STUDIOS architecture

UNIVERSITY OF CALIFORNIA, RIVERSIDE

ABERDEEN - INVERNESS RESIDENCE HALL COMMON AREA IMPROVEMENTS

Detailed Project Program

October 28, 2011

UCR Project # 950502

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1.2

EXECUTIVE SUMMARY

The 2008 Strategic Plan for Student Housing Update identified a program to enhance the common areas and amenities that support residence life in the Aberdeen-Inverness (A-I) Residence Hall. The Draft Dining Services Master Planning Study identified the need to renovate the 50 year old A-I residential restaurant and kitchen to support current student preferences, while also providing a significant portion of meal plan needs for the first phase of Dundee Residence Hall. In winter 2010-11 UC Riverside and Housing Services initiated programming and planning to renovate the residential restaurant, add a new retail emporium and upgrade the student common areas and resident services offices to address the following:

- Expand residential restaurant and kitchen, and establish a food emporium to support a larger residential population.
- Reconfigure common area and staff residences to support residents and resident life programs.
- Replace aging building infrastructure systems.

PROJECT VISION

A-I Residence Hall is an important component to UC Riverside's east campus student experience. Some of the vision statements expressed during the DPP process include:

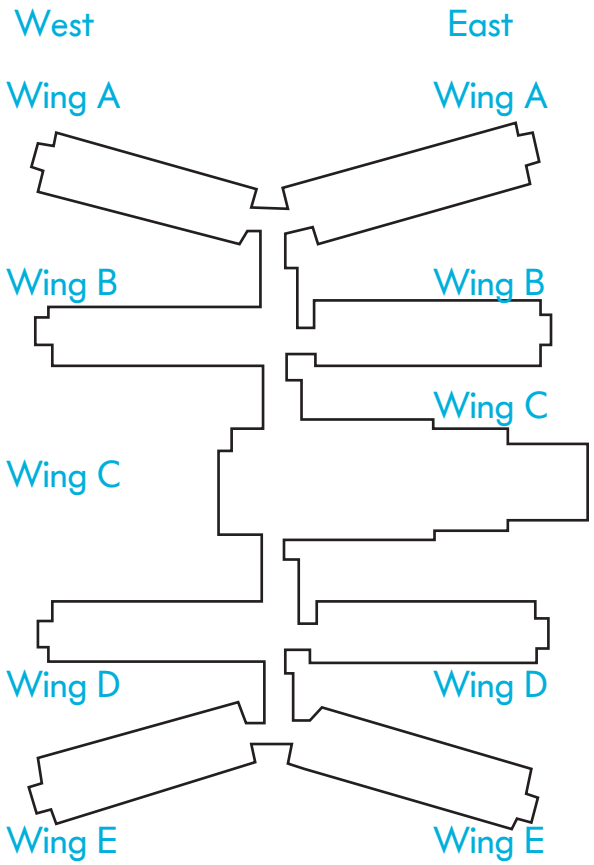
- Give back to the students
- The building is iconic - celebrate the building's history
- Embrace the campus – create a sense of place
- Bring vitality to the common spaces - create a youthful feeling
- Residential Restaurant should provide a variety of dining environments.

METHODOLOGY

The project programming was realized through a series of on-campus workshops, plus an A-I building infrastructure evaluation. The workshops were organized and led by the Design Team in collaboration with a UCR Project Management Team represented by the offices of Capital Resource Management, Office of Design & Construction, and Housing, Dining & Residential Services. Consensus was reached on the project direction by virtue of an interactive, iterative and collaborative process.

A-I RESIDENCE HALL BUILDING

A-I is one of UC Riverside's original student residence hall. Built in 1959, the building has a design occupancy of 792 beds and an overflow capacity of 892 beds contained in eight wings connected to a common circulation spine. The double-occupancy model exclusively for first-year students builds an exceptionally close knit student community, and is valued by the residents for that outcome. The central A-I residential restaurant has a current capacity of 500 seats.



Key Plan - Exsisting Building Layout

PROJECT SCOPE

The A-I Residence Hall Common Area Improvements project will reconfigure common areas and other facilities to support residents and residence life programs. Expansion of the residential restaurant (dining room and kitchen) plus expanded Food Emporium, is necessary to accommodate a larger residential population. The program consists of approximately 44,800 assignable square feet (ASF) and approximately 53,700 gross square feet (GSF). To accommodate the program, the first floor of Wings B West and D West and all of Wing C East will be renovated. In addition, Wing C West will be demolished and replaced with a larger structure. The program is organized in five categories: Community Spaces, Resident Service Office, Food/ Retail Emporium, Student Residential Restaurant and Staff Residences.

The Community Space program includes:

- 8 Meeting Rooms of varying sizes with Prefunction Space
- A Computer Lab
- A Fitness Center
- A Student Kitchen
- A Music Practice Room

The Resident Service Office program includes:

- Main Reception and Service Counter
- Private Offices and Workstations
- Conference and Workrooms
- Mailboxes and Package Room

The Food / Retail Emporium program includes:

- A late-night Diner with take-out meal options and limited on premise seats.
- A coffee / espresso bar
- A retail convenience store
- Table, counter and outdoor patio seating
- A lounge and game room

The Residential Restaurant facility program includes:

- A 575 seat Dining Room, plus 2 smaller private dining rooms and a secure outdoor patio
- A full-service Kitchen with central bakery
- An open Servery concept with dispersed food platforms and exhibition cooking ("action stations")
- A fully enclosed kitchen service loading dock with service elevator to the basement spine
- A Student Support alcove just outside the dining entry, for lockers and vending machines

The Staff Residential program consists of:

- 4 stand alone apartments for two Resident Directors and two Faculty in Residence

Diverse Dining Environments

PROGRAM GROUP:	Assignable Square Feet (ASF)	Gross Square Feet (GSF)	GSF - EXISTING	GSF - NEW CONSTRUCTION
Community Space - Wing C East/ Spine	8,875	12,678	17,425	-
RSO - Wing C East	3,323	4,747	included above	-
Retail Emporium - Wing D West	5,838	6,486	5,707	779
Residential Restaurant - Wing B & C West	22,317	24,797	5,664	19,133
Staff Residential (stand alone)	4,460	4,956	-	4,956
TOTAL	44,813	53,664	28,796	24,868

INFRASTRUCTURE & BUILDING RENEWAL

Infrastructure - Mechanical, Electrical, and Plumbing

The above Program spaces will all receive new Mechanical, Electrical, Plumbing (MEP) systems. The project scope also includes a complete renovation of the A-I Central Plant including new cooling towers, chillers, pumps, boilers, emergency generator and upgraded electrical service. The existing central steam boiler heating system will be replaced with a gas-fired boiler heating system. As a separate project, all eight Residential rooftop air handlers will be replaced in the future, along with their penthouse enclosures and the entire wing roofing.

Initial seismic analysis of the original structural drawings indicated that all of the A-I wings appear to be no better than "Fair". A "Good" seismic rating is desired by UCR. Seismic computer modeling of the existing structure was therefore completed since it can provide detailed performance analysis that may result in a higher UC rating. The computer modeling revealed that all building wings should receive an improved seismic rating of "Good", except for wings B West, D West and C East, which would remain "Fair" in their existing condition. It is recommended to remove the existing concrete loggias on the north and south of Wing C as part of the renovation scope, which would convert Wing C East to "Good" rating. Wings B and D West have discontinuous shear walls, requiring a certain amount of remedial structural work to bring these wings up to a "Good" rating. This recommended structural scope is described in greater detail in Section 4.1 Systems Narratives.

SITE DEVELOPMENT

In addition to the interior Program described above, the site scope includes new landscape and hardscape around Wing C East and Wings B, C and D West. The new entry courtyard will have a covered loggia alongside a trellised dining patio off the Emporium. The loop entry drive will be modified and a new vehicular drop off created. A new kitchen access drive from Linden Street to the service enclosure will be screened from Aberdeen Drive with earth mounds and planting. Other site work includes a two-story central plant enclosure adjacent to the existing east side dock, a new grease trap sewer system serving both kitchens and replacement of miscellaneous broken clay sewer laterals.

CONSTRUCTION PHASING

It is essential that the residential floors remain occupied and functional at all times during construction, save for the summer break (mid June – August). Any MEP or seismic work that passes through the upper floors of Wings B or D West must occur at this time. Phase One of the project will constitute all work west of the circulation spine in Wings B, C and D, plus the stand alone Central Plant. The existing dining facility will remain in operation. The circulation spine shall remain open for residents, with entry from the southern end. Temporary trailers will house the RSO functions.

When the new Residential Restaurant is ready for use, the existing dining facility will close and Phase Two of the project will commence. This scope includes renovation of Wing C East for the RSO and Community Spaces, plus the stand alone Staff Residential apartments. Again, the circulation spine will remain open for residents.

The proposed MEP improvements to the residential wings may occur incrementally or collectively, and are unrelated to the two phases described above. This work can only occur during the summer academic break. The existing steam boilers must remain in operation until hot-water heating boilers are installed in the basement space abandoned by the chillers, and the heating system conversion is completed.

1.3

DETAILED PROJECT PROGRAM PROCESS

The intent of the Detailed Project Program (DPP) process for the A-I building is to understand thoroughly and completely the implications of the planned project in terms of its functional requirements, the condition and recommended improvements of the existing building infrastructure, the schedule and construction phasing impacts, and budget considerations. While the process of programming necessarily includes elements of design, the result is not intended as a design solution, but rather as a rational and reliable basis for the design process that will follow.

THE APPROACH

Six interactive Workshops conducted by the Lead Consultant were held on the UC Riverside campus between December 2010 through June 2011. They were separated by intervals to allow Consultant Team reaction, response and synthesis. The Workshop participants included the Steering Committee, Project Management Committee and when appropriate for specific topics, various campus representatives. In addition, an evening student resident Workshop was held at the A-I building. The discussions and decisions were documented in meeting minutes (see Appendix 6.6)

The early development of a common understanding of the project goals was critical to the process. These goals served as a guide for subsequent programming inquiry and resolution. Interviews with key stakeholders - particularly representatives from HDRS - together with group discussion with the Steering Committee provided invaluable feedback in framing the DPP development. Several alternatives were created for review and comment. Ultimately, a preferred alternative was developed reflecting a balanced program, vision and budget.

Workshop Session

Workshop 1 – Visioning Session

- Tour A-I Building
- Identify Key Stakeholders
- Define Project Goals
- Review Alternative Foodservice Models
- Identify Schedule Milestones & High Level Budget Issues
- Establish Project Vision

Workshop 2 – Data Gathering & Infrastructure Evaluation

- Investigate A-I Building Infrastructure & Engineering Evaluation
- Gather Detailed Criteria for Foodservice and other Program Areas
- Define Functional Relationships and Adjacencies of Key Program Areas
- Establish A-I Building Code Ratings and Constraints
- Identify Campus Regulatory, Engineering and Maintenance Issues

Workshop 3 – Program Synthesis & Initial Concepts

- Review Initial Concepts
- Identify Possible Franchise Considerations for Emporium Diner
- Obtain Additional Clarification of Program Criteria
- Identify Sustainability (LEED) Goals and Opportunities
- Review Proposed MEP Systems Alternatives
- Define Preliminary Schedule / Phasing Issues
- Gather A-I Resident Suggestions and Concerns (Student Workshop)

Wall of Cards

Workshop 4 – Review DPP Progress

- Identify Preliminary Seismic Analysis Recommendations
- Review Concept Alternatives
- Select Preferred Alternate Concept #1
- Reconcile Space Needs and Room Requirements (Draft Room Data Sheets)
- Review Preliminary Cost Model
- Identify Critical Schedule / Phasing Strategies

Workshop 5 – Review Draft DPP

- Review Residential Restaurant Alternative Locations
- Select Alternate Concept #2 for Development
- Review and respond to UCR's comments on Draft DPP, including Program, Room Data Sheets, MEP and Structural Systems, Schedule, Phasing and Budget

Workshop 6 – Review Preferred Alternate

- Review Preferred Concept Development (Alternate #7)
- Review Kitchen Service Alternatives
- Review Central Plant

Workshop Session

- Review Cost Estimate Escalation, General Conditions, and Design Contingency Assumptions

THE PROCESS

Developing a Common Basis of Understanding

- Review 2008 Strategic Plan for Student Housing, 2010 Draft UCR Dining Services Master Plan and A-I building documents
- Define project stakeholders:
    - Dining, Conference & Catering Services
    - Housing, Dining & Residential Services
    - Capital Resource Management
    - Office of Design and Construction
    - Resident Staff
    - Physical Plant
- Understand Dining Service goals:
    - Lessons Learned
- Evaluate Condition of the Existing Infrastructure
    - Develop MEP phasing strategies for Common and Residential areas

Envisioning Opportunities

- Promoting innovations in foodservice preparation and presentation

- Creating a renewed A-I "sense of place"
- Achieving significant reductions in energy and water usage
- Maximizing facility usage with flexibility for third parties

Defining the Goals for A-I Common Areas

- Scope
    - Sizes and functional requirements
    - Schedule / Phasing
- Vision
    - Project character
    - Give back to the students

Reconciling Scope, Vision, Budget

- Balancing program needs and infrastructure improvements with available budget
- Sequencing improvements to minimize impacts on residents
- Testing Alternatives:
    - Review Alternate Directions
    - Evaluate Pro's amd Con's
    - Arrive at Preferred Scheme

1.4

PROJECT GOALS

The following project goals were developed during the Visioning Session of Workshop #1 with the Project Steering Committee and Project Management Team.

