existing manhole at University Avenue. Natural gas service will be provided via existing lines in Blaine Street.

For Phase 1 construction storm water will be detained on site in the green buffer zone that will separate existing family housing from the new facilities. For future phases of construction the recreation fields will be used to detain storm water. Release of storm water for all phases will be into existing lines located in Linden Street.

Trash and Recycling

A main trash and recycling room will be located on the first floor of each residence hall with trash chute rooms located on each floor above. Each first floor room will accommodate four 1.5 cubic yard dumpsters and a trash compactor. Housekeeping staff will transport dumpsters from the trash halls to the dumpster enclosures. Trash and recycling container enclosures will be located in the residence hall parking lots and sized appropriately. The enclosures will have a roof to ensure it is secure against intruders and be lockable for staff only access.

Trash and recycling containers for apartment residents will be located in enclosures in the apartment parking areas. Residents will transport trash and recyclables to the containers. The containers will be housed in roofed enclosures with lockable gates for resident and staff access only.

Trash and recycling for the Dining Hall will be located in the service dock.

Parking

Surface parking will be provided in accordance with the goals established with the 2005 Long Range Development Plan at a ratio of one space for every four-residence beds and one space for every two-apartment beds. Parking for residence halls will be provided in surface lots located on the east and north sides of the residence halls. Parking for the apartments will be located on the west side of the apartments.

According to the 2004 UCR Multimodal Transportation Management Strategy a 1,500-car parking garage is planned for the Southeast corner of Blaine Street and Canyon Crest Drive. The planned size of the garage has increased since the Strategic Plan for Housing was completed in 2003 and has implications on the placement of the next phase of student apartments. Initial indications are that apartment parking will most likely need to be accommodated in the garage to fulfill future student parking needs.

Service and delivery parking for the Dining Hall will be provided in the service dock. Approximately 20 metered visitor parking spaces will be provided along Aberdeen Drive extension. No parking will be provided for the recreation fields.

Parking space dimensions will be 9 feet wide by 18 feet long with a 24-26-foot wide access isle. Irrigated landscaped islands with shade trees and groundcover and lighting will be provided according to UCR standards. Card access gates will be used to control parking lot entry. Code Blue phones shall be provided within the parking lot rather than at the perimeter. No Gem Cart recharging stations will be provided in the student lots.

1.4 Program Phasing

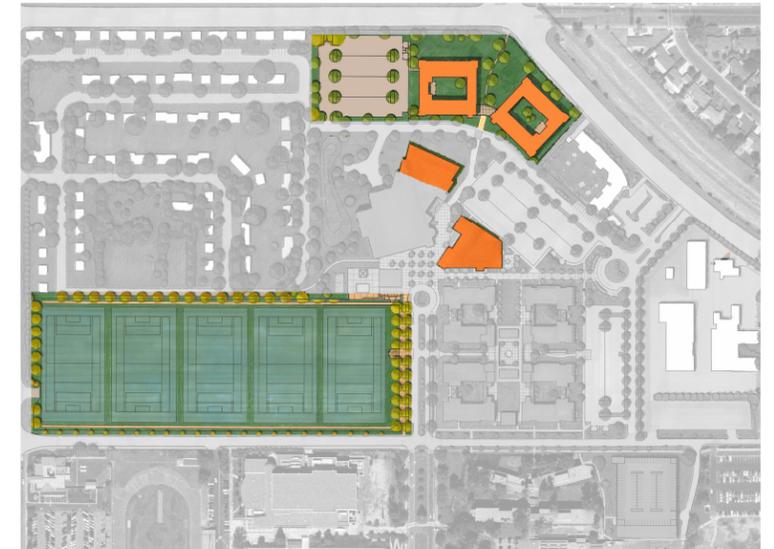
Phase 1



Phase 2



Phase 3



Site

14.32+ Acres

3.68+ Acres

16.86+ Acres

Housing

Residence Halls
750 Beds
4-Stories
1:4 Parking Space/Student Ratio
188 Parking Spaces
Family Housing
100 Units Demolished

Residence Halls
500 Beds
4-Stories
1:4 Parking Space/Student Ratio
125 Parking Spaces

Apartments
416 Beds
3.5 and 4-Stories
1:2 Parking Space/Student Ratio
208 Parking Spaces
Family Housing
68 Units Demolished

Dining/Student Services

Dining Hall – 500 Seats
Retail Foodservice/Express Café

Campus Deli/Convenience Store

Dining – 600 Seats

Conference Services

500 Seat Multipurpose Room

Recreation

1 Pool/Club House

5 Intramural Fields

2.0 PROGRAM SUMMARY

2.1 General Program Statement

2.2 Housing

2.2.1 Apartments

2.2.2 Residence Halls

2.3 Dining Hall

2.4 Retail/Deli

2.5 Conference Services



2.1 General Program Statement

The programs included in this section provide the detailed space summary representing the needs of the building space programs for each of the key components of the project. The assessment of needs for each space was based on the following:

- Institutional input (admin, staff, planning, students, constituent groups)
- Peer benchmarks in the UC system
- National standards for similar facilities
- UCR statistical data on student preferences and successes

The programs included are also illustrated in the form of proposed building plans and individual space outline sheets included later in this document. While the final design may vary from that shown in the DPP, the intent of the program, the programmatic adjacencies, and the shaping of exterior spaces with the building program are all critical components of the design. Final designs shall be evaluated based on their ability to appropriately respond to these programmatic requirements.

The following space programs are included in this section:

Housing

- Student Apartments
- Staff Apartments
- Residence Halls
- Resident Services Office (RSO)

Dining Hall

- Dining
- Kitchen and associated support spaces
- Express Café
- Campus Deli / Convenience Store

Conference Services

- Conference Services
- Meeting / Academic Programs

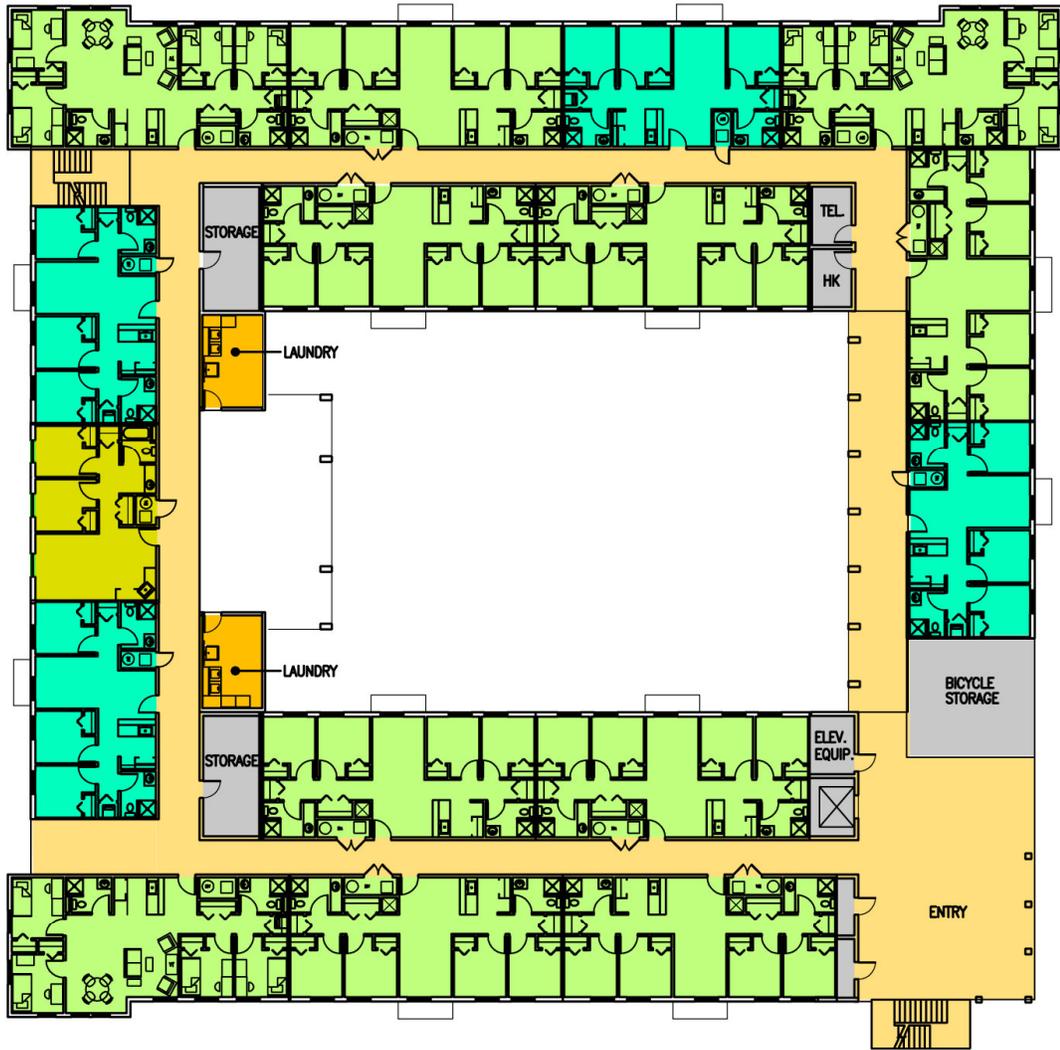


2.2 Housing

2.2.1 Student Apartments

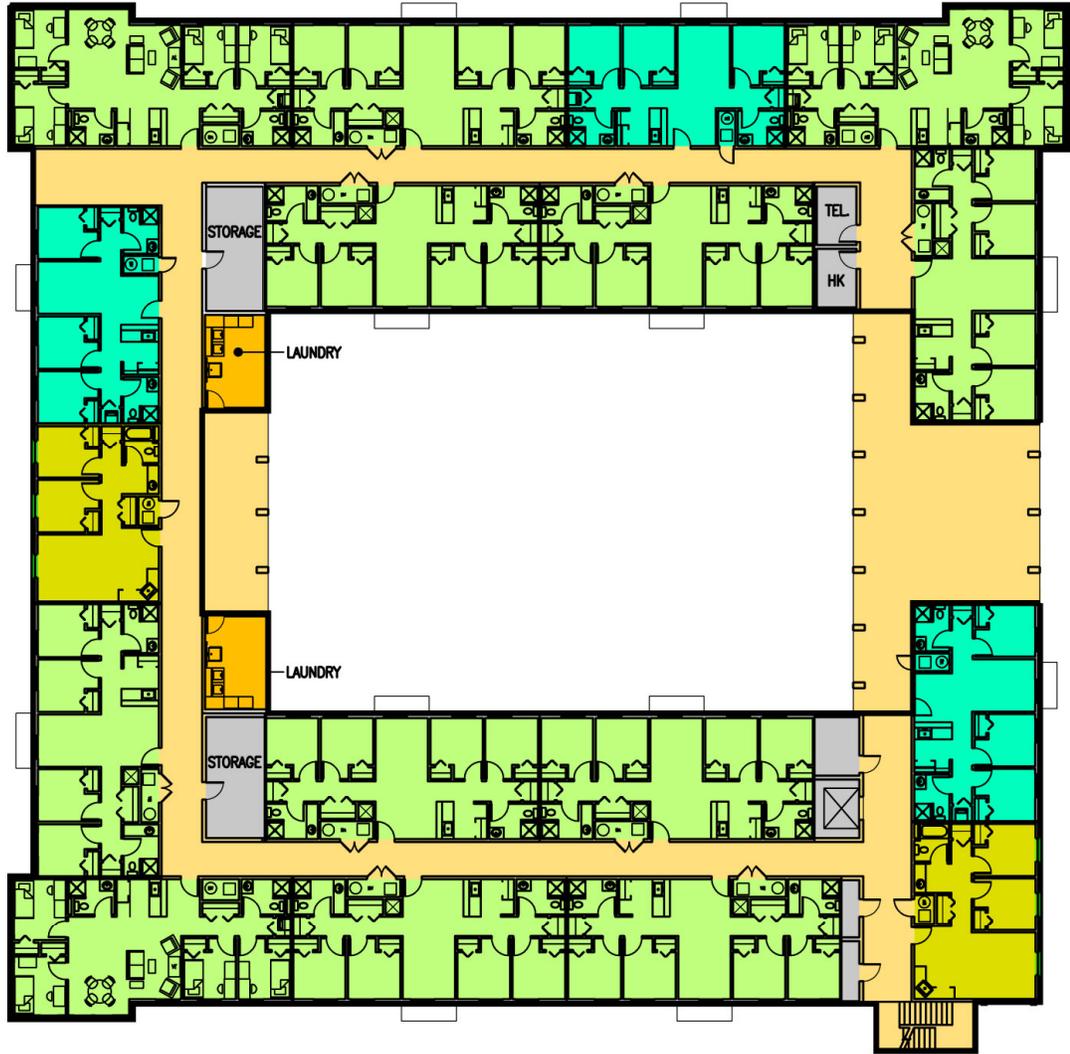
Room code	Area Description	Phase 1 Quantity	Phase 2 Quantity	ASF	Total ASF	Occupancy
Student Apartments					100,018	
982	2 - Bedroom Apartment	9			0	18
920	Kitchen	9	0	60	540	
962	Dining	9	0	56	504	
920	Living	9	0	105	945	
924	Bathroom	9	0	50	450	
912	Bedroom w/closet (single bed)	18	0	99	1,782	
980	Linen Closet	9	0	10	90	
980	Coat Closet	9	0	12	108	
962/963	Internal Circulation	9		110	990	
982	3 - Bedroom Apartment	22			0	66
920	Kitchen	22	0	60	1,320	
962	Dining	22	0	30	660	
920	Living	22	0	100	2,200	
924	Bathroom	44	0	50	2,200	
912	Bedroom w/closet (single bed)	66	0	97	6,402	
980	Linen Closet	22	0	10	220	
980	Coat Closet	22	0	12	264	
962/963	Internal Circulation	22		145	3,190	
981	4 - Bedroom Apartment Option 1	62	0		0	248
920	Kitchen	62	0	60	3,720	
962	Dining	62	0	48	2,976	
920	Living	62	0	101	6,262	
924	Bathroom	124	0	52	6,448	
912	Bedroom w/closet (single bed)	248	0	97	24,056	
980	Linen Closet	124	0	12	1,488	
980	Coat Closet	62	0	20	1,240	
962/963	Internal Circulation	62	0	167	10,354	
981	4 - Bedroom Apartment Option 2	21	0		0	84
920	Kitchen	21	0	60	1,260	
962	Dining	21	0	96	2,016	
920	Living	21	0	112	2,352	
924	Bathroom	42	0	48	2,016	
912	Bedroom w/closet (single bed)	84	0	107	8,988	
980	Linen Closet	21	0	12	252	
980	Coat Closet	21	0	20	420	
962/963	Internal Circulation	21	0	205	4,305	
Support Spaces					7,220	
720	Student Personal Storage	14	0	210	2,940	0
402	Housekeeping/custodial Closets	7	0	70	490	0
920	Telecommunications Closets	7	0	70	490	0
720	Bicycle Storage	2	0	460	920	0
985	Laundry	14	0	170	2,380	
Subtotal ASF					107,238	
Program Efficiency Ratio @ 66%						
Unenclosed areas				16,350	8,175	
Target GSF					170,657	

Target GSF/Bed @ 416 Beds



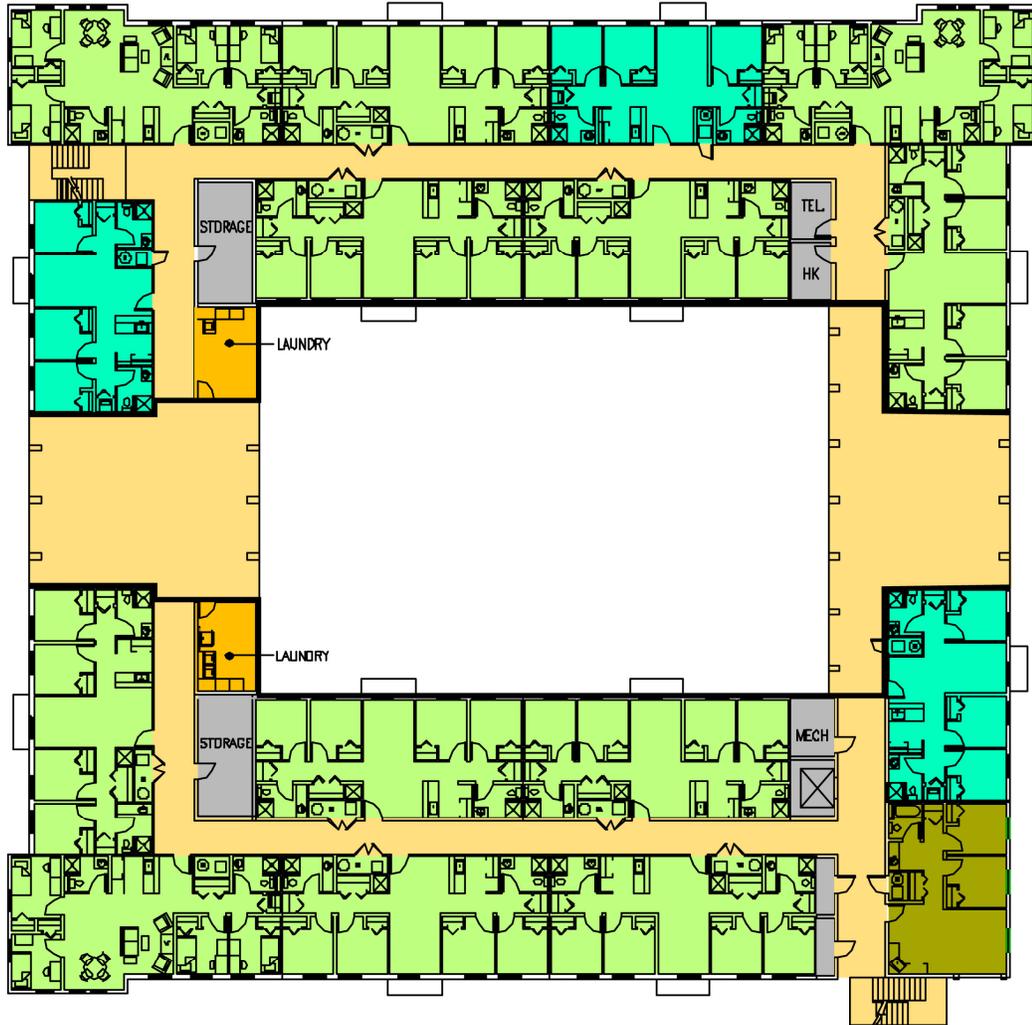
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT
- 4 BEDROOM UNIT
- PUBLIC AREAS
- CIRCULATION
- SUPPORT SPACES

GROUND FLOOR



- 2 BEDROOM UNIT
- 3 BEDROOM UNIT
- 4 BEDROOM UNIT
- PUBLIC AREAS
- CIRCULATION
- SUPPORT SPACES

SECOND FLOOR



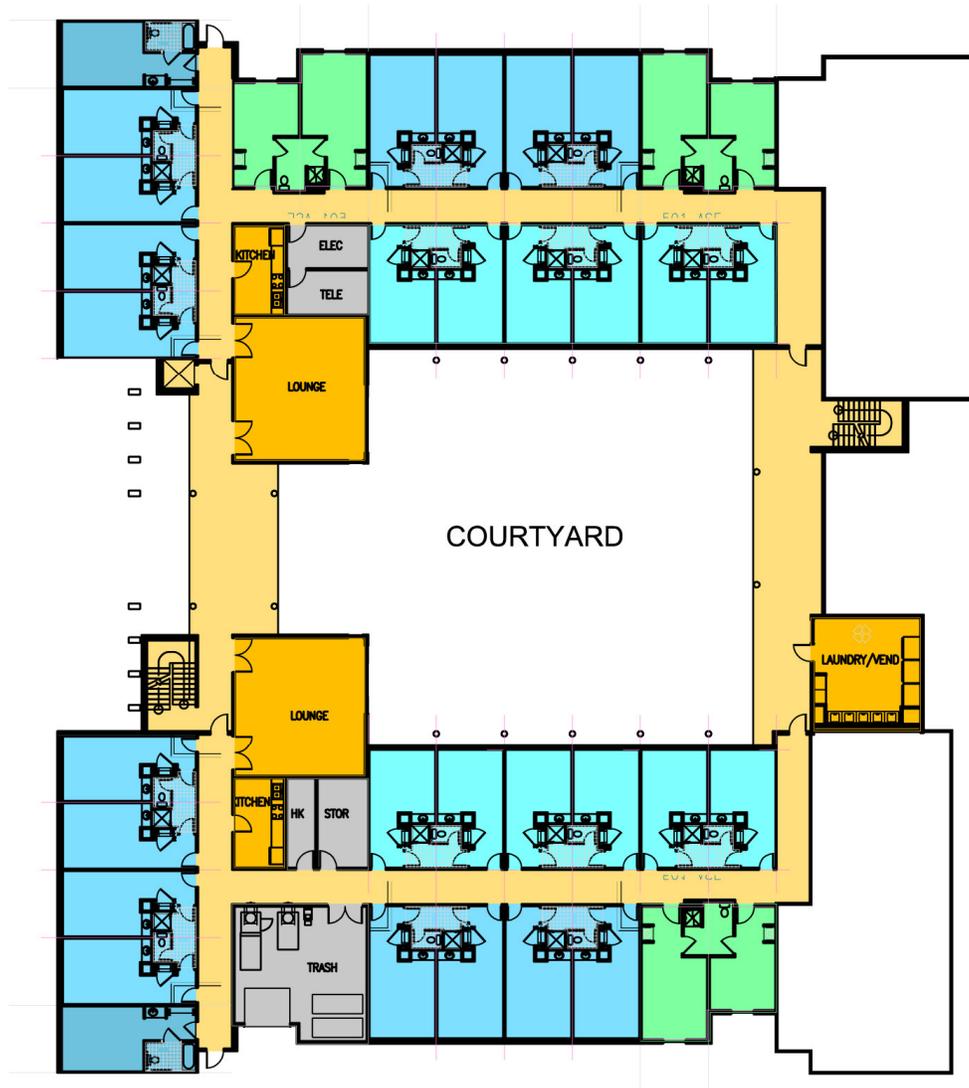
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT
- 4 BEDROOM UNIT
- PUBLIC AREAS
- CIRCULATION
- SUPPORT SPACES

TYPICAL FLOOR

2.2.2 Residence Halls

Room Code	Area Description	Phase 1	Phase 2	Phase 1	Phase 2	Phase 1	Phase 2
		Quantity	Quantity	ASF	Total ASF	Total ASF	Total ASF
Staff / Living Spaces		4	2		2,520	1,512	4,032
982	Staff 2-bedroom apartment	2	2	756	1,512	1,512	3,024
981	Staff - 1 bedroom apartment	2	0	504	1,008	0	1,008
Student Residences		233	144		117,374	72,184	189,558
914	4-person semi-suite (2D)	149	93	562	83,738	52,266	136,004
912	2-person semi-suite (2S)	15	9	502	7,530	4,518	12,048
913	3-person semi-suite (1S/1D)	30	16	501	15,030	8,016	23,046
911	1-person suite (1S)	18	10	284	5,112	2,840	7,952
912	2-person suite (1D)	21	16	284	5,964	4,544	10,508
Residential Community		48	32		15,556	10,036	25,592
630	Student Lounges	20	12	550	11,000	6,600	17,600
920	Kitchen	20	12	140	2,800	1,680	4,480
920	Trash & Recycle Room	2	2	518	1,036	1,036	2,072
920	Trash Chute	6	6	120	720	720	1,440
Resident Services Office		15	1		2,607	160	2,767
335	Lobby/reception/waiting	1		537	537	0	537
320	Resident Director Office	1		120	120	0	120
320	Head Resident Office	1		100	100	0	100
320	RSO Manager Office	1		160	160	0	160
320	Office	1		120	120	0	120
335	Staff Workstations	3		80	240	0	240
335	Staff Workroom	1		225	225	0	225
335	Staff Restrooms	1		60	60	0	60
630/920	Staff Lounge/kitchen	1		120	120	0	120
340	Conference Room	1		325	325	0	325
410	Poster Room	0	1	160	0	160	160
335	Storage	1		300	300	0	300
335	Public Restrooms	2		150	300	0	300
Community / Academic		4	11		600	4,800	5,400
130	Seminar rooms	0	4	400	0	1,600	1,600
410	Small Group Study	4	4	150	600	600	1,200
630	Fitness Room	0	1	1,000	0	1,000	1,000
260/110	Computer Lab/Classroom	0	2	800	0	1,600	1,600
Support Spaces		37	28		6,700	4,500	11,200
720	Student Personal Storage	8	8	150	1,200	1,200	2,400
920	Housekeeping/custodial Closets	8	8	100	800	800	1,600
510	Telecommunications Closets	12	4	125	1,500	500	2,000
985	Laundry/Vending	8	8	250	2,000	2,000	4,000
630	Core living room/lounge	1	0	1,200	1,200	0	1,200
Subtotal ASF		341	218		145,357	93,192	238,549
Program Efficiency Ratio @ 70%							
Target GSF					207,653	133,131	340,784
Target GSF/Bed @ 1241 Beds (1241 beds including Staff)					167	107	275

Notes: Includes space allocations for accessible requirements
 Exterior Space program included in Master Plan for Housing Document
 280 GSF / Bed is for planning and budget purposes; program refinement required in program and design phase



- 4 - PERSON SEMI-SUITE (2D)
- 3 - PERSON SEMI-SUITE (1S/1D)
- 2 - PERSON SUITE (1D)
- 1 - PERSON SUITE (1S)
- PUBLIC AREAS
- CIRCULATION
- SUPPORT SPACES

FIRST FLOOR WEST



- 4 - PERSON SEMI-SUITE (2D)
- 3 - PERSON SEMI-SUITE (1S/1D)
- 2 - PERSON SUITE (1D)
- PUBLIC AREAS
- CIRCULATION
- SUPPORT SPACES

SECOND FLOOR WEST





- 4 - PERSON SEMI-SUITE (2D)
- 3 - PERSON SEMI-SUITE (1S/1D)
- 2 - PERSON SUITE (1D)
- PUBLIC AREAS
- CIRCULATION
- SUPPORT SPACES

TYPICAL FLOOR

2.3 Dining Hall

Room code	Area Description	Quantity	Phase 1 ASF	Phase 2 ASF	Phase 3 ASF	Total ASF
Dining Hall						20,656
610	Marketplace Dining Area	1	5,760		8,416	14,176
610	Private Dining Rooms	2	800		800	1,600
610	Outdoor Marketplace Dining	1	1,440		1,440	2,880
615	Lockers/Book Drop	1	2,000			2,000
Servery						9,145
615	Serving Platform		3,050		1,725	4,775
615	Customer Queing		2,575		1,795	4,370
Production Kitchen						5,600
615	Refrigerated Storage	1	1,000			1,000
615	Frozen Storage	1	700			700
615	Dry Storage	1	1,200			1,200
615	Special Equipment Storage	1	300			300
615	Table & Chair Storage	1	300			300
615	Cold Food Preparation	1	1,200			1,200
615	Hot Food Preparation	1	900			900
Warewashing						1,900
615	Warewashing	1	1,500			1,500
615	Pot Washing	1	300			300
615	Chemical Storage	1	100			100
Dining Support						3,100
615	Loading Dock (Compactor/Baler)	1	550			550
615	Shipping & Receiving	1	200			200
615	Cart Washing	1	120			120
335	Staff Restroom & Lockers	1	700			700
615	Janitor's Closet	1	120			120
615	Custodial Equipment Room	1	150			150
320	Director's Office	1	120			120
320	Assistant Director's Office	1	120			120
320	Receiving Office	1	120			120
320	Cash Counting Office	1	120			120
320	Food Production Office	1	120			120
320	Food Production Manager's Office	1	300			300
320	Student Manager's Office	1	240			240
340	Conference Room	1	120			120
Dining Hall						9,880
610	Service Desk - Mail & Equipment	1	150			150
610	Service Desk - Administration	1	150			150
610	Lounge Seating	1	400		600	1,000
615	Mail	3	1,800		3,600	5,400
610	RHA Offices	1	420			420
610	RHA Offices - Private (120 SF each)	2	240			240
610	RHA Storage	1	120			120
615	Game Room	1	2,400			2,400
Subtotal ASF			31,905		18,376	50,281
Program Efficiency Ratio @ 70%						
Target GSF (plus central mechanical space)			53,779		26,251	80,030

- Notes:
- 1 Includes space allocations for accessible requirements
 - 2 Exterior Space program included in Master Plan for Housing Document
 - 3 8,200 GSF for central mechanical space is included in the total GSF



FIRST FLOOR

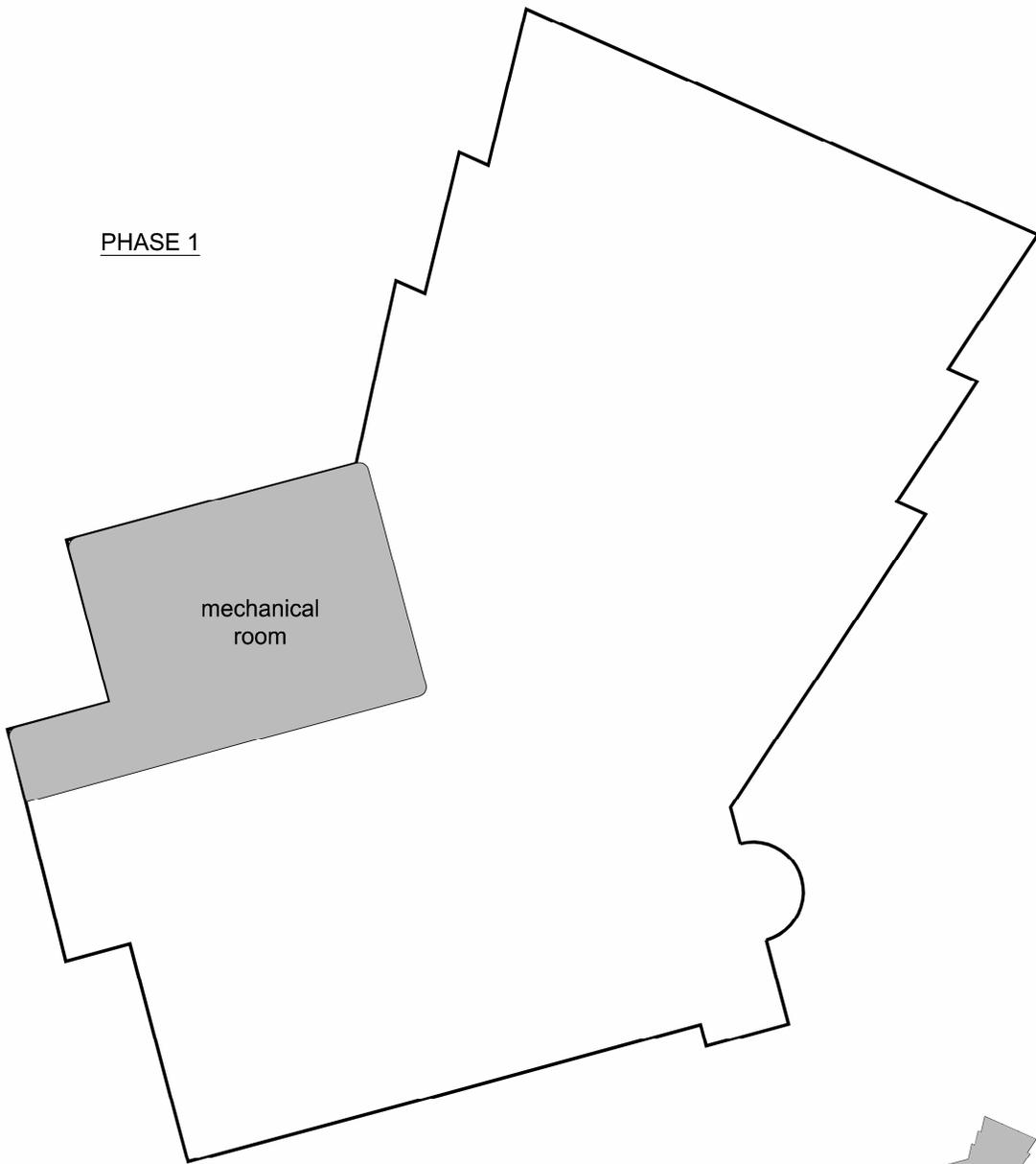


PHASE 1



SECOND FLOOR

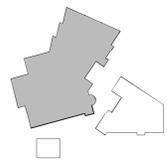




PHASE 1

mechanical
room

BASEMENT FLOOR



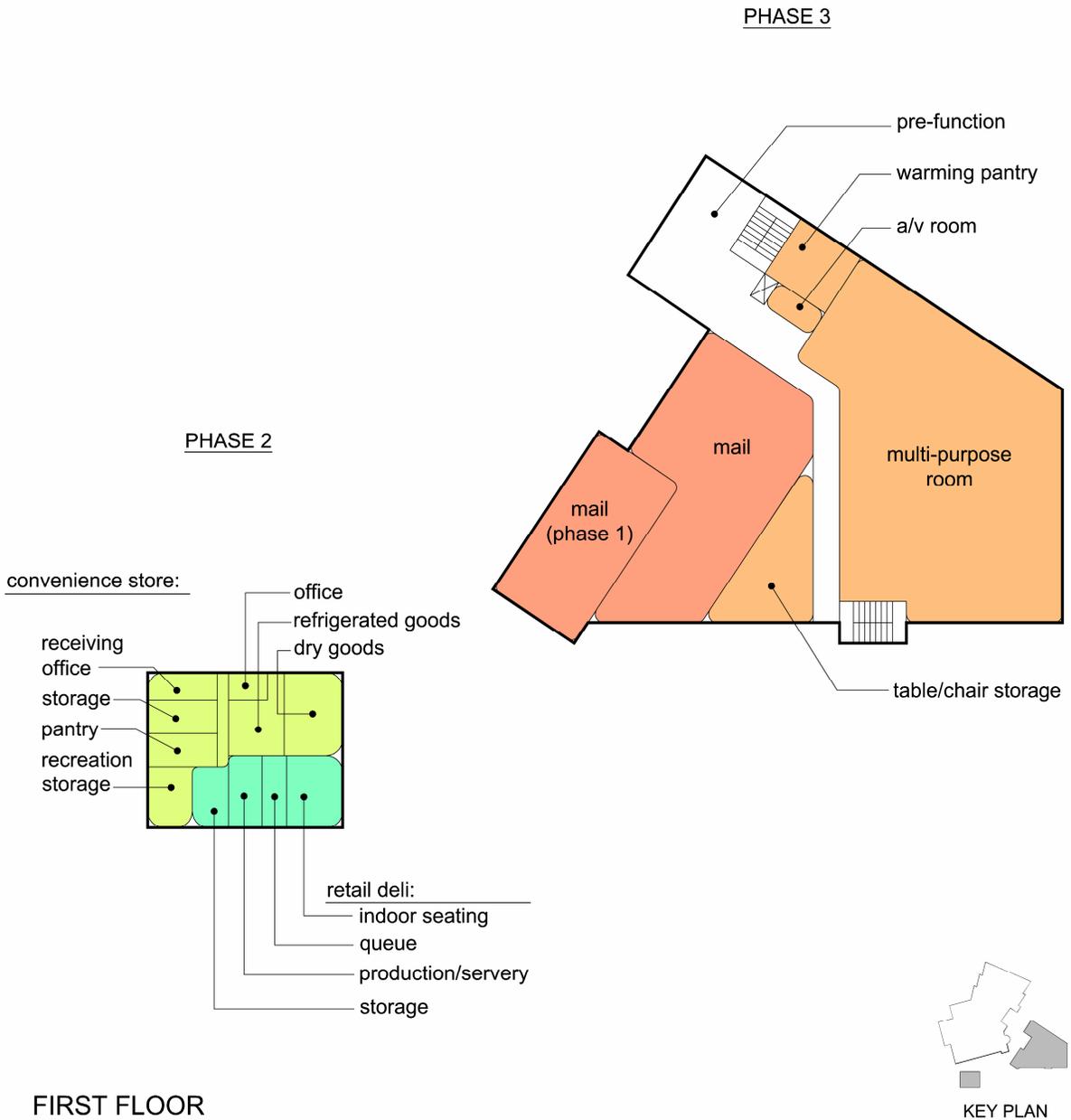
KEY PLAN

2.4 Retail/Deli

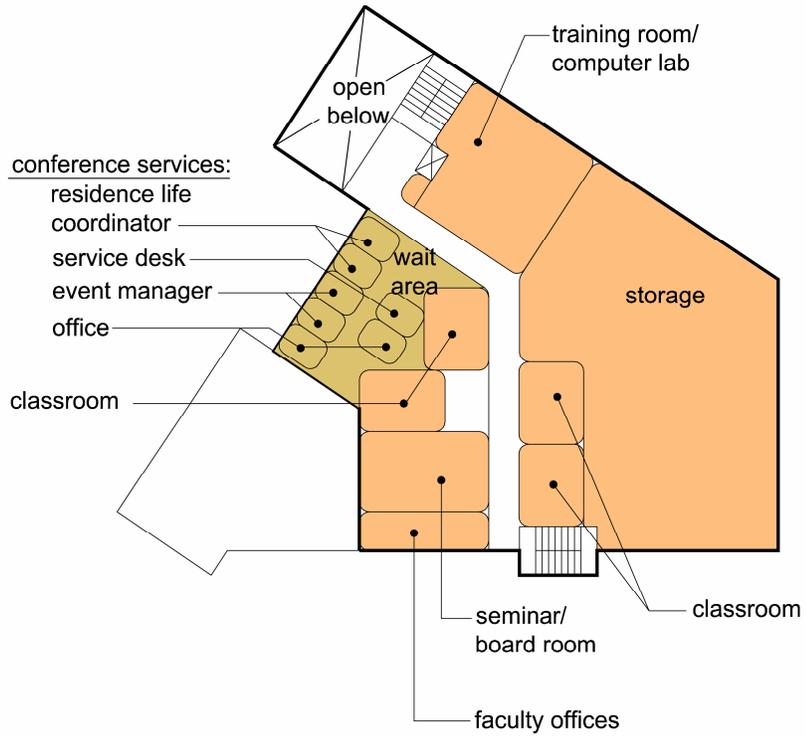
Room code	Area Description	Quantity	Phase 1 ASF	Phase 2 ASF	Phase 3 ASF	Total ASF
Convience Store						2,355
640	Dry Goods Merchandising	1		630		630
640	Refrigerated Goods Merchandising	1		500		500
920	Office	1		120		120
615	Storage	1		300		300
615	Pantry	1		300		300
615	Receiving	1		150		150
625	Recreation Storage	1		355		355
Retail Deli						2,150
610	Seating and Cicalution - Indoor	1		640		640
610	Seating and Cicalution - Outdoor	1		640		640
615	Receiving	1		70		70
615	Storage and Support	1		300		300
615	Production/Serviceing	11		300		300
615	Queuing	1		200		200
Subtotal ASF						4,505
Program Efficiency Ratio @ 70%						
Target GSF						6,436

2.5 Conference Services

Room code	Area Description	Quantity	Phase 1 ASF	Phase 2 ASF	Phase 3 ASF	Total ASF
Conference Services						1,110
335	Service Desk - Mail & Equipment	1			150	150
320	Office	3			420	420
320	Events Manager's Office	1			140	140
335	Waiting/Reception	1			120	120
320	Residence Life Coordinator's Office	2			280	280
Meeting/Academic/Programs						20,820
340	Multi-Purpose (Sub-dividable)	1			7,500	7,500
345	Pre-Function Area	1			2,250	2,250
615	Warming Pantry	1			500	500
345	AV Equipment Room	1			200	200
345	Table and Chair Storage	1			750	750
340	Seminar/Board Room	1			500	500
470	Training Room/Computer Lab	1			1,600	1,600
320	Faculty Offices	3			360	360
340	Classroom	4			2,160	2,160
335	RHA Storage	1			5,000	5,000
Subtotal ASF						21,930
Program Efficiency Ratio @ 70%						
Target GSF						31,329



PHASE 3



SECOND FLOOR



3.0 SITE AND PROJECT ANALYSIS

- 3.1 Location and Context
- 3.2 Site Definition
- 3.3 Site Characteristics and Open Space
- 3.4 Natural Site Attributes
- 3.5 Accessibility
- 3.6 Sustainability
- 3.7 Reviews, Codes and Regulations



3.1 Location and Context

The Canyon Crest site is located on the University's East Campus and is bordered on the north by Blaine Street, the east by Watkins Drive, the west by Canyon Crest Drive and the south by Linden Street. There are both University owned and privately owned apartment complexes to the southwest, west and north and single-family dwellings on the northeast and east across Watkins Drive. The campus is located directly south of the site. Immediately to the south is the University Police Station and Student Recreation Center. Aberdeen Drive, which runs north/south, connects the site to other residential sections of campus. The site shares its eastern boundary with the University's Corporation Yard and it's northeastern boundary with the Child Development Center. A row of palm trees is planted along the southern edge of the site parallel to Linden Street; these palms are to be preserved. Riverside Sports Complex (on campus land) shared by both the City of Riverside and UCR are located on the southwest corner of Blaine Street and Canyon Crest Drive.

3.2 Site Definition

The base map used by the Planning Team was obtained from the University's Office of Design and Construction. The University confirmed that the information was recently updated for use on this project.

3.3 Site Characteristics and Open Space

The site is characterized by gently sloping terrain draining from east to west. The existing family units are one-story single-family dwellings and duplexes with a network of streets providing access and on street parking for the residents. The existing landscape is mowed lawns and mature canopy shade trees. The site designated for the apartments is predominantly a vacant lot. The site for the initial phase of the residence halls is less wooded than the portion of the site where family housing will remain until future phases. A community park will continue to provide open space for remaining family housing residents.

There is a strip shopping center located on the northwest corner of Blaine Street and Watkins Drive. Multi-family housing is located adjacent to the site on the west, north and northeast and single-family neighborhoods to the northeast and east. There is an existing footpath that students travel through the family site between the Watkins Drive and Blaine Street corner and Aberdeen Drive accessing campus.

3.4 Natural Site Attributes

Generally, the site gently slopes towards the west. It has a large number of existing trees amongst the family housing units and streets. The predominant species of trees are California pepper, oaks, pines and a number of small ornamentals. The trees have been evaluated by UCR's housing grounds staff and have been determined to be overgrown, root bound and at the end of their lifespan.

There are views to the northeast and east from within the site towards to San Bernardino and Box Springs Mountain ranges. Prevailing winds enter the site from the northwest and west while the annual Santa Ana winds buffet the site from the northeast and east. The climate of the region is semi-arid with average rainfall amounts of 10 inches per year with the months between May and September being exceptionally dry. Winter months can produce occasional lows below freezing whereas summer highs of 110 degrees Fahrenheit are not uncommon.

3.5 Accessibility

All facilities shall conform to all standards required under Title II and all applicable Title 24, State Building Code requirements, the Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities and all other applicable codes and standards.

3.6 Sustainability

UCR is committed to providing new facilities that are responsible in the use of natural resources. The project shall comply with the University of California Policy for Green Buildings a copy of which can be found in the Appendix, Section 11; the LEED rating system will be used, as a point of reference and LEED certification will be the minimum goal for the project. Additional opportunities for LEED compliance will be considered in every aspect of the design and every economical attempt will be made to provide the maximum level of sustainability possible.

3.6.1 LEEDs Checklist

The following chart is a summary of the anticipated LEEDS points that are possible for the Canyon Crest project.

LEED Categories					
	Required	Certain	Possible	Unlikely	Points
SUMMARY					
Sustainable Sites					R
Credits SS 1 thru SS 8		7	6	3	16
Water Efficiency					R
Credits WE 1 thru WE 3		1	1	3	5
Energy & Atmosphere	3				R
Credits EA 1 thru EA 6		3	4	10	17
Materials & Resources					R
Credits MR 1 thru MR 6		3	4	6	13
Environmental Quality					R
Credits EQ 1 thru EQ 8		10	5		15
Innovation in Design					R
Credits ID 1 thru ID 2		1	2	2	5
Total Pts Available					71
Total Points by Category					
					25 22 24 71
LEED ratings:					
Certified 26-32 points					
Silver 33-38 points					
Gold 39-51 points					
Platinum 52-69 points					

Sustainable Sites	Required	Certain	Possible	Unlikely	Points	Client - UCR	Architect - NTD / HEWW	Landscape	Civil	M/P	Elec	Com. Agent	Contractor	Phase
Prerequisite 1: Erosion & Sedimentation Control	●				R		■							CD/CA
Credit 1: Site Selection		●			1	■	■							SD
Credit 2: Urban Redevelopment			●		1	■	■							SD
Credit 3: Brownfield Redevelopment				●	1									SD
Credit 4: Alternative Transportation														
- 4.1: Public Transportation Access		●			1	■								SD/DD
- 4.2: Bicycle Storage & Changing Rooms		●			1	■	■	■		■				SD/DD
- 4.3: Alternative Fuel Refueling Stations		●	●		2	■								SD/DD/CD
- 4.4: Parking Reductions				●	1	■								SD
Credit 5: Reduced Site Disturbance														
- 5.1: Protect and Restore Open Space			●		1	■								SD/CD
- 5.2: Maximize Open Space		●		●	2	■								SD/CD
Credit 6: Stormwater Management														
- 6.1: Flow Reduction			●		1		■		■					DD/CD
- 6.2: Flow Treatment			●		1		■	■	■					DD/CD
Credit 7: Landscape & Exterior Design														
- 7.1: Non-Roof Surfaces		●			1	■	■	■						SD/DD/CD
- 7.2: Roof Surfaces			●		1	■	■							DD/CD/CA
Credit 8: Light Pollution Reduction		●			1						■			DD/CD/CA
	Total Pts Available				16									
Sub-Total Points by Category														
		7	6	3	16									

Water Efficiency	Required	Certain	Possible	Unlikely	Points	Client - UCR	Architect - NTD / HEWW	Landscape	Civil	M/P	Elec	Com. Agent	Contractor	Phase
Credit 1: Water Efficient Landscaping														
- 1.1: 50% Reduction		●			1	■	■	■	■					SD/DD/CD
- 1.2: Potable Free System/No Irrigation				●	1									DD/CD
Credit 2: Innovative Wastewater Technologies				●	1									SD/DD/CD
Credit 3: Water Use Reduction														
- 3.1: 20% Reduction			●		1	■	■			■				DD/CD
- 3.2: 30% Reduction				●	1									DD/CD
	Total Pts Available				5									
Sub-Total Points by Category														
		1	1	3	5									

	Required	Certain	Possible	Unlikely	Points	Client - UCR	Architect - NTD / HEW	Landscaping	Civil	M/P	Elec	Com. Agent	Contractor	Phase
Energy & Atmosphere														
Prerequisite 1: Fundamental Building System Comm.	●				R	■	■					■		SD/CD/CA
Prerequisite 2: Minimum Energy Performance	●				R		■			■		■		SD/DD
Prerequisite 3: CFC Reduction in HVAC&R Equip.	●				R		■			■				SD/DD
Credit 1: Optimize Energy Performance														
- 1.1: 20% New / 10% Existing		●			2									SD/DD/CD
- 1.2: 30% New / 20% Existing			●		2									SD/DD/CD
- 1.3: 40% New / 30% Existing				●	2									SD/DD/CD
- 1.4: 50% New/ 40% Existing				●	2									SD/DD/CD
- 1.5: 60% New/ 50% Existing				●	2									SD/DD/CD
Credit 2: Renewable Energy														
- 2.1: 5%			●		1									SD/CD
- 2.2: 10%				●	1									SD/CD
- 2.3: 20%				●	1									SD/CD
Credit 3: Additional Commissioning				●	1									DD/CD
Credit 4: Ozone Depletion		●			1									DD/CD
Credit 5: Measurement & Verification			●		1									CD/CA
Credit 6: Green Power				●	1									CD/CA
	Total Pts Available				17									
Sub-Total Points by Category														
		3	4	10	17									

	Required	Certain	Possible	Unlikely	Points	Client - UCR	Architect - NTD / HEW	Landscaping	Civil	M/P	Elec	Com. Agent	Contractor	Phase
Materials & Resources														
Prerequisite 1: Storage & Collection of Recyclables	●				R	■	■						■	SD/DD
Credit 1: Building Reuse														
- 1.1: Maintain 75% of Existing Shell				●	1									SD
- 1.2: Maintain 100% of Shell				●	1									SD
- 1.3: Maintain 100% Shell/ 50% non Shell				●	1									SD
Credit 2: Construction Waste Management														
- 2.1: Salvage/Recycle 50%		●			1	■	■						■	SD/DD
- 2.2: Salvage/Recycle 75%		●			1								■	SD/DD
Credit 3: Resource Reuse														
- 3.1: Specify 5%			●		1									SD/DD/CD/CA
- 3.2: Specify 10%				●	1									SD/DD/CD/CA
Credit 4: Recycled Content														
- 4.1: Specify 25%			●		1		■							DD/CD/CA
- 4.2: Specify 50%				●	1									DD/CD/CA
Credit 5: Local/Regional Materials														
- 5.1: 20% Manufactured Locally		●			1		■							DD/CD/CA
- 5.2: 20% Mfg./ 50% Harvested Locally			●		1									DD/CD/CA
Credit 6: Rapidly Renewable Materials				●	1									DD/CD/CA
Credit 7: Certified Wood			●		1		■							DD/CD/CA
	Total Pts Available				13									
Sub-Total Points by Category														
		3	4	6	13									

3.7 Reviews, Codes and Regulations

Overview

The proposed design consists of four 4-story student residence halls of totaling 326,134 gross square feet. Each residence hall is arranged around a connecting single story element which houses common spaces, two 4-story student apartment buildings of 169,948 gross square feet each, and Dining Hall of 121,309 gross square feet

This review was not intended to constitute a full code analysis, but rather to confirm the feasibility of the proposed design using the desired construction types (Type V, one hour for the residential buildings and Type II, one hour for the dining hall and conference services facility)

The design was analyzed for conformance to the 2000 edition of the Uniform Building Code in the areas of construction type and allowable area (Chapter 5, UBC), and exiting (Chapter 10, UBC). It was also analyzed for conformance to the 2001 edition of the California Building Code for conformance to general handicapped accessibility requirements (Chapters 11, 11A, and 11B). Analysis for Electrical, Plumbing and Fire Protection, and HVAC are covered in Chapter 5 (Systems Criteria) of this DPP.

3.7.1 Construction Type and Allowable Areas

Residence Halls and Apartments:

The housing units are classified as an R-1 occupancy group. The ancillary uses are classified as A-3, B or S-1 (trash rooms).

The analysis focused primarily on the housing units, as the governing codes for that occupancy group are more restrictive.

A “quick overview” analysis was done for each of the construction types, accounting for the proposed four-story configuration as well as the various allowable increases and substitutions allowed by code. The results of this “quick overview” were not intended to be conclusive, but rather to narrow the field of possibilities to a few viable options. The spreadsheet of this analysis is presented in Figure 1.

The resulting viable options for construction type were Type V, 1-hour fire resistive (Type V-1) and Type II, 1-hour fire resistive (Type II-1). While viable from a purely code-conformance standpoint, Types I, III, and IV were not given further consideration because of inherent cost or construction practicality reasons. Because of recent escalation in the price of steel (the primary structural material considered in a Type II scenario), the structural system being considered for the housing units was narrowed down to wood framing with a Type V-1 construction type.

The design was then subjected to a more finite analysis where it was determined that the building would have to be divided into smaller “buildings” through the use of area separations. It has been assumed that the area separations would occur perpendicular to the corridors, and that where they crossed the corridors that fire rated doors on magnetic hold-opens would be utilized. The configuration of these separations had to account for a number of factors:

- Configuration of the dwelling units: Since the proposed design utilizes a common bathroom between two units, the area separation could not occur between any two units without requiring a rated separation between one of the units and the adjoining bathroom. While this is technically possible, it was felt to be impractical and would create an “institutional” feel to the units.
- Maximum area allowed for the assumed construction type. Allowable areas for Type V construction are inherently smaller than those allowed under Type II construction.

- A common balcony area adjoining lounges would have to fall wholly within a separated area. Ideally, both lounges would be within the same area in order to eliminate the need for rated doors from the lounges to the balcony.
- Because double doors on hold-opens would accomplish the separation in the corridors, the separation would need to be in a place where the doors could stack against a wall without obstructing other doors.
- The code does not allow for horizontal area separations, so all separated areas must stack vertically.

With these constraints in mind, divisions were made within the building where area separations could occur. Diagrams of these separations are shown in Figures 2 and 4 (which shows the Type V-1 scenario for the residence halls and apartments, respectively). Figures 3 and 5 provide the details of the analysis for each.

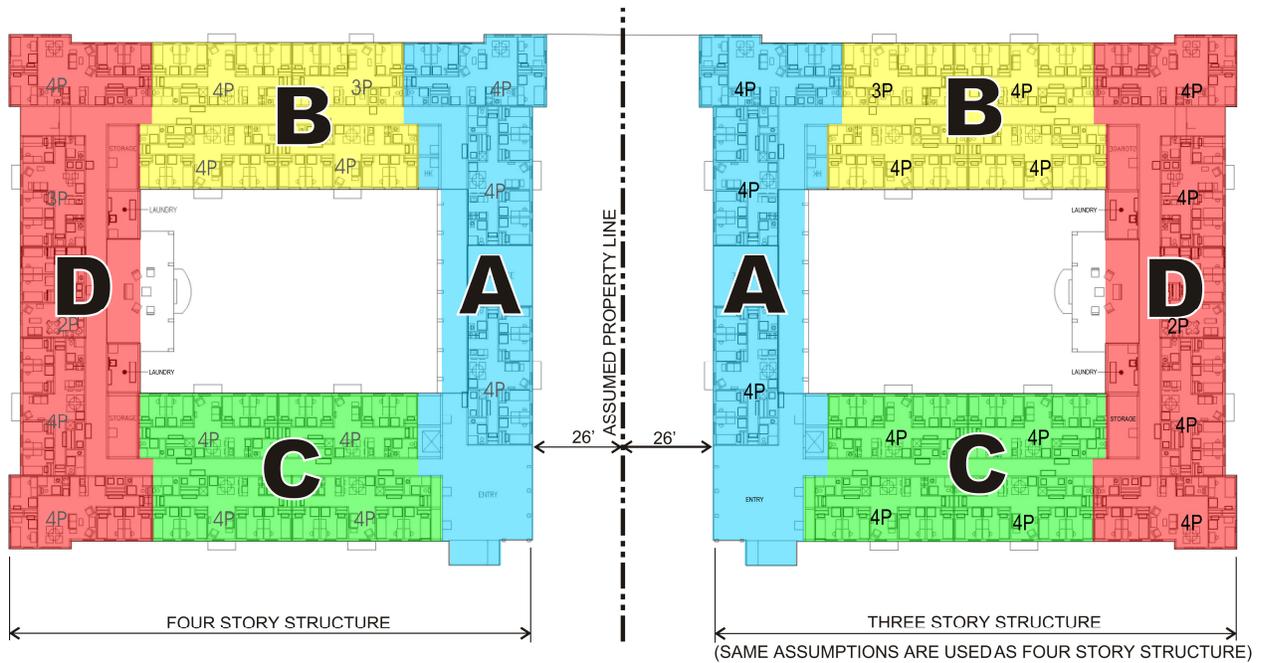


Figure 4
ASSUMED AREA SEPARATION LOCATIONS
Apartments
(based upon Type V, 1-hour construction)

STUDENT HOUSING OPTIONS

Building Type (assuming R-1 occupancy)	Max. Stories (basic)	Basic Allowable Area	height increase for sprinklers	area increase for sprinklers	area increase for side yards *	area increase for multi-story	Total Allowable Area	Total Allowable Height (stories)	Total Allowable Area/Floor
Type V-1 hr	3	10500			5250	10500	26250	3	8750
Type V-1 hr, assuming sprinkler substitution for height increase	3	10500	1			10500	21000	4	5250
Type V-1 hr, assuming area increase for sprinklers	3	10500		10500	5250	10500	36750	3	12250
Type V-N, assuming sprinkler substitution for height increase	2	6000	1		3000	6000	15000	3	5000
Type V-N, assuming sprinkler substitution for area increase	2	6000		6000	3000	6000	21000	2	10500
Type IV (heavy timber)	4	13500		13500	6750	13500	47250	4	11813
Type II-1 hr	4	13500			6750	13500	33750	4	8438
Type II-NR, assuming sprinkler substitution for height increase	2	9100	1		4550	9100	22750	3	7583

*assumes 2-side separation, 50% maximum increase

DINING COMMONS OPTIONS

Building Type (assuming A-3 occupancy)	Max. Stories (basic)	Basic Allowable Area	height increase for sprinklers	area increase for sprinklers	area increase for side yards	area increase for multi-story	Total Allowable Area	Total Allowable Height (stories)
Type V-1 hr, assuming sprinkler substitution for 1 hr rating	2	10500			10500	10500	31500	2
Type V-1 hr, assuming area increase for sprinklers	2	10500		10500	10500	10500	42000	2
Type V-N, assuming sprinkler substitution for height increase	1	6000	1		6000	6000	18000	2
Type IV (heavy timber)	2	13500		13500	13500	13500	54000	2
Type II-1 hr, assuming sprinkler substitution for 1 hr rating	2	13500			13500	13500	40500	2
Type II-1-hr, assuming area increase for sprinklers	2	13500		13500	13500	13500	54000	2
Type II-NR, assuming area increase for sprinklers	2	9100		9100	9100	9100	36400	2
Type II-FR, assuming area increase for sprinklers	12	29900		29900	29900	29900	119600	12

Figure 1
OVERVIEW
ANALYSIS

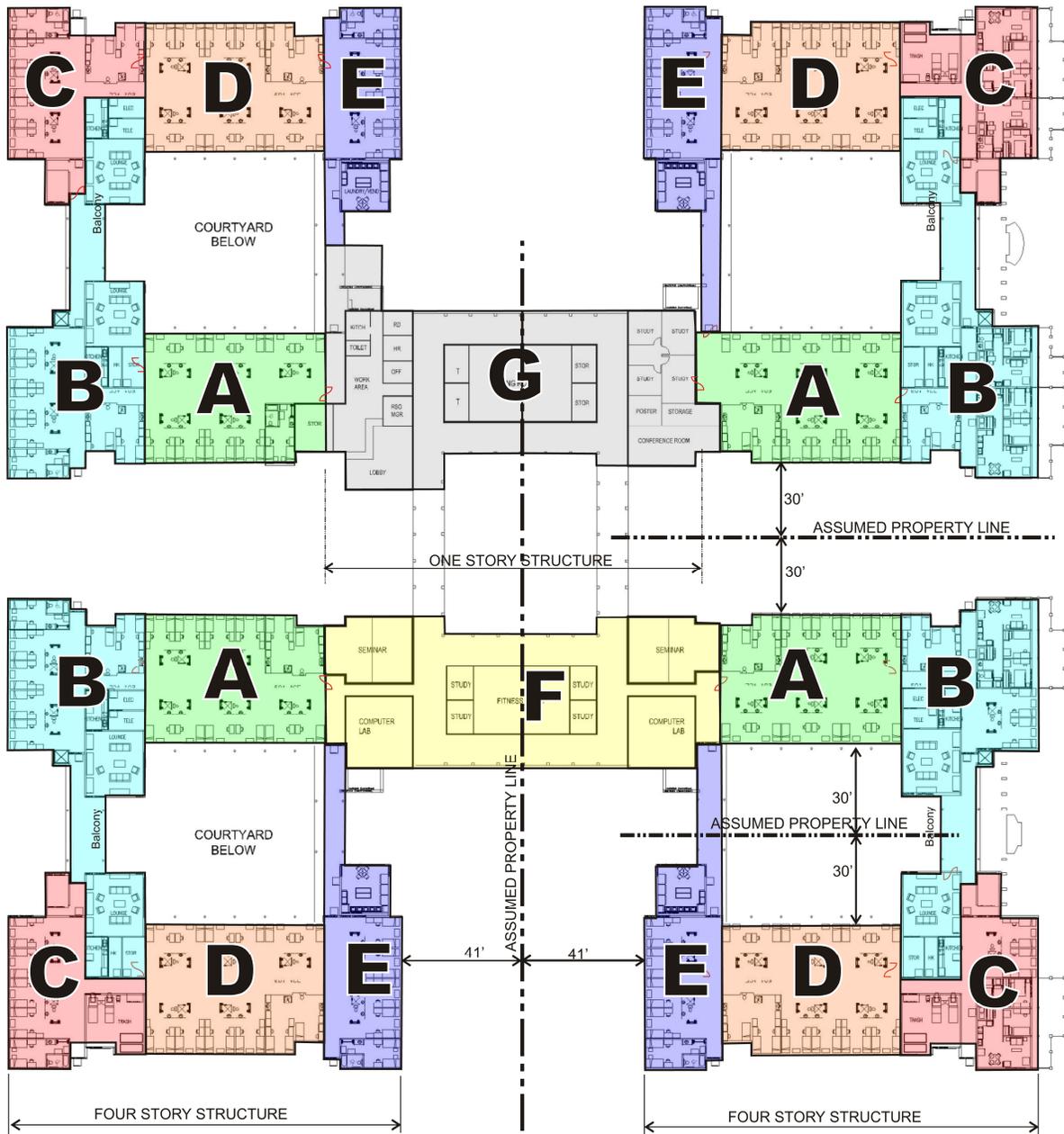


Figure 2
 ASSUMED AREA SEPARATION LOCATIONS
 Residence Halls
 (based upon Type V, 1-hour construction)

Dining Hall and Conference Services Facility:

The planned uses in the Dining Hall and Conference Services Facility are predominantly A2.1 (assembly uses), B (classrooms, offices, mail room), and S-2 (storage) occupancy groups.

Because of the close proximity of the buildings in this group, and because the aggregate area of the buildings is so large (over 120,000 gross square feet), it became necessary to consider the use of area separations to keep from having to classify the building under the highly restrictive (and costly) Type I or II Fire Resistive construction type. It is presumed that automatic fire doors (such as “Won-door”) would be used to create separations in the large assembly areas. Figure 6 shows the code analysis while Figure 7 shows proposed locations for the area separations. The locations were selected based upon project phasing, potential impact upon the design esthetic, and the ability to stack walls.

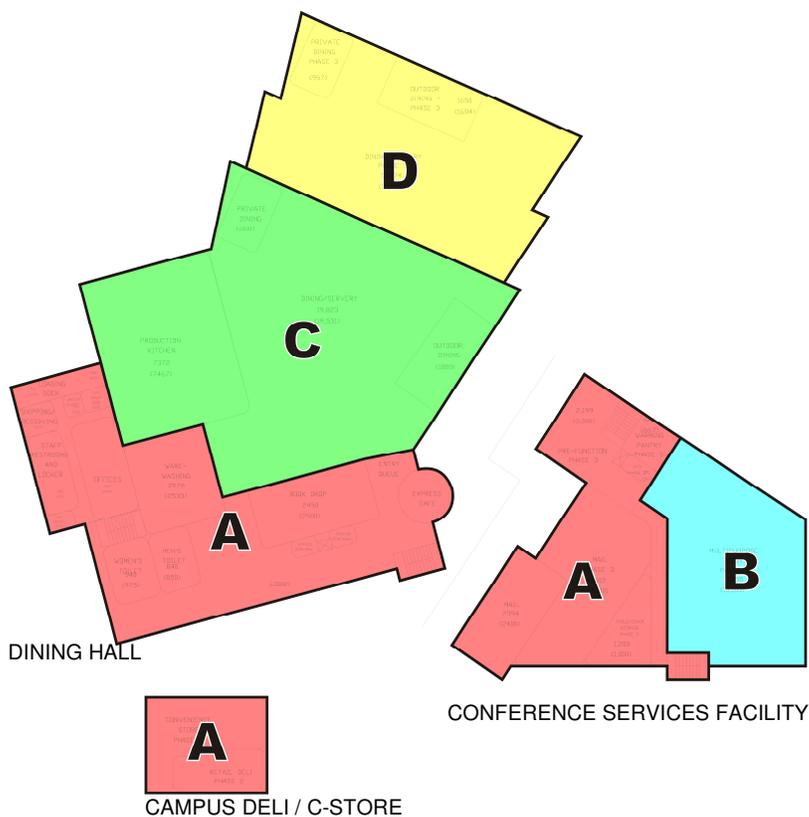


Figure 7
ASSUMED AREA SEPARATION LOCATIONS
DINING HALL – COMMUNITY CENTER
(Based upon Type II, 1-hour construction)

3.7.2 Conclusion

It appears that the proposed design for the residential buildings could be constructed in a Type V, 1-hour construction type. An automatic fire sprinkler system would be required. However, there are some design-related implications that need to be considered in choosing which construction type will be used.

While Type V-1 construction allows the use of wood framing, it could be considered preferable from a cost standpoint, especially in light of the current cost of steel. But that cost differential may get much smaller given the structural requirements of a wood framed four-story building. It is likely that the first story would need to be constructed from 2x10 or 3x8 studs at 12-inch centers, requiring steel beams for larger openings.

Additionally, the requirement for shear walls makes the ability to have openings in those walls difficult, if not impossible. If we assume that the minimum aspect ratio for a shear panel is 1:4 (width to height), and we assume that the floor-to-floor height is 12 feet (48 feet total height for four-stories), then the minimum shear panel width would be 12 feet. Since the current design uses 12-foot wide dwelling units, it is possible that there would be at least four units per side of a building that would not be able to have exterior window openings. The width of other openings (windows) could be severely restricted.

There appears to be no significant code restrictions which would impede the proposed design of the dining hall/community facilities.

4.1 Program Concept

- 4.1.1 The Individual Student
- 4.1.2 The Residential Community

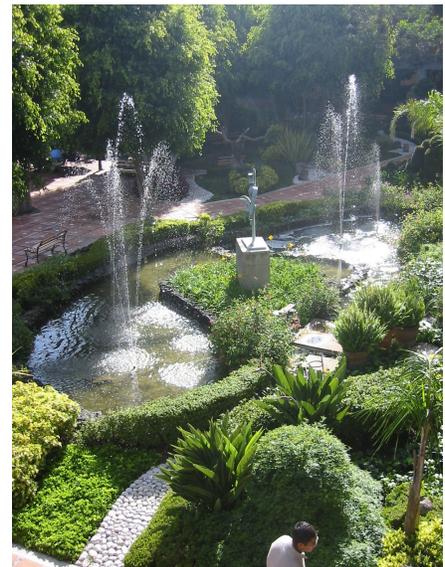
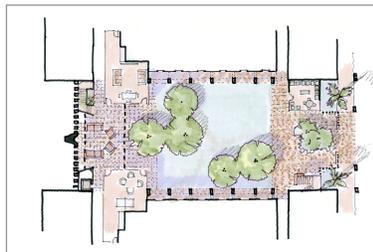
4.2 Site Concept

4.3 Circulation and Connections

4.4 Landscape Concepts

- 4.4.1 Plazas and Courtyards
- 4.4.2 Irrigation System
- 4.4.3 Hardscape and Fencing

4.5 Architectural Concept and Project Identity



4.1 Program Concept

The goal for the Canyon Crest site is to create a vibrant community that provides housing, food service, recreation and community space for the residents as well as serving some of the university's recreation, conferencing and special events programs. The primary informant of the development of the program, the site, and the buildings is the desire for successful neighborhoods and creating a strong community within the context of the Canyon Crest site and the region.

The genesis for the concepts developed in this Detailed Project Program document (DPP) is the criteria for goals and concepts as established in UCR's 2003 Strategic Plan for Housing. The DPP process has further refined all elements of the site, including the advancement of student apartments to serve as an interim family housing strategy until the West Campus can be developed.

The program concept was developed based on the needs of the individual student, the needs of the residential community and the overall Canyon Crest community and its necessary connections to the campus.

4.1.1 The Individual Student

Student Room / Unit

- Residence Halls – The program includes 1,250 beds in traditional residence halls in single and double occupancy rooms.
- Apartments – The program includes 416 beds in 2, 3 and 4-bedroom apartments designed for single students. An Alternate Phase 1 model is provided in Appendix 2 that provides 350 beds in a 2 and 3-bedroom configuration that would be suitable for families.
- Study Areas and Academic Support Spaces – The program includes study areas for students individually and in small groups as well as service functions to support the student.

4.1.2 The Residential Community

The residential community concept is guided by the development of a hall community, a courtyard / building community and a residential commons.

Hall Community

- 50 +/- students
- Models the desired Resident Advisor (RA) to Student ratio of a range of 1 RA to 44 – 50 students
- Provides the basic amenities of a lounge, a kitchen, and a study space

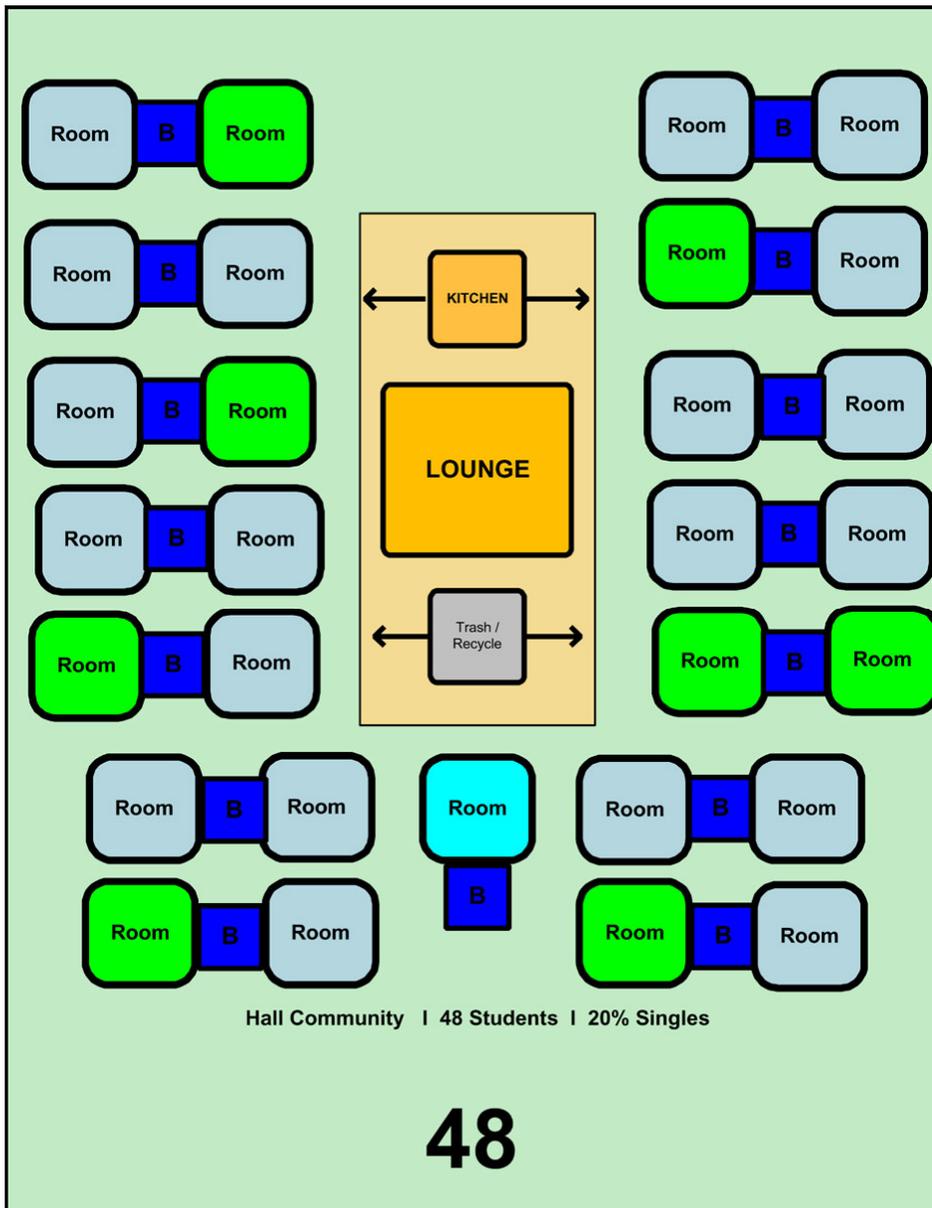
Building / Courtyard Community

- 300 +/- students
- The building community provides services, including trash, laundry, and dedicated green space / courtyard space

Residential Commons

- 1,000 – 1,250 students +/-, including resident student staff
- The commons provides services including Residential Service Offices (RSO), fitness, living room, central courtyard / green space, computer and study rooms, and staff and faculty apartments.

A diagram illustrating the hierarchy of the community model is illustrated below.



- RA ROOM
- STUDENT ROOM (SINGLE)
- STUDENT ROOM (DOUBLE)
- BATH

Canyon Crest Community and Campus Connections

The neighborhood anchor is the Dining Hall; it brings each of the residential communities on the site together as well as providing a location for campus connections and services for non-residents, conference and special events attendees and recreational use.

4.2 Site Concept

The site concept was generated by the key program components outlined above and the circulation, green space / landscape, and functional exterior program spaces. These elements combine to create a vibrant community that is supportive of the program needs that are well connected to the campus and the City of Riverside.

Key features of the site will guide the site-planning considerations. They include:

- Setbacks for the student apartments and parking will comply with City of Riverside municipal codes;
- The existing fire access lane on the west side of the Child Development Center will be maintained;
- A masonry screen wall and landscaping will be provided between the fire lane and the apartments' parking lot;
- The recreation fields will be located on the west side of the Aberdeen Drive extension adjacent to the existing campus Student Recreation Center;
- A landscaped berm will be provided between Canyon Crest Drive and the recreation fields; and
- Peach Street will be relocated northward to provide continued vehicle circulation from Florida, Kentucky and Idaho Avenues within the family housing neighborhood to remain.

4.3 Circulation and Connections

A new entrance road located on the east side of the existing Child Development Center parking lot will connect Watkins Avenue and Linden Street providing primary vehicle access to UCR's residential neighborhoods. Based on the recommendations in the 2005 Long Range Development Plan and by prior written agreement between UCR planning staff and UCR Physical Plant representatives the existing right of way between the Child Development Center and the Corporation Yard will be enhanced to provide a 70-foot wide access easement for a divided, landscaped entrance road with sidewalks and bicycle lanes. The existing Corporation Yard perimeter fence will be removed and a masonry screen wall will be constructed approximately 35 feet east from the fence's present location.

At the Watkins Avenue intersection a traffic signal will be installed to provide safe access for students, staff and visitors. The new curb cut and traffic signal will necessitate the closure of the existing curb cuts at the Child Development Center; vehicle access for the Center will be incorporated into the entrance road to facilitate safe ingress and egress for parents and Center staff. Additionally, the existing Center parking lot will be reconfigured to accommodate the new entrance and maintain the Center's current pick-up and drop-off traffic pattern.

A turn-around/drop-off will be provided on the northeast side of the residence hall site to provide a readily identifiable front door for the new student community. The turn-around will be designed to accommodate emergency vehicles, shuttles and buses and provide temporary parking for deliveries. A ground-mounted monument entrance sign with appropriate landscaping shall be placed in the island of the turn-around facing the entrance road. The text of the sign will be provided by UCR during Phase 1 of construction. A shade device shall be provided on the west side of the turn-around adjacent to the resident halls to provide shade for students waiting for public or private transportation and to provide an appropriate architectural scale between the residence hall buildings and the drop-off. The structure will be designed to allow emergency vehicle access to pass through the site to the Aberdeen Drive extension.

An internal access road will connect the entrance drive to the apartment's parking lot; the Dining Hall service dock and the Phase 1 residence hall parking lot. Additional parking spaces for the Child Development Center will be provided on the north side of the access road adjacent to the Center's play yard.

Aberdeen Drive will be extended northward from Linden Street and terminate at a turn-around/drop-off on the south side of the Dining Hall. The turn-around/drop-off will be sized to accommodate emergency vehicles, shuttles and buses.

4.4 Landscape Concept

Large lawn areas, lush planting beds and large canopy trees, characterize the landscape on the East Campus. The basis of design for the landscape for the Canyon Crest site attempts to blend this character with the reality of the semi-arid nature of the region. Building design and orientation have been patterned after California's mission-style heritage creating sheltered courtyards and shaded paths and plazas. These architectural responses provide opportunities for the landscape to stimulate the senses with fragrance, sound, color and texture. Lawn areas will be appropriately sized for passive student use and periodic programming by housing staff.

Walkways flanked by canopy trees, colonnade structures or both will be utilized to provide shade and pedestrian scale. New landscape trees will be of a similar palette to those found on the core campus; particularly ash, magnolia, flowering plum, citrus and hardy native species. Parking lot islands shall be large enough to accommodate one shade tree with low growing evergreen ground cover.

Landscape design and plant palette shall adhere to the standards set forth in UCR's Campus Design Standards and be used to create a distinctive district ambience at Canyon Crest. Additionally, the landscape shall respond to the following areas.

4.4.1 Plazas and Courtyards

The plaza located on the south side of the Dining Hall will be a focal point for student activity both by residents and users of the recreation fields. The plaza shall be sized to accommodate not only number of students in the first phases of construction but also for the proposed build-out of the site. The 2003 Strategic Plan for Housing indicates an ultimate population of 3,800 students on the Canyon Crest site. Site furniture, paving patterns and landscaping shall be used to break down the scale of the space and provide an active ambience for students to interact.

The residence halls are oriented to provide enclosed courtyards for each pair of buildings. The courtyards shall provide ample area for informal gathering, passive recreation and quiet areas for study. Each courtyard shall have a distinct character by using patterns of color and texture that accentuate the architecture of the space. Irrigated, container plantings shall be used on the porches of the buildings. On the upper porches the containers shall contain flowering vines that shall be trained to grow over the railings or walls. Lighting shall be pedestrian scale cut-off fixtures throughout.

The Resident Services Office (RSO) at the core of the four residence hall buildings surrounds a central plaza. The RSO will be a hub of activity for residents, conference attendees and visitor groups who are attending campus tours. Site furniture shall be provided and of a type and quantity to accommodate those who are waiting for access to the RSO. The plaza at the center of the space shall have a surface of colored concrete or other special paving. The loggia surrounding the plaza shall be planted with flowering vines and be illuminated with down-lights mounted in the rafters. The center of the plaza shall be planted with groups of palm trees. A water feature or fountain at the center of the plaza will provide both a soothing sound and a calming psychological ambience.

Streetscapes

The east side of the Aberdeen Drive extension adjacent to the residence halls is to be characteristic of an urban streetscape with planter cut outs 8 feet wide by 12 feet long. Each cut out will include a shade tree and either turf or low evergreen planting. Street lighting shall be pedestrian scale cut-off fixtures to prevent glare on the student room windows. Light poles shall be able to accommodate hanging plants and banners. The center island of the drive shall be of similar nature as Aberdeen Drive to the south including citrus and palm tree varieties and lawn area.

A 30-foot wide landscaped plaza will be located along the western edge of the Aberdeen Drive extension. The plaza will have regularly spaced planter areas containing shade trees and low planting and lighting identical in size and character to those located on the east side of the street. Site furniture, specifically tables, chairs and litter receptacles shall be provided along the length of the plaza.

The path between the Phase 1 and Phase 2 residence halls will serve as a fire access lane. The sidewalk will be of a width for pedestrians and the 20-foot wide fire access corridor will be accommodated with PVC Grasspavers. The grass paving system will utilize the manufacturer's recommended soils amendments to insure a successful turf cover.



Entry Road

The new entry road at Watkins is considered to be the entry into the housing district of the East Campus. The existing landscaping on the east side of the Child Development Center shall be maintained as a buffer to the new sidewalk and road and planting will be used to soften the site wall that is to be constructed by others along the adjacent perimeter of the Corporation Yard. Street trees and low planting shall be used along the entire length of the road to Linden Street

Parking Lots

Parking lots are required to have planter islands at the ends of each parking bay and evenly distributed throughout the lot. Each planter shall include one shade tree and ground cover and be irrigated.

Landscape Lighting

Landscape lighting shall be used to highlight key landscape features such as specimen trees, walkways and plazas. Street, walk and plaza lighting shall be consistent in pattern and rhythm to create an evenly lighted environment and minimize glare for both pedestrians and motorists. Lighting shall highlight building entries, building names and numbers and special architectural features; wall washes shall be used to highlight special detailing.

4.4.2 Irrigation System

An automatic underground irrigation system will be installed for all lawn areas and planting beds. The system will be compatible with the existing system currently in use by UCR. Housing Operations staff has requested that no substitutes be allowed in order to maintain continuity with their stocks of spare parts and manufacturer relationship. The system is to be connected to the campus potable water supply; the supply is to be protected by a back flow preventor.

Irrigation controller(s) shall be the wireless Toro Sentinel pedestal or wall-mounted controller; valve controllers to be by Flowmaster. Irrigation valves shall be by Rain Bird and be of brass construction.

Sprinkler heads for small planters and small turf areas shall be Toro 570 sprinkler heads; for large lawn and planting areas and the recreation fields the Hunter I-20 and Hunter I-40 sprinkler heads shall be used.

4.4.3 Hardscape and Fencing

Hardscape

Walks and hardscape will be designed to lead pedestrians sequentially from parking areas, drop-off points, and transit stops to the student residences and to the core campus. UCR Buff concrete and UCR brick will be used to accentuate paths in a manner characteristic of the core campus. Walk widths, and curb and gutter will be to campus or City of Riverside design standards (where applicable whichever is appropriate) and facilitate regular maintenance activities, such as machine sweeping, cleaning, and service cart access for trash collection.

Fencing

A perimeter fence shall be provided along Blaine Street to prevent pedestrian access from penetrating the housing site. The fence shall extend from the existing family housing to the northwest corner of the Child Development Center. A pedestrian gate with card access shall be provided at the corner of Watkins Avenue and Blaine Street. Emergency access gates with the Knox key system will be provided at the parking lot on the west side of the apartments and at the existing fire lane on the west side of the Child Development Center. The fence shall be constructed of ornamental iron or steel; masonry piers should be considered at intervals to increase the aesthetic quality and provide an appropriate demarcation between campus and town. The outside edge of the fence shall be landscaped with plants that discourage pedestrian attempts to climb the fence. Planting on the housing side of the fence should provide an evergreen buffer to limit views to the street from the housing.

A 6-foot high masonry wall and landscaping is required between the Apartments and the Child Development Center. Planting shall be of appropriate height to limit visibility and impact of the apartments on the Center.

4.5 Architectural Concept and Project Identity

The Canyon Crest neighborhood achieves its identity and organization through a series of clustered courtyards accommodating residence halls, apartments, food service, administrative, community spaces, and recreation

fields. The neighborhood commons and primary civic space are geographically centered in the neighborhood and provide a focal point for the neighborhood and a physical and visual link from Aberdeen, a primary campus entry and view corridor.

The residential courtyards are intentionally configured to provide secure exterior spaces with both social and environmental benefits. The intimate courtyards provide a heightened sense of community, a unique neighborhood identity, and a pleasant functional relationship between interior and exterior spaces. The courtyards are scaled to be “self shading”, and to encourage air movement within and between courtyards. The courtyards have the opportunity to provide a significant degree of identity for the residents within the neighborhood, through size, scale / height, and variety in the landscape material. In addition to the courtyards, the neighborhood has a defined recreation zone serving the residents and the adjacent recreation complex.

The courtyards are organized around an activity spine, pedestrian paths, and open spaces that weave the residential, the social spaces and the primary community spaces into a comfortable low scale urban village. A Dining Hall and Conference Services Facility as well as community pool and an express food venue are located along the activity spine, in the geographic heart of the neighborhood. The location makes it truly a community center, with easy access for residents, pedestrians, conference and recreational guests.

The courtyard organization is structured around the primary program components as well as the neighborhood concept. The residential buildings are configured to house the ideal community models and represent the hierarchy of spaces for each community, including staffing models, social and support spaces. The Dining Hall is configured to provide late night and frequent / quick stop spaces along the path. The Dining Hall is also configured to serve residents as well as non-resident customers.



5.1 Life Cycle Costing

5.2 Sustainability

5.3 Site Utility Piping

- 5.3.1 Domestic Water and Fire Protection
- 5.3.2 Sanitary Sewer
- 5.3.3 Storm Drainage
- 5.3.4 Natural Gas

5.4 HVAC Systems

- 5.4.1 Codes and Standards
- 5.4.2 Design Criteria
- 5.4.3 Mechanical Systems
- 5.4.4 Controls and Energy Management

5.5 Plumbing and Fire Protection System

- 5.5.1 Estimated Loads
- 5.5.2 Criteria
- 5.5.3 System Description

5.6 Electrical Systems

- 5.6.1 Codes and Standards
- 5.6.2 Design Loads
- 5.6.3 Main Electrical Service
- 5.6.4 Electrical Distribution
- 5.6.5 Emergency Power
- 5.6.6 Voltage
- 5.6.7 Site Lighting
- 5.6.8 Field Lighting
- 5.6.9 General Lighting
- 5.6.10 Grounding
- 5.6.11 Fire Alarm System
- 5.6.12 Voice/Data Signal and Communication System
- 5.6.13 Mechanical/Electrical/Plumbing

5.7 Structural

- 5.7.1 Housing Units
- 5.7.2 Dining Hall

5.8 Noise and Acoustics

5.9 Security

- 5.9.1 Recreation Fields Perimeter
- 5.9.2 Residence Halls, Apartments and Dining Hall Perimeter
- 5.9.3 Dining Hall
- 5.9.4 Parking Lots
- 5.9.5 Acceptable Manufacturers

5.10 Utility Diagrams

5.1 Life Cycle Costing

Life cycle costing analysis of building systems assists the University in determining the relative costs that are initially an increased capital expense, but may pay for themselves over time based on quality or efficiency of the selected system.

Building systems and materials should be selected after careful review and analysis of their lifetime effectiveness relative to maintenance and capital costs, durability and operational efficiency. This analysis will assist in the selection of systems and materials.

In the program phase, system options have been explored and proposed systems included in the project budget. The design is not intended to be limited to systems indicated in the program, and should be analyzed for life cycle costing options by the Executive Architect in the early design phase of the project.

5.2 Sustainability

The buildings shall be designed in accordance with the University of California Policy on Green Building Design and Clean Energy Standards. The buildings shall be designed to provide overall energy usage that exceeds the baseline Title 24 requirements by 20% (Title 24 analysis based on an approved program utilizing the performance approach). In addition, the project shall meet a minimum LEED Certified certification (26-32 credits), with a Silver certification as an Alternate (33-38 credits), per the criteria developed by the University.

The University of California Policy on Green Building Design and Clean Energy Standards shall be reviewed, and sustainable options are to be explored and analyzed in the design phases of the project in an effort to reduce energy consumption and to conserve natural resources. The design team shall incorporate sustainable design features into the project to the extent feasible, as dictated by the University and budget constraints, under the following LEED Rating System categories:

- Sustainable Site (SS)
- Water Efficiency (WE)
- Energy and Atmosphere (EA)
- Materials and Resources (MR)
- Indoor Environmental Quality (EQ)
- Innovation and Design (ID)

5.3 Site Utility Piping

Existing campus water, storm drain, and sewer utilities located on Linden Street will serve as the points of connection for Phase 1, 2 and 3 utilities; no new main lines for these utilities are proposed. Based upon preliminary information received from campus personnel, it has been determined that sufficient capacity is available in these existing lines to serve these phases. However, water pressure tests and sewer gauging should be accomplished prior to final design to confirm these assumptions. Phases 1 and 2 storm water will be directed, where possible, to new open spaces where it will be retained and encouraged to infiltrate into the soil before overflowing to inlets. These inlets will be connected to the existing 18-inch storm drain in Linden Street by a system of pipes. During Phase 3, when the playfields are constructed, storm water will be directed there where possible, for maximum infiltration.

5.3.1 Domestic Water and Fire Protection

This report assumes that both domestic and fire protection water (site hydrants and building sprinklers) will be supplied from the same system. This system will consist of an 8-inch loop extending from the existing 8-inch campus main in the north side of Linden Street. This loop will begin at the southeast corner of the property and will extend north between the new residence halls and the existing campus buildings approximately 650

feet to a point near the southwest corner of the existing Child Development Center. The line will then extend northwesterly approximately 530 feet to the Phase 3 apartments; then west approximately 330 feet to a point northwest of the dining hall. From this point the line will extend south approximately 1,100 feet to another new connection to the existing 8-inch line in Linden Street. Two 6-inch cross ties between the residence hall modules will be constructed to serve those buildings, as well as the Phase 3 conference services center. All of the system, with the exception of one Phase 2 fire hydrant, three fire hydrants to serve the Phase 3 apartments, and two hydrants to serve the Phase 3 parking structure, will be constructed in Phase 1. It has been assumed that no new hydrants will be necessary for the Phase 3 recreation fields.

An 8-inch stub will be left at the most northwesterly corner of the loop to provide a point of connection for the future phase loop that will continue west to Canyon Crest Drive where it will be placed in University property east of Canyon Crest, then continue south to connect to the campus main at the intersection of Canyon Crest Drive and Linden Street.

Domestic water laterals will tee off this loop to individual buildings. Individual meters will be provided to serve the residence halls (one meter for the first 750 beds), the dining hall, and the apartments (one meter for both buildings). In Phase 3, the recreation fields will have their own meter.

Building fire sprinkler systems will tee off this loop, through backflow preventers and post indicator valves; and site fire hydrants will be connected to it as well. Fire hydrants (twelve in Phase 1, one in Phase 2 and five in Phase 3) will be located such that all faces of all buildings at ground level can be reached by laying no more than 150 feet of hose from the nearest hydrant.

The irrigation system will tee off this loop and will include backflow preventer(s) and meter(s), as necessary, depending on the configuration of the system.

5.3.2 Sanitary Sewer System

Interviews with campus facilities personnel revealed that the existing sewers lines located in the family student housing areas are badly deteriorated and should not be considered for future use when these housing units are demolished to construct the Canyon Crest housing. Therefore, an entirely new system is being proposed for the project. All of this system, except for an extension to serve the apartments in Phase 3, and a Phase 3 cross-tie to serve existing housing, will be constructed in Phase 1. Sanitary sewer, if any, to serve the Phase 3 parking structure will be directly connected to the existing 8-inch campus sewer in Linden Street.

The overall Phase 1 and 2 system will consist of a new 8-inch main (approximate total of 1,100 lineal feet with 5 manholes) extending northerly from its point of connection to the existing 8-inch campus sewer near the centerline of Linden Street, continuing in a northerly direction west of the dining hall. In Phase 3, approximately an additional 400 feet plus two manholes will be constructed to serve the apartments. All buildings will ultimately connect to this new sewer, except for the previously described, separate connection for the Phase 3 parking structure.

Studies by previous consultants have determined that the current phasing for construction of Phases 1, 2 and 3 will not require any relief sewer construction for the existing 8-inch sewer in Linden Street. It has more than sufficient capacity to handle all flows projected from these phases. Due to limited capacity in the Canyon Crest Drive 8-inch sewer, future phases of development will increase the flows such that a new 10-inch relief sewer will be needed southerly on Canyon Crest Drive from Linden Street to University Avenue.

5.3.3 Storm Drainage System

Campus records indicate that there is an existing 18-inch storm drain in Linden Street. As mentioned previously, Phases 1 and 2 storm water runoff will be directed to new open space areas, where possible, where it will be encouraged to infiltrate back into the ground water before being allowed to overflow into

collection systems and carried to this existing 18-inch line in Linden Street. This approach will not only filter contaminants and debris from the water before it enters the public system, but also will retard the runoff such that it will create less of an impact on the capacity of downstream facilities. The Phase 1 and 2 storm drain system will consist of approximately 1,000 feet of 8-inch pipe, 750 feet of 12-inch pipe, 930 feet of 15-inch and 500 feet of 18-inch, plus 5 manholes and various inlets.

Phase 3 and future phase runoff will be directed similarly to the recreation fields for retention and infiltration purposes before being conveyed to the Linden Street storm drain, and will also include extensions to collect roof water from the apartments, plus the surface parking to be built in that phase.

5.3.4 Natural Gas System

Research of Southern California Gas Company (SCG) records indicates that the existing family housing at the site is served from a system of 2-inch mains connected to mains in Blaine Street, north of the site for the Phase 3 student apartments. Discussions with SCG have confirmed that all gas lines up to and including meters will be designed, installed and maintained by SCG, but paid for by the University. Easements will also be required to be dedicated in favor of SCG for each of these lines.

In order to maintain service to family housing to remain, SCG will construct one replacement 2-inch line in Plum Street east of Florida Avenue during Phase 1. This line will remain to serve housing to the west, until it can be abandoned or removed during Phase 3.

The configuration of the natural gas system indicated on the following sketches to serve the new buildings has not been confirmed with SCG. However, the design team has assumed, for the purposes of this programming effort that the new, permanent gas service will consist of a 2-inch gas company main, from an existing 6-inch line located in Watkins Drive. This main will be constructed during Phase 1 to serve the dining hall and the Phase 3 conference services facility. Each building will have its own meter, with the conference services facility meter being installed in Phase 3. Similarly, the meters for the Phase 3 apartments will be installed during Phase 3.

Phases 1 and 2 residence halls will be served by two separate SCG laterals and meters connected to the 2-inch main in Linden Street. Five meters for the residence halls will be installed in Phase 1 and three in Phase 2. A separate meter to serve the campus deli/convenience store and will be installed in Phase 2.

5.4 HVAC Systems

5.4.1 Codes and Standards

Codes, Regulations and Requirements: Comply with applicable sections of national, state and local codes, laws, ordinances, rules and regulations of authorities having jurisdiction, including:

1. State of California Code of Regulations (CCR), current edition.
2. California Building Code, current edition.
3. California Mechanical Code, current edition.
4. Uniform Plumbing Code, current edition.
5. California Fire Code, current edition.
6. State of California Energy Code, current edition.
7. Occupational Safety and Health Administration (OSHA).
8. South Coast Air Quality Management District (SCAQMD).
9. National Fire Protection Association (NFPA).

10. Underwriters' Laboratories, Inc. (UL).
11. American Disability Act (ADA).
12. National Electric Code (NEC).
13. UCR Campus Standards and Design Criteria.

5.4.2 Design Criteria

Design Conditions

Outdoor summer and winter conditions shall be in accordance with 0.5% design conditions for summer and 0.2% design conditions for winter for the City of Riverside from Climatic Data for Region X as published by Golden Gate and Southern California Chapters of ASHRAE, 5th Edition, 1982 as outlined below:

Summer

- Outdoor Dry Bulb: 110°F
- Outdoor Wet Bulb: 70°F
- Indoor Design Temperature: 75°F

Winter

- Outdoor Dry Bulb: 34°F
- Indoor Design Temperature: 72°F

Indoor relative humidity: 50% ±20% (No mechanical control)

Minimum Ventilation

Operable windows will satisfy the requirement for outdoor ventilation air for residential units in residence halls and apartments. The dining hall, campus deli / convenience store, and conference services facility will utilize air handling units with outside air economizers and will provide the required amount of outside ventilation air per occupant.

Ventilation and Exhaust Systems

Mechanical exhaust will be provided for toilets at the rate of 12 air changes per hour minimum. Each residential unit will utilize a ceiling exhaust fan for toilet rooms ducted to a wall cap at the nearest exterior wall. On/off control can be via an interlock with the room light switch.

The stack washer/dryer units should be located as close as possible to an exterior wall so that the dryer vent can terminate at an exterior wall cap. Care must be taken to limit duct lengths in accordance with the dryer manufacturer's guidelines.

For residential kitchen range hoods, the optimum means of controlling cooking smoke and odors is to utilize hoods which exhaust directly outdoors. Each hood should be ducted to a small wall cap at the nearest exterior wall. Because most residential hoods are equipped with low capacity fans, it is important to plan the kitchen layout such that the exhaust duct length is kept to a minimum and is well within manufacturer's guidelines for the total developed length. All exhaust terminations to be located to avoid reentry to the building. Kitchen hoods in the dining hall will be ducted directly to kitchen exhaust fans located on the roof.

Air Filtration

It is desired to have minimum 65% efficient filtration on the air handling units serving the dining hall, campus deli / convenience store, and conference services facility. 30% minimum filtration is desired for fan-coil units and heat pump systems serving the residential units.

Equipment Sizing/Redundancy

In general, systems will be designed for approximately 10% extra capacity due to aging effects of the system. Central cooling and heating equipment in the central plant shall be selected to provide at least 80% of system peak load in the event of breakdown or planned maintenance of any one unit.

Air Intake Security

Outside air intakes shall not be located on ground level. All required measures shall be taken to protect air intakes.

5.4.3 Mechanical Systems

Apartments

The typical apartment is to be air conditioned by means of dedicated stand-alone equipment. This is to consist mainly of heat pump split system equipment which is commonly encountered in residential projects of this type. It is preferable to locate the condensing units on the roof if flat roof space is available in the final design. Alternatively, the outdoor section can be located at grade. The indoor fan coil sections are best in the floor mounted vertical position since this offers ready access for maintenance and servicing needs. Alternatively, the indoor section can be soffit mounted if there is sufficient mounting clearance.

Ceiling fans are to be provided for all bedrooms and living rooms to promote air circulation and to allow air movement during periods when the HVAC system is not in use. Each fan is to be controlled by a variable speed wall switch.

Residence Halls

The typical unit is to be air conditioned by means of a dedicated stand alone four-pipe fan coil unit. The indoor fan coil sections are best in the floor mounted vertical position since this offers ready access for maintenance and servicing needs. The units shall be accessible from the corridor.

Chilled and hot water for the fan coil units will be supplied from a central cooling-and-heating plant located in the sublevel of dining hall, and will be delivered to the buildings via underground direct-buried pre-insulated piping.

Ceiling fans are to be provided for all bedrooms and living rooms to promote air circulation and to allow air movement during periods when the HVAC system is not in use. Each fan is to be controlled by a variable speed wall switch.

Dedicated cooling only fan-coil units shall be provided for the main telecom room in each building and for each elevator machine room.

Dining Hall

The dining hall will be air conditioned by means of rooftop constant volume multi-zone air handling equipment. With this type of equipment, proper temperature control will be ensured for various zones throughout the building.

Chilled and hot water for the air handling units will be supplied from the central plant in sublevel of the dining hall. The central plant will consist of water cooled chillers, cooling towers, and gas fired heating hot water boilers. It is desired to avoid the use of central steam supply system in the dining hall, and subsequently eliminate the need for a steam boiler. Gas-fired kettles and similar “non-steam consuming” kitchen equipment should be selected by the project kitchen consultant; kitchen equipment with integral gas or electric steam generators should be considered.

Tempered make-up air will be supplied to the kitchen to compensate for the large amount of air exhausted through the kitchen hoods. Rooftop packaged make-up air units with hot water heating and evaporative cooling sections will be the most efficient option. Kitchen hoods will be ducted directly to the kitchen exhaust fans located on the roof.

Since the dining hall is designated as an emergency/disaster center, select HVAC equipment shall be connected to a emergency power generator to be located adjacent to the dining hall service dock.

Conference Services Facility

The conference services facility will be air conditioned by means of rooftop constant volume multi-zone air handling equipment. With this type of equipment, proper temperature control will be ensured for various zones throughout the building.

Chilled and hot water for the air handling units will be supplied from the central plant located in the sublevel of dining hall, and will be delivered to the building via underground direct-buried pre-insulated piping.

Campus Deli / Convenience Store

The campus deli / convenience store building will be air conditioned by means of rooftop constant volume multi-zone air handling equipment. With this type of equipment, proper temperature control will be ensured for various zones throughout the building.

Chilled and hot water for the air handling units will be supplied from the central plant located in the sublevel of dining hall, and will be delivered to the building via underground direct-buried pre-insulated piping.

Mechanical Equipment

Campus facilities staff expressed a preference for the following equipment manufacturers

- Chillers: Carrier
- Hot Water Boilers: Lochinvar
- Heat Pumps: Mitsubishi SlimJim
- Fan Coil Units: First Company

5.4.4 Controls and Energy Management

The controls and energy management system shall be furnished by one of the pre-approved campus vendors specializing in building automation systems. Controls for the proposed buildings will be compatible with the existing campus control system.

For the dining hall a direct digital control (DDC) controller is to be installed and will control the HVAC and plumbing equipment. For the residential units which are each stand-alone, a programmable digital type thermostat will be utilized. For connecting to the campus energy management and control system (EMCS), specific needs are to be discussed with campus facilities personnel during the early design phase.

5.5 Plumbing and Fire Protection System

5.5.1 Estimated loads

Domestic Water

Ultimate maximum water consumption for domestic use is estimated at 185,000 GPD (~620GPM). The water consumption was calculated based on known data and the following assumptions:

Residential Units Assumptions

1. 1700 Beds total.
2. Population: 1700 persons.
3. Daily water consumption = 100 gallons per day per capita.
4. Hours per day usage = 15 hrs.
5. Peak Flow Rate = 3.0 x average flow.
6. Total daily water consumption = 170,000 GPD
7. Peak Flow Rate = 570 GPM

Dining Hall Assumptions

1. 80,000 square feet
2. Seating: 1,100 persons.
3. Daily water consumption = 10 GPD/Person.
4. Hours per day usage = 10 hrs.
5. Peak Flow Rate = 2.5 x average flow.
6. Total daily water consumption = 11,000 GPD
7. Peak Flow Rate = 50 GPM

Separate domestic cold water meters shall be provided for each use: one for the dining hall, one for the campus deli / convenience store, one for the conference services facility, one for the residence halls group, one for the apartment buildings, and one for the recreation fields. The metering for irrigation shall be segregated from domestic cold water metering.

Sanitary Sewer

Sewer piping is available in Linden Street and will be extended into the site at multiple locations to serve the building loads from domestic plumbing. Water consumption is estimated at 90% of the peak demand of 185,000 GPD and will be drained to the sewer. The balance of water will be used for irrigation and therefore will evaporate or infiltrate into the ground.

Storm Drain

Roof drainage will be handled by roof drains and connected to the underground storm system. Rainfall data will be obtained from County Flood Control District.

Natural Gas

The Gas Company will set and connect meters and regulators at a reasonable distance from the street mains at their expense. Metering will be done on a per unit basis or for the project as a whole pending further review by the University. Medium pressure mains looping large distances within the complex from the street mains may be a shared expense between the University and the Gas Company depending on the size and distance involved.

Gas Loads: Loads to be served are anticipated to be the following:

1. Comfort/space heating.
2. Domestic hot water.
3. Dining kitchen cooking.

4. Amenities support functions, etc.
5. Laundry.
6. Residential cooking.
7. Outdoor gas barbecue.

Fire Water Service

All buildings will be protected by automatic, wet pipe fire sprinklers. Hazard classifications will be determined by the requirements in NFPA 13. The systems will be hydraulically sized.

Estimated Fire Water Flow:
Sprinklers = 1,500 GPM.

Reclaimed Water Service

Reclaimed water will not be used within the building for plumbing fixture usage.

5.5.2 Criteria

- Domestic water will be sized for a maximum velocity of 6-foot/second at design flow conditions. A minimum of 35 psi will be provided at all plumbing fixtures, including devices at the highest point of use in the buildings. Hot water will be provided to fixtures at the following temperatures:
 - a. Lavatories - 110°F
 - b. Service Sinks - 120°F
 - c. Kitchen - 140°F
- The calculations for hot water based on the minimum street main temperature 60°F.
- Storm drainage design will be based on a rainfall of 2-inches per hour.
- Sanitary drainage and vent system will be based on fixture unit count with piping at minimum slope of 1/8-inch/foot.
- Natural gas systems will be provided for domestic water heaters. Gas will also be provided for heating boilers, air conditioning rooftop units, kitchen equipment, domestic gas ranges, and outdoor gas barbecue.
- Garbage disposals shall only be connected to 3-inch or larger horizontal waste lines.
- Trash Rooms: Hose bib and drain shall be provided in each trash room in the residence halls. Fire sprinkler system shall be installed as required.
- Trash Compactor: Hot and cold water shall be provided for trash compactor wash-down in the service dock of the dining hall. Area drains shall be provided with sediment basket; drainage piping to be connected to kitchen grease interceptor.

5.5.3 System Description

Water Systems

Domestic water system (inside the buildings): Domestic water shall include each building's distribution system to plumbing fixtures, hose bibs, and water heaters. The buildings' water supply shall connect to the new on-site water main and shall be provided with building shutoff and system drain valve for each building. Zone valves and branch valves will be provided for the interior water distribution network.

Though the water quality in the area is characterized as “hard”, UCR has not mandated the use of softening equipment and has reportedly disconnected some systems due to maintenance and cost burdens. As such, water softening is not a requirement at this time.

Domestic hot water for apartments can be provided by a dedicated gas water heater at each unit for hot water. Residence halls shall be equipped with a centralized hot water system utilizing an instantaneous gas-fired water heater, with hot water then being distributed to each unit. Hot water for the dining hall kitchen shall be provided at 140° F by a dedicated gas water heater.

Sanitary Drainage System

The sanitary (waste and vent) drainage system for this project consists of regular waste, indirect waste, and grease waste.

Regular Waste: Waste and vent piping will be provided for each fixture and piece of equipment which requires such piping. Plumbing fixtures above grade will be drained by gravity through a soil waste stack and the house drain to a point set beyond the building exterior. The gravity waste piping will be installed at a slope of ¼-inch per foot unless otherwise indicated or approved. Cleanouts will be provided for drainage maintenance purposes. Any plumbing fixtures or floor drains in the parking structure that cannot be drained by gravity, will be drained to duplex sewage ejectors and pumped into gravity house drain.

Indirect Waste System: Indirect waste from mechanical equipment shall discharge into the sanitary drainage system through an indirect waste connection.

Grease Waste: Grease waste system for the kitchen in dining hall will be piped through a separate network to a grease interceptor per Appendix “H” of the California Plumbing Code.

Plumbing Fixtures

The Campus has expressed a preference for the following plumbing fixtures:

- Urinals: Waterless - Sloan (“Falcon”)
- Sinks: American Standard – self-rimming
- Faucets: American Standard – ceramic
- Showers: American Standard – ceramic
- Toilets: Floor mounted in apartments, wall mounted in residence halls

Natural Gas System

Interior natural gas will serve gas fired HVAC equipment, the dining hall kitchen, domestic gas range, water heaters, gas dryers, and outdoor gas barbecue. All interior gas distribution systems will be low pressure and will be connected to the on-site medium pressure distribution. An approved automatic seismic safety gas shutoff valve will be provided for the entire site and will be located downstream of the meter.

Fire Protection

Sprinklers: System shall be designed according to NFPA 13. Complete wet pipe automatic sprinkler coverage will be provided for each building. The system shall include an automatic fire control assembly and a common drain outside the building and shall be supplied from one standpipe.

The apartments will be classified “LIGHT HAZARD” occupancy and shall be designed with a minimum density of 0.10 gpm/square foot over the most remote 1500 square feet. Head coverage shall not exceed 225 square feet in area and shall be 165° F temperature rated.

The kitchen, mechanical and electrical rooms, and storage rooms will be classified “ORDINARY HAZARD” occupancy and shall be designed with a minimum density of 0.15 gpm/square foot over the most remote 3000 square feet. Head coverage shall not exceed 130 square feet in area and shall be 165° F temperature rated.

A system with complete automatic fire sprinkler coverage, with all material, equipment appurtenances as required conforming to the rules and regulations of all current applicable state and local codes, laws and ordinances applicable rating agency and the National Fire Protection Association (NFPA) will be provided. Materials for similar uses shall be of the same type and manufacture. All components of the fire protection systems shall be UL and FM listed.

5.6 ELECTRICAL SYSTEMS

5.6.1 Codes and Standards

Codes, regulations and requirements: Comply with adopted applicable sections of national, state, and local codes, laws, ordinances, rules and regulations enforced by the authorities having jurisdictions. Conformance with Campus Design Standards will be applicable.

All electrical work will comply with the latest adopted editions of all codes, including, but not limited to, the following codes:

- State of California Code of Regulations (CCR)
- California Electrical Code (CEC)
- National Fire Protection Association (NFPA) including NFPA 70 (National Electric Code, NEC)
- County of Riverside, Electrical Code (NFPA 70 with Amendments)
- California Energy Commission, Title 24
- County and City of Riverside Fire Department
- City of Riverside Power utility requirements
- American with Disabilities Act (ADA)
- South Coast Air Quality Management District (SCAQMD)
- Federal Aviation Authority (FAA)
- Occupational Safety and Health Administration (OSHA)
- National Fire Protection Association (NFPA) Life Safety Code 101

Standards and Regulations Compliance

All electrical work will be in compliance with the latest editions of applicable regulations and standards including, but not limited to, the following:

- American National Standards Institute (ANSI)
- Certified Ballast Manufacturers (CBM)
- Institute of Electrical and Electronic Engineers (IEEE)
- Insulated Cable Engineers Association (ICEA)
- National Bureau of Standards (NBS)
- National Electrical Manufacturers Association (NEMA)
- National Electrical Contractors Association (NECA)
- National Electrical Testing Association

- Underwriters' Laboratories Inc. (UL)

Minimum Requirements

The above listed Codes and Regulations will form the basis of design as minimum requirements.

- Compliance with the State of California "Energy Compliance Standards"
- Code of Regulations Title 24
- Equipment anchorage to meet Seismic Zone 4 requirements.

5.6.2 Design Loads

Overall Connected Volt-amperes (VA) per square foot:

Apartments, Residence Halls

- Lighting 3.0
- Appliance 2.5
- Receptacle 2.0
- Air Conditioning 8.0

Note: Assumed the range, clothes dryer and water heater are not electric equipment.

Dining Hall

- Lighting 1.5
- Kitchen Equipment 40.0
- Receptacles 2.0
- Air Conditioning 8.0

Note: Assumed that the major cooking appliances will not be electric equipment.

Conference Services Facility

- Lighting 1.5
- Receptacles 5.0
- Equipment 5.0
- Air Conditioning 8.0

Campus Deli / Convenience Store

- Lighting 2.0
- Receptacles 2.0
- Equipment 2.0
- Air Conditioning 8.0

Recreation Fields

- Lighting 72kW/field

Outlets/Miscellaneous 10kW

Design Lighting Levels

Illumination levels will conform to the luminance category recommendations of the current edition of the IES lighting handbook as a guide and as mandated in the State of California "Nonresidential Building Standards."

Average Maintained Footcandles:

- Lounge, Kitchen/Pantry 40 - 50
- Corridors 10 - 15
- Electrical, Mechanical Rooms, Laundry 35
- Entry/Lobby 35
- Offices/Reception 40 - 50
- Restrooms, Stairs 15 - 20
- Storage Rooms 10 - 15
- Telecommunications Rooms 35

5.6.3 Main Electrical Service

Existing Condition

Per discussion with campus facilities staff, the existing campus 12kV service is available from a manhole near Linden Street in the Corporation Yard. The service will be extended from the existing manhole via concrete encased ductbank.

There will be underground concrete encased ductbank with manholes to each transformer. The transformers at each residence hall will be capable of supplying loads at 208/120 volt, 3 phase, and 4 wires to suit housing loads. The 480/277 volt service is better suited for the recreation field lighting and long distance distribution.

All transformer pads will require truck access. Two circuits will be extended to each transformer (primary and backup).

Metering

A service meter board will be located adjacent to each apartment building, residence hall, dining hall, conference services facility, the campus deli / convenience store and one for the recreation fields. Each service meter board will include meters per campus standards. The apartment buildings and residence halls meters will be grouped to provide totalized readings.

5.6.4 Electrical Distribution

480Y/277V and 208Y/120V distribution switchboards will be provided in the electric rooms. Distribution at 480Y/277V and 208Y/120V to panelboards, and packaged mechanical equipment will be by means of or cable feeders from distribution switchboards. The electrical distribution will have electrical risers for vertical power distribution in stacked electrical room for lighting, receptacle power and mechanical equipment.

Dry type transformer for 208Y/120V will be provided adjacent to the recreation fields for small equipment loads. Branch circuit panelboards (208Y/120V and 480Y/277V) will be installed in the electrical rooms and close to the loads they serve wherever practical. All panelboards will be fully bussed, 42 circuit and utilize bolt-on circuit breakers. Copper wiring and bussing will be used throughout.

5.6.5 Emergency Power

The residence halls, apartments, conference services facility, and campus deli / convenience store buildings will be provided with integral battery equipped exit lights and egress lighting in the stairs, corridors and adjacent to exit doors. The fire alarm system will have integral battery system.

The diesel powered emergency generator set shall be installed adjacent to the Dining Hall. The generator will be used to power the main telephone switch room and selected loads in the Dining Hall including the

switch room equipment, UPS, lighting, and air conditioning as well as some kitchen equipment such as freezers to facilitate the use of the Dining Hall as a disaster relief center during an emergency.

5.6.6 Voltages

Utilization Voltages will be as follows:

- Fluorescent and HID Lighting: 120V, 1 phase
- Exterior Site Lighting: 120V, 1 phase, or 208V, 1 phase, or 480V
- Motors Less than ½ HP: 120V, 1 phase
- Motors ½ HP or greater: 208V, 3 phase, or 480V, 3 phase
- General Use receptacles: 120V, 1 phase
- Recreation field lighting: 277V, 1 phase

5.6.7 Site Lighting

Building exterior and site walkways and landscape lighting will be designed to compliment the architecture. Campus standards will apply for walkway areas. The fixtures will be controlled with photocell and/or time clock with lighting control system. The fixtures will be selected with lower cut offs to reduce light pollution and light spillage in bedrooms. The Campus exterior lighting standards are as described below:

- Parking area lighting fixture will be double or single Cobra head with total height of 32'-6". Provide inline fuse holder in the base of the pole. Fixture manufacturer: General Electric No. M520A2.
- Pole manufacturer: Ameron No. AMRC-5C1-25F8D.
- Lamps: 1 or 2 – 250W, high pressure sodium, 480V.
- Pedestrian lighting to be Campus Standard, 10' painted aluminum pole with 250 watt high pressure sodium lamp. Fixture manufacturer: McGraw-Edison No. PA-4000.
- Other exterior lighting will vary in sizes and styles. They will be functionally appropriate to the Campus as manufactured by Kim Lighting Company or equal.

5.6.8 Recreation Field Lighting

The following sports lighting performance standards will be applied to the soccer fields:

- Maintained foot candles = 30
- Maximum to minimum uniformity ration = 3.0:1.
- Uniformity Gradient (UG) – 1.7
- Coefficient of Variance (CV) = 0.28
- Flare/Spill light levels 100' from area of lighting =
 - a. Maximum foot candles = 1.0
 - b. Foot candles with meter aimed toward brightest light bank = 1.5-2.0.
- Arc tube will not be visible at greater than 35° angle.
- Fixture angle power will not exceed value of 12,000.

Light Structure and Luminaires for Field Lighting

The structure will include steel pole, cross arm assembly, wire harness, and electrical component enclosure. The foundation will be designed to meet wind speed of a minimum of 150 miles/hour.

The luminaire will be NEMA 3R, 1500 MH with aluminum reflector and ALZAK finish. The fixtures will have internal and external glare control. The University's preference is MUSCO Type – TLCMZ. The typical pole height of 70-foot with 350 feet x 150 feet spacing pattern will be required to meet lighting performances criteria. Each pole may have 8 to 12 light fixtures.

5.6.9 General Lighting

General illumination for the building interior will conform to the energy limitation and control requirements of the California Conservation Code and the recommendations of the current edition of the IES Lighting Handbook. Student rooms, hallways, toilets, and support areas will be commercial fluorescent type fixtures with T8, SPX Series 4100K fluorescent lamps and rapid start electronic ballasts. Fixtures will be recessed, surface or pendant mounted to suit the design.

Where recessed downlights are used, compact fluorescent lamps are provided. Incandescent lamps will be limited to special applications. Exit signs will use long life LED type lamps. Lighting in mechanical/electrical equipment rooms will be industrial type fluorescent fixtures with T8, SPX Series 4100K fluorescent lamps and rapid start electronic ballasts.

Lighting Control

Lighting control systems will meet Title 24 requirements. Lighting in common areas shall be controlled by local wall switches and occupancy sensors. Lighting in offices will be controlled by occupancy sensors with dual level wall switches. In large dining or multipurpose rooms local dimming systems will be provided.

5.6.10 Grounding

A grounding system will be provided for all the transformers, switchboards, metallic conduits, and raceways. A ground bus bar will be provided in each electrical room. A ground loop will be provided in the main electrical room. A ground conductor will be provided in each telephone and data room from the adjacent ground box.

The ground system resistance will be 5 ohm or less. The service grounding will be provided at the service substation with Ufer ground, cold water lines and building steel. All electrical equipment will be grounded.

5.6.11 Fire Alarm System

An addressable-point fire alarm system will be designed for standard low rise building operation conforming to all state and local codes. The system will include a graphic annunciator panel located at the first floor and a remote fire alarm annunciator panel located on the outside wall, at the Fire Department response point. Terminal cabinets will be located on each floor to serve various devices. The building fire alarm system shall report to the central campus fire alarm system via the fiber optics communication network. This system will also annunciate at the resident service office. The system will include the following:

- Manual pull stations.
- Water flow alarms.
- Sprinkler valve tamper supervision.
- Smoke detectors in bedrooms.
- Smoke detectors in equipment rooms.
- ADA strobes.
- Horns.
- Smoke detection with local visual and audible alarm in ADA compliance housing unit.

Campus preference is Simplex System. The system will provide alarm and trouble signals to the University of California, Riverside Central Fire Alarm console via campus fire alarm proprietary cable plant. All wiring shall be installed in conduit.

5.6.12 Voice/Data Signal and Communication System

Communication Systems

The project will receive voice/data service from the campus communication network via a fiber optic system. Underground voice/data lines shall be installed in duct banks with manholes throughout the site connecting each housing building, the dining hall, campus deli/convenience store, conference services facility and recreation field area. This project will be connected on the campus phone system.

Voice/Data outlets will be provided in the student rooms, classrooms, offices and staff rooms as per the programming requirements. All cabling faceplates will be furnished and installed per the campus standard. There will be a main telephone switch room of approximately 300 square feet for the project. The room will have dedicated air conditioning. The equipment, lighting and air conditioning system will be on the generator.

The Main Distribution Frame (MDF) will be located on the first floor of each building. Each floor will have vertically aligned Intermediate Distribution Frame (IDF) located so that the work station cable run will not exceed 250 linear feet. The system will include complete riser cables, fiber optics, backboards, conduits, boxes and cable tray as required.

Cable Television System

The Charter Cable Company is the local provider for the area. Empty conduit will be extended from the adjacent public street to the main head end room located either in the dining hall or residence halls. Campus wide conduit ductbank and manholes will be provided connecting each building.

Each building will have a system terminal cabinet to terminate coaxial cables and to mount signal amplifiers. Each floor will have system terminal cabinet. Each housing unit will have cable TV outlets in living rooms and bedrooms. Coaxial cable will be provided from each TV outlet to the floor terminal cabinet.

The University may make an arrangement to buy cable at bulk rate. A University representative will investigate this with the cable provider at a future date.

5.7 Structural

5.7.1 Housing Units

The student housing will be comprised of apartments and residence halls. The residence halls will be built as the first two phases. Phase 1 will construct 750 beds and Phase 2 will provide 500 beds for residence halls for a total of 1250 beds. Also included in the residence halls are 10 private apartments for staff and faculty. Phase 3 will include two student apartment structures. Breezeways shall be used for exterior circulation within each of the apartment buildings. The apartments will provide 418 beds and will be predominantly comprised of 4-bedroom units with 2 bathrooms, a full-kitchen and living room.

5.7.2 Dining Hall

The dining hall will provide seating for 1,100 students: 500 seats in Phase 1 and 600 seats in Phase 3. Phase 1 of the building will also contain support spaces, offices, a game room, book drop and a small “grab-and-go” type Express Café located in the lobby. Phase 2 will add a stand-alone retail campus deli/convenience store adjacent to the dining hall.

5.7.3 Conference Services Facility

The conference services facility will be constructed in Phase 3. The two-story structure will include a large, sub-dividable multi-purpose room for a variety of uses with support spaces, a staging pantry and smaller conference rooms. A student mail center will be located on the first floor of the building.

5.7.4 General Design Criteria

5.7.4.1 Codes

The governing building code will be the California Building Code, 2001 or most current edition. Other referenced design codes are anticipated to include the AISC Manual of Steel Construction (LRFD), Third Edition, ACI Building Code, Commentary, ACI 318-02, AWS Structural Welding Code, ANSI (AWS D 1.1-2004), National Design Specification for Wood Construction (NDS-1997).

5.7.4.2 Design Loads

5.6.4.2.1 Live Loads

- Residential 40 psf, reducible
- Offices 50 psf, reducible
- Dining/Conference 100 psf, non-reducibile
- Kitchen 50 psf, reducible
- General Storage 125 psf, non-reducibile
- Circulation Areas 100 psf, non-reducibile
- Roof 20 psf reducible

5.7.4.2.1 Dead Loads

- General: Estimated weight of construction materials.
- Offices: 20 psf for partitions
- Kitchen: 50 psf or weight of equipment
- Mechanical Equipment: 150 psf or weight of mechanical equipment.

5.7.4.2.3 Seismic Design

Seismic design criteria will be based on the latest edition of the California Building Code (2001) and the University of California Seismic Safety Policy, which requires that the building attain a seismic rating of "GOOD".

- Seismic Zone Factor $Z = 0.4$
- Importance Factor $I = 1.15$
- Soil Profile Type SC (very dense soil and soft rock)
- $C_a = 0.44,$ $N_a = 1.0$
- $C_v = 0.69,$ $N_v = 1.1$

5.7.4.2.4 Structural System Factor

Will depend on the system selected and will be based on CBC 2001.

5.7.4.3 Wind Design

- Basic Wind Speed 80 miles per hour
- Exposure Exposure B
- Importance Factor I= 1.0

5.7.5 Materials

5.7.5.1 Concrete

- $f'_c = 3000$ psi Slab-on-grade
- $f'_c = 3000$ psi Foundations
- $f'_c = 4000$ psi Suspended floor slabs and beams
- $f'_c = 4000$ psi Columns (non-seismic)
- $f'_c = 4000$ psi Basement walls

5.7.5.2 Reinforcing Steel

- ASTM A615, Grade 60
- ASTM A706 in boundary elements of shear walls

5.7.5.3 Structural Steel

- ASTM 992 for all structural shapes except as noted otherwise
- ASTM A500, Grade B for all structural tubes
- A490 Anchor bolts
- A325 High strength bolts, except as noted otherwise

5.7.5.4 Masonry

- Medium Weight CMU, ASTM C-90, Grade N-1, $f'_m = 1500$ psi
- Mortar, ASTM C-270, Type S, $f'_c = 1800$ psi
- Grout, ASTM C-476, $f'_c = 2000$ psi

5.7.5.5 Rough Carpentry

- Sawn Lumber: Douglas Fir – Larch, No. 1 & 2 as required
- Manufactured Lumber: TrusJoist plywood web joists, Timberstrand, Parallam, etc.

5.7.6 Structural Building Description

5.7.6.1 General

The residence halls will be comprised of four structures, each with two primary wings around a central courtyard. The wings will have a lounge and small kitchen for 40 to 48 students on each floor. The student apartments will be comprised of two, 4-story buildings around a central courtyard. The courtyard will be bounded by a two-story component on one side and an open breezeway on the other.

The dining hall will consist primarily of a 1-story structure with a partial second story and partial basement. The first floor will contain the server, seating (in two phases), kitchen, express café and support/office spaces and loading dock. The second floor will provide offices and a game room. The basement will contain the central mechanical plant for all three phases of work. The campus deli/convenience store will be built as an additional one story structure in Phase 3.

The Phase 3 conference services facility will be a two-story structure. The ground floor will house the large multi-purpose room and mail facility. The second floor will have smaller conference rooms, offices and a portion of the dining hall expansion seating.

5.7.6.2 Geotechnical and Geological Condition

A preliminary geotechnical feasibility investigation report prepared by CHJ, Incorporated dated July 30, 2004 and an update letter dated September 7, 2004 were made available for review for this programming phase. The site proposed for this project is located east of Canyon Crest Drive between Blaine Street to the north and Linden Street to the south. The site has a general slow uphill slope from west to east. The total grade change is up to 60 feet.

The site is located on an alluvium layer of medium dense to very dense soil. However, based on the limited boring performed by CHJ, Inc. there is undocumented fill and/or disturbed natural soils up to 11 feet deep in many locations on the site. Groundwater or bedrock was not encountered in the borings of up to 51.5 feet deep. CHJ testing indicated that the undocumented fill has a moderate potential for hydroconsolidation (collapse) upon application of a surcharge load and inundation with water. These fills should be completely removed.

Based on their preliminary geotechnical investigation, it is CHJ's opinion that the foundations of the buildings should rest on properly compacted fill or native soil material to a depth of 36 inches or the footing width, whichever is greater. In the areas of new structures, the excavation shall extend 10 feet beyond the building lines to a depth required to achieve proper depth of recompacted fill. Once the site is prepared as described, the proposed structures may be safely founded on conventional reinforced concrete spread and continuous footings. The entire existing uncontrolled fill under any proposed paved and flatwork areas shall be removed and replaced with properly compacted and controlled fills. Slab on grade shall be 4 inches minimum thickness over 12 inches minimum compacted fill.

The site soils were generally granular and considered to be non-critically expansive. The proposed site is not within a zone of active faulting. The preliminary geotechnical opinions should be confirmed through more elaborate geotechnical investigation during the design phase once the exact location and size and structural system is identified.

5.7.6.3 Seismic Design

Seismic design criteria will be based on the latest edition of the California Building Code (CBC 2001 or most current edition) and the University of California Seismic Policy, which requires that the building attain a seismic rating of "good." It is assumed for this report that special seismic performance goals are not required for this project, and the basic seismic design criteria contained in the 1997 Uniform Building Code will guide the design of the seismic system. Accordingly, the feasibility of structural seismic system having higher seismic performance characteristics, such as seismic isolation and energy dissipation was not explored, since those would require an increase in the project construction budget because of their higher initial construction cost.

5.7.6.4 Structural Systems

5.6.6.4.1 Housing Units

Residential construction is typically built with wood or metal "stick-framed" construction or concrete. Both options have a relatively thin and uniform thickness of floor structure. Structural steel construction is less common for residential construction because it will have a thicker structural envelope which adds costs by increasing costs relative to a taller floor-to-floor height.

Historically, stick-framed construction tends to be most cost-effective for low-rise residential construction. Bearing metal stud framing has drawbacks because it is relatively new and the pool of labor is limited. Metal studs are also quite expensive at this time.

Currently, wood framed construction is recommended because it will be the most cost-effective structural system for the student residences. The floors would be constructed of 1½-inch light-weight concrete over plywood, supported by joists of sawn lumber or manufactured joists. The floors will be carried by bearing walls of sawn lumber studs. Seismic lateral forces are resisted by plywood shear walls with steel holdown hardware at each end. The foundations will be shallow spread and continuous footings.

5.7.6.4.2 Dining Hall

The dining hall is an irregular structure with large open interior spaces and it will be built in phases. Concrete or steel construction should be required due to the fire rating for this type of building. Concrete will achieve the fire rating, but may require a taller floor-to-floor height to achieve the long spans. Concrete is also a much heavier structure which will increase the foundations and seismic forces.

Steel framed construction is the recommended structural system for this type of structure. Structural steel has a high strength-to-weight ratio, making it well suited for longer spans. Additionally, new (Phase 3) connections to existing (Phase 1) structural steel can be made easily with bolted or welded connections. The roof structure will be metal deck topped with concrete, insulating concrete or rigid insulation. The floor spaces on the second level will be concrete over metal deck. The foundations will be shallow spread and continuous footings.

Seismic lateral forces can be resisted by steel braced-frames, moment frames, and/or concrete or masonry shear walls. Braced-frames are generally most cost effective, but may interfere with the architectural layout. Moment frames are the least limiting to the design, but are most expensive. Concrete or masonry shear walls are cost-effective options but bring an added level of complication to the construction in the coordination of multiple trades. Braced frames are recommended for cost efficiency, but will need to be evaluated with the design of the building.

The campus deli/convenience store will be most cost-effectively built with wood-framed construction. The roof can be plywood over long-span wood-chord steel joists. Exterior stud bearing walls will also act as shear walls. Some structural steel may be required for interior bearing columns and/or a seismic lateral bracing system if an open storefront is utilized. The foundations will be shallow spread and continuous footings.

5.7.6.4.3 Conference Services Facility

Similar to the dining hall, the conference facility is an irregular structure with large open interior spaces. Structural steel construction is also recommended for this building. The floor and roof structure will be concrete over metal deck. The foundations will be shallow spread and continuous footings.

Braced frames are also recommended for the seismic lateral resisting system. This again is the most cost effective, but will need to be evaluated with the design of the building.

5.8 Noise and Acoustics

Mechanical systems shall be designed in accordance with standard acceptable practice to control noise and vibration to student living spaces using UCR Standards. Mechanical systems components shall provide the most cost effective methods to reduce noise and vibration especially roof-mounted equipment located directly above living units. Mechanical equipment shall be located in areas where noise shall be of minimum impact to

student living and outdoor gathering areas. Grade-mounted mechanical equipment shall be enclosed with masonry walls with gates and be of a height to provide maximum acoustic attenuation.

A 6-foot high masonry wall shall be provided on the east side of the student apartments to mitigate sound impacts to the child development center. The following areas shall have airborne sound insulation equal to sound transmission class (STC) 50:

- The exterior walls on the north side of the student apartments located adjacent to Blaine Street.
- All administrative area walls and ceiling assemblies.
- Residential unit wall and floor assemblies separating individual living units.

5.9 Security System

The project will have a security system per University requirements. The security system will consist of an intrusion detection system, a door access and control system and a closed circuit video surveillance system. The system will also report to the Access Control Office in Pentland Hills. All equipment and wiring will be provided by UCR under separate contract.

The electrical contractor will provide backboards for equipment, conduit, cable and back boxes only. Security systems shall be provided for the dining hall, recreation field area perimeter, apartments and residence halls, conference services facility, deli/convenience store, and all parking lots. UCR has indicated a preference for the following systems outlined below.

5.9.1 Recreation Fields Perimeter

- Lenel based Platform.
- Each gate requires:
 1. HID Maxiprox long-range proximity reader (or Lenel equivalent).
 2. BAS/LENEL model LNL-1000 access control processor.
 3. BAS/LENEL model 1320 dual card reader interface module
 4. Dialup Modem Cable

There will be pedestrian gates with card access and phone dialer interface to remotely unlock the gates.

5.9.2 Residence Halls, Apartments, Conference Services Facility, Deli/Convenience Store, and Dining Hall Perimeter

- Lenel based Platform:
- Each gate requires:
 1. HID Maxiprox long-range proximity reader (or Lenel equivalent)
 2. BAS/LENEL model LNL-1000 access control processor.
 3. BAS/LENEL model 1320 dual card reader interface module
 4. Dialup Modem Cable
 5. ALTRONIX AL300ULM controller power supply wired chargeable batteries.

Security gates along Blaine Street will have rolling gates, V-Grove or rolling slide gate operated by the above system. The parking lot for student use will have barrier arm-type gates. There will be pedestrian gates next to the vehicle gates, both wired for phone dialer interface so residents can permit guests (or

vendor delivery) access. The pedestrian gates adjacent to the Residence Halls and Apartments will have card access and phone dialer systems.

Depending upon street configuration and available street parking we also suggest providing residents with HID ProxPass Active Vehicle tag. Since the rolling gate is considerably slower than a barrier arm, the ProxPass will prevent traffic back up as well as reduce the potential for “tailgaters” to enter without authorization. Gates shall be wired to open automatically when a fire alarm is triggered or have a Knox box for fire truck access. This will depend upon what fire protection system is decided upon and the campus Fire Marshal’s input.

Cameras to be wired to both the RSO and the Pentland Surveillance control room with gate opening capability. It is also suggested that a 4 or 6 car parking area be provided for guests who need to dial in. This too will prevent traffic backups. For maximum security, separate, shorter duration ingress/egress gates are also suggested, reducing the amount of time security can be breached. Cantilever swing gates are an alternative to rolling gates, depending upon space and location. Either option is workable with the same operating systems and devices.

5.9.3 Dining Hall

Perimeter exit will have Proximity Reader system. In the public dining area cameras are recommended.

5.9.4 Parking Lots

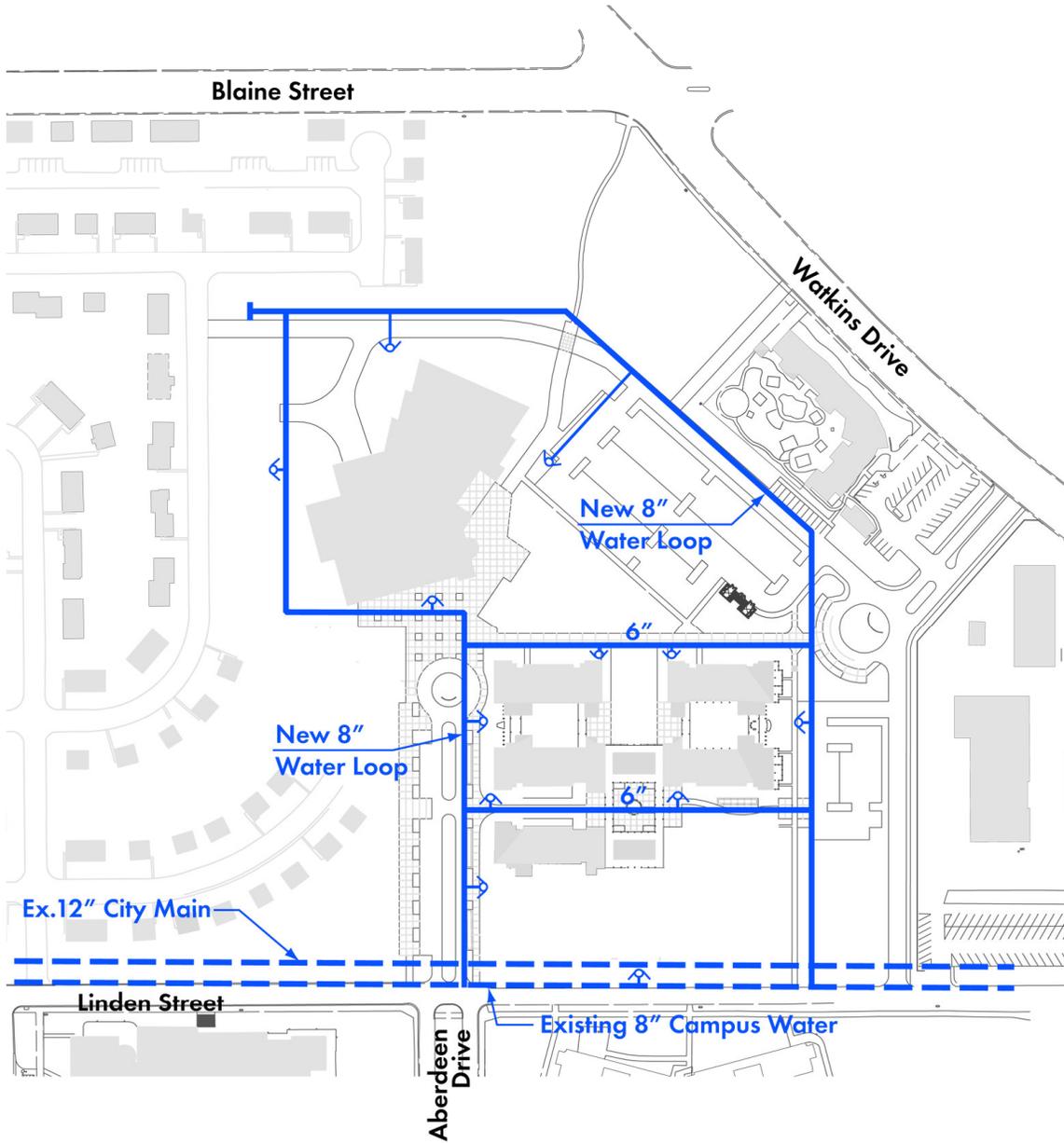
Provide blue emergency phone per Campus Standard Code Blue – CB-3000.

5.9.5 Acceptable Manufacturers

The Housing Services Operations Access Control Standards are as follows:

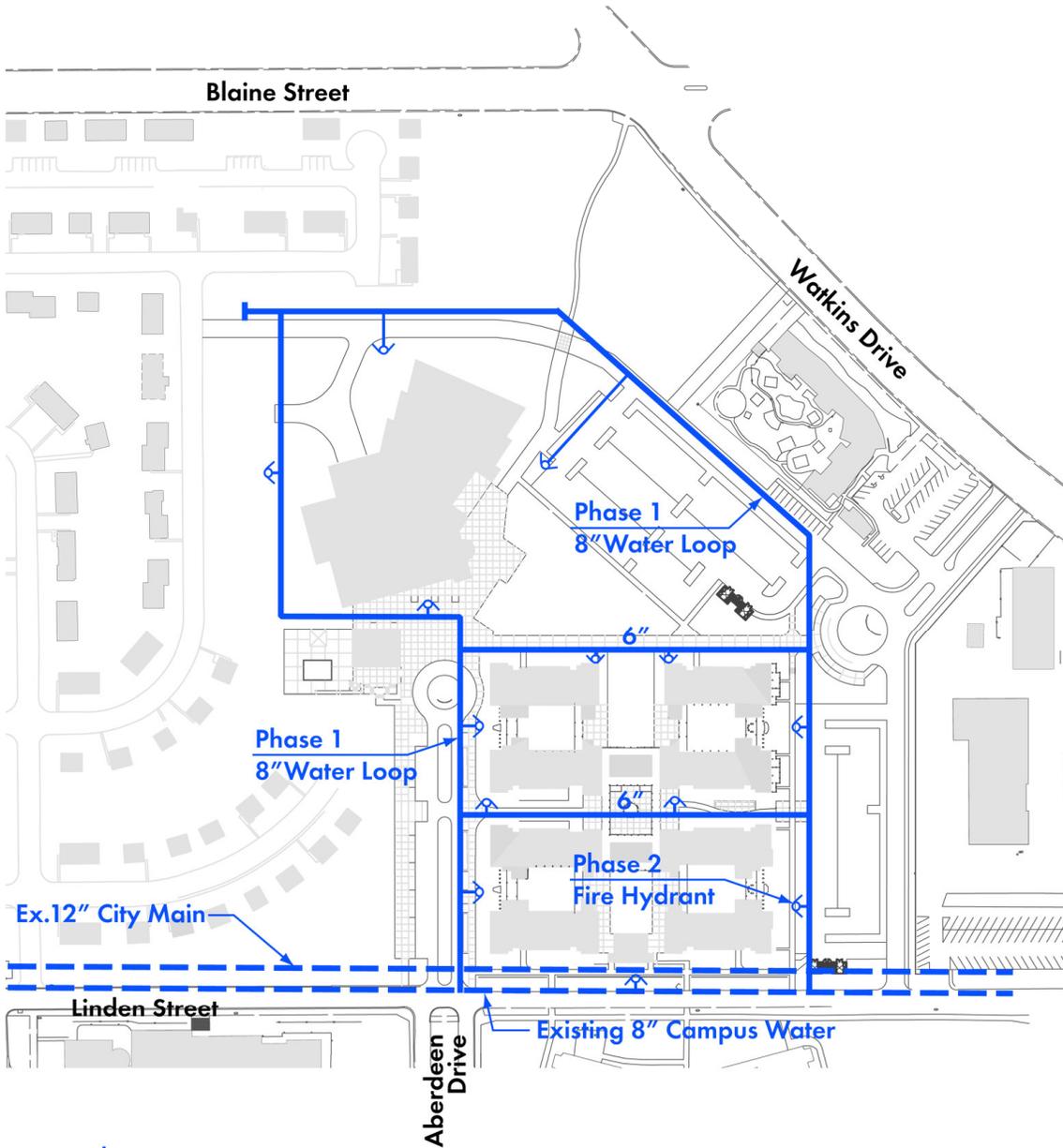
<u>EQUIPMENT</u>	<u>Manufacturer/ Model</u>	<u>Product Use</u>	<u>Recommended Vendors</u>
Spectra 3 PTZ Camera	Pelco SD53CBW-PG-0	Exterior Parking Lot Cameras	A.D.I. Riverside 909-787-8790
Keystone	Best Access KS3000	Key Tracking Software	Best Access Systems 661-295-0190
Keys and Cores	Best Access E,F,G,H,J Keyways	Securing Doors	Best Access Systems 661-295-0190
Mortise Locks	Best Access 35H7FD-J3-625	Securing Doors	Best Access Systems 661-295-0190
Cylindrical Locks	Best Access 93K7T15D-STK-626	Securing Doors	Best Access Systems 661-295-0190
Smart Chip Readers	Best Access 35HBG7FV14SC626	Securing Doors	Best Access Systems 661-295-0190
Proximity Reader	H.I.D. 5395CG100	Securing Doors	A.D.I. Riverside 909-787-8790
Barrier Arm	Door King 1601	Securing Parking Lots	Automated Gate Service UCR Physical Plant 909-787-4214
D.V.R.s	Pelco DX7016480	Video Recording	A.D.I. Riverside 909-787-8790

5.10 Utility Diagrams



- Legend:
- Exist. Water Line
 - New Water Line
 - △ Fire Hydrant

Figure 5.2.1.1
Water System Diagram
Phase 1

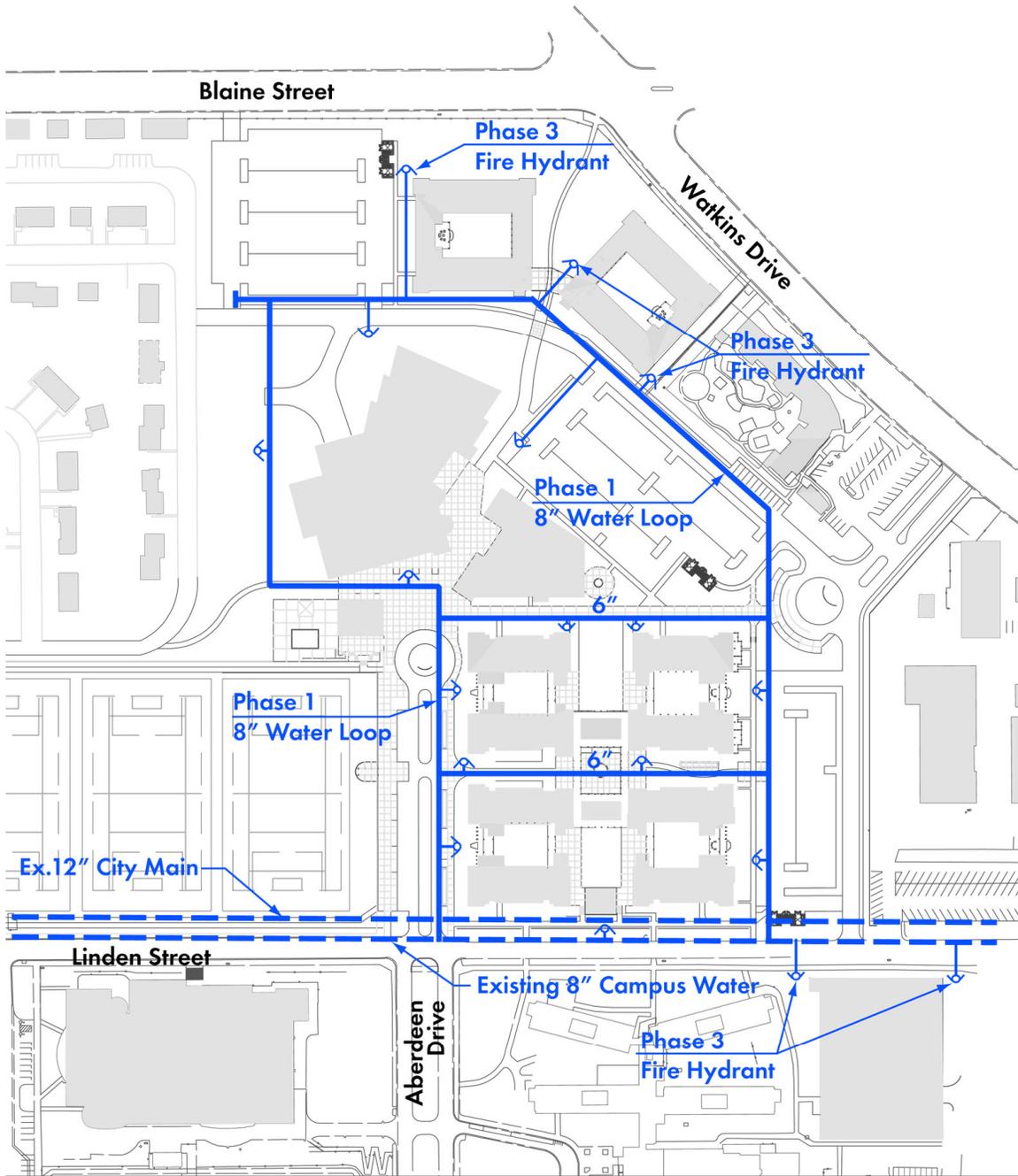


Legend:

- - - - - Exist. Water Line
- New Water Line
- ⊗ Fire Hydrant

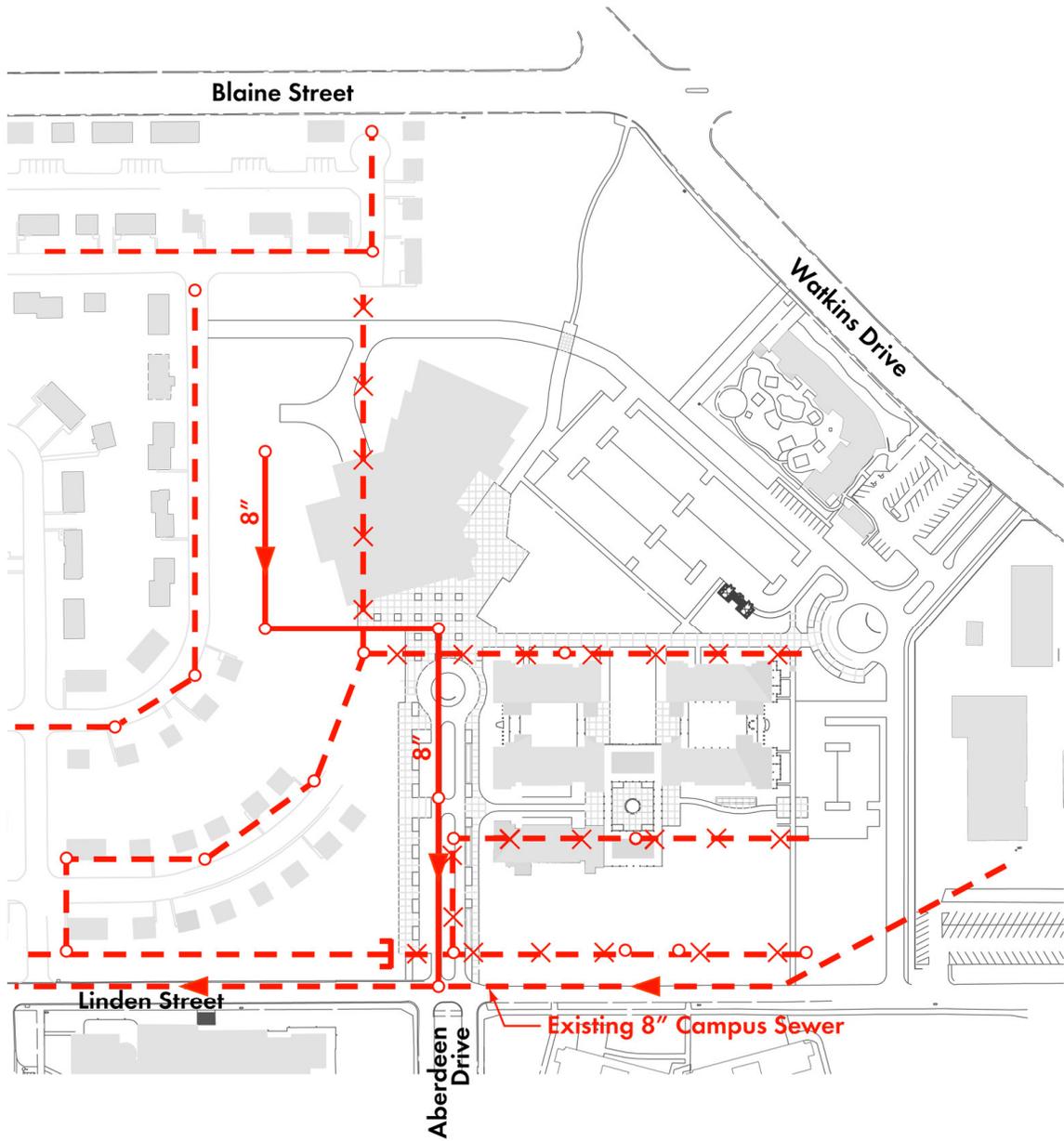
Note: No Mainline Water Lines in Phase 2.

Figure 5.2.1.2
Water System Diagram
Phase 2



- Legend:**
- - - Exist. Water Line
 - New Water Line
 - ⊕ Fire Hydrant

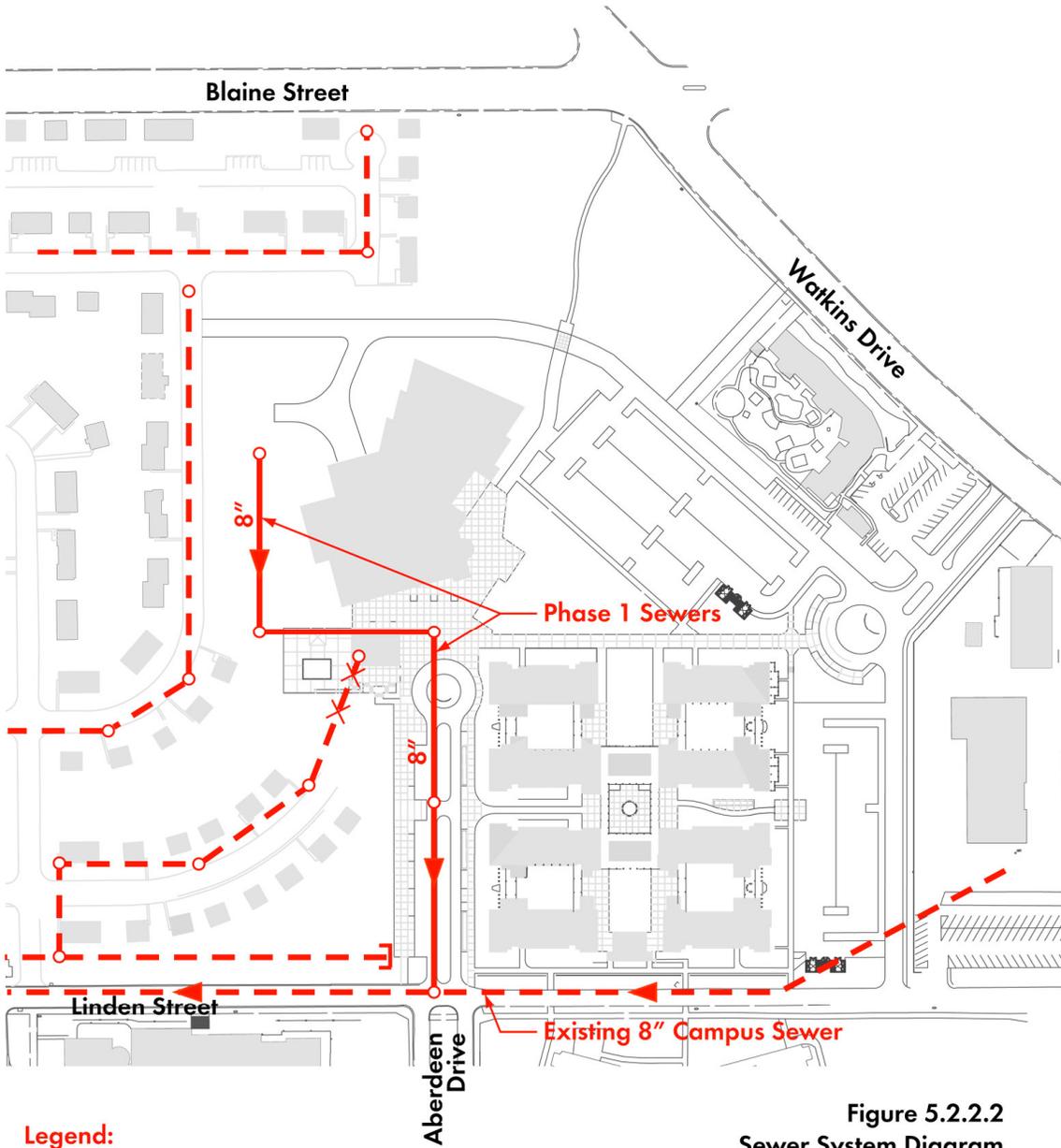
Figure 5.2.1.3
Water System Diagram
Phase 3



Legend:

- - - - - Exist. Sewer Line
- X-X-X- Exist. Sewer Line to be Removed or Abandoned in Phase 1
- New Sewer Line
- Manhole

Figure 5.2.2.1
Sewer System Diagram
Phase 1

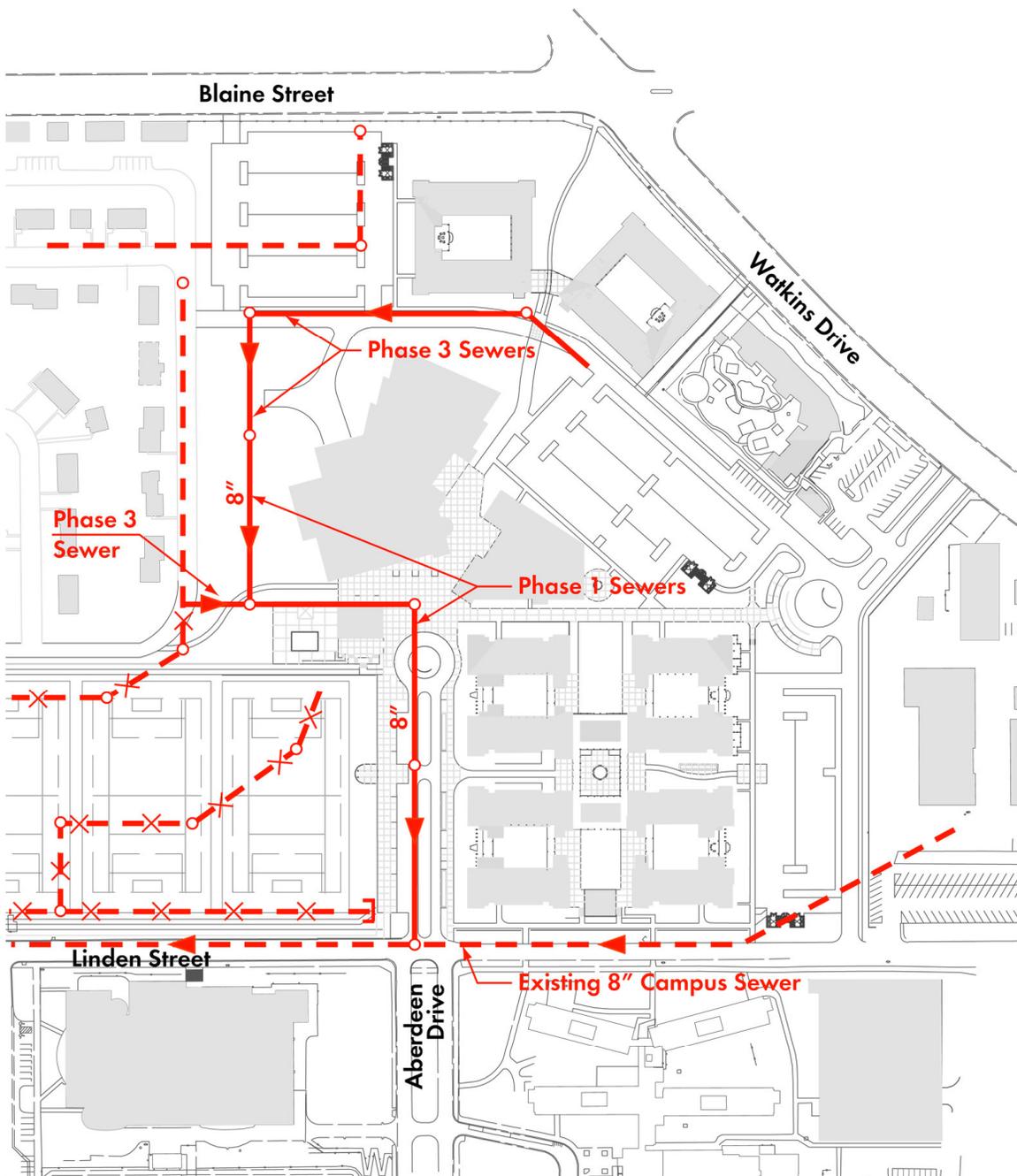


Legend:

- - - - - Exist. Sewer Line
- X-X-X- Exist. Sewer Line to be Removed or Abandoned in Phase 2
- New Sewer Line
- Manhole

Note: No Mainline Sewer Lines in Phase 2

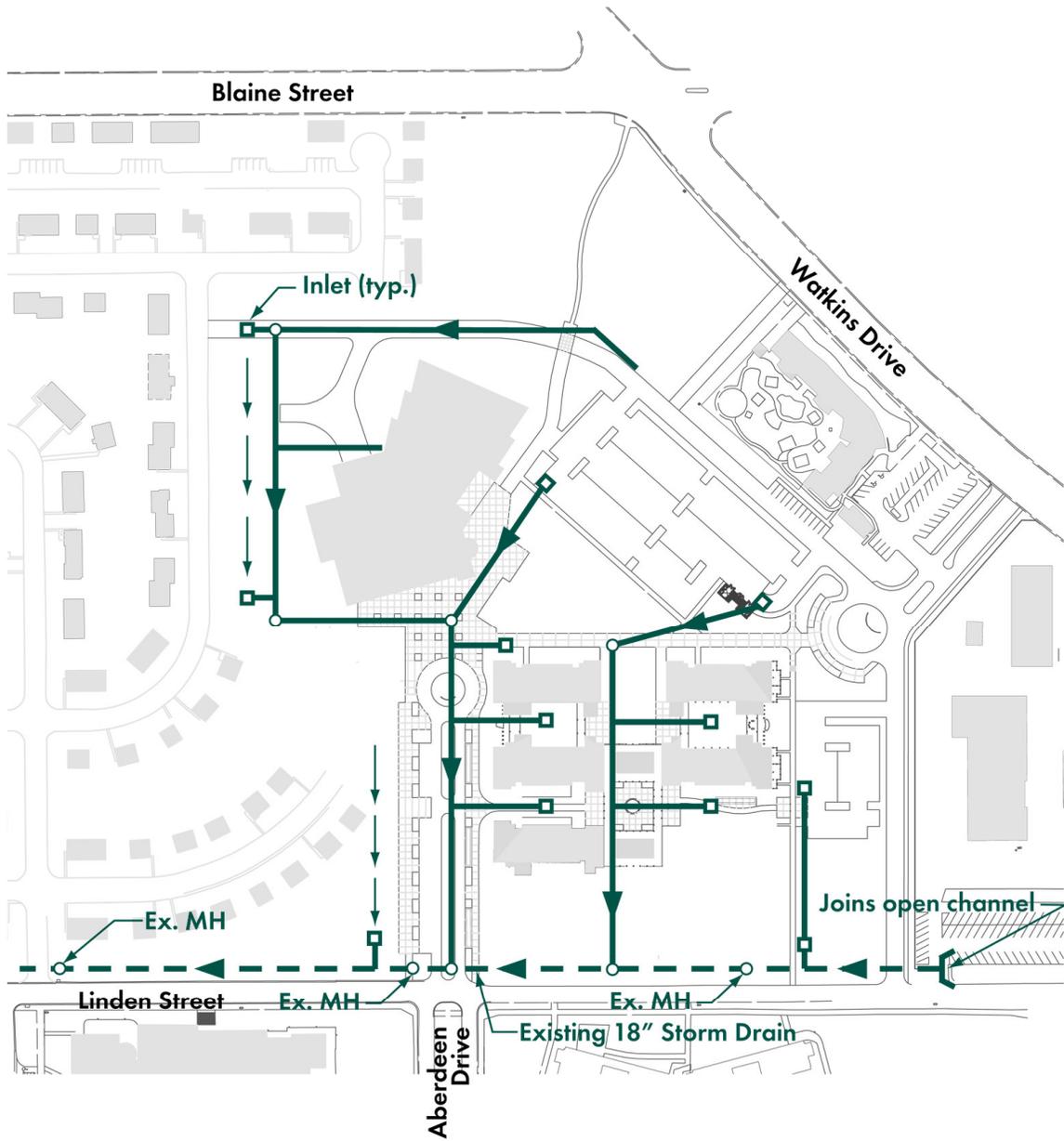
Figure 5.2.2.2
Sewer System Diagram
Phase 2



Legend:

- - - Exist. Sewer Line
- X-X-X- Exist. Sewer Line to be Removed or Abandoned in Phase 3
- New Sewer Line
- Manhole

Figure 5.2.2.3
Sewer System Diagram
Phase 3



- Legend:**
- Exist. Storm Drain Line
 - New Storm Drain Line
 - Manhole
 - Inlet

Figure 5.2.3.1
Storm Drainage System Diagram
Phase 1

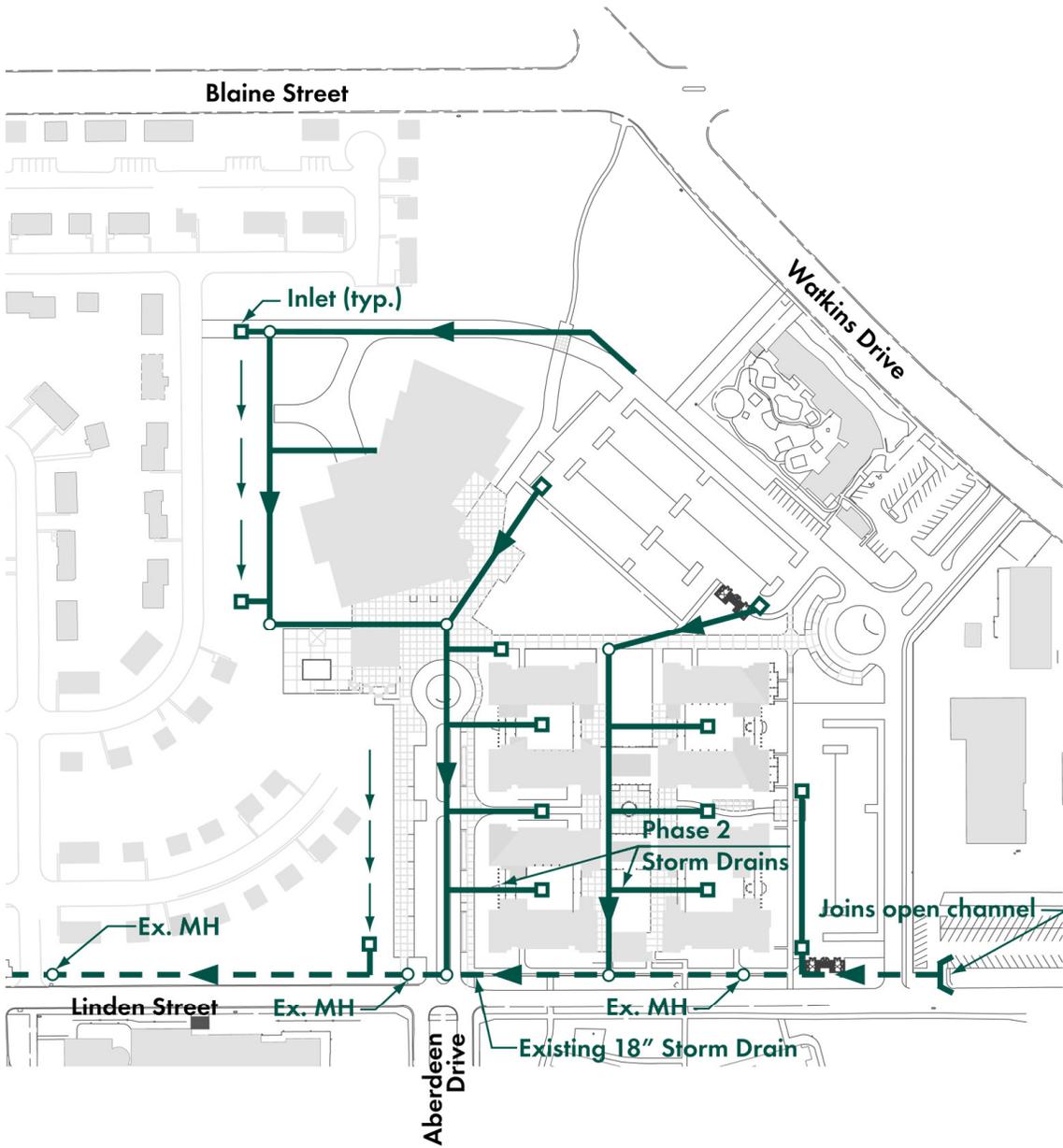
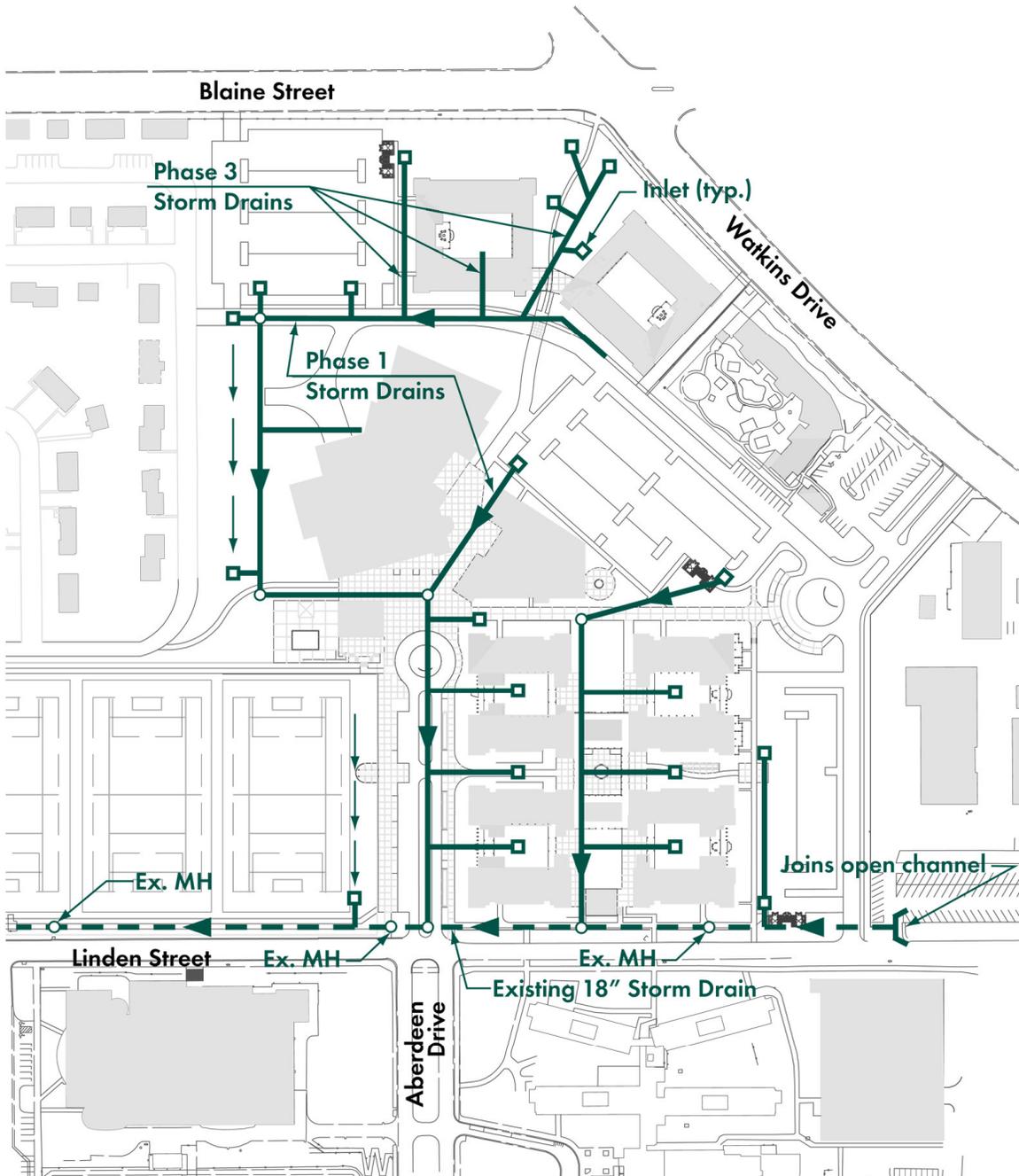


Figure 5.2.3.2
 Storm Drainage System Diagram
 Phase 2

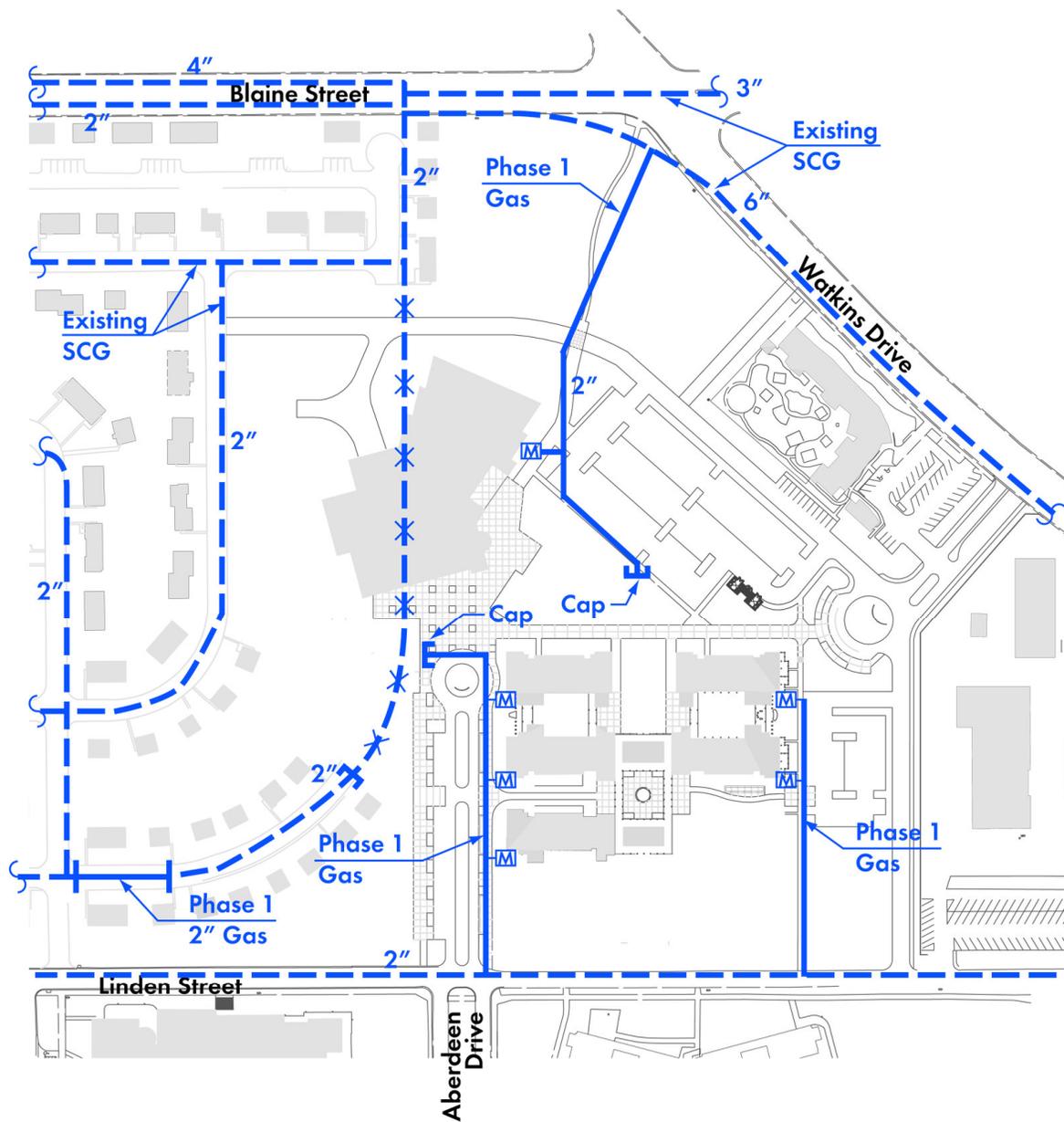
- Legend:
- Exist. Storm Drain Line
 - New Storm Drain Line
 - Manhole
 - Inlet