GOALS

The renovated A-I Residence Hall Dining Facilities and Common Areas will:

- Provide a 575-seat Student Residential Restaurant which will employ an open Kitchen, exhibition cooking, dispersed Servery and multiple Dining environments
- Provide an Emporium which will offer a convenience store, coffee, and a late night diner that generates 140 meals per hour
- Provide multiple upgraded Meeting Rooms for student group use, with off-hours rental capability
- Provide upgraded student Common Spaces, Resident Service Offices and Support Functions
- Upgrade the building's seismic performance and MEP infrastructure to lower energy use, improve system reliability and reduce maintenance
- Embrace environmentally sustainable strategies, with LEED Silver Certification as a minimum target
- Celebrate the building's mid-century origins and its iconic character in the architecture of any exterior additions
- Embrace the campus character and pedestrian flow

Inviting Spaces With Youthful Vitality

- Establish a renewed “sense of place”
- Create inviting and useful exterior spaces for dining, studying and socializing
- Create interior spaces with a youthful feeling, bringing vitality to Student Common spaces
- Strive for zero impact on residents during the construction phases
- Give back to the Students by creating a physical environment that promotes scholarship and a memorable residence life experience

2.1

CAMPUS PLANNING PRINCIPLES

The A-I Residence Hall Common Area Improvement project will respond to the goals and objectives articulated in the 2005 LRDP and in the 2008 CAMPS, including:

- Create a regional model of planning, design and environmental stewardship, protecting the natural environment and incorporating sustainable planning and design practices
- Enhance the UCR image and identity
- Accommodate planned enrollment growth while retaining flexibility for unanticipated additional needs in the future
- Increase the size of the on-campus residential community and thereby improve opportunities for social interaction and socialization: a living / learning environment

Several other recent planning studies have been published to guide the anticipated growth of the campus enrollment. These include:

- Draft Dining Services Master Planning Study
- 2009 Physical Design Framework
- 2008 Strategic Plan for Student Housing Update
- 2007 Campus Design Guidelines
- 2002 East Campus Infrastructure DPP

PLANNING PRINCIPLES

2008 Strategic Plan for Student Housing Update

The 2008 Strategic Plan for Student Housing Update calls for creating a campus regional center and "primary civic space" in the west entry court surrounding the proposed Emporium in Wing D. Other recommendations relevant to the A-I project include:

- The Residential Restaurant Program Model calls for designing new (and renovated) foodservice opportunities to meet the diverse dining needs of residents.

- The Emporium Program Model calls for providing after-hours foodservice and retail operations. The proposed A-I location in Wing D West takes advantage of the pedestrian flow along Aberdeen Drive. An outdoor seating area takes advantage of the large shade trees around the drop-off. The Emporium is intended to supplement dining choices and address increased demand that will be generated by the first phase of the future Dundee Residence Hall and expanded Student Recreation Center.

- The Conference Services Program Model calls for expanding UCR capability to accommodate the current and potential demand from outside groups for conference and banquet space.

- The Parking Program Model was developed in the 2008 Strategic Plan for Housing Update. A preliminary study was conducted to evaluate the potential of providing a parking structure on Lot 22 on the east side of A-I Residence Hall. The garage program proposed a total of 500 cars including the quantity currently provided in Lot 22.

- The Maintenance Program Model proposes a service facility to replace existing buildings in the current Canyon Crest site (maintenance shop, grounds shed, warehouse, offices and dumpsters), while adding space to serve the additional housing proposed in the plan. The proposed location is integrated with the proposed parking structure.

Campus Residential District

2007 Campus Design Guidelines

The Design Guidelines, especially as they relate to architectural elements and materials will become more relevant in the Design Phase. The Guidelines offer the following goals that may be applicable to renovation projects:

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

Draft Dining Services Master Planning Study

In the 2010 Draft report, the Dining Master Planning Study contains market research to quantify the campus community's expectations and perceptions of the campus dining program. It employs situational analysis to identify opportunities for improving customer satisfaction, increasing market capture, improving operational efficiencies and optimizing financial performance.

The Dining Master Planning Study provides an itemized survey of the existing A-I residential restaurant dining facility and numerically rates each room from 1 to 10 based on a Poor Practice / Best Practice system. It lists metrics for an expanded A-I residential restaurant, including peak meal participation rates, turnover and seat counts. The Dining Master Planning Study also provides qualitative recommendations including exhibition style service platforms and restaurant style seating environments.

The proposed A-I project addresses the major points in the Study in the following ways:

- Take-out options and late night meal opportunities are planned at the Emporium.

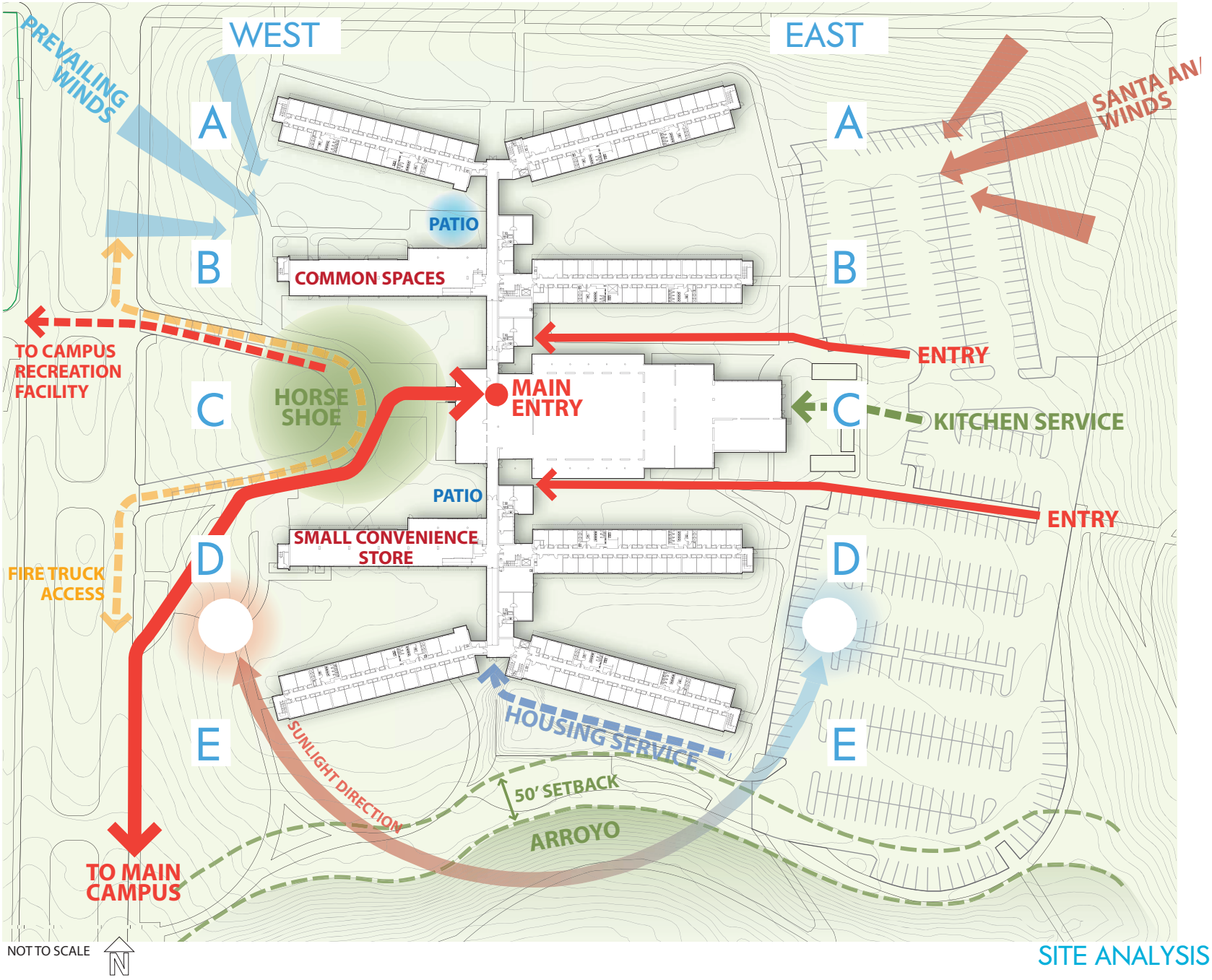
- Multiple island style serving platforms provide variety and "a la carte" cooking at the Residential Restaurant.

- The dining environment offers a range of seating options from high visibility/social to semi-secluded with low partitions at the Residential Restaurant, and from counter service to lounge soft seating at the Emporium.

2.2

SITE / BUILDING ANALYSIS

The A-I building is located on the southeast corner of Linden Street and Aberdeen Drive. The campus academic core lies to the south. The building is bounded by a +/- 320 space parking lot on the east and the arroyo open space on the south. Several large student residences lie to the east, beyond the parking lot. The area north of Linden Street is planned for future redevelopment as undergraduate student residences and related facilities. The Student Recreation Center on the west side of Aberdeen Drive is undergoing significant expansion, with construction timing likely to overlap with the A-I project.



SITE ANALYSIS

SITE ANALYSIS

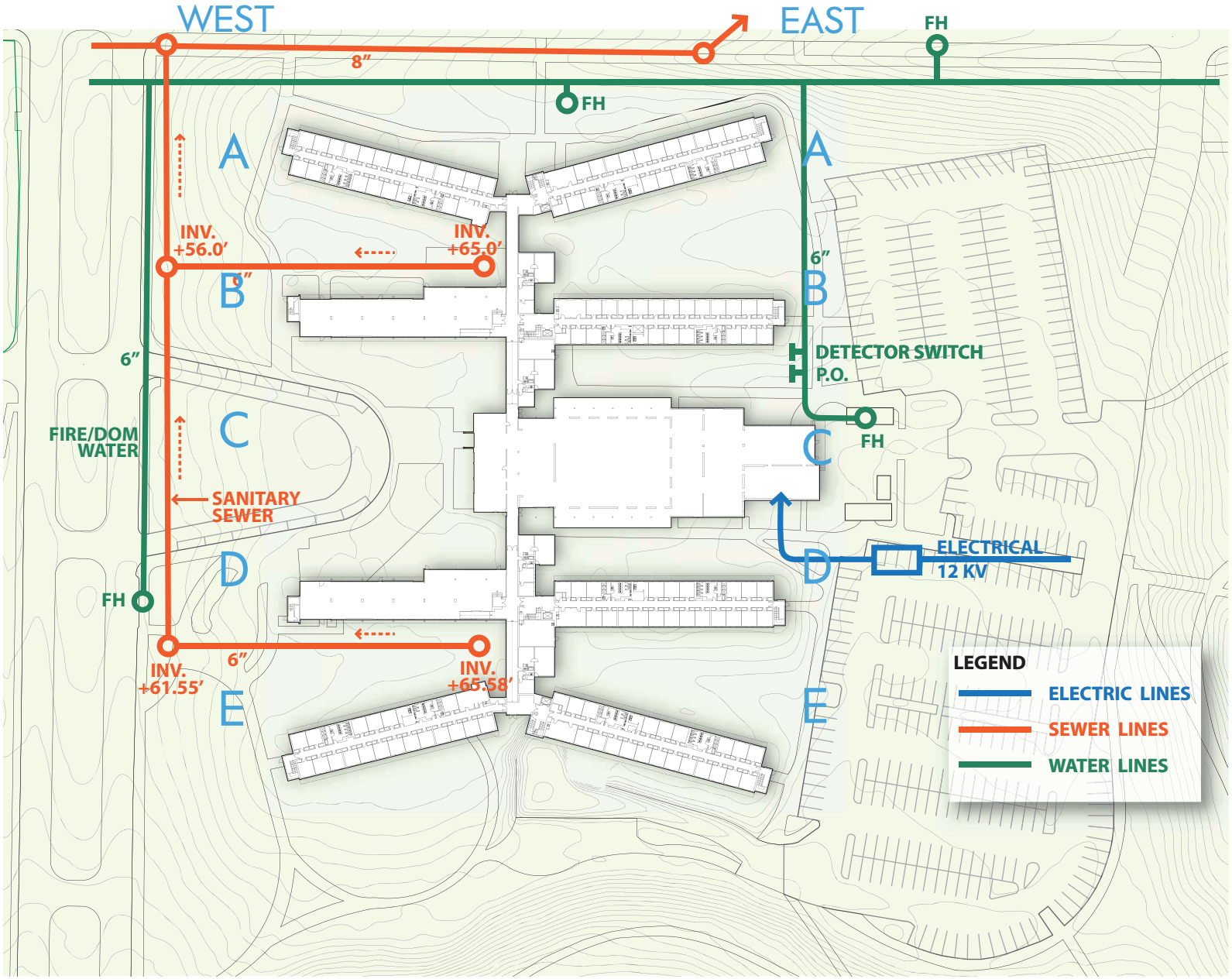
The primary pedestrian flow to the A-I Building from the campus academic core is along Aberdeen Drive to the main A-I entrance located in Wing C West. As residence halls are developed north of Linden Street the pedestrian traffic along Aberdeen Drive is anticipated to increase. There is secondary pedestrian flow from east of A-I: students from other residence halls such as Pentland Hills, Glen Mor 1 and future Glen Mor 2 come to the A-I dining facility for meals. The entry south of Wing C Dining is the more heavily used of the two east side entrances. The 2008 Strategic Plan for Student Housing proposes a future parking deck over the north half of the parking lot.