Legend:

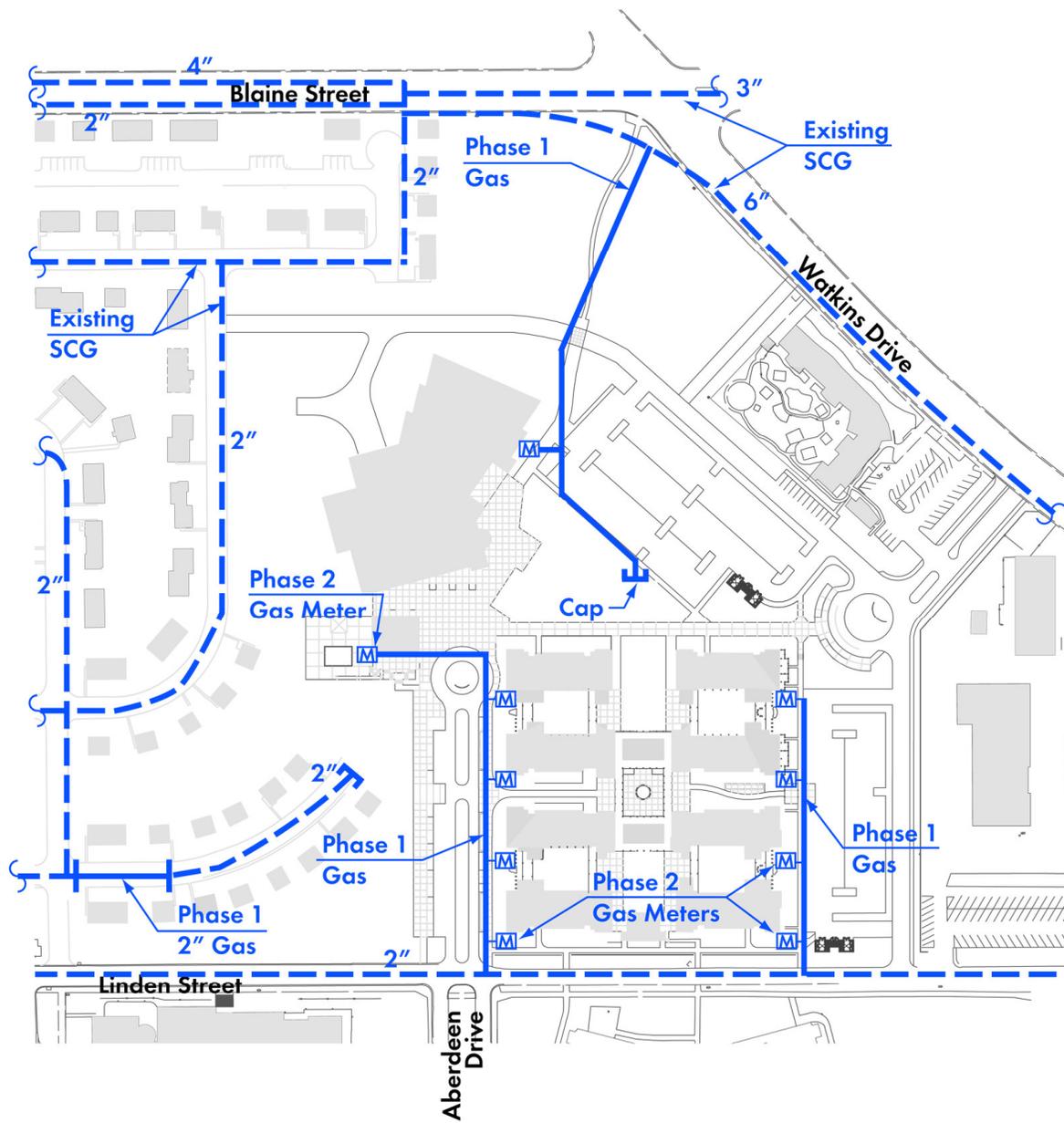
- Exist. Storm Drain Line
- New Storm Drain Line
- Manhole
- Inlet

Figure 5.2.3.3
Storm Drainage System Diagram
Phase 3



- Legend:**
- Exist. Gas Line
 - Exist. Gas Line to be Removed in Phase 1
 - New Gas Line and Meter (by Gas Co.)
 - Cap for Future Phase

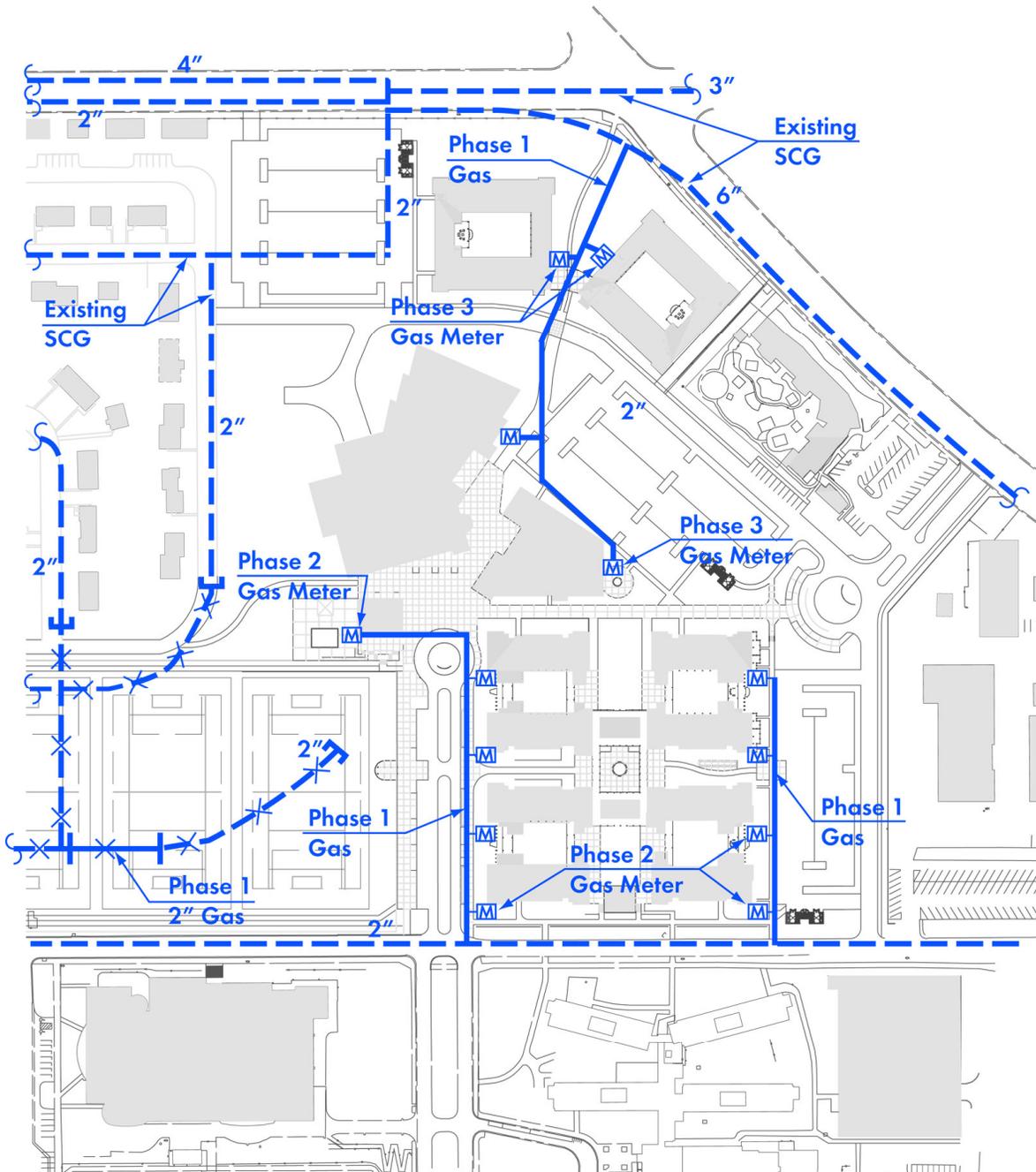
Figure 5.2.4.1
Natural Gas System Diagram
Phase 1



Legend:

-  New Gas Line and Meter (by Gas Co.)
-  Exist. Gas Line
-  Cap for Future Phase

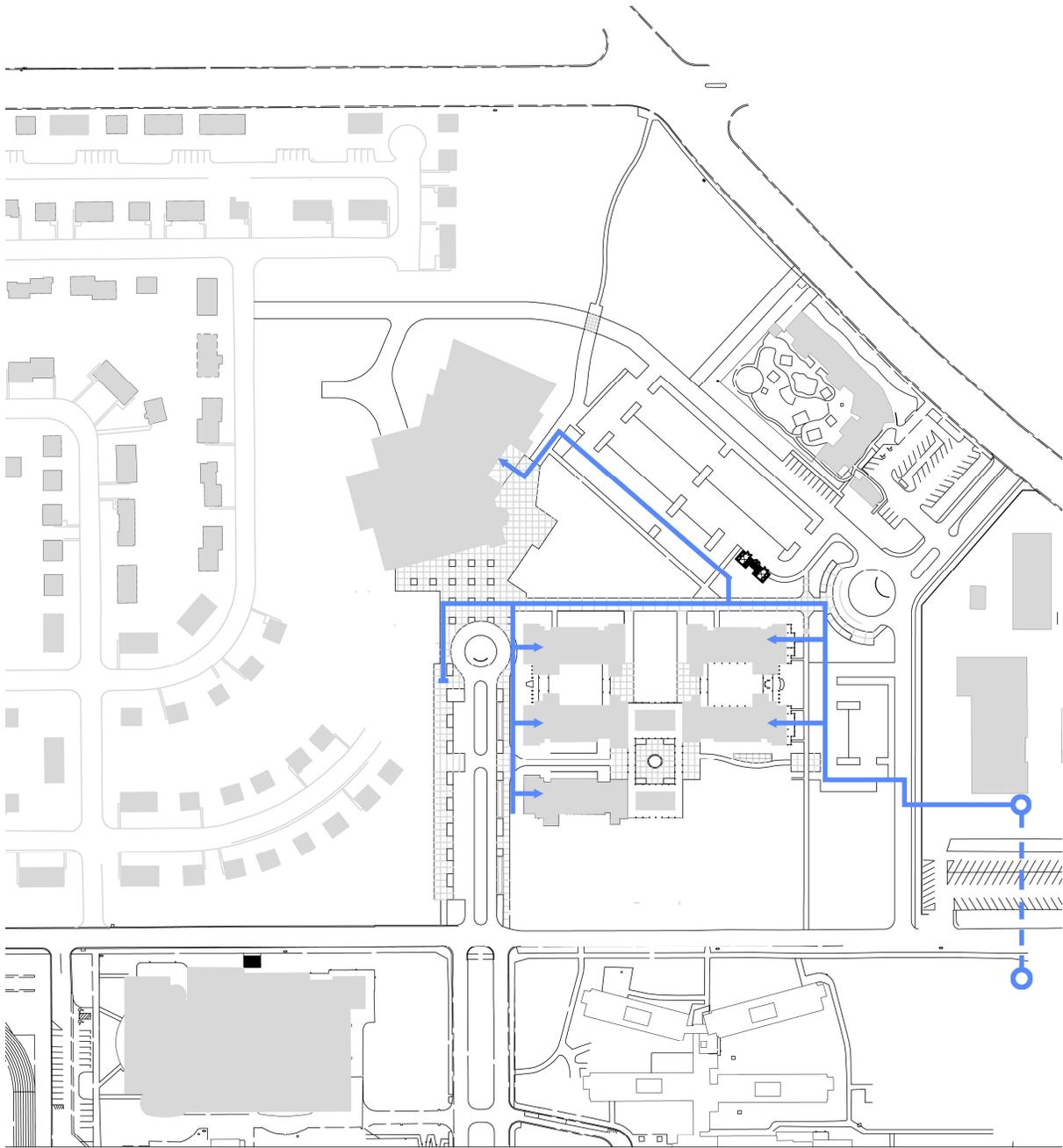
Figure 5.2.4.2
Natural Gas System Diagram
Phase 2



Legend:

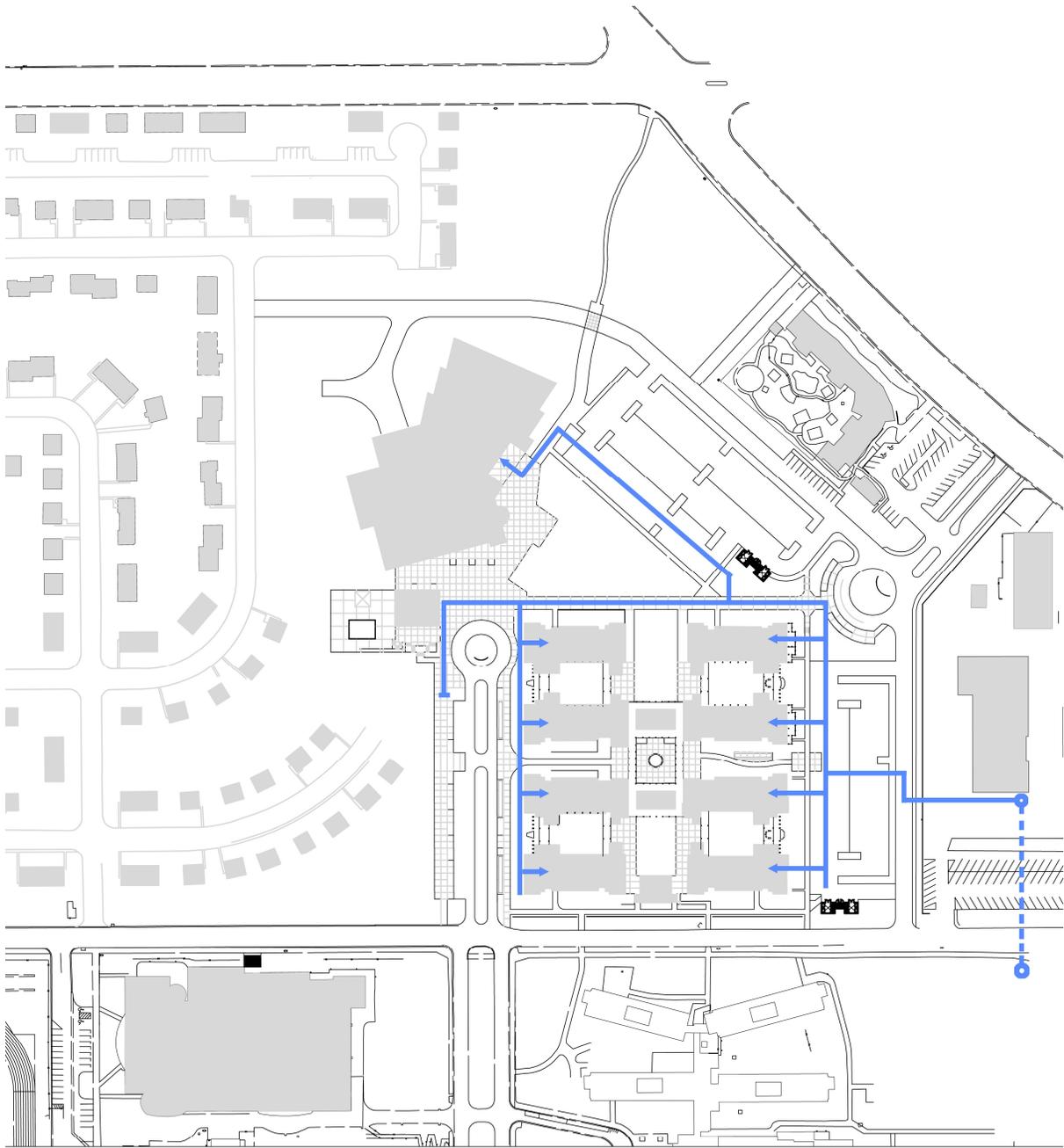
- New Gas Line and Meter (by Gas Co.)
- Exist. Gas Line
- Exist. Gas Line to be Removed in Phase 3
- Cap for Future Phase

Figure 5.2.4.3
Natural Gas System Diagram
Phase 3



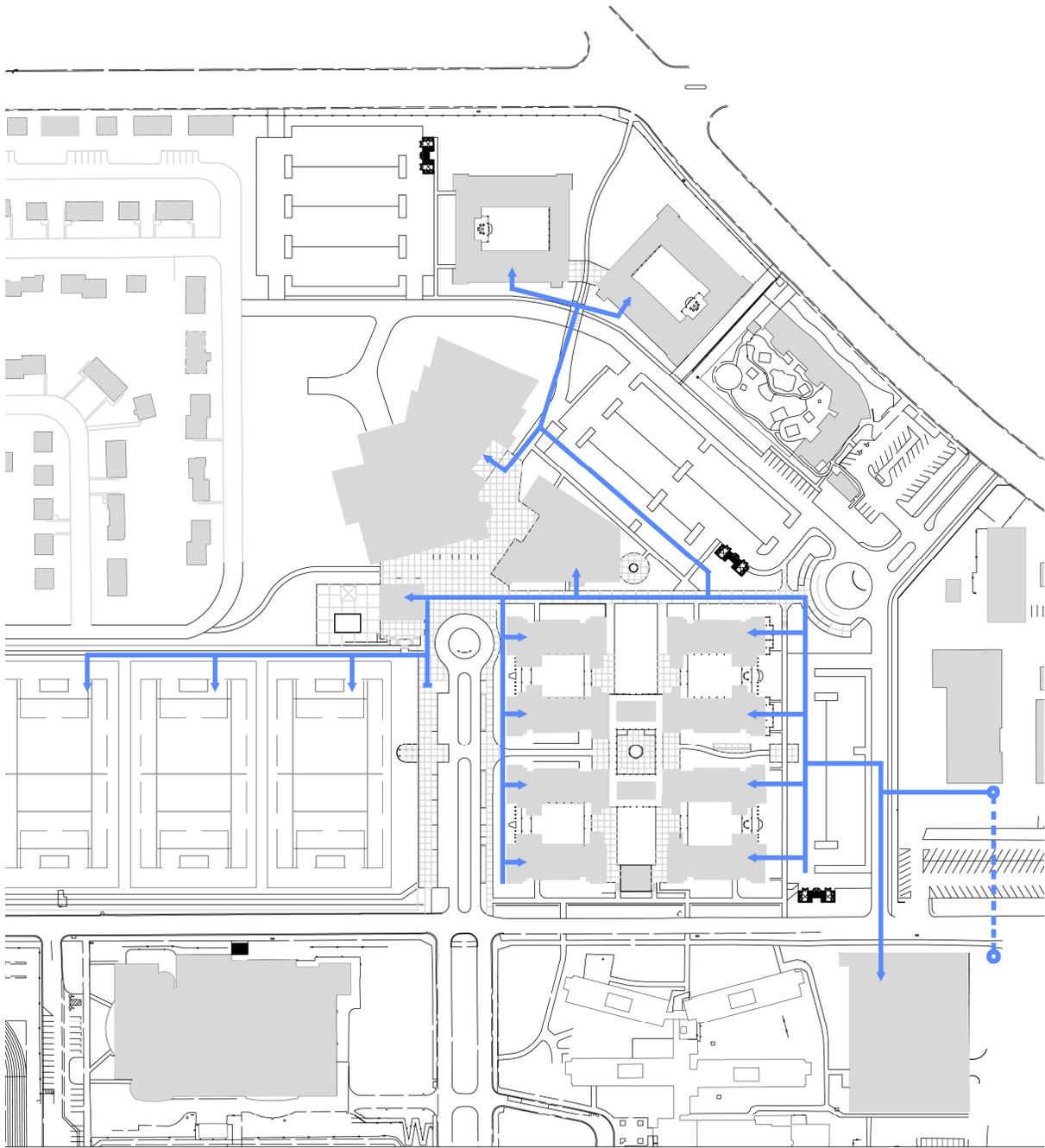
-  Existing Manhole
-  Existing System
-  New System

**ELECTRICAL SYSTEM DIAGRAM
PHASE 1**



-  Existing Manhole
-  Existing System
-  New System

**ELECTRICAL SYSTEM DIAGRAM
PHASE 2**



-  Existing Manhole
-  Existing System
-  New System

ELECTRICAL SYSTEM DIAGRAM
PHASE 3

6.0 FACILITY REQUIREMENTS

- 6.1 Housing Components
- 6.2 Dining / Student Services Components
- 6.3 Conference Services Components
- 6.4 Recreation Components



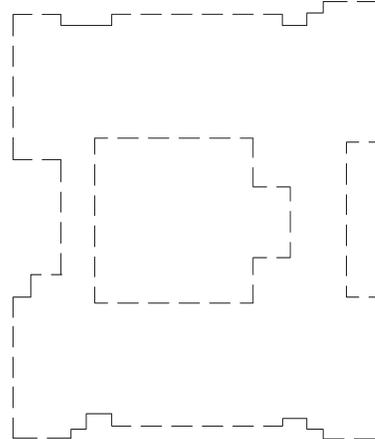
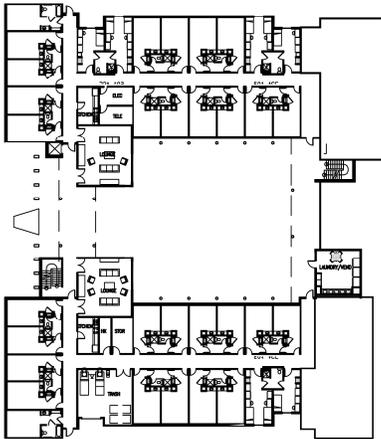
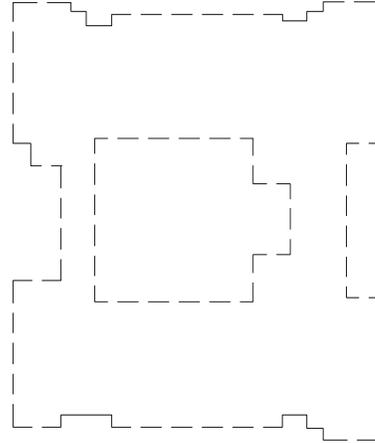
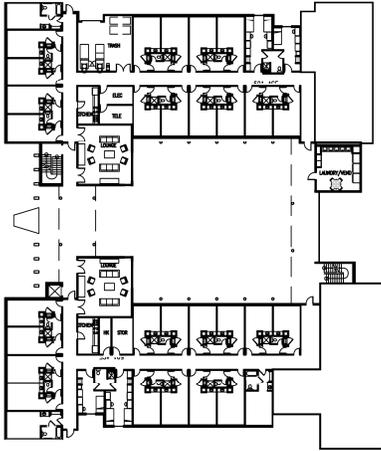
Facility Requirements

Individual space outlines are provided to provide a visual reference for the spaces in each of the key programmatic areas. The plan data represents the targeted assignable area as presented in the space programs. In addition, where appropriate, furnishings and capacities are shown to provide a reference for how the space may be used.

6.1 Housing Units

- Residence Halls
- Resident Services Office
- Apartments

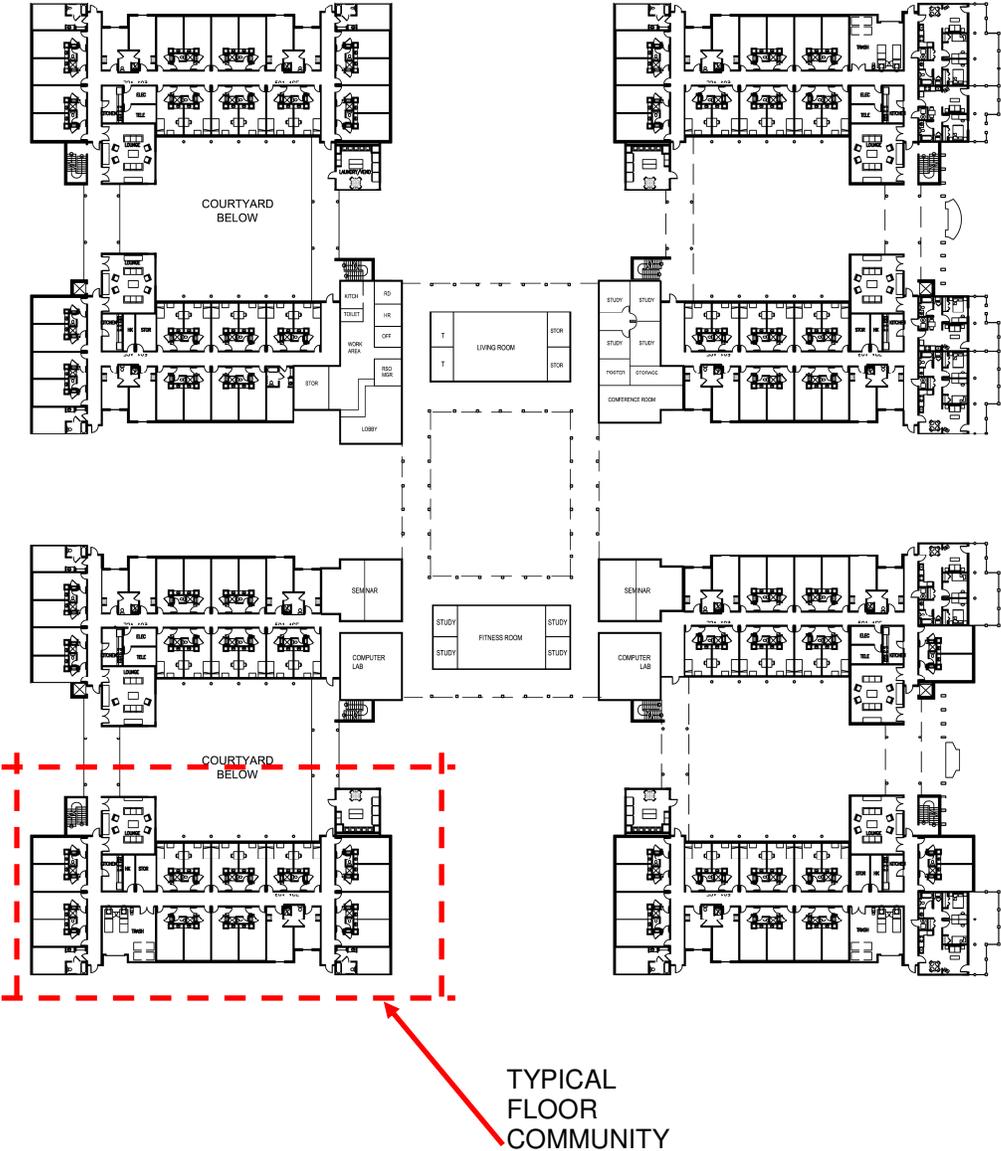
Program Development & Space Outline



GROUND FLOOR



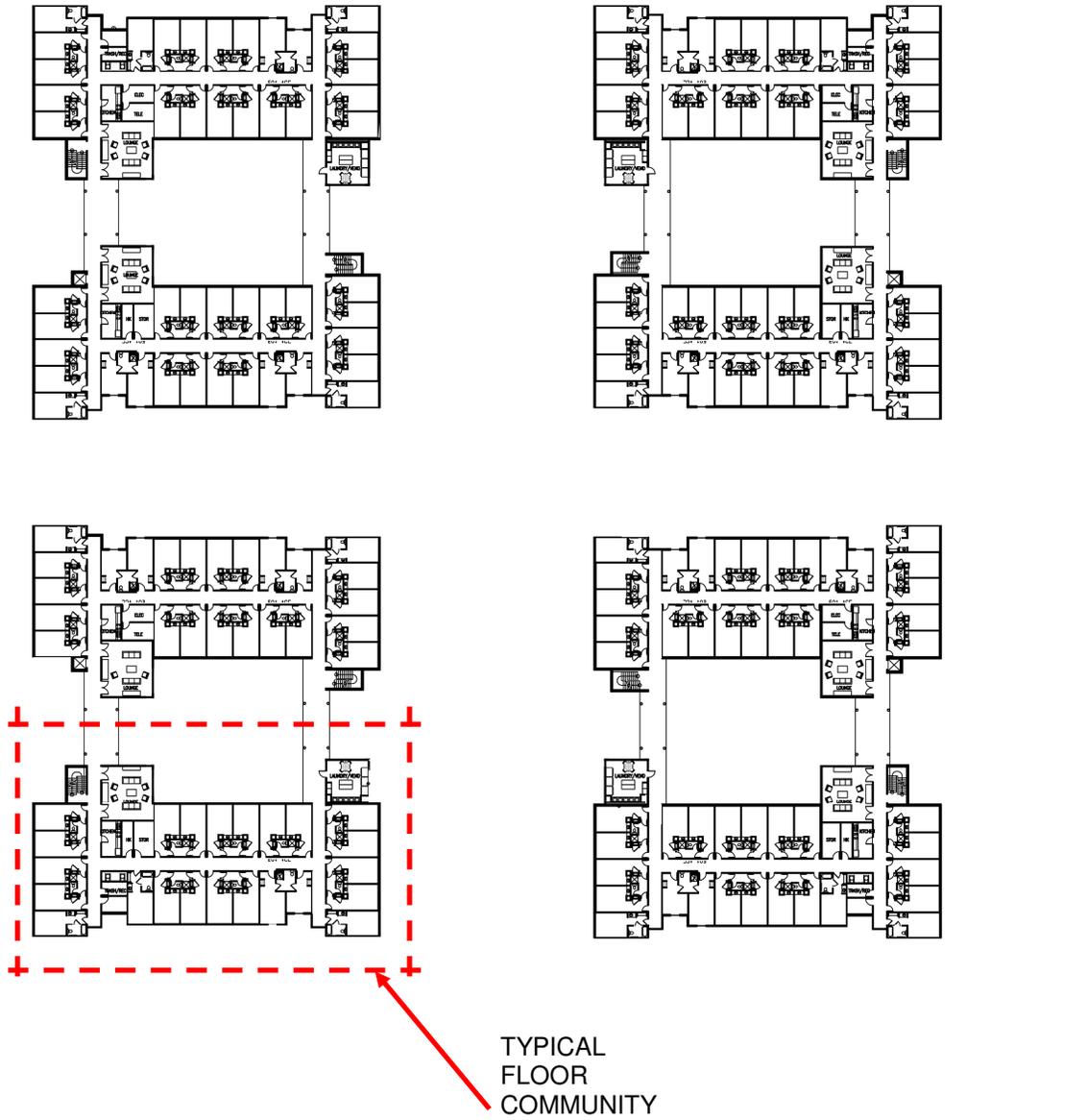
Program Development & Space Outline



FIRST FLOOR



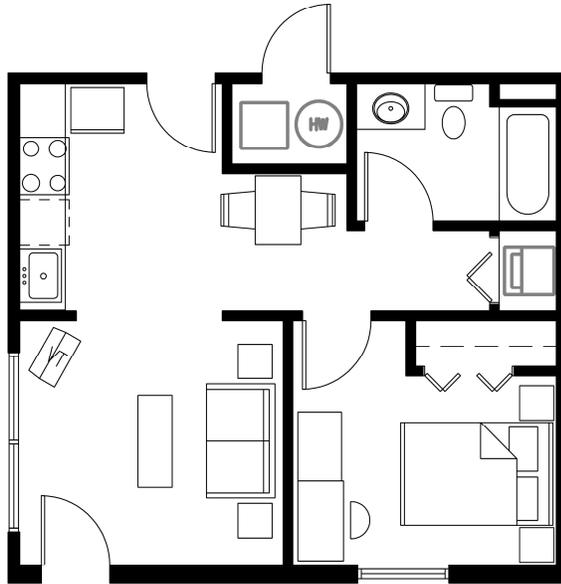
Program Development & Space Outline



TYPICAL FLOOR



Program Development & Space Outline



1 BEDROOM STAFF APT

504± NSF

Scale: 1/8" = 1'-0"

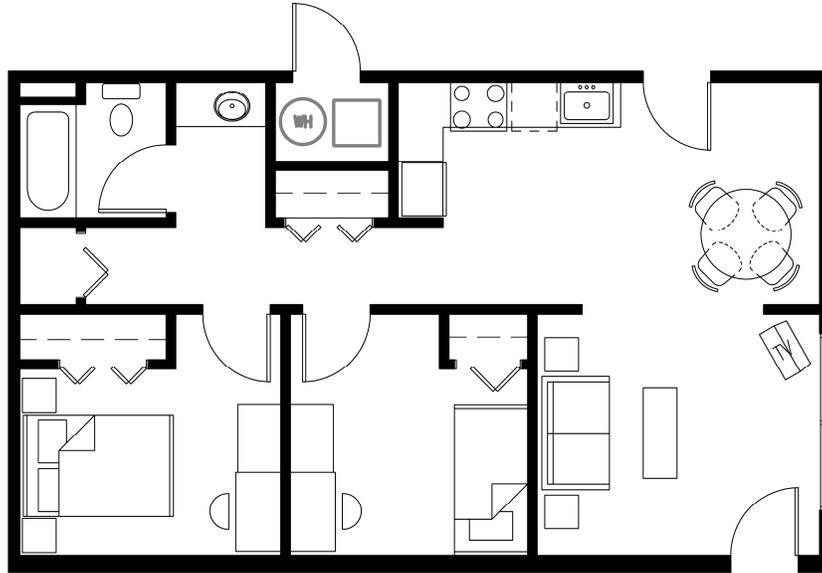


Canyon Crest Site DPP

Program Development & Space Outline

	AREA		OCCUPANCY
Staff/Living Spaces (staff: students)	Target NSF		Institutional Standards
1 Bedroom Staff Apartment	504		Design
FUNCTION	Sleep, study and bath accommodations		
DIMENSIONS	21' x 24' ±		
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting		
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units and walls surrounding bath		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area/Living Room: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc	
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None	
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.	
	HUMIDITY	50% ± 20% (No Mechanical control).	
	VENTILATION	Bath – Exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.	
PLUMBING	Self-rimming stainless steel sink with garbage disposal, lavatory, floor-mounted toilet, tub/shower, water heater, stackable washer/dryer		
CASEWORK	Kitchen cabinets		
FURNITURE / EQUIPMENT	Refrigerator, range with oven, sofa, tables, dining table, double bed, bedside tables, dresser, desk with chair		
SECURITY	Window sash locks, security screens on first floor windows Card access door		

Program Development & Space Outline



2 BEDROOM STAFF APT

756 NSF

Scale: 1/8" = 1'-0"

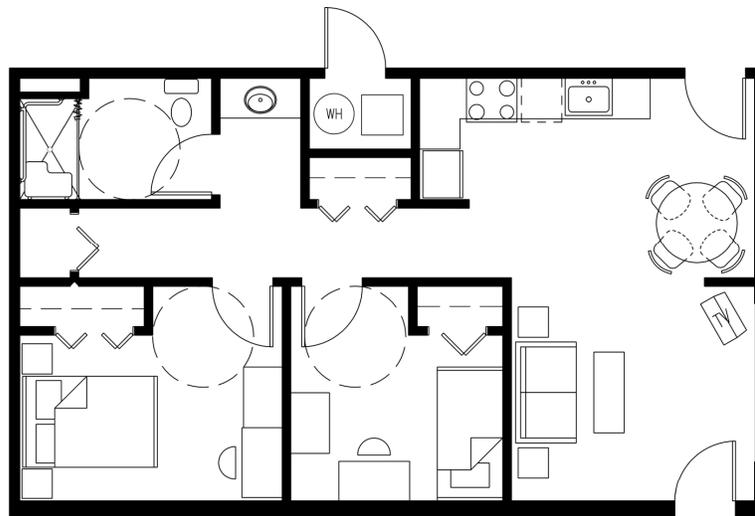


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Staff/Living Spaces (staff: students)		Target NSF	Institutional Standards
2 Bedroom Staff Apartment		756	Design
FUNCTION	Sleep, study and bath accommodations		
DIMENSIONS	21' x 36' ±		
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting		
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units and walls surrounding bath		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area/Living Area: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc	
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None	
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.	
	HUMIDITY	50% ± 20% (No Mechanical control).	
	VENTILATION	Bath – Exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.	
PLUMBING	Self-rimming stainless steel single compartment sink with garbage disposal, under-counter lavatory, floor-mounted toilet, tub/shower, water heater, stackable washer/dryer.		
CASEWORK	Kitchen cabinets		
FURNITURE / EQUIPMENT	Refrigerator, range with oven, sofa, tables, dining table, double bed, single bed, bedside tables, dressers, desks with chairs		
SECURITY	Window sash locks, security screens on first floor windows Card access door		

Program Development & Space Outline



2 BEDROOM STAFF APT - ADA UNIT

777± NSF

Scale: 1/8" = 1'-0"



Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>INSTITUTIONAL STANDARDS</u>	<u>OCCUPANCY</u>
Staff/Living Spaces (staff: students)		Target NSF	Institutional Standards	Design
2 Bedroom Staff Apartment – ADA Unit		777		
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	21' x 37' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area/Living Area: Operable windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.		
	HUMIDITY	50% ± 20% (No Mechanical control).		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.		
PLUMBING	Self-rimming stainless steel single compartment sink with garbage disposal, under-counter lavatory, floor mounted toilet, tub/shower, water heater, stackable washer/dryer			
CASEWORK	Kitchen cabinets			
FURNITURE / EQUIPMENT	Refrigerator, range with oven, sofa, tables, dining table, double bed, single bed, bedside tables, dressers, desks with chairs			
SECURITY	Window sash locks, security screens on first floor windows Card access door			

Program Development & Space Outline



2-PERSON SUITE

Scale: 1/8" = 1'-0"

284 NSF

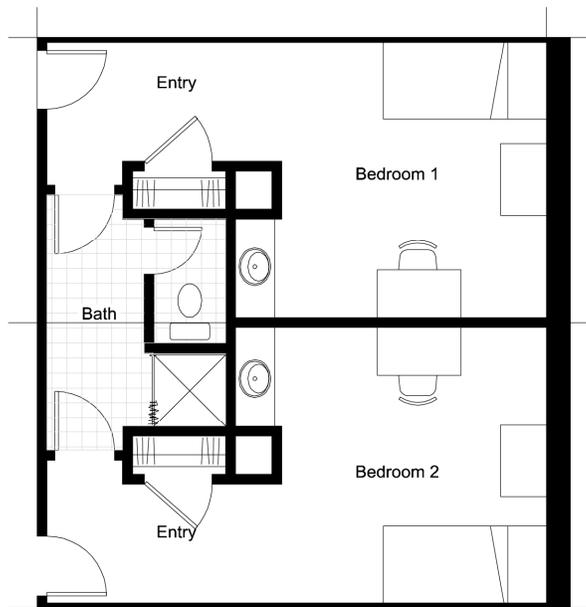


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Staff/Living Spaces (staff: students)		Target NSF	Institutional Standards
2 Person Suite (Double Room – 1D)		284	Design
FUNCTION	Sleep, study and bath accommodations		
DIMENSIONS	12' x 26' ±		
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting		
FINISHES	Floor: Carpet Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units and walls surrounding bath		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc	
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None	
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone	
	HUMIDITY	50% ± 20% (No Mechanical control)	
	VENTILATION	Bath – Exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.	
PLUMBING	One under-counter lavatories, one floor-mounted toilet, one tub/shower		
CASEWORK	N/A		
FURNITURE / EQUIPMENT	2 beds, 2 desks, 2 dressers, 2 chairs		
SECURITY	Window sash locks, security screens on first floor windows Card access door		

Program Development & Space Outline



2-PERSON SEMI-SUITE UNIT

502 NSF

Scale: 1/8" = 1'-0"

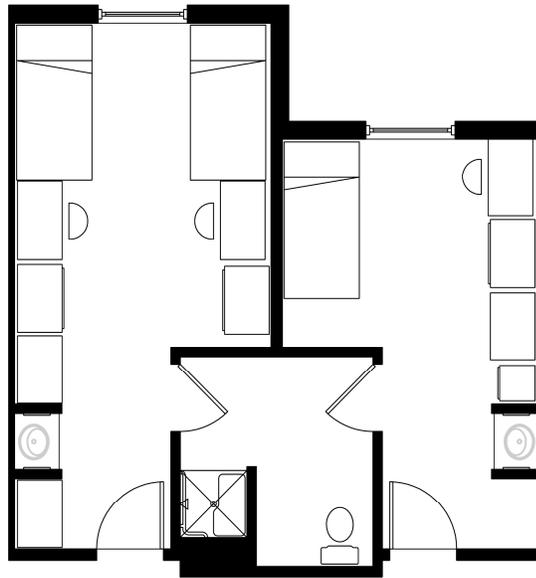


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Student Residences – Semi-Suite		Target NSF	Institutional Standards
2-Person Semi-Suite (2S)		502	Design
FUNCTION	Sleep and study		
DIMENSIONS	21' x 24' ±		
CRITICAL CLEARANCES			
FINISHES	Floor: Carpet Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles with dedicated circuit. Study duplex IG outlet, dedicated	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 FC, Study: 15-25 (general), 40-50 Fc (task)	
	COMMUNICATIONS	Sleeping Area: Data and communication connections; CATV connection	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath: None	
MECHANICAL	TEMPERATURE	75°F – dedicated 4-pipe fan coil unit.	
	HUMIDITY	50% ± 20% (No Mechanical control)	
	VENTILATION	Bath exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.	
PLUMBING	Two lavatories, one floor-mounted toilet, one shower		
CASEWORK	N/A		
FURNITURE / EQUIPMENT	2 beds, 2 desks, 2 dressers, 2 chairs		
SECURITY	Window sash locks, security screens on first floor windows Card access door		

Program Development & Space Outline



3-PERSON SEMI-SUITE UNIT

501 NSF

Scale: 1/8" = 1'-0"

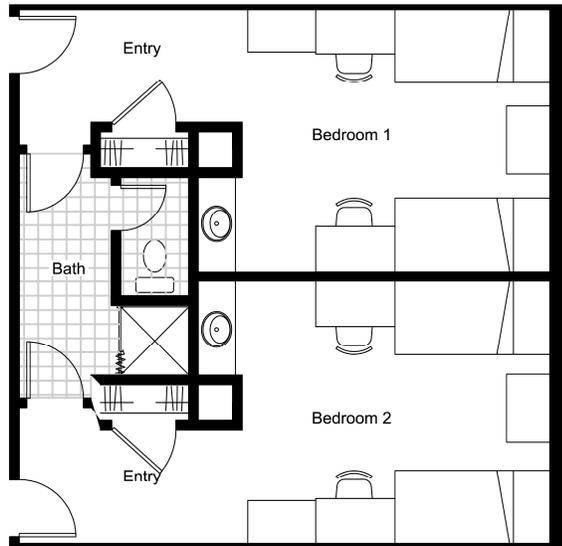


Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>Institutional Standards</u>	<u>OCCUPANCY</u>
Staff/Living Spaces (staff: students)		Target NSF		Design
3 Person Semi-Suite (Double/Single Unit – 1D/1S)		501		
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	12' x 26' ± / 12'x21' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWES	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.		
	HUMIDITY	50% ± 20% (No Mechanical control).		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.		
PLUMBING	Two under-counter lavatories, floor-mounted toilet, shower			
CASEWORK	N/A			
FURNITURE / EQUIPMENT	3 beds, 3 dressers, 3 desks, 3 chairs			
SECURITY	Window sash locks, security screens on first floor windows Card access door			

Program Development & Space Outline



4-PERSON SEMI-SUITE UNIT

624 NSF

Scale: 1/8" = 1'-0"

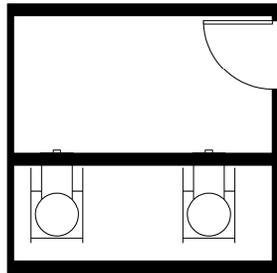


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Student Residences – Semi-Suite		Target NSF	Institutional Standards
4-person Semi-Suite (2D)		624	Design
FUNCTION	Sleep and study		
DIMENSIONS	24' x 26' ±		
CRITICAL CLEARANCES			
FINISHES	Floor: Carpet Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles with dedicated circuit. Study duplex IG outlet, dedicated	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task)	
	COMMUNICATIONS	Sleeping Area: Two Data and one communication connections per room; CATV connection	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None	
MECHANICAL	TEMPERATURE	75°F – dedicated 4-pipe fan coil unit.	
	HUMIDITY	50% ± 20% (No Mechanical control)	
	VENTILATION	Bath exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria	
PLUMBING	Two under-counter lavatories, one floor-mounted toilet, one shower		
CASEWORK	N/A		
FURNITURE / EQUIPMENT	4 Beds, 4 desks, 4 dressers, 4 chairs		
SECURITY	Window sash locks, security screens on first floor windows Card access door		

Program Development & Space Outline



TRASH/RECYCLE CHUTE

120 NSF

Scale: 1/8" = 1'-0"

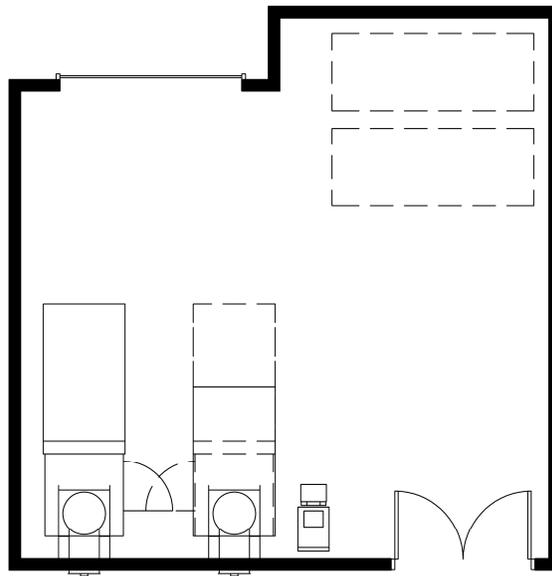


Canyon Crest Site DPP

Program Development & Space Outline

	AREA		OCCUPANCY
Meeting / Academic / Programs	Target NSF	Institutional Standards	Design
Trash/Recycle Chute	120		
FUNCTION	Meeting space		
DIMENSIONS	10' x 14' ±		
CRITICAL CLEARANCES			
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: SAPC Doors: Wood Windows: N/A		
ACOUSTIC	Sound separation from adjacent program spaces; sound absorption / reverberating as required		
VIEWS	N/A		
DAYLIGHTING NATURAL VENT.			
ELECTRICAL	POWER	General duplex receptacles	
	LIGHTING	Direct/Indirect 30-35 footcandles	
	COMMUNICATIONS	None	
	SPECIAL	Smoke detector strobe / horn	
MECHANICAL	TEMPERATURE	75°F – dedicated zone	
	HUMIDITY	40% ± 20%	
	VENTILATION	General exhaust	
	ACOUSTIC	None	
PLUMBING	N/A		
CASEWORK	N/A		
FURNITURE / EQUIPMENT	Trash Chute		
SECURITY	Card access door		

Program Development & Space Outline



TRASH ROOM

Scale: 1/8" = 1'-0"

518 NSF

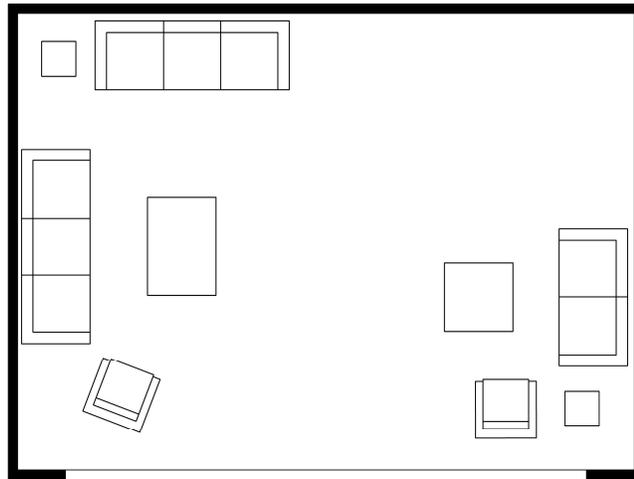


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Residential Community		Target NSF	Institutional Standards
Trash Room		518	Design
FUNCTION	Trash and recycling bin		
DIMENSIONS	24' x 26'		
CRITICAL CLEARANCES	Trash dumpster and compactor clearances		
FINISHES	Floor: Concrete Base: Resilient Walls: Epoxy painted GWB or painted CMU Ceiling: Exposed underside Doors: Roll-up exterior, hollow metal interior Windows: N/A		
ACOUSTIC	None		
VIEWS	N/A		
DAYLIGHTING NATURAL VENT.	N/A		
ELECTRICAL	POWER	General duplex receptacles	
	LIGHTING	Direct 10-20 Fc	
	COMMUNICATIONS	None	
	SPECIAL	Smoke detector strobe / horn	
MECHANICAL	TEMPERATURE	75°F – dedicated zone	
	HUMIDITY	40% ± 20%	
	VENTILATION	General exhaust	
	ACOUSTIC	No special requirements	
	PLUMBING	Hose bibb, floor drain	
	CASEWORK	N/A	
	FURNITURE / EQUIPMENT	Trash dumpsters, trash compactors	
	SECURITY	Card access door	

Program Development & Space Outline



MAIN DESK WAITING AREA

540± NSF

Scale: 1/8" = 1'-0"

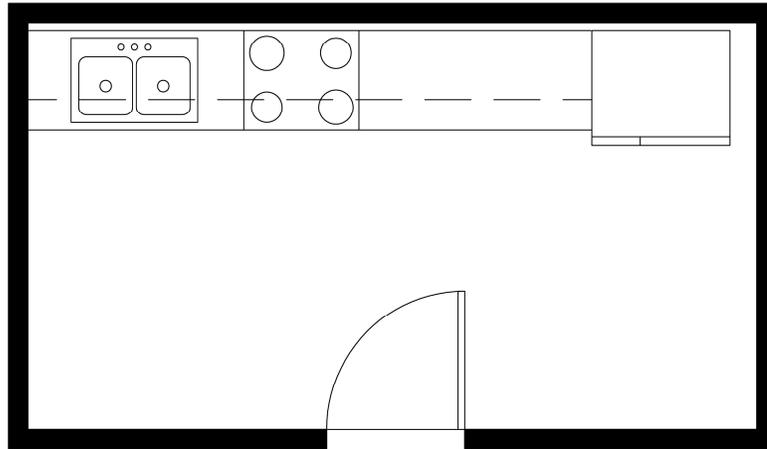


Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>Institutional Standards</u>	<u>OCCUPANCY</u>
Administrative		Target NSF		Design
Main Desk/Waiting Area		540		
FUNCTION	Informal lounge/waiting area with reception desk			
DIMENSIONS	18' x 25' ±			
CRITICAL CLEARANCES				
FINISHES	Floor: Carpet Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Store Front Door Windows: Aluminum or Vinyl Clad			
ACOUSTIC	N/A			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Operable doors and windows			
ELECTRICAL	POWER	General duplex receptacles per NEC 210C		
	LIGHTING	Indirect/Direct – General: 15-25 Fc, 40-50 Fc (task)		
	COMMUNICATIONS	Data and communication connections; CATV connections		
	SPECIAL	Smoke detector strobe/horn Fire alarm control panel		
MECHANICAL	TEMPERATURE	75°F – dedicated 4-pipe fan coil unit		
	HUMIDITY	50% ±20% (No mechanical control)		
	VENTILATION	No special requirements when operable windows provided.		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.		
PLUMBING	N/A			
CASEWORK	N/A			
FURNITURE / EQUIPMENT	Lounge chairs, sofa, coffee and side tables			
SECURITY	Lockable door Rolling security grill at desk area			

Program Development & Space Outline



KITCHENETTE

128± NSF

Scale: 1/8" = 1'-0"

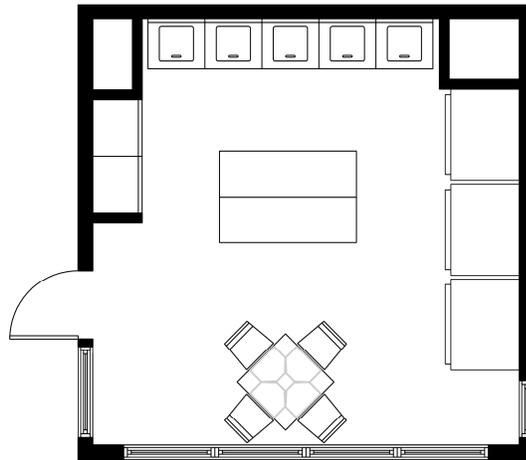


Canyon Crest Site DPP

Program Development & Space Outline

		AREA		OCCUPANCY
Residential Community		Target NSF	Institutional Standards	Design
Kitchenette		128		
FUNCTION	Food preparation, storage			
DIMENSIONS	8' x 16' ±			
CRITICAL CLEARANCES				
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Glazed metal Windows: Aluminum or Vinyl Clad			
ACOUSTIC	N/A			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Operable windows – if possible			
ELECTRICAL	POWER	General duplex receptacles per NEC 210C. GFI receptacles at countertop		
	LIGHTING	Ambient light: Indirect/Direct 20-30 Fc		
	COMMUNICATIONS			
	SPECIAL	No Special Requirements		
MECHANICAL	TEMPERATURE	75°F – dedicated zone		
	HUMIDITY	40% ± 20%		
	VENTILATION	Range Hood Exhaust		
	ACOUSTIC	No special requirements		
PLUMBING	Self-rimming stainless steel double compartment sink with garbage disposal, range and oven			
CASEWORK	Wall and base cabinets			
FURNITURE / EQUIPMENT	Range, refrigerator, oven, trash and recycling containers			
SECURITY	Card access door Lockable cabinets			

Program Development & Space Outline



LAUNDRY / VENDING

240± NSF

Scale: 1/8" = 1'-0"

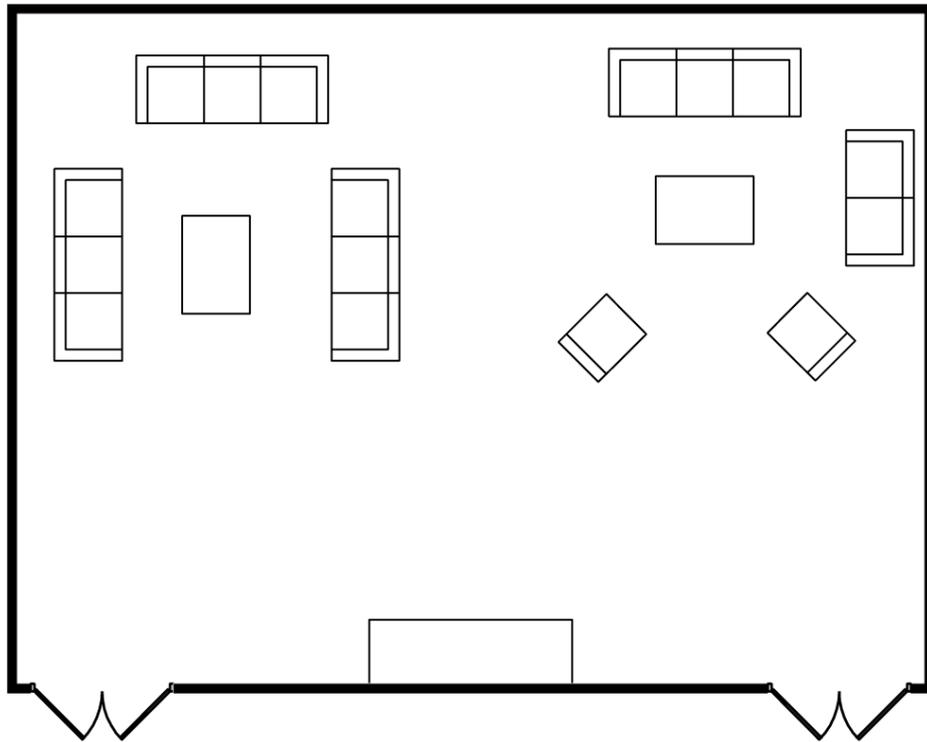


Canyon Crest Site DPP

Program Development & Space Outline

	AREA		OCCUPANCY
Support Spaces	Target NSF	Institutional Standards	Design
Laundry	240		
FUNCTION	Laundry Area		
DIMENSIONS	15' x 16' ±		
CRITICAL CLEARANCES			
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: SAPC Doors: Glazed metal Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between laundry and study areas		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	No Special Requirements		
ELECTRICAL	POWER	General duplex receptacles. Power as required for washers and dryers	
	LIGHTING	Direct – 20-30 Fc	
	COMMUNICATIONS	Data and communication connections; CATV connections	
	SPECIAL	Smoke detector strobe/horn	
MECHANICAL	TEMPERATURE	75°F – dedicated zone	
	HUMIDITY	40% ± 20%	
	VENTILATION	Dryer exhaust, General exhaust.	
	ACOUSTIC	No special requirements	
	PLUMBING	(5) Washers, (3) Dryers, floor drain	
	CASEWORK	N/A	
	FURNITURE / EQUIPMENT	Washers, stacked dryers, laundry vending machine, laundry tables, trash and recycling containers	
	SECURITY	Card access door	

Program Development & Space Outline



CENTRAL STUDENT LOUNGE

1200± NSF

Scale: 1/8" = 1'-0"

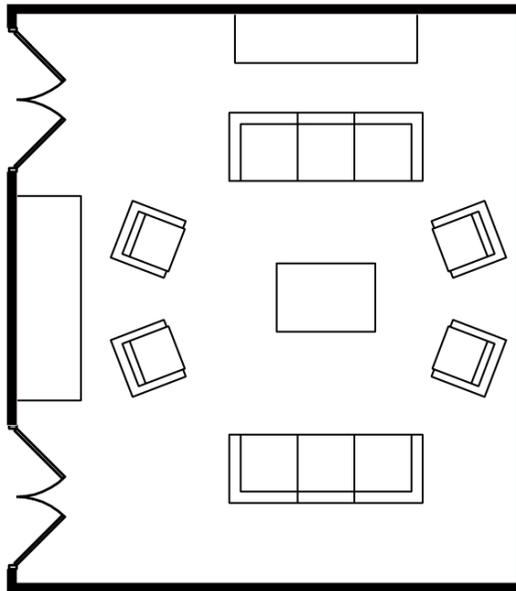


Canyon Crest Site DPP

Program Development & Space Outline

	AREA	OCCUPANCY
Residential Community	Target NSF	Institutional Standards
Central Student Lounge	1200	Design
FUNCTION	Social gathering area – informal study area	
DIMENSIONS	25' x 22' ±	
CRITICAL CLEARANCES		
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Glazed metal Windows: Aluminum or Vinyl Clad	
ACOUSTIC	High Noise Reduction Coefficient	
VIEWS	Views desirable where possible	
DAYLIGHTING NATURAL VENT.	Operable windows – if possible	
ELECTRICAL	POWER	General duplex receptacles per NEC 210C
	LIGHTING	Indirect/Direct – General: 5-10 Fc, Study: 15-25 Fc (general), 40-50 Fc (task)
	COMMUNICATIONS	Data and communication connections; CATV connection
	SPECIAL	Smoke detector strobe/horn
MECHANICAL	TEMPERATURE	75°F – dedicated zone
	HUMIDITY	50% ±20% (No mechanical control)
	VENTILATION	No special requirements when operable windows provided
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria
	PLUMBING	N/A
	CASEWORK	N/A
FURNITURE / EQUIPMENT	25 couches, 2 large chairs, 4 lamps, tables, TV, trash and recycling containers	
SECURITY	Lockable door	

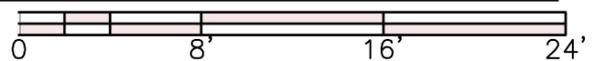
Program Development & Space Outline



RESIDENCE HALL STUDENT LOUNGE

550 NSF

Scale: 1/8" = 1'-0"

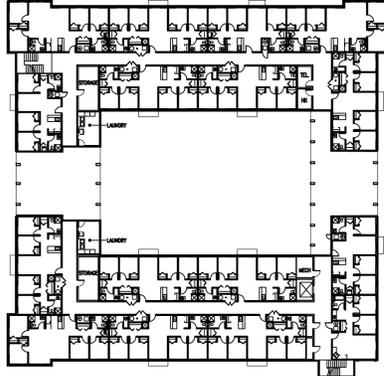


Canyon Crest Site DPP

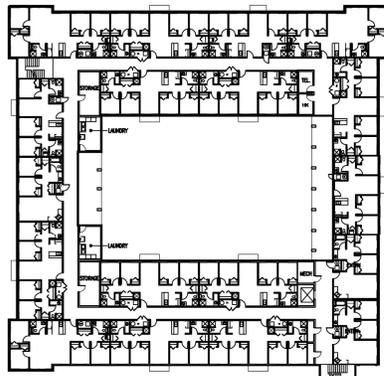
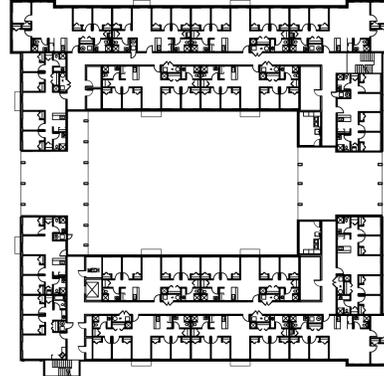
Program Development & Space Outline

Residential Community		AREA	Institutional Standards	OCCUPANCY
Residence Hall Student Lounge		Target NSF		Design
FUNCTION	Social gathering area – informal study area			
DIMENSIONS	26' x 23' ±			
CRITICAL CLEARANCES				
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	High Noise Reduction Coefficient			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Operable windows – if possible			
ELECTRICAL	POWER	General duplex receptacles per NEC 210C		
	LIGHTING	Indirect/Direct – General: 5-10 Fc, Study: 15-25 Fc (general), 40-50 Fc (task)		
	COMMUNICATIONS	Data and communication connections; CATV connection		
	SPECIAL	Smoke detector strobe/horn		
MECHANICAL	TEMPERATURE	75°F – dedicated zone		
	HUMIDITY	50% ±20% (No Mechanical control)		
	VENTILATION	No special requirements when operable windows provided		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC criteria		
PLUMBING	N/A			
CASEWORK				
FURNITURE / EQUIPMENT	2 couches, 4 large chairs, 4 lamps, tables, TV, trash and recycling containers			
SECURITY	Lockable door			

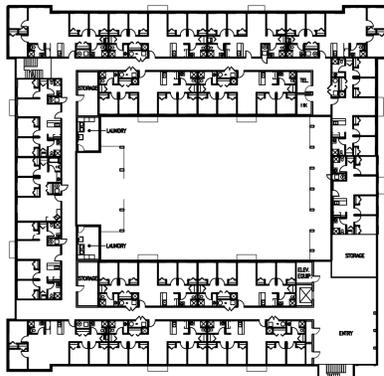
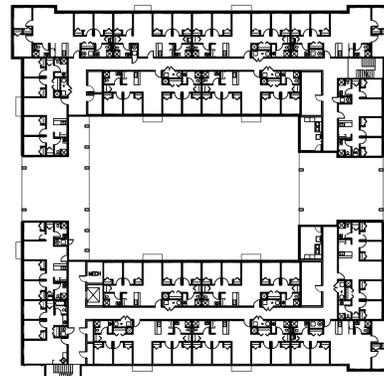
Program Development & Space Outline



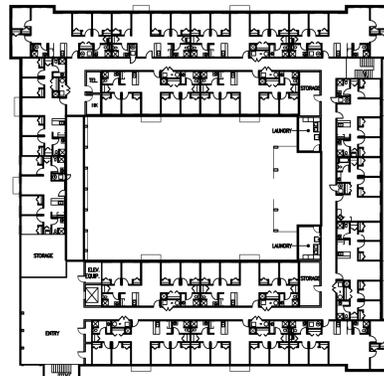
TYPICAL FLOOR



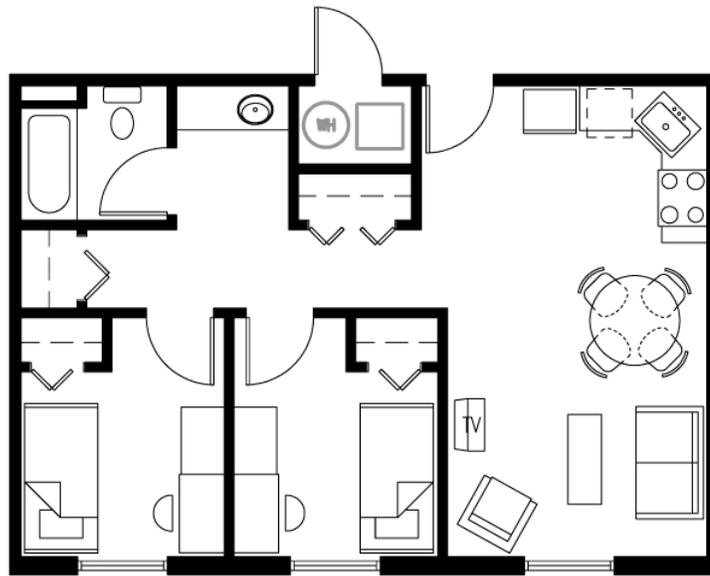
SECOND FLOOR



GROUND FLOOR



Program Development & Space Outline



APARTMENT UNIT - 2 BEDROOM APT

601 NSF

Scale: 1/8" = 1'-0"

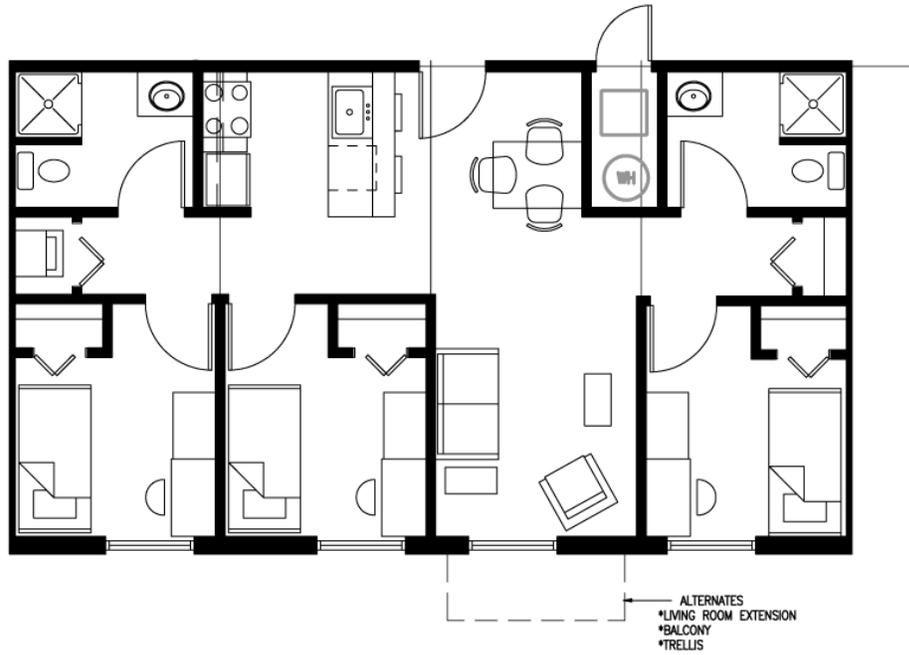


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Staff/Living Spaces (staff: students)		Target NSF	Institutional Standards
2 Bedroom Apartment		601	Design
FUNCTION	Sleep, study and bath accommodations		
DIMENSIONS	21' x 35' ±		
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting		
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units and walls surrounding bath		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc	
	COMMUNICATIONS	Sleeping Area: Voice: CAT 3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None	
MECHANICAL	TEMPERATURE	75°F – dedicated 4-pipe fan coil unit.	
	HUMIDITY	50% ±20% (No Mechanical control)	
	VENTILATION	Bath Exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with Space NC Criteria.	
PLUMBING	Self-rimming single compartment sink with garbage disposal. Single under-counter lavatory, floor-mounted toilet, tub-shower, water heater.		
CASEWORK	Kitchen cabinets		
FURNITURE / EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, two single beds, dressers, desks with chairs		
SECURITY	Window sash locks, security screens on first floor windows Card access door		

Program Development & Space Outline



APARTMENT UNIT - 3 BEDROOM

748 NSF

Scale: 1/8" = 1'-0"

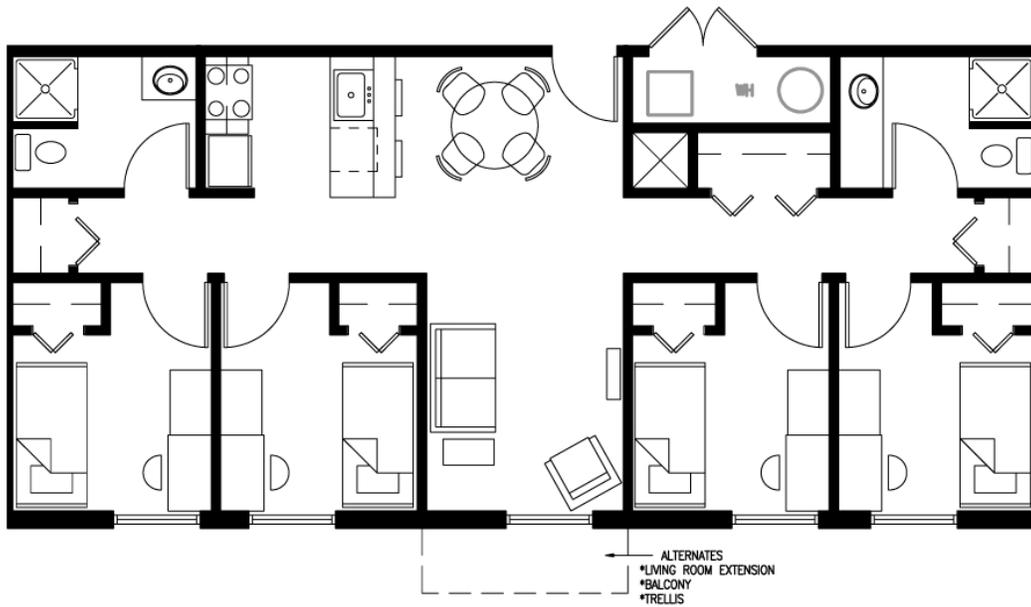


Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>INSTITUTIONAL STANDARDS</u>	<u>OCCUPANCY</u>
Staff/Living Spaces (staff: students)		Target NSF	Institutional Standards	Design
3 Bedroom Apartment		748		
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	21' x 47' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWES	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT 3 / Data: CAT5 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil units for each zone.		
	HUMIDITY	50% ± 20% (No Mechanical control)		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with Space NC Criteria.		
PLUMBING	Self-rimming single compartment sink with garbage disposal. Single under-counter lavatory, floor-mounted toilet, tub-shower, water heater.			
CASEWORK	Kitchen cabinets			
FURNITURE / EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, three single beds, dressers, desks with chairs			
SECURITY	Window sash locks, security screens on first floor windows Card access door			

Program Development & Space Outline



APARTMENT UNIT - 4 BEDROOM - OPTION 1

890 NSF

Scale: 1/8" = 1'-0"

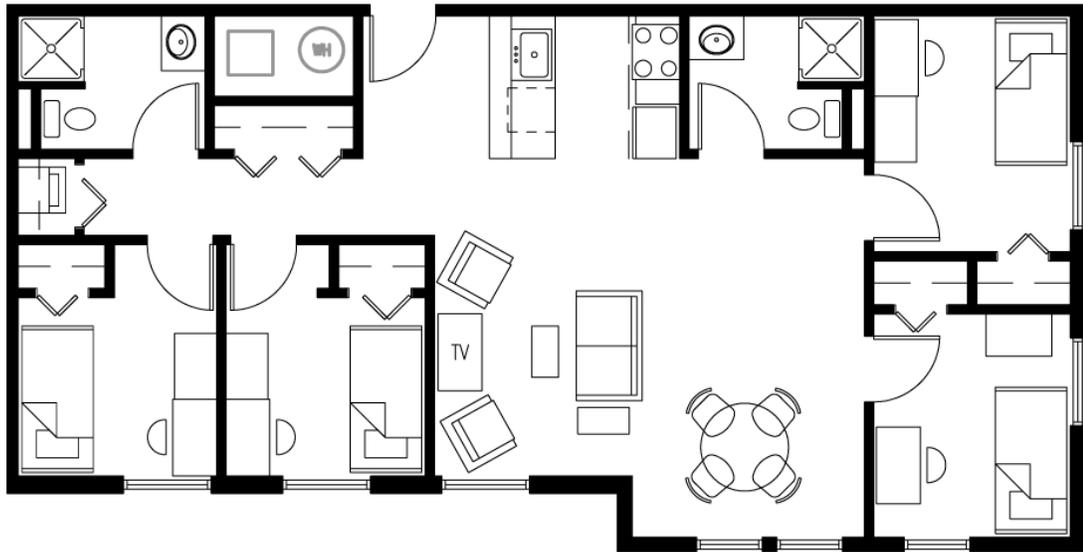


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Staff/Living Spaces (staff: students)		Target NSF	Institutional Standards Design
4 Bedroom Apartment – Option 1		890	
FUNCTION	Sleep, study and bath accommodations		
DIMENSIONS	21' x 47' ±		
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting		
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units and walls surrounding bath		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc	
	COMMUNICATIONS	Sleeping Area: Voice: CAT 3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None	
MECHANICAL	TEMPERATURE	75°F – dedicated 4-pipe fan coil unit.	
	HUMIDITY	50% ± 20% (No Mechanical control)	
	VENTILATION	Bath – Exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.	
PLUMBING		(1) Self-rimming stainless steel single compartment sink with garbage disposal, (2) lavatories, (2) floor mounted toilets, (2) showers. Water heater	
CASEWORK		Kitchen cabinets	
FURNITURE / EQUIPMENT		Refrigerator, range with oven, sofa, chair, tables, dining table, four single beds, dressers, desks with chairs	
SECURITY		Window sash locks, security screens on first floor windows Card access door	

Program Development & Space Outline



APARTMENT UNIT - 4 BEDROOM - OPTION 2

1019 NSF

Scale: 1/8" = 1'-0"

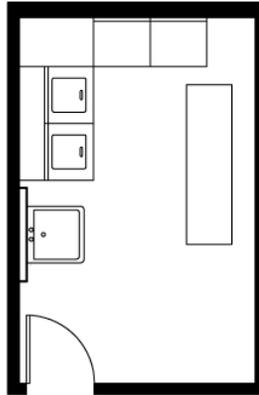


Canyon Crest Site DPP

Program Development & Space Outline

	AREA	OCCUPANCY
Staff/Living Spaces (staff: students)	Target NSF	Institutional Standards Design
4 Bedroom Apartment – Option 2	1019	
FUNCTION	Sleep, study and bath accommodations	
DIMENSIONS	21' x 47' ±	
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting	
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad	
ACOUSTIC	Sound separation between complete living units and walls surrounding bath	
VIEWS	Views desirable where possible	
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows	
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc
	COMMUNICATIONS	Sleeping Area: Voice: CAT 3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None
MECHANICAL	TEMPERATURE	75°F – dedicated 4-pipe fan coil unit.
	HUMIDITY	50% ± 20% (No Mechanical control)
	VENTILATION	Bath – Exhaust
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.
PLUMBING		(1) Self-rimming stainless steel double compartment sink with garbage disposal, (2) lavatories, (2) floor-mounted toilets, (2) showers. Water heater
CASEWORK		Kitchen cabinets
FURNITURE / EQUIPMENT		Refrigerator, range with oven, sofa, chair, tables, dining table, four single beds, dressers, desks with chairs
SECURITY		Window sash locks, security screens on first floor windows Card access door

Program Development & Space Outline



LAUNDRY / VENDING

170 NSF

Scale: 1/8" = 1'-0"

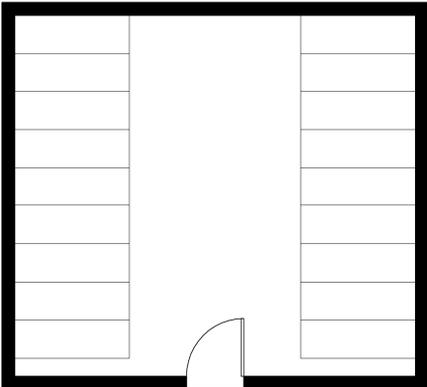


Canyon Crest Site DPP

Program Development & Space Outline

	AREA		OCCUPANCY
	Target NSF	Institutional Standards	Design
Support Spaces			
Laundry/Vending	170		
FUNCTION	Laundry Area		
DIMENSIONS	16' x 17' ±		
CRITICAL CLEARANCES			
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: SAPC Doors: Glazed Metal Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between laundry and study areas		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	No Special Requirements		
ELECTRICAL	POWER	General duplex receptacles. Power as required for washers and dryers	
	LIGHTING	Direct – 20-30 Fc	
	COMMUNICATIONS	Data and communication connections; CATV connections	
	SPECIAL	Smoke detector strobe/horn	
MECHANICAL	TEMPERATURE	75°F – dedicated zone	
	HUMIDITY	40% ± 20%	
	VENTILATION	Dryer exhaust, General exhaust.	
	ACOUSTIC	No special requirements	
PLUMBING	Laundry sink, (2) washers, (2) dryers, floor drain		
CASEWORK	N/A		
FURNITURE / EQUIPMENT	Washers, dryers, laundry table, laundry vending machine, trash and recycling containers		
SECURITY	Card access door		

Program Development & Space Outline



BICYCLE STORAGE ROOM

460 NSF

Scale: 1/8" = 1'-0"



Canyon Crest Site DPP

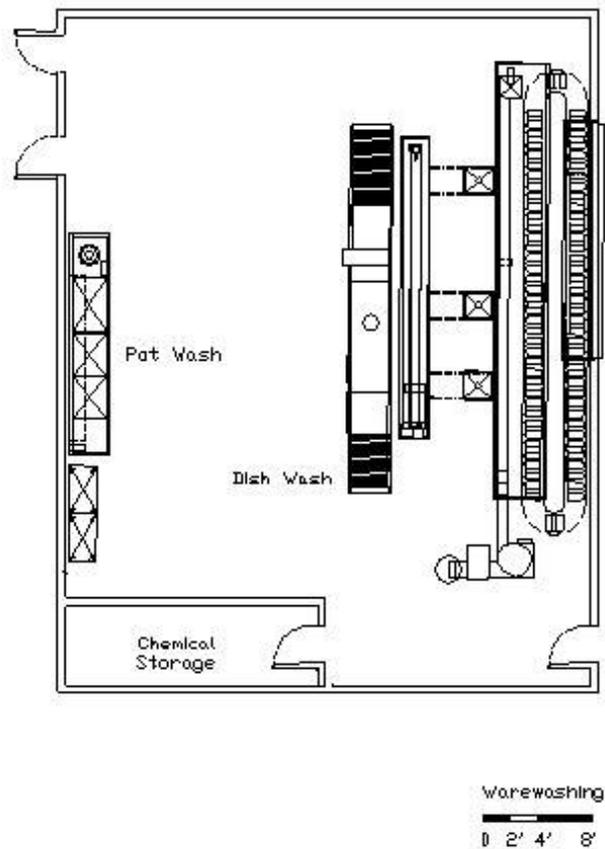
Program Development & Space Outline

		AREA		OCCUPANCY
Residential Community		Target NSF	Institutional Standards	Design
Bicycle Storage		460		
FUNCTION	Bicycle Storage			
DIMENSIONS	19' x 24'			
CRITICAL CLEARANCES				
FINISHES	Floor: Concrete Base: Resilient Walls: Epoxy Painted GWB or Painted CMU Ceiling: Exposed Underside Doors: Hollow Metal Exterior Windows: N/A			
ACOUSTIC	None			
VIEWS	N/A			
DAYLIGHTING NATURAL VENT.	N/A			
ELECTRICAL	POWER	General duplex receptacles.		
	LIGHTING	Direct – 10-20Fc		
	COMMUNICATIONS	None		
	SPECIAL	Smoke detector strobe/horn		
MECHANICAL	TEMPERATURE	No special requirements.		
	HUMIDITY	No special requirements.		
	VENTILATION	No special requirements.		
	ACOUSTIC	No special requirements.		
PLUMBING	Floor drain			
CASEWORK	N/A			
FURNITURE / EQUIPMENT	Bicycle storage racks			
SECURITY	Card access door			

6.2 Dining

- Dining Hall
- Campus Retail Deli/Convenience Store
- Express Café

Program Development & Space Outline



1900 sq. ft.

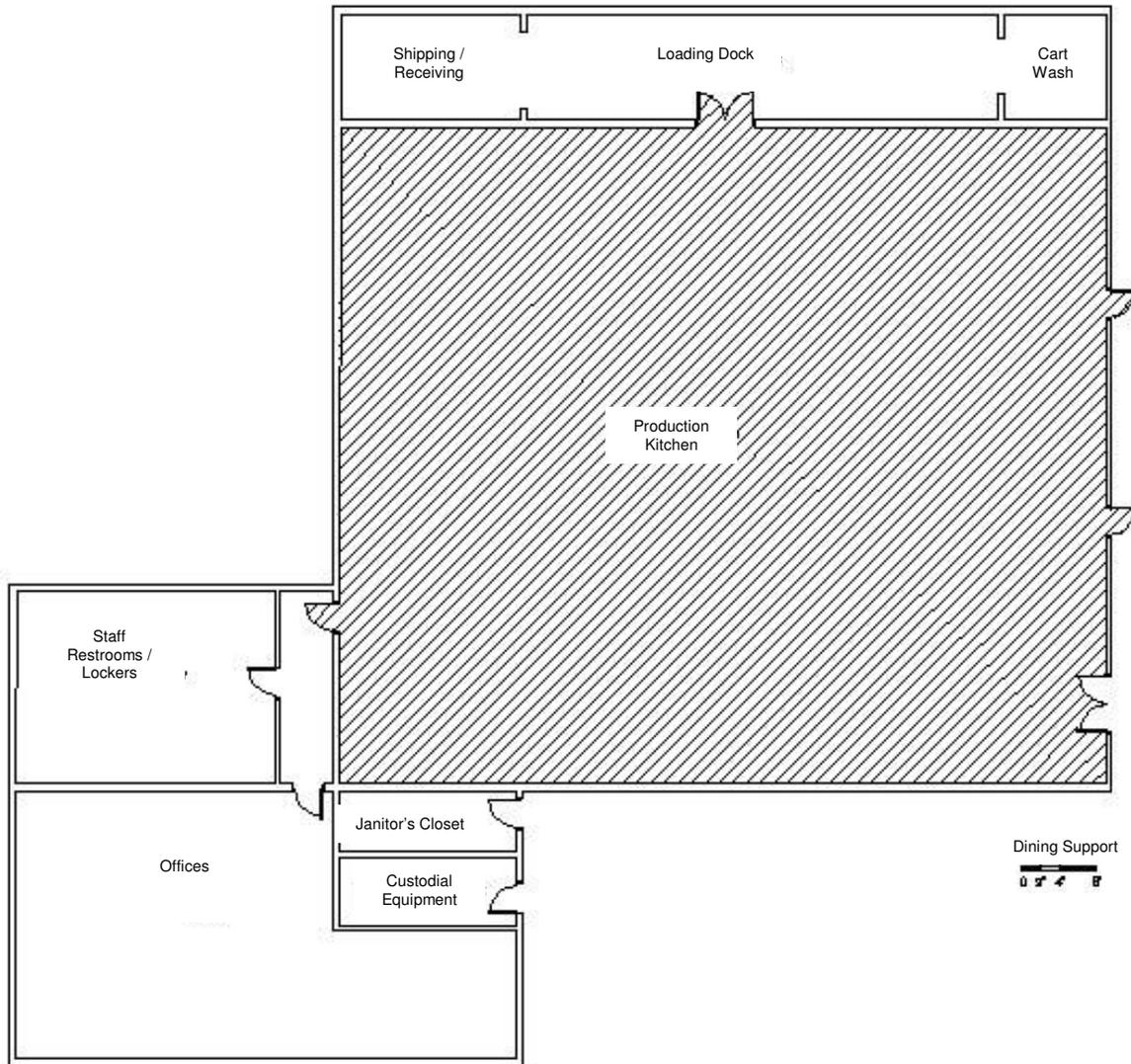
The layout shown is for illustration only. Final equipment layout, design and selection to be determined as part of design project.

Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>INSTITUTIONAL</u>	<u>OCCUPANCY</u>
100	Warewashing	TARGET NSF	Standards	Design
		1,900 sq. ft.		
		(Breakdown as Follows)		
		Dishwashing: 1,500 sq. ft.		
		Pot Washing: 300 sq. ft.		
		Chemical Storage: 100 sq. ft.		
FUNCTION	Clean and Sanitize Dishes, Utensil, Pots and Pans			
DIMENSIONS	TBD			
CRITICAL CLEARANCES	Minimum 36" wide clear openings			
FINISHES	Floor: Quarry Tile or Seamless Flooring suitable for Food Service applications Floor Load: 150 lbs/sq ft Base: Integrally Coved Base Walls: Ceramic Tile Ceiling: Epoxy Enamel Painted Acoustical Gypboard or Washable High-Density, Non-Perforated Lay In Acoustical Ceiling Tiles; 10' High Doors: TBD Windows: TBD			
ACOUSTIC	Noise Reduction Techniques required			
VIEWS	Desirable but Not Required			
DAYLIGHTING NATURAL VENT.	Desirable but Not Required			
ELECTRICAL	POWER	480V/3Ph, 208V/3Ph, 208V/1Ph, 120/1Ph		
	LIGHTING	General Area Lighting (Fluorescent)		
	COMMUNICATIONS	Telephone		
	SPECIAL	Equipment Monitoring System		
MECHANICAL	TEMPERATURE	Ambient Room Temperature Required		
	HUMIDITY	Ambient Room Humidity Required		
	VENTILATION	General HVAC; Exhaust Duct Connection for Dishmachine		
	ACOUSTIC			
PLUMBING	Cold Water, Hot Water, Indirect Waste, Direct Waste, Floor Drains			
CASEWORK	None Required			
FURNITURE / EQUIPMENT	Dishmachine w/Booster Heater, Tray Accumulator, Soiled Dishtable, Transfer Conveyor, Three Compartment Sink, Shelving, Sorting Table(s), Mobile Dish Racks and Carts			
SECURITY	Door Locks			

Program Development & Space Outline



3100 sq. ft.

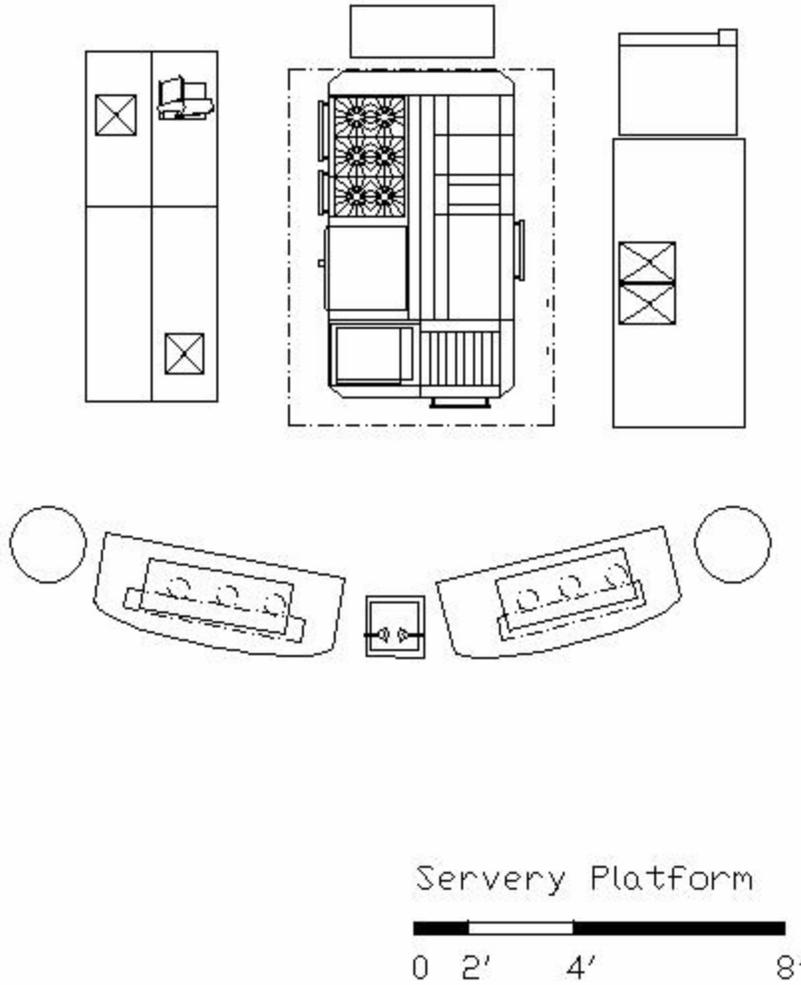
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Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>OCCUPANCY</u>
100	Dining Support	TARGET NSF	Institutional Standards Design
		3,100 sq. ft. (Breakdown as Follows) Loading Dock: 550 sq. ft. Shipping and Receiving: 200 sq. ft. Cart Washing: 120 sq. ft. Staff Restrooms/Lockers: 700 sq. ft. Janitor's Closet: 120 sq. ft. Custodial Equipment Room: 150 sq. ft. Offices: 1,140 sq. ft.	
FUNCTION	Support Operations for Production and Management of Food Service		
DIMENSIONS	TBD		
CRITICAL CLEARANCES	Minimum 36" wide clear openings		
FINISHES	Floor: For Shipping and Receiving, Cart Washing, Janitor's Closes, Custodial Equipment Room and Staff Restrooms/Lockers: Quarry Tile or Seamless Flooring Suitable for Food Service Applications. For Offices: Carpet. For Loading Dock: Sealed Concrete. Floor Load: 150 lbs/sq ft Base: TBD based on Flooring Material Walls: For Shipping and Receiving, Cart Washing, Janitor's Closes, Custodial Equipment Room and Staff Restrooms/Lockers: Ceramic Tile. For Offices: Painted Gypboard. Ceiling: Epoxy Enamel Painted Acoustic Gypboard or Washable High-Density, Non-Perforated Lay In Acoustic Ceiling Tiles Doors: TBD Windows: TBD		
ACOUSTIC	Noise Reduction Techniques required		
VIEWS	Exterior Views Desirable for Offices		
DAYLIGHTING NATURAL VENT.	Daylighting Desirable for Offices		
ELECTRICAL	POWER	208V/3Ph, 208V/1Ph, 120/1Ph	
	LIGHTING	General Area Lighting (Fluorescent), Task Lighting for Desks (Halogen or Incandescent)	
	COMMUNICATIONS	Telephone; Computer Data Lines	
	SPECIAL	Production Equipment Monitoring System	
MECHANICAL	TEMPERATURE	Ambient Room Temperature Required	
	HUMIDITY	Ambient Room Humidity Required	
	VENTILATION	Ambient Room Ventilation	
	ACOUSTIC		
	PLUMBING	Cold Water, Hot Water, Direct Waste, Floor Drains	
	CASEWORK	Counter in Conference Room	
FURNITURE / EQUIPMENT	Offices: Office Furniture. Loading Dock; Trash Compactor, Cardboard Baler, Dock Leveller. Janitor's Closet: Mop Sink. Cart Wash: Cart Washing Equipment. Staff Restrooms/Lockers: Lockers.		
SECURITY	Alarmed Dock Entrance. Door Locks for Offices.		

Program Development & Space Outline



~975 sq. ft.

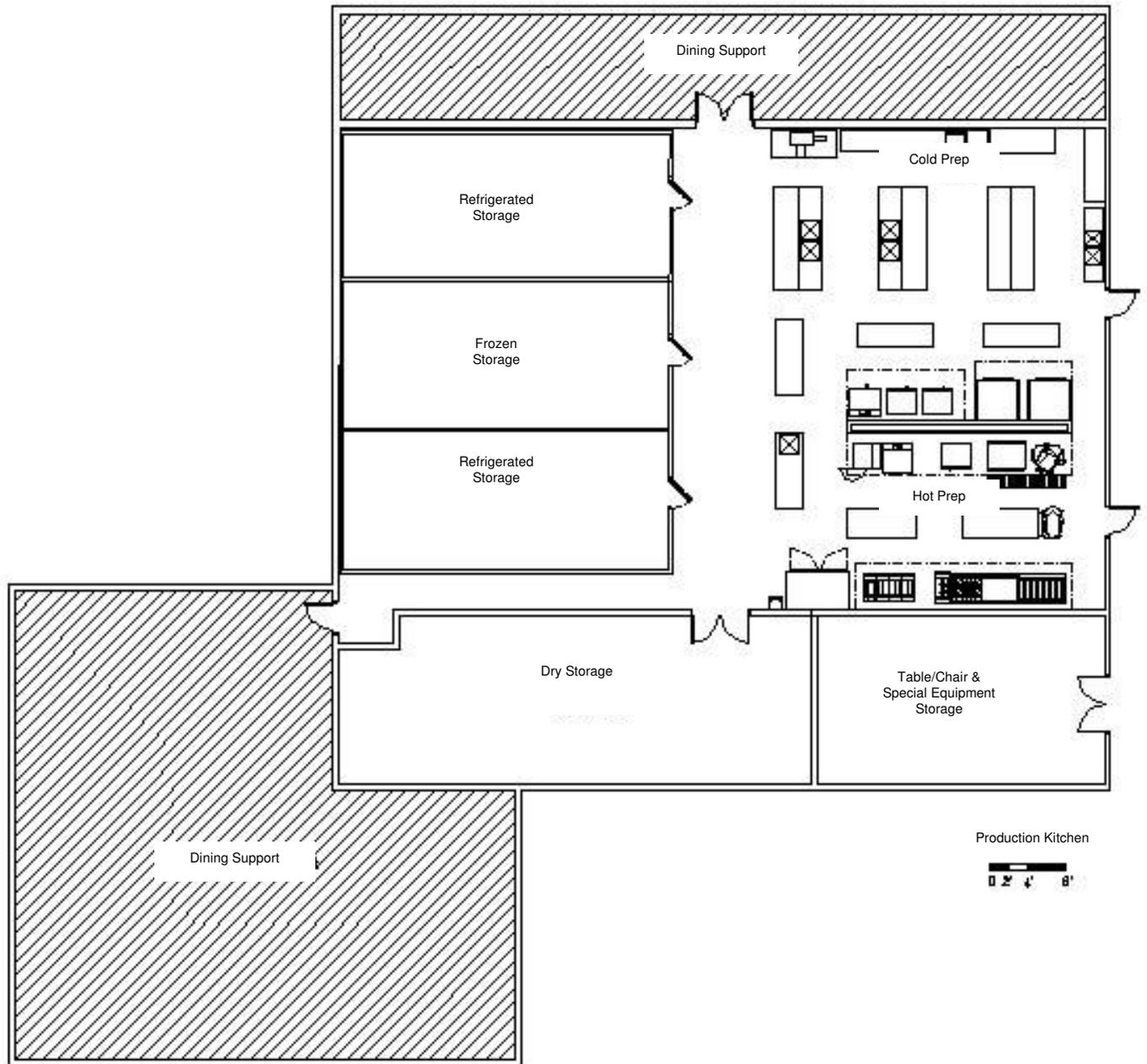
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Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
100	Servery Platform Prototype – Phases 1, 2 and 3	Target NSF	Institutional Standards Design
	Phase 1 Phase 2 Phase 3	5,625 sq. ft. 3,520 sq. ft. 3,520 sq. ft.	
		(Breakdown as Follows) Salad Platform: 75 sq. ft. Serving; 195 sq. ft. Queuing Eurokitchen Platform: 600 sq. ft. Serving; 375 sq. ft. Queuing Wood Fire Oven Platform: 600 sq. ft. Serving; 375 sq. ft. Queuing Deli Platform: 250 sq. ft. Serving; 650 sq. ft. Queuing Beverage Counters: 200 sq. ft. Serving; 200 sq. ft. Queuing	
FUNCTION	Point of Service for Food Products		
DIMENSIONS	TBD		
CRITICAL CLEARANCES	Minimum 36" wide clear openings		
FINISHES	Floor: Quarry Tile or Seamless Flooring suitable to Food Service applications (Service Side) / Non-slip Decorative Floor Tile or Stone (Customer Side) Floor Load: 150 lbs/sq ft Base: Integrally Coved Tile Base Walls: Ceramic Tile or other Decorative Finish suitable to Food Service applications (Serving and Merchandising Areas); Epoxy Enamel Painted Gypboard (Back of House Areas) Ceiling: Epoxy Enamel Painted Acoustical Gypboard or Washable High-Density, Non-Perforated Lay In Acoustical Ceiling Tiles Doors: TBD Windows: TBD		
ACOUSTIC	Noise Reduction Techniques required		
VIEWS	Desirable but Not Required		
DAYLIGHTING NATURAL VENT.	Desirable but Not Required		
ELECTRICAL	POWER	208V/3Ph, 208V/1Ph, 120/1Ph	
	LIGHTING	General Area Lighting (Fluorescent), Task Lighting and Decorative Lighting in food display areas and serving counters (Warm Halogen or Incandescent)	
	COMMUNICATIONS	Telephone	
	SPECIAL	Production Equipment Monitoring System	
MECHANICAL	TEMPERATURE	Ambient Room Temperature Required	
	HUMIDITY	Ambient Room Humidity Required	
	VENTILATION	General HVAC; Exhaust Hood and Fire Suppression System as required, with adequate make-up air external to the hood canopy.	
	ACOUSTIC		
PLUMBING	Cold Water, Hot Water, Indirect Waste, Direct Waste, Floor Drains Natural Gas		
CASEWORK	Serving Counters, Display Shelving, Decorative Food Display Cases		
FURNITURE / EQUIPMENT	Food Service Production, Serving and Merchandising Equipment		
SECURITY	Ability to Secure Entire Area		

Program Development & Space Outline



5600 sq. ft.

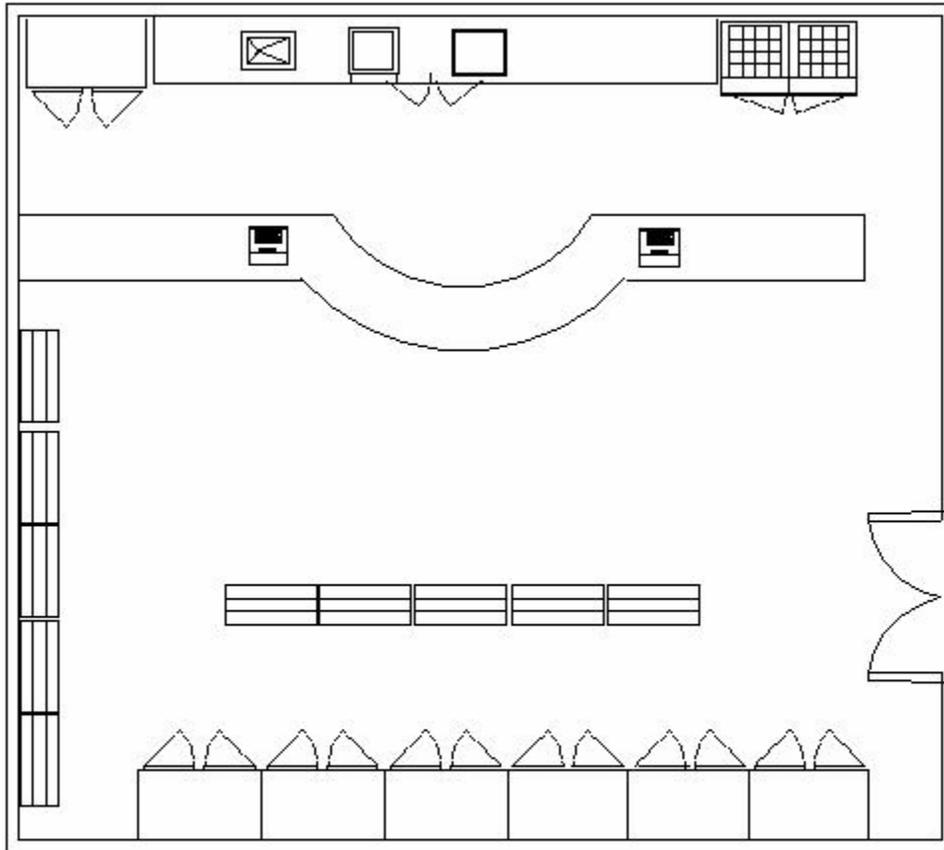
The layout shown is for illustration only. Final equipment layout, design and selection to be determined as part of design project.

Canyon Crest Site DPP

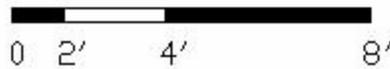
Program Development & Space Outline

		AREA		OCCUPANCY
300	Production Kitchen – Phase 1	Target NSF	Institutional Standards	Design
		5600 sq. ft. (Breakdown as Follows)		
		Refrigerated Storage	1,000 sq. ft.	
		Frozen Storage	700 sq. ft.	
		Dry Storage	1,200 sq. ft.	
		Special Equipment Storage	300 sq. ft.	
		Table & Chair Storage	300 sq. ft.	
		Cold Food Production	1,200 sq. ft.	
		Hot Food Production	900 sq. ft.	
FUNCTION	Storage for Food and Equipment; Hot and Cold Food Production			
DIMENSIONS	TBD			
CRITICAL CLEARANCES	Minimum 36" wide clear openings			
FINISHES	Floor:	Quarry Tile or Seamless Flooring suitable to Food Service applications	Floor Load: 150 lbs/sq ft	
	Base:	Integrally Coved Base		
	Walls:	Ceramic Tile; Stainless Steel Wall Flashing in Hot Production Areas		
	Ceiling:	Epoxy Enamel Painted Acoustical Gypboard or Washable High-Density, Non-Perforated Lay In Acoustical Ceiling Tiles; 10' High		
	Doors:	TBD		
	Windows:	TBD		
ACOUSTIC	Noise Reduction Techniques required			
VIEWS	Desirable but Not Required			
DAYLIGHTING NATURAL VENT.	Desirable but Not Required			
ELECTRICAL	POWER	480V/3Ph, 208V/3Ph, 208V/1Ph, 120/1Ph		
	LIGHTING	General Area Lighting (Fluorescent)		
	COMMUNICATIONS	Telephone; Data Lines for Computer(s)		
	SPECIAL	Equipment Monitoring System		
MECHANICAL	TEMPERATURE	Ambient Room Temperature Required		
	HUMIDITY	Ambient Room Humidity Required		
	VENTILATION	General HVAC; Exhaust Hoods with Fire Suppression Systems as Required over Hot Food Production Equipment		
	ACOUSTIC			
PLUMBING		Cold Water, Hot Water, Indirect Waste, Direct Waste, Floor Drains, Floor Troughs, Floor Sinks Natural Gas		
CASEWORK		None Required		
FURNITURE / EQUIPMENT		Variety of Stainless Steel Tables, Counters and Food Preparation/Production Equipment		
SECURITY		Door Locks		

Program Development & Space Outline



Express Cafe



1400 sq. ft.

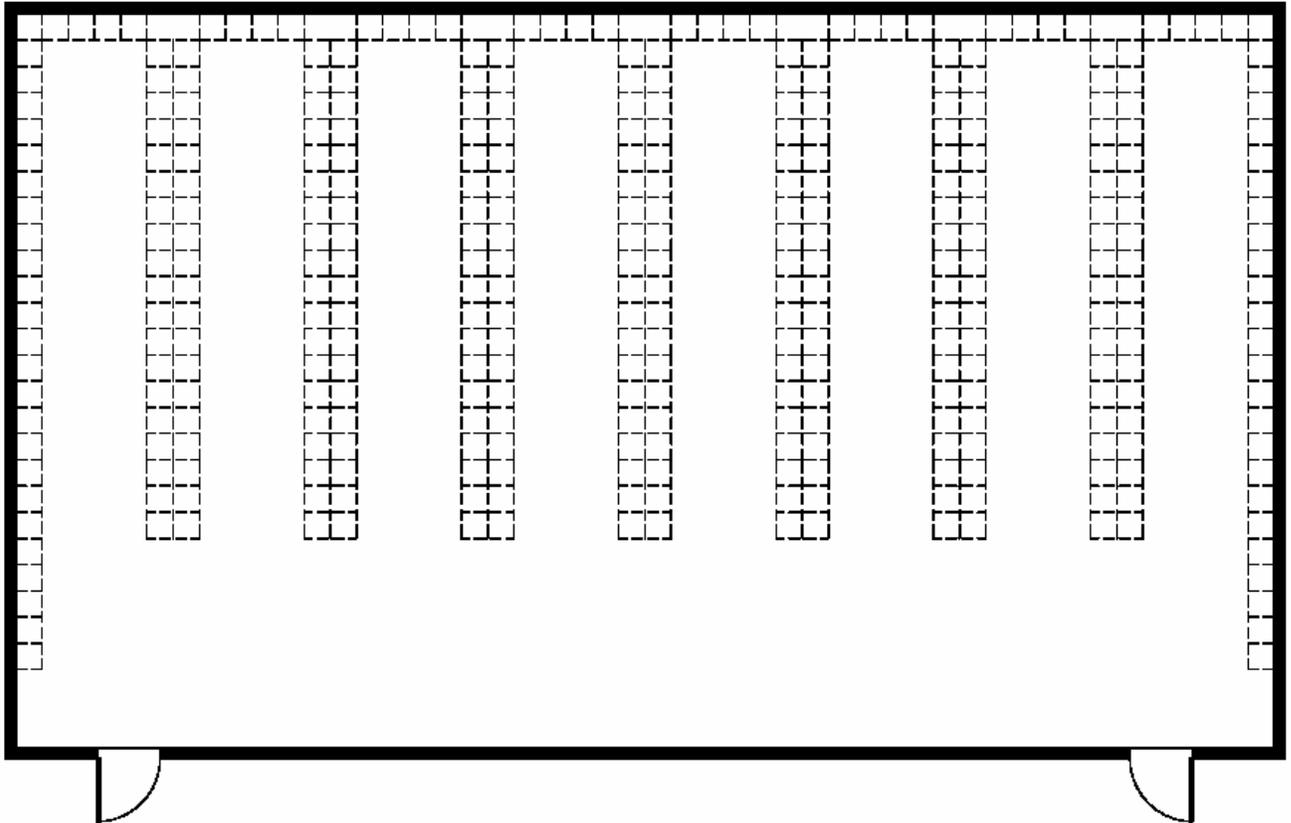
Equipment shown on program development is for illustration purposes only. Equipment layout and selection to be performed during design project phases.

Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Express Café – Phase 1		800 sq. ft. Serving 600 sq. ft. Queuing	Institutional Standards Design
FUNCTION	Coffee Bar & Grab 'n Go Service Point		
DIMENSIONS	TBD		
CRITICAL CLEARANCES	Minimum 36" wide clear openings		
FINISHES	Floor: Quarry Tile or Seamless Flooring suitable to Food Service applications (Service Side) / Non-slip Decorative Floor Tile or Stone (Customer Side) Floor Load: 150 lbs/sq ft Base: Integrally Coved Tile Base Walls: Ceramic Tile or other Decorative Finish suitable to Food Service applications (Serving and Merchandising Areas); Epoxy Enamel Painted Gypboard (Back of House Areas) Ceiling: Epoxy Enamel Painted Acoustical Gypboard or Washable High-Density, Non-Perforated Lay In Acoustical Ceiling Tiles Doors: TBD Windows: TBD		
ACOUSTIC	Noise Reduction Techniques required		
VIEWS	Exterior Views Desirable		
DAYLIGHTING NATURAL VENT.	Daylighting Desirable		
ELECTRICAL	POWER	208V/3Ph, 208V/1Ph, 120/1Ph	
	LIGHTING	General Area Lighting (Fluorescent), Task Lighting and Decorative Lighting in food display areas and serving counters (Warm Halogen or Incandescent)	
	COMMUNICATIONS	Telephone; Data Lines for Point of Sale System	
	SPECIAL	Production Equipment Monitoring System	
MECHANICAL	TEMPERATURE	Ambient Room Temperature Required	
	HUMIDITY	Ambient Room Humidity Required	
	VENTILATION	General HVAC; Exhaust Hood and Fire Suppression System as required, with adequate make-up air external to the hood canopy.	
	ACOUSTIC		
	PLUMBING	Cold Water, Hot Water, Indirect Waste, Direct Waste, Floor Drains	
	CASEWORK	Serving Counters, Display Shelving, Decorative Food Display Cases	
	FURNITURE / EQUIPMENT	Food Service Production, Serving and Merchandising Equipment	
	SECURITY	Ability to Secure Entire Area	

Program Development & Space Outline



LOCKERS BOOK DROP

2000± NSF

Scale: 1/8" = 1'-0"

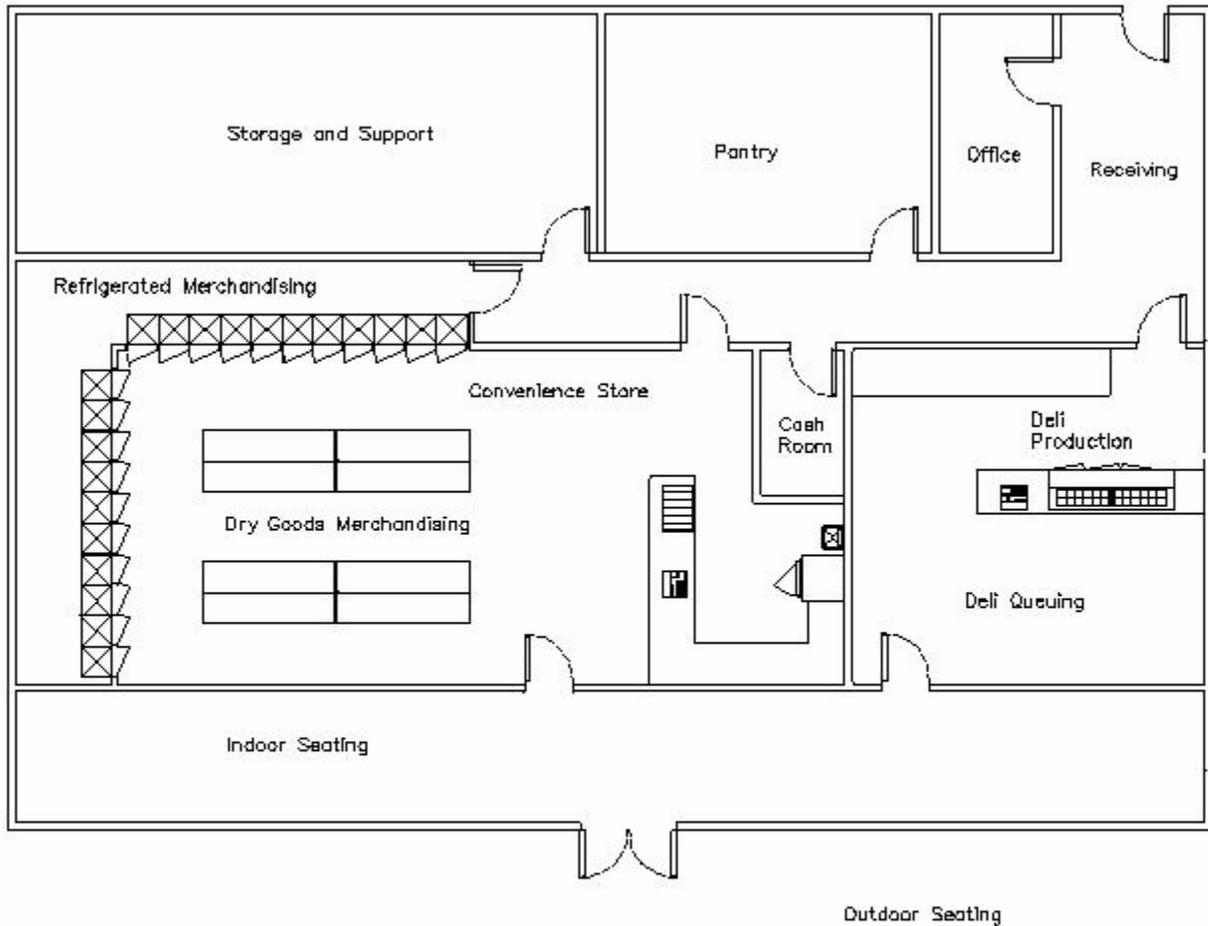


Canyon Crest Site DPP

Program Development & Space Outline

	<u>AREA</u>	<u>OCCUPANCY</u>
Dining Areas	Target NSF	Institutional Standards
Lockers / Book Drop	2000	Design
FUNCTION	Area for storage of student book bags prior to dining area entry	
DIMENSIONS	52' x 38' ±	
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting	
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: SAPC Doors: Wood Windows: Aluminum	
ACOUSTIC	N/A	
VIEWS	N/A	
DAYLIGHTING NATURAL VENT.		
ELECTRICAL	POWER	General receptacle
	LIGHTING	General 10-15 footcandle
	COMMUNICATIONS	None
	SPECIAL	Smoke detector strobe/horn
MECHANICAL	TEMPERATURE	75°F – dedicated zone
	HUMIDITY	50% ± 20% (No mechanical control)
	VENTILATION	15 cfm/person Outside air connected to fan coil unit, general exhaust of excess air.
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.
PLUMBING	N/A	
CASEWORK		
FURNITURE / EQUIPMENT	Lockers	
SECURITY		

Program Development & Space Outline



Convenience Store & Retail Deli
0 2' 4' 8'

4150 sq ft

The layout shown is for illustration only. Final equipment layout, design and selection to be determined as part of design project.

Canyon Crest Site DPP

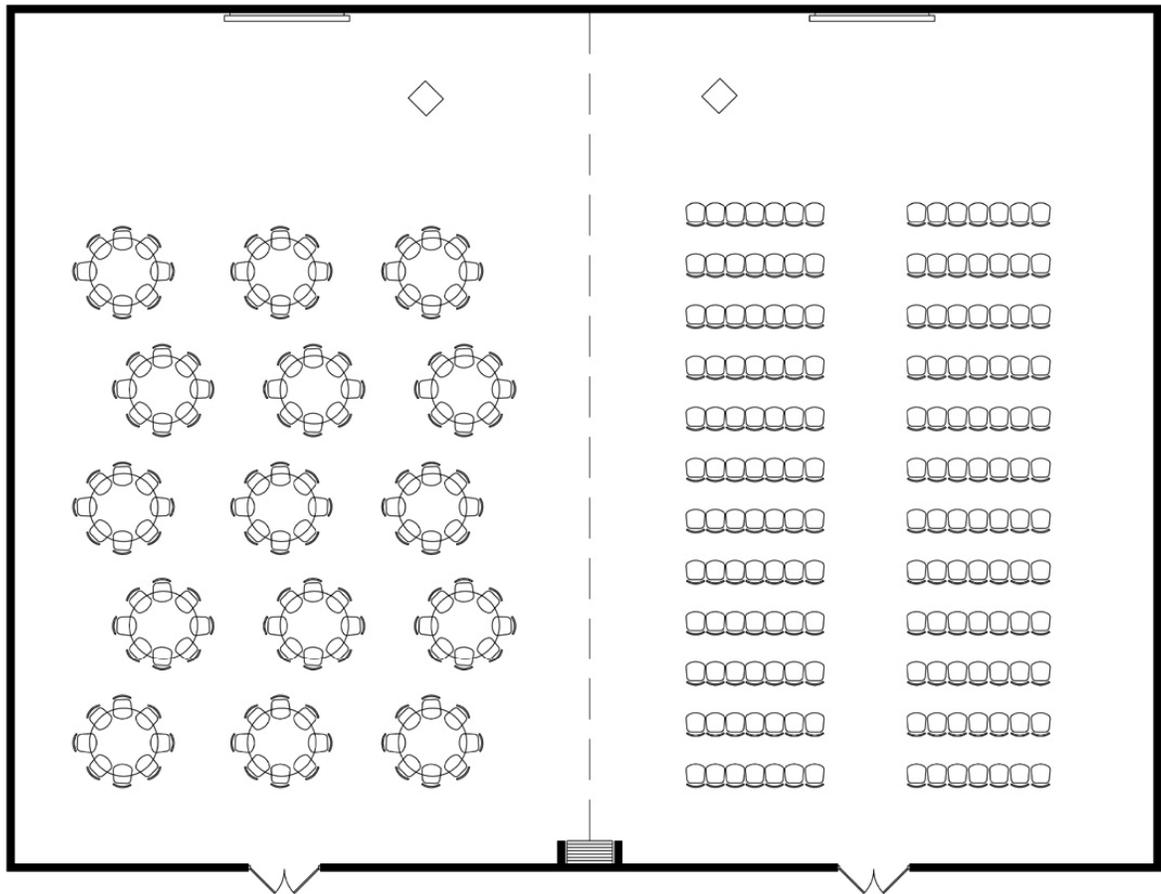
Program Development & Space Outline

Convenience Store and Retail Deli - Phase 2		AREA Target NSF	Institutional Standards	OCCUPANCY Design
		4150 sq ft (Breakdown As Follows)		
		Receiving	150 sq. ft.	
		Storage & Support	600 sq. ft.	
		Office	120 sq. ft.	
		Pantry	300 sq. ft.	
		Cash Counting Room	70 sq. ft.	
		Refrigerated Merchandising	500 sq. ft.	
		Dry Goods Merchandising	630 sq. ft.	
		Deli Production/Serving	300 sq. ft.	
		Deli Queuing	200 sq. ft.	
		Indoor Seating	640 sq. ft.	
		Outdoor Seating	640 sq. ft.	
FUNCTION	Point of Sale for Convenience Products and Freshly Prepared Deli Foods			
DIMENSIONS	TBD			
CRITICAL CLEARANCES	Minimum 36" wide clear openings			
FINISHES	Floor: Quarry Tile of Seamless Flooring suitable to Food Service applications (Service Side) / Non-slip Decorative Floor Tile or Stone (Customer Side) Floor Load: 150 lbs/sq ft Base: Integrally Coved Tile Base Walls: Ceramic Tile or other Decorative Finish suitable to Food Service applications (Serving and Merchandising Areas); Epoxy Enamel Painted Gypboard (Back of House Areas) Ceiling: Epoxy Enamel Painted Acoustical Gypboard or Washable High-Density, Non-Perforated Lay In Acoustical Ceiling Tiles Doors: TBD Windows: TBD			
ACOUSTIC	Noise Reduction Techniques required			
VIEWS	Exterior Views for Dining Areas; other areas to the extent feasible			
DAYLIGHTING NATURAL VENT.	Daylighting for Dining Areas; other areas to the extent feasible			
ELECTRICAL	POWER	208V/3Ph, 208V/1Ph, 120/1Ph		
	LIGHTING	General Area Lighting (Fluorescent), Task Lighting and Decorative Lighting in food display areas and serving counters (Warm Halogen or Incandescent)		
	COMMUNICATIONS	Telephone; Data Lines for Point of Sale System		
	SPECIAL	Production Equipment Monitoring System		
MECHANICAL	TEMPERATURE	Ambient Room Temperature Required		
	HUMIDITY	Ambient Room Humidity Required		
	VENTILATION	General HVAC; Exhaust Hood and Fire Suppression System, as required in Deli, with adequate make-up air external to the hood canopy.		
	ACOUSTIC			
PLUMBING	Cold Water, Hot Water, Indirect Waste, Direct Waste, Floor Drains			
CASEWORK	Serving Counters, Display Shelving, Decorative Food Display Cases			
FURNITURE / EQUIPMENT	Food Service Production, Serving and Merchandising Equipment Tables and Chairs			
SECURITY	Door Locks			

6.3 Conference Services Facility



Program Development & Space Outline



LARGE MULTIPURPOSE ROOM

7500 NSF

Scale: 1/8" = 1'-0"

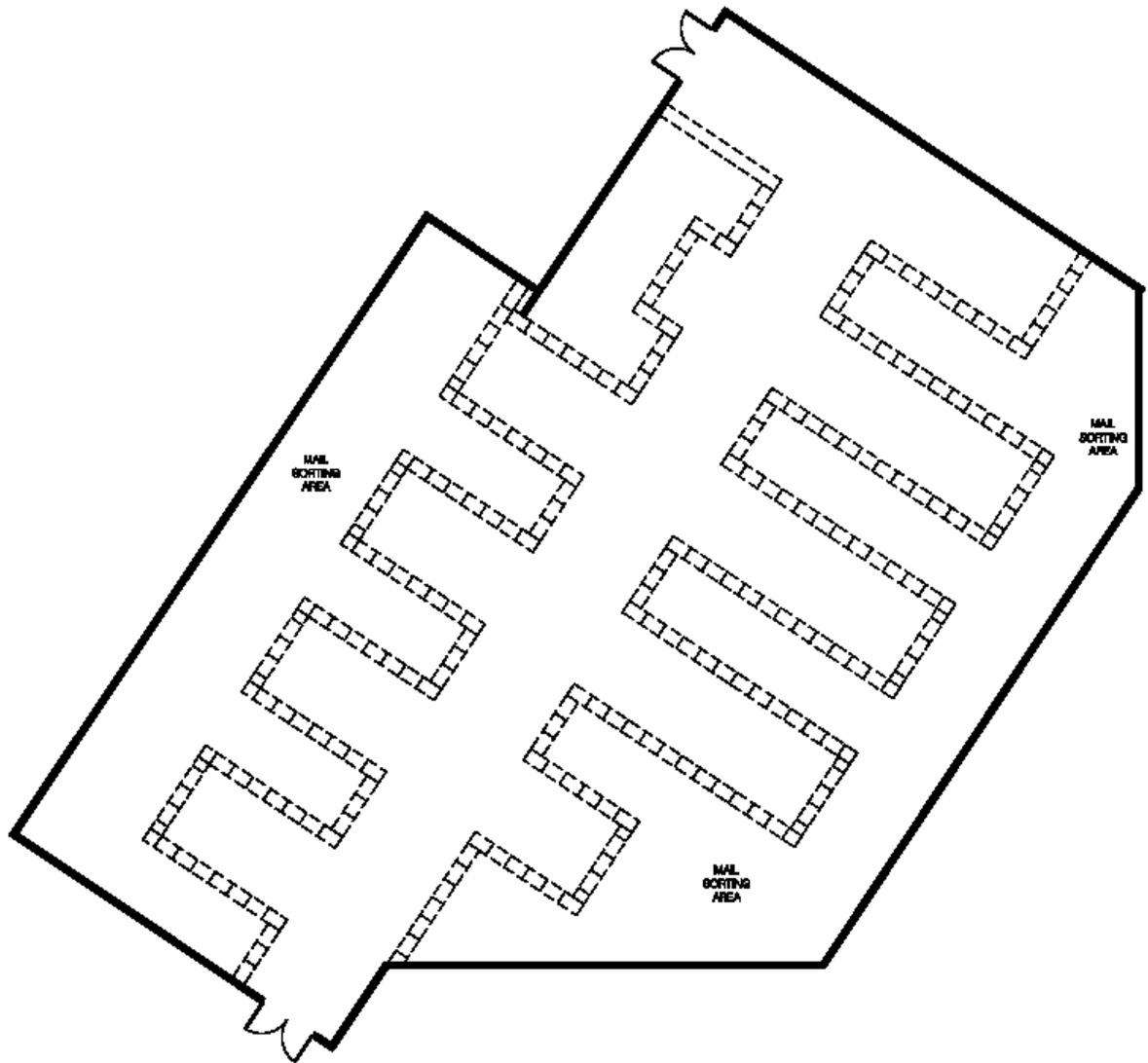


Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>Institutional Standards</u>	<u>OCCUPANCY Design</u>
Community/Academics		Target NSF		
Multi-Purpose Rooms		7500		
FUNCTION	Seminar or Meeting area for residents and staff			
DIMENSIONS	75' x 100' ±			
CRITICAL CLEARANCES				
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB; with wood paneling and tackable wall surface Ceiling: Painted GWB/SAPC Doors: Wood Windows: Aluminum			
ACOUSTIC	N/A			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Operable windows – if possible			
ELECTRICAL	POWER	General duplex receptacles per NEC 210C		
	LIGHTING	Direct/indirect 30-35 footcandles		
	COMMUNICATIONS	Data and communication connections; CATV connections		
	SPECIAL	Smoke detector strobe/horn		
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.		
	HUMIDITY	40% + 20%		
	VENTILATION	15 cfm/person Outside air connected to fan coil unit, general exhaust of excess air.		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with Space NC Criteria.		
PLUMBING	N/A			
CASEWORK	N/A			
FURNITURE / EQUIPMENT	Conference tables, chairs, tack surface, projection screens, white board, trash and recycling containers, movable partitions			
SECURITY	Lockable door with glass lite			

Program Development & Space Outline



MAIL ROOM

5400± NSF

Scale: 1/16" = 1'-0"

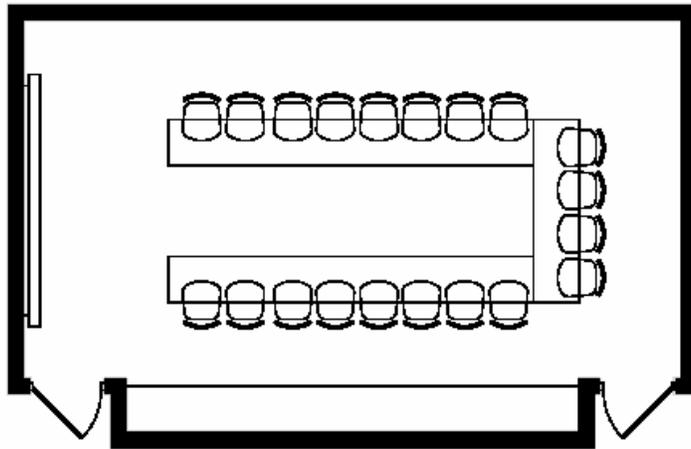


Canyon Crest Site DPP

Program Development & Space Outline

Public / Common Spaces		AREA	Institutional Standards	OCCUPANCY
		Target NSF		Design
Mail		5400		
FUNCTION	Location of student mailboxes			
DIMENSIONS	60' x 89' ±			
CRITICAL CLEARANCES				
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: SAPC Doors: Glazed Metal Windows: Aluminum			
ACOUSTIC				
VIEWS	No views required			
DAYLIGHTING NATURAL VENT.	Sleeping Area: N/A			
ELECTRICAL	POWER	General duplex receptacles		
	LIGHTING	Direct -30 to 40 footcandles		
	COMMUNICATIONS	None		
	SPECIAL	Smoke detector strobe/horn		
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.		
	HUMIDITY	50% ± 20% (No Mechanical control).		
	VENTILATION	15 cfm/person outside air connected to fan coil unit, general exhaust of excess air.		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.		
	PLUMBING	N/A		
	CASEWORK	N/A		
	FURNITURE / EQUIPMENT	Mailboxes		
	SECURITY	Lockable card access door		

Program Development & Space Outline



SEMINAR ROOM/BOARD ROOM

500± NSF

Scale: 1/8" = 1'-0"

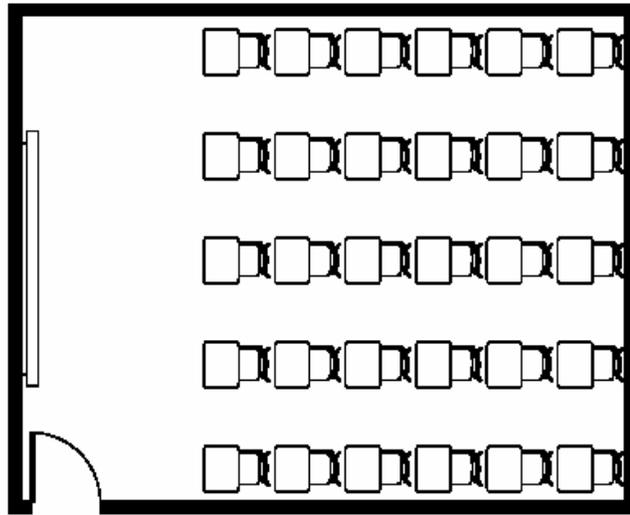


Canyon Crest Site DPP

Program Development & Space Outline

		<u>AREA</u>	<u>Institutional Standards</u>	<u>OCCUPANCY</u>
Meeting / Academic / Programs		Target NSF		Design
Seminar/Board Room		500		
FUNCTION	Meeting space			
DIMENSIONS	18' x 28' ±			
CRITICAL CLEARANCES	Depth of presentation well			
FINISHES	Floor: Carpet Base: Resilient Walls: Painted GWB Ceiling: Painted GWB or SAPC Doors: Wood Windows: Aluminum			
ACOUSTIC	Sound separation from adjacent program spaces; sound absorption / reverberating as required			
VIEWS	N/A			
DAYLIGHTING NATURAL VENT.	Operable windows if possible			
ELECTRICAL	POWER	General receptacles and power for A/V equipment		
	LIGHTING	Direct/Indirect 30-35 footcandles		
	COMMUNICATIONS	Data communication connection, CATV connection		
	SPECIAL	Smoke detector, strobe/horn.		
MECHANICAL	TEMPERATURE	75°F – dedicated 4-pipe fan coil unit.		
	HUMIDITY	40% + 20%		
	VENTILATION	15 cfm/person. Outside air connected to fan coil unit, general exhaust of excess air.		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.		
PLUMBING	N/A			
CASEWORK	Base cabinets and counter			
FURNITURE / EQUIPMENT	Chairs, conference table, projection screen, white board, trash and recycling containers			
SECURITY	Lockable doors			

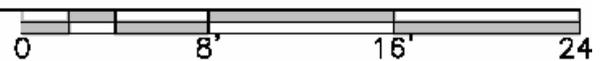
Program Development & Space Outline



CLASSROOM

540± NSF

Scale: 1/8" = 1'-0"

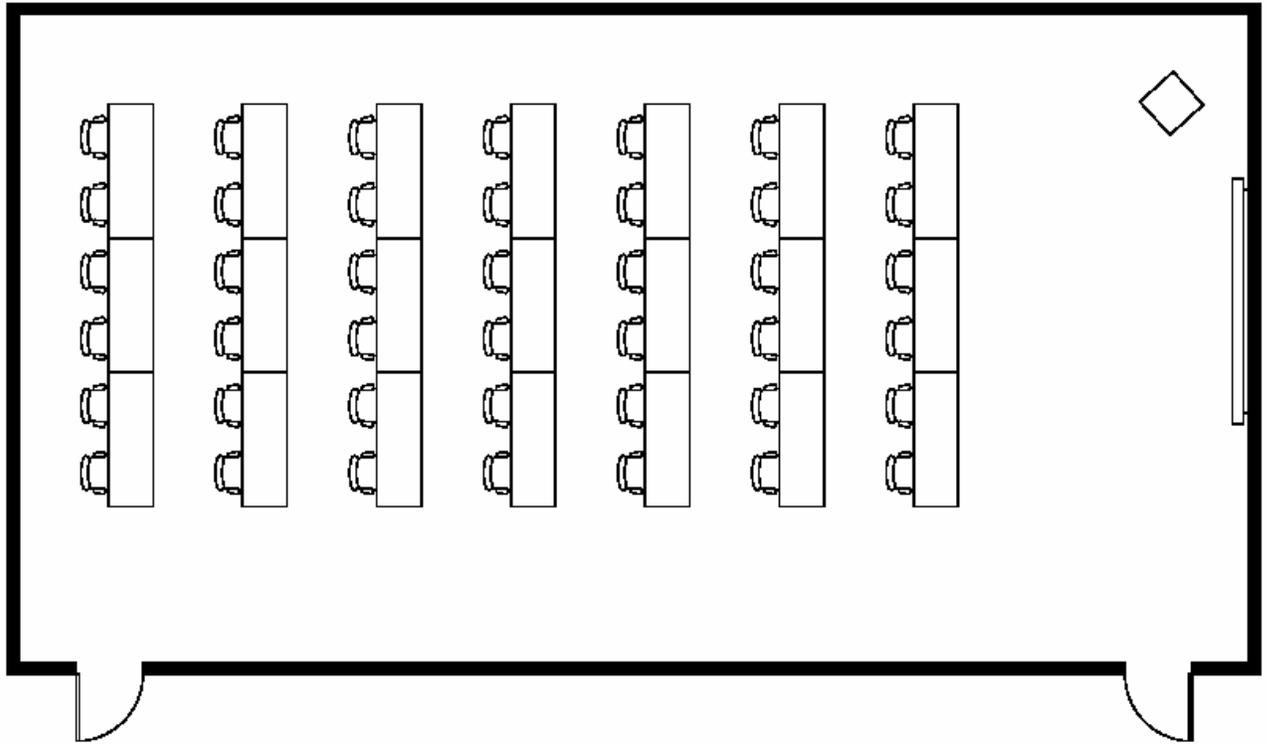


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY
Meeting / Academic / Programs		Target NSF	Institutional Standards
Classrooms		540	Design
FUNCTION	Classes for student use or training/seminars		
DIMENSIONS	21' x 26" ±		
CRITICAL CLEARANCES	Desk spacing, maintain depth of presentation well		
FINISHES	Floor: Resilient Base: Resilient Walls: Painted GWB Ceiling: SAPC Doors: Wood Windows: Aluminum		
ACOUSTIC	Sound separation from adjacent program spaces		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.			
ELECTRICAL	POWER	Duplex receptacles	
	LIGHTING	Direct/Indirect 30-35 footcandles.	
	COMMUNICATIONS	Data and communication connections	
	SPECIAL	Smoke detector strobe/horn	
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.	
	HUMIDITY	50% ± 20% (No Mechanical control)	
	VENTILATION	15 cfm/person Outside air connected to fan coil unit, general exhaust of excess air.	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.	
PLUMBING	N/A		
CASEWORK	N/A		
FURNITURE / EQUIPMENT	Chairs, desks, lectern, white board, projection screen		
SECURITY	Window sash locks Lockable door		

Program Development & Space Outline



COMPUTER LAB

1600 NSF

Scale: 1/8" = 1'-0"

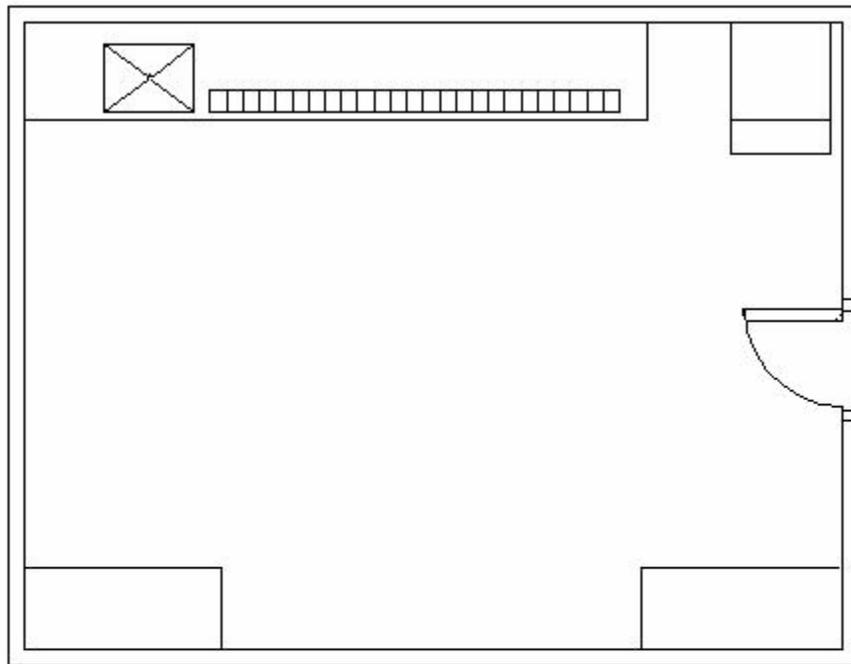


Canyon Crest Site DPP

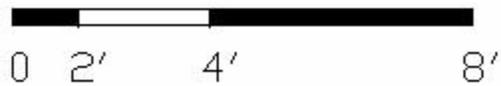
Program Development & Space Outline

		<u>AREA</u>	<u>OCCUPANCY</u>
Meeting / Academic / Programs		Target NSF	Institutional Standards
Computer Lab		1600	Design
FUNCTION	Access to computers for classes or training		
DIMENSIONS	29' x 55' ±		
CRITICAL CLEARANCES	Desk spacing, maintain depth of presentation well		
FINISHES	Floor: Carpet or Resilient Base: Resilient Walls: Painted GWB with tackable wall surface Ceiling: SAPC Doors: Wood Windows: Aluminum		
ACOUSTIC	Sound separation from adjacent program spaces		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.			
ELECTRICAL	POWER	Duplex receptacles	
	LIGHTING	Direct/Indirect 30-35 footcandles.	
	COMMUNICATIONS	Data and communication connections	
	SPECIAL	Smoke detectors strobe/horn	
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.	
	HUMIDITY	40% + 20%	
	VENTILATION	15 cfm/person Outside air connected to fan coil unit, general exhaust of excess air.	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria.	
	PLUMBING	N/A	
	CASEWORK	N/A	
FURNITURE / EQUIPMENT	Computers, computer desks, chairs, projection screen, white board, lectern		
SECURITY	Window sash locks Lockable door		

Program Development & Space Outline



Warming Pantry



500 sq. ft.

The layout shown is for illustration only. Final equipment layout, design and selection to be determined as part of design project.

Canyon Crest Site DPP

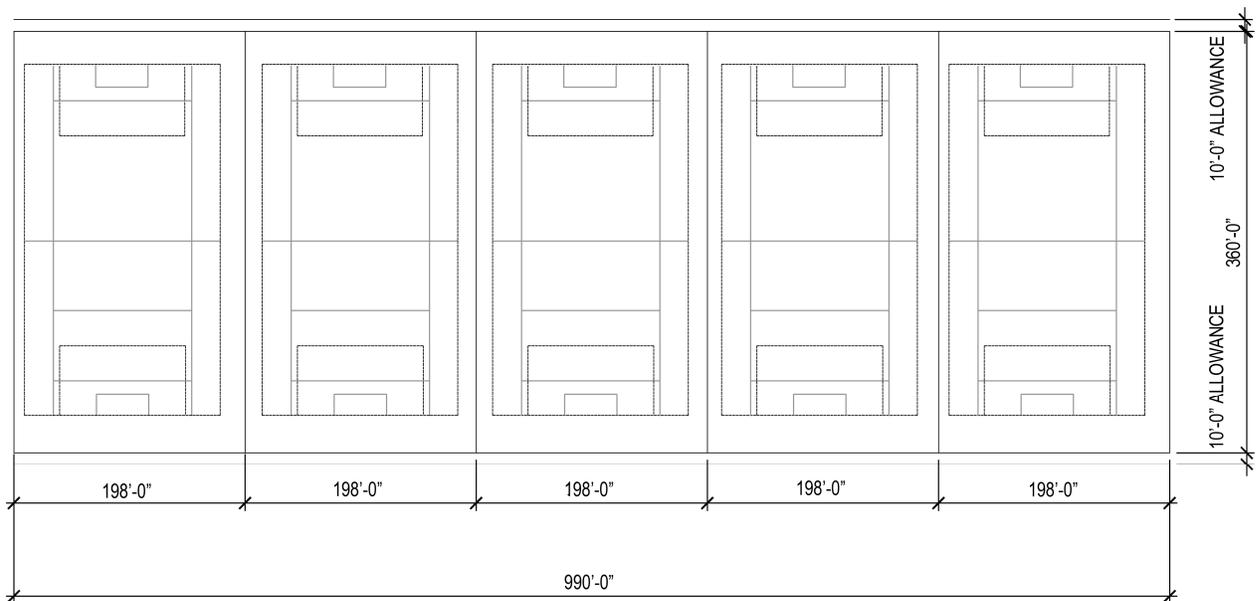
Program Development & Space Outline

		<u>AREA</u>	<u>OCCUPANCY</u>
1000	Warming Pantry	Target NSF 500 sq. ft.	Institutional Standards Design
FUNCTION	Storage for Catering Food and Equipment		
DIMENSIONS	TBD		
CRITICAL CLEARANCES	Minimum 36" wide clear openings		
FINISHES	Floor: Quarry Tile or Seamless Flooring suitable to Food Service applications Floor Load: 150 lbs/sq ft Base: Integrally Coved Base Walls: Ceramic Tile Ceiling: Epoxy Enamel Painted Acoustical Gypboard or Washable High-Density, Non-Perforated Lay In Acoustical Ceiling Tiles; 10' High Doors: TBD Windows: TBD		
ACOUSTIC	Noise Reduction Techniques required		
VIEWS	Desirable but Not Required		
DAYLIGHTING NATURAL VENT.	Desirable but Not Required		
ELECTRICAL	POWER	208V/3Ph, 208V/1Ph, 120/1Ph	
	LIGHTING	Direct/Indirect 30-35 footcandles.	
	COMMUNICATIONS	Telephone; Data Lines for Computer(s)	
	SPECIAL	Smoke alarm strobe/horn	
MECHANICAL	TEMPERATURE	75°F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.	
	HUMIDITY	40% + 20%	
	VENTILATION	General HVAC	
	ACOUSTIC	N/A	
	PLUMBING	Cold Water, Hot Water, Indirect Waste, Direct Waste, Floor Drains, Floor Sinks	
	CASEWORK	None Required	
	FURNITURE / EQUIPMENT	Variety of Stainless Steel Tables, Counters and Food Preparation/Production Equipment	
	SECURITY	Lockable door	

6.4 Recreation Fields



Program Development & Space Outline



RECREATION FIELDS

1" = 100'

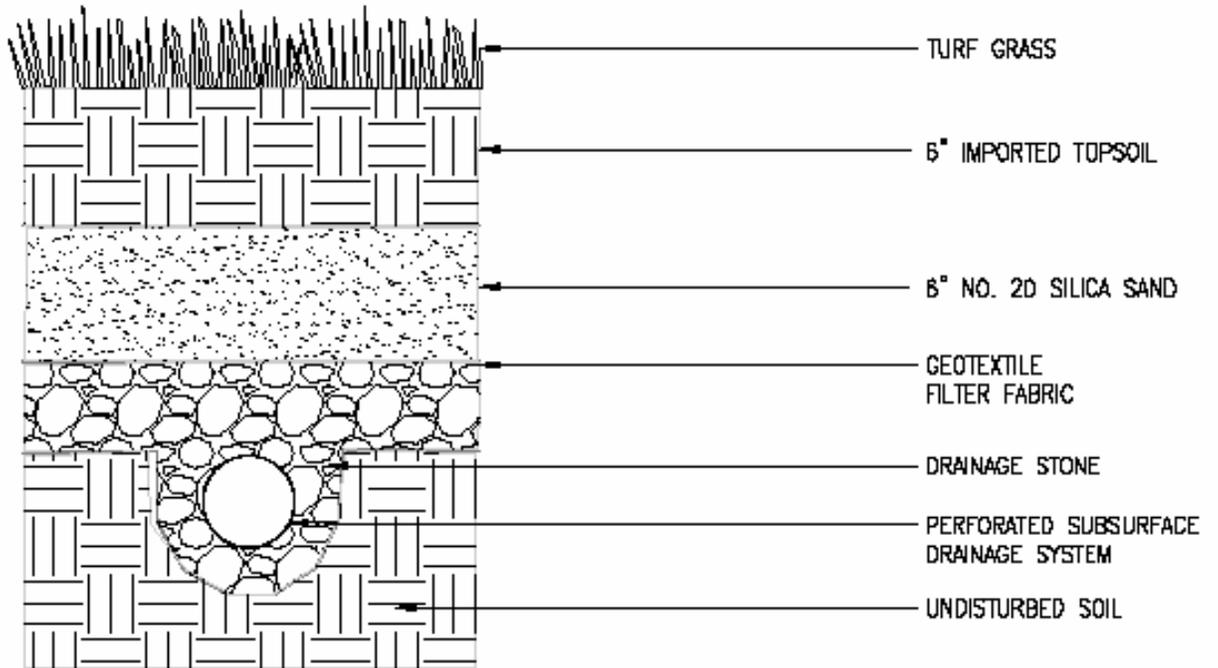


Canyon Crest Site DPP

Program Development & Space Outline

		AREA	
Recreation Fields		Acres	Institutional Standards
		11.0±	
FUNCTION	Athletic fields for intramural and club sports		
DIMENSIONS	148' x 360' each – 990' x 360' overall		
CRITICAL CLEARANCES	10'-0" clearance around perimeter		
TURF SECTION	<ul style="list-style-type: none"> • 6" imported topsoil • 6" No. 20 silica sand base • geotextile filter fabric • subsurface drainage system • turf type Bullseye, GN1 or Tiftway 2 		
ACOUSTIC	N/A		
FIELD ORIENTATION	North/south in direction of play		
DAYLIGHTING	N/A		
ELECTRICAL	POWER	GFI receptacles at select light pole locations to be determined	
	LIGHTING	30 FC at field surface	
	COMMUNICATIONS	Emergency call phone at western edge of fields	
	SPECIAL	Emergency vehicle access gate with Knox key access off Canyon Crest Drive	
MECHANICAL	TEMPERATURE	N/A	
	HUMIDITY	N/A	
	VENTILATION	N/A	
	ACOUSTIC	N/A	
PLUMBING	Public restrooms to be located in the Dining Hall		
LANDSCAPING	Landscaping will be provided along the southern and western perimeter of the site		
STORAGE	355 SF storage room to be located in Campus Deli/Convenience Store		
SECURITY	Five foot high black vinyl coated chain link fence provided along the south, north and west sides of the field. One card access pedestrian gate will be provided on the northern and southern side of the fields.		

Program Development & Space Outline



RECREATION FIELD SOIL SECTION



**University of California, Riverside
Canyon Crest Housing at UCR
Riverside, California**

DPP Cost Plan
July 27, 2005
CLLC Project No. 04-307.00

INTRODUCTION

1. Basis Of Estimate

This statement is based on DPP drawing package dated December, 2004 by HEWV & Co., along with verbal direction from the architect and engineer at the June 23rd consultant meeting and subsequent e-mailed directives.

- A Apartment building floor plan and room layouts received from HEWV 12-14-04.
- B Residence Hall floor plan and room layouts received from HEWV 12-14-04.
- C Dining Hall space program. Dining Hall diagrams received from HEWV 12-14-04.
- D Preliminary program narrative.
- E Kitchen equipment estimate from Envision Strategies, dated 6-17-04..
- F Grading concept as received from HEWV 7-1-04. Apartments grading plan as received from HEWV 7-2-04.
- G Site Utility plans as received from A. C. Martin 12-17-04 and 3-25-05.
- H Phasing layout, corporate yard screen wall sketch, electrical tie-in sketch as received from HEWV 6-29-04
- I Bicycle storage layout received from HEWV 7-7-04.
- J Preliminary project schedule as received from NTD Stichler 12-16-04.
- L Housing Review Group Meeting minutes dated 6-23-04.

The information listed above is considered programmatic design level for estimating purposes.

2. Items Not Included Within Estimate

The following cost items are excluded from this estimate.

- A Professional fees, inspections and testing.
- B Escalation beyond beginning of construction, (varies), assumed @ 5% per annum - not compounded.
- 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 unless noted in body of estimate.
- F Costs of hazardous material surveys, abatements, and disposals unless noted in estimate.
- G Costs of offsite construction unless noted in estimate.
- H Premium for PSA Labor Agreements.
- I Construction contingency costs.
- J Blasting or excavation of rock.
- K Group 2 kitchen equipment as quoted by Envision Strategies

3. 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

INTRODUCTION

result in a lower bid result.

4. Scope of Estimate

The new 170,657 sf Apartment Building, 340,784 sf Residence Hall buildings both consisting of a 4-story buildings and 117,795 sf of 2 level Dining Hall building, Deli/Convenience Store and Conference Services Building and associated sitework and demolition of existing housing.

Foundations are assumed to be pile foundations and grade beams due to poor soil conditions.

The Vertical Structure is a steel moment frame with sprayed fireproofing for the Dining Hall, Deli/Convenience Store and Conference Services building. The Vertical Structure is wood frame with shear panels and pipe columns for the Apartments and Residence Hall.

Floor and Roof Structures consist of a 5" slab on grade, wide flange steel beams, metal deck and concrete fill at floor and roof with sprayed fireproofing for the Dining Hall, Conference Services building and Deli/Convenience Store. Floor and Roof Structures consist of a 5" slab on grade, timber beams, wood joists, plywood deck at floor roof with lightweight concrete fill at floors for the Apartments and Residence Hall.

Exterior cladding consists of plaster and aluminum windows for the Apartments and Residence Halls. The exterior cladding for the Dining Hall, Conference Services building and Deli/Convenience store shall consist of a mix of one-third each, plaster, brick and glass.

Roofing and Waterproofing includes a single ply membrane system over tapered rigid insulation at Dining Hall, Conference Services and Deli/Convenience Store buildings with galvanized metal flashings and trim. Residence Hall and Apartment buildings include single ply roofing system with under roof batt insulation, galvanized sheet metal flashings and trim as well as clay tile roofing at sloped areas.

Interior partitions, rated and unrated include metal/wood stud framing, insulation and gypsum wallboard. Two hour rated shafts are included where indicated. Interior doors are included as wood doors with hollow metal frames.

Floor finishes include glued direct carpeting, VCT, ceramic tile, quarry tile, sealed concrete with rubber base. Wall finishes include paint over drywall and ceramic tile. Ceiling finishes include painted gypsum board and T-bar grid system with acoustic tile.

Functional equipment includes, toilet accessories, wall and corner guards, fire extinguishers, kitchen equipment, kitchen appliances, projection screens, signage, and telephone enclosures. Casework includes residential grade base and upper cabinets with plastic laminate countertops. Public area caseworks includes painted wood shelving, plastic laminate counters and reception desk casework. Misc. wood trim in the units is also included.

Furnishings include window blinds.

Stairs and Vertical Transportation includes pan filled metal stairs with handrails and hydraulic passenger elevators.

INTRODUCTION

Plumbing system consists of water supply, waste & vent piping, roof and deck drainage.

HVAC systems are composed of split system heat pumps at the apartments, a 4 pipe fan coil system at the Residence Hall and Dining hall, Conference Services and Deli/Convenience Store. A stand alone central plant is provided for both the Residence Hall and the Dining Hall, Conference Services and Deli/Convenience Store.

Electrical includes the 12kV duct bank from the existing manhole, Unit Substation, distribution switchgear, panels and feeders. Allowances are also included for convenience power, equipment connections, lighting and lighting control, fire alarm, access control and cable TV systems.

Fire Protection Systems include wet pipe sprinklers.

CONSTRUCTION COST SUMMARY

Element	Area	Cost / SF	Total
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Base Estimate

A Residence Halls, Phase 1	207,653 SF	\$174.01	\$36,132,884
B Site Development, Residence Halls Phase 1	622,978 SF	\$13.90	\$8,657,248
C Parking, Residence Hall Phase 1	54,603 SF	\$10.26	\$560,043
D Dining Hall, Phase 1	53,779 SF	\$337.25	\$18,136,978

TOTAL ESTIMATED CONSTRUCTION COST Phase 1 (CCCI 4328)	<u>\$63,487,153</u>
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Allowance for Rising Costs at 5.0% per Annum to BOC **\$11,559,952**

TOTAL ESTIMATED CONSTRUCTION COST Phase 1 (Feb., 2009)	<u>\$75,047,105</u>
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Routers and Switches, Phase 1, Feb, 2009 Dollars **\$257,966**

E Residence Hall, Phase 2	133,131 SF	\$170.95	\$22,758,599
F Site Development, Residence Halls Phase 2	115,439 SF	\$16.17	\$1,866,583
G Parking, Residence Hall Phase 2	20,851 SF	\$11.74	\$244,783
H Retail Deli/Convenience Store, Phase 2	6,436 SF	\$337.81	\$2,174,142

TOTAL ESTIMATED CONSTRUCTION COST Phase 2 (CCCI 4328)	<u>\$27,044,107</u>
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Allowance for Rising Costs at 5.0% per Annum to BOC **\$6,629,562**

TOTAL ESTIMATED CONSTRUCTION COST Phase 2 (May, 2010)	<u>\$33,673,670</u>
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Routers and Switches, Phase 2, May 2010 Dollars **\$191,715**

CONSTRUCTION COST SUMMARY

Element	Area	Cost / SF	Total
I Apartments, Phase 3, 4 Bedroom Units	170,657 SF	\$181.98	\$31,055,322
J Site Development, Apartments Phase 3	239,731 SF	\$13.75	\$3,295,629
K Parking, Apartments Phase 3	61,519 SF	\$7.89	\$485,567
TOTAL ESTIMATED CONSTRUCTION COST Phase 3 (CCCI 4328)			<u>\$34,836,518</u>
Allowance for Rising Costs at 5.0% per Annum to BOC			\$10,455,794
TOTAL ESTIMATED CONSTRUCTION COST Phase 3 (June, 2011)			<u>\$45,292,311</u>
E Routers and Switches, Phase 3, June 2011 Dollars			\$200,183
L Dining Hall, Phase 3	26,251 SF	\$288.71	\$7,579,040
M Conference Services, Phase 3	31,329 SF	\$243.98	\$7,643,663
N Recreation Fields	492,228 SF	\$9.59	\$4,718,010
TOTAL ESTIMATED CONSTRUCTION COST Phase 3 (CCCI 4328)			<u>\$19,940,713</u>
Allowance for Rising Costs at 5.0% per Annum to BOC			\$5,899,128
TOTAL ESTIMATED CONSTRUCTION COST Phase 3 (May, 2011)			<u>\$25,839,841</u>
TOTAL ESTIMATED CONSTRUCTION COST			<u>\$179,852,927</u>

CONSTRUCTION COST SUMMARY

Element	Area	Cost / SF	Total
Alternates			
A LEEDS Certification			\$882,069
B Parking Structure (Current Dollars)	179,560 SF	\$49.44	\$8,877,446

Residence Halls, Phase 1

University of California, Riverside
 Schedule of Areas & Control Quantities
 Canyon Crest Housing at UCR

Project #: 04-307.00
 Date: 27-Jul-05

Schedule of Areas		SF per Unit	Total Beds	SF	SF
Enclosed Areas - Residential Units					
149 ea	4 Person Semi-suite	562	596	83,738	
30 ea	3 Person Semi-suite	501	90	15,030	
15 ea	Double Room with Bath	502	30	7,530	
2 ea	2 Bedroom Apartment	756	4	1,512	
2 ea	1 Bedroom Apartment	504	2	1,008	
18 ea	Single Room with Bath	284	18	5,112	
21 ea	Double Room with Bath	284	42	5,964	
237 total					
Subtotal, Enclosed Areas - Residential Units			782		<u>119,894</u>
Enclosed Areas - Common Areas					
	Lounge/Living/conf/study/Rec/Computer			13662	
	Laundry			2000	
	Kitchens			2920	
	Trash			1756	
	Storage			1500	
	Utility Rooms			2660	
	Office/work			965	
	Interior Corridors/circulation			34,566	
	Other			13,986	
Subtotal, Enclosed Areas - Common Areas					<u>74,015</u>
Unenclosed Areas					
	Colonnade/trellis			3,834	
	Ground Floor			5,718	
	Second Floor			5,561	
	Third Floor			4,905	
	Fourth Floor			7,470	
Subtotal, Unenclosed Areas				27,488	
Unenclosed Areas @ 50%					<u>13,744</u>
Total Gross Floor Area					<u>207,653</u>

Residence Halls, Phase 1 Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$10,818,896		\$52.10
1 Foundations	\$1,993,907		\$9.60	
2 Vertical Structure	\$1,420,147		\$6.84	
3 Floor & Roof Structures	\$3,306,723		\$15.92	
4 Exterior Cladding	\$3,517,590		\$16.94	
5 Roofing and Waterproofing	\$580,529		\$2.80	
B) Interiors (6-7)		\$6,038,551		\$29.08
6 Interior Partitions, Doors and Glazing	\$3,209,797		\$15.46	
7 Floor, Wall and Ceiling Finishes	\$2,828,755		\$13.62	
C) Equipment and Vertical Transportation (8-9)		\$1,412,369		\$6.80
8 Function Equipment and Specialties	\$776,488		\$3.74	
9 Stairs and Vertical Transportation	\$635,881		\$3.06	
D) Mechanical and Electrical (10-13)		\$10,424,551		\$50.20
10 Plumbing Systems	\$2,392,190		\$11.52	
11 HVAC	\$3,332,506		\$16.05	
12 Electrical Lighting, Power and Communications	\$3,981,108		\$19.17	
13 Fire Protection Systems	\$718,747		\$3.46	
E) Site Construction (14-16)		\$550,714		\$2.65
15 Site Paving, Structures & Landscaping	\$550,714		\$2.65	
Subtotal		\$29,245,082		\$140.84
Gen'l Cond, Bonds and Insurance 8.00%		\$2,339,607		\$11.27
Subtotal		\$31,584,688		\$152.10
General Contractor's Fee 4.0%		\$1,263,388		\$6.08
Subtotal		\$32,848,076		\$158.19
Design Contingency 10.0%		\$3,284,808		\$15.82
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$36,132,884</u>		\$174.01
Allow for Rising Costs at 5.0% per Annum to BOC	18.2%	\$6,579,196		
TOTAL ESTIMATED CONSTRUCTION COST (Feb, 2009)		<u>\$42,712,079</u>		\$205.69

(ASF) \$293.84

EFFICIENCY 70%

Total Area: 207,653 SF

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Foundations and grade beams				
Residential units	207,653	sf	\$3.82	\$793,569
Special foundations				
Caisson foundations due to poor soils	207,653	sf	\$4.37	\$906,936
Elevator pit	3	ea	\$9,281.04	\$27,843
Retaining wall within building footprints				
Retaining wall footings	407	lf	\$81.89	\$33,330
Retaining walls	4,473	sf	\$45.86	\$205,129
Waterproofing retaining walls	4,676	sf	\$3.82	\$17,869
Foundation drainage	457	lf	\$20.20	\$9,231
Total - 1 Foundations				<u>\$1,993,907</u>
2 Vertical Structure				
CMU columns, 16" x 16"	644	lf	\$92.81	\$59,743
Steel pipe columns	207,653	sf	\$1.64	\$340,101
Wood posts and shear panels	207,653	sf	\$4.91	\$1,020,303
Total - 2 Vertical Structure				<u>\$1,420,147</u>
3 Floor & Roof Structures				
Concrete slab-on-grade, 5" with vapor barrier and base	48,464	sf	\$6.28	\$304,274
Upper Floors				
Units				
TJI @ 16" OC	145,445	sf	\$7.10	\$1,032,265
3/4" T & G Floor, Ply	145,445	sf	\$3.82	\$555,835
2" Hardrock concrete	145,445	sf	\$2.73	\$397,025
Batt insulation	145,445	sf	\$0.66	\$95,286
Roof Construction				
TJI @ 16" OC	48,482	sf	\$7.10	\$344,088
3/4" T & G Floor, Ply	48,482	sf	\$3.82	\$185,278
Batt insulation, R-30	48,482	sf	\$0.98	\$47,643
Colonnade	3,642	sf	\$92.81	\$338,061
Concrete Housekeeping Pads, allow	851	sf	\$8.19	\$6,968
Total - 3 Floor & Roof Structures				<u>\$3,306,723</u>
4 Exterior Cladding				

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Exterior walls				
Wood studs, 2"x6"	111,132	sf	\$4.37	\$485,374
Batt insulation, R-19	111,132	sf	\$0.71	\$78,873
Exterior sheathing, 5/8"	111,132	sf	\$2.73	\$303,359
Cement plaster, 7/8"	111,132	sf	\$9.28	\$1,031,420
Gypsum board, 5/8"	111,132	sf	\$1.91	\$212,351
Paint cement plaster	111,132	sf	\$1.26	\$139,545
Paint gypsum board	111,132	sf	\$0.60	\$66,739
Courtyard Wall				
Screen wall	1,245	sf	\$18.02	\$22,430
Windows, double glazing, low e				
Operable at apts	6,479	sf	\$43.68	\$282,974
Other fixed, allow	998	sf	\$34.94	\$34,871
Storefront at lobby	877	sf	\$41.49	\$36,388
Entry Doors				
HM frames, hm doors, finish hardware, painted	66	ea	\$1,146.48	\$75,668
Exterior glass doors, double	3	ea	\$5,459.44	\$16,378
Panic hardware	66	ea	\$600.54	\$39,636
Barn doors at trash rooms, ground floor	2	ea	\$3,603.23	\$7,206
Exterior Gates, single, with card access	5	ea	\$3,821.61	\$19,108
Soffits				
Plaster, 3 coat, integral color	3,811	sf	\$10.37	\$39,531
Bridge connectors	8,520	sf	\$70.97	\$604,681
Aluminum louvers, allow	551	sf	\$38.22	\$21,057

Total - 4 Exterior Cladding

\$3,517,590

5 Roofing and Waterproofing

Single-ply membrane roofing system:	46,058	sf	\$5.24	\$241,393
Crickets & cants	46,058	sf	\$0.55	\$25,145
Flashing & Trim				
General sheet metal	207,653	sf	\$1.36	\$283,418
Roof hatches, roof ladders, curb	5	ea	\$6,114.57	\$30,573

Total - 5 Roofing and Waterproofing

\$580,529

6 Interior Partitions, Doors and Glazing

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Party Wall				
Wood studs, 3" x 4", staggered	47,260	sf	\$4.37	\$206,410
Sound insulation	47,260	sf	\$0.66	\$30,962
Gypsum board, 5/8"	189,042	sf	\$1.91	\$361,222
Interior Partitions				
Wood studs, 2" x 4"	153,091	sf	\$2.29	\$351,032
Sound insulation	153,091	sf	\$0.66	\$100,295
Gypsum board, 5/8"	306,181	sf	\$1.91	\$585,052
Interior Doors				
Entry doors, hm frames, wood doors, finish hardware, painted	547	ea	\$1,146.48	\$627,097
Interior doors, solid core wood door in wood frame including hardware and finish, single door	875	ea	\$709.73	\$620,870
Unit entry card readers	237	ea	\$491.35	\$116,450
Bifold closet doors	46	ea	\$409.46	\$18,835
30" x 30" access panels	230	ea	\$300.27	\$69,062
Special doors				
Folding partitions	2,040	sf	\$60.05	\$122,510

Total - 6 Interior Partitions, Doors and Glazing

\$3,209,797

7 Floor, Wall and Ceiling Finishes

Floors				
Seal concrete	6,173	sf	\$0.82	\$5,055
Sheet vinyl	44,540	sf	\$4.98	\$221,777
Carpet	121,831	sf	\$2.84	\$345,867
Ceramic tile	14,783	sf	\$13.10	\$193,696
Marble thresholds	421	sf	\$92.81	\$39,071
Bases				
Resilient	48,869	lf	\$2.57	\$125,395
Ceramic tile	7,853	lf	\$13.10	\$102,895
Walls				
Paint gypboard	422,358	sf	\$0.60	\$253,642
Ceramic tile	13,774	sf	\$13.10	\$180,477
Ceiling				
Acoustic tile ceilings	49,109	sf	\$3.28	\$160,866
Gypsumboard ceiling, framing	154,673	sf	\$7.10	\$1,097,757
Soffit drop	53	lf	\$17.57	\$923
Paint gypsumboard ceilings	154,673	sf	\$0.66	\$101,331

Total - 7 Floor, Wall and Ceiling Finishes

\$2,828,755

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
8 Function Equipment and Specialties				
Kitchen Appliances				
Dishwasher	4	ea	\$709.73	\$2,839
Disposer	4	ea	\$272.97	\$1,092
Stove, 4 burner	4	ea	\$818.92	\$3,276
Microwave/hood combo	4	ea	\$818.92	\$3,276
Refrigerator, incl. kitchens at floors	23	ea	\$818.92	\$18,835
Washer/dryer combo	4	ea	\$1,364.86	\$5,459
Microwave at common area kitchens	19	ea	\$409.46	\$7,780
Casework & Millwork				
Base cabinet with p-lam countertop	36	lf	\$180.16	\$6,486
Vanity cabinet with p-lam countertop, open shelving base	1,556	lf	\$136.49	\$212,372
Upper cabinet	53	lf	\$103.73	\$5,498
Closet shelving, bedrooms	355	ea	\$202.00	\$71,710
Casework at common kitchens, office space, storage & laundry	24,361	sf	\$2.18	\$53,199
Reception desk	32	lf	\$382.16	\$12,229
Millwork & trim	207,653	sf	\$0.55	\$113,367
Corner guards and wall protection	1	ls	\$15,559.40	\$15,559
Signage	207,653	sf	\$0.27	\$56,684
Telephone enclosures, allowance	1	ea	\$1,255.67	\$1,256
Misc. specialties	207,653	sf	\$0.27	\$56,684
Toilet accessories				
Mirror	431	ea	\$191.08	\$82,356
Toilet paper dispenser, by owner vendor				
Towel bar	237	ea	\$54.59	\$12,939
Grab bars	12	ea	\$103.73	\$1,245
Shower wand	237	ea	\$81.89	\$19,408
Shower curtain	237	ea	\$38.22	\$9,057
Coat hook	237	ea	\$16.38	\$3,882

Total - 8 Function Equipment and Specialties

\$776,488

9 Stairs and Vertical Transportation

Metal pan stairs, concrete fill, railing, paint				
4'0" wide, tread and riser	312	rsr	\$655.13	\$204,401
Landing fill	1,248	sf	\$16.38	\$20,440

Elevators and Lifts
Hydraulic Elevators

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Passenger, 4-stop, 32'0" travel	2	ea	\$147,404.81	\$294,810
Passenger, 3-stop, 21'0" travel	1	ea	\$110,553.61	\$110,554
Elevator sill	45	lf	\$35.15	\$1,582
Elevator pit ladder	3	ea	\$1,364.86	\$4,095

Total - 9 Stairs and Vertical Transportation

\$635,881

10 Plumbing Systems

Fixtures including complete rough-in

Water closet	237	ea	\$1,747.02	\$414,044
Lavatory	431	ea	\$1,834.37	\$790,614
Kitchen sinks	4	ea	\$1,954.48	\$7,818
Shower	233	ea	\$1,856.21	\$432,497
Shower / Tub	4	ea	\$2,402.15	\$9,609
Kitchen sinks at common areas	19	ea	\$3,275.66	\$62,238
Water heaters for laundry rooms	10	ea	\$5,459.44	\$54,594
Natural gas to water heaters, allow 100' run	10	ea	\$1,637.83	\$16,378
Water heating	1	ls	\$48,900.18	\$48,900
Natural gas	207,653	sf	\$0.55	\$113,367
Roof drainage allowance	207,653	sf	\$1.31	\$272,081
Misc plumbing allowance	207,653	sf	\$0.82	\$170,051

Total - 10 Plumbing Systems

\$2,392,190

11 HVAC

Central plant

Central plant equipment and piping, CHW, CW,HHW	413	ton	\$1,201.08	\$496,044
Chiller redundancy, 60%	249	ton	\$457.50	\$113,918
Chilled water distribution	207,653	sf	\$1.97	\$408,121
Heating hot water distribution	207,653	sf	\$1.97	\$408,121
Air-Side Equipment at units				
4-pipe fancoils	437	ea	\$1,528.64	\$668,017
Toilet exhaust fan	237	ea	\$187.80	\$44,510
Ceiling paddle fan	437	ea	\$387.62	\$169,390
Air distribution allowances at units				
Ductwork, galvanized steel	6,535	lb	\$7.09	\$46,309
Grilles, registers, diffusers	360	hr	\$59.73	\$21,501
Test and balance	180	ea	\$98.27	\$17,689
HVAC allowances at common areas				
Air handlers	54,686	cfm	\$4.41	\$241,232
General exhaust	5,468	cfm	\$1.09	\$5,970
VAV's	39	ea	\$1,190.16	\$46,416
Controls	74,015	sf	\$1.97	\$145,469
Ductwork, galvanized steel	39,449	lb	\$7.09	\$279,549
Duct insulation	26,682	sf	\$2.43	\$64,968
Flexible duct, insulated, various sizes	1,097	lf	\$14.96	\$16,410
Combination fire / smoke damper	32	ea	\$932.47	\$29,839

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Manual volume damper	219	ea	\$75.23	\$16,476
Grilles, registers, diffusers	293	ea	\$177.98	\$52,147
Test and balance	74,015	sf	\$0.55	\$40,408

Total - 11 HVAC

\$3,332,506

12 Electrical Lighting, Power and Communications

Service & Distribution

Mainservice 1600 amp 120/208 volt 3ph 4w	2	ea	\$19,428.66	\$38,857
Distribution panel 800 amp 120/208v 3ph 4w	2	ea	\$8,132.93	\$16,266
House panel 400 amp 120/208v 3ph 4w	1	ea	\$2,891.71	\$2,892
Laundry panel 400 amp 120/208v 3ph 4w	1	ea	\$2,891.71	\$2,892
Unit panels 200 amp 120/208v 3ph 4w	149	ea	\$862.99	\$128,586
Unit panels 100 amp 120/208v 3ph 4w	88	ea	\$862.99	\$75,943
Transformers	20	ea	\$12,283.73	\$245,675
Grounding	1	ls	\$1,355.49	\$1,355
MC cable 3C-#4, with 1#6 ground	9,485	lf	\$4.47	\$42,427
MC cable 3C-#2, with 1#6 ground	17,160	lf	\$5.87	\$100,794
Feeder conduit, emt, 4"	1,135	lf	\$14.84	\$16,838
Feeder wire, #2	7	clf	\$164.84	\$1,123
Feeder wire, #1/0	5	clf	\$234.65	\$1,065
Feeder wire, #4/0	27	clf	\$405.30	\$11,036
Feeder wire, #500mcm	18	clf	\$655.15	\$11,891
Lounge/Living/conf/study/Rec/Computer	13,662	sf	\$1.81	\$24,692
Laundry	2,000	sf	\$2.26	\$4,518
Kitchens	2,920	sf	\$3.61	\$10,555
Trash	1,756	sf	\$1.81	\$3,174
Storage	1,500	sf	\$1.81	\$2,711
Utility Rooms	2,660	sf	\$1.81	\$4,807
Office/work	965	sf	\$2.71	\$2,616
Interior Corridors/circulation/lobby	34,566	sf	\$1.81	\$62,471
Other	13,986	sf	\$1.81	\$25,278
Corridors	27,488	sf	\$1.81	\$49,680

Lighting & Power

Convenience Power

Duplex 15 amp 120 volt	1,839	ea	\$45.18	\$83,099
Duplex 1/2 hot 15 amp 120 volt	757	ea	\$49.70	\$37,632
Duplex GFI 15 amp 120 volt	636	ea	\$63.26	\$40,228
Double duplex 20 amp 120 volt	385	ea	\$67.77	\$26,063
Duplex separate circuit 20 amp 120 volt	471	ea	\$81.33	\$38,269
Oven 40 amp connection	4	ea	\$180.73	\$723
Washer/dryer outlet separate circuit	4	ea	\$135.55	\$486
Switch with duplex separate circuit 20 amp 120 volt	196	ea	\$135.55	\$26,549
MC cable 12-2 with ground copper	3,529	lf	\$2.21	\$7,813
MC cable 12-3 with ground copper	23,527	lf	\$2.58	\$60,592
MC cable 10-3 with ground copper	7,834	lf	\$2.49	\$19,469
MC cable 8-3 with ground copper	5,876	lf	\$3.12	\$18,319

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Lounge/Living/conf/study/Rec/Computer	13,662	sf	\$2.26	\$30,864
Laundry	2,000	sf	\$1.81	\$3,615
Kitchens	2,920	sf	\$2.71	\$7,916
Trash	1,756	sf	\$1.81	\$3,174
Storage	1,500	sf	\$1.81	\$2,711
Utility Rooms	2,660	sf	\$1.81	\$4,807
Office/work	965	sf	\$2.71	\$2,616
Interior Corridors/circulation/lobby	34,566	sf	\$1.81	\$62,471
Other	13,986	sf	\$2.03	\$28,438
Corridors	27,488	sf	\$0.09	\$2,484
Equipment connection				
RTU unit compressor connection	647	ea	\$45.18	\$29,233
RTU unit compressor disconnect 30 amp 208v	647	ea	\$126.51	\$81,853
Fan coil unit connection	647	ea	\$45.18	\$29,233
Fan coil unit disconnect 30 amp 208v	647	ea	\$112.96	\$73,083
Exhaust fan connection	237	ea	\$135.55	\$32,125
MC cable 10-3 with ground copper	22,643	lf	\$2.49	\$56,269
MC cable 8-3 with ground copper	64,695	lf	\$3.12	\$201,695
Lounge/Living/conf/study/Rec/Computer	13,662	sf	\$0.68	\$9,259
Laundry	2,000	sf	\$0.68	\$1,355
Kitchens	2,920	sf	\$0.68	\$1,979
Trash	1,756	sf	\$0.23	\$397
Storage	1,500	sf	\$0.23	\$339
Utility Rooms	2,660	sf	\$0.23	\$601
Office/work	965	sf	\$0.90	\$872
Interior Corridors/circulation/lobby	34,566	sf	\$1.13	\$39,045
Lighting				
Emergency lighting allowance	1	ls	\$98,269.88	\$98,270
Fixture A, recessed downlight entry	1,396	ea	\$108.44	\$151,381
Fixture B, recessed downlight kitchen	8	ea	\$126.51	\$1,012
Fixture C, wall sconce bathroom	782	ea	\$135.55	\$105,952
Fixture D, strip light	196	ea	\$81.33	\$15,929
Switch 1P, single	1,131	ea	\$40.66	\$45,991
Switch 1P, double	385	ea	\$49.70	\$19,113
MC cable 12-2 with ground copper	33,526	lf	\$2.21	\$74,225
MC cable 12-3 with ground copper	16,763	lf	\$2.58	\$43,172
Lounge/Living/conf/study/Rec/Computer	13,662	sf	\$3.61	\$49,383
Laundry	2,000	sf	\$2.71	\$5,422
Kitchens	2,920	sf	\$2.71	\$7,916
Trash	1,756	sf	\$2.26	\$3,967
Storage	1,500	sf	\$2.26	\$3,389
Utility Rooms	2,660	sf	\$2.26	\$6,009
Office/work	965	sf	\$3.61	\$3,488
Interior Corridors/circulation/lobby	34,566	sf	\$5.87	\$203,032
Other	13,986	sf	\$2.71	\$37,917
Corridors	27,488	sf	\$0.68	\$18,630

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Telephone/Data system				
Telephone terminal box	237	ea	\$112.96	\$26,771
Telephone/data wall outlet	945	ea	\$40.66	\$38,439
Conduit 1", emt	27,938	lf	\$4.02	\$112,347
Cable Cat 6	100,578	lf	\$1.31	\$131,784
Lounge/Living/conf/study/Rec/Computer	13,662	sf	\$1.81	\$24,692
Laundry	2,000	sf	\$0.45	\$904
Kitchens	2,920	sf	\$0.45	\$1,319
Trash	1,756	sf	\$0.45	\$793
Storage	1,500	sf	\$0.45	\$678
Utility Rooms	2,660	sf	\$0.45	\$1,202
Office/work	965	sf	\$1.81	\$1,744
Interior Corridors/circulation/lobby	34,566	sf	\$1.36	\$46,853
Other	13,986	sf	\$0.45	\$6,319
Fire Alarm				
FA control panel master slave system	2	ea	\$6,777.44	\$16,188
FA strobe/speaker	385	ea	\$176.21	\$67,764
FA smoke detector	946	ea	\$158.14	\$149,673
Conduit 1", emt	29,409	lf	\$4.02	\$118,261
FA cable	29,409	lf	\$0.88	\$25,778
Lounge/Living/conf/study/Rec/Computer	13,662	sf	\$1.36	\$18,519
Laundry	2,000	sf	\$0.90	\$1,807
Kitchens	2,920	sf	\$0.90	\$2,639
Trash	1,756	sf	\$9.94	\$17,455
Storage	1,500	sf	\$0.90	\$1,355
Utility Rooms	2,660	sf	\$0.90	\$2,404
Office/work	965	sf	\$1.81	\$1,744
Interior Corridors/circulation/lobby	34,566	sf	\$1.36	\$46,853
Other	13,986	sf	\$1.36	\$18,958
CATV System				
CATV terminal box	237	ea	\$90.37	\$21,417
CATV wall outlet	918	ea	\$40.66	\$37,346
Conduit 1", emt	27,938	lf	\$4.02	\$112,347
Cable RG6	27,938	lf	\$0.95	\$26,509
Lounge/Living/conf/study/Rec/Computer	13,662	sf	\$0.68	\$9,259
Office/work	965	sf	\$0.68	\$654
Interior Corridors/circulation/lobby	34,566	sf	\$0.68	\$23,427
Security/CCTV System				
Card key access system	1	ls	\$18,889.65	\$18,890
Total - 12 Electrical Lighting, Power and Communications				<u>\$3,981,108</u>
13 Fire Protection Systems				
Fire Sprinklers, NFPA 13	207,653	ea	\$3.46	<u>\$718,747</u>

Residence Halls, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Total - 13 Fire Protection Systems				<u>\$718,747</u>
15 Site Paving, Structures & Landscaping				
Courtyard Site Improvements				
Hardscape				
Integral color concrete paving, 5" thick, sand blast finish, with brick banding	10,255	sf	\$10.37	\$106,376
Concrete paving, standard	4,257	sf	\$7.10	\$30,213
Concrete turf block and grass	4,283	sf	\$9.28	\$39,747
Patio slabs	506	sf	\$13.10	\$6,635
Landscaping				
Trees				
48" box, allow	19	ea	\$1,965.40	\$37,555
Shrubs / Ground cover				
Lush groundcover, allow	2,458	sf	\$27.30	\$67,107
Seeding including soil prep, between buildings	31,671	sf	\$0.71	\$22,478
90 days maintenance	1	ls	\$12,387.46	\$12,387
Irrigation				
Planting and lawn area irrigation	34,130	sf	\$1.64	\$55,899
Landscape drainage	34,130	sf	\$1.64	\$55,899
Site furnishings				
Wooden bench, 6'-0" long	4	ea	\$1,364.86	\$5,459
Miscellaneous site furnishings, allowance	1	ls	\$10,918.88	\$10,919
Special space	2	ea	\$21,837.75	\$43,676
Fencing & Gates				
Fencing, ornamental	230	lf	\$163.78	\$37,670
CMU screen wall at patios	107	lf	\$174.70	\$18,693
Total - 15 Site Paving, Structures & Landscaping				<u>\$550,714</u>

Site Development, Residence Halls Phase 1

Site Development, Residence Halls Phase 1 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$7,006,967		\$11.25
14 Site Preparation and Demolition		\$1,613,282		\$2.59	
15 Site Paving, Structures and Landscaping		\$3,509,481		\$5.63	
16 Utilities on Site		\$1,884,204		\$3.02	
Subtotal			\$7,006,967		\$11.25
Gen'l Cond, Bonds and Insurance	8.00%		\$560,557		\$0.90
Subtotal			\$7,567,524		\$12.15
General Contractor's Fee	4.0%		\$302,701		\$0.49
Subtotal			\$7,870,225		\$12.63
Design Contingency	10.0%		\$787,023		\$1.26
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$8,657,248</u>		\$13.90
Allow for Rising Costs at 5.0% per Annum to BOC		18.2%	\$1,576,340		
TOTAL ESTIMATED CONSTRUCTION COST (Feb, 2009)			<u>\$10,233,588</u>		\$16.43

Total Area: 622,978 SF

Site Development, Residence Halls Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
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14 Site Preparation and Demolition

Demolition				
Hazmat abatement, allow	75	ea	\$3,821.61	\$286,620
Demo existing housing units	75	ea	\$8,189.16	\$614,187
Site Demolition				
Clear site	622,978	sf	\$0.44	\$272,089
Grading and clearing				
Overexcavate and recompact under structures	29,799	cy	\$3.82	\$113,879
Rough grade	622,978	sf	\$0.33	\$204,067
Fine grade	622,978	sf	\$0.11	\$68,022
Erosion control, allowance	622,978	sf	\$0.09	\$54,418

Total - 14 Site Preparation and Demolition

\$1,613,282

15 Site Paving, Structures and Landscaping

Hardscape				
Integral color concrete paving, 5" thick, sand blast finish, with brick banding	52,458	sf	\$10.37	\$544,143
Concrete paving	13,255	sf	\$7.10	\$94,074
Curb and gutter, concrete	6,064	lf	\$19.65	\$119,182
Asphalt paving	103,215	sf	\$3.00	\$309,923
Asphalt paving, repairs	1	ls	\$5,459.44	\$5,459
Striping, miscellaneous road markings	103,215	sf	\$0.05	\$5,635
Accessible concrete curb cut ramps	4	ea	\$928.10	\$3,712
Stairs on grade	314	lf	\$38.22	\$12,000
Retaining walls				
Retaining wall footings, 5 - 10 ft height	1,124	lf	\$70.97	\$79,773
Retaining walls	7,764	sf	\$45.86	\$356,051
Waterproofing retaining walls	8,152	sf	\$3.82	\$31,154
Foundation drainage	1,250	lf	\$20.20	\$25,250
Other site improvements				
Trash enclosures	2	ea	\$25,113.41	\$50,227
CMU screen wall at corporate yard	748	lf	\$174.70	\$130,677
Wood Trellis at circle drive	4,120	sf	\$38.22	\$157,450
Wood Trellis at circle courtyard	909	sf	\$38.22	\$34,738
Site signage, allow	1	ls	\$16,378.31	\$16,378
Monument sign, allow	1	ls	\$10,918.88	\$10,919
Site furnishings	1	ls	\$109,188.75	\$109,189
Bicycle enclosures & storage				
Bicycle storage enclosure - 30 bikes per enclosure	5	ea	\$82,459.34	\$412,297

Site Development, Residence Halls Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Slab, trellis structure, ornamental fencing, gates with security, roof structure, clay tile roofing				
Landscaping				
Trees				
Screening trees, allow	52	ea	\$1,637.83	\$85,167
Palms, allow	20	ea	\$1,965.40	\$39,308
Shrubs / Ground cover				
Lush groundcover, allow	4,000	sf	\$27.30	\$109,189
Turf including soil prep	150,000	sf	\$0.71	\$106,459
90 days maintenance	3	mo	\$5,459.44	\$16,378
Irrigation				
Planting and lawn area irrigation	154,000	sf	\$1.64	\$252,226
Parking equipment				
Arm gate & card reader	3	ea	\$6,551.33	\$19,654
Electrical Site Lighting	622,978	sf	\$0.55	\$340,111
Emergency blue light security system	2	ea	\$16,378.31	\$32,757
Total - 15 Site Paving, Structures and Landscaping				<u>\$3,509,481</u>

16 Utilities on Site

Electrical Site Utilities				
Electrical Site Utilities	1	ls	\$181,793.81	\$181,794
Telephone Data Site Utilities	1	ls	\$90,896.90	\$90,897
Site substation transformers and 500 kva generator, prorated cost across all site phases	1	ls	\$414,644.28	\$414,644
Site HVAC Distribution				
1-1/2" HHW pipe, steel in pvc, preinsulated, db	400	lf	\$28.17	\$11,268
3" HHW pipe, steel in pvc, preinsulated, db	850	lf	\$43.68	\$37,124
4" HHW pipe, steel in pvc, preinsulated, db	850	lf	\$60.71	\$51,603
2" CHW pipe, steel in pvc, preinsulated, db	400	lf	\$33.08	\$13,234
Trench excavate, backfill, compact	370	cy	\$39.64	\$14,680
6" CHW pipe, steel in pvc, preinsulated, db	800	lf	\$80.04	\$64,028
Trench excavate, backfill, compact	119	cy	\$39.64	\$4,698
Wet utilities				
Domestic Water & fire service				
Point of connection	2	ea	\$3,821.61	\$7,643
8" DIP lateral	3,081	lf	\$65.51	\$201,846
6" DIP lateral	1,335	lf	\$49.13	\$65,595
4" DIP lateral	350	lf	\$38.22	\$13,376
Double detector check	5	ea	\$8,735.10	\$43,676

Site Development, Residence Halls Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Post Indicator valve	5	ea	\$1,637.83	\$8,189
Fire hydrant, allow	12	ea	\$4,913.49	\$58,962
Fire department connection	3	ea	\$1,637.83	\$4,913
Gas service	1,257	lf	\$32.76	\$41,175
Gas meter	6	ea	\$2,729.72	\$16,378
Gas service, demolition	865	lf	\$16.38	\$14,167
Storm drain				
Point of connection	4	ea	\$2,729.72	\$10,919
Catch basin	10	ea	\$2,402.15	\$24,022
Manhole	6	ea	\$4,913.49	\$29,481
SDR 35, 12"	4,249	lf	\$70.97	\$301,563
Sanitary Sewer				
Sewer, demolition	2,463	lf	\$16.38	\$40,340
Point of connection	1	ea	\$2,729.72	\$2,730
Sewer manhole	5	ea	\$4,913.49	\$24,567
4" - 6" laterals, allow	300	lf	\$38.22	\$11,465
8" mains	1,155	lf	\$56.78	\$65,579
10,000 gal grease interceptor	1	ea	\$13,648.59	\$13,649
Total - 16 Utilities on Site				<u>\$1,884,204</u>

Parking, Residence Hall Phase 1

Parking, Residence Hall Phase 1 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$453,286		\$8.30
14 Site Preparation and Demolition		\$61,354		\$1.12	
15 Site Paving, Structures and Landscaping		\$368,347		\$6.75	
16 Utilities on Site		\$23,585		\$0.43	
Subtotal			\$453,286		\$8.30
Gen'l Cond, Bonds and Insurance	8.00%		\$36,263		\$0.66
Subtotal			\$489,548		\$8.97
General Contractor's Fee	4.0%		\$19,582		\$0.36
Subtotal			\$509,130		\$9.32
Design Contingency	10.0%		\$50,913		\$0.93
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$560,043</u>		\$10.26
Allow for Rising Costs at 5.0% per Annum to BOC		18.2%	\$101,975		
TOTAL ESTIMATED CONSTRUCTION COST (Feb, 2009)			<u>\$662,018</u>		\$12.12

Total Area: 54,603 SF

Parking, Residence Hall Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Site Demolition				
Clear site	54,603	sf	\$0.44	\$23,848
Grading and clearing				
Overexcavate and recompact under structures	2,326	cy	\$3.82	\$8,888
Rough grade	54,603	sf	\$0.33	\$17,886
Fine grade	54,603	sf	\$0.11	\$5,962
Erosion control, allowance	54,603	sf	\$0.09	<u>\$4,770</u>
Total - 14 Site Preparation and Demolition				<u>\$61,354</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Concrete paving	3,615	sf	\$7.10	\$25,657
Curb and gutter, concrete	2,966	lf	\$19.65	\$58,294
Asphalt paving	54,603	sf	\$3.00	\$163,956
Asphalt paving - CDC	8,555	sf	\$3.00	\$25,688
Striping, standard stall	214	ea	\$19.65	\$4,206
Striping, miscellaneous road markings	54,603	sf	\$0.05	\$2,981
Stencil ADA parking symbols	7	ea	\$92.81	\$650
Accessible concrete curb cut ramps	3	ea	\$928.10	\$2,784
Landscaping				
Trees				
Screening trees, allow	12	ea	\$1,637.83	\$19,654
Shrubs / Ground cover				
Turf including soil prep	5,000	sf	\$0.71	\$3,549
90 days maintenance	3	mo	\$2,183.78	\$6,551
Irrigation				
Planting and lawn area irrigation	5,000	sf	\$0.98	\$4,913
Parking equipment				
Arm gate & card reader	3	ea	\$6,551.33	\$19,654
Electrical Site Lighting	54,603	sf	\$0.55	<u>\$29,810</u>
Total - 15 Site Paving, Structures and Landscaping				<u>\$368,347</u>
16 Utilities on Site				
Storm drain				
Catch basin	3	ea	\$2,402.15	\$7,206
SDR 35, 8"	300	lf	\$54.59	<u>\$16,378</u>
Total - 16 Utilities on Site				<u>\$23,585</u>

Dining Hall, Phase 1

Schedule of Areas	SF	SF
Enclosed Areas - Dining Hall		
Dining Area	10000	
Servery	5625	
Production Kitchen	5600	
Warewashing	1900	
Dining support	3100	
Convenience Store/Deli		
Public/common, (Admin, offices, lounges, game)	5680	
Conference services, (Office, and waiting)	0	
Meeting/Academic/Programs	0	
Circulation and other area	13,674	
Central Plant prorated space	8,200	
Subtotal, Enclosed Areas - Dining Hall		<u>53,779</u>
Unenclosed Areas		
Ground Floor	0	
Second Floor	0	
Subtotal, Unenclosed Areas	0	
Unenclosed Areas@ 50%		<u>0</u>
Total Gross Floor Area		<u>53,779</u>

Dining Hall, Phase 1 Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$6,339,879		\$117.89
1 Foundations	\$712,061		\$13.24	
2 Vertical Structure	\$399,297		\$7.42	
3 Floor & Roof Structures	\$2,281,999		\$42.43	
4 Exterior Cladding	\$2,491,441		\$46.33	
5 Roofing and Waterproofing	\$455,081		\$8.46	
B) Interiors (6-7)		\$2,037,589		\$37.89
6 Interior Partitions, Doors and Glazing	\$901,354		\$16.76	
7 Floor, Wall and Ceiling Finishes	\$1,136,235		\$21.13	
C) Equipment and Vertical Transportation (8-9)		\$2,893,015		\$53.79
8 Function Equipment and Specialties	\$2,522,139		\$46.90	
9 Stairs and Vertical Transportation	\$370,876		\$6.90	
D) Mechanical and Electrical (10-13)		\$3,409,148		\$63.39
10 Plumbing Systems	\$696,265		\$12.95	
11 HVAC	\$1,459,925		\$27.15	
12 Electrical Lighting, Power and Communications	\$1,018,077		\$18.93	
13 Fire Protection Systems	\$234,881		\$4.37	
Subtotal		\$14,679,631		\$272.96
Gen'l Cond, Bonds and Insurance	8.00%	\$1,174,371		\$21.84
Subtotal		\$15,854,002		\$294.80
General Contractor's Fee	4.0%	\$634,160		\$11.79
Subtotal		\$16,488,162		\$306.59
Design Contingency	10.0%	\$1,648,816		\$30.66
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$18,136,978</u>		\$337.25
Allow for Rising Costs at 5.0% per Annum to BOC	18.2%	\$3,302,441		
TOTAL ESTIMATED CONSTRUCTION COST (Feb, 2009)		<u>\$21,439,420</u>		\$398.66

(ASF) \$671.98

EFFICIENCY 70%

Total Area: 53,779 SF

Dining Hall, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Standard foundations				
Spread, strip footings and grade beams	53,779	sf	\$4.09	\$220,201
Special foundations				
Caisson foundations due to poor soils	53,779	sf	\$4.37	\$234,881
Basement walls				
Basement wall footings	222	lf	\$70.97	\$15,756
Basement walls	4,067	sf	\$45.86	\$186,510
Basement wall waterproofing	4,067	sf	\$5.24	\$21,315
Foundation drain system	275	lf	\$20.20	\$5,555
Elevator pit	3	ea	\$9,281.04	\$27,843
Total - 1 Foundations				<u>\$712,061</u>
2 Vertical Structure				
Structural Steel				
Columns, beams, braced frames, (4# per sf)	108	tn	\$3,439.45	\$369,937
Fireproofing				
Structural steel	108	tn	\$272.97	\$29,360
Total - 2 Vertical Structure				<u>\$399,297</u>
3 Floor & Roof Structures				
Cast-In-Place Concrete Slab-On-Grade				
Concrete slab	26,889	sf	\$7.64	\$205,521
Structural Steel				
Upper floors & roof				
Upper floors structural steel beams & girders (12# / sf)	323	tn	\$3,439.45	\$1,109,811
Metal deck at upper floors, concrete fill	53,779	sf	\$9.66	\$519,673
Fireproofing	323	tn	\$272.97	\$88,080
Penthouse Roof				
Roof screens	1	ls	\$81,891.56	\$81,892
Loading dock				
Loading dock concrete	785	sf	\$81.89	\$64,285
Misc metal fabrications	53,779	sf	\$3.28	\$176,160
Seismic expansion joints	1	ls	\$27,297.19	\$27,297
Concrete Housekeeping Pads	1,000	sf	\$9.28	\$9,281

Dining Hall, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Total - 3 Floor & Roof Structures				<u>\$2,281,999</u>
4 Exterior Cladding				
Exterior Skin, glass, doors, 1/3	14,297	sf	\$70.97	\$1,014,682
Exterior Skin, brick, 1/3	21,445	sf	\$45.86	\$983,461
Exterior Skin, cement plaster, 1/3	21,445	sf	\$9.28	\$199,034
Exterior canopies	1	ls	\$272,971.88	\$272,972
Dock doors, roll-up	3	ea	\$7,097.27	<u>\$21,292</u>
Total - 4 Exterior Cladding				<u>\$2,491,441</u>
5 Roofing and Waterproofing				
Single ply roofing system				
Flat roofing, insulation, roof accessories	26,889	sf	\$11.46	\$308,281
Sheet metal allowance	53,779	sf	\$2.73	<u>\$146,800</u>
Total - 5 Roofing and Waterproofing				<u>\$455,081</u>
6 Interior Partitions, Doors and Glazing				
Interior Partitions				
Partitions, shafts, column enclosures and insulation	53,779	sf	\$13.65	\$734,002
Doors				
Interior Doors, Frames and Finished Hardware	53,779	sf	\$2.18	\$117,440
Other Doors				
Special doors	53,779	sf	\$0.66	\$35,232
Interior Glazing				
Sidelites and other interior glazing	53,779	sf	\$0.27	<u>\$14,680</u>
Total - 6 Interior Partitions, Doors and Glazing				<u>\$901,354</u>
7 Floor, Wall and Ceiling Finishes				
Ceiling				
Ceilings, gypboard, acoustical, soffits & bulkheads	53,779	sf	\$6.28	\$337,641
Special ceilings, soffits, allow	53,779	sf	\$4.37	\$234,881
Walls				
Wall finishes, paint, tile, wall covering	53,779	sf	\$2.46	\$132,120

Dining Hall, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Bases				
Resilient, tile and wood	53,779	sf	\$0.66	\$35,232
Floors				
Carpet, terrazzo, tile, sheet vinyl, concrete sealer	53,779	sf	\$7.37	<u>\$396,361</u>
Total - 7 Floor, Wall and Ceiling Finishes				<u>\$1,136,235</u>
8 Function Equipment and Specialties				
Toilet & misc. specialties	53,779	sf	\$1.09	\$58,720
Lockers	1,000	ea	\$70.97	\$70,973
Signage				
Signage package	53,779	sf	\$0.38	\$20,552
Graphics and menu-signage, allow	1	ls	\$81,891.56	\$81,892
Casework				
Casework and shelving, allowance	53,779	sf	\$0.55	\$29,360
Built-in seating, allow	53,779	sf	\$1.64	\$88,080
Millwork & trim	53,779	sf	\$1.09	\$58,720
Kitchen equipment, from kitchen consultant				
Group 1 equipment				
Serving platforms	1	ls	\$976,044.79	\$976,045
Production kitchen	1	ls	\$592,703.83	\$592,704
Warewashing	1	ls	\$283,890.75	\$283,891
Support	1	ls	\$7,643.21	\$7,643
Accordion folding partition	888	sf	\$70.97	\$63,024
Projector screens, electronic, Projection screen	2	ea	\$9,281.04	\$18,562
Loading dock equipment				
Dock levelers, bumpers, etc	3	ea	\$13,648.59	\$40,946
Trash compactor, allow	1	ls	\$81,891.56	\$81,892
Bailer, allow	1	ls	\$49,134.94	<u>\$49,135</u>
Total - 8 Function Equipment and Specialties				<u>\$2,522,139</u>
9 Stairs and Vertical Transportation				
Stairs and Ramps				
Architectural steel stairs, paint 7'0" wide, tread and riser, nosing	31	rsr	\$802.54	\$24,879
Metal pan stairs 4'0" wide, tread and riser, nosing	62	rsr	\$671.51	\$41,634

Dining Hall, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Elevators and Lifts				
Hydraulic Elevators				
Passenger, 2-stop, 18'0" travel	1	ea	\$92,810.44	\$92,810
Freight, 2-stop, 18'0" travel	2	ea	\$103,729.31	\$207,459
Elevator pit ladder	3	ea	\$1,364.86	\$4,095
Total - 9 Stairs and Vertical Transportation				<u>\$370,876</u>
10 Plumbing Systems				
Plumbing allowance, general	40,654	sf	\$6.55	\$266,335
Plumbing allowance, kitchen	13,125	sf	\$32.76	\$429,931
Total - 10 Plumbing Systems				<u>\$696,265</u>
11 HVAC				
Central plant				
Central plant equipment and piping, CHW, CW, HHW	189	ton	\$1,201.08	\$227,016
Chiller redundancy, 60%	114	ton	\$457.50	\$52,009
Chilled water distribution	53,779	sf	\$1.33	\$71,639
Heating hot water distribution	53,779	sf	\$2.56	\$137,405
Air-Side Equipment				
Air handlers	51,590	cfm	\$4.41	\$227,574
Kitchen makeup air unit	12,439	cfm	\$3.57	\$44,414
Kitchen exhaust	12,439	cfm	\$1.09	\$13,582
General exhaust	9,131	cfm	\$1.09	\$9,970
Air distribution allowances				
Ductwork, galvanized steel	41,135	lb	\$7.09	\$291,496
Flexible duct, insulated, various sizes	918	lf	\$12.01	\$11,022
Duct insulation, wrap	28,808	sf	\$2.43	\$70,145
Duct insulation, liner	2,283	sf	\$3.13	\$7,153
Combination fire / smoke damper	26	ea	\$932.47	\$24,266
Manual volume damper	184	ea	\$75.23	\$13,807
Grilles, registers, diffusers	275	ea	\$192.17	\$52,905
Test and balance	53,779	sf	\$0.55	\$29,360
Controls	53,779	sf	\$3.28	\$176,160
Total - 11 HVAC				<u>\$1,459,925</u>
12 Electrical Lighting, Power and Communications				
Service & Distribution				
Dining Area	10,000	sf	\$2.18	\$21,837.75
Serving	5,625	sf	\$3.28	\$18,425.60
Production Kitchen	5,600	sf	\$3.28	\$18,343.71
Warewashing	1,900	sf	\$3.28	\$6,223.76
Dining support	3,100	sf	\$2.18	\$6,769.70
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$2.18	\$12,403.84

Dining Hall, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Circulation and other area	13,674	sf	\$1.64	\$22,395.00
Transformers	2	ea	\$12,739.05	\$25,478
Central plant	8,200	sf	\$8.74	\$71,627.82
Emergency power				
Backup generator, see site costs				
Convenience Power				
Dining Area	10,000	sf	\$2.73	\$27,297.19
Serving	5,625	sf	\$4.37	\$24,567.47
Production Kitchen	5,600	sf	\$4.37	\$24,458.28
Warewashing	1,900	sf	\$4.37	\$8,298.35
Dining support	3,100	sf	\$2.73	\$8,462.13
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$2.73	\$15,504.80
Circulation and other area	13,674	sf	\$2.18	\$29,860.00
Central plant	8,200	sf	\$1.36	\$11,191.85
Equipment Power				
Dining Area	10,000	sf	\$2.18	\$21,837.75
Serving	5,625	sf	\$2.18	\$12,283.73
Production Kitchen	5,600	sf	\$2.18	\$12,229.14
Warewashing	1,900	sf	\$2.18	\$4,149.17
Dining support	3,100	sf	\$1.64	\$5,077.28
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$1.09	\$6,201.92
Circulation and other area	13,674	sf	\$1.64	\$22,395.00
Central plant	8,200	sf	\$5.46	\$44,767.39
Lighting				
Dining Area	10,000	sf	\$6.55	\$65,513.25
Serving, includes specialty decorative lighting	5,625	sf	\$13.10	\$73,702.41
Production Kitchen	5,600	sf	\$4.37	\$24,458.28
Warewashing	1,900	sf	\$4.37	\$8,298.35
Dining support	3,100	sf	\$6.55	\$20,309.11
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$6.55	\$37,211.53
Circulation and other area	13,674	sf	\$1.64	\$22,395.00
Central plant	8,200	sf	\$3.82	\$31,337.17
Telephone/Data system				
Dining Area	10,000	sf	\$0.55	\$5,459.44
Serving	5,625	sf	\$0.55	\$3,070.93
Production Kitchen	5,600	sf	\$0.55	\$3,057.29
Warewashing	1,900	sf	\$0.55	\$1,037.29
Dining support	3,100	sf	\$0.55	\$1,692.43
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$2.18	\$12,403.84
Circulation and other area	13,674	sf	\$1.64	\$22,395.00
Central plant	8,200	sf	\$1.64	\$13,430.22
Public address & technology				
Dining Area	10,000	sf	\$0.55	\$5,459.44

Dining Hall, Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Servery	5,625	sf	\$0.27	\$1,535.47
Production Kitchen	5,600	sf	\$0.27	\$1,528.64
Warewashing	1,900	sf	\$0.55	\$1,037.29
Dining support	3,100	sf	\$0.55	\$1,692.43
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$1.09	\$6,201.92
Circulation and other area	13,674	sf	\$1.09	\$14,930.00
Fire Alarm				
Dining Area	10,000	sf	\$1.64	\$16,378.31
Servery	5,625	sf	\$1.64	\$9,212.80
Production Kitchen	5,600	sf	\$1.64	\$9,171.86
Warewashing	1,900	sf	\$1.64	\$3,111.88
Dining support	3,100	sf	\$1.64	\$5,077.28
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$1.64	\$9,302.88
Circulation and other area	13,674	sf	\$1.64	\$22,395.00
Central plant	8,200	sf	\$1.64	\$13,430.22
CATV System				
Dining Area	10,000	sf	\$1.09	\$10,918.88
Dining support	3,100	sf	\$0.55	\$1,692.43
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$1.09	\$6,201.92
Security/CCTV System				
Dining Area	10,000	sf	\$0.55	\$5,459.44
Servery	5,625	sf	\$0.55	\$3,070.93
Production Kitchen	5,600	sf	\$0.55	\$3,057.29
Warewashing	1,900	sf	\$0.55	\$1,037.29
Dining support	3,100	sf	\$0.55	\$1,692.43
Public/common, (Admin, offices, lounges, game)	5,680	sf	\$1.09	\$6,201.92
Circulation and other area	13,674	sf	\$1.64	\$22,395.00
Other items				
Core drilling, firestopping	300	ls	\$26.75	\$8,025.37
Total - 12 Electrical Lighting, Power and Communications				<u>\$1,018,077</u>
13 Fire Protection Systems				
Fire Sprinklers	53,779	ea	\$4.37	\$234,881
Total - 13 Fire Protection Systems				<u>\$234,881</u>

Residence Hall, Phase 2

University of California, Riverside
 Schedule of Areas & Control Quantities
 Canyon Crest Housing at UCR

Project #: 04-307.00
 Date: 27-Jul-05

Schedule of Areas		SF per Unit	Total Beds	SF	SF
Enclosed Areas - Residential Units					
93 ea	4 Person Semi-suite	562	372	52,266	
16 ea	3 Person Semi-suite	501	48	8,016	
9 ea	Double Room with Bath	502	18	4,518	
2 ea	2 Bedroom Apartment	756	4	1,512	
0 ea	1 Bedroom Apartment	504	0	0	
10 ea	Single Room with Bath	284	10	2,840	
16 ea	Double Room with Bath	284	32	4,544	
146 total					
Subtotal, Enclosed Areas - Residential Units			484		<u>73,696</u>
Enclosed Areas - Common Areas					
	Lounge/Living/conf/study/Rec/Computer			11,400	
	Laundry			2,000	
	Kitchens			1,680	
	Trash			1,756	
	Storage			1,200	
	Utility Rooms			1,300	
	Office/work			160	
	Interior Corridors/circulation/lobby			24,375	
	Other			6,291	
Subtotal, Enclosed Areas - Common Areas					<u>50,162</u>
Unenclosed Areas					
	Colonnade/trellis			2,587	
	Ground Floor			3,858	
	Second Floor			3,751	
	Third Floor			3,310	
	Fourth Floor			5,040	
Subtotal, Unenclosed Areas				18,546	
Unenclosed Areas @ 50%					<u>9,273</u>
Total Gross Floor Area					<u>133,131</u>

Residence Hall, Phase 2 Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$6,846,200		\$51.42
1 Foundations	\$1,302,209		\$9.78	
2 Vertical Structure	\$901,836		\$6.77	
3 Floor & Roof Structures	\$2,122,866		\$15.95	
4 Exterior Cladding	\$2,123,068		\$15.95	
5 Roofing and Waterproofing	\$396,221		\$2.98	
B) Interiors (6-7)		\$3,842,925		\$28.87
6 Interior Partitions, Doors and Glazing	\$1,959,244		\$14.72	
7 Floor, Wall and Ceiling Finishes	\$1,883,680		\$14.15	
C) Equipment and Vertical Transportation (8-9)		\$762,025		\$5.72
8 Function Equipment and Specialties	\$474,451		\$3.56	
9 Stairs and Vertical Transportation	\$287,574		\$2.16	
D) Mechanical and Electrical (10-13)		\$6,562,843		\$49.30
10 Plumbing Systems	\$1,485,993		\$11.16	
11 HVAC	\$2,119,223		\$15.92	
12 Electrical Lighting, Power and Communications	\$2,500,377		\$18.78	
13 Fire Protection Systems	\$457,251		\$3.43	
E) Site Construction (14-16)		\$406,267		\$3.05
15 Site Paving, Structures & Landscaping	\$406,267		\$3.05	
Subtotal		\$18,420,260		\$138.36
Gen'l Cond, Bonds and Insurance 8.0%		\$1,473,621		\$11.07
Subtotal		\$19,893,880		\$149.43
General Contractor's Fee 4.0%		\$795,755		\$5.98
Subtotal		\$20,689,636		\$155.41
Design Contingency 10.0%		\$2,068,964		\$15.54
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$22,758,599</u>		\$170.95
Allow for Rising Costs at 5.0% per Annum to BOC	24.5%	\$5,579,018		
TOTAL ESTIMATED CONSTRUCTION COST (May, 2010)		<u>\$28,337,617</u>		\$212.86

(ASF) \$304.08

EFFICIENCY 70%

Total Area: 133,131 SF

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Foundations and grade beams				
Residential units	133,131	sf	\$3.79	\$504,851
Special foundations				
Caisson foundations due to poor soils	133,131	sf	\$4.33	\$576,973
Elevator pit	1	ea	\$9,209.48	\$9,209
Retaining wall within building footprints				
Retaining wall footings	327	lf	\$81.26	\$26,572
Retaining walls	3,593	sf	\$45.51	\$163,502
Waterproofing retaining walls	3,593	sf	\$3.79	\$13,625
Foundation drainage	373	lf	\$20.04	\$7,476
Total - 1 Foundations				<u>\$1,302,209</u>
2 Vertical Structure				
CMU columns, 16" x 16"	395	lf	\$92.09	\$36,377
Steel pipe columns	133,131	sf	\$1.63	\$216,365
Wood posts and shear panels	133,131	sf	\$4.88	\$649,094
Total - 2 Vertical Structure				<u>\$901,836</u>
3 Floor & Roof Structures				
Concrete slab-on-grade, 5" with vapor barrier and base	31,366	sf	\$6.23	\$195,408
Upper Floors				
Units				
TJI @ 16" OC	94,099	sf	\$7.04	\$662,696
3/4" T & G Floor, Ply	94,099	sf	\$3.79	\$356,836
2" Hardrock concrete	94,099	sf	\$2.71	\$254,883
Batt insulation	94,099	sf	\$0.65	\$61,172
Roof Construction				
TJI @ 16" OC	31,366	sf	\$7.04	\$220,896
3/4" T & G Floor, Ply	31,366	sf	\$3.79	\$118,944
Batt insulation, R-30	31,366	sf	\$0.98	\$30,586
Colonnade	2,356	sf	\$92.09	\$216,975
Concrete Housekeeping Pads, allow	550	sf	\$8.13	\$4,469
Total - 3 Floor & Roof Structures				<u>\$2,122,866</u>

4 Exterior Cladding

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Exterior walls				
Wood studs, 2"x6"	71,899	sf	\$3.03	\$218,121
Batt insulation, R-19	71,899	sf	\$0.70	\$50,635
Exterior sheathing, 5/8"	71,899	sf	\$2.71	\$194,751
Cement plaster, 7/8"	71,899	sf	\$9.21	\$662,152
Gypsum board, 5/8"	71,899	sf	\$1.90	\$136,325
Paint cement plaster	71,899	sf	\$1.25	\$89,585
Paint gypsum board	71,899	sf	\$0.60	\$42,845
Courtyard Wall				
Screen wall	850	sf	\$17.88	\$15,196
Windows, double glazing, low e				
Operable at apts	4,192	sf	\$43.34	\$181,676
Other fixed, allow	646	sf	\$34.67	\$22,397
Entry Doors				
HM frames, hm doors, finish hardware, painted	43	ea	\$1,137.64	\$48,919
Panic hardware	43	ea	\$595.91	\$25,624
Barn doors at trash rooms, ground floor	2	ea	\$3,575.44	\$7,151
Exterior Gates, single, with card access	5	ea	\$3,792.14	\$18,961
Soffits				
Plaster, 3 coat, integral color	2,466	sf	\$10.29	\$25,382
Bridge connectors	5,236	sf	\$70.43	\$368,748
Aluminum louvers, allow	385	sf	\$37.92	\$14,600
Total - 4 Exterior Cladding				<u>\$2,123,068</u>

5 Roofing and Waterproofing

Single-ply membrane roofing system:	34,431	sf	\$5.20	\$179,063
Crickets & cants	34,431	sf	\$0.54	\$18,652
Flashing & Trim				
General sheet metal	133,131	sf	\$1.35	\$180,304
Roof hatches, roof ladders, curb	3	ea	\$6,067.42	\$18,202

Total - 5 Roofing and Waterproofing

\$396,221

6 Interior Partitions, Doors and Glazing

Party Wall

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Wood studs, 3" x 4", staggered	30,576	sf	\$4.33	\$132,512
Sound insulation	30,576	sf	\$0.65	\$19,877
Gypsum board, 5/8"	122,304	sf	\$1.90	\$231,897
Interior Partitions				
Wood studs, 2" x 4"	99,044	sf	\$2.28	\$225,353
Sound insulation	99,044	sf	\$0.65	\$64,387
Gypsum board, 5/8"	198,090	sf	\$1.90	\$375,592
Interior Doors				
Entry doors, hm frames, wood doors, finish hardware, painted	336	ea	\$1,137.64	\$382,248
Interior doors, solid core wood door in wood frame including hardware and finish, single door	571	ea	\$704.25	\$402,129
Unit entry card readers	146	ea	\$487.56	\$71,184
Bifold closet doors	26	ea	\$406.30	\$10,564
30" x 30" access panels	146	ea	\$297.95	\$43,501

Total - 6 Interior Partitions, Doors and Glazing

\$1,959,244

7 Floor, Wall and Ceiling Finishes

Floors				
Seal concrete	3,994	sf	\$0.81	\$3,246
Sheet vinyl	28,816	sf	\$4.94	\$142,377
Carpet	78,820	sf	\$2.82	\$222,037
Ceramic tile	8,564	sf	\$13.00	\$111,346
Marble thresholds	264	sf	\$92.09	\$24,313
Bases				
Resilient	31,616	lf	\$2.55	\$80,499
Ceramic tile	5,080	lf	\$15.17	\$77,056
Walls				
Paint gypboard	320,394	sf	\$0.60	\$190,925
Ceramic tile	9,293	sf	\$13.00	\$120,823
Ceiling				
Acoustic tile ceilings	33,133	sf	\$3.25	\$107,694
Gypsumboard ceiling, framing	104,353	sf	\$7.04	\$734,909
Soffit drop	35	lf	\$17.44	\$618
Paint gypsumboard ceilings	104,353	sf	\$0.65	\$67,838

Total - 7 Floor, Wall and Ceiling Finishes

\$1,883,680

8 Function Equipment and Specialties

Kitchen Appliances				
Dishwasher	2	ea	\$704.25	\$1,409
Disposer	2	ea	\$270.87	\$542

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Stove, 4 burner	2	ea	\$812.60	\$1,625
Microwave/hood combo	2	ea	\$812.60	\$1,625
Refrigerator, incl. kitchens at floors	14	ea	\$812.60	\$11,376
Washer/dryer combo	2	ea	\$1,354.34	\$2,709
Microwave at common area kitchens	14	ea	\$406.30	\$5,688
Casework & Millwork				
Base cabinet with p-lam countertop	24	lf	\$178.77	\$4,291
Vanity cabinet with p-lam countertop, open shelving base	955	lf	\$135.43	\$129,339
Upper cabinet	32	lf	\$102.93	\$3,294
Closet shelving, bedrooms	236	ea	\$200.44	\$47,304
Casework at common kitchens, office space, storage & laundry	16,436	sf	\$2.17	\$35,616
Millwork & trim	133,131	sf	\$0.54	\$72,122
Corner guards and wall protection	1	ls	\$9,859.56	\$9,860
Signage	133,131	sf	\$0.27	\$36,061
Misc. specialties	133,131	sf	\$0.27	\$36,061
Toilet accessories				
Mirror	248	ea	\$189.61	\$47,023
Toilet paper dispenser, by owner vendor				
Towel bar	146	ea	\$54.17	\$7,909
Grab bars	8	ea	\$102.93	\$823
Shower wand	146	ea	\$81.26	\$11,864
Shower curtain	146	ea	\$37.92	\$5,537
Coat hook	146	ea	\$16.25	\$2,373
Total - 8 Function Equipment and Specialties				<u>\$474,451</u>

9 Stairs and Vertical Transportation

Metal pan stairs, concrete fill, railing, paint 4'0" wide, tread and riser	192	rsr	\$666.33	\$127,936
Landing fill	705	sf	\$16.25	\$11,458
Elevators and Lifts				
Hydraulic Elevators				
Passenger, 4-stop, 32'0" travel	1	ea	\$146,268.19	\$146,268
Elevator sill	16	lf	\$34.88	\$558
Elevator pit ladder	1	ea	\$1,354.34	\$1,354

Total - 9 Stairs and Vertical Transportation

\$287,574

10 Plumbing Systems

Fixtures including complete rough-in

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Water closet	146	ea	\$1,733.55	\$253,098
Lavatory	264	ea	\$1,820.23	\$480,540
Kitchen sinks	2	ea	\$1,939.41	\$3,879
Shower	144	ea	\$1,841.90	\$265,233
Shower / Tub	2	ea	\$2,383.63	\$4,767
Kitchen sinks at common areas	12	ea	\$3,250.40	\$39,005
Water heaters for laundry rooms	8	ea	\$5,417.34	\$43,339
Natural gas to water heaters, allow 100' run	8	ea	\$1,625.20	\$13,002
Water heating	1	ls	\$29,734.70	\$29,735
Natural gas	133,131	sf	\$0.54	\$72,122
Roof drainage allowance	133,131	sf	\$1.30	\$173,092
Misc plumbing allowance	133,131	sf	\$0.81	\$108,182

Total - 10 Plumbing Systems

\$1,485,993

11 HVAC

Central plant				
Central plant equipment and piping, CHW, CW,HHW	268	ton	\$1,191.81	\$319,406
Chiller redundancy, 60%	160	ton	\$453.97	\$72,636
Chilled water distribution	133,131	sf	\$1.95	\$259,638
Heating hot water distribution	133,131	sf	\$1.95	\$259,638
Air-Side Equipment at units				
4-pipe fancoils	268	ea	\$1,516.86	\$406,517
Toilet exhaust fan	146	ea	\$186.36	\$27,208
Ceiling paddle fan	268	ea	\$384.63	\$103,081
Air distribution allowances at units				
Ductwork, galvanized steel	4,641	lb	\$7.03	\$32,634
Grilles, registers, diffusers	232	hr	\$59.27	\$13,750
Test and balance	146	ea	\$97.51	\$14,237
HVAC allowances at common areas				
Air handlers	35,380	cfm	\$4.38	\$154,866
General exhaust	3,538	cfm	\$1.08	\$3,833
VAV's	25	ea	\$1,180.98	\$29,525
Controls	50,162	sf	\$1.95	\$97,828
Ductwork, galvanized steel	25,787	lb	\$7.03	\$181,327
Duct insulation	17,250	sf	\$2.42	\$41,678
Flexible duct, insulated, various sizes	710	lf	\$14.84	\$10,539
Combination fire / smoke damper	21	ea	\$925.28	\$19,431
Manual volume damper	146	ea	\$74.65	\$10,899
Grilles, registers, diffusers	189	ea	\$176.61	\$33,378
Test and balance	50,162	sf	\$0.54	\$27,174

Total - 11 HVAC

\$2,119,223

12 Electrical Lighting, Power and Communications

Service & Distribution				
Mainservice 1600 amp 120/208 volt 3ph 4w	2	ea	\$19,278.85	\$38,558

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Distribution panel 800 amp 120/208v 3ph 4w	2	ea	\$8,070.22	\$16,140
House panel 400 amp 120/208v 3ph 4w	1	ea	\$2,869.41	\$2,869
Laundry panel 400 amp 120/208v 3ph 4w	1	ea	\$2,869.41	\$2,869
Unit panels 200 amp 120/208v 3ph 4w	101	ea	\$856.34	\$86,490
Unit panels 100 amp 120/208v 3ph 4w	54	ea	\$856.34	\$46,242
Transformers	12	ea	\$12,189.02	\$146,268
Grounding	1	ls	\$1,345.04	\$1,345
MC cable 3C-#4, with 1#6 ground	6,164	lf	\$4.44	\$27,360
MC cable 3C-#2, with 1#6 ground	11,102	lf	\$5.83	\$64,708
Feeder conduit, emt, 4"	735	lf	\$14.72	\$10,820
Feeder wire, #2	4	clf	\$163.57	\$720
Feeder wire, #1/0	3	clf	\$232.84	\$685
Feeder wire, #4/0	18	clf	\$402.18	\$7,086
Feeder wire, #500mcm	12	clf	\$650.10	\$7,632
Lounge/Living/conf/study/Rec/Computer	11,400	sf	\$1.79	\$20,445
Laundry	2,000	sf	\$2.24	\$4,483
Kitchens	1,680	sf	\$3.59	\$6,026
Trash	1,756	sf	\$1.79	\$3,149
Storage	1,200	sf	\$1.79	\$2,152
Utility Rooms	1,300	sf	\$1.79	\$2,331
Office/work	160	sf	\$2.69	\$430
Interior Corridors/circulation/lobby	24,375	sf	\$1.79	\$43,714
Other	6,291	sf	\$1.79	\$11,282
Corridors	18,546	sf	\$1.79	\$33,260
Lighting & Power				
Convenience Power				
Duplex 15 amp 120 volt	1,241	ea	\$44.83	\$55,632
Duplex 1/2 hot 15 amp 120 volt	511	ea	\$49.32	\$25,193
Duplex GFI 15 amp 120 volt	429	ea	\$62.77	\$26,931
Double duplex 20 amp 120 volt	259	ea	\$67.25	\$17,448
Duplex separate circuit 20 amp 120 volt	317	ea	\$80.70	\$25,620
Oven 40 amp connection	2	ea	\$179.34	\$359
Washer/dryer outlet separate circuit	2	ea	\$134.50	\$325
Switch with duplex separate circuit 20 amp 120 volt	132	ea	\$134.50	\$17,773
MC cable 12-2 with ground copper	2,169	lf	\$2.20	\$4,765
MC cable 12-3 with ground copper	14,460	lf	\$2.56	\$36,954
MC cable 10-3 with ground copper	4,815	lf	\$2.47	\$11,873
MC cable 8-3 with ground copper	3,612	lf	\$3.09	\$11,174
Lounge/Living/conf/study/Rec/Computer	11,400	sf	\$2.24	\$25,556
Laundry	2,000	sf	\$1.79	\$3,587
Kitchens	1,680	sf	\$2.69	\$4,519
Trash	1,756	sf	\$1.79	\$3,149
Storage	1,200	sf	\$1.79	\$2,152
Utility Rooms	1,300	sf	\$1.79	\$2,331
Office/work	160	sf	\$2.69	\$430
Interior Corridors/circulation/lobby	24,375	sf	\$1.79	\$43,714
Other	6,291	sf	\$2.02	\$12,692
Corridors	18,546	sf	\$0.09	\$1,663

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Equipment connection				
RTU unit compressor connection	268	ea	\$44.83	\$12,016
RTU unit compressor disconnect 30 amp 208v	268	ea	\$125.54	\$33,644
Fan coil unit connection	268	ea	\$44.83	\$12,016
Fan coil unit disconnect 30 amp 208v	268	ea	\$112.09	\$30,039
Exhaust fan connection	146	ea	\$134.50	\$19,638
MC cable 10-3 with ground copper	8,747	lf	\$2.47	\$21,569
MC cable 8-3 with ground copper	24,993	lf	\$3.09	\$77,318
Lounge/Living/conf/study/Rec/Computer	11,400	sf	\$0.67	\$7,667
Laundry	2,000	sf	\$0.67	\$1,345
Kitchens	1,680	sf	\$0.67	\$1,130
Trash	1,756	sf	\$0.22	\$394
Storage	1,200	sf	\$0.22	\$269
Utility Rooms	1,300	sf	\$0.22	\$291
Office/work	160	sf	\$0.90	\$143
Interior Corridors/circulation/lobby	24,375	sf	\$1.12	\$27,321
Lighting				
Emergency lighting allowance	1	ls	\$65,008.08	\$65,008
Fixture A, recessed downlight entry	964	ea	\$107.60	\$103,713
Fixture B, recessed downlight kitchen	4	ea	\$125.54	\$502
Fixture C, wall sconce bathroom	527	ea	\$134.50	\$70,931
Fixture D, strip light	132	ea	\$80.70	\$10,664
Switch 1P, single	695	ea	\$40.35	\$28,044
Switch 1P, double	236	ea	\$49.32	\$11,639
MC cable 12-2 with ground copper	21,690	lf	\$2.20	\$47,651
MC cable 12-3 with ground copper	10,845	lf	\$2.56	\$27,715
Lounge/Living/conf/study/Rec/Computer	11,400	sf	\$3.59	\$40,889
Laundry	2,000	sf	\$2.69	\$5,380
Kitchens	1,680	sf	\$2.69	\$4,519
Trash	1,756	sf	\$2.24	\$3,936
Storage	1,200	sf	\$2.24	\$2,690
Utility Rooms	1,300	sf	\$2.24	\$2,914
Office/work	160	sf	\$3.59	\$574
Interior Corridors/circulation/lobby	24,375	sf	\$5.83	\$142,069
Other	6,291	sf	\$2.69	\$16,923
Corridors	18,546	sf	\$0.67	\$12,473
Telephone/Data system				
Telephone terminal box	159	ea	\$112.09	\$17,791
Telephone/data wall outlet	638	ea	\$40.35	\$25,733
Conduit 1", emt	18,075	lf	\$3.99	\$72,124
Cable Cat 6	65,071	lf	\$1.30	\$84,603
Lounge/Living/conf/study/Rec/Computer	11,400	sf	\$1.79	\$20,445
Laundry	2,000	sf	\$0.45	\$897
Kitchens	1,680	sf	\$0.45	\$753
Trash	1,756	sf	\$0.45	\$787
Storage	1,200	sf	\$0.45	\$538

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Utility Rooms	1,300	sf	\$0.45	\$583
Office/work	160	sf	\$1.79	\$287
Interior Corridors/circulation/lobby	24,375	sf	\$1.35	\$32,785
Other	6,291	sf	\$0.45	\$2,821
Fire Alarm				
FA control panel master slave system	2	ea	\$6,725.18	\$10,837
FA strobe/speaker	236	ea	\$174.85	\$41,266
FA smoke detector	582	ea	\$156.92	\$91,328
Conduit 1", emt	18,075	lf	\$3.99	\$72,124
FA cable	8,175	lf	\$0.87	\$7,111
Lounge/Living/conf/study/Rec/Computer	11,400	sf	\$1.35	\$15,333
Laundry	2,000	sf	\$0.90	\$1,793
Kitchens	1,680	sf	\$0.90	\$1,506
Trash	1,756	sf	\$9.86	\$17,320
Storage	1,200	sf	\$0.90	\$1,076
Utility Rooms	1,300	sf	\$0.90	\$1,166
Office/work	160	sf	\$1.79	\$287
Interior Corridors/circulation/lobby	24,375	sf	\$1.35	\$32,785
Other	6,291	sf	\$1.35	\$8,462
CATV System				
CATV terminal box	159	ea	\$89.67	\$14,233
CATV wall outlet	620	ea	\$40.35	\$25,002
Conduit 1", emt	19,841	lf	\$3.99	\$79,172
Cable RG6	19,841	lf	\$0.94	\$18,681
Lounge/Living/conf/study/Rec/Computer	11,400	sf	\$0.67	\$7,667
Office/work	160	sf	\$0.67	\$108
Interior Corridors/circulation/lobby	24,375	sf	\$0.67	\$16,393
Security/CCTV System				
Card key access system	1	ls	\$12,639.74	\$12,640
Total - 12 Electrical Lighting, Power and Communications				<u>\$2,500,377</u>
13 Fire Protection Systems				
Fire Sprinklers, NFPA 13	133,131	ea	\$3.43	\$457,251
Total - 13 Fire Protection Systems				<u>\$457,251</u>
15 Site Paving, Structures & Landscaping				
Courtyard Site Improvements				
Hardscape				
Integral color concrete paving, 5" thick, sand blast finish, with brick banding	6,919	sf	\$10.29	\$71,215
Concrete paving, standard	2,872	sf	\$7.04	\$20,226
Concrete turf block and grass	2,889	sf	\$9.21	\$26,609

Residence Hall, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Patio slabs	342	sf	\$13.00	\$4,442
Landscaping				
Trees				
48" box, allow	13	ea	\$1,950.24	\$25,142
Shrubs / Ground cover				
Lush groundcover, allow	1,659	sf	\$27.09	\$44,926
Seeding including soil prep, between buildings	21,368	sf	\$0.70	\$15,048
90 days maintenance	1	ls	\$8,293.95	\$8,294
Irrigation				
Planting and lawn area irrigation	23,026	sf	\$1.63	\$37,422
Landscape drainage	23,026	sf	\$1.63	\$37,422
Site furnishings				
Wooden bench, 6'-0" long	4	ea	\$1,354.34	\$5,417
Miscellaneous site furnishings, allowance	1	ls	\$10,834.68	\$10,835
Special space	2	ea	\$21,669.36	\$43,339
Fencing & Gates				
Fencing, ornamental	230	lf	\$162.52	\$37,380
CMU screen wall at patios	107	lf	\$173.35	\$18,549
Total - 15 Site Paving, Structures & Landscaping				<u>\$406,267</u>

Site Development, Residence Halls Phase 2

Site Development, Residence Halls Phase 2 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$1,510,768		\$13.09
14 Site Preparation and Demolition		\$162,471		\$1.41	
15 Site Paving, Structures and Landscaping		\$872,873		\$7.56	
16 Utilities on Site		\$475,423		\$4.12	
Subtotal			\$1,510,768		\$13.09
Gen'l Cond, Bonds and Insurance	8.00%		\$120,861		\$1.05
Subtotal			\$1,631,629		\$14.13
General Contractor's Fee	4.0%		\$65,265		\$0.57
Subtotal			\$1,696,894		\$14.70
Design Contingency	10.0%		\$169,689		\$1.47
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$1,866,583</u>		\$16.17
Allow for Rising Costs at 5.0% per Annum to BOC		24.5%	\$457,572		
TOTAL ESTIMATED CONSTRUCTION COST (May, 2010)			<u>\$2,324,156</u>		\$20.13

Total Area: 115,439 SF

Site Development, Residence Halls Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Site Demolition				
Clear site	115,439	sf	\$0.43	\$50,030
Grading and clearing				
Overexcavate and recompact under structures	13,820	cy	\$3.79	\$52,406
Rough grade	115,439	sf	\$0.33	\$37,522
Fine grade	115,439	sf	\$0.11	\$12,507
Erosion control, allowance	115,439	sf	\$0.09	\$10,006
Total - 14 Site Preparation and Demolition				<u>\$162,471</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Integral color concrete paving, 5" thick, sand blast finish, with brick banding	2,378	sf	\$10.29	\$24,477
Concrete paving	7,529	sf	\$7.04	\$53,023
Curb and gutter, concrete	1,374	lf	\$19.50	\$26,796
Accessible ramp paving	312	sf	\$9.21	\$2,873
Asphalt paving	1,430	sf	\$2.44	\$3,486
Asphalt paving, repairs	1	ls	\$5,417.34	\$5,417
Striping, miscellaneous road markings	1,430	sf	\$0.05	\$77
Accessible concrete curb cut ramps	2	ea	\$920.95	\$1,842
Stairs on grade	76	lf	\$37.92	\$2,882
Retaining walls				
Retaining wall footings	709	lf	\$81.26	\$57,613
Retaining walls	4,537	sf	\$45.51	\$206,459
Waterproofing retaining walls	4,764	sf	\$3.79	\$18,065
Foundation drainage	800	lf	\$20.04	\$16,035
Other site improvements				
Trash enclosures	2	ea	\$24,919.77	\$49,840
Site signage, allow	1	ls	\$5,417.34	\$5,417
Site furnishings	1	ls	\$27,086.70	\$27,087
Pool	1,375	sf	\$124.60	\$171,323
Cabana	1	ls	\$16,252.02	\$16,252
Landscaping				
Trees				
Screening trees, allow	39	ea	\$1,625.20	\$63,383
Shrubs / Ground cover				
Lush groundcover, allow	1,000	sf	\$27.09	\$27,087
Turf including soil prep	7,684	sf	\$0.70	\$5,411
90 days maintenance	3	mo	\$3,792.14	\$11,376

Site Development, Residence Halls Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Irrigation				
Planting and lawn area irrigation	8,684	sf	\$1.63	\$14,113
Electrical Site Lighting	115,439	sf	\$0.54	\$62,537
Total - 15 Site Paving, Structures and Landscaping				<u>\$872,873</u>

16 Utilities on Site

Electrical Site Utilities				
Electrical Site Utilities	1	ls	\$88,849.80	\$88,850
Telephone Data Site Utilities	1	ls	\$44,424.90	\$44,425
Site substation transformers and 500 kva generator, prorated cost across all site phases	1	ls	\$218,995.98	\$218,996
Wet utilities				
Domestic Water & fire service				
Point of connection	2	ea	\$3,792.14	\$7,584
6" DIP lateral	200	lf	\$48.76	\$9,751
Double detector check	1	ea	\$8,667.74	\$8,668
Post Indicator valve	1	ea	\$1,625.20	\$1,625
Fire hydrant, allow	1	ea	\$4,875.61	\$4,876
Fire department connection	1	ea	\$1,625.20	\$1,625
Gas service, allow	156	lf	\$32.50	\$5,071
Gas meter	3	ea	\$2,708.67	\$8,126
Storm drain				
Point of connection	1	ea	\$2,708.67	\$2,709
Catch basin	2	ea	\$2,383.63	\$4,767
SDR 35, 12"	165	lf	\$70.43	\$11,620
Sanitary Sewer				
Sewer, demolition	139	lf	\$16.25	\$2,259
4" - 6" laterals, allow	130	lf	\$37.92	\$4,930
Point of connection	1	ea	\$2,708.67	\$2,709
Storm drain				
Point of connection	2	ea	\$2,708.67	\$5,417
Catch basin	2	ea	\$2,383.63	\$4,767
SDR 35, 8"	343	lf	\$54.17	\$18,581
Sanitary Sewer				
Point of connection	1	ea	\$2,708.67	\$2,709
4" - 6" laterals, allow	405	lf	\$37.92	\$15,358

Total - 16 Utilities on Site

\$475,423

Parking, Residence Hall Phase 2

Parking, Residence Hall Phase 2 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$198,121		\$9.50
14 Site Preparation and Demolition		\$19,880		\$0.95	
15 Site Paving, Structures and Landscaping		\$170,440		\$8.17	
16 Utilities on Site		\$7,801		\$0.37	
Subtotal			\$198,121		\$9.50
Gen'l Cond, Bonds and Insurance	8.00%		\$15,850		\$0.76
Subtotal			\$213,971		\$10.26
General Contractor's Fee	4.0%		\$8,559		\$0.41
Subtotal			\$222,530		\$10.67
Design Contingency	10.0%		\$22,253		\$1.07
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$244,783</u>		\$11.74
Allow for Rising Costs at 5.0% per Annum to BOC		24.5%	\$60,006		
TOTAL ESTIMATED CONSTRUCTION COST (May, 2010)			<u>\$304,788</u>		\$14.62

Total Area: 20,851 SF

Parking, Residence Hall Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Site Demolition				
Clear site	20,851	sf	\$0.43	\$9,037
Grading and clearing				
Rough grade	20,851	sf	\$0.33	\$6,777
Fine grade	20,851	sf	\$0.11	\$2,259
Erosion control, allowance	20,851	sf	\$0.09	\$1,807
Total - 14 Site Preparation and Demolition				<u>\$19,880</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Curb and gutter, concrete	673	lf	\$19.50	\$13,125
Accessible ramp paving	312	sf	\$9.21	\$2,873
Asphalt paving	20,851	sf	\$2.98	\$62,126
Striping, standard stall	60	ea	\$19.50	\$1,170
Striping, miscellaneous road markings	20,851	sf	\$0.05	\$1,130
Stencil ADA parking symbols	3	ea	\$92.09	\$276
Accessible concrete curb cut ramps	1	ea	\$920.95	\$921
Other site improvements				
Site signage, allow	1	ls	\$5,417.34	\$5,417
Site furnishings	1	ls	\$27,086.70	\$27,087
Landscaping				
Trees				
Screening trees, allow	10	ea	\$1,625.20	\$16,252
Shrubs / Ground cover				
Lush groundcover, allow	500	sf	\$27.09	\$13,543
Turf including soil prep	2,000	sf	\$0.70	\$1,409
90 days maintenance	3	mo	\$1,625.20	\$4,876
Irrigation				
Planting and lawn area irrigation	2,500	sf	\$0.98	\$2,438
Parking equipment				
Arm gate & card reader	1	ea	\$6,500.81	\$6,501
Electrical Site Lighting	20,851	sf	\$0.54	\$11,296
Total - 15 Site Paving, Structures and Landscaping				<u>\$170,440</u>
16 Utilities on Site				
Storm drain				
Point of connection	1	ea	\$2,708.67	\$2,709

Parking, Residence Hall Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Catch basin	1	ea	\$2,383.63	\$2,384
SDR 35, 8"	50	lf	\$54.17	\$2,709
Total - 16 Utilities on Site				<u>\$7,801</u>

Retail Deli/Convenience Store, Phase 2

Schedule of Areas	SF	SF
Enclosed Areas - Dining Hall		
Dining Area	0	
Servery	0	
Production Kitchen	0	
Warewashing	0	
Dining support	0	
Convenience Store/Deli	4,505	
Public/common, (Admin, offices, lounges, game)	0	
Conference services, (Office, and waiting)	0	
Meeting/Academic/Programs	0	
Circulation and other area	1,931	
Subtotal, Enclosed Areas - Dining Hall		<u>6,436</u>
Unenclosed Areas		
Ground Floor		
Second Floor		
Subtotal, Unenclosed Areas	0	
Unenclosed Areas @ 50%		<u>0</u>
Total Gross Floor Area		<u>6,436</u>

Retail Deli/Convenience Store, Phase 2 Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$776,551		\$120.66
1 Foundations	\$54,043		\$8.40	
2 Vertical Structure	\$47,418		\$7.37	
3 Floor & Roof Structures	\$290,871		\$45.19	
4 Exterior Cladding	\$298,448		\$46.37	
5 Roofing and Waterproofing	\$85,771		\$13.33	
B) Interiors (6-7)		\$238,483		\$37.05
6 Interior Partitions, Doors and Glazing	\$103,551		\$16.09	
7 Floor, Wall and Ceiling Finishes	\$134,932		\$20.97	
C) Equipment and Vertical Transportation (8-9)		\$275,740		\$42.84
8 Function Equipment and Specialties	\$275,740		\$42.84	
9 Stairs and Vertical Transportation				
D) Mechanical and Electrical (10-13)		\$468,924		\$72.86
10 Plumbing Systems	\$158,984		\$24.70	
11 HVAC	\$172,799		\$26.85	
12 Electrical Lighting, Power and Communications	\$109,249		\$16.97	
13 Fire Protection Systems	\$27,893		\$4.33	
Subtotal		\$1,759,698		\$273.41
Gen'l Cond, Bonds and Insurance	8.00%	\$140,776		\$21.87
Subtotal		\$1,900,474		\$295.29
General Contractor's Fee	4.0%	\$76,019		\$11.81
Subtotal		\$1,976,493		\$307.10
Design Contingency	10.0%	\$197,649		\$30.71
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$2,174,142</u>		\$337.81
Allow for Rising Costs at 5.0% per Annum to BOC	24.5%	\$532,967		
TOTAL ESTIMATED CONSTRUCTION COST (May, 2010)		<u>\$2,707,109</u>		\$420.62

(ASF) \$600.91

EFFICIENCY 70%

Total Area: 6,436 SF

Retail Deli/Convenience Store, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Standard foundations				
Spread, strip footings and grade beams	6,436	sf	\$4.06	\$26,150
Special foundations				
Caisson foundations due to poor soils	6,436	sf	\$4.33	<u>\$27,893</u>
Total - 1 Foundations				<u>\$54,043</u>
2 Vertical Structure				
Structural Steel				
Columns, beams, braced frames, (4# per sf)	13	tn	\$3,412.92	\$43,931
Fireproofing				
Structural steel	13	tn	\$270.87	<u>\$3,487</u>
Total - 2 Vertical Structure				<u>\$47,418</u>
3 Floor & Roof Structures				
Cast-In-Place Concrete Slab-On-Grade				
Concrete slab	6,436	sf	\$7.58	\$48,812
Structural Steel				
Upper floors & roof				
Upper floors structural steel beams & girders (12# / sf)	39	tn	\$3,412.92	\$131,793
Metal deck at upper floors, concrete fill	6,436	sf	\$9.59	\$61,713
Fireproofing	39	tn	\$270.87	\$10,460
Penthouse Roof				
Roof screens	1	ls	\$10,834.68	\$10,835
Misc metal fabrications	6,436	sf	\$3.25	\$20,920
Seismic expansion joints	1	ls	\$5,417.34	\$5,417
Concrete Housekeeping Pads	100	sf	\$9.21	<u>\$921</u>
Total - 3 Floor & Roof Structures				<u>\$290,871</u>
4 Exterior Cladding				
Exterior Skin, glass, doors, 1/3	1,952	sf	\$70.43	\$137,470
Exterior Skin, brick, 1/3	1,952	sf	\$45.51	\$88,827
Exterior Skin, cement plaster, 1/3	1,952	sf	\$9.21	\$17,977
Exterior canopies	1	ls	\$54,173.40	<u>\$54,173</u>

Retail Deli/Convenience Store, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Total - 4 Exterior Cladding				<u>\$298,448</u>
5 Roofing and Waterproofing				
Single ply roofing system Flat roofing, insulation, roof accessories	6,007	sf	\$11.38	\$68,338
Sheet metal allowance	6,436	sf	\$2.71	<u>\$17,433</u>
Total - 5 Roofing and Waterproofing				<u>\$85,771</u>
6 Interior Partitions, Doors and Glazing				
Interior Partitions Partitions, shafts, column enclosures and insulation	6,436	sf	\$13.00	\$83,678
Doors Interior Doors, Frames and Finished Hardware	6,436	sf	\$2.17	\$13,946
Other Doors Special doors	6,436	sf	\$0.65	\$4,184
Interior Glazing Sidelites and other interior glazing	6,436	sf	\$0.27	<u>\$1,743</u>
Total - 6 Interior Partitions, Doors and Glazing				<u>\$103,551</u>
7 Floor, Wall and Ceiling Finishes				
Ceiling Ceilings, gypboard, acoustical, soffits & bulkheads	6,436	sf	\$6.23	\$40,096
Special ceilings, soffits, allow	6,436	sf	\$4.33	\$27,893
Walls Wall finishes, paint, tile, wall covering	6,436	sf	\$2.44	\$15,690
Bases Resilient, tile and wood	6,436	sf	\$0.65	\$4,184
Floors Carpet, terrazzo, tile, sheet vinyl, concrete sealer	6,436	sf	\$7.31	<u>\$47,069</u>
Total - 7 Floor, Wall and Ceiling Finishes				<u>\$134,932</u>
8 Function Equipment and Specialties				
Toilet & misc. specialties	6,436	sf	\$1.08	\$6,973
Signage				

Retail Deli/Convenience Store, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Signage package	6,436	sf	\$0.38	\$2,441
Graphics and menu-signage, allow	1	ls	\$16,252.02	\$16,252
Casework				
Casework and shelving, allowance	6,436	sf	\$0.54	\$3,487
Built-in seating, allow	6,436	sf	\$1.63	\$10,460
Millwork & trim	6,436	sf	\$1.08	\$6,973
Kitchen equipment, from kitchen consultant				
Group 1 equipment				
Convenience store	1	ls	\$116,472.82	\$116,473
Retail deli	1	ls	\$112,680.68	\$112,681
Total - 8 Function Equipment and Specialties				<u>\$275,740</u>
10 Plumbing Systems				
Plumbing allowance, general	1,931	sf	\$6.50	\$12,553
Plumbing allowance, Conv. store/Deli	4,505	sf	\$32.50	\$146,431
Total - 10 Plumbing Systems				<u>\$158,984</u>
11 HVAC				
Central plant				
Central plant equipment and piping, CHW, CW, HHW	23	ton	\$1,191.81	\$26,959
Chiller redundancy, 60%	12	ton	\$453.97	\$5,606
Chilled water distribution	6,436	sf	\$1.32	\$8,507
Heating hot water distribution	6,436	sf	\$2.54	\$16,317
Air-Side Equipment				
Air handlers	6,174	cfm	\$4.38	\$27,025
Kitchen makeup air unit	1,489	cfm	\$3.54	\$5,274
Kitchen exhaust	1,489	cfm	\$1.08	\$1,613
General exhaust	1,093	cfm	\$1.08	\$1,184
Air distribution allowances				
Ductwork, galvanized steel	4,923	lb	\$7.03	\$34,616
Flexible duct, insulated, various sizes	110	lf	\$11.92	\$1,309
Duct insulation, wrap	3,448	sf	\$2.42	\$8,330
Duct insulation, liner	273	sf	\$3.11	\$849
Combination fire / smoke damper	3	ea	\$925.28	\$2,882
Manual volume damper	22	ea	\$74.65	\$1,640
Grilles, registers, diffusers	33	ea	\$190.69	\$6,283
Test and balance	6,436	sf	\$0.54	\$3,487
Controls	6,436	sf	\$3.25	\$20,920
Total - 11 HVAC				<u>\$172,799</u>

12 Electrical Lighting, Power and Communications

Retail Deli/Convenience Store, Phase 2 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Service & Distribution				
Convenience Store/Deli	4,505	sf	\$2.17	\$9,762.05
Circulation and other area	1,931	sf	\$1.63	\$3,138.27
Convenience Power				
Convenience Store/Deli	4,505	sf	\$3.25	\$14,643.07
Circulation and other area	1,931	sf	\$2.17	\$4,184.35
Equipment Power				
Convenience Store/Deli	4,505	sf	\$1.63	\$7,321.54
Circulation and other area	1,931	sf	\$1.63	\$3,138.27
Lighting				
Convenience Store/Deli	4,505	sf	\$4.33	\$19,524.09
Circulation and other area	1,931	sf	\$1.63	\$3,138.27
Telephone/Data system				
Convenience Store/Deli	4,505	sf	\$1.08	\$4,881.02
Circulation and other area	1,931	sf	\$1.63	\$3,138.27
Public address & technology				
Convenience Store/Deli	4,505	sf	\$1.08	\$4,881.02
Circulation and other area	1,931	sf	\$1.35	\$2,615.22
Fire Alarm				
Convenience Store/Deli	4,505	sf	\$1.63	\$7,321.54
Circulation and other area	1,931	sf	\$1.63	\$3,138.27
CATV System				
Convenience Store/Deli	4,505	sf	\$0.54	\$2,440.51
Security/CCTV System				
Convenience Store/Deli	4,505	sf	\$1.08	\$4,881.02
Circulation and other area	1,931	sf	\$1.63	\$3,138.27
Other items				
Core drilling, firestopping	300	ls	\$26.54	\$7,963.49
Total - 12 Electrical Lighting, Power and Communications				<u>\$109,249</u>
13 Fire Protection Systems				
Fire Sprinklers	6,436	ea	\$4.33	\$27,893
Total - 13 Fire Protection Systems				<u>\$27,893</u>

Apartments, Phase 3, 4 Bedroom Units

University of California, Riverside
Schedule of Areas & Control Quantities
Canyon Crest Housing at UCR
Apartments, Phase 3, 4 Bedroom Units

Project #: 04-307.00
Date: 27-Jul-05

Schedule of Areas	SF per Unit	Total Beds	SF	SF
Enclosed Areas - Apartment Units				
62 ea 4 Bedroom Units - Type A	987	248	61,194	
21 ea 4 Bedroom Units - Type B	1060	84	22,260	
22 ea 3 Bedroom Units	786	66	17,292	
9 ea 2 Bedroom Units - Type A	640	18	5,760	
114 total				
Subtotal, Enclosed Areas - Apartment Units		416		<u>106,506</u>
Enclosed Areas - Common Areas				
Laundry			2,380	
Storage, including bicycle storage			3,860	
Utility Rooms			980	
Corridors/Other			48,740	
Subtotal, Enclosed Areas - Common Areas				<u>55,960</u>
Unenclosed Areas				
Unenclosed			16,382	
Second Floor				
Third Floor				
Fourth Floor				
Subtotal, Unenclosed Areas			16,382	
Unenclosed Areas @ 50%				<u>8,191</u>
Total Gross Floor Area				<u>170,657</u>

Apartments, Phase 3, 4 Bedroom Units Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$10,831,754		\$63.47
1 Foundations	\$1,402,450		\$8.22	
2 Vertical Structure	\$1,194,538		\$7.00	
3 Floor & Roof Structures	\$2,835,118		\$16.61	
4 Exterior Cladding	\$4,459,532		\$26.13	
5 Roofing and Waterproofing	\$940,115		\$5.51	
B) Interiors (6-7)		\$4,502,559		\$26.38
6 Interior Partitions, Doors and Glazing	\$2,538,137		\$14.87	
7 Floor, Wall and Ceiling Finishes	\$1,964,422		\$11.51	
C) Equipment and Vertical Transportation (8-9)		\$1,897,568		\$11.12
8 Function Equipment and Specialties	\$1,380,907		\$8.09	
9 Stairs and Vertical Transportation	\$516,661		\$3.03	
D) Mechanical and Electrical (10-13)		\$7,610,150		\$44.59
10 Plumbing Systems	\$2,811,791		\$16.48	
11 HVAC	\$1,485,598		\$8.71	
12 Electrical Lighting, Power and Communications	\$2,727,761		\$15.98	
13 Fire Protection Systems	\$584,999		\$3.43	
E) Site Construction (14-16)		\$293,396		\$1.72
14 Site Preparation and Demolition				
15 Site Paving, Structures & Landscaping	\$293,395.5		\$1.72	
16 Utilities on Site				
Subtotal		\$25,135,427		\$147.29
Gen'l Cond, Bonds and Insurance	8.0%	\$2,010,834		\$11.78
Subtotal		\$27,146,261		\$159.07
General Contractor's Fee	4.0%	\$1,085,850		\$6.36
Subtotal		\$28,232,111		\$165.43
Design Contingency	10.0%	\$2,823,211		\$16.54
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$31,055,322</u>		\$181.98
Allow for Rising Costs at 5.0% per Annum to BOC	30.0%	\$9,320,910		
TOTAL ESTIMATED CONSTRUCTION COST (June, 2011)		<u>\$40,376,232</u>		\$236.59

(ASF) \$355.03

EFFICIENCY 66%

Total Area: 170,657 SF

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Foundations and grade beams Residential units	170,657	sf	\$3.78	\$645,898
Special foundations Caisson foundations due to poor soils	170,657	sf	\$4.33	\$738,169
Elevator pit	2	ea	\$9,191.59	\$18,383
Total - 1 Foundations				<u>\$1,402,450</u>
2 Vertical Structure				
CMU columns, 16" x 16"	950	lf	\$91.92	\$87,285
Steel pipe columns	170,657	sf	\$1.62	\$276,813
Wood posts and shear panels	170,657	sf	\$4.87	\$830,440
Total - 2 Vertical Structure				<u>\$1,194,538</u>
3 Floor & Roof Structures				
Concrete slab-on-grade, 5" with vapor barrier and base	45,480	sf	\$6.22	\$282,787
Upper Floors				
TJI @ 16" OC	113,700	sf	\$7.03	\$799,181
3/4" T & G Floor, Ply	113,700	sf	\$3.78	\$430,328
2" Hardrock concrete	113,700	sf	\$2.70	\$307,377
Sound insulation	113,700	sf	\$0.65	\$73,771
Roof Construction				
Wood trusses, plywood sheathing	45,480	sf	\$8.65	\$393,443
Flat roof area				
TJI @ 16" OC	45,480	sf	\$7.03	\$319,673
3/4" T & G Floor, Ply	45,480	sf	\$3.78	\$172,131
Batt insulation, R-30	45,480	sf	\$0.97	\$44,262
Concrete Housekeeping Pads, allow	1,500	sf	\$8.11	\$12,165
Total - 3 Floor & Roof Structures				<u>\$2,835,118</u>
4 Exterior Cladding				
Exterior walls				
Wood studs, 2"x6"	147,083	sf	\$4.54	\$668,009
Batt insulation, R-19	147,083	sf	\$0.70	\$103,382
Exterior sheathing, 5/8"	147,083	sf	\$2.70	\$397,624
Cement plaster, 7/8"	147,083	sf	\$9.19	\$1,351,922

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Gypsum board, 5/8"	147,083	sf	\$1.89	\$278,337
Paint cement plaster	147,083	sf	\$1.24	\$182,907
Paint gypsum board	147,083	sf	\$0.59	\$87,477
Windows, double glazing, low e				
Operable at apts	6,250	sf	\$43.25	\$270,323
Other fixed, allow	500	sf	\$34.60	\$17,302
Entry Doors				
HM frames, wood doors, finish hardware, painted	279	ea	\$1,135.43	\$316,785
Exterior Gates, single, with card access	8	ea	\$3,784.77	\$30,278
Soffits				
Plaster, 3 coat	71,670	sf	\$10.27	\$736,262
Aluminum louvers, allow	500	sf	\$37.85	\$18,924
Total - 4 Exterior Cladding				<u>\$4,459,532</u>
5 Roofing and Waterproofing				
Roofing				
Single-ply membrane roofing system	45,480	sf	\$5.19	\$236,066
Pitched roof, clay tile	45,480	sf	\$6.76	\$307,377
Fascia board, allowance	2,274	lf	\$19.46	\$44,262
Cricket & cants	45,480	sf	\$0.54	\$24,590
Flashing & Trim				
General sheet metal	170,657	sf	\$1.35	\$230,678
Waterproofing and coatings				
Traffic topping at exterior walkways, Dextotex	16,382	sf	\$5.19	\$85,031
Roof hatches, roof ladders, curb	2	ea	\$6,055.63	\$12,111
Total - 5 Roofing and Waterproofing				<u>\$940,115</u>
6 Interior Partitions, Doors and Glazing				
Party Wall				
Wood studs, 3" x 4", staggered	13,040	sf	\$4.54	\$59,225
Sound insulation	13,040	sf	\$0.65	\$8,461
Gypsum board, 5/8"	46,944	sf	\$1.89	\$88,837
Interior Partitions				
Wood studs, 2" x 4"	184,175	sf	\$3.51	\$647,271
Sound insulation	184,175	sf	\$0.65	\$119,496

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Gypsum board, 5/8"	368,350	sf	\$1.89	\$697,061
Interior Doors				
Solid core wood door in wood frame including hardware and finish, single door	614	ea	\$919.16	\$564,180
Bi-fold closet doors	652	ea	\$405.51	\$264,231
Unit entry card readers	114	ea	\$486.61	\$55,474
30" x 30" access panels	114	ea	\$297.37	\$33,901

Total - 6 Interior Partitions, Doors and Glazing

\$2,538,137

7 Floor, Wall and Ceiling Finishes

Floors				
Seal concrete	21,222	sf	\$0.81	\$17,212
Sheet vinyl	17,957	sf	\$4.93	\$88,550
Carpet	86,378	sf	\$2.81	\$242,857
Ceramic tile	12,101	sf	\$12.98	\$157,032
Marble thresholds	238	ea	\$91.92	\$21,876
Bases				
Resilient	43,155	lf	\$2.54	\$109,666
Ceramic tile	7,862	lf	\$15.14	\$119,030
Walls				
Paint gypboard	388,395	sf	\$0.59	\$230,998
Ceiling				
Acoustic tile ceilings	3,028	sf	\$3.24	\$9,822
Gypsum board ceiling, framing	120,175	sf	\$7.03	\$844,695
Soffit drop	2,477	lf	\$17.40	\$43,108
Paint gypsum board ceilings	122,652	sf	\$0.65	\$79,579

Total - 7 Floor, Wall and Ceiling Finishes

\$1,964,422

8 Function Equipment and Specialties

Kitchen Appliances				
Dishwasher	114	ea	\$702.89	\$80,129
Disposer	114	ea	\$270.34	\$30,819
Electric range	114	ea	\$811.02	\$92,457
Refrigerator	114	ea	\$811.02	\$92,457
Microwave/hood combo	114	ea	\$811.02	\$92,457
Casework & Millwork				
Base cabinet with p-lam countertop	792	lf	\$178.42	\$141,366
Vanity cabinet with p-lam countertop	811	lf	\$178.42	\$144,756
Upper cabinet	1,511	lf	\$102.73	\$155,271

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Misc shelving	623	lf	\$93.00	\$57,956
Closet shelving, bedrooms	654	ea	\$200.05	\$130,754
Millwork & trim	170,657	sf	\$1.08	\$184,542
Corner guards & wall protection	1	ls	\$10,813.63	\$10,814
Signage	170,657	sf	\$0.27	\$46,136
Telephone enclosures, allowance	2	ea	\$1,243.57	\$2,487
Toilet accessories				
Mirror	224	ea	\$189.24	\$42,389
Toilet paper dispenser	224	ea	\$21.63	\$4,845
Medicine cabinet	224	ea	\$124.36	\$27,856
Towel bar	224	ea	\$54.07	\$12,111
Grab bars	10	ea	\$102.73	\$1,027
Shower wand	224	ea	\$81.10	\$18,167
Shower curtain	224	ea	\$37.85	\$8,478
Coat hook	224	ea	\$16.22	\$3,633