There is a horseshoe-shaped main entry drive off Aberdeen Drive that contains a drop off and a half a dozen temporary parking spaces. There are several very large trees within and around the main entry drive.

Building housekeeping and maintenance service is from a basement level loading dock at the south end of the circulation spine. There is also a Kitchen service yard with dock and enclosure walls at the east end of Wing C. Service vehicles access via the sloping drive off Linden, which also serves the parking lot. Main electrical service comes to the building from the east into the basement of Wing C East. Domestic and fire sprinkler water service feeds from Linden Street and enters A-I in Wing C East. Sanitary sewer laterals run from the west side of the circulation spine out to Aberdeen Drive.

Prevailing breezes and rainstorms are generally from the west / northwest, except for seasonal hot Santa Ana winds from the northeast. Riverside can be uncomfortably warm 5-6 months of the year, so the usability of exterior spaces is dependent on capturing any available breeze and providing shade devices. Some venues on campus have employed misters. The balance of the year is fairly temperate, and well-designed outdoor spaces can be used in the middle of winter.

A-I West Lawn



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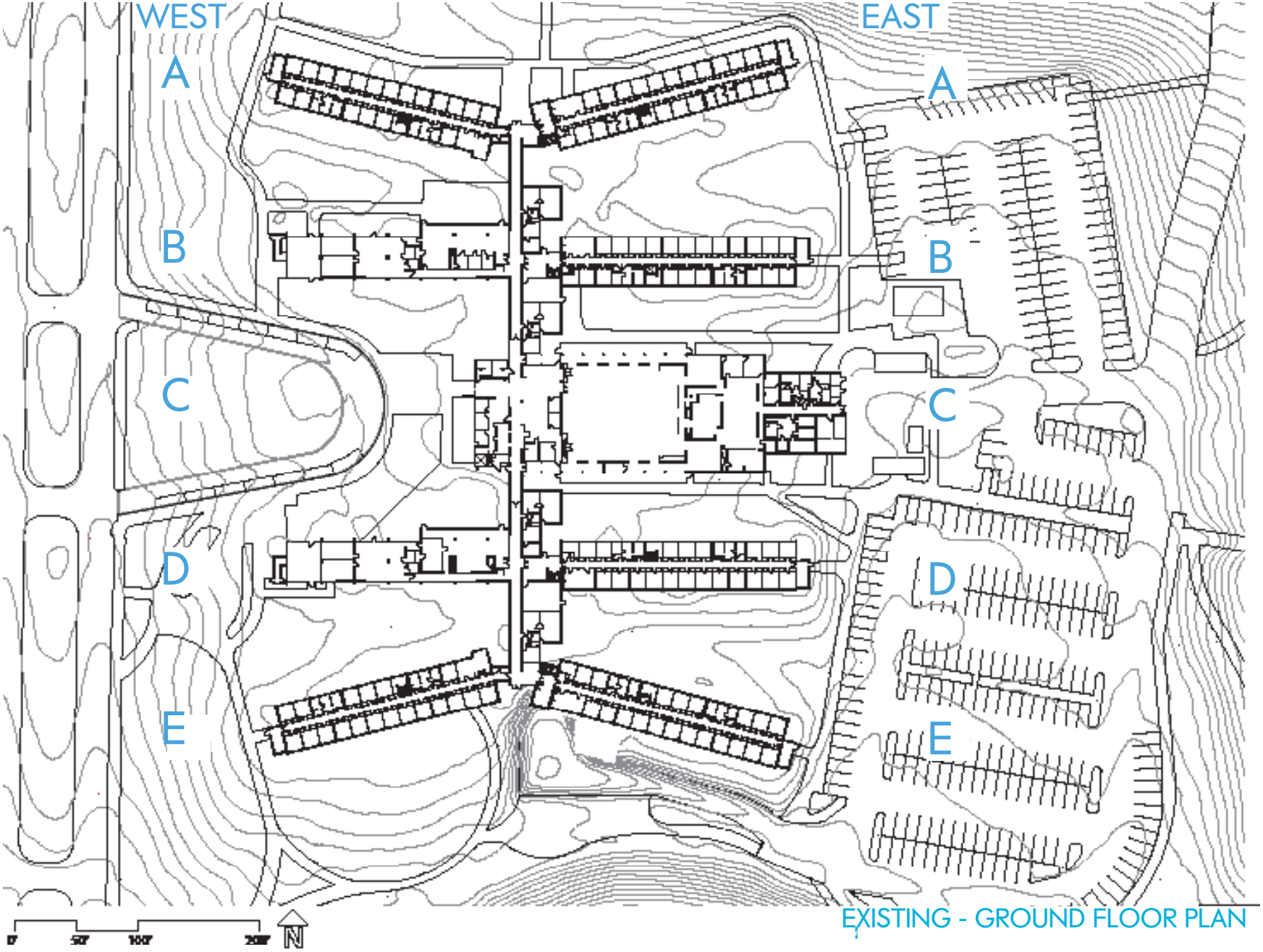
SITE UTILITY - EXISTING

A-I From the South



EXISTING - GROUND FLOOR PLAN

A-I Wing B / Entrance

A- I Reception

BUILDING ANALYSIS

The A-I building is primarily a concrete slab and column structure, with brick infill panels between bedroom windows at the residential wings. The majority of the building is three stories, except that Wings A and E West are two stories high and the central spine is limited to one story. Wing C is also one story but the Dining Room portion is a higher bay with 15' clear to the existing ceiling. There is a basement under the circulation spine and a portion of Wing C East, housing the central mechanical systems and small support rooms. The east and west extensions of the building wings each have a mechanical penthouse at the midpoint housing an air handler.

The residential levels are recessed 4' back from the edge of the cantilevered floor slabs, creating a strong horizontal expression. The corresponding flat building roof, honest expression of materials and complete absence of ornament are representative of a prevailing mid-20th century design vernacular. South-facing bedrooms are shaded by a vertical metal fin on the west edge of each window, painted the same aqua color as the spandrel panels below the windows.

The building envelope is substantially unchanged since it was built in 1959. Therefore, the thermal performance of the exterior walls and roof insulation are well below current building standards. The scope of the project improvements does not include upgrading the existing cladding, except for first floor Program areas that are being renovated. The roof insulation will be upgraded and re-roofed, when the residential wing air handlers and penthouses are replaced (see 4.1 Systems Narratives for further discussion on phasing and Appendix 6.3 Roofing).

Each residential wing is served by a central elevator and stairwell adjacent to the circulation spine, with an additional egress stair at the extremities of the eight wings. Round the clock security for the residential wings is a priority. The circulation spine currently has card key access to the north and south of Wing C just beyond the two east side (back) entries. In the course of improving the Common Areas to make the spaces feel more open and interconnected, it will be critical to maintain security for the residential wings.

A-I BUILDING AREA SUMMARY

All areas gsf, U.O.N.	**Existing**	**Proposed Expansion**	**Total**
Existing A-I Gross Building Area	195,185 (OGSF50)		
Wing C West (existing to be demo'd)	- 1,955		
Revised (E) A-I Gross Building Area	193,230 (OGSF50)		
Proposed Phase 1 & 2:			
Wing C West (new Resident. Restaurant)		+ 19,133	
Wing B West (to be renovated)	5,664		
Wing D West (to be renovated)	5,707		
Wing D West (extensions)		+779	
Wing C East (to be renovated)	17,425		
New Central Plant (enclosed portion)		+2,100	
New Kitchen Dock Enclosure		+3,600	
New Staff Residences (standalone)		+4,956	
Total Renovation	**28,796**		28,796
Total New Construction		**30,568**	30,568
Total A-I Project			**59,364**
Residential Wings	132,726	0	**132,726**
Circulation Spine/Laundries/2 RD Apts	13,082	0	**13,082**
Basement & Roof Penthouses	18,626	0	**18,626**
Revised Total A-I Gross Building Area			**223,799** (OGSF50)

2.3

PREFERRED CONCEPT

During the DPP process several concept diagrams for the Program organization were investigated (see Section 6.2). Foodservice being a significant component of the project, multiple strategies for preparing and serving meals were also explored. The Preferred Scheme is a synthesis of the concepts that most effectively meet the programmatic requirements and project goals defined by the Steering Committee and Project Management Team.