Total - 8 Function Equipment and Specialties

\$1,380,907

9 Stairs and Vertical Transportation

Metal pan stairs, concrete fill, railing, paint 4'0" wide, tread and riser	306	rsr	\$665.04	\$203,502
Landing fill	1,037	sf	\$16.22	\$16,817
Elevators and Lifts				
Hydraulic Elevators				
Passenger, 4-stop, 31'0" travel	2	ea	\$145,984.03	\$291,968
Elevator sill	48	lf	\$34.81	\$1,671
Elevator pit ladder	2	ea	\$1,351.70	\$2,703

Total - 9 Stairs and Vertical Transportation

\$516,661

10 Plumbing Systems

Fixtures including complete rough-in				
Water closet	219	ea	\$1,730.18	\$378,910
Lavatory	219	ea	\$1,816.69	\$397,855
Kitchen sinks	114	ea	\$1,935.64	\$220,663
Shower	210	ea	\$1,838.32	\$386,047
Shower / Tub	9	ea	\$2,379.00	\$21,411
Water heaters	114	ea	\$2,162.73	\$246,551
Flue	114	ea	\$540.68	\$61,638
Natural gas meters	114	ea	\$270.34	\$30,819
Natural gas to water heaters, allow 100' run	114	ea	\$1,622.04	\$184,913
Water meter	114	ea	\$702.89	\$80,129

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Water line from meter to service entrance, allow 100'	114	ea	\$2,379.00	\$271,206
Water heaters for laundry rooms	14	ea	\$5,406.82	\$75,695
Natural gas to water heaters, allow 100' run	14	ea	\$1,622.04	\$22,709
Plumbing allowance, common areas	55,960	sf	\$3.78	\$211,796
Roof drainage	170,657	sf	\$1.30	\$221,451

Total - 10 Plumbing Systems

\$2,811,791

11 HVAC

Air-Side Equipment				
Split heat pump, 2 ton	114	ea	\$5,406.82	\$616,377
Toilet exhaust fan	219	ea	\$185.99	\$40,733
Air distribution allowances at units				
Ductwork, galvanized steel	13,985	lb	\$7.02	\$98,150
Flexible duct, insulated, various sizes	3,685	lf	\$11.89	\$43,831
Grilles, registers, diffusers	737	ea	\$59.15	\$43,592
Test and balance	92	hr	\$97.32	\$8,965
HVAC allowances at common areas				
Rooftop AC units	140	tons	\$1,503.09	\$209,907
General exhaust	8,379	cfm	\$1.08	\$9,061
Controls	55,960	sf	\$1.95	\$108,924
Ductwork, galvanized steel	21,812	lb	\$7.02	\$153,078
Duct insulation	15,268	sf	\$2.41	\$36,819
Flexible duct, insulated, various sizes	927	lf	\$14.81	\$13,733
Combination fire / smoke damper	16	ea	\$923.48	\$15,107
Manual volume damper	185	ea	\$74.51	\$13,814
Grilles, registers, diffusers	245	ea	\$176.26	\$43,252
Test and balance	55,960	sf	\$0.54	\$30,257

Total - 11 HVAC

\$1,485,598

12 Electrical Lighting, Power and Communications

Service & Distribution				
Main service 1600 amp 120/208 volt 3ph 4w	2	ea	\$30,808.40	\$61,617
Distribution panel 800 amp 120/208v 3ph 4w	2	ea	\$12,896.54	\$25,793
House panel 400 amp 120/208v 3ph 4w	2	ea	\$4,585.44	\$9,171
Laundry panel 400 amp 120/208v 3ph 4w	2	ea	\$4,585.44	\$9,171
Unit panels 100 amp 120/208v 3ph 4w	114	ea	\$1,368.47	\$156,005
Transformers	16	ea	\$12,165.34	\$194,645
Grounding	2	ls	\$2,149.42	\$4,299
MC cable 3C-#4, with 1#6 ground	11,340	lf	\$7.09	\$80,436
Feeder conduit, emt, 4"	1,800	lf	\$23.52	\$42,344
Feeder wire, #2	11	clf	\$261.38	\$2,823

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Feeder wire, #1/0	7	clf	\$372.09	\$2,679
Feeder wire, #4/0	43	clf	\$642.70	\$27,765
Feeder wire, #500mcm	29	clf	\$1,038.89	\$29,920
Laundry	2,380	sf	\$3.58	\$8,526
Storage	3,860	sf	\$3.58	\$13,828
Utility Rooms	980	sf	\$3.58	\$3,511
Corridors	48,740	sf	\$3.58	\$174,605
Lighting & Power				
Convenience Power				
Duplex 15 amp 120 volt	958	ea	\$71.65	\$68,610
Duplex 1/2 hot 15 amp 120 volt	327	ea	\$78.81	\$25,756
Duplex GFI 15 amp 120 volt	327	ea	\$100.31	\$32,780
Double duplex 20 amp 120 volt	89	ea	\$107.47	\$9,597
Duplex separate circuit 20 amp 120 volt	179	ea	\$128.97	\$23,033
Oven 40 amp connection	89	ea	\$286.59	\$25,592
Switch with duplex separate circuit 20 amp 120 volt	89	ea	\$214.94	\$19,194
MC cable 12-2 with ground copper	12,707	lf	\$3.51	\$44,611
MC cable 12-3 with ground copper	6,354	lf	\$4.08	\$25,947
MC cable 10-3 with ground copper	4,188	lf	\$3.94	\$16,502
MC cable 8-3 with ground copper	4,188	lf	\$4.94	\$20,702
Laundry	2,380	sf	\$3.58	\$8,526
Storage	3,860	sf	\$3.58	\$13,828
Utility Rooms	980	sf	\$3.58	\$3,511
Corridors	48,740	sf	\$0.14	\$6,984
Equipment connection				
RTU unit compressor connection	122	ea	\$71.65	\$8,741
RTU unit compressor disconnect 30 amp 208v	122	ea	\$200.61	\$24,475
Fan coil unit connection	122	ea	\$71.65	\$8,741
Fan coil unit disconnect 30 amp 208v	122	ea	\$179.12	\$21,852
Exhaust fan connection	122	ea	\$214.94	\$26,223
MC cable 10-3 with ground copper	17,103	lf	\$3.94	\$67,395
MC cable 8-3 with ground copper	8,551	lf	\$4.94	\$42,275
Laundry	2,380	sf	\$2.15	\$5,116
Storage	3,860	sf	\$2.15	\$8,297
Utility Rooms	980	sf	\$2.15	\$2,106
Lighting				
Emergency lighting allowance	1	ls	\$32,440.90	\$32,441
Fixture A, recessed downlight entry	114	ea	\$171.95	\$19,603
Fixture B, recessed downlight kitchen	232	ea	\$200.61	\$46,502
Fixture C, wall sconce bathroom	226	ea	\$214.94	\$48,598
Fixture D, strip light	114	ea	\$128.97	\$14,702
Switch 1P, single	802	ea	\$64.48	\$51,714
Switch 1P, double	114	ea	\$78.81	\$8,985
MC cable 12-2 with ground copper	14,919	lf	\$3.51	\$52,378
MC cable 12-3 with ground copper	4,476	lf	\$4.08	\$18,279
Laundry	2,380	sf	\$4.30	\$10,231

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Storage	3,860	sf	\$4.30	\$16,594
Utility Rooms	980	sf	\$4.30	\$4,213
Corridors	48,740	sf	\$1.07	\$52,381
Systems				
Telephone / Data				
Telephone terminal box	114	ea	\$179.12	\$20,420
Telephone/data wall outlet	489	ea	\$64.48	\$31,549
Conduit 1", emt	19,086	lf	\$6.38	\$121,701
Cable Cat 6	68,708	lf	\$1.30	\$89,158
Laundry	2,380	sf	\$1.43	\$3,410
Fire alarm				
FA control panel master slave system	2	ea	\$10,747.12	\$21,494
FA strobe/speaker	171	ea	\$279.42	\$47,789
FA smoke detector	469	ea	\$250.77	\$117,713
Conduit 1", emt	18,649	lf	\$6.38	\$118,919
FA cable	18,649	lf	\$1.39	\$25,922
Laundry	2,380	sf	\$1.43	\$3,410
Storage	3,860	sf	\$1.43	\$5,531
Utility Rooms	980	sf	\$1.43	\$1,404
Corridors	48,740	sf	\$0.21	\$10,476
Cable TV				
CATV terminal box	114	ea	\$143.29	\$16,336
CATV wall outlet	605	ea	\$64.48	\$39,031
Conduit 1", emt	25,313	lf	\$6.38	\$161,414
Cable RG6	25,313	lf	\$1.50	\$38,086
Security system				
Corridors	48,740	sf	\$1.43	<u>\$69,842</u>
Total - 12 Electrical Lighting, Power and Communications				<u>\$2,727,761</u>
13 Fire Protection Systems				
Fire Sprinklers, NFPA 13	170,657	sf	\$3.43	<u>\$584,999</u>
Total - 13 Fire Protection Systems				<u>\$584,999</u>
15 Site Paving, Structures & Landscaping				
Courtyard Site Improvements				
Hardscape				
Integral color concrete paving, 5" thick, sand blast finish, with brick banding	1,410	sf	\$10.27	\$14,485
Concrete paving, standard	4,490	sf	\$7.03	\$31,560
Landscaping				

Apartments, Phase 3, 4 Bedroom Units Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Trees				
48" box, allow	16	ea	\$1,946.45	\$31,143
Shrubs / Ground cover				
Lush groundcover, allow	1,000	sf	\$27.03	\$27,034
Sod at courtyard area	10,910	sf	\$1.35	\$14,747
Seeding including soil prep, between buildings	10,198	sf	\$0.70	\$7,168
90 days maintenance	1	ls	\$10,272.95	\$10,273
Irrigation				
Planting and lawn area irrigation	22,108	sf	\$1.62	\$35,860
Landscape drainage	22,108	sf	\$1.62	\$35,860
Site furnishings				
Wooden bench, 6'-0" long	4	ea	\$1,351.70	\$5,407
Miscellaneous site furnishings, allowance	1	ls	\$10,813.63	\$10,814
Special space	2	ea	\$21,627.26	\$43,255
Site signage, allow	1	ls	\$16,220.45	\$16,220
Fencing & Gates				
Fencing, ornamental	59	lf	\$162.20	\$9,570
Total - 15 Site Paving, Structures & Landscaping				<u>\$293,396</u>

Site Development, Apartments Phase 3

Site Development, Apartments Phase 3 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$2,667,402		\$11.13
14 Site Preparation and Demolition		\$396,487		\$1.65	
15 Site Paving, Structures and Landscaping		\$1,469,298		\$6.13	
16 Utilities on Site		\$801,617		\$3.34	
Subtotal			\$2,667,402		\$11.13
Gen'l Cond, Bonds and Insurance	8.00%		\$213,392		\$0.89
Subtotal			\$2,880,794		\$12.02
General Contractor's Fee	4.0%		\$115,232		\$0.48
Subtotal			\$2,996,026		\$12.50
Design Contingency	10.0%		\$299,603		\$1.25
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$3,295,629</u>		\$13.75
Allow for Rising Costs at 5.0% per Annum to BOC		30.0%	\$989,146		
TOTAL ESTIMATED CONSTRUCTION COST (June, 2011)			<u>\$4,284,775</u>		\$17.87

Total Area: 239,731 SF

Site Development, Apartments Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Demolition				
Hazmat abatement, allow	8	ea	\$3,784.77	\$30,278
Demo existing housing units	8	ea	\$8,110.22	\$64,882
Site Demolition				
Clear site	284,394	sf	\$0.43	\$123,013
Grading and clearing				
Overexcavate and recompact under structures	8,111	cy	\$3.78	\$30,698
Rough grade	284,394	sf	\$0.32	\$92,260
Fine grade	284,394	sf	\$0.11	\$30,753
Erosion control, allowance	284,394	sf	\$0.09	\$24,603
Total - 14 Site Preparation and Demolition				<u>\$396,487</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Concrete paving	12,015	sf	\$7.03	\$84,452
Curb and gutter, concrete	2,995	lf	\$19.46	\$58,296
Asphalt paving	15,323	sf	\$2.97	\$45,567
Asphalt paving, repairs	1	ls	\$5,406.82	\$5,407
Striping, miscellaneous road markings	15,323	sf	\$0.05	\$828
Other site improvements				
Trash enclosures	2	ea	\$24,871.35	\$49,743
CMU screen wall	247	lf	\$173.02	\$42,735
Site signage, allow	1	ls	\$10,813.63	\$10,814
Monument sign, allow	1	ls	\$10,813.63	\$10,814
Site furnishings	1	ls	\$54,068.16	\$54,068
Landscaping				
Trees				
Screening trees, allow	30	ea	\$1,622.04	\$48,661
Shrubs / Ground cover				
Turf including soil prep	150,893	sf	\$0.70	\$106,061
90 days maintenance	1	mo	\$9,191.59	\$9,192
Irrigation				
Planting and lawn area irrigation	145,925	sf	\$1.62	\$236,697
Fencing & Gates				
Fencing, ornamental	902	lf	\$162.20	\$146,308
Electrical Site Lighting	284,394	sf	\$0.54	\$153,767
Emergency blue light security system	1	ea	\$16,220.45	\$16,220

Site Development, Apartments Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Signalization				
Traffic signal at new entrance	1	ls	\$216,272.64	\$216,273
Streetscape				
City sidewalk	5,000	sf	\$8.11	\$40,551
City curb & gutter	517	lf	\$22.17	\$11,461
Street lighting	6	ea	\$10,272.95	\$61,638
Other work within ROW, allow	6,500	sf	\$9.19	<u>\$59,745</u>
Total - 15 Site Paving, Structures and Landscaping				<u>\$1,469,298</u>
16 Utilities on Site				
Electrical Site Utilities				
Electrical Site Utilities	1	ls	\$109,758.36	\$109,758
Telephone Data Site Utilities	1	ls	\$54,879.18	\$54,879
Site substation transformers and 500 kva generator, prorated cost across all site phases	1	ls	\$316,974.59	\$316,975
Fiber optic for tie in to police system	1	ls	\$29,737.49	\$29,737
Wet utilities				
Domestic Water & fire service				
6" DIP lateral	486	lf	\$48.66	\$23,649
Double detector check	1	ea	\$8,650.91	\$8,651
Post Indicator valve	1	ea	\$1,622.04	\$1,622
Fire hydrant, allow	3	ea	\$4,866.13	\$14,598
Fire department connection	1	ea	\$1,622.04	\$1,622
Gas service, allow	168	lf	\$32.44	\$5,450
Gas meter	3	ea	\$2,703.41	\$8,110
Gas service, demolition	906	lf	\$16.22	\$14,696
Storm drain				
Point of connection	1	ea	\$2,703.41	\$2,703
Catch basin	7	ea	\$2,379.00	\$16,653
SDR 35, 12"	1,406	lf	\$70.29	\$98,826
Sanitary Sewer				
Sewer, demolition	2,463	lf	\$16.22	\$39,951
Point of connection	1	ea	\$2,703.41	\$2,703
Sewer manhole	1	ea	\$4,866.13	\$4,866
8" mains	821	lf	\$56.23	<u>\$46,166</u>
Total - 16 Utilities on Site				<u>\$801,617</u>

Parking, Apartments Phase 3

Parking, Apartments Phase 3 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$393,006		\$6.39
14 Site Preparation and Demolition		\$58,541		\$0.95	
15 Site Paving, Structures and Landscaping		\$316,190		\$5.14	
16 Utilities on Site		\$18,275		\$0.30	
Subtotal			\$393,006		\$6.39
Gen'l Cond, Bonds and Insurance	8.00%		\$31,440		\$0.51
Subtotal			\$424,446		\$6.90
General Contractor's Fee	4.0%		\$16,978		\$0.28
Subtotal			\$441,424		\$7.18
Design Contingency	10.0%		\$44,142		\$0.72
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$485,567</u>		\$7.89
Allow for Rising Costs at 5.0% per Annum to BOC		30.0%	\$145,737		
TOTAL ESTIMATED CONSTRUCTION COST (June, 2011)			<u>\$631,304</u>		\$10.26

Total Area: 61,519 SF

Parking, Apartments Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Site Demolition				
Clear site	61,519	sf	\$0.43	\$26,610
Grading and clearing				
Rough grade	61,519	sf	\$0.32	\$19,957
Fine grade	61,519	sf	\$0.11	\$6,652
Erosion control, allowance	61,519	sf	\$0.09	\$5,322
Total - 14 Site Preparation and Demolition				<u>\$58,541</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Concrete paving	1,162	sf	\$7.03	\$8,168
Curb and gutter, concrete	2,269	lf	\$19.46	\$44,165
Asphalt paving	61,519	sf	\$2.43	\$149,680
Striping, standard stall	200	ea	\$19.46	\$3,893
Striping, miscellaneous road markings	61,519	sf	\$0.05	\$3,326
Stencil ADA parking symbols	10	ea	\$91.92	\$919
Accessible concrete curb cut ramps	10	ea	\$919.16	\$9,192
Landscaping				
Trees				
Screening trees, allow	15	ea	\$1,622.04	\$24,331
Shrubs / Ground cover				
Turf including soil prep	2,000	sf	\$0.70	\$1,406
90 days maintenance	1	mo	\$9,191.59	\$9,192
Irrigation				
Planting and lawn area irrigation	2,000	sf	\$1.62	\$3,244
Fencing & Gates				
Gate, single pedestrian, card reader	1	ea	\$3,784.77	\$3,785
Gate, vehicular entry	2	ea	\$4,325.45	\$8,651
Parking equipment				
Arm gate & card reader	2	ea	\$6,488.18	\$12,976
Electrical Site Lighting	61,519	sf	\$0.54	\$33,262
Total - 15 Site Paving, Structures and Landscaping				<u>\$316,190</u>
16 Utilities on Site				
Storm drain				
Point of connection	1	ea	\$2,703.41	\$2,703

Parking, Apartments Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Catch basin	2	ea	\$2,379.00	\$4,758
SDR 35, 8"	200	lf	\$54.07	\$10,814
Total - 16 Utilities on Site				<u>\$18,275</u>

Dining Hall, Phase 3

Schedule of Areas	SF	SF
Enclosed Areas - Dining Hall Community Center		
Dining Area	10656	
Servery	3520	
Production Kitchen		
Warewashing		
Dining support		
Convenience Store/Deli		
Public/common, (Admin, offices, lounges, game)	4200	
Conference services, (Office, and waiting)	0	
Meeting/Academic/Programs	0	
Circulation and other area	7,875	
Subtotal, Enclosed Areas - Dining Hall Community Center		<u>26,251</u>
Unenclosed Areas		
Ground Floor	0	
Second Floor	0	
Subtotal, Unenclosed Areas	0	
Unenclosed Areas @ 50%		<u>0</u>
Total Gross Floor Area		<u>26,251</u>

Dining Hall, Phase 3 Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$2,710,203		\$103.24
1 Foundations	\$248,058		\$9.45	
2 Vertical Structure	\$193,410		\$7.37	
3 Floor & Roof Structures	\$1,063,845		\$40.53	
4 Exterior Cladding	\$984,456		\$37.50	
5 Roofing and Waterproofing	\$220,433		\$8.40	
B) Interiors (6-7)		\$986,958		\$37.60
6 Interior Partitions, Doors and Glazing	\$436,594		\$16.63	
7 Floor, Wall and Ceiling Finishes	\$550,364		\$20.97	
C) Equipment and Vertical Transportation (8-9)		\$880,068		\$33.52
8 Function Equipment and Specialties	\$767,317		\$29.23	
9 Stairs and Vertical Transportation	\$112,751		\$4.30	
D) Mechanical and Electrical (10-13)		\$1,557,063		\$59.31
10 Plumbing Systems	\$262,187		\$9.99	
11 HVAC	\$694,720		\$26.46	
12 Electrical Lighting, Power and Communications	\$486,386		\$18.53	
13 Fire Protection Systems	\$113,770		\$4.33	
Subtotal		\$6,134,292		\$233.67
Gen'l Cond, Bonds and Insurance	8.0%	\$490,743		\$18.69
Subtotal		\$6,625,035		\$252.37
General Contractor's Fee	4.0%	\$265,001		\$10.09
Subtotal		\$6,890,036		\$262.46
Design Contingency	10.0%	\$689,004		\$26.25
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$7,579,040</u>		\$288.71
Allow for Rising Costs at 5.0% per Annum to BOC	29.6%	\$2,242,133		
TOTAL ESTIMATED CONSTRUCTION COST (May, 2011)		<u>\$9,821,173</u>		\$374.12
			(ASF)	\$534.46
			EFFICIENCY	70%

Total Area: 26,251 SF

Dining Hall, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Standard foundations				
Spread, strip footings and grade beams	26,251	sf	\$4.06	\$106,660
Special foundations				
Caisson foundations due to poor soils	26,251	sf	\$4.33	\$113,770
Elevator pit	3	ea	\$9,209.48	<u>\$27,628</u>
Total - 1 Foundations				<u>\$248,058</u>
2 Vertical Structure				
Structural Steel				
Columns, beams, braced frames, (4# per sf)	53	tn	\$3,412.92	\$179,188
Fireproofing				
Structural steel	53	tn	\$270.87	<u>\$14,221</u>
Total - 2 Vertical Structure				<u>\$193,410</u>
3 Floor & Roof Structures				
Cast-In-Place Concrete Slab-On-Grade				
Concrete slab	13,126	sf	\$7.58	\$99,549
Structural Steel				
Upper floors & roof				
Upper floors structural steel beams & girders (12# / sf)	158	tn	\$3,412.92	\$537,565
Metal deck at upper floors, concrete fill	26,251	sf	\$9.59	\$251,717
Fireproofing	158	tn	\$270.87	\$42,664
Penthouse Roof				
Roof screens	1	ls	\$16,252.02	\$16,252
Misc metal fabrications	26,251	sf	\$3.25	\$85,328
Seismic expansion joints	1	ls	\$27,086.70	\$27,087
Concrete Housekeeping Pads	400	sf	\$9.21	<u>\$3,684</u>
Total - 3 Floor & Roof Structures				<u>\$1,063,845</u>
4 Exterior Cladding				
Exterior Skin, glass, doors, 1/3	7,472	sf	\$70.43	\$526,219
Exterior Skin, brick, 1/3	7,472	sf	\$45.51	\$340,018
Exterior Skin, cement plaster, 1/3	7,472	sf	\$9.21	\$68,813

Dining Hall, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Exterior canopies	1	ls	\$49,406.14	\$49,406
Total - 4 Exterior Cladding				<u>\$984,456</u>
5 Roofing and Waterproofing				
Single ply roofing system				
Flat roofing, insulation, roof accessories	13,126	sf	\$11.38	\$149,327
Sheet metal allowance	26,251	sf	\$2.71	\$71,106
Total - 5 Roofing and Waterproofing				<u>\$220,433</u>
6 Interior Partitions, Doors and Glazing				
Interior Partitions				
Partitions, shafts, column enclosures and insulation	26,251	sf	\$13.54	\$355,532
Doors				
Interior Doors, Frames and Finished Hardware	26,251	sf	\$2.17	\$56,885
Other Doors				
Special doors	26,251	sf	\$0.65	\$17,066
Interior Glazing				
Sidelites and other interior glazing	26,251	sf	\$0.27	\$7,111
Total - 6 Interior Partitions, Doors and Glazing				<u>\$436,594</u>
7 Floor, Wall and Ceiling Finishes				
Ceiling				
Ceilings, gypboard, acoustical, soffits & bulkheads	26,251	sf	\$6.23	\$163,545
Special ceilings, soffits, allow	26,251	sf	\$4.33	\$113,770
Walls				
Wall finishes, paint, tile, wall covering	26,251	sf	\$2.44	\$63,996
Bases				
Resilient, tile and wood	26,251	sf	\$0.65	\$17,066
Floors				
Carpet, terrazzo, tile, sheet vinyl, concrete sealer	26,251	sf	\$7.31	\$191,987
Total - 7 Floor, Wall and Ceiling Finishes				<u>\$550,364</u>
8 Function Equipment and Specialties				
Toilet & misc. specialties	26,251	sf	\$1.08	\$28,443

Dining Hall, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Signage				
Signage package	26,251	sf	\$0.38	\$9,955
Graphics and menu-signage, allow	1	ls	\$29,643.69	\$29,644
Casework				
Casework and shelving, allowance	26,251	sf	\$0.54	\$14,221
Built-in seating, allow	26,251	sf	\$1.63	\$42,664
Millwork & trim	26,251	sf	\$1.08	\$28,443
Kitchen equipment, from kitchen consultant				
Group 1 equipment				
Serving platforms	1	ls	\$613,947.17	<u>\$613,947</u>
Total - 8 Function Equipment and Specialties				<u>\$767,317</u>
9 Stairs and Vertical Transportation				
Stairs and Ramps				
Metal pan stairs				
4'0" wide, tread and riser, nosing	31	rsr	\$666.33	\$20,656
Elevators and Lifts				
Hydraulic Elevators				
Passenger, 2-stop, 18'0" travel	1	ea	\$92,094.78	<u>\$92,095</u>
Total - 9 Stairs and Vertical Transportation				<u>\$112,751</u>
10 Plumbing Systems				
Plumbing allowance, general	22,731	sf	\$6.50	\$147,773
Plumbing allowance, kitchen	3,520	sf	\$32.50	<u>\$114,414</u>
Total - 10 Plumbing Systems				<u>\$262,187</u>
11 HVAC				
Central plant				
Central plant equipment and piping, CHW, CW, HHW	84	ton	\$1,191.81	\$99,866
Chiller redundancy, 60%	50	ton	\$453.97	\$22,864
Chilled water distribution	26,251	sf	\$1.32	\$34,700
Heating hot water distribution	26,251	sf	\$2.54	\$66,556
Air-Side Equipment				
Air handlers	25,182	cfm	\$4.38	\$110,229
Kitchen makeup air unit	6,072	cfm	\$3.54	\$21,513
Kitchen exhaust	6,072	cfm	\$1.08	\$6,579
General exhaust	4,457	cfm	\$1.08	\$4,829
Air distribution allowances				
Ductwork, galvanized steel	20,079	lb	\$7.03	\$141,190

Dining Hall, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Flexible duct, insulated, various sizes	448	lf	\$11.92	\$5,339
Duct insulation, wrap	14,062	sf	\$2.42	\$33,976
Duct insulation, liner	1,114	sf	\$3.11	\$3,465
Combination fire / smoke damper	13	ea	\$925.28	\$11,754
Manual volume damper	90	ea	\$74.65	\$6,688
Grilles, registers, diffusers	134	ea	\$190.69	\$25,625
Test and balance	26,251	sf	\$0.54	\$14,221
Controls	26,251	sf	\$3.25	<u>\$85,328</u>

Total - 11 HVAC

\$694.720

12 Electrical Lighting, Power and Communications

Service & Distribution

Dining Area	10,656	sf	\$2.17	\$23,090.87
Servery	3,520	sf	\$3.25	\$11,441.42
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$2.17	\$9,101.13
Circulation and other area	7,875	sf	\$1.63	\$12,799.16

Convenience Power

Dining Area	10,656	sf	\$2.71	\$28,863.59
Servery	3,520	sf	\$4.33	\$15,255.23
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$2.71	\$11,376.41
Circulation and other area	7,875	sf	\$2.17	\$17,065.55

Equipment Power

Dining Area	10,656	sf	\$2.17	\$23,090.87
Servery	3,520	sf	\$2.17	\$7,627.62
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$1.08	\$4,550.57
Circulation and other area	7,875	sf	\$1.63	\$12,799.16

Lighting

Dining Area	10,656	sf	\$6.50	\$69,272.61
Servery, includes specialty decorative lighting	3,520	sf	\$13.00	\$45,765.69
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$6.50	\$27,303.40
Circulation and other area	7,875	sf	\$1.63	\$12,799.16

Telephone/Data system

Dining Area	10,656	sf	\$0.54	\$5,772.72
Servery	3,520	sf	\$0.54	\$1,906.90
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$2.17	\$9,101.13
Circulation and other area	7,875	sf	\$1.63	\$12,799.16

Public address & technology

Dining Area	10,656	sf	\$1.08	\$11,545.44
Servery	3,520	sf	\$1.08	\$3,813.81
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$1.63	\$6,825.85
Circulation and other area	7,875	sf	\$1.35	\$10,665.97

Dining Hall, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Fire Alarm				
Dining Area	10,656	sf	\$1.63	\$17,318.15
Serving	3,520	sf	\$1.63	\$5,720.71
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$1.63	\$6,825.85
Circulation and other area	7,875	sf	\$1.63	\$12,799.16
CATV System				
Dining Area	10,656	sf	\$1.08	\$11,545.44
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$1.08	\$4,550.57
Security/CCTV System				
Dining Area	10,656	sf	\$0.54	\$5,772.72
Serving	3,520	sf	\$0.54	\$1,906.90
Public/common, (Admin, offices, lounges, game)	4,200	sf	\$1.08	\$4,550.57
Circulation and other area	7,875	sf	\$1.63	\$12,799.16
Other items				
Core drilling, firestopping	300	ls	\$26.54	<u>\$7,963.49</u>
Total - 12 Electrical Lighting, Power and Communications				<u>\$486,386</u>
13 Fire Protection Systems				
Fire Sprinklers	26,251	ea	\$4.33	\$113,770
Total - 13 Fire Protection Systems				<u>\$113,770</u>

Conference Services, Phase 3

Schedule of Areas	SF	SF
Enclosed Areas - Dining Hall Community Center		
Dining Area		
Servery		
Production Kitchen		
Warewashing		
Dining support		
Convenience Store/Deli		
Public/common, (Admin, offices, lounges, game)		
Conference services, (Office, and waiting)	1,110	
Meeting/Academic/Programs	20,820	
Circulation and other area	9,399	
Central Plant prorated space	0	
Subtotal, Enclosed Areas - Dining Hall Community Center		<u>31,329</u>
Unenclosed Areas		
Ground Floor	0	
Second Floor	0	
Subtotal, Unenclosed Areas	0	
Unenclosed Areas@ 50%		<u>0</u>
Total Gross Floor Area		<u>31,329</u>

Conference Services, Phase 3 Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$3,043,177		\$97.14
1 Foundations	\$272,275		\$8.69	
2 Vertical Structure	\$230,819		\$7.37	
3 Floor & Roof Structures	\$1,102,192		\$35.18	
4 Exterior Cladding	\$1,174,819		\$37.50	
5 Roofing and Waterproofing	\$263,072		\$8.40	
B) Interiors (6-7)		\$1,177,856		\$37.60
6 Interior Partitions, Doors and Glazing	\$521,040		\$16.63	
7 Floor, Wall and Ceiling Finishes	\$656,816		\$20.97	
C) Equipment and Vertical Transportation (8-9)		\$268,033		\$8.56
8 Function Equipment and Specialties	\$155,281		\$4.96	
9 Stairs and Vertical Transportation	\$112,751		\$3.60	
D) Mechanical and Electrical (10-13)		\$1,697,531		\$54.18
10 Plumbing Systems	\$203,664		\$6.50	
11 HVAC	\$795,577		\$25.39	
12 Electrical Lighting, Power and Communications	\$562,514		\$17.96	
13 Fire Protection Systems	\$135,776		\$4.33	
Subtotal		\$6,186,596		\$197.47
Gen'l Cond, Bonds and Insurance	8.0%	\$494,928		\$15.80
Subtotal		\$6,681,524		\$213.27
General Contractor's Fee	4.0%	\$267,261		\$8.53
Subtotal		\$6,948,785		\$221.80
Design Contingency	10.0%	\$694,878		\$22.18
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$7,643,663</u>		\$243.98
Allow for Rising Costs at 5.0% per Annum to BOC	29.6%	\$2,261,250		
TOTAL ESTIMATED CONSTRUCTION COST (May, 2011)		<u>\$9,904,914</u>		\$316.16
			(ASF)	\$451.66
			EFFICIENCY	70%

Total Area: 31,329 SF

Conference Services, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Standard foundations				
Spread, strip footings and grade beams	31,329	sf	\$4.06	\$127,290
Special foundations				
Caisson foundations due to poor soils	31,329	sf	\$4.33	\$135,776
Elevator pit	1	ea	\$9,209.48	<u>\$9,209</u>
Total - 1 Foundations				<u>\$272,275</u>
2 Vertical Structure				
Structural Steel				
Columns, beams, braced frames, (4# per sf)	63	tn	\$3,412.92	\$213,847
Fireproofing				
Structural steel	63	tn	\$270.87	<u>\$16,972</u>
Total - 2 Vertical Structure				<u>\$230,819</u>
3 Floor & Roof Structures				
Cast-In-Place Concrete Slab-On-Grade				
Concrete slab	15,665	sf	\$7.58	\$118,804
Structural Steel				
Upper floors & roof				
Upper floors structural steel beams & girders (12# / sf)	188	tn	\$3,412.92	\$641,541
Metal deck at upper floors, concrete fill	15,665	sf	\$9.59	\$150,202
Fireproofing	188	tn	\$270.87	\$50,916
Penthouse Roof				
Roof screens	1	ls	\$8,126.01	\$8,126
Misc metal fabrications	31,329	sf	\$3.25	\$101,832
Seismic expansion joints	1	ls	\$27,086.70	\$27,087
Concrete Housekeeping Pads	400	sf	\$9.21	<u>\$3,684</u>
Total - 3 Floor & Roof Structures				<u>\$1,102,192</u>
4 Exterior Cladding				
Exterior Skin, glass, doors, 1/3	8,917	sf	\$70.43	\$627,984
Exterior Skin, brick, 1/3	8,917	sf	\$45.51	\$405,774
Exterior Skin, cement plaster, 1/3	8,917	sf	\$9.21	\$82,121

Conference Services, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Exterior canopies	1	ls	\$58,940.66	\$58,941
Total - 4 Exterior Cladding				<u>\$1,174,819</u>
5 Roofing and Waterproofing				
Single ply roofing system				
Flat roofing, insulation, roof accessories	15,665	sf	\$11.38	\$178,212
Sheet metal allowance	31,329	sf	\$2.71	\$84,860
Total - 5 Roofing and Waterproofing				<u>\$263,072</u>
6 Interior Partitions, Doors and Glazing				
Interior Partitions				
Partitions, shafts, column enclosures and insulation	31,329	sf	\$13.54	\$424,300
Doors				
Interior Doors, Frames and Finished Hardware	31,329	sf	\$2.17	\$67,888
Other Doors				
Special doors	31,329	sf	\$0.65	\$20,366
Interior Glazing				
Sidelites and other interior glazing	31,329	sf	\$0.27	\$8,486
Total - 6 Interior Partitions, Doors and Glazing				<u>\$521,040</u>
7 Floor, Wall and Ceiling Finishes				
Ceiling				
Ceilings, gypboard, acoustical, soffits & bulkheads	31,329	sf	\$6.23	\$195,178
Special ceilings, soffits, allow	31,329	sf	\$4.33	\$135,776
Walls				
Wall finishes, paint, tile, wall covering	31,329	sf	\$2.44	\$76,374
Bases				
Resilient, tile and wood	31,329	sf	\$0.65	\$20,366
Floors				
Carpet, terrazzo, tile, sheet vinyl, concrete sealer	31,329	sf	\$7.31	\$229,122
Total - 7 Floor, Wall and Ceiling Finishes				<u>\$656,816</u>
8 Function Equipment and Specialties				
Toilet & misc. specialties	31,329	sf	\$1.08	\$33,944

Conference Services, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Signage				
Signage package	31,329	sf	\$0.81	\$25,458
Casework				
Casework and shelving, allowance	31,329	sf	\$0.54	\$16,972
Millwork & trim	31,329	sf	\$1.08	\$33,944
Kitchen equipment, from kitchen consultant				
Group 1 equipment				
Warming pantry	1	ls	\$35,754.45	\$35,754
Stage equipment				
Stage equipment - excluded				
Projector screens, electronic,				
Projection screen	1	ea	\$9,209.48	\$9,209
Seating				
Auditorium seat, in FF& E				
Total - 8 Function Equipment and Specialties				<u>\$155,281</u>
9 Stairs and Vertical Transportation				
Stairs and Ramps				
Metal pan stairs				
4'0" wide, tread and riser, nosing	31	rsr	\$666.33	\$20,656
Elevators and Lifts				
Hydraulic Elevators				
Passenger, 2-stop, 18'0" travel	1	ea	\$92,094.78	\$92,095
Total - 9 Stairs and Vertical Transportation				<u>\$112,751</u>
10 Plumbing Systems				
Plumbing allowance, general	31,329	sf	\$6.50	\$203,664
Total - 10 Plumbing Systems				<u>\$203,664</u>
11 HVAC				
Central plant				
Central plant equipment and piping, CHW, CW, HHW	100	ton	\$1,191.81	\$119,184
Chiller redundancy, 60%	60	ton	\$453.97	\$27,287
Chilled water distribution	31,329	sf	\$1.32	\$41,412
Heating hot water distribution	31,329	sf	\$2.54	\$79,429
Air-Side Equipment				

Conference Services, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Air handlers	30,054	cfm	\$4.38	\$131,551
General exhaust	5,319	cfm	\$1.08	\$5,763
Air distribution allowances				
Ductwork, galvanized steel	23,963	lb	\$7.03	\$168,502
Flexible duct, insulated, various sizes	535	lf	\$11.92	\$6,371
Duct insulation, wrap	16,782	sf	\$2.42	\$40,548
Duct insulation, liner	1,330	sf	\$3.11	\$4,135
Combination fire / smoke damper	15	ea	\$925.28	\$14,027
Manual volume damper	107	ea	\$74.65	\$7,981
Grilles, registers, diffusers	160	ea	\$190.69	\$30,582
Test and balance	31,329	sf	\$0.54	\$16,972
Controls	31,329	sf	\$3.25	\$101,832

Total - 11 HVAC

\$795,577

12 Electrical Lighting, Power and Communications

Service & Distribution

Public/common, (Admin, offices, lounges, game)	1,110	sf	\$2.17	\$2,405.30
Meeting/Academic/Programs	20,820	sf	\$2.17	\$45,115.61
Circulation and other area	9,399	sf	\$1.63	\$15,275.27

Convenience Power

Public/common, (Admin, offices, lounges, game)	1,110	sf	\$2.71	\$3,006.62
Meeting/Academic/Programs	20,820	sf	\$2.71	\$56,394.51
Circulation and other area	9,399	sf	\$2.17	\$20,367.03

Equipment Power

Public/common, (Admin, offices, lounges, game)	1,110	sf	\$1.08	\$1,202.65
Meeting/Academic/Programs	20,820	sf	\$1.63	\$33,836.71
Circulation and other area	9,399	sf	\$1.63	\$15,275.27

Lighting

Public/common, (Admin, offices, lounges, game)	1,110	sf	\$6.50	\$7,215.90
Meeting/Academic/Programs	20,820	sf	\$6.50	\$135,346.83
Circulation and other area	9,399	sf	\$1.63	\$15,275.27

Telephone/Data system

Public/common, (Admin, offices, lounges, game)	1,110	sf	\$2.17	\$2,405.30
Meeting/Academic/Programs	20,820	sf	\$2.17	\$45,115.61
Circulation and other area	9,399	sf	\$1.63	\$15,275.27

Public address & technology

Public/common, (Admin, offices, lounges, game)	1,110	sf	\$1.63	\$1,803.97
Meeting/Academic/Programs	20,820	sf	\$1.08	\$22,557.80
Circulation and other area	9,399	sf	\$1.35	\$12,729.40

Fire Alarm

Conference Services, Phase 3 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Public/common, (Admin, offices, lounges, game)	1,110	sf	\$1.63	\$1,803.97
Meeting/Academic/Programs	20,820	sf	\$1.63	\$33,836.71
Circulation and other area	9,399	sf	\$1.63	\$15,275.27
CATV System				
Public/common, (Admin, offices, lounges, game)	1,110	sf	\$1.08	\$1,202.65
Meeting/Academic/Programs	20,820	sf	\$1.08	\$22,557.80
Security/CCTV System				
Public/common, (Admin, offices, lounges, game)	1,110	sf	\$1.08	\$1,202.65
Meeting/Academic/Programs	20,820	sf	\$0.54	\$11,278.90
Circulation and other area	9,399	sf	\$1.63	\$15,275.27
Other items				
Core drilling, firestopping	357	ls	\$26.54	<u>\$9,476.55</u>
Total - 12 Electrical Lighting, Power and Communications				<u>\$562,514</u>
13 Fire Protection Systems				
Fire Sprinklers	31,329	ea	\$4.33	<u>\$135,776</u>
Total - 13 Fire Protection Systems				<u>\$135,776</u>

Recreation Fields

Recreation Fields Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$3,818,643		\$7.76
14 Site Preparation and Demolition		\$969,877		\$1.97	
15 Site Paving, Structures and Landscaping		\$2,848,766		\$5.79	
16 Utilities on Site					
Subtotal			\$3,818,643		\$7.76
Gen'l Cond, Bonds and Insurance	8.00%		\$305,491		\$0.62
Subtotal			\$4,124,135		\$8.38
General Contractor's Fee	4.0%		\$164,965		\$0.34
Subtotal			\$4,289,100		\$8.71
Design Contingency	10.0%		\$428,910		\$0.87
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$4,718,010</u>		\$9.59
Allow for Rising Costs at 5.0% per Annum to BOC		29.6%	\$1,395,745		
TOTAL ESTIMATED CONSTRUCTION COST (May, 2011)			<u>\$6,113,755</u>		\$12.42

Total Area: 492,228 SF

Recreation Fields Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Demolition				
Hazmat abatement, allow	42	ea	\$3,792.14	\$159,270
Demo existing housing units	42	ea	\$8,126.01	\$341,292
Site Demolition				
Clear site	492,228	sf	\$0.43	\$213,325
Grading and clearing				
Rough grade	492,228	sf	\$0.33	\$159,994
Fine grade	492,228	sf	\$0.11	\$53,331
Erosion control, allowance	492,228	sf	\$0.09	\$42,665
Total - 14 Site Preparation and Demolition				<u>\$969,877</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Concrete paving	18,700	sf	\$5.96	\$111,435
Curb cut	1	ls	\$2,708.67	\$2,709
Concrete turf block and grass	4,000	sf	\$9.21	\$36,838
Other site improvements				
Site furnishing, allow	1	ea	\$37,921.38	\$37,921
Site signage, allow	1	ea	\$5,417.34	\$5,417
Sports goals & backstops, excluded				
Electrical Site Utilities				
Lighting pole 70' 8 light cluster 450 watt metal halide	12	ea	\$32,341.52	\$388,098
Site security	1	ls	\$10,834.68	\$10,835
Emergency blue light security system	1	ea	\$16,252.02	\$16,252
Landscaping				
Trees				
Screening trees	70	ea	\$1,625.20	\$113,764
Athletic field system				
Export 12" of fill	20,739	cy	\$15.17	\$314,581
Topsoil, 6"	10,370	cy	\$30.34	\$314,587
Sand base, 6"	10,370	sf	\$19.50	\$202,234
Filter fabric	492,228	sf	\$0.15	\$74,664
Bullseye turf	492,228	sf	\$0.65	\$319,988
90 days maintenance	1	ls	\$16,252.02	\$16,252
Irrigation				
Planting and lawn area irrigation	492,228	sf	\$0.81	\$399,985
Field drainage system	492,228	sf	\$0.81	\$399,985

Recreation Fields Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Fencing & Gates				
Fencing, chain link	2,500	lf	\$26.00	\$65,008
Gate chain link, Pair	2	ea	\$3,467.10	\$6,934
Gate, single pedestrian, card reader	2	ea	\$3,792.14	\$7,584
Pipe bollards	8	ea	\$400.88	\$3,207
Knox box	1	ea	\$487.56	\$488

Total - 15 Site Paving, Structures and Landscaping

\$2,848,766

7.2.1 Overview

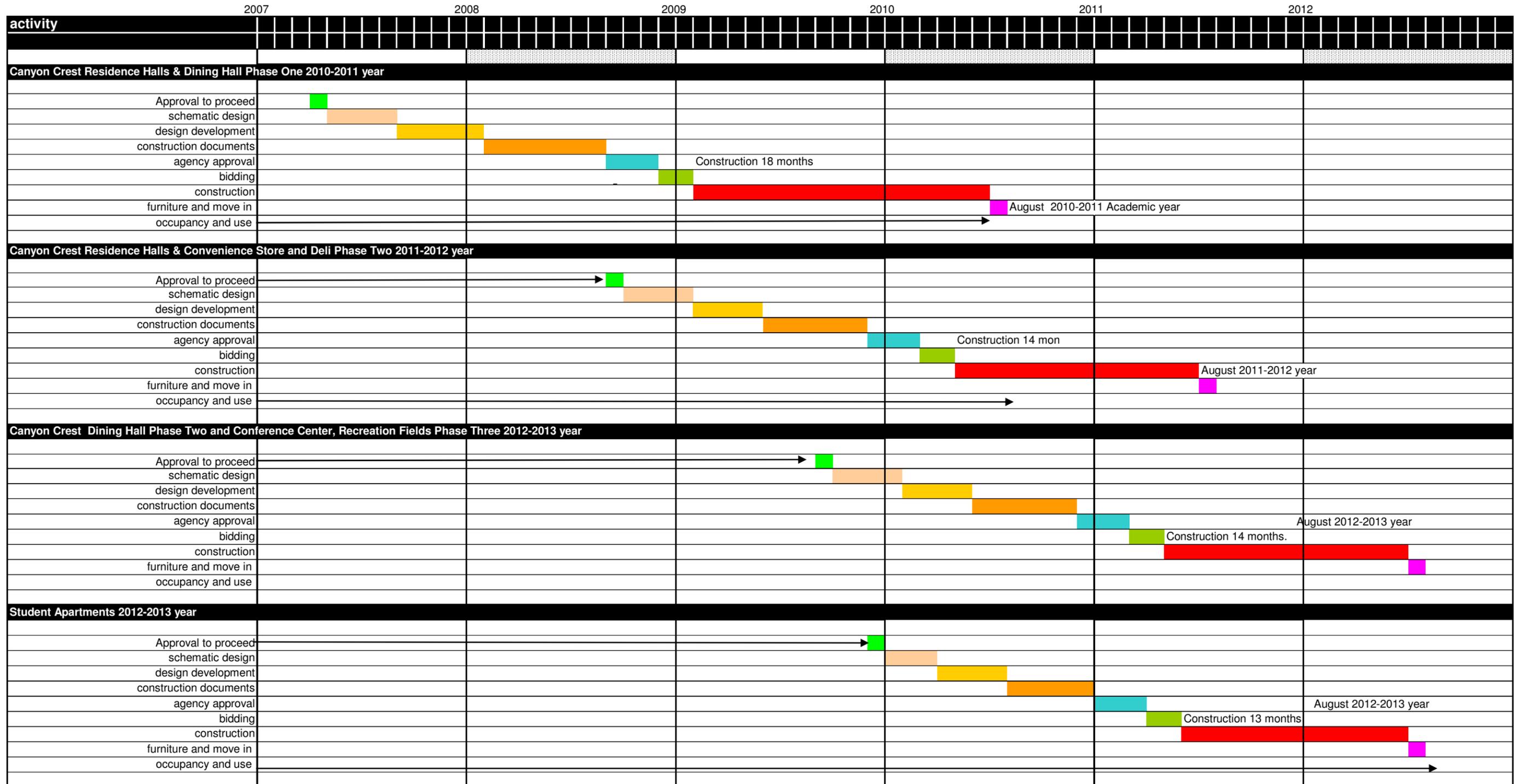
The implementation schedule anticipates the project being constructed in four phases with the first phase being available for use in August 2010 of the 2010-2011 school year, and the last phase being available in August 2012 for the 2012-2013 school year.

Phase 1 includes residence halls for 750 beds together with the first phase of the Dining Hall providing 500 seats, loading area and central plant. Construction is anticipated to begin February 2009 allowing 18 months for construction, with occupancy August 2010, for the 2010-2011 school year.

Phase 2 includes the completion of the 1,250-bed residence hall community, together with additions to the Dining Hall complex of the Campus Deli/Convenience Store and pool, allowing 14 months for construction, with occupancy August 2011, for the 2010-2011 school year.

Phase 3 includes the completion of the Dining Hall providing 600 additional seats for a total of 1,100 seats; the Conference Center, the Recreation Fields and 416 beds in student apartments with occupancy in August 2012 for the 2012-2013 school year.

**Canyon Crest Student Residence Halls / Apartments / Dining Commons/Community Building
Schedule**



Two and Three Bedroom Apartments

CONSTRUCTION COST SUMMARY

Element	Area	Cost / SF	Total
Base Estimate			
A Two and Three Bedroom Apartments	193,403 SF	\$189.22	\$36,596,309
B Site Development, Apartments Phase 1	239,731 SF	\$15.40	\$3,692,434
C Parking, Apartments Phase 1	61,519 SF	\$7.89	\$485,567
TOTAL ESTIMATED CONSTRUCTION COST Phase 1 (CCCI 4328)			<u>\$40,774,310</u>
Allowance for Rising Costs at 5.0% per Annum to BOC			\$4,134,062
TOTAL ESTIMATED CONSTRUCTION COST Phase 1 (July 2007)			<u>\$44,908,371</u>

University of California, Riverside
 Schedule of Areas & Control Quantities
 Canyon Crest Housing at UCR

Project #: 04-307.00
 Date: 27-Jul-05

Schedule of Areas	SF per Unit	Total Beds	SF	SF
Enclosed Areas - Apartment Units				
31 ea 3 Bedroom Units	896	93	27,776	
116 ea 2 Bedroom Units - Type A	663	232	76,908	
16 ea 2 Bedroom Units - Type B	707	32	11,312	
163 total				
Subtotal, Enclosed Areas - Apartment Units		357		<u>115,996</u>
Enclosed Areas - Common Areas				
Laundry			2,720	
Storage			2,200	
Utility Rooms			1,120	
Corridors/Other			62,867	
Subtotal, Enclosed Areas - Common Areas				<u>68,907</u>
Unenclosed Areas				
Ground Floor			4,470	
Second Floor			3,420	
Third Floor			4,555	
Fourth Floor			4,555	
Subtotal, Unenclosed Areas			17,000	
Unenclosed Areas @ 50%				<u>8,500</u>
Total Gross Floor Area				<u>193,403</u>

Two and Three Bedroom Apartments Construction Cost Summary

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$12,782,146		\$66.09
1 Foundations	\$1,586,925		\$8.21	
2 Vertical Structure	\$1,376,622		\$7.12	
3 Floor & Roof Structures	\$2,930,914		\$15.15	
4 Exterior Cladding	\$6,129,651		\$31.69	
5 Roofing and Waterproofing	\$758,033		\$3.92	
B) Interiors (6-7)		\$5,045,080		\$26.09
6 Interior Partitions, Doors and Glazing	\$3,096,640		\$16.01	
7 Floor, Wall and Ceiling Finishes	\$1,948,439		\$10.07	
C) Equipment and Vertical Transportation (8-9)		\$2,146,927		\$11.10
8 Function Equipment and Specialties	\$1,687,056		\$8.72	
9 Stairs and Vertical Transportation	\$459,871		\$2.38	
D) Mechanical and Electrical (10-13)		\$9,412,093		\$48.67
10 Plumbing Systems	\$3,088,252		\$15.97	
11 HVAC	\$2,298,884		\$11.89	
12 Electrical Lighting, Power and Communications	\$3,361,986		\$17.38	
13 Fire Protection Systems	\$662,970		\$3.43	
E) Site Construction (14-16)		\$233,921.0		\$1.21
15 Site Paving, Structures & Landscaping	\$233,921.0		\$1.21	
Subtotal		\$29,620,167		\$153.15
Gen'l Cond, Bonds and Insurance 8.00%		\$2,369,613		\$12.25
Subtotal		\$31,989,780		\$165.40
General Contractor's Fee 4.0%		\$1,279,591		\$6.62
Subtotal		\$33,269,371		\$172.02
Design Contingency 10.0%		\$3,326,937		\$17.20
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)		<u>\$36,596,309</u>		\$189.22
Allow for Rising Costs at 5.0% per Annum to BOC	10.1%	\$3,710,459		
TOTAL ESTIMATED CONSTRUCTION COST (July, 2007)		<u>\$40,306,768</u>		\$208.41

(ASF) \$330.29

EFFICIENCY 66%

Total Area: 193,403 SF

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
Foundations and grade beams Residential units	193,403	sf	\$3.78	\$731,986
Special foundations Caisson foundations due to poor soils	193,403	sf	\$4.33	\$836,556
Elevator pit	2	ea	\$9,191.59	<u>\$18,383</u>
Total - 1 Foundations				<u>\$1,586,925</u>
2 Vertical Structure				
CMU columns, 16" x 16"	1,325	lf	\$91.92	\$121,789
Steel pipe columns	193,403	sf	\$1.62	\$313,708
Wood posts and shear panels	193,403	sf	\$4.87	\$941,125
Total - 2 Vertical Structure				<u>\$1,376,622</u>
3 Floor & Roof Structures				
Concrete slab-on-grade, 5" with vapor barrier and base	48,350	sf	\$6.22	\$300,632
Upper Floors				
TJI @ 16" OC	145,050	sf	\$7.30	\$1,058,749
3/4" T & G Floor, Ply	145,050	sf	\$3.78	\$548,981
2" Hardrock concrete	145,050	sf	\$2.70	\$392,129
Sound insulation	145,050	sf	\$0.65	\$94,111
Roof Construction				
Wood trusses, plywood sheathing	24,175	sf	\$8.65	\$209,136
Flat roof area				
TJI @ 16" OC	24,175	sf	\$7.30	\$176,458
3/4" T & G Floor, Ply	24,175	sf	\$3.78	\$91,497
Batt insulation, R-30	48,350	sf	\$0.97	\$47,056
Concrete Housekeeping Pads, allow	1,500	sf	\$8.11	<u>\$12,165</u>
Total - 3 Floor & Roof Structures				<u>\$2,930,914</u>
4 Exterior Cladding				
Exterior walls				
Wood studs, 2"x6"	197,476	sf	\$4.54	\$896,880
Batt insulation, R-19	197,476	sf	\$0.70	\$138,803
Exterior sheathing, 5/8"	197,476	sf	\$3.78	\$747,400
Cement plaster, 7/8"	197,476	sf	\$9.19	\$1,815,115

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Gypsum board, 5/8"	197,476	sf	\$1.89	\$373,700
Paint cement plaster	197,476	sf	\$1.24	\$245,574
Paint gypsum board	197,476	sf	\$0.59	\$117,449
Windows, double glazing, low e				
Operable at apts	7,280	sf	\$43.25	\$314,898
Other fixed, allow	586	sf	\$34.60	\$20,290
Entry Doors				
HM frames, wood doors, finish hardware, painted	450	ea	\$1,135.43	\$511,304
Exterior Gates, single, with card access	8	ea	\$3,784.77	\$30,278
Soffits				
Plaster, 3 coat	79,867	sf	\$9.19	\$734,104
Bridge connectors	2,300	sf	\$70.29	\$161,664
Aluminum louvers, allow	586	sf	\$37.85	\$22,192

Total - 4 Exterior Cladding

\$6,129,651

5 Roofing and Waterproofing

Roofing				
Single-ply membrane roofing system	24,175	sf	\$5.19	\$125,481
Pitched roof, clay tile	24,175	sf	\$6.76	\$163,387
Fascia board, allowance	1,642	lf	\$19.46	\$31,956
Crickets & cants	24,175	sf	\$0.54	\$13,071
Flashing & Trim				
General sheet metal	193,403	sf	\$1.35	\$261,424
Waterproofing and coatings				
Traffic topping at exterior walkways, Dexotex	29,015	sf	\$5.19	\$150,603
Roof hatches, roof ladders, curb	2	ea	\$6,055.63	\$12,111

Total - 5 Roofing and Waterproofing

\$758,033

6 Interior Partitions, Doors and Glazing

Party Wall				
Wood studs, 3" x 4", staggered	32,501	sf	\$4.54	\$147,612
Sound insulation	32,501	sf	\$0.65	\$21,087
Gypsum board, 5/8"	130,006	sf	\$1.89	\$246,021

Interior Partitions

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Wood studs, 2" x 4"	225,164	sf	\$3.51	\$791,324
Sound insulation	225,164	sf	\$0.65	\$146,091
Gypsum board, 5/8"	450,329	sf	\$1.89	\$852,195
Interior Doors				
Solid core wood door in wood frame including hardware and finish, single door	605	ea	\$919.16	\$556,195
Bi-fold closet doors	680	ea	\$405.51	\$275,748
30" x 30" access panels	203	ea	\$297.37	\$60,367
Total - 6 Interior Partitions, Doors and Glazing				<u>\$3,096,640</u>

7 Floor, Wall and Ceiling Finishes

Floors				
Seal concrete	10,392	sf	\$0.81	\$8,428
Sheet vinyl	26,949	sf	\$4.93	\$132,893
Carpet	119,356	sf	\$2.81	\$335,575
Ceramic tile	7,691	sf	\$12.98	\$99,801
Marble thresholds	163	sf	\$91.92	\$14,982
Bases				
Resilient	58,893	lf	\$2.54	\$149,659
Ceramic tile	4,152	lf	\$15.14	\$62,864
Walls				
Paint gypboard	580,334	sf	\$0.59	\$345,154
Ceiling				
Acoustic tile ceilings	2,813	sf	\$3.24	\$9,126
Gypsum board ceiling, framing	115,996	sf	\$5.68	\$658,527
Soffit drop	3,227	lf	\$17.40	\$56,169
Paint gypsum board ceilings	115,996	sf	\$0.65	\$75,260
Total - 7 Floor, Wall and Ceiling Finishes				<u>\$1,948,439</u>

8 Function Equipment and Specialties

Kitchen Appliances				
Dishwasher	163	ea	\$702.89	\$114,570
Disposer	163	ea	\$270.34	\$44,066
Stove	163	ea	\$811.02	\$132,197
Refrigerator	163	ea	\$811.02	\$132,197
Microwave/hood combo	163	ea	\$811.02	\$132,197
Casework & Millwork				
Base cabinet with p-lam countertop	2,215	lf	\$178.42	\$395,290
Vanity cabinet with p-lam countertop	800	lf	\$178.42	\$142,683

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Upper cabinet	2,807	lf	\$102.73	\$288,366
Misc shelving	502	lf	\$93.00	\$46,670
Closet shelving, bedrooms	520	ea	\$200.05	\$104,027
Corner guards & wall protection	1	ls	\$10,813.63	\$10,814
Signage	193,403	sf	\$0.27	\$52,285
Telephone enclosures, allowance	4	ea	\$1,243.57	\$4,974
Toilet accessories				
Mirror	163	ea	\$189.24	\$30,846
Toilet paper dispenser	163	ea	\$21.63	\$3,525
Medicine cabinet	163	ea	\$124.36	\$20,270
Towel bar	163	ea	\$54.07	\$8,813
Grab bars	12	ea	\$102.73	\$1,233
Shower wand	163	ea	\$81.10	\$13,220
Shower curtain	163	ea	\$37.85	\$6,169
Coat hook	163	ea	\$16.22	\$2,644

Total - 8 Function Equipment and Specialties

\$1,687,056

9 Stairs and Vertical Transportation

Metal pan stairs, concrete fill, railing, paint 4'0" wide, tread and riser	228	rsr	\$665.04	\$151,629
Landing fill	768	sf	\$16.22	\$12,457
Elevators and Lifts				
Hydraulic Elevators				
Passenger, 4-stop, 32'0" travel	2	ea	\$145,984.03	\$291,968
Elevator sill	32	lf	\$34.81	\$1,114
Elevator pit ladder	2	ea	\$1,351.70	\$2,703

Total - 9 Stairs and Vertical Transportation

\$459,871

10 Plumbing Systems

Fixtures including complete rough-in				
Water closet	163	ea	\$1,730.18	\$282,020
Lavatory	187	ea	\$1,816.69	\$339,721
Kitchen sinks	163	ea	\$1,935.64	\$315,509
Shower / Tub	163	ea	\$2,379.00	\$387,777
Water heaters	163	ea	\$2,162.73	\$352,524
Flue	163	ea	\$540.68	\$88,131
Natural gas meters	163	ea	\$270.34	\$44,066
Natural gas to water heaters, allow 100' run	163	ea	\$1,622.04	\$264,393
Water meter	163	ea	\$702.89	\$114,570
Water line from meter to service entrance, allow 100'	163	ea	\$2,379.00	\$387,777

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Plumbing allowance, common areas	68,907	sf	\$3.78	\$260,797
Roof drainage	193,403	sf	\$1.30	\$250,967
Total - 10 Plumbing Systems				<u>\$3,088,252</u>
11 HVAC				
Split heat pump, 2 ton	187	ea	\$5,406.82	\$1,011,075
Air distribution ductwork at units	15,980	lbs	\$9.19	\$146,882
Grilles, diffusers, misc air distribution	115,996	sf	\$0.54	\$62,717
HVAC allowance at public common areas	65,587	sf	\$16.22	\$1,063,851
HVAC allowance at rough common areas	3,320	sf	\$4.33	\$14,361
Total - 11 HVAC				<u>\$2,298,884</u>
12 Electrical Lighting, Power and Communications				
Service & Distribution				
Main service 1600 amp 120/208 volt 3ph 4w	2	ea	\$30,808.40	\$61,617
Distribution panel 800 amp 120/208v 3ph 4w	2	ea	\$12,896.54	\$25,793
House panel 400 amp 120/208v 3ph 4w	2	ea	\$4,585.44	\$9,171
Laundry panel 400 amp 120/208v 3ph 4w	2	ea	\$4,585.44	\$9,171
Unit panels 100 amp 120/208v 3ph 4w	163	ea	\$1,368.47	\$223,060
Transformers	16	ea	\$12,165.34	\$194,645
Grounding	2	ls	\$2,149.42	\$4,299
MC cable 3C-#4, with 1#6 ground	12,852	lf	\$7.09	\$91,160
Feeder conduit, emt, 4"	2,040	lf	\$23.52	\$47,990
Feeder wire, #2	12	clf	\$261.38	\$3,199
Feeder wire, #1/0	8	clf	\$372.09	\$3,036
Feeder wire, #4/0	49	clf	\$642.70	\$31,466
Feeder wire, #500mcm	33	clf	\$1,038.89	\$33,909
Laundry	2,720	sf	\$3.58	\$9,744
Storage	2,200	sf	\$3.58	\$7,881
Utility Rooms	1,120	sf	\$3.58	\$4,012
Other/Corridors	62,867	sf	\$3.58	\$225,213
Lighting & Power				
Convenience Power				
Duplex 15 amp 120 volt	1,028	ea	\$71.65	\$73,665
Duplex 1/2 hot 15 amp 120 volt	359	ea	\$78.81	\$28,297
Duplex GFI 15 amp 120 volt	384	ea	\$100.31	\$38,470
Double duplex 20 amp 120 volt	163	ea	\$107.47	\$17,518
Duplex separate circuit 20 amp 120 volt	326	ea	\$128.97	\$42,043
Oven 40 amp connection	163	ea	\$286.59	\$46,714
Washer/dryer outlet separate circuit	163	ea	\$214.94	\$35,036

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Switch with duplex separate circuit 20 amp 120 volt	163	ea	\$214.94	\$35,036
MC cable 12-2 with ground copper	17,600	lf	\$3.51	\$61,789
MC cable 12-3 with ground copper	8,800	lf	\$4.08	\$35,938
MC cable 10-3 with ground copper	5,800	lf	\$3.94	\$22,856
MC cable 8-3 with ground copper	5,800	lf	\$4.94	\$28,673
Laundry	2,720	sf	\$3.58	\$9,744
Storage	2,200	sf	\$3.58	\$7,881
Utility Rooms	1,120	sf	\$3.58	\$4,012
Other/Corridors	62,867	sf	\$0.14	\$8,801
Corridors	39,613	sf	\$0.14	\$5,676
Equipment connection				
RTU unit compressor connection	187	ea	\$71.65	\$13,398
RTU unit compressor disconnect 30 amp 208v	187	ea	\$200.61	\$37,515
Fan coil unit connection	187	ea	\$71.65	\$13,398
Fan coil unit disconnect 30 amp 208v	187	ea	\$179.12	\$33,495
Exhaust fan connection	187	ea	\$214.94	\$40,194
MC cable 10-3 with ground copper	19,176	lf	\$3.94	\$75,565
MC cable 8-3 with ground copper	9,588	lf	\$4.94	\$47,400
Laundry	2,720	sf	\$2.15	\$5,846
Storage	2,200	sf	\$2.15	\$4,729
Utility Rooms	1,120	sf	\$2.15	\$2,407
Other/Corridors	62,867	sf	\$1.43	\$90,085
Lighting				
Emergency lighting allowance	1	ls	\$43,254.53	\$43,255
Fixture A, recessed downlight entry	163	ea	\$171.95	\$28,028
Fixture B, recessed downlight kitchen	384	ea	\$200.61	\$76,939
Fixture C, wall sconce bathroom	335	ea	\$214.94	\$71,911
Fixture D, strip light	163	ea	\$128.97	\$21,021
Switch 1P, single	694	ea	\$64.48	\$44,725
Switch 1P, double	187	ea	\$78.81	\$14,738
MC cable 12-2 with ground copper	16,728	lf	\$3.51	\$58,727
MC cable 12-3 with ground copper	5,018	lf	\$4.08	\$20,495
Laundry	2,720	sf	\$4.30	\$11,693
Storage	2,200	sf	\$4.30	\$9,457
Utility Rooms	1,120	sf	\$4.30	\$4,815
Other/Corridors	62,867	sf	\$1.07	\$67,268
Systems				
Telephone / Data				
Telephone terminal box	163	ea	\$179.12	\$29,196
Telephone/data wall outlet	526	ea	\$64.48	\$33,939
Conduit 1", emt	20,910	lf	\$6.38	\$133,335
Cable Cat 5e	75,276	lf	\$1.79	\$134,833
Laundry	2,720	sf	\$1.43	\$3,898
Fire alarm				
FA control panel master slave system	2	ea	\$10,747.12	\$21,494

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
FA strobe/speaker	187	ea	\$279.42	\$52,252
FA smoke detector	526	ea	\$250.77	\$131,983
Conduit 1", emt	20,910	lf	\$6.38	\$133,335
FA cable	20,910	lf	\$1.39	\$29,064
Laundry	2,720	sf	\$1.43	\$3,898
Storage	2,200	sf	\$1.43	\$3,152
Utility Rooms	1,120	sf	\$1.43	\$1,605
Other/Corridors	62,867	sf	\$0.21	\$13,202
Cable TV				
CATV terminal box	163	ea	\$143.29	\$23,357
CATV wall outlet	526	ea	\$64.48	\$33,939
Conduit 1", emt	20,910	lf	\$6.38	\$133,335
Cable RG6	20,910	lf	\$1.50	\$31,461
Security system				
Other/Corridors	62,867	sf	\$1.43	<u>\$90,085</u>
Total - 12 Electrical Lighting, Power and Communications				<u>\$3,361,986</u>
13 Fire Protection Systems				
Fire Sprinklers, NFPA 13	193,403	sf	\$3.43	<u>\$662,970</u>
Total - 13 Fire Protection Systems				<u>\$662,970</u>
15 Site Paving, Structures & Landscaping				
Courtyard Site Improvements				
Hardscape				
Integral color concrete paving, 5" thick, sand blast finish, with brick banding	1,410	sf	\$10.27	\$14,485
Concrete paving, standard	4,490	sf	\$7.03	\$31,560
Landscaping				
Trees				
48" box, allow	16	ea	\$1,946.45	\$31,143
Shrubs / Ground cover				
Lush groundcover, allow	1,000	sf	\$27.03	\$27,034
Sod at courtyard area	10,910	sf	\$1.35	\$14,747
Seeding including soil prep, between buildings	10,198	sf	\$0.70	\$7,168
90 days maintenance	1	ls	\$10,272.95	\$10,273
Irrigation				
Planting and lawn area irrigation	22,108	sf	\$1.62	\$35,860
Landscape drainage	22,108	sf	\$1.62	\$35,860
Site furnishings				
Wooden bench, 6'-0" long	4	ea	\$1,351.70	\$5,407

Two and Three Bedroom Apartments Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Miscellaneous site furnishings, allowance	1	ls	\$10,813.63	\$10,814
Fencing & Gates				
Fencing, ornamental	59	lf	\$162.20	\$9,570
Total - 15 Site Paving, Structures & Landscaping				<u>\$233,921</u>

Site Development, Apartments Phase 1

Site Development, Apartments Phase 1 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$2,988,567		\$12.47
14 Site Preparation and Demolition		\$717,652		\$2.99	
15 Site Paving, Structures and Landscaping		\$1,469,298		\$6.13	
16 Utilities on Site		\$801,617		\$3.34	
Subtotal			\$2,988,567		\$12.47
Gen'l Cond, Bonds and Insurance	8.00%		\$239,085		\$1.00
Subtotal			\$3,227,652		\$13.46
General Contractor's Fee	4.0%		\$129,106		\$0.54
Subtotal			\$3,356,758		\$14.00
Design Contingency	10.0%		\$335,676		\$1.40
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$3,692,434</u>		\$15.40
Allow for Rising Costs at 5.0% per Annum to BOC		10.1%	\$374,372		
TOTAL ESTIMATED CONSTRUCTION COST (July, 2007)			<u>\$4,066,806</u>		\$16.96

Total Area: 239,731 SF

Site Development, Apartments Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Demolition				
Hazmat abatement, allow	35	ea	\$3,784.77	\$132,467
Demo existing housing units	35	ea	\$8,110.22	\$283,858
Site Demolition				
Clear site	284,394	sf	\$0.43	\$123,013
Grading and clearing				
Overexcavate and recompact under structures	8,111	cy	\$3.78	\$30,698
Rough grade	284,394	sf	\$0.32	\$92,260
Fine grade	284,394	sf	\$0.11	\$30,753
Erosion control, allowance	284,394	sf	\$0.09	\$24,603
Total - 14 Site Preparation and Demolition				<u>\$717,652</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Concrete paving	12,015	sf	\$7.03	\$84,452
Curb and gutter, concrete	2,995	lf	\$19.46	\$58,296
Asphalt paving	15,323	sf	\$2.97	\$45,567
Asphalt paving, repairs	1	ls	\$5,406.82	\$5,407
Striping, miscellaneous road markings	15,323	sf	\$0.05	\$828
Other site improvements				
Trash enclosures	2	ea	\$24,871.35	\$49,743
CMU screen wall	247	lf	\$173.02	\$42,735
Site signage, allow	1	ls	\$10,813.63	\$10,814
Monument sign, allow	1	ls	\$10,813.63	\$10,814
Site furnishings	1	ls	\$54,068.16	\$54,068
Landscaping				
Trees				
Screening trees, allow	30	ea	\$1,622.04	\$48,661
Shrubs / Ground cover				
Turf including soil prep	150,893	sf	\$0.70	\$106,061
90 days maintenance	1	mo	\$9,191.59	\$9,192
Irrigation				
Planting and lawn area irrigation	145,925	sf	\$1.62	\$236,697
Fencing & Gates				
Fencing, ornamental	902	lf	\$162.20	\$146,308
Electrical Site Lighting	284,394	sf	\$0.54	\$153,767
Emergency blue light security system	1	ea	\$16,220.45	\$16,220

Site Development, Apartments Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Signalization				
Traffic signal at new entrance	1	ls	\$216,272.64	\$216,273
Streetscape				
City sidewalk	5,000	sf	\$8.11	\$40,551
City curb & gutter	517	lf	\$22.17	\$11,461
Street lighting	6	ea	\$10,272.95	\$61,638
Other work within ROW, allow	6,500	sf	\$9.19	<u>\$59,745</u>
Total - 15 Site Paving, Structures and Landscaping				<u>\$1,469,298</u>
16 Utilities on Site				
Electrical Site Utilities				
Electrical Site Utilities	1	ls	\$109,758.36	\$109,758
Telephone Data Site Utilities	1	ls	\$54,879.18	\$54,879
Site substation transformers and 500 kva generator, prorated cost across all site phases	1	ls	\$316,974.59	\$316,975
Fiber optic for tie in to police system	1	ls	\$29,737.49	\$29,737
Wet utilities				
Domestic Water & fire service				
6" DIP lateral	486	lf	\$48.66	\$23,649
Double detector check	1	ea	\$8,650.91	\$8,651
Post Indicator valve	1	ea	\$1,622.04	\$1,622
Fire hydrant, allow	3	ea	\$4,866.13	\$14,598
Fire department connection	1	ea	\$1,622.04	\$1,622
Gas service, allow	168	lf	\$32.44	\$5,450
Gas meter	3	ea	\$2,703.41	\$8,110
Gas service, demolition	906	lf	\$16.22	\$14,696
Storm drain				
Point of connection	1	ea	\$2,703.41	\$2,703
Catch basin	7	ea	\$2,379.00	\$16,653
SDR 35, 12"	1,406	lf	\$70.29	\$98,826
Sanitary Sewer				
Sewer, demolition	2,463	lf	\$16.22	\$39,951
Point of connection	1	ea	\$2,703.41	\$2,703
Sewer manhole	1	ea	\$4,866.13	\$4,866
8" mains	821	lf	\$56.23	<u>\$46,166</u>
Total - 16 Utilities on Site				<u>\$801,617</u>

Parking, Apartments Phase 1

Parking, Apartments Phase 1 Construction Cost Summary

Element		Subtotal	Total	Cost / SF	Cost / SF
E) Site Construction (14-16)			\$393,006		\$6.39
14 Site Preparation and Demolition		\$58,541		\$0.95	
15 Site Paving, Structures and Landscaping		\$316,190		\$5.14	
16 Utilities on Site		\$18,275		\$0.30	
Subtotal			\$393,006		\$6.39
Gen'l Cond, Bonds and Insurance	8.00%		\$31,440		\$0.51
Subtotal			\$424,446		\$6.90
General Contractor's Fee	4.0%		\$16,978		\$0.28
Subtotal			\$441,424		\$7.18
Design Contingency	10.0%		\$44,142		\$0.72
TOTAL ESTIMATED CONSTRUCTION COST (CCCI 4328)			<u>\$485,567</u>		\$7.89
Allow for Rising Costs at 5.0% per Annum to BOC	10.1%		\$49,231		
TOTAL ESTIMATED CONSTRUCTION COST (July, 2007)			<u>\$534,798</u>		\$8.69

Total Area: 61,519 SF

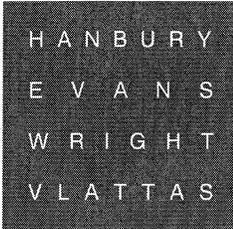
Parking, Apartments Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
14 Site Preparation and Demolition				
Site Demolition				
Clear site	61,519	sf	\$0.43	\$26,610
Grading and clearing				
Rough grade	61,519	sf	\$0.32	\$19,957
Fine grade	61,519	sf	\$0.11	\$6,652
Erosion control, allowance	61,519	sf	\$0.09	\$5,322
Total - 14 Site Preparation and Demolition				<u>\$58,541</u>
15 Site Paving, Structures and Landscaping				
Hardscape				
Concrete paving	1,162	sf	\$7.03	\$8,168
Curb and gutter, concrete	2,269	lf	\$19.46	\$44,165
Asphalt paving	61,519	sf	\$2.43	\$149,680
Striping, standard stall	200	ea	\$19.46	\$3,893
Striping, miscellaneous road markings	61,519	sf	\$0.05	\$3,326
Stencil ADA parking symbols	10	ea	\$91.92	\$919
Accessible concrete curb cut ramps	10	ea	\$919.16	\$9,192
Landscaping				
Trees				
Screening trees, allow	15	ea	\$1,622.04	\$24,331
Shrubs / Ground cover				
Turf including soil prep	2,000	sf	\$0.70	\$1,406
90 days maintenance	1	mo	\$9,191.59	\$9,192
Irrigation				
Planting and lawn area irrigation	2,000	sf	\$1.62	\$3,244
Fencing & Gates				
Gate, single pedestrian, card reader	1	ea	\$3,784.77	\$3,785
Gate, vehicular entry	2	ea	\$4,325.45	\$8,651
Parking equipment				
Arm gate & card reader	2	ea	\$6,488.18	\$12,976
Electrical Site Lighting	61,519	sf	\$0.54	\$33,262
Total - 15 Site Paving, Structures and Landscaping				<u>\$316,190</u>
16 Utilities on Site				
Storm drain				
Point of connection	1	ea	\$2,703.41	\$2,703

Parking, Apartments Phase 1 Detail Elements

Element	Quantity	Unit	Unit Cost	Total
Catch basin	2	ea	\$2,379.00	\$4,758
SDR 35, 8"	200	lf	\$54.07	\$10,814
Total - 16 Utilities on Site				<u>\$18,275</u>

MEETING MINUTES



architecture
preservation
interiors
planning
landscape

To: Those Present
From: Jane Cady Wright, AIA
Date: January 12, 2004
Re: Canyon Crest DPP
Workshop #1 – PMT Committee Meeting
University of California, Riverside
HEWV Project #04006.00

At the Committee meeting on January 12, 2004, from 1:00 pm to 3:00 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Burnelle
Fernand McGinnis
Nita Bullock
Tony Lees
Lindy Fenex
Kipp Dougherty
Albert Esqueda
Angie Villegas
Jeanette Bradeen
Adrianna Davis
Travis Randel

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Jane Wright
Mike Evans
Buddy Hall

The following items were discussed:

1. The dining facility is important to the programming for the residence halls; should the large gathering space (3,000 + SF) be incorporated in the dining facility?
 - Should other common use spaces be located in the dining facility to make it the new community's true center?
 - Both indoor and outdoor seating can be used to meet proposed 1,100 seat capacity of dining facility
 - There is a well-traveled footpath from Aberdeen to the intersection of Watkins and Blaine. The retail portion of dining should be on this path to "capture" this potential market.
 - Should student mailboxes be located in the dining facility to further elevate its perception as the community center?
 - The retail area should be open for breakfast and late night; it should be able to be scaled up or down depending on use (conferences vs. school year)
 - The phasing of the dining needs to be explored during the DPP. At present, Phase 1 of dining will include infrastructure for future phase; building shell for phase 2 as part of phase 1; maximum platform flexibility is needed

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- Attendees of simultaneously held conferences don't mind using same service lines with but prefer to be able to sit together in separate areas; dining room should have different zones
 - One C-store will service the total 3,000 bed residence area; should be sized accordingly
 - Public restrooms should be located with quick access from the recreation fields
2. Recreation field program schedule is Monday thru Thursday, 5:00 pm until 12:00 am; no scheduled day activity
 - Students participating in field sports will use dining facility retail and restrooms
 - May need a berm and/or fence along Canyon Crest and Linden Street edges to prevent students from using recreation fields as "cut through" to campus and to discourage non-students from using recreation fields
 - One softball field is included in the program; however, depending on status of the shared use recreation fields at the northwest corner of Canyon Crest and Blaine Street the program may need to include two softball fields.
 - A 400 SF storage facility need for the recreation fields; larger pieces can be stored at the existing Recreation facility on the south side of Linden Street. Storage area will need water for rinsing equipment and power. This is currently not in the program.
 - No bleachers will be required
 - Emergency access is essential
 3. New residence hall common spaces shall include:
 - One large space for gather that can be divided into four smaller spaces; can be close to dining but not part of the dining building (3,000 SF area dedicated as dining adjacent to 3,000 SF programmable commons area – could share an outdoor plaza?)
 - Classrooms should be located in commons area; computer labs should be integrated in the student living areas
 4. Resident faculty apartment:
 - 800 SF two-bedroom unit with kitchen and private entry
 - Will need separate office space/meeting space
 - Five to six faculty apartments will be needed for the 3,000 bed build out (6 x 800 = 4,800 SF)
 - No faculty housing will be required in the apartments proposed along Blaine Street
 - Faculty housing is currently not included in the program.
 5. Resident director apartments – one for every 600 student beds
 6. Resident advisors – one for every 48 student beds

7. Current housing Strategic plan indicates programming goal of 6,000 SF of programmable space for every 600 students; this can be reduced.
8. One residence services office (RSO – front desk) will be required for 3,000-bed community; RSO will need to be included in phase 1 construction.
 - Package/parcel pick-up should be located at RSO; should mailboxes be located here or in dining facility?
 - PMT to provide consultants with ideal model layout of RSO prior to next workshop
9. Outdoor spaces at new community:
 - Should be large enough to be programmable, i.e. area on west side of Pentlands RSO
 - Program options will be outdoor movies, carnivals, live entertainment
 - Space should be able to accommodate 50 to 200 persons; some functions at Pentland Hills have drawn 1,000 students
 - Be viewable from large number of student rooms to increase exposure
 - The options of themes was discussed, for example a description of a “Street scene” could be themed, “New Orleans”
 - Convenient ADA access is essential; maximum allowable slopes are not always best or comfortable
10. Study rooms/computer rooms should have glass partitions – students like to see and be seen
11. Courtyards and benches should be provided for passive gathering
12. Demolition of existing family housing:
 - Consider relocation options for existing RSO, carpenter shop and building maintenance shop
 - Needs to be logical take down area; consider access to remaining units
 - Consider construction noise, dust, clean up – need buffer zone
 - Remaining units should be perceived as intact community

13. Future meeting schedule considerations:

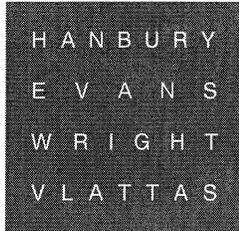
- 1st two weeks of March are “dead week” and finals for winter quarter
- March 21st begins spring break
- April is good for student meetings
- Need at least two student groups to participate
- Need input from dining and residence life managers and student staff groups

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_01_12_04 1 to 33.doc

MEETING MINUTES



architecture
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To: Those Present
From: Jane Cady Wright, AIA
Date: January 13, 2004
Re: Canyon Crest DPP
Workshop #1 – PMT Committee Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT Committee meeting on January 13, 2004, from 8:00 am to 10:45 am the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Burnelle
Fernand McGinnis
Nita Bullock
Tony Lees
Lindy Fenex
Kipp Dougherty
Angie Villegas
Jeanette Bradeen
Adrianna Davis
Travis Randel

NTD Architects

Tony O’Keefe
Thomas Christian

HEWV

Jane Wright
Mike Evans
Buddy Hall

The following items were discussed:

1. HEWV presented a revised workshop schedule for future meetings
 - March and early April workshops will be focused on gathering information that will influence the program (operations, programming, fact finding)
 - A visioning session will be held in late April; this will be targeted as a 2-day event and will establish place making concepts to be considered for the new community
 - The place making concepts will focus on vitality, identity and community outcomes and establish a design vocabulary
 - Prior to this meeting, both UCR and consultant team participants will gather images of dynamic spaces to share with the group; these images will be used to create a vision of what is possible for the project
 - The PMT will consider who should participate in the visioning session from UCR; approximately 4 students should be included in each session
 - Consultant team will provide session leaders and format
 - Following the Visioning Session, the consultant team will develop potential scenarios for PMT review
 - Consultant team will present scenarios at May workshop
 - PMT will evaluate scenarios and make recommendations for draft DPP
 - Approval process and presentations will follow schedule already established

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- Reference attached diagram
2. March – early April information gathering meetings should be user groups specific and can be held simultaneously; some user groups will be more comfortable in smaller group meetings (1-3 persons per group)
 3. The meetings could begin with the larger group for the overview of the project then break into smaller groups. The existing land plan shown in the current housing strategic plan will be used in these sessions to gather the criteria. The meeting wrap-up will bring all groups together to share findings.
 4. PMT and consultant team will identify the information needed from the user groups prior to the meetings so they can come prepared. User groups likely to benefit from this format include:
 - Transportation/parking
 - Infrastructure (storm water, telecom, electric, gas, cable, water, sewer, hvac)
 - Operations (servicing, trash, etc.)
 - Child development center (existing facility)
 - Public safety (police and fire marshal)
 - Special services (HC – ADA compliance)
 - Housing landscape services – not campus landscape services
 5. Housing and dining focus groups should be held in the large group format to insure as much information is commonly known as possible
 6. The Consultant team will provide the university with a kit / list of issues for exploration of the housing program
 7. PMT will provide the following to the consultant team prior to the next workshop:
 - East Campus Entrance Plan
 - Pedestrian site analysis
 - Asbestos/lead paint analysis of existing family housing
 - City setbacks (20'-25' from right-of-way)
 - Model RSO layout
 - New property survey
 - Latest draft of LRDP
 - List of critical dates
 - Survey of existing trees on existing family site by housing grounds staff identifying any trees recommended for preservation
 - Family housing statistics – how many families with children at Canyon Crest?

Committee Meeting held on January 13, 2004

Page 3

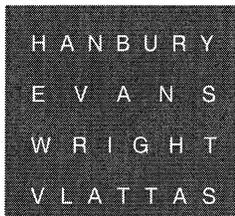
8. Housing requested that student housing phases be revised to 500-beds per phase

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_01_13_04 8 to 10-45.doc

MEETING MINUTES



architecture
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To: Those Present
From: Jane Cady Wright, AIA
Date: January 12, 2004
Re: Canyon Crest DPP
Workshop #1 – PMT Start-up Meeting
University of California, Riverside
HEWV Project #04006.00

At the start up meeting on January 12, 2004, from 9:00 am to 10:30 am the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Burnelle
Fernand McGinnis
Nita Bullock
Dan Johnson
Timothy Ralston

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Jane Wright
Mike Evans
Buddy Hall

The following items were discussed:

1. The meeting commenced with introductions and an overview of the day's meetings and activities.
2. The consultant team was informed of a new State law that requires that all UC system projects without signed consultant contracts by December 31, 2003 must be re-advertised. All teams that have previously submitted proposals and interviewed need not do so again.
3. DPP scope of the project comprise demolition of approximately 100 units of existing family housing, construction of 1,200-bed undergraduate student residence halls with parking, 1,100 seat dining facility and recreation fields. Phase 1 construction project scope will be 750-bed residence hall with parking and 500 seat dining facility. (In subsequent discussions Andy requested that student residence hall phasing be reduced to 500-bed increments for subsequent phases.)
4. DPP process will be as follows:
 - Project Committee
 - DRB – Design Review Board presentation of draft document
 - Pre-CPAC (Capital Programs Advisory Committee) conference call between Consultant Team, PMT, Gretchen Bolar and Tim Ralston
 - CPAC formal presentation
 - Submission of Administrative Draft, Draft and final Detailed Project Program (DPP)
 - Final presentation of document?

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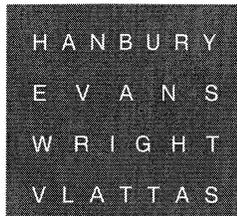
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- A diagram of the anticipated process is attached
- 5. Consultant team needs to identify the 100 units of family housing that will be demolished in Phase 1. PMT to provide consultant team with current asbestos and lead based paint testing data.
- 6. Housing Operations Grounds staff to evaluate existing trees in order to determine if any merit preservation.
- 7. Palm trees will be preserved along Linden Street.
- 8. Recreation fields size has been defined in Arroyo DPP; fields will not be rotated; lighting levels will be 30 footcandles.
- 9. UCR will present Arroyo project at March Regents' meeting. HEWV has been requested to undertake additional work to support the Arroyo project. The information requested is required within next two weeks.
- 10. The issue of LEEDS certification was discussed. The draft UC Policy for green buildings will be used instead of LEEDs. PMT to provide policy to consultant team.
- 11. Existing topographic information of site is not orthographically correct. PMT to obtain new survey prior to DPP start date.
- 12. Housing requires efficient, easily maintained buildings – careful evaluation of the pros and cons of LEED's certification on this project will be undertaken as part of the DPP process.

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_01_12_04 9 to 10-30.doc



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To: Those Present
From: Jane Cady Wright, AIA
Date: January 12, 2004
Re: Canyon Crest DPP
Workshop #1 – PMT Start-up Meeting
University of California, Riverside
HEWV Project #04006.00

At the tour of existing facilities on January 12, 2004, from 10:30 am to 12:30 pm the following were present:

UCR

Andy Plumley
Jeanette Bradeen
Kieron Burnelle

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Jane Wright
Mike Evans
Buddy Hall

The following items were discussed:

1. The participants took a walking tour of the Pentlands housing project with emphasis on the community spaces located at the first floor of Phase 1.
2. The following comments were made:
 - Group meeting room is approximately 3,000 SF and can be divided into two rooms via a movable wall.
 - There is room for seating for 500 persons with no tables - New Canyon Crest residence hall should be larger to accommodate more than 500 persons; should communicate with an outdoor space for overflow
 - Kitchen cabinets are rarely used – better to have less cabinets and a separate storage closet
 - One drop-down screen is located at each end but projectors are stored elsewhere – better AV system located in room would be preferable.
 - 600 SF meeting room/classroom spaces work well
 - Smaller meeting rooms have been converted to office space
 - TV room/meeting room doesn't work well - Would like to combine TV room with game room in new hall
 - Fitness room (28'x36') should include water fountain and TVs
 - 400 SF (20'x20') rooms for tutors and small meetings - Need more study carrels with wireless connections
 - Computer labs (28'x20')
 - Convenience store (28'x20') – new community will need larger c-store
 - Student government office – New hall will be central location for student government
 - NRHH office (6'x8' ?)
 - Bike storage closets don't work – Bike storage needs to be on the way to campus

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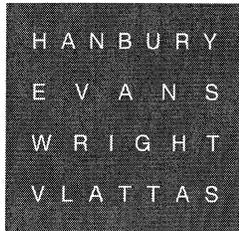
- Smoking areas need to be away from building but covered
 - Mail boxes – locate so that prevailing winds don't blow mail out of students' boxes back into mailroom
 - Parcel pick up is located at 'front desk' – students order a lot of products on-line
 - Overall, the new project needs to improve on adjacencies of community spaces to student room
3. The team took a driving tour of the family housing site.
- KUCR will be relocated outside the process for the new residence hall project
 - Housing maintenance function will need a new home – it may be able to remain in its current location until the latter stages of construction as it is located in what will be the new parking lot/entrance road off Watkins Drive.
 - The trees on this site are not unique and while saving them may provide some mature landscape for the project, the project design should not be centered around the saving of the trees.

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_01_12_04 10-30 to 12-30.doc

MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: January 13, 2004
Re: Canyon Crest DPP
Workshop #1 – PMT Committee Meeting
University of California, Riverside
HEWV Project #04006.00

At a Committee meeting on January 13, 2004, from 11:00 am to 11:45 am the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Burnelle
Mac McGinnis
Nita Bullock

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Jane Wright
Mike Evans
Buddy Hall

The following items were discussed:

1. Construction cost profiling:
 - Cummings is an acceptable cost consultant
 - California market has seen a recent 10-12% escalation since the completion of the strategic plan
 - Value engineering needs to be part of process from the beginning to ensure adequate funds for essential program elements
2. Infrastructure scope:
 - How was Canyon Crest/Arroyo infrastructure DPP cost developed; UCR to obtain back-up data for consultant team evaluation; costs seem very high
 - Need to evaluate utilities for existing family units to remain
3. Consultant team suggests that area assigned for future phases of student apartments be considered as interim family housing site. Since west campus family-housing work is being held up by unexpectedly high infrastructure costs, these new apartments replace the family units lost due to residence hall construction. The PMT will meet to consider this.
4. The consultant team will provide cost data on podium parking construction to the PMT within the next two weeks

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Committee Meeting held on January 13, 2004

Page 2

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File: MM_01_13_04 11 to 11-45.doc

MEETING MINUTES



To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting on March 3, 2004, from 8:30 am to 9:30 am the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
Timothy Ralston

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall

The following items were discussed:

1. The meeting commenced with an overview of the day's meetings and activities.
2. DPP scope of the project has increased to include 800-beds of student apartments. The apartments will be used as interim family housing to accommodate the units demolished for the residence hall project. The parking ratio for family housing is 1.5 to 1 unit; the parking ratio for student apartments is 1:2. Housing will set a parking target for the initial phase that accommodates students' needs. Design team should consider options for using surface parking at the location of the future parking deck at the corner of Canyon Crest Boulevard and Blaine Street.
3. Consultant Team to consider the vacant land adjacent to the child development center as the most likely location for the first phase of the new family apartments.
4. The new survey is complete and will be made available to the Consultant Team the week of March 10, 2004. The survey includes all of the property including the parcel set aside for the future parking garage and a portion of the Corporation yard.
5. The Consultant Team will monitor the cost per unit and efficiencies. A good balance needs to be maintained for program space between buildings and the dining commons. A list of comparables needs to be developed.
6. The Consultant Team will track the cost of the infrastructure improvements as a separate line item and track its effects on the cost per bed.
7. The Consultant Team needs to develop the agenda for the visioning session as soon as possible and submit it for review. Housing to provide a list of attendees

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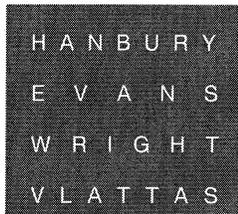
and recommended locations and times. Staff is available during the day; students in the afternoon and evening. The current scheduled dates of April 21-23 may need to be reviewed with consultant calendars. If necessary dining sessions could occur on the April 22 due to availability of Envision Strategies consultant.

8. The May 6 meeting needs to be rescheduled. Consultant Team should consider the third week of May.
9. The issue of LEEDS certification was discussed. The Consultant Team shall pursue certification as a goal. The PMT will provide to the Teams an exercise for the purpose of developing a list of attainable certification points. Once complete the University will decide whether or not to pursue official certification.
10. Housing will request permission of EHS to release the hazardous materials report that has been completed for the family housing site. A summary of the report was provided to the team.
11. Timing for housing implementation shall be as follows: Arroyo student housing, Fall 2007; Canyon Crest Apartments, Fall 2008; and Canyon Crest Residence Halls and Dining Commons, Fall 2009.

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_03_03_04 8-30 to 9-30.doc



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Housing Operations meeting on March 3, 2004, from 9:45 am to 12:00 am the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
Timothy Ralston
Jeff Adams
Tony Lees
Matt Jones
Timothy Holmes

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall

ME-Engineers

Sean Hira
Roman Kleyman

The following items were discussed:

1. The meeting commenced with an overview of the project scope.
2. Housing operations group provided the Team landscape design parameters
3. Prefer that no turf block be used as it is difficult to maintain turf
4. Existing trees on site are root bound and overgrown; generally at the end of their life span however a tree evaluation with need to be done once a site design concept is finalized.
5. New landscape trees should be similar palette as that found on campus, specifically, Ash, Magnolia, Thunder Cloud flowering plum and similar hardy natives.
6. Parking lot islands shall be large enough to accommodate one shade tree with low growing evergreen ground cover; root barriers are highly desirable.
7. Maintain continuity with current irrigation system and controller; the Sentinel system by Toro is used with wireless pedestal or wall mounted controllers. Pop up sprays by Toro and rotor sprays by Hunter are campus standards
8. Sidewalks shall be 8 feet wide with few curves; use a minimum 4 foot radius at intersections
9. Avoid using painted galvanized material; paint does not adhere
10. Provide large non-programmed turf areas for student use
11. Provide gas feed for barbeque in proximity to a programmable outdoor space

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12. Provide a 12-foot wide area around the perimeter of all buildings to provide access for window and gutter repair and maintenance.
13. Dining commons service dock shall accommodate 3, 60-foot tractor-trailers at a time and a trash compactor.
14. Dock area shall also accommodate 2, four cubic yard dumpsters and parking for one maintenance vehicle; no external storage is required.
15. Parking lot light poles shall have conduit for security cameras
16. Lighting: use T-8 cool white lamps; limit the number of fixture types for which an inventory of bulbs might be needed. Do not use T-5 lamps.
17. Battery packs shall be used for all emergency lighting
18. Dining commons shall have an emergency generator
19. Canyon Crest project shall not be on campus chilled water and steam system
20. General MEP requirements, appliances and finishes for the apartments shall be as outlined in the Arroyo DPP. Consultant team shall also review UCR design guidelines.
21. Occupancy shall be measured at 90% for 12 months
22. All resident room window sizes (in apartments and residence halls) shall be standardized and operable
23. Toilet fixtures in the dining commons and residence halls to be wall mounted, toilets in apartments to be floor mounted. Valves for all plumbing fixtures to be American Standard Ceramics.
24. Kitchen sinks to be stainless steel; showers shall have anti-scalding diaphragm
25. Kitchen units could be Servator units
26. Corian is preferred for counter tops
27. Consultant team recommended molded, one-piece shower/bath enclosure; PMT to consider
28. MEP requirements for Dining Commons shall be as follows:
29. System in dining commons to be constant volume with 100% outside air make up for all exhaust through kitchen hoods.
30. Preferred HVAC components are Carrier heat pumps for apartments, First Company fan coil units for residence hall student rooms or Mitsubishi Slim Jims and boilers shall be by Lochenvaer
31. No ceramic tile shall be used except in dining servery area
32. Carpet shall be Mohawk hydrostatic looped; no cut pile
33. Floor drains shall be provided in all bathrooms
34. Sanitary piping within building shall be cast iron; no ABS piping will be accepted
35. Hirsch (HID readers) card access is required at all exterior entry doors; and desired at student room doors
36. Simplex fire alarm system shall be used. The fiber optic system shall be accessed from the Physical Plant office in the Corporation Yard

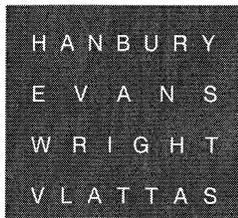
Housing Operations Meeting held on March 3, 2004

Page 3

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_03_03_04 9-45 to 12-00.doc



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Police/Public Safety meeting on March 3, 2004, from 10:30 am to 11:00 am the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
Timothy Ralston
Jeff Adams
Hank Rosenfield
Jason Day

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall

ME-Engineers

Sean Hira
Roman Kleyman

The following items were discussed:

1. The meeting commenced with an overview of the project scope.
2. The Consultant team shall consider visibility and access as a key element of successful design
3. Visibility from vehicle patrols are highly desirable to all parts of the project but are essential for building entries, the retail component of the dining commons and the parking lots.
4. Landscaping should be designed to provide lawns, low evergreen shrubs and ground covers and canopy shade trees to aid in visibility both for police and students
5. Building air intakes should not be located at ground level to deter vandalism and potential terrorist acts
6. A fence or wall should be provided along Blaine Street to deter non-students from entering the student environment.
7. Emergency phones should be placed within the parking lot rather than at the perimeters and scattered throughout the site especially in proximity to the recreation fields
8. An emergency generator is required at the dining commons; it will be a center of activity during a disaster
9. Standardized card access was recommended to aid in response time during an emergency

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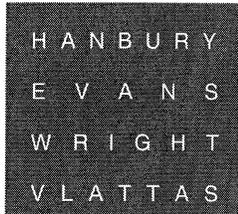
10. Emergency vehicle access should be a high priority in the site design and placement of all buildings and the recreation fields.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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File: MM_03_03_04 10-30 to 11-00.doc

MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Fire Safety meeting on March 3, 2004, from 12:00 pm to 12:30 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
Timothy Ralston
Scott Corrin

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall

ME-Engineers

Sean Hira
Roman Kleyman

The following items were discussed:

1. The meeting commenced with an overview of the project scope.
2. Fire trucks shall be able to reach within 150 feet of all sides of a building; fire hydrants shall be located within 150 feet of any exterior wall of any building
3. The service yard of the dining commons shall not be considered as an access from which to calculate the 150-foot measurement.
4. Fire access lane shall be 20 feet wide (not including a loading zone at the curb) and have a vertical clearance of a minimum of 13 feet 6 inches
5. Transitory nature of dining commons service dock will not be considered as a fire access impediment
6. Four story buildings shall be sprinkled, have a dry stand pipe and be a minimum of 1 hour construction
7. Sprinkled buildings shall have a minimum of 1500 GPM with 20 pounds of residual pressure; non-sprinkled buildings shall have a minimum of 3000 GPM with 20 pounds of residual pressure
8. At least one side of any building shall be a maximum of 40 feet in height to allow for ladder truck access.
9. If perimeter fence is used along Blaine Street perimeter gates are required with Knox key access

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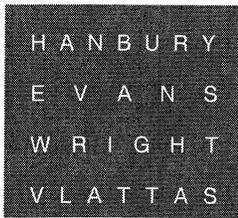
**Fire Safety Meeting held on March 3, 2004
12:00 – 12:30 pm
Page 2**

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_03_03_04 12-00 to 12-30.doc

MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Infrastructure Group meeting on March 3, 2004, from 12:45 pm to 1:30 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
Pat Simone
Jerry Higgins
Earl LeVoss
Walt Griffin
Jeff Adams
Tony Lees

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall

ME-Engineers

Sean Hira
Roman Kleyman

The following items were discussed:

1. The meeting commenced with an overview of the project scope.
2. The Consultant team shall consider using separate piping for irrigation in anticipation of the University's plans to convert all irrigation on campus to a gray water system. Until that time potable water will be used for irrigation.
3. The project shall be connected to the University's 12 KV electrical feed and be accessed from a vault in the Corporation Yard; circuits 2A and 2B shall be extended to the site.
4. Telephone service will have to be extended from the campus telephone building; PMT will provide the cost of the extension to the Consultant team.
5. Fiber optic conduit can be extended to the site from a vault on the east end of the Pentland Hills site; air-blown fiber or 24 strand cable will have to be extended from the Stat Com building; Room will be required in Phase 1 to accommodate full build out of the site
6. Cable TV will be extended from the Student Recreation facility
7. Consultant team to contact the City of Riverside to determine availability of the natural gas service

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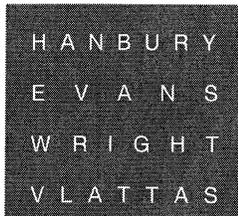
Infrastructure Group Meeting held on March 3, 2004
12:45 – 1:30 pm
Page 2

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_03_03_04 12-45 to 2-00.doc

MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Parking Services Group meeting on March 3, 2004, from 1:45 pm to 2:00 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
Jan Martin
Andy Stewart

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall

ME-Engineers

Sean Hira
Roman Kleyman

The following items were discussed:

1. The meeting commenced with an overview of the project scope.
2. The parking structured proposed to be located at the corner of Canyon Crest Boulevard and Blaine Street does not have a start date and therefore cannot be considered to serve Housing needs.
3. The Consultant team may consider the site as a potential surface parking lot
4. The Consultant Team shall design surface parking lots to the following standard: 9 feet by 18 feet parking stall with 24-26 wide travel lane
5. The quantity of motorcycle spaces shall be determined based on need; Consultant team shall not provide spaces specifically for motorcycles
6. No Gem Cart recharging stations shall be provided in the parking lots
7. Code Blue phones shall be provided within the parking lots; hardwire conduits shall be located at designated locations
8. Parking lot islands with landscaping are required
9. Consultant team shall provide cost summary of parking lot costs as a separate line item in the DPP; cost shall include paving, landscaping, lighting and storm drains

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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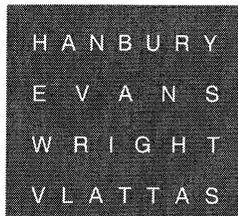
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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Special Services group meeting on March 3, 2004, from 2:15 pm to 2:30 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
Suzanne Trotta

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall

ME-Engineers

Sean Hira
Roman Kleyman

The following items were discussed:

1. The meeting commenced with an overview of the project scope.
2. The Consultant team shall investigate using two separate elevators in each building to maintain access in the event that one of the elevators is out of service
3. Automatic doors with proximity cards is preferred; if push button doors are used provide a high push plate and a low kick plate; automatic sliding doors shall be considered
4. Dining/retail counters with lower counter heights shall be provided to accommodate persons in wheelchairs
5. Site furniture: benches shall be scattered throughout the site to provide rest areas; tables shall provide access to persons in wheelchairs

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

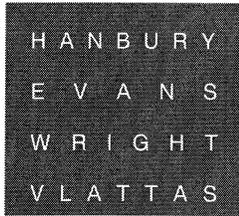
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To: Those Present
From: Jane Cady Wright, AIA
Date: March 3, 2004
Re: Canyon Crest DPP
Workshop #2 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Special Meeting to discuss infrastructure requirements on March 3, 2004, from 3:00 pm to 5:00 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Nita Bullock
George MacMullin

NTD Architects

Tony O’Keefe
Thomas Christian

HEWV

Buddy Hall

ME-Engineers

Sean Hira
Roman Kleyman

Kennedy Jenks

Bruce Thomas

Hirsch

Cecil Rehr

Bechard-Long

Brian Pottenger
Larry Pipkin

The following items were discussed:

1. The meeting commenced with introductions and an overview of the project scope.
2. The Bechard-Long report was evaluated; the routings for water and sewer will not be constructed as shown in their DPP report
3. Sanitary connection for the Arroyo will be routed south along Valencia Hill Drive to the existing line at Big Springs Road; the design will be implemented during the schematic phase of the Arroyo housing project
4. The PMT will modify the scope to indicate the following:
5. Water for the Canyon Crest project will be extended from an existing 8 inch line located at the north east corner of the Pentland Hills site
6. Sanitary service will be extended from the existing line at Linden Street for Phase 1.
7. In a subsequent phase an additional 8-inch sanitary line will be provided parallel to the existing line at Linden and extended along Canyon Crest Boulevard to a connection point at University Drive.
8. The landscape buffer to be provided between the phase 1 and the existing family housing to remain will serve as the storm water collection and detention area for the project; the recreation fields will serve this purpose when they are developed

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Special Infrastructure Meeting held on March 3, 2004
3:00 – 5:00 pm
Page 2

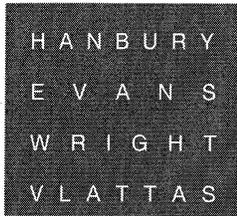
9. The PMT agreed that the electrical system upgrades as shown in the Bechard Long DPP reflect the University's intentions.

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_03_03_04 3-00 to 5-00.doc

MEETING MINUTES



architecture
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To: Those Present
From: Jane Cady Wright, AIA
Date: March 25, 2004
Re: Canyon Crest DPP
Workshop #3 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting on March 25, 2004, from 8:30 am to 9:30 am the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Timothy Ralston
Thomas Miller

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall
Jane Wright
Rosie Cuartelon

Envision Strategies

Claudia Scotty

The following items were discussed:

1. The meeting commenced with an overview of the day's meetings and activities.
2. The Design team will continue to develop the agenda for the April visioning session.
3. KUCR will remain in its current location in the near term.
4. Construction process may allow the existing maintenance shop to remain in place until the new shop is completed
5. Site planning process will proceed. Once a final concept is agreed upon Housing Operations (Landscape Services) and the Campus Physical Planner will evaluate existing trees to remain
6. Infrastructure for dining commons build-out will be constructed in the first phase; seating can be added in later phases
7. Revenue generating space will be constructed in phase 1 Dining Commons to accommodate potential revenue gained from camps and the users of the recreation fields
8. Phasing designations have been adjusted to accommodate interim Family Student Housing as phase 1, 750-bed residence hall and 500-seat Dining Commons as phase 2, and 500-bed Residence Hall and Recreation Fields as phase 3.

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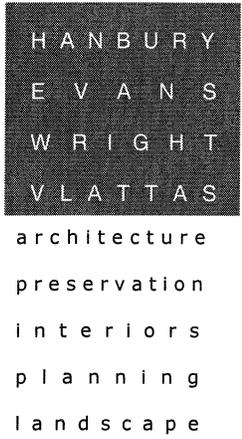
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PMT Meeting held on March 25, 2004
8:30 – 9:30 am
Page 2

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_03_25_04 8-30 to 9-30 (Final).doc



To: Those Present
 From: Jane Cady Wright, AIA
 Date: March 25, 2004
 Re: Canyon Crest DPP
 Workshop #3 – PMT Meeting
 University of California, Riverside
 HEWV Project #04006.00

At the Housing Operations meeting on March 25, 2004, from 9:45 am to 10:45 am the following were present:

UCR

Andy Plumley
 Susan Marshburn
 Kieron Brunelle
 Fernand McGinnis
 Kipp Dougherty
 Timothy Ralston
 Jeff Adams
 Tony Lees
 Albert Esqueda
 John Enright
 Andrew Sturart
 Scott Spicer
 Thomas Miller
 Lindy Fenex

NTD Architects

Tony O’Keefe
 Thomas Christian

HEWV

Buddy Hall
 Jane Wright
 Rosie Cuartelon

ME-Engineers

Sean Hira
 Roman Kleyman

Envision Strategies

Claudia Scotty

AC Martin

Jon Ziegler

The following items were discussed:

1. The meeting commenced with an overview of the project scope.
2. Recreation fields will be part of phase 3 construction. Funding will be determined by a student referendum.
3. Public restrooms accessible after hours for recreation field users will be located in the dining commons
4. One hundred square feet of storage space is required for recreation program use; should be incorporated into the maintenance building
5. Storage space for 8 soccer goals is required. Goals are 24’ wide by 8’ depth. Could be secured to perimeter fence.
6. Softball fields will not be part of recreation field programming
7. Lindy Fenex to research cost savings potential of using “SPRINT TURF” synthetic turf in lieu of natural turf for field surfacing.
8. Design team shall work toward LEEDs certification or equivalency. Discussed the preliminary evaluation of potential LEEDs certification points for the project: Operable windows, Parking reduction, Recreation fields (converting housing to green space), and Waterless urinals. The latter could save 40,000 gallons per

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year. The design team confirm that they have LEED certified professionals on staff,

9. LEED Certification: commissioning, filing and verification will be identified in the in cost plan
10. University will determine whether or not to go forward with LEEDs certification prior to the design phase of the project.
11. Design team will refer to the University of California, Riverside Storm Water Management Plan (March 10, 2003) on issues pertaining to the treatment of storm water.
12. Design team to provide the following at the service dock of the dining commons: cart wash with manual switch to direct wash water to sanitary system and rainwater runoff to storm system, compactor and bailer
13. Design team to consider options that minimize views into the service dock from student rooms but also provide easy tractor trailer truck access.

The aforementioned is our understanding of items discussed and decisions made during overview meeting and tour. Please contact this office with any additions or corrections to these notes.

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File: MM_03_25_04 9-45 to 10-45 (Final).doc

MEETING MINUTES

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To: Those Present
From: Jane Cady Wright, AIA
Date: March 25, 2004
Re: Canyon Crest DPP
Workshop #3 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining Facilities tour held on March 25, 2004, from 11:00 am to 11:30 am the following were present:

UCR
Kipp Dougherty
Andy Plumley

Planning Team
Jane Wright
Claudia Scotty
Tony O'Keefe

The assembled group toured the dining facilities at A-I and Lothian. Photos were taken and notes made by the planning team. Claudia Scotty, Envision Strategies will identify a list of data that she would like from the university and will submit it to HEWV.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

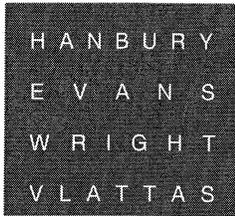
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To: Those Present
From: Jane Cady Wright, AIA
Date: March 25, 2004
Re: Canyon Crest DPP
Workshop #3 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Break-out meetings for Housing Operations, Fire Marshall, EHS and Police held on March 25, 2004, from 11:00 am to 11:45 am the following were present:

UCR

Andy Plumley
Doug Lindberg
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Mike Lane
Timothy Ralston
Jeff Adams
Tony Lees
Suzanne Trotta
Travis Randel
Andrew Stewart
Scott Spicer
Scott Corin

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall
Rosie Cuartelon

ME-Engineers

Sean Hira
Roman Kleyman

AC Martin

Jon Ziegler

The following items were discussed:

1. The Design team will incorporate trash rooms in each residence hall building.
2. Each building will need to have either 4 – 4 cubic yard dumpsters or 8 – 1 cubic yard dumpsters. Housing Operations demonstrated a preference for 4 cubic yard dumpsters. Two dumpsters placed in the trash room at all times. If one cubic yard dumpsters are used, four would be necessary in the trash room at all times.
3. Building trash chutes shall be considered. Requirements for multiple trash shuts providing for the separation of plastic, paper cans and trash will be evaluated. Hose-bib connections are required in proximity of trash chutes and trash rooms.. Trash enclosures are required to be located in the parking lots. If included, the design should consider placing overhead security/enclosure to prevent intruders
4. Two gas barbecue grills are required at one of the common green spaces for the residence hall. Approximate size of grills shall be 24" to 30" wide by 14" to 16" deep.

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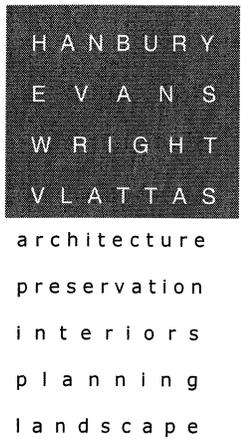
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5. Electrical power outlets and a domestic water quick coupling shall also be provided at the common green space.
6. Residence hall windows shall be standard sizes and operable
7. More than one remote annunciator panel may be required for each building. Locations will be determined by Resident Advisor / Resident Director RA/RD (spell-out) staffing.
8. Design team to comply with State Fire Code, Chapter 11 provision requiring an area of rescue assistance in one stairway with communication device. The phone will be connected to the campus police station.
9. Dry standpipe system is not required for buildings below 4 stories.
10. A double detector check is acceptable to the fire department. The Campus Fire Marshal in conjunction with Housing Operations will make the final determination
11. Design team to provide gates that open automatically for fire and police vehicles. University shall provide fire and police vehicles with on board remote access devices. Gates will have battery back up in case of loss of power. Gates will remain open in a fail safe condition.
12. Gates in perimeter fence along Blaine Street to have Knox system (*It is my understanding that we will not have gates on the Blaine Street entrance due to safety concerns*)?
13. Per current University standards all parking lot gates will open automatically when a fire alarm is activated.
14. Fire Marshal recommends extension fire alarm fiber optics to childcare facility or at a minimum a stub out in proximity for ease of future extension.
15. The drop-off circle at the dining commons shall accommodate trolley and emergency vehicles. Curb height shall allow easy access into and out of trolley.
16. The Design team will provide separate water meters for the following:
 - Residence hall – one for entire 1200 beds
 - Dining commons
 - Recreation fields
 - Apartments – one for entire 800 beds
 - Maintenance shop

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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To: Those Present
 From: Jane Cady Wright, AIA
 Date: March 25, 2004
 Re: Canyon Crest DPP
 Workshop #3 – PMT Meeting
 University of California, Riverside
 HEWV Project #04006.00

At the Break-out meeting for Physical Plant, Telecommunications, Parking and Student Special Services on March 25, 2004, from 11:45 am to 12:15 pm the following were present:

UCR

Andy Plumley
 Susan Marshburn
 Kieron Brunelle
 Fernand McGinnis
 Doug Lindberg
 Timothy Ralston
 Jeff Adams
 Tony Lees
 Suzanne Trotta
 Travis Randel
 Andrew Stewart
 Scott Spicer

NTD Architects

Tony O'Keefe
 Thomas Christian

HEWV

Buddy Hall
 Jane Wright
 Rosie Cuartelon

ME-Engineers

Sean Hira
 Roman Kleyman

Envision Strategies

Claudia Scotty

AC Martin

Jon Ziegler

The following items were discussed:

1. Design team to consider adjacencies of areas of refuge to evacuation routes
2. Building entries should be easily recognizable
3. Site vehicular circulations should make drop-off and pick-up of disabled students as convenient as possible.
4. Bicycle storage, litter receptacles and vending machines should be located as not to encumber building access for people with disabilities
5. PMT to provide to Design team the newly created signage standards
6. Electrical outlets in student rooms should be sufficient for recharging electric wheelchairs.
7. Gem cart recharging stations require individual circuit with GFCI.
8. PMT to provide design team with housing's standards for entry doors
9. The Design team will provide as many metered parking spaces (central meter) as possible along the Aberdeen Drive extension. Locate spaces along the

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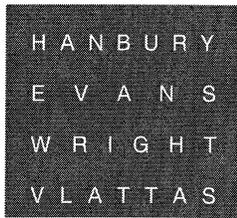
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western edge adjacent to the recreation fields. "Pay and Display" dispensers similar to those at Lot 24 will be used.

10. The drop-off circle at the dining commons shall accommodate trolley and emergency vehicles. Curb height shall allow easy access into and out of trolley.
11. The university requested two (2) data and one (2) phone connection per student bedrooms
12. The Design team will provide 1 main telecom room for the entire project build-out. Locating the main room in the maintenance building shall be evaluated and further discussed as the planning evolves.
13. Telecom wiring will be Category 5E cable with a 295' maximum run length.
14. Each building will have a minimum of one telecom closet, possibly requiring one per floor. This closet may be shared with CATV but no other function. Design team to determine need.
15. Wireless APS are required for all common rooms.
16. PMT to provide the Design team with the budget dollars for telecom extension to the project
17. The Design team will provide separate water meters for the following:
 - Residence halls – one for entire 1200 beds
 - Dining commons
 - Recreation fields
 - Apartments – one for entire 800 beds
 - Maintenance shop

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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To: Those Present
From: Jane Cady Wright, AIA
Date: March 25, 2004
Re: Canyon Crest DPP
Workshop #3 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining Services meeting held on March 25, 2004, from 1:15 pm to 2:15 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Kipp Dougherty
Timothy Ralston
Albert Esqueda
John Enright

NTD Architects

Tony O’Keefe
Thomas Christian

HEWV

Buddy Hall
Jane Wright
Rosie Cuartelon

ME-Engineers

Sean Hira
Roman Kleyman

AC Martin

Jon Ziegler

Envision Strategies

Claudia Scotty

The following items were discussed:

1. Canyon Crest dining commons will be the permanent production kitchen for the campus
2. Dining Services goal is to provide a comfortable, restaurant-style environment that offers students a core platform for meals with flexibility for menu change and a retail component/emporium convenience that allows product control.
3. The dining commons shall be placed so that it is the center of activity for the total student population planned for the site, the pedestrians who cross the site to and from campus and potential users from A-I halls.
4. Dining areas shall have the ability to be segregated for smaller groups such as faculty dinners, conference groups or revenue generating events.
5. Service dock shall accommodate 3 to 4 parking spaces for vendor parking, dock space for two semi trucks, a separate ramp to allow delivery vehicles to load and unload, a cart-washing station, a compactor, bailer, a GEM cart recharging station.
6. A room with two commercial washers and dryers are required adjacent to the loading dock
7. The dock area can be shared with the maintenance building; the maintenance building could be used to screen the service area.
8. Dining commons seating: preferred ratio is 70% interior to 30% exterior

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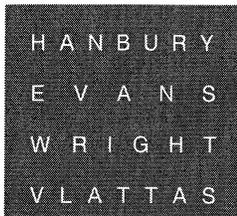
9. Outdoor seating shall be in a controlled environment

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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File: MM_03_25_04 1-15 to 2-15.doc

MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 25, 2004
Re: Canyon Crest DPP
Workshop #3 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Recreation meeting held on March 25, 2004, from 2:15 pm to 3:15 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Lindy Fenex
Timothy Ralston
Steven Thiela
Mike Eason
Kenneth Ubom

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall
Jane Wright
Rosie Cuartelon

ME-Engineers

Sean Hira
Roman Kleyman

AC Martin

Jon Ziegler

The following items were discussed:

1. The design team will use the dimensioned plans for recreation fields as shown in the West Campus DPP.
2. No softball fields will be included in the program
3. One blue call phone will be located on the western end of the fields
4. A five-foot high PVC coated chain link fence is required to secure the fields. The fence will be located on the north adjacent to the residence halls, on the west along Canyon Crest Boulevard and on the south adjacent to Linden Street. Gated emergency vehicle access will be provided from Canyon Crest Boulevard. The gate will use a Knox key system. A lockable pedestrian gate will be incorporated into the fence directly across from the existing student recreation building on the south side of Linden Street.
5. Eight-foot wide sidewalks shall be located along the northern, eastern and southern edges of the recreation fields to facilitate pedestrian movement to the dining commons
6. The Design team shall use the same storage room size as was indicated in the Arroyo DPP (355 SF). The storage room shall be located in the maintenance building.

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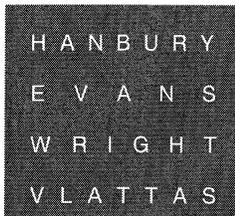
Recreation Meeting held on March 25, 2004
2:15 – 3:15 pm
Page 2

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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File: MM_03_25_04 2-15 to 3-15 (Final).doc

MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 25, 2004
Re: Canyon Crest DPP
Workshop #3 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Housing Services meeting held on March 25, 2004, from 3:15 pm to 4:00 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Timothy Ralston

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall
Jane Wright
Rosie Cuartelon

The following items were discussed:

1. Apartments will not be programmed for family; family use is only temporary. Parking ratio will be planned at 1:2.
2. Typical apartment will be 4-bedroom unit; provide opportunity for 1-bedroom studios, and 2-3 bedroom units. Graduate units will be 2-bedroom
3. Design team to test apartment site with surface and structured parking
4. In Residence Halls, smaller Resident Services Office (RSO) with mailboxes in a central entry lobby is preferred to facilitate the sense of belonging to a smaller community and create a hub of activity
5. Housing prefers laundry facilities be spread throughout a building (i.e. one per floor)
6. Design team to plan for 6,000 SF of commons space for total build out of site; *not as indicated in the Strategic Plan for Housing (SPH) that indicated 6K for every 600 students.* Design team to provide the Project Management Team (PMT) with a diagram showing relevancy/proportions/size/function of typical multipurpose room.
7. Design team to provide one faculty apartment in each residence hall group. (the Strategic Plan for Housing (SPH) shows a total of three residence hall groups on the Canyon Crest site)
8. Design team to test unit layouts with students as indicated in the SPH at the visioning session in April
9. Design team to discuss RSO office configuration and space needs with RSO staff at the visioning session in April

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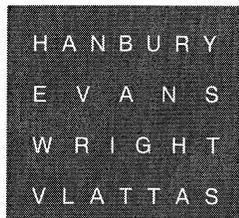
10. Susan Marshburn and Jane Wright to develop a list of questions to be distributed to each working group prior to the visioning session PMT to schedule both commons rooms in Pentlands C for April meetings
11. Design Team will take work sessions off the agenda; they will be continuous over the three days
12. Susan Marshburn to revise the proposed visioning session meeting schedule and forward to the design team for inclusion in the agenda
13. May 7 meetings shall be moved to May 4th. Design team needs 2 hours with the committee, 1.5 hours with the PMT and 1 hour with students and student leaders.
14. The June 3rd meeting will be similar schedule as May 4th meeting.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: March 25, 2004
Re: Canyon Crest DPP
Workshop #3 – PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting held on March 25, 2004, from 4:00 pm to 5:00 pm the following were present:

UCR

Andy Plumley
Susan Marshburn
Kieron Brunelle
Fernand McGinnis
Timothy Ralston

NTD Architects

Tony O'Keefe
Thomas Christian

HEWV

Buddy Hall
Jane Wright
Rosie Cuartelon

The following items were discussed:

1. Design team requested that PMT begin to think about concepts for April meeting by collecting images to share. Images could be of a favorite space or places that evoke positive emotions.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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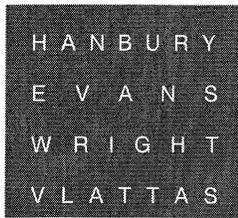
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MEETING MINUTES



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To: Kieron Brunelle
From: Jane Cady Wright, AIA
Date: April 21, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting on April 21, 2004, from 1:30 pm to 2:15 pm the following were present:

UCR

Kieron Brunelle
Fernand McGinnis
Nita Bullock
Andy Plumley
Susan Marshburn
Luis Carrazana

NTD Architects

Tony O'Keefe
Thomas Christian

Envision Strategies

Claudia Scotty

HEWV

Jane Wright
Buddy Hall
Rosie Cuartelon
Steve Wright
Mike Evans
Jimmy Stevens

The following items were discussed:

1. The agenda for each workshop was reviewed in detail with comments / goals offered by the Project Management Team.
2. The agenda was modified to delete the early morning meeting reference for the 22nd, as the agenda is covered in the meeting later that morning.
3. Student focus groups will take place in the workshop rooms in Pentland Hills.
4. The PMT will provide the planning team with the metrics that the University desires the project to meet (for example - \$/GSF for each building type, GSF/bed for housing and GSF/seat for dining).
5. The planning team will continue to pursue comparable projects. The dining component is difficult to compare due to the wide variety of associated functions.
6. The dining commons will be programmed for use as dining for the Canyon Crest project and not include a central kitchen

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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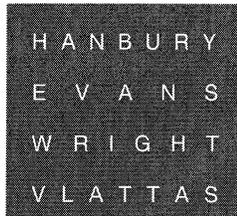
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To: Those Present
From: Jane Cady Wright, AIA
Date: April 21, 2004
Re: Canyon Crest DPP
Dining Managers Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining Managers meeting on April 21, 2004, from 2:30 pm to 3:30 pm the following were present:

UCR

Kieron Brunelle
Nita Bullock
Susan Marshburn

UCR Dining Services

Kipp Dougherty
Albert Esqueda
John Enright
Teresa Garcia
Susan Coffman
Gustavo Plascencia

HEWV

Rosie Cuartelon
Steve Wright

NTD Architects

Tony O'Keefe
Thomas Christian

Envision Strategies

Claudia Scotty

The following items were discussed:

1. Phase I dining must be designed efficiently to allow for expansion into Phase 2.
2. Phase I will include 1200 beds and approximately 500 seats for dining will be provided.
3. Design Team to consider programmed spaces to allow for summer conferencing dining requirements.
4. Shell for dining hall should be provided for full build-out for all phases.
5. Conference spaces could be considered within full build-out shell in interim until Phase 2 is completed.
6. Provide stub-outs for future Phase 2 equipment in Phase 1.
7. Dining hall should encompass a dispersed platform approach.
8. Design Team to consider separate platforms to allow for easier management of different conference groups.
9. Dining hall could potentially be used for catering, requiring support for some form of a central kitchen. Current budget does not support a full central kitchen. A central kitchen is needed to serve existing residence hall locations as well.
10. The dish room, which is typically considered the hub of a dining space, should be sized for both phases.

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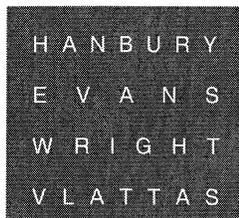
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11. The current ratio of indoor/outdoor seating is 70% indoor and 30% outdoor. (equal to 350 seats/150 seats for Phase 1.) For both phases this is equivalent to 770 seats/330 seats (based on 1100 total). This total number of outdoor seating may be too high. Design Team to consider 150 seats for total outdoor seats.
12. Dinner should be assumed as the biggest meal – turnover rate is usually 40-minutes. 60% of total number of students in Phase 1 and 2 will typically show up during peak dining hours.
13. Design Team should consider the facility to be used for another activity i.e. study lounge/hangout space. Space should be considered for a central activity like a stage area. ?
14. Semi-private dining areas are also needed for specialty uses like residence hall dinners. Seating should accommodate 50 people (this number is included in the 500 seats for Phase 1). No more than 2 semi-private areas are needed.
15. The following platforms are desired for Phase 1 dining:
 - a. Salad bar
 - b. Dessert/breakfast bar
 - c. “Express” coffee bar/station to serve hot/cold grab ‘n go breakfast items. This station will be manned. It can also have an area for finish baking items.
 - d. Eurokitchen
 - e. Self-service deli
 - f. Pizza
16. A retail convenience store is envisioned for Phase One, and a retail food operation (coffee shop) is envisioned for Phase Two. Both will be located to maximize exposure to the recreation fields. Both will have late-night hours of operation.
17. C-store component could be backed up to retail dining to provide 2 different retail options with common dining seating.
18. Wireless point-of-sale equipment may be used.
19. Grab ‘n go breakfast to be available at the Express. This could be accessible to both board plan and retail patrons.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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To: Those Present
From: Jane Cady Wright, AIA
Date: April 21, 2004
Re: Canyon Crest DPP
Committee and Constituent Meeting
University of California, Riverside
HEWV Project #04006.00

At the Committee and Constituent meeting on April 21, 2004, from 3:45 pm to 5:00 pm the following were present:

UCR

Kieron Brunelle
Susan Marshburn
Jeanette Bradeen
Ange Villegas
Tony Lees
Kipp Dougherty
Nita Bullock
Lindy Fenex
Scott Spicer

NTD Architects

Tony O'Keefe
Tom Christian

HEWV

Jane Wright
Buddy Hall
Rosie Cuartelon
Steve Wright
Mike Evans
Jimmy Stevens

The following items were discussed:

1. Design Team to pursue the goal of discouraging people from walking between Phase 1 apartment buildings off of Blaine Street.
 - Barrier needs to be considered
 - Pedestrian path at corner will be only point of entry for foot traffic.
2. Components of the Dining Facility were discussed. Five diagram options were presented and the following observations were made:
 - Option 1:
 - Interior courtyard dining should be moved outboard at the east end-too closed in
 - Interior courtyard allows for security
 - Courtyard should be attractive, whether inboard or outboard of dining facility
 - Convenient access to residence
 - Retail is not desired as initial view from Aberdeen
 - Retail location is not close to loading dock service
 - Building systems need to be balanced
 - Intent of building orientation is to block undesirable winds from the North/Northeast and accept breezes from the West/Northwest
 - Option 2:
 - Retail exposure to recreation fields is lost
 - Good view from Aberdeen
 - Difficult access to retail from pedestrian path

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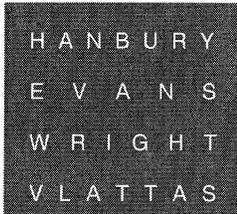
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- Service on east side changes relationship to pedestrian path
- Retail is not near service
- Circulation path is counterintuitive to the path of least resistance
- Location of service is less intrusive on the apartments
- Path from retail to service would require internal circulation corridor, which would intersect with main pedestrian path
- Option 3:
 - Two courtyards, one controlled and one for retail, is desirable
 - Retail not close to service
 - Retail is close to recreation fields
 - Too much retail facing Aberdeen
- Option 4:
 - Similar to the Mission Inn Courtyard layout
 - Entry through courtyards from Aberdeen
 - Retail needs to be at the NE corner of new recreation fields
 - Consider retail as its own separate building?
 - Recreation fields and Housing are priority for retail – not those on pedestrian path from Blaine Street
 - Convenience store and express combined are approximately 3,000-4,000 sf
- Option 5:
 - Area between circle at Aberdeen and front of dining commons needs to be a rich pedestrian zone
 - Path to campus along Aberdeen needs to be a themed streetscape
 - Outdoor dining needs to be access controlled but appear to be on the high traffic path – not shut off from the “action”
 - Position of dining commons needs to accommodate path to campus and student paths between halls and commons
 - Entry drive and circle at Aberdeen will be used for public access/visitors, metered parking, intramural game participant drop-off and some service delivery
 - Consider flipping the diagram to make a sixth option
 - Consider a turn-around/drop-off at the entry road off Watkins; allow promenade to extend to the drop-off
 - Consider options for new vehicle access to childcare facility

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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To: Those Present
From: Jane Cady Wright, AIA
Date: April 21, 2004
Re: Canyon Crest DPP
Dining Focus Group Student Staff/Leaders Meeting
University of California, Riverside
HEWV Project #04006.00

The Dining Focus Group with Student Staff/Leaders on April 21, 2004, from 6:00 pm to 7:00 pm was canceled.

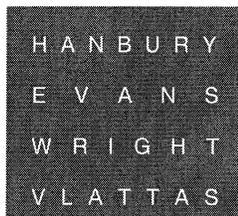
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To: Those Present
From: Jane Cady Wright, AIA
Date: April 21, 2004
Re: Canyon Crest DPP
Dining Focus Group, Current Residents Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining Focus Group, Current Residents meeting on April 21, 2004, from 7:00 pm to 8:00 pm the following were present:

Current Residents

Jackie Law
(1st year student)

HEWV

Rosie Cuartelon
Steve Wright

Envision Strategies

Claudia Scotty

NTD Architects

Tony O'Keefe
Tom Christian

The following items were discussed:

1. Current dining program does not adequately accommodate vegan diets
2. More vegetable varieties should be added to the menu. Information for all of the menu ingredients should also be listed.
3. More nutritious meals should be made specifically geared towards vegan diets.
4. More after-hours service is desired.
5. Extended convenience store hours is desired – all day is preferred.
6. The typical group size of students eating in the dining hall is typically 15 students. Smaller groups of seating is preferred, i.e., 2-3 smaller groups instead of one large group of 15.
7. Different platforms of food are preferred so that there is not one long single line for food.
8. There is a desire to see a more social atmosphere, with music or television in the background.
9. Desirable to use meal plan to purchase food for occasional guests.
10. The dining plan should incorporate a better variety of foods, i.e. more “cultural” foods (Indian, sushi, etc.)
11. Freshly prepared meals in front of the students are preferred. Some portions of the food seem to be “leftover” food from the previous meal.
12. Shaded, intimate, outdoor courtyard seating is preferred instead of a single large area of outdoor seating. There currently are few outdoor areas to hangout, and not a lot of outdoor shaded seating areas are available.

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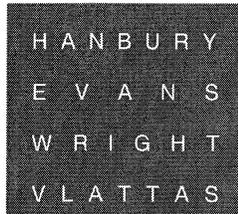
13. Booth seating would be preferred. Intimate, private seating is also preferred.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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To: Those Present
From: Jane Cady Wright, AIA
Date: April 21, 2004
Re: Canyon Crest DPP
Dining Focus Group, Current Residents Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining Focus Group, Student Staff/Student Leaders meeting on April 21, 2004, from 8:00 pm to 9:00 pm the following were present:

Student Staff/Leaders

HEWV

Rosie Cuartelon
Steve Wright

Envision Strategies

Claudia Scotty

NTD Architects

Tony O'Keefe
Tom Christian

1. No students arrived for this focus group meeting.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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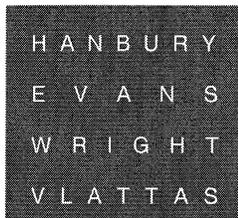
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To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Residence Services Office Staff Meeting
University of California, Riverside
HEWV Project #04006.00

At the Residence Services Office Staff meeting on April 22, 2004, from 1:00 pm to 2:00 pm the following were present:

Residence Services

Rosalie Burns
Ann Blanton
Bob Brumbaugh
Angie Villegas
Karen Burleson
Charlotte Shifflet
Julie Forbes

UCR

Andy Plumley
Susan Marshburn

HEWV

Jane Wright
Rosie Cuartelon

The following items were discussed:

1. Residence Services Office is the "hub of congregation".
 - Current RSO's are too crowded. RSO for Pentlands is too far from the individual residence halls, and doesn't allow for a central office to exist within each building.
 - RSO should be decentralized in the neighborhood and central to the community it serves.
2. Two workstations are required near entry counter, one for an administrative staff member and one for customer service.
3. One workstation is needed for a student staff member.
4. Mail service locations were discussed – with pros and cons for central vs decentralized. PMT to provide direction.
5. Mailboxes should be near work area for distribution.
6. Work/Staff room is needed for staff mail, printer/copier/fax areas.
7. Storage room is needed for supplies, equipment storage.
8. Separate room is needed for file cabinets.
9. Marketing services, Conferencing services, and judicial services can be centralized.
10. Residence Director requires a separate office and should be located in the community it serves. Offices also required for HR and RA.
11. Conference room is needed to accommodate 12 +/- people.

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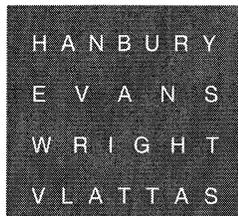
12. Staff Toilets and Kitchenette are needed.
13. Laundry facilities should be located in the residential community.
14. Lobby/waiting areas should be located near the RSO entry.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Dining Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining meeting on April 22, 2004, from 11:00 am to 12:00 pm the following were present:

UCR

Kieron Brunelle
Fernand McGinnis
Susan Marshburn
Andy Plumley

Envision Strategies

Claudia Scotty

HEWV

Jane Wright
Steve Wright

NTD Architects

Tony O'Keefe
Tom Christian

UCR Dining

Kipp Dougherty

The following items were discussed:

1. Claudia Scotty reviewed and distributed the demand analysis and assumptions. The following comments / issues were raised:
 - Dinner was used as the peak meal
 - 40 minute turnover (industry standard for University)
 - 490 seats phase I; 1176 final; program will actually be for 500 in phase I
 - Conference demands fill every seat – this has been responded to with the extra 50 seats in Phase II
 - It was indicated that the University desires to use 98% as the occupancy rate.
 - The University indicates 74% participation in the old facility and feels this will go up in the new facility. Kip feels that 80% is a good target.
2. Claudia Scotty reviewed and distributed the space analysis and assumptions. The following question / issues were raised:
 - The design of the outside seating will determine how desirable it is.
 - The square footage for the outside dining area should be carried in the cost model with the interior space due to lights, finishes, etc.
 - The University agreed to go with 175 – 200 seats of outdoor seating.
 - The salad bar platform may be able to be expanded in phase II
 - The bakery and the express should be adjacent (desired) but not necessarily the same platform.
 - The express component of the dining could be open for late night – it can be used for retail or for meal plans.
 - The deli as a grab and go type of place. The express could have grab and go from the deli.

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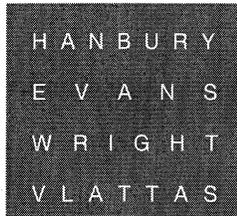
- Express is a component of the main board plan dining venue and take the form of a deli; more of coffee shop
 - For recreation purposes, students may want to socialize and eat between games, so there needs to be a retail place to eat.
 - The express is envisioned as capturing the non-resident population
 - University will provide feedback on the retail component
 - Desire to minimize equipment that goes on the roof;
 - Using the 2003 estimates is (Not a concern, but the project must reflect both today's cost and escalated out to midpoint of construction)
 - (University requested that exterior space be reflected in terms of gross square feet GSF)
 - 55,333 GSF is defined in the strategic plan; 56,943 GSF is currently defined in the proposal; Phasing is critical
 - The University will define what is included in the \$18.5 million of the DPP contract for the dining component.
 - The convenience store needs to be located where it is best serves the customer.
 - Components such as the convenience store, retail options should be provided in the main plaza adjacent to the recreation fields to provide vibrancy for the neighborhood.
3. Claudia Scotty and Steve Wright addressed issues of massing and spaces within the facility:
- Components that could be included on the 2nd floor include a platform and seating - there is an opportunity to split the platforms
 - A meeting space for 1,100 plus other meeting support spaces previously programmed for the individual communities could be added to this facility. The team will make a recommendation.
 - Platforms and the kitchen should be on the same floor
 - The event space or the outdoor dining could be on the 2nd floor; this would help with the control issue with exterior dining.
 - Upstairs dining could be for peak dining – 2-3 nights / week with only one platform.
 - The euro-kitchen is a possible 2nd floor platform; could function as a restaurant.
 - Students desire to be able to get to outside areas even if associated platforms are closed.
4. Other issues that were raised at the meeting:
- Susan Marshburn, Andy Plumley, and Kipp Dougherty need to review the operations and office spaces and give feedback to Kieron Brunelle.
 - Lockers need to be added as assignable space.
 - Emergency power is desirable, but perhaps the whole facility is not on the generator. The freezers, etc. need to stay on line, but if refrigeration is provided, cold food can be served during emergencies. The recreation facility already functions as a Red Cross center

Dining Meeting held on April 22, 2004
11:00 am – 12:00 pm
Page 3

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Residence Life Professional Staff Meeting
University of California, Riverside
HEWV Project #04006.00

At the Residence Life Professional Staff meeting on April 22, 2004, from 2:00 pm to 3:00 pm the following were present:

UCR

Kieron Brunelle
Fernand McGinnis
Nita Bullock
Andy Plumley
Susan Marshburn

Residence Life

Sara Cole
Laura Riley
Vanessa Elola
Paul Osineup

HEWV

Jane Wright
Steve Wright

The following items were discussed:

1. The concerns of the group revolved around conferencing and program activities.
2. A square shaped room was requested, as the current linear shape of the Pentland Hills rooms makes it difficult to give presentations / lectures.
3. Use patterns were discussed. Big events will attract 900 – 1100 people (1x per quarter); for these events, a portable stage may be used if there is associated storage for the stage.
4. Small events – 100 people (very frequent use); in good weather there will be a program event every month.
5. In all facilities for programs, black out capabilities are desirable, as well as appropriate lighting and PA system.
6. A tiered lecture hall / theatre space for 200 –300 is desirable.
7. Two seminar rooms in each community and two in the community center is desired
8. One large game room in the community center is desired
9. It is desired that each community of 500 have a space that accommodates 40% of the population.
10. Each community should have a computer lab accommodating 15 stations.
11. A computer lab is preferred in the community center as well with instruction space that seats forty students.

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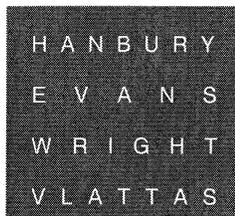
12. Resident director office should be located in the communities, not the community center.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Faculty Colleges Meeting
University of California, Riverside
HEWV Project #04006.00

At the Faculty Colleges meeting on April 22, 2004, from 3:00 pm to 4:00 pm the following were present:

UCR

Susan Marshburn
Kieron Brunelle

Faculty Colleges

Dein McCoy
Gabe Mendoza
Dorine Ramos
Barbara Wotherspoon

HEWV

Jane Wright

The following items were discussed:

1. Tutoring currently takes place from 6:30 – 8:00 PM in each hall.
2. Locations that are most frequently utilized by students are 'on the path' not on the campus peripheral.
3. The typical seminar size is 5 to 25 students for tutorials
4. Advisor is on site 1 time / quarter.
5. Need two offices and one meeting room dedicated for tutoring for the entire site.
6. Faculty in residence program needs one meeting room adjacent or near the faculty residence. This was not definite, as these programs have not been fully defined yet by UCR.
7. Transfer day is a day with large groups of visiting students and the goal is to market UCR to the students. Additionally advising / tutoring seminars take place in these spaces. In these instances, Pentland Hills rooms are used. The room the workshop was held in (C101) holds roughly 300 in lecture style seating and it can be filled for one of these events

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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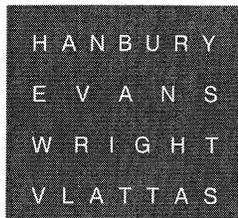
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To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Honors Meeting
University of California, Riverside
HEWV Project #04006.00

At the Honors meeting on April 22, 2004, from 4:00 pm to 5:00 pm the following were present:

UCR

Kieron Brunelle
Susan Marshburn

Honors

Jason Kosmal

HEWV

Mike Evans
Jimmy Stevens

The following items were discussed:

1. Residence program was explained to the participants
2. Honors college offers
 - Interaction with mentors and staff
 - Proximity to other students with similar goals
3. Honors college needs its own special community
 - Lounge for just honor students
 - Community size of 300 honor students
 - Mentor office spaces (3 to 4 people total) for existing pier mentoring program to hold individual meetings for student - could be a two person size room (one mentor and one student) but a mentor may also will need a room for ten persons to meet – should be near conference rooms
 - A group of 300 will need six lounges
 - Group study rooms that can be reserved
 - Three classrooms for 30 with media cabinet and dry erase boards on opposing walls
 - Computer rooms with at least three computers for each community of 48 students
 - Private dining area for sixteen located in the dining building.
 - One workroom accommodating 100 occupants for seminars or workshops
 - Two faculty in residence apartments
 1. Two to three bedroom
 2. Walk through access to common areas for interaction with students
 3. Separate outside entrance and private exterior patio space
 4. Reserved parking space
 5. Office space

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4. The honors Administration will not be moving to the building.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Housing Focus Group – Residence Hall Residents Meeting
University of California, Riverside
HEWV Project #04006.00

At the Housing Focus Group, Residence Hall Residents meeting on April 22, 2004, from 6:30 pm to 7:30 pm the following were present:

Residence Hall Residents

2 Students
(upperclassmen, RA's - Pentlands)

HEWV

Rosie Cuartelon
Jimmy Stevens

The following items were discussed:

1. Advantages to older residence halls (Aberdeen-Inverness):
 - Tight-knit community between students
 - Doors to rooms continuously kept open to maintain a sense of community in the hall
 - Smaller rooms (vs. "suites") force people to congregate in social areas, public lounges
 - More social atmosphere, promotes student interaction
 - AI is an ideal living atmosphere for incoming freshman because it promotes a sense of belonging
2. Disadvantages to older residence halls (Aberdeen-Inverness):
 - One single, controlled entry into building is inconvenient
 - Very few outdoor shaded areas and green space to hangout
 - Larger centralized laundry rooms are inconvenient
3. Advantages to newer residence halls (Pentlands):
 - Lots of outdoor green space to hangout
 - Lots of public lounge areas/meeting rooms
 - Decentralized laundry facilities per hallway, not per building
 - Lots of amenities – game room, exercise room, kitchenettes, general public areas
 - Centralized mail facility to serve as a single communication marquee (for flyer distribution/poster announcements, etc.)
4. Disadvantages to newer residence halls (Pentlands):
 - Spread out rooms and suites do not foster a sense of community
 - Students are more reclusive

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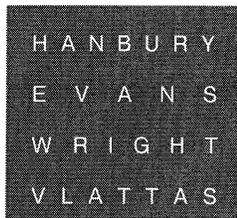
- Students tend to hang out within their suites, less in public areas
- Pentlands is not an ideal living condition for incoming freshman
- Very few shaded areas to hang out in
- Less of a feeling of belonging to the residential hall community
- Lounge halls on each floor do not have enough shading – temperature gets to hot during the summer.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Housing Focus Group – Apartment Residents Meeting
University of California, Riverside
HEWV Project #04006.00

At the Housing Focus Group, Apartment Residents meeting on April 22, 2004, from 7:30 pm to 8:30 pm the following were present:

Apartment Residents

HEWV

Rosie Cuartelon
Jimmy Stevens
Jane Wright
Mike Evans
Buddy Hall
Steve Wright

No students arrived for this Focus Group meeting.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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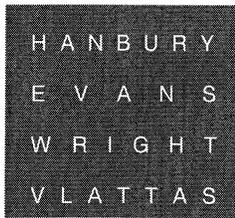
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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: April 22, 2004
Re: Canyon Crest DPP
Housing Focus Group – Residence Hall Meeting
University of California, Riverside
HEWV Project #04006.00

At the Housing Focus Group, Residence Hall meeting on April 22, 2004, from 8:30 pm to 9:30 pm the following were present:

Residence Hall

HEWV
Jane Wright

No students arrived for this focus group meeting.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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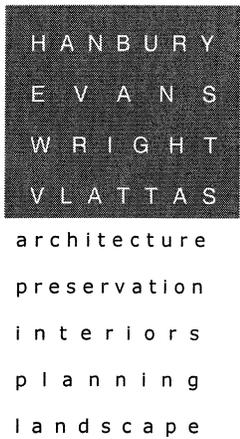
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To: Kieron Brunelle
From: Jane Cady Wright, AIA
Date: April 23, 2004
Re: Canyon Crest DPP
Committee and Constituent Meeting
University of California, Riverside
HEWV Project #04006.00

At the Committee and Constituent meeting on April 23, 2004, from 8:30 am to 10:00 am the following were present:

UCR

Kieron Brunelle
Fernand McGinnis
Nita Bullock
Andy Plumley
Susan Marshburn
Jeanette Bradeen
Ange Villegas
Lindy Fenex
Kipp Dougherty
Albert Esqueda

HEWV

Jane Wright
Buddy Hall
Rosie Cuartelon
Steve Wright
Mike Evans
Jimmy Stevens

The primary site and building development issues and associated recommendations were presented for discussion. The following key points and questions were discussed at the meeting.

Site

1. Consider the grove idea as an extension of the landscape on Aberdeen.
2. The new turnaround off of Watkins needs function as a drop off and have accessibility to the front desk
3. The security fence along Blaine Street should extend to the Child Development Center and have an opening at the corner of Blaine and Watkins for pedestrians. The opening should be inviting, be open during the day and have card access for evening use.
4. Recommend 6' ornamental or iron fence.

Parking

1. Security concerns were raised regarding the surface parking for the apartments proposed at the corner of Blaine and Watkins. A wall and landscaping will need to be placed between the Child Development Center and the parking lot maintaining the existing emergency vehicle access corridor.
2. The planning and design team presented the advancement of the idea regarding a parking garage located on the current parking lot #22, east of A-I. Housing Operations and Maintenance would also be housed in this building. This idea had been previously considered during the Strategic Plan

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for Housing (SPH); however, it was not required to meet the demands under the podium parking scenarios. All present agreed that this was a positive opportunity for consideration. This scheme should maintain vehicular, bike and pedestrian circulation to the Vietch site.

3. The design team will advance the project with the surface-parking scheme and will provide the University with the capacity and an order of magnitude cost of a future structure.
4. It was agreed that the site east of A-I was a good central location for the Housing Operations Maintenance facility. This location will receive consideration due to the potential need to expand the dining site. An issue was raised as to what to do with A-I parking, lot #22 during any construction / site disturbance for the parking garage.

Swimming Pool

1. Locate the pool where it can be appropriately screened from high traffic.
2. Insure it doesn't block pedestrian connections from recreation fields to the community center.
3. The Stonehaven Pool is considered by the University to be a good example of what Housing is looking for relative to the pool size and associated social spaces.
4. Pool shall have a southern exposure.
5. The current adjacency is positive, next to the convenience / express store.

Housing

1. The location of the front door for the administrative / housing services functions was discussed. Following the meeting, the team was directed that the location should occur somewhere in the central courtyard space with high visibility.

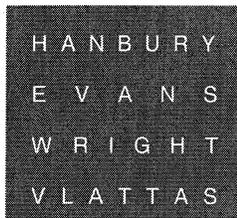
Recreation

1. The current Recreation challenge course was identified as a recreation component that may need to be relocated. However, the Canyon Crest Student housing site is not available for this function.
2. The buffer strip east of the recreation fields should be considered as social space, i.e. informal picnics, watching athletic events, and similar activities.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Kieron Brunelle
From: Jane Cady Wright, AIA
Date: April 23, 2004
Re: Canyon Crest DPP
Wrap/Up / Next Steps Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting on April 23, 2004, from 10:00 am to 11:30 am the following were present:

UCR

Kieron Brunelle
Fernand McGinnis
Nita Bullock
Andy Plumley
Susan Marshburn

NTD Architects

Tom Christian

HEWV

Jane Wright
Buddy Hall
Rosie Cuartelon
Steve Wright
Mike Evans
Jimmy Stevens

The following items were discussed:

Program

1. The housing program and dining program have been updated to reflect the conversations and they were presented to the PMT.
2. The PMT will provide the planning team with an organizational chart for housing, direction on front desk operations and space requirements and a floor plan of the Pentland Hills Housing Services Offices.
3. Office space for grounds keeping and house keeping need to be included in the program, in the absence of having maintenance and operations building until later phases.
4. The PMT to provide classroom planning standards (done) and audio-visual storage standards to design team
5. Central security/surveillance rooms initially considered part of the maintenance building is to be part of the commons program

Dining

1. The pros and cons of dining on the second floor of the community center were discussed. The concerns center around the ability to deliver to the kitchen, as the kitchen will be desired on the same floor as the platforms and primary dining spaces.
2. The opportunities include vistas, clear separation of meal plan users from retail operations; higher security of the exterior dining venue; perceptually more vibrant and active building due to less functions that penetrates deeply into a large one level facility; image and massing at the end of Aberdeen and scale appropriateness compared to the adjacent housing.
3. The PMT to discuss 2 story dining facility concept prior to May 4 meeting

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4. Design team to increase the number of classrooms and decrease the number of seminar rooms – the dining seating area may be considered as after hours classroom space if it is sub-dividable
5. The planning team will present scenarios for consideration at the next meeting, relative to interior space relationships and 1st / 2nd floor zoning.

Mail

1. The mail will be located in the community center.

Budget

1. The spaces added to the community center have almost doubled its size to approximately 95,000,000 GSF. The space in the residential portion of the project has been reduced by a similar amount; however the implications of phasing and the \$ / GSF allocated for each building type may impact the feasibility of the changes. The planning team will outline these scenarios for the university for the May meeting.

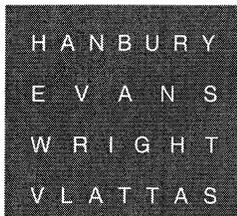
Next Steps

1. University to provide program data so that the space program for housing services offices can be completed.
2. The university is also providing additional data for dining
3. The next meeting is May 4th, and an update of the entire program will be presented at that meeting. The sub consultants will be present.
4. The draft agenda for the meeting was discussed and is attached to these minutes.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: May 4, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting on May 4, 2004, from 8:30 am to 10:30 am the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Andy Plumley

HEWV

Jane Wright
Buddy Hall

Envision Strategies

Claudia Scotty

NTD Architects

Tony O'Keefe
Tom Christian

1. The following items were discussed:
2. The PMT is concerned about how outdoor seating cost will be calculated as part of building program; Kieron Brunelle distributed a hand out of the guidelines related to building efficiencies / area calculations.
3. PMT has sent the design team the CIB's for several dining projects; design team is to use these as a starting point.
4. Design Team indicated it will use dining costs obtained for comparable projects at other California Universities and cost data provided in the Strategic Plan for Housing as bench marks for determining costs for the Canyon Crest dining commons
5. Design Team to keep parking structure proposed at the east end of Aberdeen and Inverness residence hall in the programming and prepare costs data – currently the structure is not in the scope of construction for phase 1.
6. Creep in program scope of the Dining Commons is of concern to PMT. Elements being reevaluated are:
 - Duplication of some common space, which may be adaptable to accommodate other program requirements.
 - Construction phasing to provide stand-alone first phase
7. The Agenda for the day's meetings was reviewed
8. Due to the fire at Lothian PMT requested additional time in responding to programming elements discussed at the April workshop.
9. Dining component in the DPP will include:

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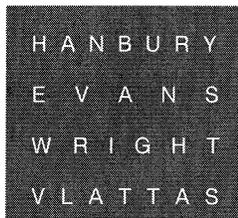
- Room data sheets, equipment list and space diagrams
 - a sample platform diagram that shows potential platform layout, distribution and circulation to demonstrate efficiency
10. PMT to provide the criteria sheet to the Design Team for cost estimating purposes
 11. Dining consultant to submit a sample platform diagram for PMT review
 12. The type of detailed diagram shown in the Arroyo DPP is not required
 13. Current site plan indicates:
 - Rotary at entry drive with pedestrian access to dining and housing
 - Two story dining
 - Housing grouped around a center plaza and community commons functions
 - Parking garage with housing maintenance building on east side of A-I
 - Surface parking lot to meet required spaces on site lots
 14. Entry drive off Watkins Avenue: plan to expand existing access 30 additional feet into Corporation Yard from existing site boundary
 15. Design team to plan to maximize additional parking for child development center on north side of proposed access drive
 16. Design team to provide second access for emergency vehicles from the access drive on the south side of the proposed apartments. Use of turf-block will be considered, but not preferable.
 17. Parking bay dimensions: 9' x 18' stall with 26 foot wide drive isle
 18. Design team to evaluate gate locations at parking lots and vehicle stacking at entry
 19. The Design team indicated that the program requirements of 1,200 beds could be provided in the four buildings on the south east part of the site if each building comprised all four story; a fifth building would allow the density to ease
 20. PMT indicated a preference to maximize building heights and efficiency
 21. Design team to investigate the use of Type 5 construction for four story buildings
 22. Design team to maintain the additional building in the program which will be uses as "theme" housing
 23. Typical student rooms establish the following priorities
 - 4:1 bath ratio
 - Unit door off the hallway
 - Reverse toilet location to allow natural light into toilet room of option A

24. Design team explored the RSO as two story element
25. Design team to develop character of the core common spaces
26. Design team indicated the key points of current dining diagram
 - Desire to have two story structure as focal point
 - Separation of bulk storage and prep area is a operational challenge
 - Synergy between mail and dining is important
 - Lockers for student backpacks needed on the ground floor
 - Dining control point should be on the ground floor
 - Outdoor seating upstairs maximizes views and addresses access control issue
 - Staff locker room and showers should be located with kitchen
 - Public restrooms should be placed on the ground floor
 - If bulk storage is located on a different floor than the kitchen a small one day storage areas is need adjacent to the prep area
27. 10,000 sf multi purpose room (650 banquet seating) is too large
 - Design team to consider banquet space for 250
 - Computer labs/training rooms and will stay in program for 20 – 25 people,
 - Class rooms for 30 will be located in the dining commons
 - Design team to eliminate the two seminar rooms and add a classroom for a total of four classrooms
 - Multi purpose room of 6000 sf to be able to be subdivided into 3 spaces
 - PMT to determine the clients who would be renting the large rooms to verify the size
 - Multipurpose room, classrooms and training room to be located in the dining commons
28. Classrooms to be based on the standards provided by the PMT

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: May 4, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Committee and Constituent meeting on May 4, 2004, from 11:00 am to 12:00 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Andy Plumley
Kipp Daugherty
Lindy Fenex
Jeanette Bradeen
Albert Esqueda
Angie Villegas
Thomas Miller

HEWV

Jane Wright
Buddy Hall

Envision Strategies

Claudia Scotty

NTD Architects

Tony O'Keefe
Tom Christian

M-E Engineers

Sean Hira
Roman Kleyman

A C Martin

Jon Ziegler

The following items were discussed:

1. The Design team provided an overview of the project for those who may not have been at the April meeting
2. Committee comments:
 - Drop off at east side of residence halls is good
 - Sidewalk needs to be provided along two sides of the entry drive from Watkins Avenue (as per LRDP)
 - Landscaping and fence are needed along north edge of recreation fields
 - Provide path along north side of fence at rec fields from family units to dining
 - Design team to investigate proposed location of Metrolink station along Watkins
 - Fire access to be reviewed by fire marshal
 - Nita Bullock to review entry road
 - Laundry for students should be within the secure area of each building preferable in a central location; prefer one on each floor

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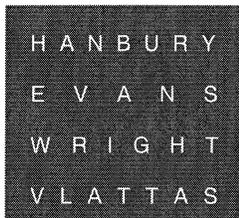
Committee and Constituent Meeting held on May 4, 2004
11:00 – 12:00 pm
Page 2

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: May 4, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Review Group meeting on May 4, 2004, from 1:00 pm to 2:00 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Andy Plumley
Angie Villegas
Jeanette Bradeen
Bob Brumbaugh
Julie Forbes
Paul Osineup
Thomas Miller
Charlotte Shifflet
Sereind Moliga

HEWV

Jane Wright
Buddy Hall

NTD Architects

Tony O'Keefe
Tom Christian

Envision Strategies

Claudia Scotty

The following items were discussed:

- Existing Residence Service Office (RSO) floor plan for Pentland Hills Residence Hall was reviewed and the following comments made:
 - Entry needs more exterior canopy
 - Lobby is not big enough for conference check-in or for move in day
 - Rest rooms over capacity, if used by public and staff; adequate if just for staff
 - Various programs are run from this location as well as equipment check out (sports, vacuums, cooking equip)
 - Patron "flow" is poor
 - Poor visibility to front desk from staff desks
 - Fire panel needs to be visible but not taking up space
 - Students who work at night need their own work stations separate from fulltime staff – currently they use the desks for answering phones and sorting mail
 - Poster room is good, special requirement for exhaust (fumes from markers)
 - Tour sizes range from 20 to 200.
 - Staff office needs to be quiet – wall separates offices from lobby; glass wall for visibility

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- Work room located at the center of staff offices is desirable
 - Lunch room is used primarily for its intended use, in addition accommodates other functions, i.e. meeting space for students, staff and study area
 - The high ceiling at entry skylights creates a noisy zone and light glare
 - The large lobby area in Aberdeen-Inverness (A-I) (fish bowl) works well for marshaling area for tours, having front doors offset from desk, offices have direct access to desk attendants.
 - Mail at A-I is more convenient than Lothian and Pentland Hills.
 - Cubby hole storage is better in Lothian
 - Office Manager at Pentland Hills Residence Hall can see front desk through glass wall
 - Central office configuration is good at Pentland Hills Residence Hall
 - Poster room is remote in Lothian and A-I
 - Poster room doesn't have to be in RSO at Canyon Crest – but proximate
 - Storage is important
 - Office spaces are organized around the workroom in Pentland Hills Residence Hall; this is a good configuration
2. Canyon Crest RSO:
- Messaging center – need to determine how to coordinate with mail room staff – PMT to explore email communication as solution
 - Canyon Crest RSO would need to accommodate two resident directors and a head resident, an RSO manager, 2 administrative/clerical staff, three student workstations, a filing area of 300 square feet.
 - Kitchen is needed for lunch prep and storage
 - The existing production and marketing area needs to stay in its current location per Susan Marshburn
 - Residence Hall Association office; Conferencing Office would be located in the dining commons. No satellite conference services office needed in Canyon Crest RSO
 - Staff should have their own toilet, in a discrete location with adequate ventilation within the office suite; public toilets should be outside the office area
3. Dining Commons:
- Dining services has a periodic demand for banqueting space to accommodate 500 seats; this would require a 7,200 sf space with round tables – one group requested a 1000 seat venue
 - Predominant demand is for groups of 200 to 300; this could be once per week in a community of 3000.
 - Based on estimated demand, dining operation will run fulltime during the summer to accommodate conference attendees,

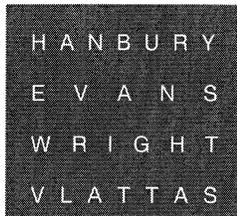
- Most conferences want a facility whereby they can have a final sit-down dinner
- UCR is interested in pursuing professional groups – need to sell the conference beds
- Business plan will have to justify the multi-purpose (UCLA makes about \$ 6 million in 2.5 months)
- Need eight classroom spaces for 30 and the multipurpose space at 6,000 sf to address current demand – In addition the seminar rooms will be located in the residence halls
- One training room with 25 computer spaces
- Table and chair storage for the rooms is essential – storage area in each of the 3 sub dividable portions of the multipurpose room

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: May 4, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT Wrap-up meeting on May 4, 2004, from 3:00 pm to 4:00 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Andy Plumley
Nita Bullock

HEWV

Jane Wright
Buddy Hall

NTD Architects

Tony O'Keefe
Tom Christian

The following items were discussed:

1. Location of Metrolink - transit stop – is undetermined. PMT to follow up with transit authority
2. Design team to provide a sidewalk between Watkins Avenue and the drop off – to be placed on both sides of the drive (as per LRDP).
3. Design Team to follow City standards for driveway approach; Kieron Brunelle provided input on width of fire lane access from University Fire Marshall, Scott Corrin to Design Team
4. Proposed parking garage on the east side of A-I to remain in planning – develop it to point of costing - PMT to decide if part of program
5. PMT to review business plan for conferencing and banqueting – design team to show relative size of banqueting halls in graphic form showing tables for PMT evaluation
6. Design Team to provide a graphic showing the relationship of the apartments to the dining commons
7. Resident Services Office (RSO) staff prefers their office to be a one story facility
8. PMT prefers the diagram showing the central nature of the RSO and other common rooms
9. RSO needs to be at the intersection of most traffic – show on the northwest corner of the plaza area
10. Design Team to go forward with the residence hall program and building diagrams

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11. June 3 meeting will confirm all programmatic data and include initial cost data from estimator, specifically for the housing
12. HEWV to forward floor plates and room data sheets to cost estimator and site plans to consultants
13. Design Team to test the unit diagram model that centralizes the bath adjacent to the room entry and provides room doors that open directly onto hall
14. PMT to evaluate apartment configuration and dining program and advise design team by May 24.
15. PMT to forward the Arroyo cost plan to the design team as soon as possible
16. Design team to send copy of space outlines and consolidated space program
17. Storage for recreation will be located in retail function adjacent to recreation fields

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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File: MM_05_04_04 3-00 to 4-00 (Final).doc

TELECONFERENCE
MINUTES



To: Those Present
From: Jane Cady Wright, AIA
Date: May 4, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the telephone conference on May 24, 2004, from 1:30 PM to 2:30 PM the following participated:

UCR

Kieron Brunelle
Susan Marshburn
Kipp Dougherty

HEWV

Jane Wright
Buddy Hall

Envision Strategies

Claudia Scotty

The following items were discussed:

1. Susan Marshburn will send book drop locker cut sheet to HEWV
2. Design Team to increase size of Special Equipment storage from 200 SF to 300 SF
3. Design Team to increase Table and Chair Storage from 200 SF to 300 SF; note to be added to category that states, "Final verification pending." Move this line item out of Production Kitchen category to a stand-alone category.
4. Design Team to space plan in Phase 1 for the expansion of Salad Platform that will occur in Phase 2. Phase 2 will add one fixed unit to the Salad Platform to increase offering.
5. Convenience store to increase from 1180 SF to 2,000 SF. Increase size of office from 80 SF to 120 SF. Distribute remainder of increased square footage among other use categories; 50 SF of box breakdown space shall be added to the Convenience store
6. Since Maintenance Building has been eliminated from Canyon Crest site programming the Recreation storage room of 355 SF will be added to the Convenience Store. Total of C-store will not be 2,355 SF.
7. Deli and Convenience Store will be adjacent to one another and stand-alone facilities. Delivery shall be from Aberdeen Drive extension turn-around.
8. Office space allocation shall be increased. Office and Support shall include a Director's office, Assistant Director's office, Food production office adjacent to the kitchen, Receiving office and a Cash office with Counting room on the first floor. Counting room shall be 80 SF. Standard office space on campus is 120 SF. Office space on the second floor shall include a Manager's office with 3 workstations and a Student Manager's office with 2 workstations.
9. Claudia Scotty to send hotel conferencing standards to Kieron Brunelle before the end of the day on May 26, 2004.

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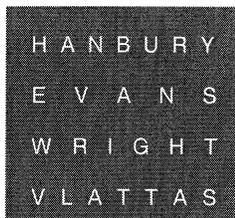
10. Design Team to add a sidewalk parallel to Watkins Drive that connects to an existing sidewalk in front of the Child Development Center. PMT to provide to Design Team exact location and extent of new walk.
11. Design Team recommends the use of compactors in residence hall trash room in conjunction with the 1½ cubic yard dumpsters. Susan Marshburn to provide input on the number of dumpster for recycling and trash use that are needed in each residence hall and whether or not compactors shall be included.
12. The two-bedroom apartment model shall be used for Phase 1a interim family housing. The per bed cost will increase due to the reduction of students sharing kitchen and bath fixtures and the density will be reduced. Design Team to provide the new site capacity and preliminary cost comparison to PMT prior to the June 3 meeting.
13. Design Team and PMT to finalize dining program, conferencing goals and commons program at the June 3 PMT meeting.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: June 3, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting on June 3, 2004, from 8:30 am to 10:00 am the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Nita Bullock
Tim Ralston

HEWV

Jane Wright
Buddy Hall

AC Martin

Jon Ziegler

Cumming, LLC

Alastair McPhail

Envision Strategies

Claudia Scotty

NTD Architects

Tony O'Keefe
Tom Christian

The following items were discussed:

1. The team finalized June 23, 2004 as the date for the detailed cost presentation.
2. UCR wants to change its business model from offering summer only conferences to being able to also offer space for single-day conferences during the academic year and space for groups as large as 500 persons.
3. It was noted that the conferencing faculty requires the University to develop a business plan in order to insure that there is a successful financial pro-forma for the proposed program and capacities, scope of work, and budget. This is important relative to justification for approval at higher levels of the UC System. In addition, it was noted that a statement by the University relative to how this facility fits into the context of the local market would be appropriate.
4. UCR's goal is to provide conference services for the "third tier" or mid-range conference event; meeting and banquet space with no exhibition space.
5. The target size for the conference banquet room to be provided in phase 1 is 7,500 square feet to accommodate a 500-seat dinner. This room is a separate space from the 500-seats provided for student dining.
6. Claudia Scotty explained that large conference providers typically include a meeting space/theater for 500, a banquet space for 500, breakout spaces, space for pre-function activity such as a lobby and administrative offices. Space layout is designed to be easily reconfigured for smaller groups.
7. The large meeting/banquet space will need an elevated stage; a storage room for stage should be located adjacently.

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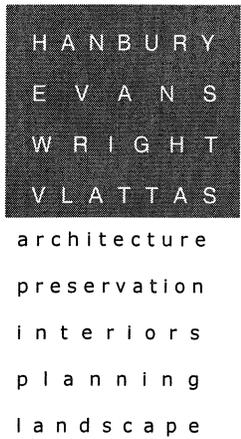
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8. The program currently provides 15,000 SF of assignable conferencing space and 3000 SF of pre-function space
9. The Design Team will evaluate overlapping functions of the conferencing and dining spaces to increase building efficiency.
10. PMT to evaluate revised program and establish priorities for both spaces and identify the essential components to be included in phase 1.
11. Revisions to the dining and conference program were distributed at the meeting and discussed.
12. PMT recognized the likelihood that UCR Residence Life will want an increase in the size of the banquet space to accommodate 900; the Riverside area does not have competitive space – Design Team needs to identify a comparable market in California.
13. Alastair McPhail, of Cummings.LLC suggested UCR consider partnering with a third party like Marriot who would provide management and marketing of the facility; this would improve the business model by insuring that the facility was being marketed and scheduled as soon as it was open
14. Canyon Crest will provide less program space than the Pentland Hills project. The Design Team shall provide justification in the DPP for this difference.
15. The Design Team shall report out costs to midpoint of construction and consider the cost spike. Costs shall be broken out per category and impact of utility improvements shall be packaged per phase and per category.
16. Fixed and movable equipment costs for the kitchen will be provided to the Cumming, LLC by Envision Strategies – Cumming, LLC will provide infrastructure costs for kitchen
17. The costs for the housing component will be based on wood frame but the Design Team will consider cost competitive alternatives (e.g. CMU/core plank; light gauge steel with metal framing; light gauge steel with wood TGI floor, etc).
18. Cumming, LLC recommended the estimate not be based on what are the current market costs but be based on the best system for the type of construction.
19. UCR anticipates the schedule of completion for the 400-bed apartment component is September 2008; 2009 for the 750-bed residence hall and phase 1 of the dining commons/conference center components
20. The Design Team will evaluate the new schedule to determine what modifications need to be made to the Strategic Plan for Housing

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

HANBURY EVANS WRIGHT VLATTAS + COMPANY

MEETING MINUTES



To: Those Present
 From: Jane Cady Wright, AIA
 Date: June 3, 2004
 Re: Canyon Crest DPP
 PMT Meeting
 University of California, Riverside
 HEWV Project #04006.00

At the Committee meeting on June 3, 2004, from 10:30 am to 12:30 pm the following were present:

UCR

Andy Plumley
 Kieron Brunelle
 Mac McGinnis
 Susan Marshburn
 Nita Bullock
 Kipp Dougherty
 Albert Esqueda
 Angie Villegas
 Tony Lees

HEWV

Jane Wright
 Buddy Hall

Envision Strategies

Claudia Scotty

AC Martin

Jon Ziegler

Cumming, LLC

Alastair McPhail

NTD Architects

Tony O'Keefe
 Tom Christian

The following items were discussed:

1. The revised housing program was presented and distributed at the meeting. The current housing program provides 271 GSF per bed.
2. Compactors in the residence hall trash rooms is preferred – size of room shall accommodate dumpster move in and move out
3. No trash anteroom required adjacent to trash chute room – students will have access to chutes
4. Two chutes are required; one for trash and one for recycling
5. Provide sidewalk access from the core south to Linden Street
6. Trash rooms are not required in the student apartment buildings
7. The apartment unit diagram was presented and following comments made
 - Provide dining table area
 - Provide bedrooms large enough to accommodate double beds
 - Provide tub/shower combo in bathroom; no compartmentalization required
 - Put sink outside bathroom
 - Move entry door to end of unit adjacent to living room
8. Provide some 3-bedroom units where necessary to maximize building configuration efficiency
9. Current survey does not reflect existing conditions at the corner of Blaine Street and Watkins Drive – right turn lane was removed by City of Riverside. Design Team to revise site plan accordingly.
10. Design Team to verify existing storm drainage capacity in Linden Street
11. The revised dining program was presented and distributed at the meeting.