SITE PLAN - PREFERRED CONCEPT

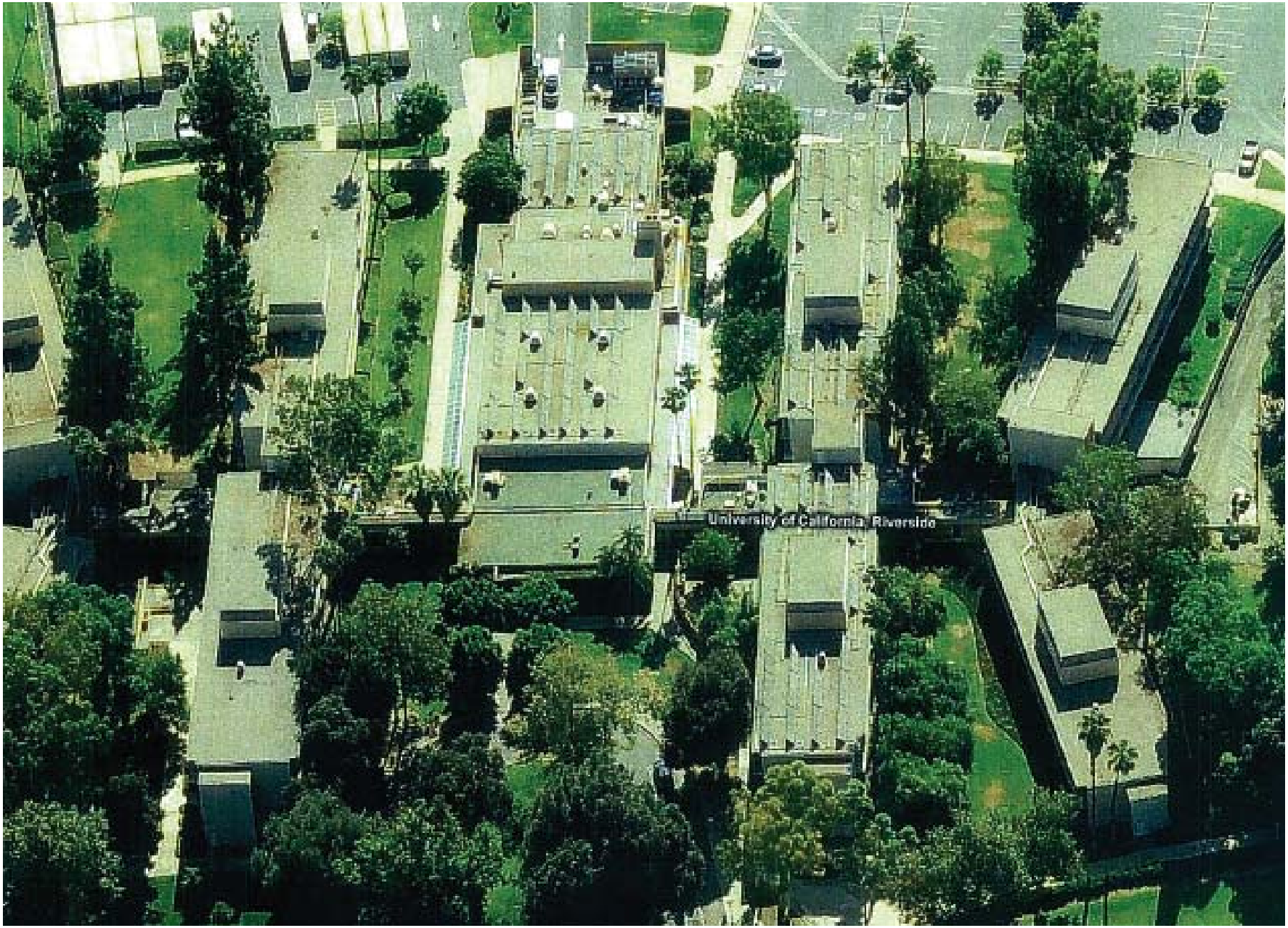
EXISTING

NEW/RENOVATION

CIRCULATION - PUBLIC ACCESS

CIRCULATION - SECURED ACCESS

0′ 50′ 100′ 200′ N



A - 1 Aerial From the West

CONCEPT DIAGRAM

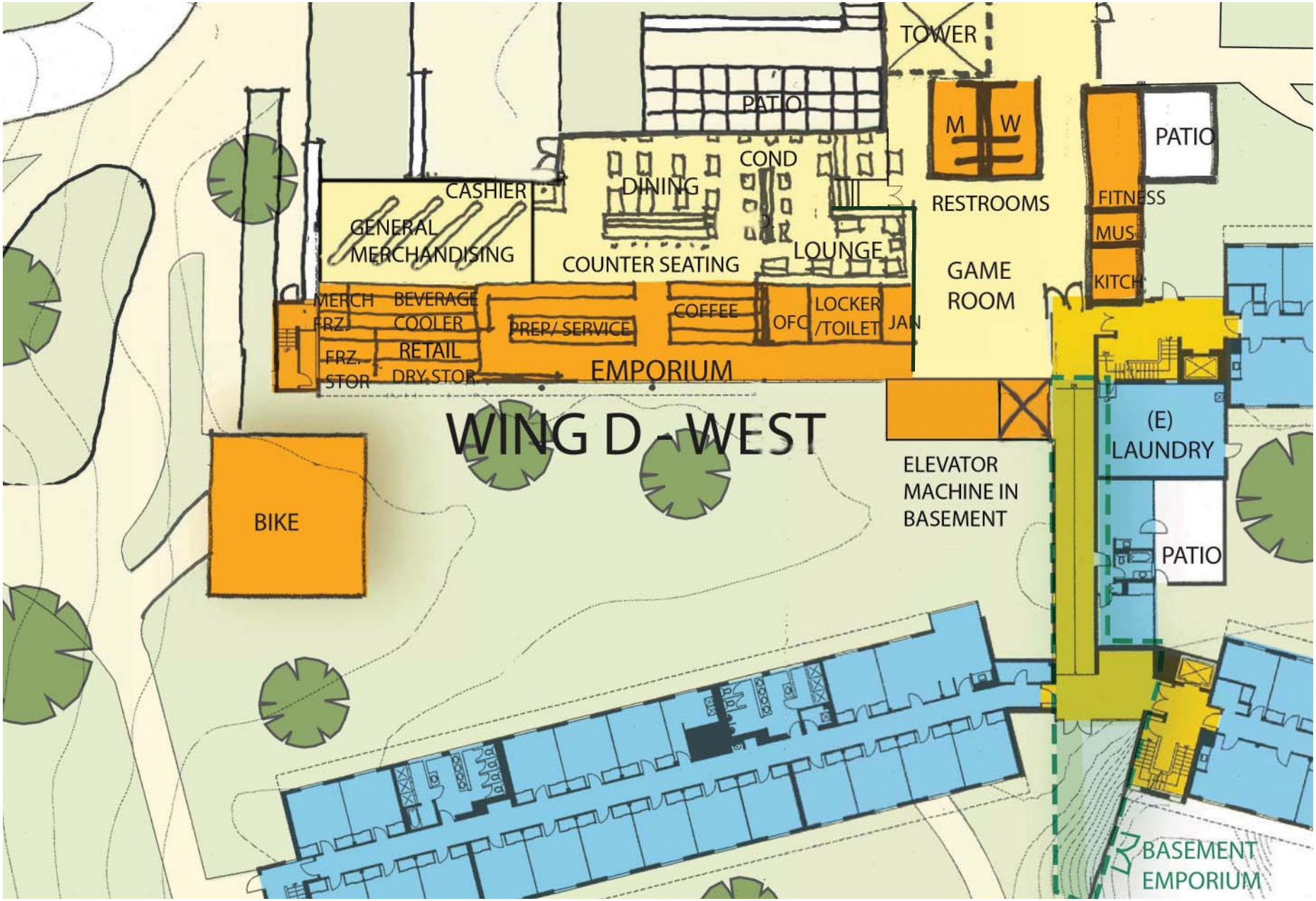
The Concept Diagram is fundamentally based on a phasing strategy that keeps the existing Wing C East foodservice facility in operation until the new Residential restaurant venue can open. The new Emporium diner alone will not be enough to handle the dining demand. Two other key Concept determinants were the mandate to create a vibrant social hub for A-I residents and the campus neighborhood, plus the desire to enhance campus visual quality. Together with existing patterns of pedestrian flow and repurposing as much of the A-I shell as possible, the proposed Concept Diagram developed as follows.

Wing D West

Wing D West will house a retail area and the Food Emporium because it has the most ideal frontage to the primary flow of students from the main A-I entry to the rest of campus. The existing ground floor bike storage will be captured for interior Program uses. Secure bicycle storage will be relocated to a single enclosure just southwest of Wing D – closer to primary pedestrian access and visible from the street. The primarily north-facing glazing on the ground floor will be replaced with high performance clear glass to provide transparency and visibility of the retail and dining areas. The western end of Wing D will be General Merchandising featuring small retail items, snacks and beverages. The middle section of Wing D will have Coffee service and a late-night Dining facility supported by a full service prep area. Though a significant portion of meals are anticipated to be take away, on site dining for 56 patrons will be provided at tables, booths and counter, with additional seating for 40 in the adjacent lounge plus a north-facing outdoor patio (see "Foodservice Concepts" below for additional description of the Emporium dining concept). The eastern end of Wing D will be populated by a student Lounge, Game Room and public Restrooms.

Residential areas must remain secured from the public at all times. Wing D will have 24-hour card key access for A-I residents directly off the circulation spine, as well as exterior access on the north side which can be secured from nonresidents during later hours, when desired. The intention is to sequentially close off the more public (western) zones of Wing D as the evening progresses: first the Retail / Dining and points of

Conceptual Model West Side



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WING D WEST - PREFERRED CONCEPT

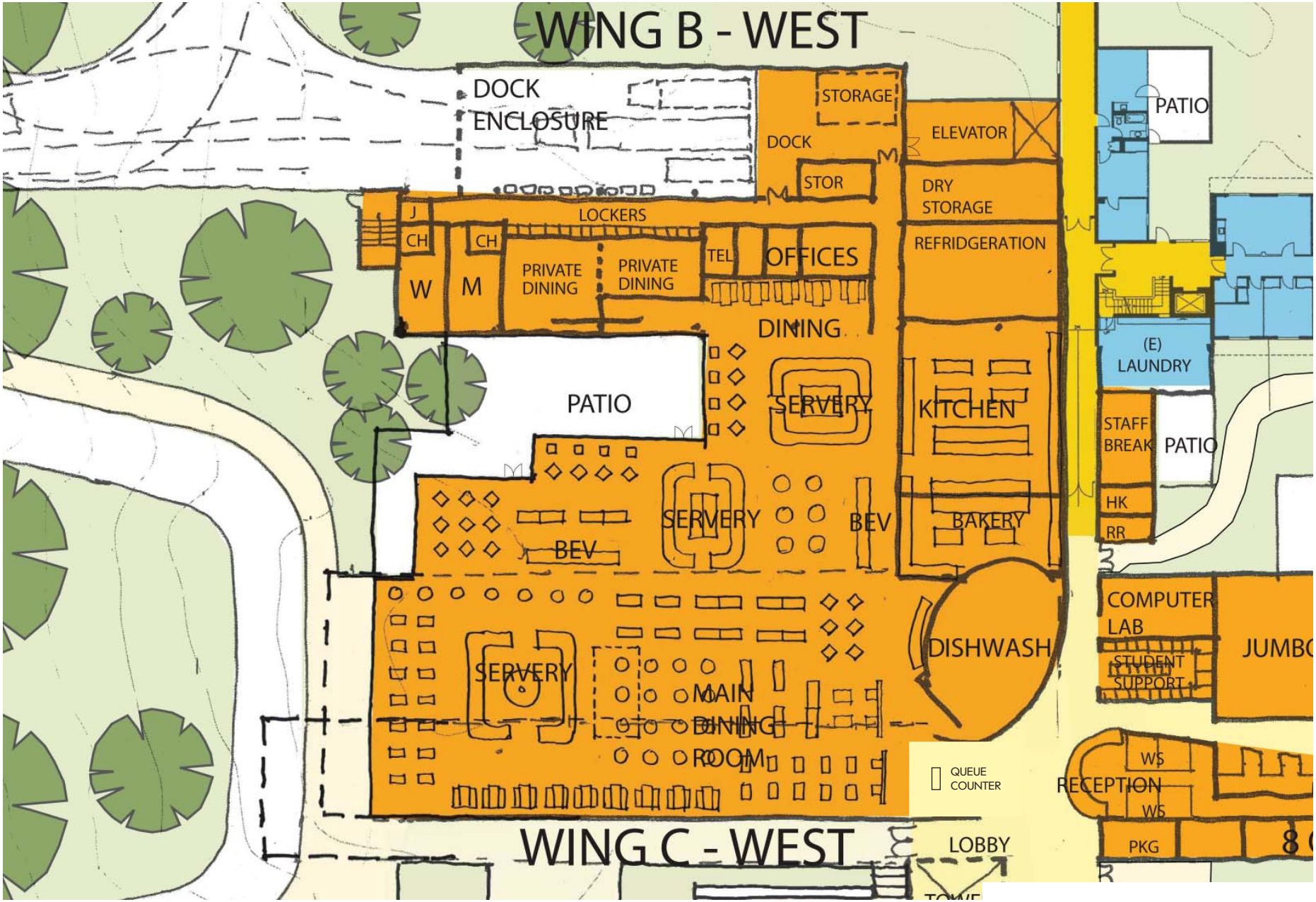
sale, followed by the Coffee Bar, with the eastern zone (Lounge, Games, Restrooms) remaining open around the clock. Service for the kitchen will be located on the south side of Wing D, including a trash/recycling enclosure and new underground grease trap system. The kitchen hood exhaust must be ducted to the roof of Wing D. A new service elevator to the basement spine will provide access to the building's recessed south loading dock for receiving and waste removal. Receiving may also be routed through the basement spine from the Residential Restaurant kitchen dock and service elevator.

Wing C West

Existing Wing C West will be demolished and replaced with a much larger addition housing the Residential Restaurant facility, with new foodservice equipment and upgraded infrastructure support. The dining concept is to provide a more open Kitchen and Servery experience, so that students and staff alike have an increased sense of the food preparation that fosters enjoyment of meals (see "Foodservice Concepts" description below). The 575 seats in the dining room will be arranged in a variety of types and configurations, possibly employing occasional low partitions to provide a diverse dining experience. The central dining zone is subdivided by a satellite servery that will facilitate an audience of approximately 300 on the east side facing a demountable stage with video projection capabilities, and seating for at least 55 on the west side for hall dinners or other special events. The dining room wraps around a secure patio for additional outdoor seating and increased perimeter daylighting. Two 16-seat private dining rooms face onto the patio from the north. The dining entry is accessed directly off the A-I building lobby, which is configured to better handle the peak mealtime queue and will have an adjoining alcove for backpack lockers and vending machines. The Dishwash enclosure for trayless drop off is located at the dining exit, directly adjacent to the entry.

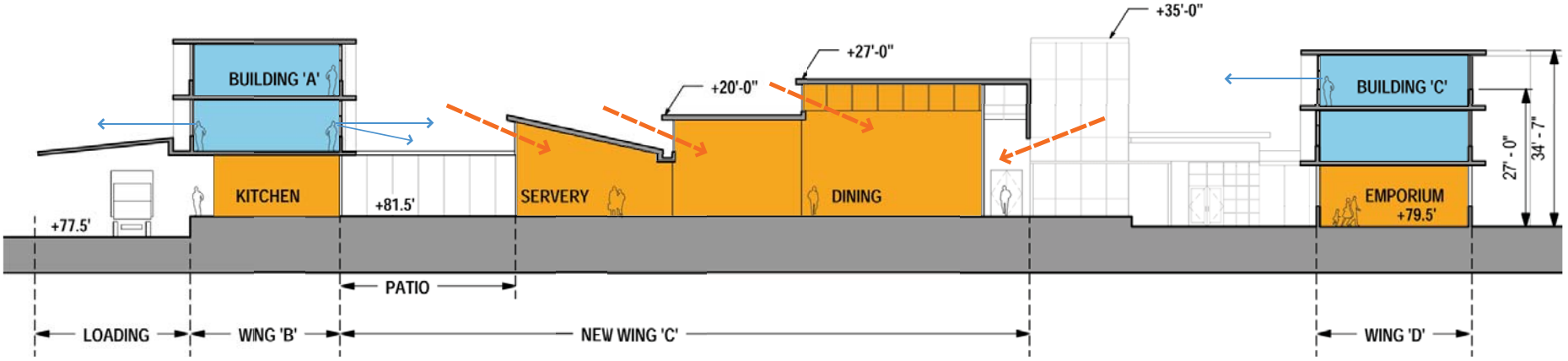
Positioning the main A-I building entry between the Residential Restaurant wing and the Emporium is conceived as a vibrant social hub for the residents. The cantilevered dining building roof reaches out to Aberdeen Drive, creating a shaded loggia along the entry path. Transparent exterior building walls will display the high level of activity in the interior, visually connecting outside with inside. Trellised outdoor seating along

Conceptual Model - View of Entry



NOT TO SCALE

WING B WEST & WING C WEST - PREFERRED CONCEPT



Section Looking East

A - I Entry Looking East

Conceptual Diagram

the Emporium creates a hangout space for casual meeting among residents. The Concept Diagram suggests that the main entry be pronounced from the Aberdeen approach by a glazed two-story tower with a visitor waiting area at its base

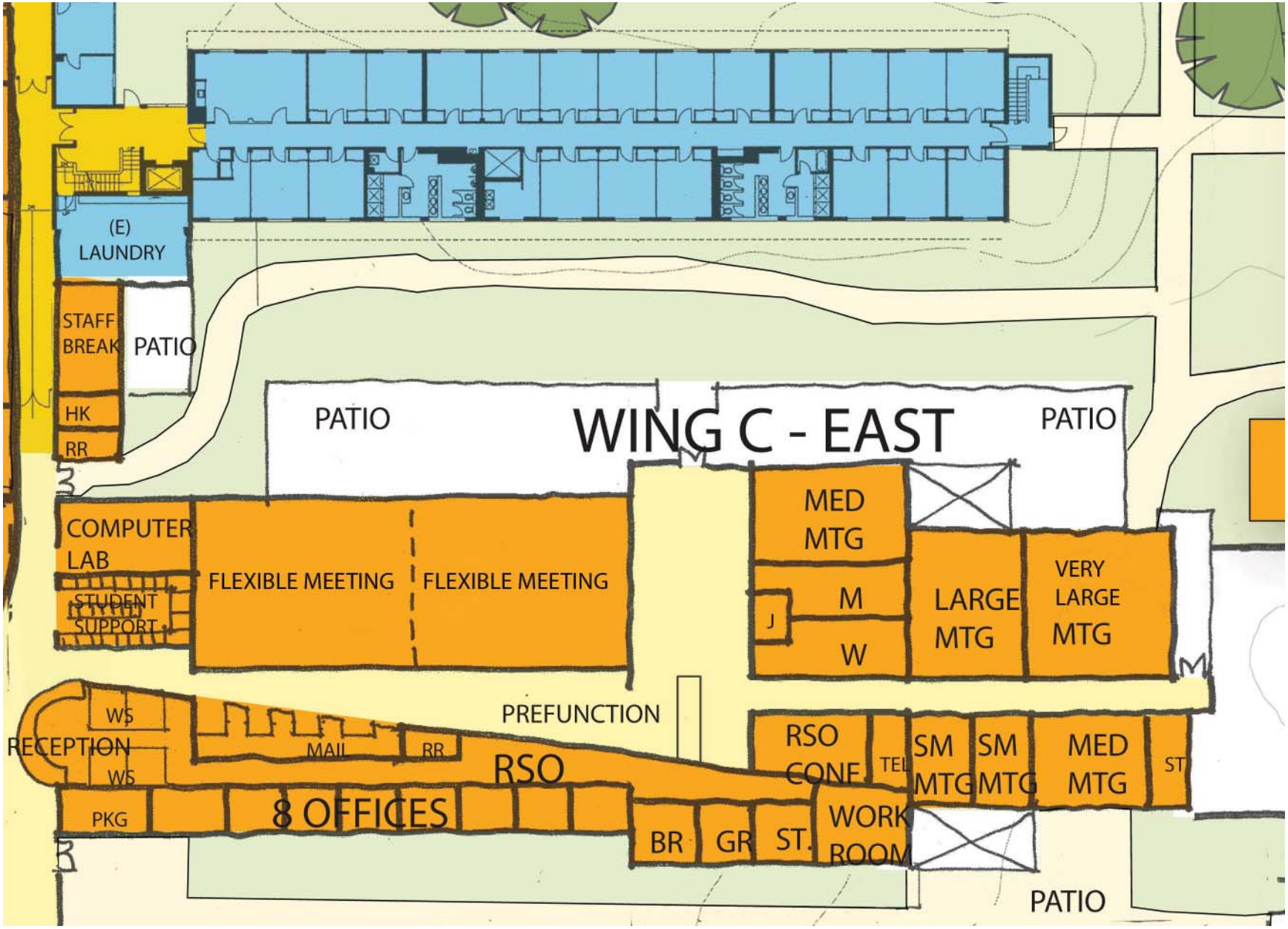
Wing B West

Wing B West will house the Residential Restaurant kitchen back of house spaces, including dry and refrigerated storage, foodservice staff offices, lockers and changing areas, as well as the two private dining rooms facing the patio. The existing ground floor bike storage will be captured for this interior use, and a roofed service enclosure will be added along the northern edge of Wing B for kitchen deliveries, food truck loading and trash/recycling. A new service drive will allow trucks to enter from Linden Street and exit onto Aberdeen Drive. An elevator adjacent to the dock will allow foodservice deliveries to be transported to the Emporium kitchen in Wing D West via the basement spine. An underground grease trap system serving the Residential Restaurant kitchen and the loading enclosure will be installed immediately to the north of Wing B. New kitchen and servery hood exhaust fans will be located on the roof of Wing B (above residential windows), with an enclosed duct riser on the south face of the stair tower.

Wing C East

The interior of Wing C East (existing dining facility) will be completely demolished and replaced with multiple meeting rooms in addition to the offices of the RSO. A reception area with 24/7 service counter faces onto the main building lobby, with student mailboxes positioned around the corner. Eight meeting rooms of varying sizes are situated deeper into Wing C, united by a prefunction space that is accessible from both the A-I circulation spine and directly from the exterior between new north-facing patios. This interior organization, combined with dedicated restrooms, allows the meeting room zone to be easily segregated for occasional nonresident usage, while maintaining direct access from the circulation spine for amenities. The north entrance provides convenient access from the parking lot for summer visitors.

Conceptual Model



NOT TO SCALE

WING C EAST - PREFERRED CONCEPT

The Computer Lab is centrally positioned where Wing C connects to the circulation spine, since the residents require convenient 24-hour access to the printers. Other Community program spaces including the Fitness Center, Music Practice Room and Student Kitchen, are located in the repurposed Resident Director apartment directly opposite the Wing D Game Room. Another Resident Director apartment opposite the Residential Restaurant kitchen will house the Staff Breakroom plus a single-occupancy ADA restroom and a large Housekeeping closet to serve the Community spaces.

Staff Residences

Four single-story Staff Residences are proposed to be located on the lawn immediately south of the A-I building. These two bedroom wood-framed units will house Resident Directors and Faculty in Residence. Operable windows on the north and south will allow flow though natural ventilation for most of the year, with air conditioning provided for the summer extremes. South-facing windows will be shaded by roof overhangs, and each unit will have a deck overlooking the arroyo. Privacy from A-I and passing pedestrians is a priority.

Central Plant

A new standalone mechanical equipment enclosure is proposed adjacent to the existing kitchen loading dock. This allows the existing basement central plant to remain in operation until the new chiller / cooling tower plant can be brought on line. Due to the impact on site open space that a single-story footprint would have (approximately 5,700 sf program area), the central plant is recommended to be a two-story structure with the unroofed cooling tower enclosure on top. This would also reduce noise and visibility of mechanical equipment from the upper floors of the A-I east wings. The ground level will house chillers, pumps and a water treatment system, and the upper level will contain the new emergency generator in addition to the cooling towers. To reduce the standalone mechanical enclosure footprint by an additional 1,500 gsf, it is recommended that the new heating hot water boilers and pumps, which will replace the existing steam boiler system, be installed in the abandoned chiller space in the Wing C basement.

Conceptual Model - Staff Residences in Foreground

Residential Restaurant

FOODSERVICE CONCEPTS

A-I Residential Restaurant

A completely new Residential Restaurant facility, main kitchen/bakery, servery and dishroom will be built in the new A-I Wing C West, and includes all new infrastructure, utilities, equipment, dining room and exterior patio with secure enclosure. The facility will exclusively employ a pre-paid meal ticket program, but cash can be accepted for non-board plan diners.

The main kitchen will consist of the following areas and functions: dry storage room, walk-in refrigerator/freezer complex, employee changing and restrooms, lockers, offices, bakery, hot/cold food preparation, production cooking and utensil washing. The kitchen loading dock will have a leveler with two truck slots, a compactor, trash / cardboard / recycling bin area, cart wash, a single pallet bottle beverage walk-in refrigerator, a central $C0^2$ fill station, a central oil fill/dispensing system and a used oil accumulation unit. The kitchen will be located between the dock and the food court servery and the dining room.

The new dishwashing area will be located adjacent to the Dining Room entry / exit and includes an accumulator conveyor designed to self-bus dishes, flatware and glassware without the use of trays. The electric Hobart "Flight Type" dishwasher will be re-used (as it will be almost new), and a scrapping table and conveyor will be added. A new pulper will also be installed along with a new accumulator.

A new food court servery will be open to the kitchen and bakery as well as the dining room. The servery will have multiple serving platforms or "action stations" that will each have "a la carte" cooking to order or display cooking to re-supply self serve hot and cold stations with "just-in-time" food re-supply. Very little hot holding will be required for pre-cooked hot entrees and side dishes.

One proposed island-style cooking platform will include: International fare with hot/cold self-service displays with a cooking line of burners, grill and fryers; hot carving and classic hot entrees; pizza display self-service with a two deck conveyor pizza oven and pizza prep area. The conveyor oven will also bake other hot entrees, such as Shepherd's pie, pot pies, etc.

The second island-style cooking platform will include: an appetizer bar with fryers and multiple hot/cold displays for self- service "small plate" multi-cultured finger foods and toppings. The island platform will also include a "grill to order" cooking line with broiler, grill and fryers to serve classic burgers, chicken and fries with self service hot/cold displays of grilled foods. A full station of condiment pumps will also be part of the island station.

The third proposed island style cooking platform will revolve around a 60" diameter round grill (a.k.a. "Mongolian Grill") which will be surrounded by chilled salad bar and ingredient bar stations that will have all cold ingredients for any entrees, including breakfast, lunch and dinner. The 60" grill chef will cook ingredients gathered by students from the salad and ingredients bars. An order counter will be designed around the 60" round grill so students can pass their ingredients to the chef and wait until their food is cooked. This "fire and ice" cooking platform is planned as a feature for the dining room.

The food court will also include a self-service bread, bagels and soup display with "Whole Foods" style cabinets, toasters and chilled smears. Another counter will feature yogurt, cereals, grains, trail mixes and bulk milk dispensers.

Two beverage counters will be provided with self-service coffee, juice, tea soda/ice and other specialty beverages.

Desserts will be a feature in front of the exhibition bakery with self-service cookies, bars and chilled displays.

Food / Retail Emporium

Wing D West will include a new 56 seat late-night Diner concept with table and counter seating, a Convenience Store, a Coffee / espresso bar, an outdoor patio plus an adjacent Lounge and Game Room with seating for up to 40.

Open Kitchen & Servery

Diner Concept

The Convenience Store will include four 12' long merchandising display gondolas with end caps, a walk-in freezer with three self-service glass doors and a walk-in refrigerator with six self-service glass doors. The Convenience Store will be controlled by a Point of Sale counter at the entry door with two cash registers and an impulse display case.

The all-day, late-night Diner platform will be a branded concept and include a la carte cooking with griddles, fryers and open burners. The short-order cooking line will be supported by refrigerators, freezer and back of house preparation area. The serving counter will have two cash registers as well as pastry display case and self-service food pick-up. All beverages and food will be "order and pay". The kitchen will include prep sinks, hand sinks, pot sinks, dry storage, walk-in freezer, staff toilet and a janitor closet. Receiving and trash will be facilitated by a new one-stop elevator to the basement. Foodservice deliveries from large trucks will be routed from the new Residential Restaurant loading dock north of Wing B West through the basement circulation spine. Trash, recycling and smaller truck deliveries will utilize the south service yard. The entire pathway from service yards through basement spine to elevator to Kitchen back of house will be designed to accommodate full pallets (4'-6" wide minimum clear).

The Diner serving and food pick-up area will be adjacent to a full-service Coffee/espresso, blender beverage platform, which will operate independently of the branded late-night Diner concept. The Coffee/espresso bar will provide premium coffees, espresso and blended cold drinks, as well as pastries displayed in a euro-style glass case. The Coffee/espresso bar will be directly adjacent to the Lounge and Game Room. The Wing D layout will facilitate sequential closing of the Convenience Store followed by the late night Diner followed by the Coffee bar - with the latest entry remaining from the circulation spine for A-I residents only.

FOODSERVICE SEATING CAPACITY

Program Space	**Seats**
Residential Restaurant – Main Dining Room	575
Residential Restaurant – 2 Private Dining Rooms	32 (total)
Residential Restaurant – Patio	120 (estimated)
Emporium Diner (including counter service)	56
Lounge	40
Emporium - Patio	50 (estimated)
Total Foodservice Seats (indoor and outdoor)	873

3.1

PROGRAM AREA SUMMARY

The following summary represents the project total assignable square footage required for the A - I Residence Hall Common Areas.

The program is organized into seven catagories:

- Community Space
- Resident Service Office
- Retail/Emporium/Lounge
- Reidential Restaurant
- Staff Residential
- Interior Non- Assigned
- Exterior Non-Assigned

PROGRAM SUMMARY
ABERDEEN - INVERNESS RESIDENCE HALL
Tabulation

PROGRAM GROUP:	ASF	GSF	GSF - EXISTING CONSTRUCTION	GSF - NEW CONSTRUCTION
TABULATION:				
Wing C-East & Spine - Community Space	8,875	12,678	17,425	0
Wing C 'East' - Resident Service Office	3,323	4,747		0
Wing D - Retail/Emporium/Lounge	5,838	6,486	5,707	779
Wing B & C 'West' - Residential Restaurant	22,317	24,797	5,664	19,133
Staff Residential	4,460	4,956	0	4,956
Total	**44,813**	**53,664**	**28,796**	**24,868**
Non - Assigned Interior	1,544	1,716		
Exterior:				
Bicycle Storage		1,540		
Dock Enclosure		3,600		
Central Plant		2,100		
OVERALL PROJECT GSF		**62,510**		

WING C 'EAST' (+ SPINE) - COMMUNITY SPACE

AREA DESCRIPTION	QUANTITY	UNIT ASF	TOTAL ASF	PRECINCT GSF	TOTAL GSF	NOTES
Prefunction	1	914	914			5 tables, 20 chairs
Very Large Meeting Room	1	900	900			16 tables, 32 chairs
Flexible Meeting Room	2	1,600	3,200			256 seats
Large Meeting Room	1	750	750			12 tables, 24 chairs
Student Support	1	400	400			Lockers, ATM and Vending
Medium Meeting Room	2	500	1,000			6-8 tables, 12-14 chairs (14 tables, 26 chairs)
Small Meeting Room	2	252	504			1 table, 8 chairs (2 tables, 16 chairs - total)
Chair Storage	1	100	100			
Computer Lab (at Spine)	1	450	450			12 tables, 12 chairs
Storage	1	35	35			
Music Practice Room (at Spine)	1	70	70			
Student Kitchen (at Spine)	1	102	102			
Fitness Center (at Spine)	1	450	450			
Assignable Area Subtotal			***8,875***			
Net to Gross 0.70				***3,803***		
Subtotal Gross					***12,678***	

PROGRAM SUMMARY
ABERDEEN - INVERNESS RESIDENCE HALL
Assignable square footage (ASF)

AREA DESCRIPTION	QUANTITY	UNIT ASF	TOTAL ASF	PRECINCT GSF	TOTAL GSF	NOTES
WING C 'EAST' - RESIDENT SERVICE OFFICE						
Reception	1	600	600			
Mail	1	350	350			1,000 mailboxes
Package Room	1	100	100			
Resident Director Office	2	120	240			Side entry required 3 chairs (6 chairs - total)
Head Resident Office	1	120	120			3 chairs
RSO Manager Office	1	160	160			4 chairs
Staff Offices	4	120	480			3 chairs (12 chairs - total)
Staff work stations	4	60	240			1 chairs (4 chairs - total)
RSO Conference	1	325	325			Provide projection system/projection screen 1 table, 14 chairs
Breakroom	1	120	120			1 table, 4 chairs
Workroom	1	228	228			
Graphics Room	1	160	160			
Storage	1	200	200			
Assignable Area Subtotal			***3,323***			
Net to Gross 0.70				***1,424***		
Subtotal Gross					***4,747***	

WING 'C' WEST - RETAIL/EMPORIUM/LOUNGE

AREA DESCRIPTION	QUANTITY	UNIT ASF	TOTAL ASF	PRECINCT GSF	TOTAL GSF	NOTES
General Merchandising	1	1,000	1,000			Provide 4 gondolas
Cashier	1	150	150			P.O.S. security cameras required
Merchandise Freezer	1	93	93			
Dining	1	720	720			48 seats - 13 tables, 40 chairs, 8 seats at banquette
Counter Seating	1	100	100			8 stools
Coffee	1	200	200			Separate counter/blended beverages
Condiment Station	1	15	15			
Prep Area/Service	1	646	646			
Dry Storage	1	180	180			Delivery 3x/week - not ok to walk through
Freezer Storage	1	112	112			
Beverage Cooler Retail	1	288	288			
Office	1	144	144			3 station office - 2 people use at a time , 1-3 chairs
Lockers/Toilet	1	100	100			Kitchen staff
Janitor	1	90	90			Services emporium kitchen
Lounge	1	1,200	1,200			Provide 1 flatscreen/40 seats @ 30 sq. ft. ea. 2 couches, 23 chairs, 10 tables
Game Room	1	800	800			Provide 1 flatscreen - wii station
Assignable Area Subtotal			***5,838***			
Net to Gross 0.90				***648***		
Subtotal Gross					***6,486***	

PROGRAM SUMMARY

ABERDEEN - INVERNESS RESIDENCE HALL

Assignable square footage (ASF)

AREA DESCRIPTION	QUANTITY	UNIT ASF	TOTAL ASF	PRECINCT GSF	TOTAL GSF	NOTES
WING B & C 'WEST' - RESIDENTIAL RESTAURANT						
Lobby	1	750	750			Includes queueing +eating, 9 chairs, 6 sidetables
Staff Breakroom	1	388	388			Leave current 'B' wing RD apartment as is
Main Dining Room	1	9,500	9,500			575 seats
Private Dining	2	330	660			16 chairs (32 seats - total)
Servery - primary	1	2,415	2,415			International/Hot carving/App. bar/Grill to order
Servery - secondary	1	1,584	1,584			Salad Bar and Grille + (2) Beverage stations
Dishwashing	1	1,158	1,158			
Kitchen	1	1,780	1,780			Kitchen requires 1 computer w/ high counter
Bakery	1	833	833			
Dry Storage	1	800	800			Includes receiver station
Refrigeration	1	1,000	1,000			Includes blast chiller
Supervisor's Office	1	120	120			Services 4 people at 1 time, 4 chairs
Manager's Office	1	256	256			Services 2 people at 1 time + conf.,1 table, 6-10 chairs
Culinary Office	1	120	120			Services 3 people at 1 time, 3 chairs
Professional Employee Lockers	1	60	60			40 -2 high X 18" wide in hallway
Student Employee Lockers	1	39	39			4 high X 18" wide; 50 in hallway
Employee Restrooms	2	250	500			Includes changing room
Cleaning Storage	1	90	90			
Food Truck Storage	1	64	64			
Misc/Seasonal Storage	1	50	50			
Catering Storage	1	150	150			A/V equip/stage(stored off site)/chairs/tables
Assignable Area Subtotal			***22,317***			
Net to Gross 0.90 +/-				***2,480***		
Subtotal Gross					***24,797***	

AREA DESCRIPTION	QUANTITY	UNIT ASF	TOTAL ASF	PRECINCT GSF	TOTAL GSF	NOTES
STAFF RESIDENTIAL						
2 Bedroom Staff Housing	4	1,115	4,460			Min. one unit to meet ADA access
Master Bedroom						
Bedroom						
Master Bath						
Bath						
Kitchen/Dining						
Living						
Laundry Closet						
Stora(atge Closets						
Patio/Deck						
Assble Area Subtotal			***4,460***			
Net to Gross 0.90				***496***		
Subtotal Gross					***4,956***	

PROGRAM SUMMARY
ABERDEEN - INVERNESS RESIDENCE HALL
Non - Assignable Square Footage

AREA DESCRIPTION	QUANTITY	UNIT ASF	TOTAL ASF	PRECINCT GSF	TOTAL GSF	NOTES
NON - ASSIGNED INTERIOR						
Primary Restrooms/M-W	2	325	650			'C' East Wing & 'D' Wing/M + W
Single Occupancy Restroom	1	64	64			ADA accessible/Centrally located
RSO Restroom	1	60	60			ADA accessible (Single Occupancy)
Janitor's Closet	1	120	120			
Housekeeping Closet	1	80	80			
Telecom Closet	3	90	270			One telecom per wing - Kitchen, C East, Spine
Dining + Emporium Service Elevator	2	150	300			
Net Area Subtotal			***1,544***			
Net to Gross 0.90				***172***		
Subtotal Gross					***1,716***	
EXTERIOR						
Bicycle Storage	1				1,540 gsf	150 bikes, standalone structure
Dock Enclosure NEW STRUCTURE W/ ROOF, WALLS + 30' W/ DOOR	1				3,600 gsf	Security camera/Food digester & Cardboard trash compactor/Power for trucks, Covered
Emporium Service yard	1			360 sf		Grease disposal/Cardboard & food recycling, Uncovered
Patios	3	VARIES		6,500 sf		Patio sizes vary; provide 50% cover
Central Plant	1				2,100 gsf	Standalone Structure Interior space for chillers & pumps. Exterior for cooling tower & generator. Boilers and pumps to be located in Wing C basement
Subtotal				***6,860 sf***	***7,240 gsf***	

3.2

PROGRAM ADJACENCY DIAGRAMS

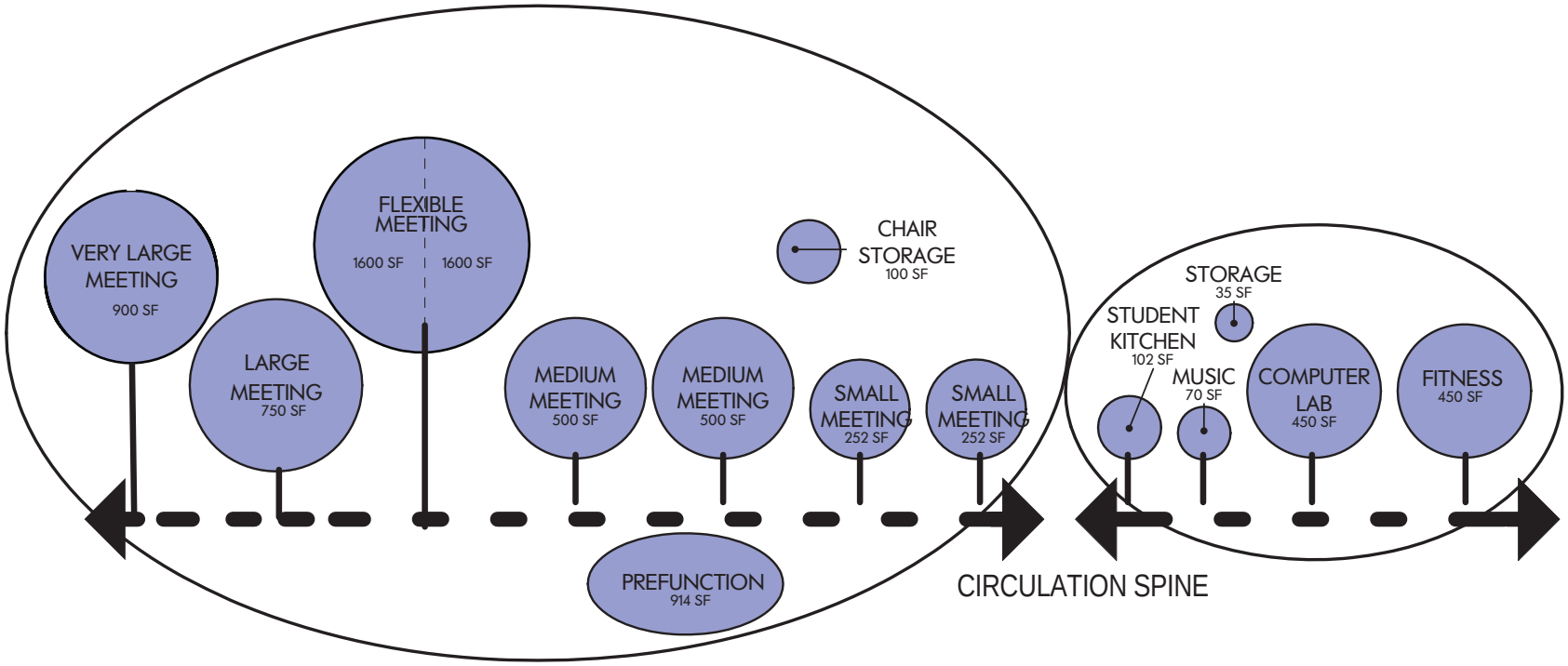
Program Adjacency Diagrams illustrate desirable proximities between program components that were articulated by the Project Management Team in the Workshops. The bubble diagrams for each programmatic group graphically clarify relationships that the Room Data Sheets cannot. The size of the bubbles, though not to scale, are a representation of the various program area requirements. Smaller components that together comprise a larger subgroup are encapsulated by a circle or ellipse. Solid lines signify user (resident) connections; dashed lines represent staff connections.

COMMUNITY SPACE

KEY

USER CONNECTION

STAFF CONNECTION

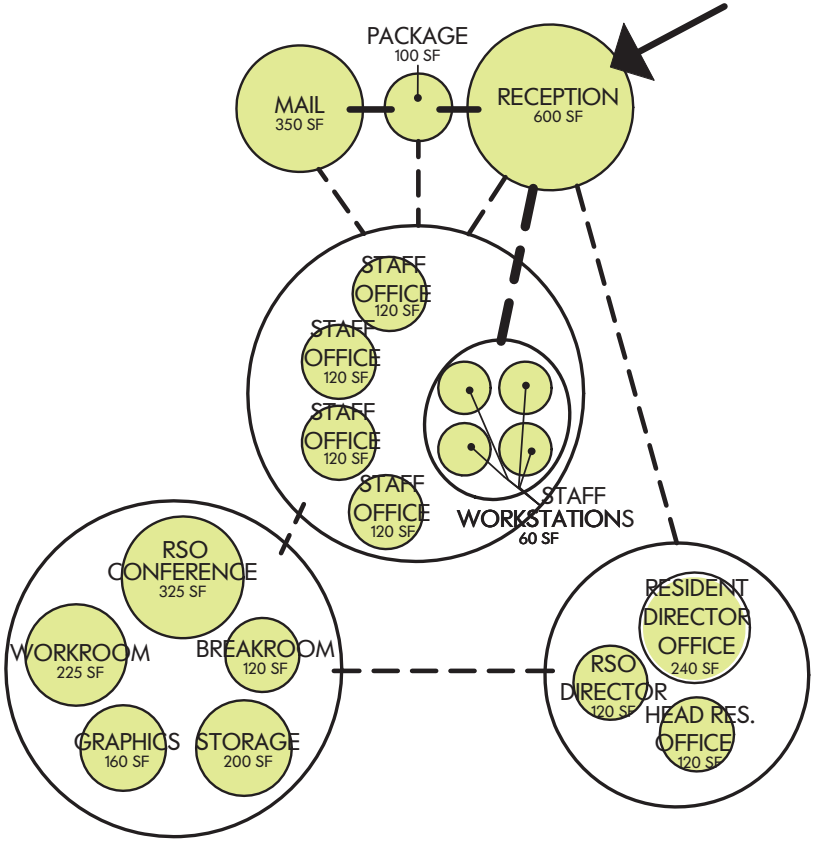


RESIDENT SERVICE OFFICES

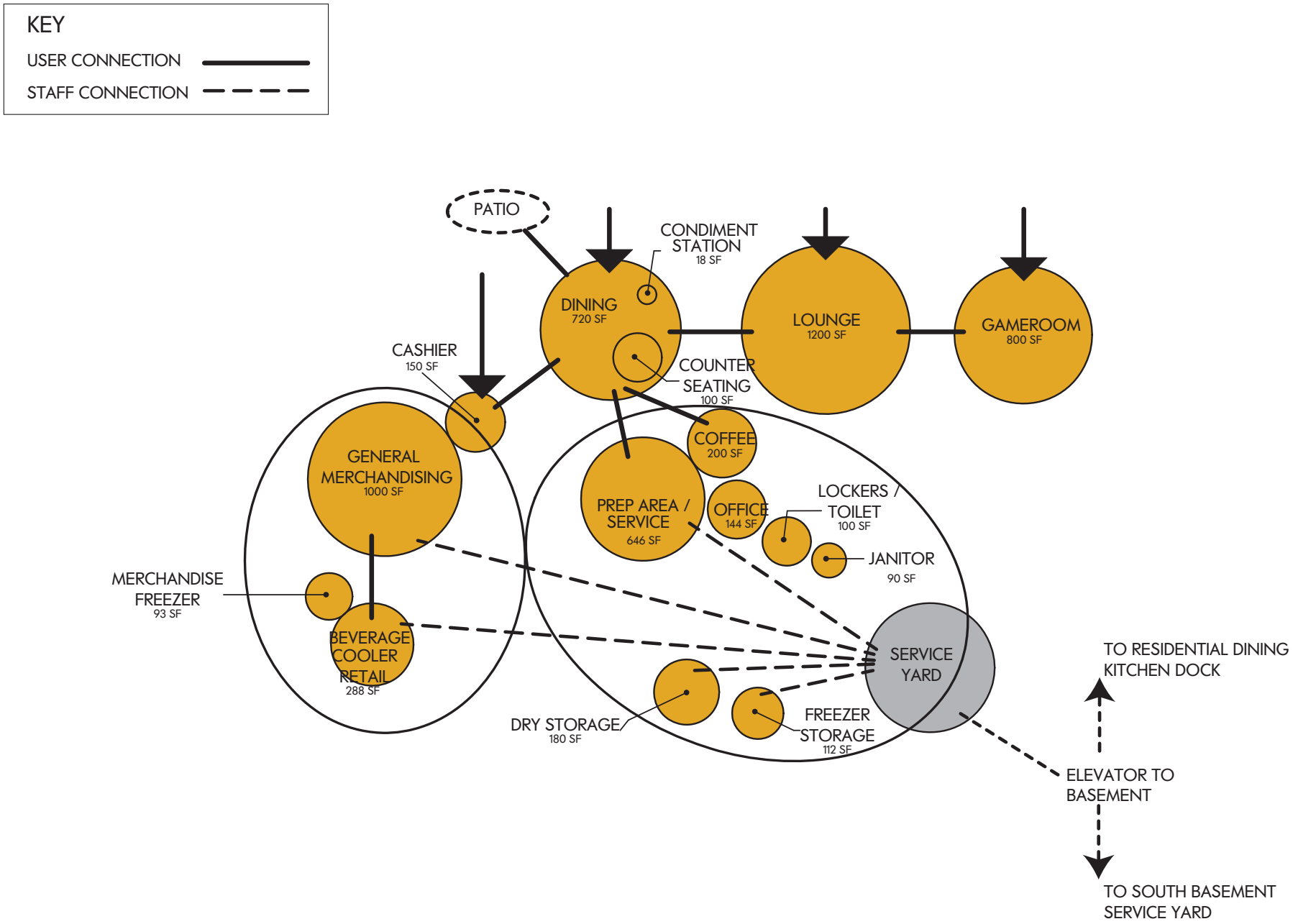
KEY

USER CONNECTION

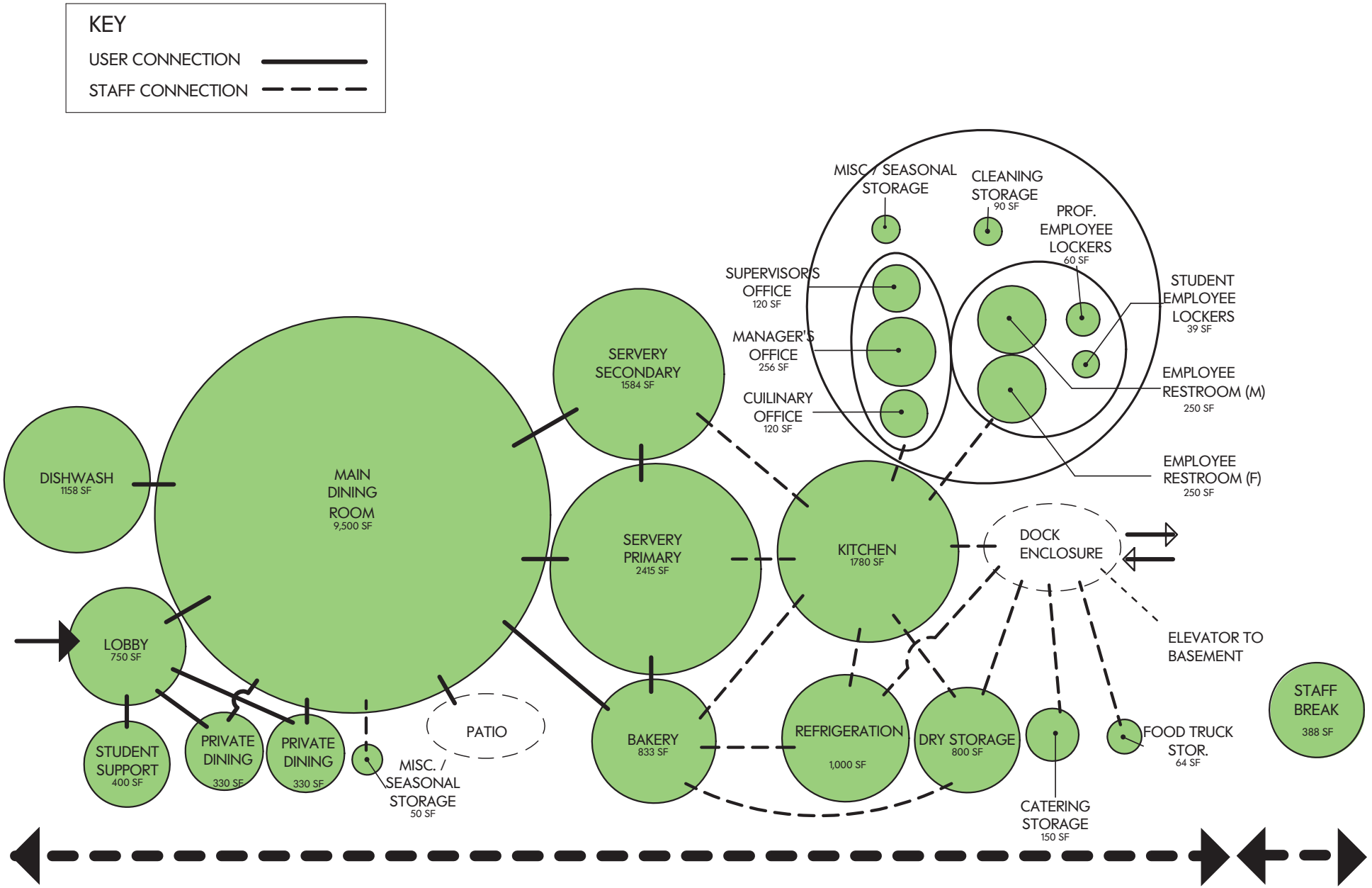
STAFF CONNECTION



RETAIL / EMPORIUM



RESIDENTIAL RESTAURANT

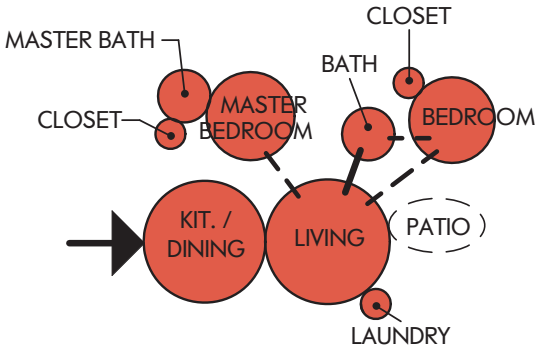


STAFF RESIDENCE

KEY

USER CONNECTION

STAFF CONNECTION



3.3

ROOM DATA SHEETS

The following section contains schematic diagrams and descriptions of each typical room in the Program, including ceiling height, desired architectural finishes, systems and technical requirements, equipment/furnishings and critical adjacencies.

COMMUNITY SPACE -PREFUNCTION

WING 'C' EAST

GENERAL INFORMATION

Name	**Prefunction**
Function	*Breakout room from meeting rooms*
No. of Occupants	20+
Area (Assignable)	914 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Meeting Rooms/Restroom
Additional Notes	Facing courtyard - ideal

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Ext doors - glass aluminum door, Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall and floor duplexes per code, Duplex support for catered events to be served
Lighting	30-40 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	1 phone/6 data, Wireless internet
Audio/Visual	N/A

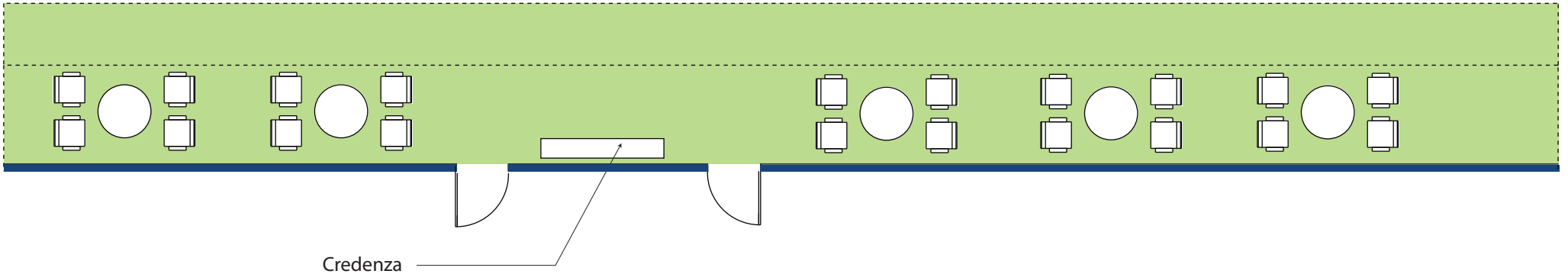
EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Window blinds, 1 Credenza
Moveable Equipment/ Furnishings	20 Lounge chairs/5 Coffee tables
Special Requirements	-

COMMUNITY SPACE -PREFUNCTION

WING 'C' EAST

ROOM DIAGRAM



SCALE: NTS

COMMUNITY SPACE - VERY LARGE MEETING ROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**Very Large Meeting Room**
Function	*Meeting room for students/staff*
No. of Occupants	32
Area (Assignable)	900 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Prefunction
Additional Notes	1 Very large meeting room req. w/ 1 exit to exterior

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood/Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall duplexes per code, Floor box, Ceiling projector
Lighting	Min. 50 Fc, Lighting controls
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	AWP on one wall
Security	Card key access/Camera at entrance to room
Telecom/Data	1 phone/4 data, One for clg. mount projector, Wireless AP
Audio/Visual	Ceiling mounted projector

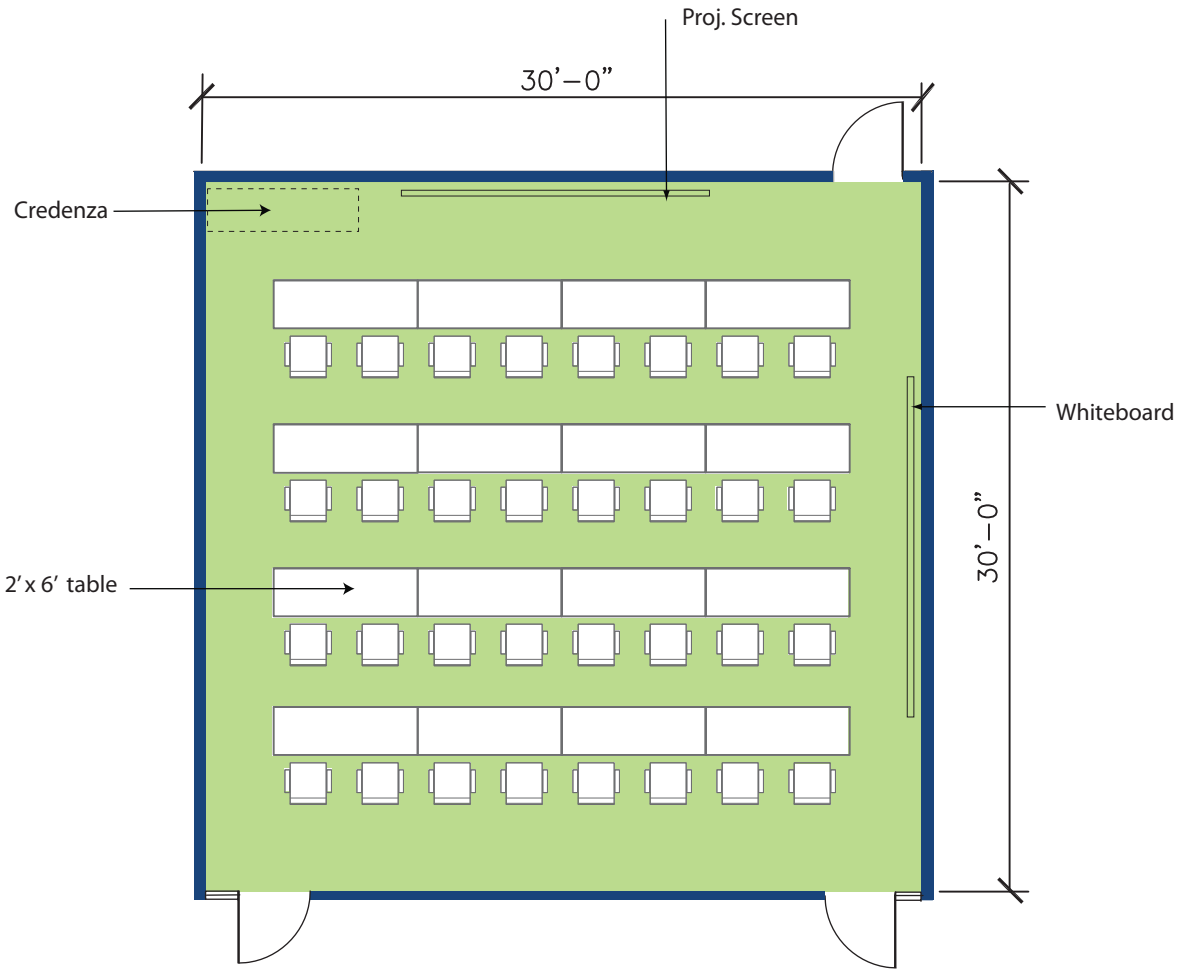
EQUIPMENT/FURNISHINGS

Built-In Features	Pull down projection screen
Fixed	1 Magnetic whiteboard, Window blinds, Credenza
Moveable Equipment/ Furnishings	16 tables, 32 stackable chairs
Special Requirements	-

COMMUNITY SPACE - VERY LARGE MEETING ROOM

WING 'C' EAST

ROOM DIAGRAM



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

NOTES: 16 tables, 32 chairs

COMMUNITY SPACE - FLEXIBLE MEETING ROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**Flexible Meeting Room**
Function	*Meeting room for students/staff*
No. of Occupants	256 Max
Area (Assignable)	1,600 ASF (x2)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Prefunction
Additional Notes	1 divisible meeting room req. w/ 1 Exit to exterior per Jumbo meeting room

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood/Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall duplexes per code, Floor box, Ceiling projector
Lighting	Min. 50 Fc, Lighting controls
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	AWP on one wall
Security	Card key access/Camera at entrance to room
Telecom/Data	1 phone/4 data, One for clg. mount projector, Wireless AP
Audio/Visual	2 ceiling mounted projectors

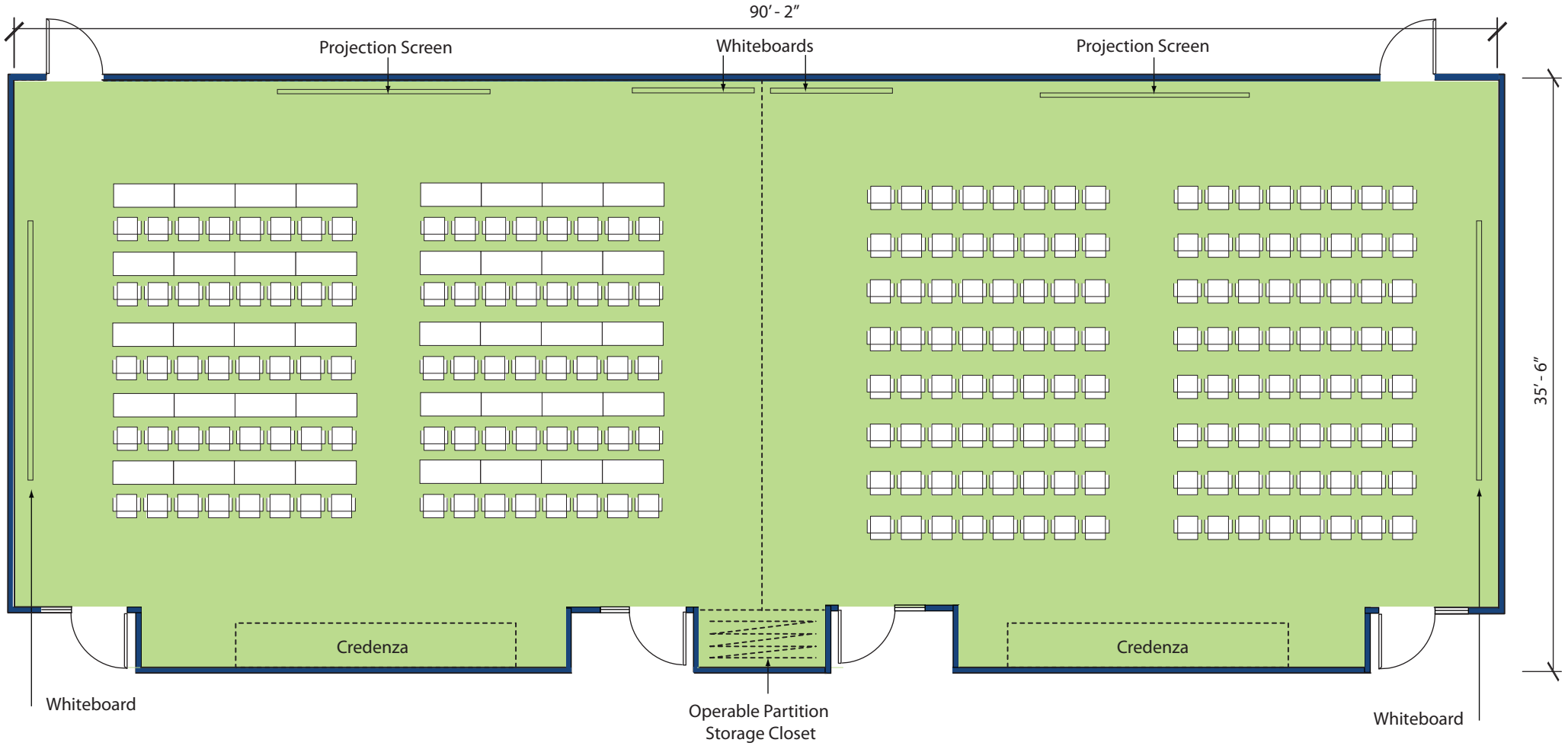
EQUIPMENT/FURNISHINGS

Built-In Features	Operable partition 2 pull down projection screens
Fixed	4 Magnetic whiteboards, Window blinds, 2 credenzas
Moveable Equipment/ Furnishings	Combined: 256 seats max
Special Requirements	-

COMMUNITY SPACE - FLEXIBLE MEETING ROOM

WING 'C' EAST

ROOM DIAGRAM



Seat Count w/ Tables:	80 split 160 combined	Seating only:	128 split 256 combined

SCALE: NTS

COMMUNITY SPACE - LARGE MEETING ROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**Large Meeting Room**
Function	*Meeting room for students/staff*
No. of Occupants	24
Area (Assignable)	750 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Prefunction
Additional Notes	1 large meeting room req.

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood/Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall duplexes per code, Floor box, Ceiling projector
Lighting	30-40 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	AWP on one wall
Security	Card key access/Camera at entrance to room
Telecom/Data	1 phone/4 data, One for clg. mount projector, Wireless AP
Audio/Visual	Ceiling mounted projector