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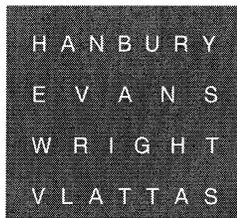
12. Book Drop will be lockers – Design Team has received cut sheet from PMT in a previous email.
13. The dining commons will be sized to serve 1,400 at its peak hour
14. PMT instructed the Design Team to remove the 600 SF of outdoor dining from the assignable square footage.
15. The Phase 1 dining program is accepted – UCR will evaluate Phase 2 after opening of facility
16. The two 800 SF private dining areas, the small group studies and the seminar/boardroom will be used as breakout space for conferences – they are to be color coded accordingly in the program
17. Add the following offices to the dining commons program:
 - three offices for conference services
 - one office for the events manager
 - two offices for RHA staff

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: June 3, 2004
Re: Canyon Crest DPP
Housing Review Group Meeting
University of California, Riverside
HEWV Project #04006.00

At the Review Group meeting on June 3, 2004, from 1:00 to 3:00 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Nita Bullock
Andy Plumley
Kipp Dougherty
Angie Villegas
Jeanette Bradeen
Bob Brumbaugh
Julie Forbes
Paul Osincup
S. Moliga
Karen Burleson
Monica Sepulveda
Vanessa Elola
Charlotte Shifflet
Ann Blanton

HEWV

Jane Wright
Buddy Hall

Envision Strategies

Claudia Scotty

NTD Architects

Tony O'Keefe
Tom Christian

The following items were discussed:

1. Revised program was presented and distributed at the meeting.
2. A comparison of the Resident Services Offices (RSO) at Canyon Crest and Pentland Hills was presented
3. UCR confirmed that each neighborhood of 1000 – 1200 students will have their own RSO.
4. Add two residential life offices (120 SF each) to the dining commons building
5. No assistant director office needed at Canyon Crest RSO – this is accommodated elsewhere in the UCR housing system
6. Add a residence life coordinator office in the commons building.
7. The RSO conference room location is acceptable separated from main office – it will be available for other groups
8. Staff mailboxes shall be located in the workroom area
9. No public access will be provided between the lobby and offices – prefer a separate door for staff access off of the colonnade.

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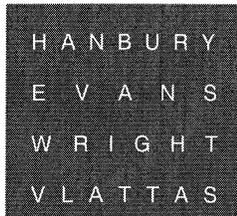
10. The living room at the center of the plan is a social lounge with no kitchen but a pantry for storage.
11. Bike storage rooms shall be located in each of the residence halls adjacent to RSO.
12. The counter space will be extended to the corner of the RSO manager's office to ensure the proper adjacency
13. Staff 2-bedroom apartments shall be located on east end of buildings adjacent to parking. Avoid placing them adjacent to interior courtyards or adjacent to Aberdeen.
14. Two Resident director 2-bedroom apartments shall be provided; (2 RD two Head Resident 1-bedroom apartments shall be provided; and two faculty-in residence 2-bedroom apartments shall be provided for the 1,250 bed community
15. Phase 1 will be the two northern buildings with the option for the 3rd "theme" building to the north
16. Due to the distribution of site costs it may be more economical to bring all 1,250 on-line at once.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: June 3, 2004
Re: Canyon Crest DPP
Housing Review Group Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining group meeting on June 3, 2004, from 2:30 – 3:00 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Nita Bullock
Kipp Dougherty
Albert Esqueda
Andy Plumley

HEWV

Jane Wright
Buddy Hall

NTD Architects

Tony O'Keefe
Tom Christian

Envision Strategies

Claudia Scotty

The following items were discussed:

1. Proceed with the current student dining and conferencing program— Design Team to determine logical phasing.
2. Student dining will be located on the second floor; conferencing spaces will be on the first floor.
3. The June 23 meeting agenda will include the refined program, a draft detail cost plan for housing and a cost plan based on unit dollars for dining commons.
4. Furniture, fixtures and equipment will be outside the DPP cost estimating profile – UCR to provide costs for these items.
5. Envision Strategies to provide costs for both “group one” and group two” food service equipment. Group one consists of equipment that is hard-wired and group 2 equipment is inventory type equipment - toasters, coffee urns, etc).

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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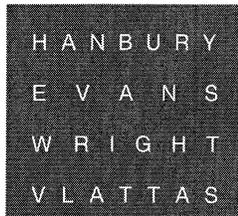
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MEETING MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: June 3, 2004
Re: Canyon Crest DPP
Housing Review Group Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT group meeting on June 3, 2004, from 3:30 – 4:00 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Nita Bullock
Andy Plumley

HEWV

Jane Wright
Buddy Hall

NTD Architects

Tony O'Keefe
Tom Christian

Envision Strategies

Claudia Scotty

The following items were discussed:

1. The June 23, 2004 agenda will be forwarded to the PMT as soon as possible. It was agreed that the meetings would be held in the afternoon only.
2. A tentative schedule for the Design Review Board meeting will be held on August 10 and the CPAC meeting on August 17. Both meetings will be power point presentations and will be principally focused on site and programming issues. The Design team will provide a draft of DPP for distribution to both groups for review prior to the presentation dates.
3. The tentative date for the Regents Meeting is October 2004.
4. The Design Team will include costs for right of way improvements from the existing sidewalk on the northwest corner of the Child Development Center to corner of Watkins Drive and Blaine Street.
5. Costs shall be in current dollars with allowance for "spike" in construction cost. Appropriate CCCI and EPI shall reflect budget year assumption of "current dollars."
 - LEEDs certification process shall be included in costs.
 - An allowance for a quality signage package shall be included – there is no UCR standard
 - Building signage shall be sized for easy building identification for emergency vehicles and visitor way finding
6. The emergency generator for the dining commons may need to be upgraded due to scope increase of facility

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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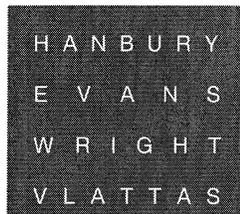
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PMT Meeting held on June 3, 2004
3:30 – 4:00 pm
Page 2

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File: MM_06_03_04 3-30 - 400 final.doc

MEETING MINUTES



architecture
preservation
interiors
planning
landscape

To: Those Present
From: Jane Cady Wright, AIA
Date: June 23, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

At the Design Team meeting on June 23, 2004, from 10:00 am to 12:00 pm the following were present:

HEWV
Rosie Cuartelon
Buddy Hall

NTD Architects
Tony O'Keefe
Tom Christian

Cumming, LLC
Alastair McPhail
Lee Namisniak

Envision Strategies
Claudia Scotty

The following items were discussed:

1. The design team met to prepare for the days meetings. The team discussed the latest dining floor plans and the project cost estimate.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

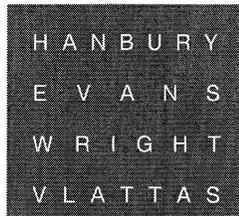
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To: Those Present
From: Jane Cady Wright, AIA
Date: June 23, 2004
Re: Canyon Crest DPP
Housing Review Group Meeting
University of California, Riverside
HEWV Project #04006.00

At the Dining Managers meeting on June 23, 2004, from 12:00 to 1:30 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Andy Plumley
Kipp Dougherty
Albert Esqueda
John Enright
Gustavo Plascencia
Susan Coffman

HEWV

Jane Wright
Buddy Hall

Envision Strategies

Claudia Scotty

NTD Architects

Tom Christian
Tony O'Keefe

Cumming, LLC

Alastair McPhail
Lee Namisniak

Claudia Scotty presented the revised dining space diagram and the following items were discussed:

1. The ware wash station needs to be located closer to the exit; it will be sized for the full build out.
2. Provide stronger relationship between serving platforms and kitchen
3. During summer conferences portions of the dining area will be closed. Platforms such as the beverage counter and salad bar should be located in order that summer dining has convenient access to them.
4. Two private dining areas are provided, one in Phase 1 and the second in Phase 2. The two do not need to be adjacent to one another or have immediate adjacency to the kitchen.
5. Provide two service elevators from loading dock to kitchen; one for trash and one for food.
6. Relocate the pre-function space to the east of the multi-purpose room and reduce the entry area.
7. Locate a specialized pizza platform on the first floor. It needs to be adjacent to the Express but not located within the Express but be more visible from front entry
8. Office space needs to be located so that it is more accessible to the public
9. The current plan indicates the Theater space to be located in Phase 2 in an adjacent building. To support the catering function, the Theater needs a scullery with sink, power hookup, and two upright refrigerators. Fixed counters are also required to facilitate continental breakfasts, breaks and afternoon snacks.

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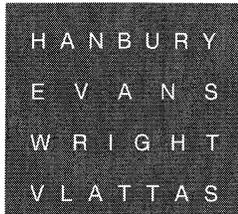
10. Office space in the convenience store will also serve the deli. Revise program-change designation of 70 SF from “receiving room” to “cash counting room.”
11. Andy Plumley suggested one way to increase the efficiency of the Canyon Crest dining commons would be to increase the number of students being served there by temporarily closing Aberdeen-Inverness dining.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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File: MM_06_23_04 12-00 to 1-30_final.doc

MEETING MINUTES



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planning
landscape

To: Those Present
From: Jane Cady Wright, AIA
Date: June 23, 2004
Re: Canyon Crest DPP
Housing Review Group Meeting
University of California, Riverside
HEWV Project #04006.00

At the PMT meeting on June 23, 2004, from 2:00 – 5:00 pm the following were present:

UCR

Kieron Brunelle
Mac McGinnis
Susan Marshburn
Andy Plumley
Tim Ralston

HEWV

Jane Wright
Buddy Hall

NTD Architects

Tony O'Keefe
Tom Christian

Envision Strategies

Claudia Scotty

The following items were discussed:

1. PMT stated that apartments are scheduled to open for the fall of 2008 with first phases of the residence halls and dining to open in fall of 2009.
2. The first phase of family housing demolition will begin in the summer of 2006.
3. Alastair McPhail presented a preliminary current cost plan.
4. Cost plan reflects:
 - Current premiums in the construction market,
 - Trends of increasing costs for qualified labor,
 - Escalation of 5% per annum is assumed. (Should be reduced 4%)
 - Wood frame construction – may be problematic with four-story structures (to be evaluated by the consultants)
 - 50% brick and 50% stucco for exterior of residential buildings
 - Combination of brick, metal panel and glass on a concrete and steel structure for the dining commons
 - Demolition costs for existing family housing is included in the site costs
5. All building cost reflects commercial grade construction quality with commercial prevailing wage.
6. Costs for special soils conditions are not included in the cost due to the lack of a soils study. A geo-technical survey has been scheduled by Design and Construction.
7. Each area of the project was discussed.
8. PMT directed cost consultant to evaluate and provide savings range for:
 - Declining percentages of brick and increasing percentages of stucco
 - Use residential wage rates for apartments and residence halls should be explored.
 - Differentiate premiums for LEED products

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9. PMT requested the following changes be made to the apartment cost detail:
 - Replace stove exhaust hood with microwave/hood combination
 - Remove the washer/dryer from each unit
 - Remove window coverings; Reflect within Furnishings, fixtures and equipment (FF&E)
 - Replace gas range with electric
 - Provide gas dryers in laundry rooms
 - Elevator cabs to be sized to accommodate emergency access and “scooters” used by handicapped students
 - Itemize plumbing fixtures
 - Show pounds/SF of ductwork per unit
 - Increase detail of mechanical system to match that shown for electrical
 - Use Category 6 network cable
 - Provide more detail for security system; provide card swipe for all doors
 - Provide residential grade fire sprinkler system
 - Revise pricing for hearth area; change wording to reflect “special space” rather than “hearth.”
 - Provide summary page for GSF, ASF and efficiency
 - Provide section on Control Quantities
10. PMT requested the following changes be made to the residence hall cost plan detail:
 - Increase detail of mechanical, plumbing and security systems to match detail of electrical section
 - Add a stackable washer/dryer unit to staff apartments
 - Add microwave/exhaust hood combination in kitchen
 - Remove medicine cabinets in student bathrooms; replace with open shelves under sink
 - Add cost category for “miscellaneous millwork”
 - The cost plan should indicate only one telephone enclosure
 - Add (battery pack) emergency lighting
11. PMT requested the following changes be made to the dining commons cost plan detail:
 - Revise mid-point of construction to 2008
 - Delete vinyl tile
 - Add porcelain tile and terrazzo floors in the following areas: lobby/pre-function space, multi-purpose room and queuing lines for the service platforms
 - Add technology category for meeting spaces, wireless capability
 - Add one drop down screen in each meeting/classroom and two in multi-purpose room
 - Add allowance for menu signage/graphics – use \$75,000 allowance
 - Casework and shelving is included in food service equipment
 - Add category for casework to include 30% fixed seating at 15 SF/seat
 - Remove costs for fixed auditorium seating – move to FF&E
 - Add costs for 1,000 lockers in book drop
 - Add dock levelers at loading dock
 - Add millwork category

- Split Group 2 equipment into separate summary – Group 2 equipment will not be part of general contractor's package but financed with the total project costs
 - Add two freight elevators at the service dock
 - Add emergency generator for life safety and maintain food freezers
 - Add specialty lighting category – Alastair McPhail to review hotel/conference center model and add appropriate allowance for restaurant quality lighting
 - Add technology and public address system
 - Increase hoods/ducts to nine; increase CFM from 10,000 to 20,000 SF
12. PMT requested the following changes be made to the site cost detail:
- Revise mid-point of construction to 2007
 - Break site costs and demolition into the established phasing
 - a. Phase 1A, 352 apartment beds and Watkins Drive entry – cost of 200 car surface parking lot and associated landscaping in to be provided in a separate line item;
 - b. Phase 1B, 750 residence hall beds – two northern buildings, 500 seat dining commons and road connection to Linden Street and Aberdeen Drive extension –cost of 188 surface parking lot and associated landscaping in to be provided in a separate line item;
 - c. Phase 2, 500 residence hall beds – two southern buildings, dining commons expansion, convenience store/deli;
 - d. Phase 3, student recreation fields; (Cost estimator to perform a line by line review of the Arroyo project's detail cost for recreation fields)
 - e. Parking structure (based on typical cost/SF)
 - Add masonry monument sign for entry at Watkins Drive turnaround
 - Add costs for masonry site wall along Corporation Yard property line
 - Add costs for street improvements from the north end of the Child Development Center to the corner of Watkins Drive and Blaine Street
 - Increase number of fire hydrants – this number is sixteen (16) based on recommendation by Civil Engineer.
 - Add cost for extending fiber optic from vault 25 – fiber optic will have to be installed in existing cable back to campus source.
13. PMT requested that cost estimator provide cost for recommended parking deck to be located on the east side of Aberdeen-Inverness residence hall. Costs will be based on the floor plans provided by the design team in a previous email to Cumming, LLC and include site development.
14. Design Team to verify cost and phasing of new parallel sanitary sewer line along Linden Street to a service connection in Canyon Crest Drive.
15. Design Team to provide sketch showing point of electrical service connection to cost estimator
16. Design Team to provide sketches required infrastructure improvements per each phase to cost estimator
17. Design Team to provide phased budget to UCR by July 6, 2004.
18. PMT to verify number of bicycle storage required each phase of the project

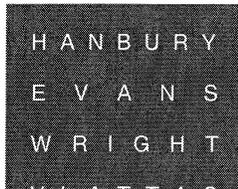
PMT Meeting held on June 23 2004
2:00 – 5:00 pm
Page 4

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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TELECONFERENCE
MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: July 21, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.00

**At the telephone conference on July 21, 2004, from 5:00 PM to 6:30 PM (EST)
the following participated:**

UCR

Kieron Brunelle
Susan Marshburn
Kipp Dougherty
Mac McGinnis
Nita Bullock
Andy Plumley

HEWV

Jane Wright
Buddy Hall

NTD Architects

Tom Christian

Envision Strategies

Claudia Scotty

Cumming, LLC

Lee Namisniak

The following items were discussed:

1. UCR has made the decision that the new housing buildings will be 30-year construction quality rather than 50-year quality
2. Type 5 construction will be utilized for the Apartments and Residence Halls
3. The theater component current shown in Phase 2 will need to be moved to Phase 3 or beyond
4. The CPAC and Design Review Board Meetings for August have been canceled in order to give Housing Services more time to develop a thorough business plan
5. Housing Services anticipates completion of the business plan and their budget targets at the end of August
6. Consultant Team to use the budget targets to reevaluate the program and establish priorities for Phases 1 and 2.
7. The Consultant Team to hold off submitting the administrative draft of the DPP until after the PMT has agreed to the proposed programming revisions
8. PMT is concerned about the use of 0.75% for LEED certification in the General Conditions of the cost data. PMT will consider putting this "below the line."
9. PMT is concerned about the use of a 5% inflation factor in the cost data and asked whether or not this number reflects the cost spikes seen in the current construction market.
10. Cumming, LLC indicated that the price premiums are included in the individual line items and that the 5% rate accommodates anticipated increases for petroleum-based products, cement and concrete products, and drywall.
11. PMT suggests that given the midpoint of construction for a number of the proposed phases are four to six years in the future, a declining escalation be used, i.e. 5%, 4.5%, 4%....
12. PMT is concerned that the price for the recreation fields is too low as compared to the cost defined in the Arroyo project cost data. HEWV to forward the January 2004 update of the Arroyo cost data to Cumming, LLC for comparison.

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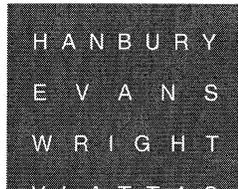
13. Cumming, LLC to remove costs for soccer goals and backstop from cost data
14. PMT is concerned about the cost of the apartments as compared to the Arroyo cost data. Canyon Crest costs per square foot is higher. Cumming, LLC to re-evaluate cost with Arroyo data.
15. Cumming, LLC to provide PMT with a cost comparison of an all 4-bedroom apartment model with the current 2 and 3-bedroom model. The PMT intends to use this data in discussions with the Office of President.
16. Cumming, LLC will re-evaluate the demolition costs of existing family housing to remain to include cost for abatement of hazardous materials as defined in the Family Housing Hazardous Materials Summary dated January 29, 2004

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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TELECONFERENCE
MINUTES



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To: Those Present
From: Jane Cady Wright, AIA
Date: December 3, 2004
Re: Canyon Crest DPP
PMT Meeting
University of California, Riverside
HEWV Project #04006.01

At the telephone conference on December 3, 2004, from 11: 00 AM to 12:00 PM PST the following participated:

UCR

Kieron Brunelle
Susan Marshburn
Andy Plumley
Ferdinand McGinnis
Albert Esqueda

HEWV

Jane Wright
Buddy Hall
Steve Wright
Rosie Cuartelon

NTD

Tony O'Keefe

The following items were discussed:

1. Option A was chosen by the PMT as the preferred option
 - a. Operational efficiency
 - b. More foundation and roof area but savings on structural and seismic considerations, elevators, stairs and long-term operational costs
 - c. Game room and offices work on 2nd floor
2. Mail pavilion could be a temporary structure – HEWV to study layout
3. HEWV to finalize site plan with attention to proximity of ultimate size of dining building to the perimeter road and the future apartments phase.
4. PMT to provide to HEWV the desired program efficiency percentage to be used in the revised program
5. Separate pricing shall be provided in the DPP for:
 - a. 2009-10 – 750 bed residence hall, 500 seat dining commons, mail pavilion structure
 - b. 2010-11 – 500 bed residence hall and Convenience store/deli
 - c. 2012-13 – 600 seat dining expansion – provide separate price
 - d. 2012-13 – Conference services building with build-out of mail pavilion – provide separate price
 - e. 2012-13 – 400 beds of student apartments - provide separate price
 - f. 2012-13 – Recreation fields – provide separate price
 - g. 2008-2009 – Alternative for interim family apartments as an initial phase of construction
 - h. Parking, infrastructure costs shall be separated per phase
6. PMT will have an in-house meeting regarding West Campus housing on January 5 – Canyon Crest DPP to assume that student apartments will occur after residence hall and dining phases – the DPP administrative draft will generally state that, at the time of its writing, it is not clear whether family housing units will be constructed on the West Campus site in a timeframe that will allow relocation of existing family housing units. The planning

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process is on-going the outcome of which will be accommodated for the final draft.

7. The administrative draft will be forwarded to UCR for delivery on December 21, 2004 and will be distributed to the DRB and PMT members before UCR's Holiday break.

The aforementioned is our understanding of items discussed and decisions made during the referenced meeting. Please contact this office with any additions or corrections to these notes.

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File: MM_12_03_04 11-00 to 12-00 (draft).doc

- 9.1 Family Apartments as Phase 1
- 9.2 Revised Program Summary
- 9.3 Revised Phasing Diagram
- 9.4 Room Data Sheets
- 9.5 Cost Data

9.1 Family Housing as Phase 1

As previously stated in Section 1.0 of this document, the Strategic Plan for Housing (SPH) calls for the relocation of family housing to the West Campus prior to residence hall development on the Canyon Crest site. As of this writing there is a possibility of a delay in development on the West Campus. If this occurs it will necessitate a modification in the SPH's timeline and require that student apartments currently planned in future phases be accelerated to Phase 1 to open in 2008-09 to serve as interim family housing.

This change will require that the unit mix and size of the apartments recommended for single students be modified to accommodate the current family housing market. UCR Housing staff has indicated their family housing client request the following:

- 2 and 3-bedroom apartments at a ratio of approximately 80% to 20%
- Each bedroom shall accommodate a double bed
- Each unit shall have one bathroom with a tub/shower combination
- A kitchen with area for a dining table
- A living room

9.2 Program Summary

Room code	Area Description	Phase 1 Quantity	Phase 2 Quantity	ASF	Total ASF	Occupancy
Student Apartments					115,996	
982	2 - Bedroom Apartment Option 1	116			0	232
920	Kitchen	116	0	92	10,672	
962	Dining	116	0	55	6,380	
920	Living	116	0	97	11,252	
924	Bathroom	116	0	47	5,452	
912	Bedroom w/closet (double bed)	232	0	122	28,304	
980	Linen Closet	116	0	9	1,044	
980	Coat Closet	116	0	11	1,276	
962/963	Internal Circulation	116		108	12,528	
982	2 - Bedroom Apartment Option 2	16			0	32
920	Kitchen	16	0	75	1,200	
962	Dining	16	0	37	592	
920	Living	16	0	142	2,272	
924	Bathroom	16	0	45	720	
912	Bedroom w/closet (double bed)	32	0	122	3,904	
980	Linen Closet	16	0	9	144	
980	Coat Closet	16	0	11	176	
962/963	Internal Circulation	16		144	2,304	
981	3 - Bedroom Apartment	31	0		0	93
920	Kitchen	31	0	67	2,077	
962	Dining	31	0	72	2,232	
920	Living	31	0	116	3,596	
924	Bathroom	31	0	49	1,519	
912	Bedroom w/closet (double bed)	93	0	122	11,346	
980	Linen Closet	31	0	9	279	
980	Coat Closet	31	0	11	341	
962/963	Internal Circulation	31	0	206	6,386	
Support Spaces					6,040	
720	Student Personal Storage	1	0	600	600	0
402	Housekeeping/custodial Closets	8	0	70	560	0
920	Telecommunications Closets	8	0	70	560	0
720	Bicycle Storage	2	0	800	1,600	0
985	Laundry	16	0	170	2,720	
Subtotal ASF					122,036	
Program Efficiency Ratio @ 66%						
Unenclosed areas					17,000	8,500
Target GSF					193,403	

Target GSF/Bed @ 357 Beds

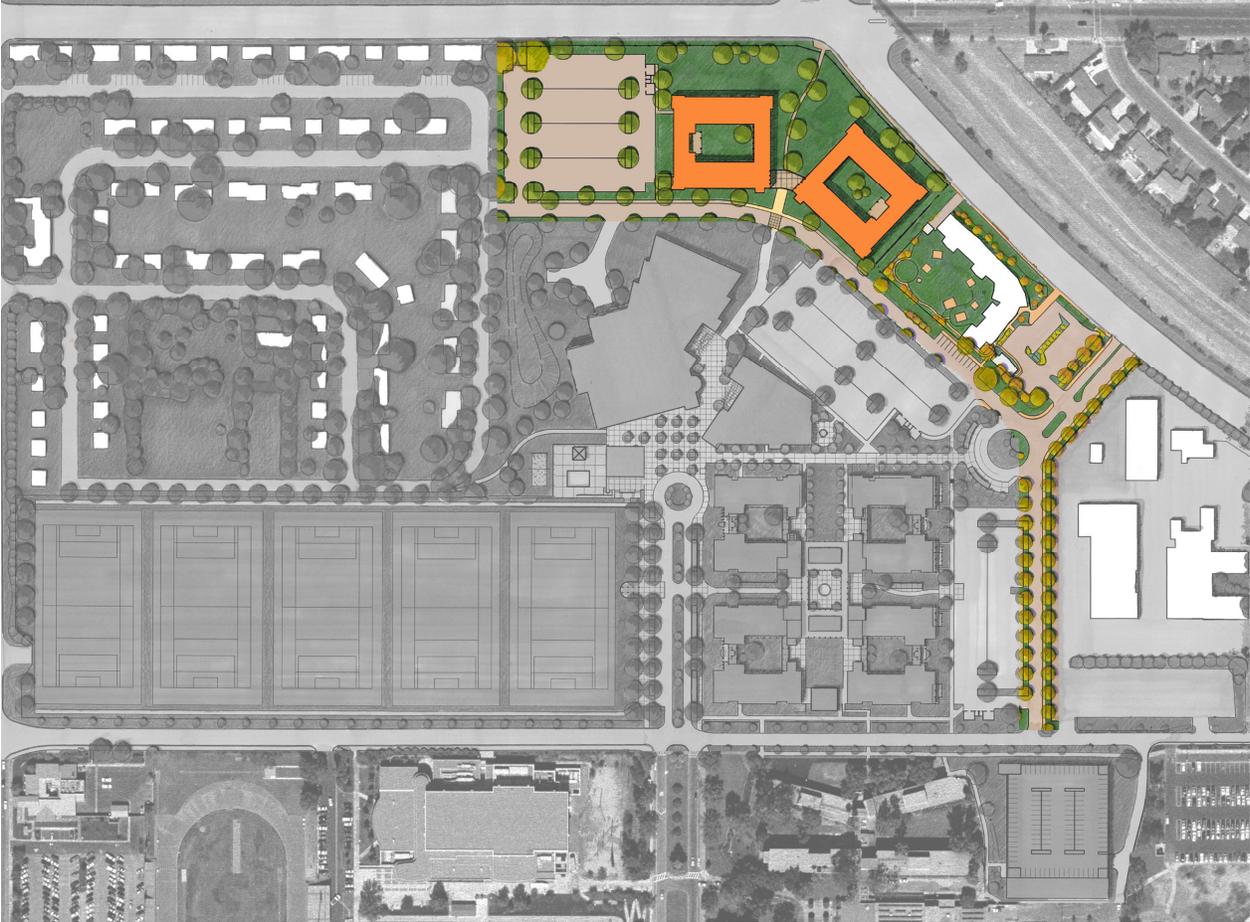


- 2 BEDROOM UNIT
- 3 BEDROOM UNIT
- SUPPORT SPACES
- CIRCULATION



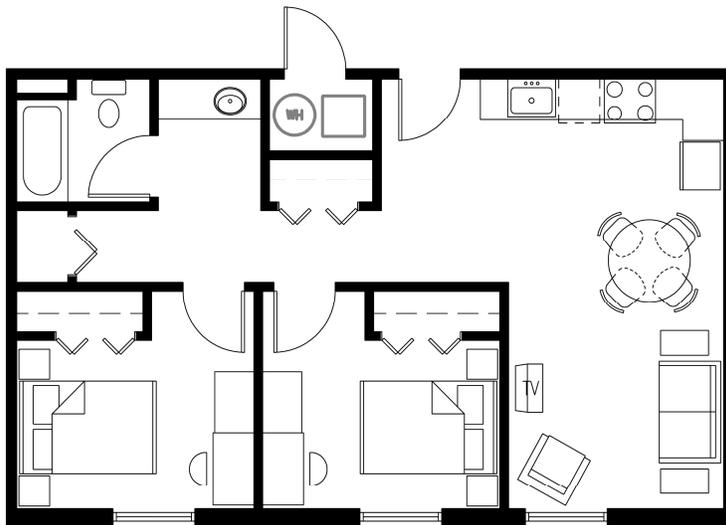
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT
- SUPPORT SPACES
- CIRCULATION

9.3 Phasing Diagram



9.4 Room Data Sheets

Canyon Crest Site DPP
Program Development & Space Outline



2 BEDROOM APT – OPTION 1

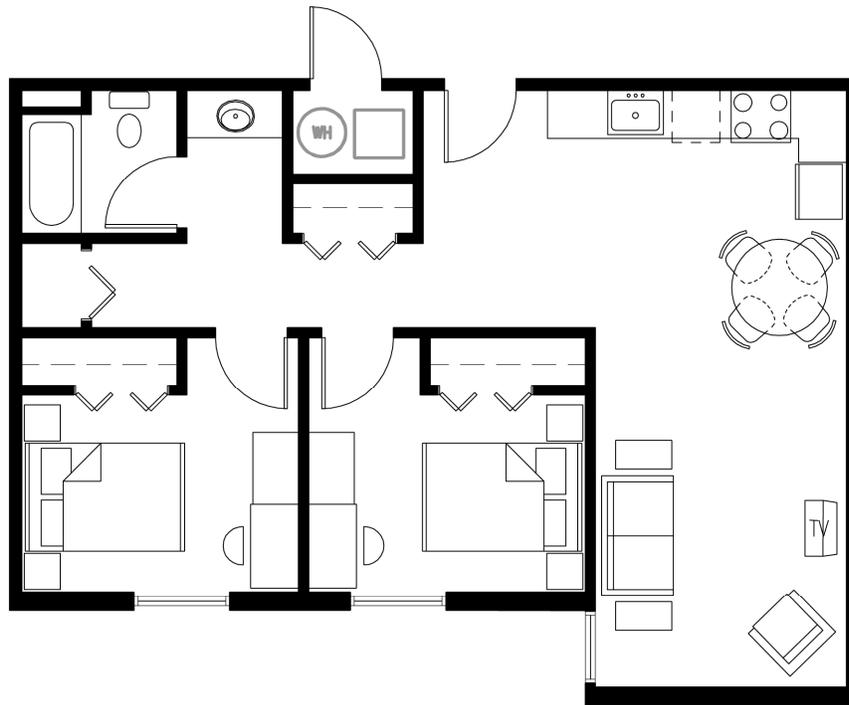
663 NSF

Canyon Crest Site DPP

Program Development & Space Outline

	AREA		OCCUPANCY AREA	
	Target NSF	Institutional Standards	Design	ADA Unit NSF
Family Apartment				
2 Bedroom Apartment	663			705
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	21' x 35' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable Windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe/horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75 °F – dedicated 4-pipe fan coil unit.		
	HUMIDITY	50% ±20% (No Mechanical control)		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC criteria.		
PLUMBING	Self-rimming stainless steel single compartment sink with garbage disposal, under-counter lavatory, floor mounted toilet, tub/shower. Water heater.			
CASEWORK	Kitchen cabinets			
FURNITURE/ EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, three double beds, dressers, desks with chairs			
SECURITY	Window sash locks Key lock - door			

Canyon Crest Site DPP
Program Development & Space Outline



2 BEDROOM APT – OPTION 2

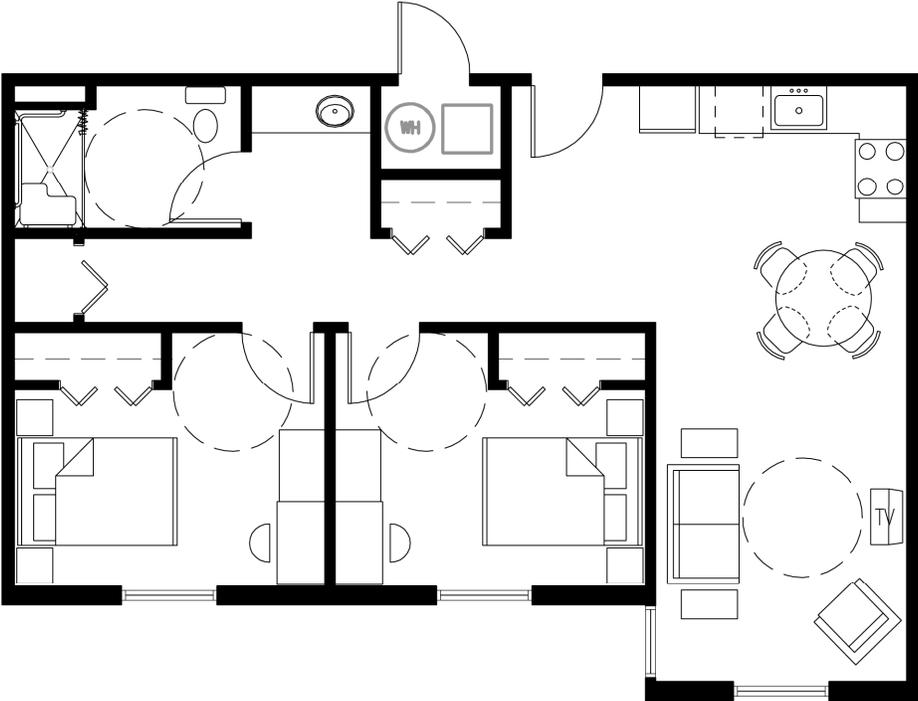
707± NSF

Canyon Crest Site DPP

Program Development & Space Outline

	AREA	Institutional Standards	OCCUPANCY AREA	
			Design	ADA Unit NSF
Family Apartment	Target NSF			
2 Bedroom Apartment – Option 2	707			
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	25' x 34' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWES	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable Windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe/horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75 °F – dedicated 4-pipe fan coil unit.		
	HUMIDITY	50% ±20% (No Mechanical control)		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC criteria.		
PLUMBING	Self-rimming stainless steel single compartment sink with garbage disposal, under-counter lavatory, floor mounted toilet, tub/shower. Water heater.			
CASEWORK	Kitchen cabinets			
FURNITURE/ EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, three double beds, dressers, desks with chairs			
SECURITY	Window sash locks Key lock - door			

Canyon Crest Site DPP
Program Development & Space Outline



2 BEDROOM APT – OPTION 2 ADA

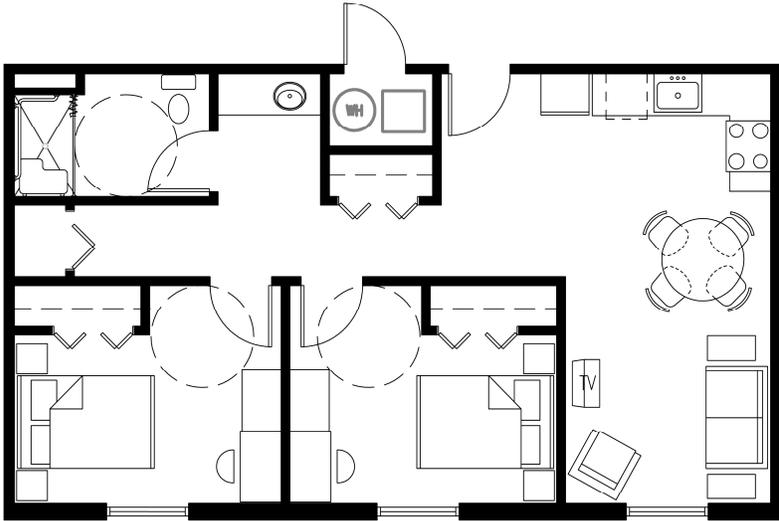
768± NSF

Canyon Crest Site DPP

Program Development & Space Outline

	AREA	Institutional Standards	OCCUPANCY AREA	
			Design	ADA Unit NSF
Family Apartment		Target NSF		
2 Bedroom Apartment – Option 2 ADA		768		
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	25' x 38' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable Windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe/horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75 °F – dedicated 4-pipe fan coil unit.		
	HUMIDITY	50% ±20% (No Mechanical control)		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC criteria.		
PLUMBING	Self-rimming stainless steel single compartment sink with garbage disposal, under-counter lavatory, floor mounted toilet, tub/shower. Water heater.			
CASEWORK	Kitchen cabinets			
FURNITURE/ EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, three double beds, dressers, desks with chairs			
SECURITY	Window sash locks Key lock - door			

Canyon Crest Site DPP
Program Development & Space Outline



2 BEDROOM APT – ADA UNIT

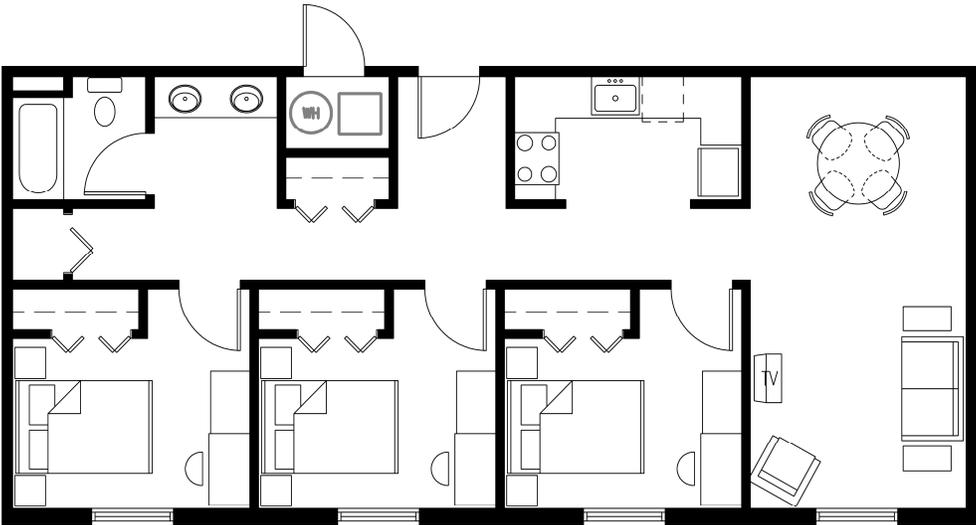
705± NSF

Canyon Crest Site DPP

Program Development & Space Outline

		AREA	OCCUPANCY	
Staff/Living Spaces (staff: students)		Target NSF	Institutional Standards	Design
2 Bedroom Apartment – ADA Unit		705		
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	21' x 37' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable Windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe/horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75 °F – Multiple zones with dedicated 4-pipe fan coil unit for each zone.		
	HUMIDITY	50% ±20% (No Mechanical control)		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC criteria.		
PLUMBING	Self-rimming stainless steel single compartment sink with garbage disposal, under-counter lavatory, floor mounted toilet, ADA shower. Water heater.			
CASEWORK	Kitchen cabinets			
FURNITURE/ EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, three double beds, dressers, desks with chairs			
SECURITY	Window sash locks Key lock - door			

Canyon Crest Site DPP
Program Development & Space Outline



3 BEDROOM APT

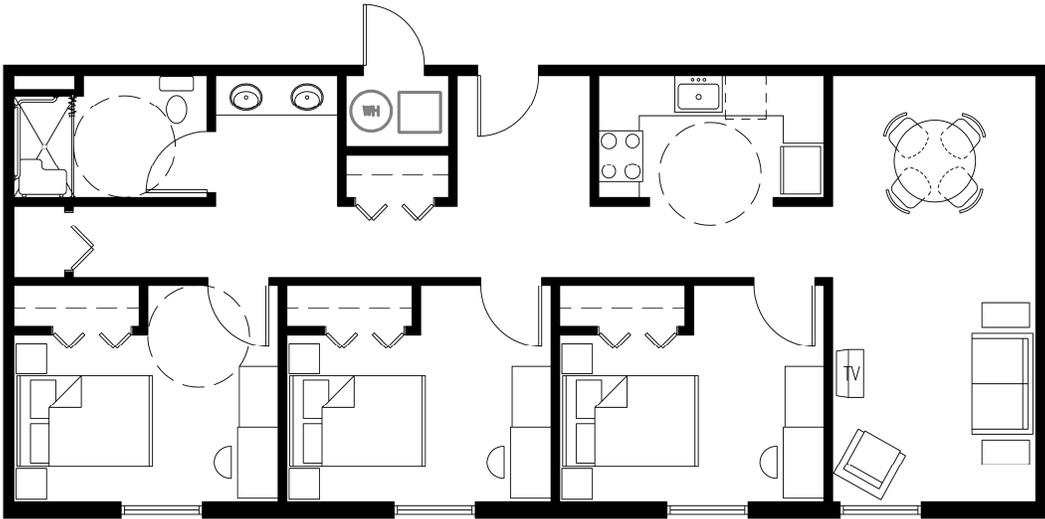
896± NSF

Canyon Crest Site DPP

Program Development & Space Outline

	AREA		OCCUPANCY AREA	
Family Apartment	Target NSF	Institutional Standards	Design	ADA UNIT NSF
3 Bedroom Apartment	896			
FUNCTION	Sleep, study and bath accommodations			
DIMENSIONS	21' x 47' ±			
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting			
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad			
ACOUSTIC	Sound separation between complete living units and walls surrounding bath			
VIEWS	Views desirable where possible			
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows			
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location		
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc		
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None		
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None		
MECHANICAL	TEMPERATURE	75 °F – Multiple zones with dedicated 4-pipe fan coil unit for each zone		
	HUMIDITY	50% ±20% (No Mechanical control)		
	VENTILATION	Bath – Exhaust		
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria		
PLUMBING	Self-rimming stainless steel single compartment sink with garbage disposal, under-counter lavatory, floor mounted toilet, tub/shower. Water heater.			
CASEWORK	Kitchen cabinets			
FURNITURE / EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, three double beds, dressers, desks with chairs			
SECURITY	Window sash locks Key lock – door			

Canyon Crest Site DPP
Program Development & Space Outline



3 BEDROOM APT – ADA UNIT

959± NSF

Canyon Crest Site DPP

Program Development & Space Outline

	AREA		OCCUPANCY AREA
Staff/Living Spaces (staff:students)	Target NSF	Institutional Standards	Design
3 Bedroom Apartment – ADA Unit	959		
FUNCTION	Sleep, study and bath accommodations		
DIMENSIONS	21' x 50± (student room) and bath		
CRITICAL CLEARANCES	Exterior wall with window to accommodate full width or length of bed Furniture must layout without lofting		
FINISHES	Floor: Carpet Base: Wood Walls: Painted GWB Ceiling: Painted GWB Doors: Wood Windows: Aluminum or Vinyl Clad		
ACOUSTIC	Sound separation between complete living units and walls surrounding bath		
VIEWS	Views desirable where possible		
DAYLIGHTING NATURAL VENT.	Sleeping Area: Operable windows		
ELECTRICAL	POWER	Sleeping Area: General duplex receptacles per NEC 210C, except dedicated circuit. Study duplex IG outlet, dedicated Bath Area: GFI outlet, dedicated circuit per bathroom/vanity location	
	LIGHTING	Sleeping Area: Indirect/Direct – General: 5-10 Fc, Study: 15-25 (general), 40-50 Fc (task) Bath Area: 15-25 Fc	
	COMMUNICATIONS	Sleeping Area: Voice: CAT3 / Data: CAT6 (1 each per student). TV outlet Bath Area: None	
	SPECIAL	Sleeping Area: Smoke detector strobe / horn. Master switch to control lighting at switched outlets Bath Area: None	
MECHANICAL	TEMPERATURE	75 °F – Multiple zones with dedicated 4-pipe fan coil unit for each zone	
	HUMIDITY	50% ±20% (No Mechanical control)	
	VENTILATION	Bath – Exhaust	
	ACOUSTIC	Air conditioning equipment acoustical performance compatible with space NC Criteria	
PLUMBING	One self-rimming stainless steel sink with garbage disposal, (2) under-counter lavatories, floor-mounted toilets, ADA showers. Water heater.		
CASEWORK	Kitchen cabinets		
FURNITURE / EQUIPMENT	Refrigerator, range with oven, sofa, chair, tables, dining table, three double beds, dressers, desks with chairs		
SECURITY	Window sash locks Key lock – door		

10.1 Parking Garage

10.2 Site Diagram

10.3 Floor Plans

10.1 Parking Garage

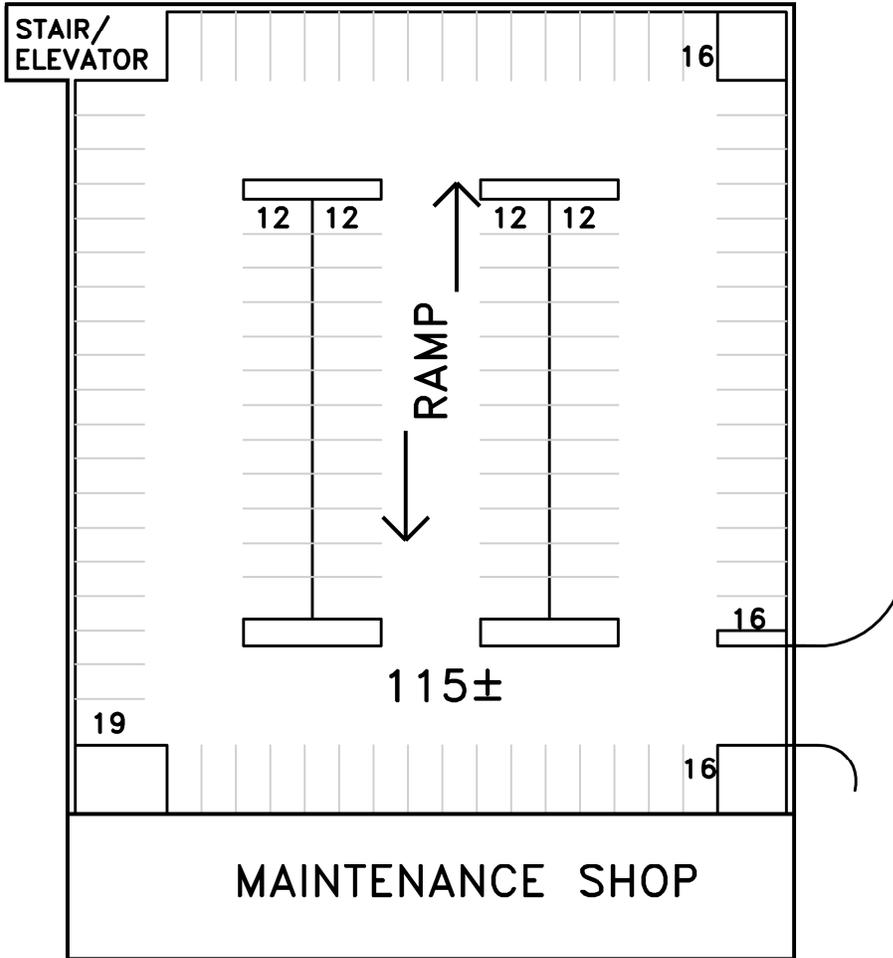
As previously stated in Section 1.0 of this document, the University requested that the Design Team conduct a preliminary study to evaluate the potential of providing a parking garage on the east side of Aberdeen/Inverness residence halls on the current site of Lot 22. The garage program includes:

- Approximately 500 cars including the quantity currently provided in Lot 22
- A new 10,000 ASF Maintenance shop on the first floor to replace the current maintenance shop that will be lost at Canyon Crest.

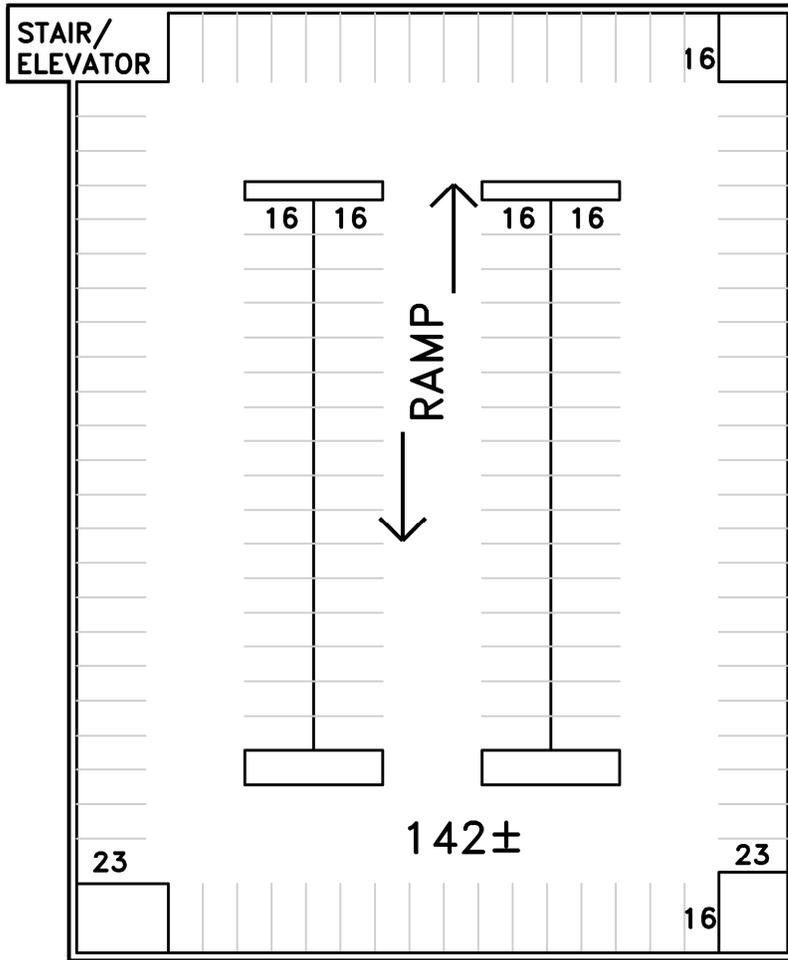
10.2 Site Diagram



10.3 Floor Plans



FIRST FLOOR



TYPICAL FLOOR

University of California, Riverside

Campus Green Building
Baseline Substantiation

FINAL DRAFT

June 30, 2005

**Campus Green Building
Baseline Substantiation
June 2005**

Table of Contents

Introduction		4
Table 1	Riverside Campus Baseline Points	5
SS - Sustainable Sites		
Prerequisite 1	Erosion & Sedimentation Control	7
SS 1.0	Site Selection	8
SS 4.1	Alternative Transportation: Public Transportation Access	9
SS 4.2	Alternative Transportation: Bicycle Storage & Showers	10
SS 5.2	Development Footprint	11
WE - Water Efficiency		
WE 2	Innovative Wastewater Technologies	12
WE 3.1	Water Use Reduction: 20%	13
EA - Energy & Atmosphere		
Prerequisite 1	Fundamental Building Systems Commissioning	14
Prerequisite 2	Minimum Energy Performance	15
Prerequisite 3	CFC Reduction in HVAC&R Equipment	16
EA 1.0	Optimize Energy Performance Baseline	17
EA 4.0	Ozone Protection	18
MR - Materials & Resources		
Prerequisite 1	Storage & Collection of Recyclables	19
MR 2.1	Construction Waste Management: Divert 50%	20
MR 5.1	Regional Materials – 20%	21

EQ – Indoor Environmental Quality

Prerequisite 1	Minimum IAQ Performance	22
Prerequisite 2	Environmental Tobacco Smoke (ETS) Control	23
EQ 3.1	Construction IAQ Management Plan: During Construction	24
EQ 3.2	Construction IAQ Management Plan: Before Occupancy	25
EQ 4.1	Low Emitting Materials: Adhesives & Sealants	26
EQ 4.2	Low Emitting Materials: Paints & Coatings	27
EQ 4.3	Low Emitting Materials: Carpets	28
EQ 5.0	Indoor Chemical & Pollutant Source Control	29
EQ 7.1	Thermal Comfort: Compliance with ASHRAE 55-1992	30

ID - Innovation & Design Process

Credit 2	LEED Accredited Professional	31
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Introduction

The following document describes the particular LEED™- equivalent credits (based on LEED-NC 2.1) UCR has selected for its baseline and provides substantiation for why these credits were included.

The University of California, Riverside is situated on 1,106 acres located three miles east of downtown Riverside. The main campus is bisected by the 215/60 Freeways, dividing the land mass into the East and West Campuses. The East Campus is primarily built out, and is developed with the majority of all educational and support buildings of the campus.

The West Campus is primarily agricultural research land which is slated for future campus development, as indicated in the 2005 LRDP. Because of the variety of conditions affecting the two sides of the campus, UCR has developed two separate baselines, one each for the East and West Campuses.

Some of the credits described in this synopsis assume that UCR has revised its Design Guidelines and Master Landscape Plan guidelines to conform to and support the intent of the baseline. The UCR campus anticipates completion of these revisions in July 2006, in conjunction with a forthcoming Sustainability Master Plan to be undertaken in 2005-06.

Table 1 – Riverside Campus Baseline Points

Riverside Campus Baseline Implementation Plan

Scope	LEED 2.1	LEED Campus Only	Labs21 EPC Only	Item	Prerequisite	EAST CAMPUS	WEST CAMPUS	Notes
Sustainable Sites	Y			SS Prerequisite 1 - Erosion & Sedimentation Control	Y			
Sustainable Sites	Y			SS 1 - Site Selection		1	0	CPP Point
Sustainable Sites	Y			SS 2 - Development Density				
Sustainable Sites	Y			SS 3 - Brownfield Redevelopment				
Sustainable Sites	Y			SS 4.1 - Alternative Transportation- Public Transportation Access		1	1	CPP Point
Sustainable Sites	Y			SS 4.2 - Alternative Transportation - Bicycle Storage & Changing Rooms		1	1	CPP Point
Sustainable Sites	Y			SS 4.3 - Alternative Transportation - Alternative Fuel Vehicles				
Sustainable Sites	Y			SS 4.4 - Alternative Transportation- Parking Capacity				
Sustainable Sites	Y			SS 5.1 - Reduced Site Disturbance- Protect or Restore Open Space				
Sustainable Sites	Y			SS 5.2 - Reduced Site Disturbance- Development Footprint		1	1	CPP Point
Sustainable Sites	Y			SS 6.1 - Stormwater Management- Rate and Quantity				
Sustainable Sites	Y			SS 6.2 - Stormwater Management- Treatment				
Sustainable Sites	Y			SS 7.1 - Heat Island Effect - Non-Roof				
Sustainable Sites	Y			SS 7.2 - Heat Islands Effect - Roof				
Sustainable Sites	Y			SS 8.1 - Light Pollution Reduction - Exterior Lighting				
Sustainable Sites		Y		(Campus AG) SS 8.2 - Light Pollution Reduction - Exterior Lighting Master Plan				
Sustainable Sites		Y		(Campus AG) SS 9 - Mixed Use Development				
Sustainable Sites		Y		(Campus AG) SS 10 - Natural Resource Salvage and Rescue, and Green Landscaping				
Sustainable Sites				(Campus AG) SS 11 - Greenways and Wildlife Corridors				
Sustainable Sites			Y	Labs21 SS 12.1 - Safety and Risk Management - Air Effluent				
Sustainable Sites			Y	Labs21 SS 12.2 - Safety & Risk Management - Water Effluent				
Water Efficiency			Y	Labs21 WE Prerequisite 1 - Laboratory Equipment Water Use	Y			
Water Efficiency	Y			WE 1.1 - Water Efficient Landscaping- Reduce by 50%				
Water Efficiency	Y			WE 1.2 - Water Efficient Landscaping- No Potable Use or No Irrigation				
Water Efficiency	Y			WE 2 - Innovative Wastewater Technologies		1	1	PP/ODC Point
Water Efficiency	Y			WE 3.1 - Water Use Reduction - 20% Reduction		1	1	PP/ODC Point
Water Efficiency	Y			WE 3.2 - Water Use Reduction- 30% Reduction				
Water Efficiency		Y		Labs21 WE 4.1 - Process Water Efficiency				
Water Efficiency		Y		Labs21 WE 4.1 - Process Water Efficiency				
Energy & Atmosphere	Y			EA Prerequisite 1 - Fundamental Building Systems Commissioning	Y			
Energy & Atmosphere	Y			EA Prerequisite 2 - Minimum Energy Performance	Y			
Energy & Atmosphere	Y			EA Prerequisite 3 - CFC Reduction in HVAC&R Equipment	Y			
Energy & Atmosphere			Y	Labs21 EA Prerequisite 2 - Assess Minimum Ventilation Requirements	Y			
Energy & Atmosphere	Y			EA 1 - Optimize Energy Performance		4	4	PP/ODC Point
Energy & Atmosphere	Y			EA 2.1 - Renewable Energy- 5%				
Energy & Atmosphere	Y			EA 2.2 - Renewable Energy - 10%				
Energy & Atmosphere	Y			EA 2.3 - Renewable Energy- 20%				
Energy & Atmosphere	Y			EA 3 - Additional Commissioning				
Energy & Atmosphere	Y			EA 4 - Ozone Protection		1	1	PP Point
Energy & Atmosphere	Y			EA 5.1 - Measurement and Verification - Building Systems				
Energy & Atmosphere		Y		(Campus AG) EA 5.2 - Measurement and Verification – Central Monitoring and Control				
Energy & Atmosphere	Y			EA 6 - Green Power				
Energy & Atmosphere	Y			(Campus AG) EA 7 - Atmospheric Emissions				
Energy & Atmosphere	Y			(Campus AG) EA 8 - CO2 Reduction				
Energy & Atmosphere		Y		(Campus AG) EA 9.1 - Combined Heat and Power – 60% Efficiency				
Energy & Atmosphere	Y			(Campus AG) EA 9.2 - Combined Heat and Power – 75% Efficiency				
Energy & Atmosphere		Y		Labs21 EA 10 - Energy Supply Efficiency				

Scope	LEED 2.1	LEED Campus Only	Labs21 EPC Only	Item	Prerequisite	EAST CAMPUS	WEST CAMPUS	Notes
Materials & Resources	Y			MR Prerequisite 1 - Storage & Collection of Recyclables	Y			
Materials & Resources			Y	Labs21 MR Prerequisite 2 - Hazardous Material Handling	Y			
Materials & Resources	Y			MR 1.1 - Building Reuse- Maintain 75% of Existing Walls, Floors and Roof				
Materials & Resources	Y			MR 1.2 - Building Reuse-Maintain 100% of Existing Walls, Floors and Roof				
Materials & Resources	Y			MR 1.3 - Building Reuse- Maintain 100% of Shell/Structure and 50% of Non-Shell/Non-Structure				
Materials & Resources	Y			MR 2.1 - Construction Waste Management- Divert 50% From Landfill		1	1	ODC Point
Materials & Resources	Y			MR 2.2 - Construction Waste Management- Divert 75% From Landfill				
Materials & Resources	Y			MR 3.1 - Resource Reuse: 5%				
Materials & Resources	Y			MR 3.2 - Resource Reuse- 10%				
Materials & Resources	Y			MR 4.1 - Recycled Content: Use 5% post-consumer or 10% postconsumer + post-industrial				
Materials & Resources	Y			MR 4.2 - Recycled Content: Use 10% post-consumer or 20% post-consumer + post-industrial				
Materials & Resources	Y			MR 5.1 - Regional Materials- 20% manufactured regionally		1	1	ODC Point
Materials & Resources	Y			MR 5.2 - Regional Materials- 50% extracted regionally				
Materials & Resources	Y			MR 6 - Rapidly Renewable Materials				
Materials & Resources	Y			MR 7 - Certified Wood				
Materials & Resources		Y	Y	(Campus AG) MR 8 - Site Recycling and Solid Waste Management Master Plan & Labs21 MR 8 - Chemical Resource Management				
Indoor Env'tl Quality	Y			IEQ Prerequisite 1 - Minimum IAQ Performance	Y			
Indoor Env'tl Quality	Y			IEQ Prerequisite 2 - Environmental Tobacco Smoke (ETS) Control	Y			
Indoor Env'tl Quality			Y	Labs21 IEQ Prerequisite 3 - Laboratory Ventilation	Y			
Indoor Env'tl Quality			Y	Labs21 IEQ Prerequisite 4 - Exterior Door Notification System	Y			
Indoor Env'tl Quality	Y			IEQ 1 - Carbon Dioxide (CO2) Monitoring				
Indoor Env'tl Quality	Y			IEQ 2 - Ventilation Effectiveness				
Indoor Env'tl Quality	Y			IEQ 3.1 - Construction IAQ Management Plan- During Construction		1	1	ODC Point
Indoor Env'tl Quality	Y			IEQ 3.2 - Construction IAQ Management Plan- After Construction		1	1	ODC Point
Indoor Env'tl Quality	Y			IEQ 4.1 - Low-Emitting Materials- Adhesives & Sealants		1	1	ODC Point
Indoor Env'tl Quality	Y			IEQ 4.2 - Low-Emitting Materials- Paints and Coatings		1	1	ODC Point
Indoor Env'tl Quality	Y			IEQ 4.3 - Low-Emitting Materials- Carpet		1	1	ODC Point
Indoor Env'tl Quality	Y			IEQ 4.4 - Low-Emitting Materials- Composite Wood				
Indoor Env'tl Quality	Y			IEQ 5 - Indoor Chemical & Pollutant Source Control		1	1	ODC Point
Indoor Env'tl Quality	Y			IEQ 6.1 - Controllability of Systems- Perimeter Spaces				
Indoor Env'tl Quality	Y			IEQ 6.2 - Controllability of Systems- Non-Perimeter Spaces				
Indoor Env'tl Quality	Y			IEQ 7.1 - Thermal Comfort- Compliance with ASHRAE 55-1992		1	1	ODC Point
Indoor Env'tl Quality	Y			IEQ 7.2 - Thermal Comfort- Permanent Monitoring System				
Indoor Env'tl Quality	Y			IEQ 8.1 - Daylight and Views- Daylight 75% of Spaces				
Indoor Env'tl Quality	Y			IEQ 8.2 - Daylight and Views- Views for 90% of Spaces				
Indoor Env'tl Quality		Y		(Campus AG) IEQ 9 - Lighting Quality				
Indoor Env'tl Quality		Y		(Campus AG) IEQ 10 - Acoustic Quality				
Indoor Env'tl Quality			Y	Labs21 IEQ 11 - Indoor Environmental Safety				
Innovation in Design	Y	Y	Y	ID 1 - Innovation in Design				
Innovation in Design	Y	Y	Y	ID 2 - LEED Accredited Professional		1	1	ODC Point
TOTAL BASELINE:						21	20	

SS – Prerequisite 1 Erosion & Sedimentation Control

Intent

Control erosion to reduce negative impacts on water and air quality.

Discussion

To fulfill this prerequisite, a sediment and erosion control plan should be designed specific to the site and conforming to EPA document number EPA 832/R-92-005 (September 2000) – Storm Water Management for Construction Activities/Chapter 3 or local erosion and sedimentation control standards and codes, whichever is more stringent.

Substantiation: An erosion control plan is required through construction documents for every project that would affect soil movement at UCR. Contractors are responsible for developing the plan, implementing it during construction, and are liable in case of failure of the plan to contain sediment, dust, etc. Contractors shall provide a copy of the erosion control plan to Capital & Physical Planning prior to the commencement of work.

Prerequisite Fulfillment: Declare by signed letter template that a sediment and erosion control plan has been designed specific to the site that conforms to EPA Document No. EPA 832/R-92-005 (September 2000) – Storm Water Management for Construction Activities/ Chapter 3.

Evaluation

No Points are given. This is required and will be achieved at all UCR projects.

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

SS 1.0 Site Selection

Intent

Avoid development of inappropriate sites and reduce the environmental impact from the location of a building on a site.

Discussion

To achieve this point, building, roads, or parking should not be developed on prime farmland, on 100-year flood plains, on habitats of endangered species, within 100 feet of any water including wetlands, or previously public parkland.

Substantiation: Compliance with the LRDP land use map would mean that projects on the East Campus will fall under these requirements; however, development on the West Campus could occur on land which has been deemed as prime farmland by the State of California. Although mitigation measures have been identified in conjunction with the 2005 LRDP Environmental Impact Report to reduce this impact, they do not meet the intent of LEED of reducing the impact to prime farmland. On the East Campus, building sites are primarily located as infill within existing development or on parking lots as defined by the Long Range Development Plan. Environmental impacts of siting are minimized as projects go through standard/required CEQA review.

Point Achievement: Declare by signed letter template that the selected site is not situated on any sites that do not include farmland, flood plains, endangered species habitat, wetlands, or parkland.

Evaluation

This point is achievable on the East Campus. The campus shall re-visit this as a baseline point specifically with regard to the prime farmland designation issue on the West Campus.

A	East Campus	1 point
B	West Campus	0 point

Approved:

Timothy Ralston, AIA
Assistant Vice Chancellor
Capital & Physical Planning

Date:

Juanita Bullock, AICP, ASLA
Campus Physical Planner
Capital & Physical Planning

SS 4.1 Alternative Transportation: Public Transportation Access

Intent

Reduce pollution and land development impacts from automobile use.

Discussion

To achieve this point, projects should be located within ½ mile of a commuter rail, light rail or subway station or ¼ mile of two or more public or campus bus lines usable by building occupants.

Substantiation: The campus is implementing the Multi-Modal Transportation Management Plan. In this regard, the campus is coordinating transit with Riverside Transit Agency and the light rail Metrolink commuter service (future station located adjacent to campus boundary at northern border). In addition enhancements to the bicycle path network on campus will link the campus to city bike lanes and provide bike racks, bike lockers, and bike racks on transit.

Most campus sites are located within a ½ mile of light rail or a ¼ mile of two or more bus lines, or are connected to these sites by campus-operated shuttles to bus stops off campus.

Point Achievement: Declare by signed letter template that project building(s) is located within required proximity to mass transit. Provide appropriate area drawing or transit map highlighting building location(s).

Evaluation

Potential point is achievable at most campus sites.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Timothy Ralston, AIA
Assistant Vice Chancellor
Capital & Physical Planning

Date:

Juanita Bullock, AICP, ASLA
Campus Physical Planner
Capital & Physical Planning

SS 4.2 Alternative Transportation: Bicycle Storage & Changing Rooms

Intent

Reduce pollution and land development impacts from automobile use.

Discussion

To achieve this point in campus environments of more than 15 acres, provide secure bicycle storage with convenient changing/shower facilities (within 250 yards actual distance) for 5% or more of regular building occupants.

Substantiation: Bicycle storage and changing/shower rooms will be installed with projects as well as in central locations shared by a number of buildings on both the East and West Campuses where not already installed.

Point Achievement: Declare by signed letter template that adequate and well-located bicycle storage and showers are available to at least 5% of building occupants by providing composite calculations for all buildings and a map showing the building(s) are within 250-yard actual distance of the shower facility. Adopt campus standard requiring that all future construction meet the LEED requirements for this point.

Evaluation

1 Point is achievable on the West Campus & East Campus.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Timothy Ralston, AIA
Assistant Vice Chancellor
Capital & Physical Planning

Date:

Juanita Bullock, AICP, ASLA
Campus Physical Planner
Capital & Physical Planning

SS 5.2 Development Footprint

Intent

Conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

Discussion

To achieve this point on undeveloped sites, the campus will designate an open space area equal to the development footprint of the new construction.

Substantiation: Language will be incorporated into the pre-design documents requiring that projects will incorporate open-space requirements equal to the space of the development footprint. Language in the LRDP and various campus area plans designates open-space requirements throughout campus. Future landscape and design guidelines will include language requiring open-space for all new construction equal to the development footprint.

Point Achievement: Designate open space area on campus that is equal to the development footprint in pre-design documents. Provide a letter stating that the open space will be conserved for the life of the building.

Evaluation

1point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Timothy Ralston, AIA
Assistant Vice Chancellor
Capital & Physical Planning

Date:

Juanita Bullock, AICP, ASLA
Campus Physical Planner
Capital & Physical Planning

WE 2 Innovative Wastewater Technologies

Intent

Reduce generation of wastewater and potable water demand, while increasing the local aquifer recharge.

Discussion

To achieve this point, the campus must reduce the use of municipally provided potable water for building sewage conveyance by a minimum of 50%, OR treat 100% of wastewater on site to tertiary standards.

Substantiation: UCR commits to installing waterless urinals and specifying low-flow fixtures, this point can be earned at any campus site. Green criteria for water use reduction will be incorporated into campus design guidelines and specifications. Waterless urinals, low-flow toilets and bathroom sink sensors to be incorporated into campus design standard.

Approach to Substantiation: Declare by signed letter template that the project uses at least 20% less water than baseline fixture performance requirements of the Energy Policy Act of 1992. Support declaration by providing the spreadsheet calculation demonstrating that water-consuming fixtures specified for the stated occupancy and use of the building reduce occupancy-based potable water consumption by 20% compared to baseline conditions. If there are multiple buildings in the project scope, enter aggregate data in the letter template.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

WE 3.1 Water Use Reduction: 20% Reduction

Intent

Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Discussion

To achieve this point, strategies can be adopted that, in aggregate, use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting Energy Policy Act of 1992 fixture performance requirements. Estimate the potable and non-potable water needs for the building. Use high efficiency fixtures, dry fixtures such as waterless urinals, and occupant sensors to reduce the potable water demand. Consider reuse of stormwater and graywater for non-potable applications such as toilet and urinal flushing, mechanical systems, and custodial uses.

Substantiation: UCR commits to installing waterless urinals and specifying low-flow fixtures, this point can be earned at any campus site. Green criteria for water use reduction will be incorporated into campus design guidelines and specifications. Waterless urinals, low-flow toilets and bathroom sink sensors to be incorporated into campus design standard.

Approach to Substantiation: Provide documentation signed by Architect, MEP Engineer or responsible party declaring the project uses 20% less water compared to baseline conditions.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EA - Prerequisite 1 - Fundamental Building Systems Commissioning

Intent

Verify and ensure that fundamental building elements and systems are designed, installed and calibrated to operate as intended.

Discussion

Commissioning of fundamental building systems will be routinely performed for all capital projects by a team that does not include individuals who were directly responsible for project design or construction management.

Substantiation: UCR will perform commissioning of all its major capital projects by a team that does not include individuals who were directly responsible for project design or construction management and therefore automatically fulfills this prerequisite.

Prerequisite Fulfillment: Declare by signed letter template that best practice commissioning procedures (as outlined in the template) have been implemented or a contract is in place to implement them.

Evaluation

No Points are given. This is required and can be achieved at all campus sites.

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EA – Prerequisite 2 - Minimum Energy Performance

Intent

Establish the minimum level of energy efficiency for the base building and systems.

Discussion

Buildings will be designed to comply with the more stringent of either ASHRAE/IESNA Standard 90.1-1999 (without amendments) or the local energy code. Each building in a project must independently meet the requirements of this prerequisite.

Substantiation: UCR currently seeks to improve energy efficiency with each building project and through system improvements.

Prerequisite Fulfillment: Declare by signed letter template that the building complies with energy code. Provide documentation that demonstrates that local code is equivalent or more stringent than ASHRAE/IESNA 90.1-1999.

Evaluation

No Points are given. This is required and can be achieved at all campus sites.

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Date:

EA – Prerequisite 3 - CFC Reduction in HVAC&R Equipment

Intent

Reduce ozone depletion.

Discussion

No CFC-based refrigerants will be used in new base building HVAC and refrigeration systems. When existing base building HVAC equipment is reused, CFC-based refrigerants will be phased out during conversion. For campuses, each building in the project must meet this prerequisite. If the building(s) is connected to a central chilled water system, that system must either be CFC free or a commitment to phasing out CFC-based refrigerants with a firm timeline of five years from substantial completion must be in place.

Substantiation: A prohibition of using CFCs in HVAC and refrigeration systems will be incorporated into campus design guidelines and specifications.

Prerequisite Fulfillment: Declare by signed letter template that there are no CFC-based refrigerants in the HVAC and refrigeration systems. If necessary, provide a letter of commitment from the campus describing its intention to phase-out CFCs and summarize the phase-out plan of action and timeline.

Demonstrate that any existing CFC containing equipment meets EPA Title VI, Rule 608, for reduction of leakage. If connecting to a central system containing CFC refrigerants operate according to USEPA criteria and plan for phasing out the CFC refrigerants.

Evaluation

No Points are given. This is required and can be achieved at the Riverside campus.

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Date:

EA 1.0 Optimize Energy Performance

Intent

Achieve increasing levels of energy performance above the prerequisite standard to reduce environmental impacts associated with excessive energy use.

Discussion

To achieve these points, energy costs based on design must be reduced in comparison to the energy cost budget and should, according to UC policy, outperform energy efficiency standards of Title 24 of the California Building Code, 2001.

Substantiation: UCR believes it has the ability to meet requirements that would yield 4 points at the Riverside campus. To achieve 4 points, energy costs must be reduced by 20% and should outperform Title 24, 2001 standards for new buildings.

Point(s) Achievement: Declare by signed letter template that the project's reduction in design energy cost compared to the energy cost budget is at least 20% for new buildings to qualify for 4 points out of a possible 10 points. Support the declaration with quantitative summary table showing the energy saving measures incorporated in the building design. Also provide a summary printout from an energy simulation package to confirm energy savings.

Evaluation

4 Points can be achieved at all campus sites.

A	East Campus	4 point
B	West Campus	4 point

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EA 4.0 Ozone Protection

Intent

Reduce ozone depletion and support early compliance with the Montreal Protocol.

Discussion

Only HVAC systems, refrigeration equipment, insulation, and fire suppression systems that do not contain Hydrochlorofluorocarbons (HCFCs) or Halons should be installed in building projects. If the building(s) is(are) connected to a central chilled water system, that system must be HCFC free or a commitment to phasing out HCFC-based refrigerants with a firm plan must be in place.

Substantiation: Install base building level HVAC and refrigeration equipment and fire suppression systems that do not contain HCFC's or Halon.

Point Achievement: Declare by signed letter template that the HVAC and refrigeration systems as built are free of HCFCs and Halons. A prohibition of using HCFCs or Halons in HVAC and refrigeration systems will be incorporated into campus design guidelines and specifications. No reference standard, should be documented in campus commissioning plan.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Date:

MR – Prerequisite 1 - Storage & Collection of Recyclables

Intent

Facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills.

Discussion

Easily accessible areas serving the entire building should be dedicated to the separation, collection, and storage of materials for recycling. Materials should at minimum include paper, corrugated cardboard, glass, plastics and metals.

Substantiation: This practice is now standard practice at all campus locations and buildings.

Prerequisite Fulfillment: Declare by signed letter template that an easily accessible area of appropriate size has been dedicated to serve the recycling needs of the entire building and identify the materials being recycled. Provide a plan showing areas dedicated to recycled material collection and storage.

Evaluation

No Points are given. This is required and is fulfilled at campus locations.

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Date:

MR 2.1 Construction Waste Management: Divert 50% from Landfill

Intent

Divert construction, demolition and land clearing debris from landfill disposal. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

Discussion

To achieve this point, a waste management plan must be developed that quantifies material diversion and is implemented as part of the project. The plan must recycle and/or salvage at least 50% of construction, demolition and land clearing waste. Calculations can be done by weight or volume, but must be consistent throughout. Establishment of goals for landfill diversion and adoption of a construction waste management plan to achieve these goals is necessary. Consider recycling land clearing debris, cardboard, metals, brick, concrete, plastic, clean wood, glass, gypsum wallboard, carpet, and insulation. Designate a specific area on the construction site for recycling and track recycling efforts throughout the construction process. Identify construction haulers and recyclers to handle the designated materials.

Substantiation: UCR can successfully integrate this task on a number of projects on campus and should be able to continue doing so on future projects.

Point Achievement: Provide document signed by Architect, Owner or other responsible party, listing the total waste material, quantities diverted and the means. The document will also declare that the means have been met.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

MR 5.1 Regional Materials- 20% manufactured regionally

Intent

Increase demand for building materials & products that are extracted and manufactured within the region, thereby supporting the regional economy & reducing the environmental impacts resulting from transportation.

Discussion

To achieve this point, a minimum of 20% of building materials and products that are manufactured regionally within a radius of 500 miles must be utilized in the project.

Substantiation: Establish a project goal for locally sourced materials and identify materials and material suppliers that can achieve this goal. During construction, ensure that the specified local materials are installed and quantify the total percentage of local materials installed.

Point Achievement: Provide documentation signed by the architect or responsible party that the credit requirements have been met. Include calculations that demonstrate the project incorporates the required percentage of regional materials/products and showing their cost, percentage of regional components, distance from project to manufacturer, and the total cost of all materials for the project.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ – Prerequisite 1 - Minimum IAQ Performance

Intent

Establish minimum indoor air quality (IAQ) performance to prevent the development of indoor air quality problems in buildings, thus contributing to the comfort and well-being of the occupants.

Discussion

To achieve this point, the Ventilation Rate Procedure should be used so that the project can meet the minimum requirements of voluntary consensus standard ASHRAE 62-1999, Ventilation for Acceptable Indoor Air Quality, and approved Addenda (see ASHRAE 62-2001, Appendix H, for a complete compilation of Addenda). The ASHRAE 62-1999 standard specifies minimum ventilation rates and indoor air quality (IAQ) levels to reduce the potential for adverse health effects. A Ventilation Rate Procedure and an Indoor Air Quality Procedure are outlined to achieve compliance with the standard.

Substantiation: Green criteria for minimum indoor air quality performance will be incorporated into campus design guidelines and specifications.

Prerequisite Fulfillment: Declare by signed letter template that the project is fully compliant with ASHRAE 62-1999 and all approved addenda. Also support declaration with documentation describing the procedure employed in the IAQ analysis (ventilation rate procedure).

Evaluation

No Points are given. This is required and is fulfilled at the Riverside campus.

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ – Prerequisite 2 - Environmental Tobacco Smoke (ETS) Control

Intent

Prevent exposure of building occupants and systems to Environmental Tobacco Smoke (ETS).

Discussion

Non-smokers should not be exposed to environmental tobacco smoke (ETS) by (1) prohibiting smoking in the building and designating outdoor smoking areas away from entries, air intakes, and operable windows or (2) providing designated smoking rooms with effective smoke containment, capture, and removal that is verified by tracer gas testing.

Substantiation: Control of ETS has now become standard practice at all UCR buildings. UCR has policies prohibiting-smoking in the workplace and designates outdoor smoking areas according to practices described above.

Prerequisite Fulfillment: Declare by signed letter template that the project provides for zero exposure of non-smokers to ETS and indicate how this is accomplished.

Evaluation

No Points are given. This is required and is fulfilled at the Riverside campus.

Approved:

Michael Miller
Assistant Vice Chancellor
Physical Plant

Date:

EQ 3.1 Construction IAQ Management Plan: During Construction

Intent

Prevent indoor air quality problems resulting from the construction/renovation process in order to help sustain the comfort and well-being of construction workers and building occupants.

Discussion

To achieve a point, an Indoor Air Quality (IAQ) Management Plan should be developed and implemented for the construction and pre-occupancy phases of the building project that can meet SMACNA guidelines for IAQ for occupied buildings under construction; protect stored-on-site or installed absorptive materials from moisture damage; and use filtered return air during construction with filtration media replaced immediately prior to occupancy.

Substantiation: Adopt an IAQ management plan to protect the HVAC system during construction, control pollutant sources, and interrupt pathways for contamination. Sequence installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile, and gypsum wallboard.

Point Achievement: Provide documentation signed by the general contractor that the credit requirements have been met and a construction IAQ plan has been incorporated. And list all filters used during construction and at the end of construction. Provide 18 photographs taken during construction, 6 at equal intervals showing consistent adherence to the credit requirements.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ 3.2 Construction IAQ Management Plan: Before Occupancy

Intent

Prevent indoor air quality problems resulting from the construction/renovation process in order to help sustain the comfort and well-being of construction workers and building occupants.

Discussion

To achieve this point, an Indoor Air Quality (IAQ) Management Plan should be developed and implemented for the pre-occupancy phase of the building project that should include a minimum two-week flush-out with appropriate filtration media at 100% outside air or conducting of baseline IAQ testing procedures according to EPA protocols.

Substantiation: Prior to occupancy, perform a two week building flush out or test the contaminant levels in the building.

Point Achievement: Start and finish of flush out period will be witnessed and documented by architect or responsible party.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ 4.1 Low-Emitting Materials: Adhesives & Sealants

Intent

Reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

Discussion

To achieve a point, the VOC (volatile organic compound) content of adhesives and sealants used must be less than the current VOC content limits of the South Coast Air Quality Management District (SCAQMD) Rule #1168 and all sealants used as filters must meet or exceed the requirements of the Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 51. VOCs are chemical compounds that contribute to air pollution inside and outside of buildings, ultimately contributing to forming of ozone and smog.

Substantiation: Green criteria for low odor-emitting adhesives and sealants will be incorporated into campus design guidelines and specifications.

Point Achievement: Provide documentation signed by the architect or responsible party listing the adhesives and sealants used in the building and declaring that they meet the noted requirements.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ 4.2 Low-Emitting Materials: Paints & Coatings

Intent

Reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

Discussion

To achieve this point, VOC (volatile organic compound) emissions from paints and coatings must not exceed the VOC and chemical compound limits of Green Seal Standard GS-11 requirements.

Substantiation: Specify low-VOC materials in construction documents. Ensure that VOC limits are clearly stated in each section where adhesives, sealants, paints, coatings, carpet systems, and composite woods are addressed.

Point Achievement: Provide documentation signed by the architect or responsible party listing the all interior paints and coatings used in the building that are addressed by green seal standard GS-11 and stating that they comply with the current standard.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ 4.3 Low-Emitting Materials: Carpets

Intent

Reduce the quantity of indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and well-being of installers and occupants.

Discussion

To achieve a point, carpet systems must meet or exceed the requirements of the Carpet and Rug Institute’s Green Label Indoor Air Quality Test Program.

Substantiation: Specify material that meet or exceed the Carpet and Rug Institute Green Label Indoor Air Quality Test Program

Point Achievement: Provide documentation signed by the architect or responsible party listing the all carpet used in the building are exceeding the Indoor Air Quality Test Program.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ 5.0 Indoor Chemical & Pollutant Source Control

Intent

Avoid exposure of building occupants to potentially hazardous chemicals that adversely impact air quality.

Discussion

To achieve this point, pollutant cross contamination of regularly occupied areas should be minimized by design: e.g. permanent entryway systems of grills or grates to filter out dirt and particulate contamination, separate outside exhaust of chemical use areas (such as copying/printing), and special drains plumbed for appropriate disposal of liquid waste in spaces where water and chemical concentrate mixing occurs. Negative impacts from common building activities can be reduced to maintain superior indoor air quality.

Substantiation: Design separate exhaust and plumbing systems for rooms with contaminants to achieve physical isolation from the rest of the building. Install permanent architectural entryway systems such as grills or grates to prevent occupant-borne contaminants from entering the building.

Point Achievement: Provide documentation signed by the architect or responsible party listing all the carpet systems used in the building and stating that they comply with the current VOC limits of the carpet and rug institutes green label indoor air quality test program.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

EQ 7.1 Thermal Comfort: Compliance with ASHRAE 55-1992

Intent

Provide a thermally comfortable environment that supports the productivity and well-being of building occupants.

Discussion

To achieve this point in mechanically ventilated buildings, the project should be designed to comply with ASHRAE Standard 55-1992, Addenda 1995, for thermal comfort standards including humidity control within established ranges per climate zone. For naturally ventilated buildings, the project should be designed to comply with the 90% acceptability limits of the adaptive comfort temperature boundaries in the Collaborative for High Performance Schools (CHPS) Best Practices Manual Appendix C.

Substantiation: Establish temperature and humidity comfort ranges and design the building envelope and HVAC system to maintain these comfort ranges. Install and maintain a temperature and humidity monitoring system in the building to automatically adjust building conditions as appropriate.

Point Achievement: For mechanically ventilated spaces, provide documentation signed by engineer or responsible party declaring that the project complies with ASHRAE 55-1992. Include a table that identifies each thermally controlled zone and summarizes for each zone the temperature and humidity control ranges and the method of control used.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

ID 2.0 LEED Accredited Professional

Intent

To support and encourage the design integration required by a LEED Green Building project and to streamline the application and certification process.

Discussion

To achieve this additional point, the project must include one principal participant of the project team who has successfully completed the LEED Accredited Professional exam as demonstrated by submission of a copy of this person's LEED Accredited Professional Certificate.

Substantiation: UCR can guarantee that at least one LEED Accredited Professional will be included as a principal on all project teams. UCR currently has several accredited LEED professionals within the office of Design and Construction.

Point Achievement: Declare by signed letter template that one principal participant of the project team has successfully completed the LEED Accredited Professional exam and forward a copy of the participant's LEED Accredited Professional award certificate.

Evaluation

1 point is achievable on all future projects.

A	East Campus	1 point
B	West Campus	1 point

Approved:

Daniel Johnson
Assistant Vice Chancellor
Design & Construction

Date:

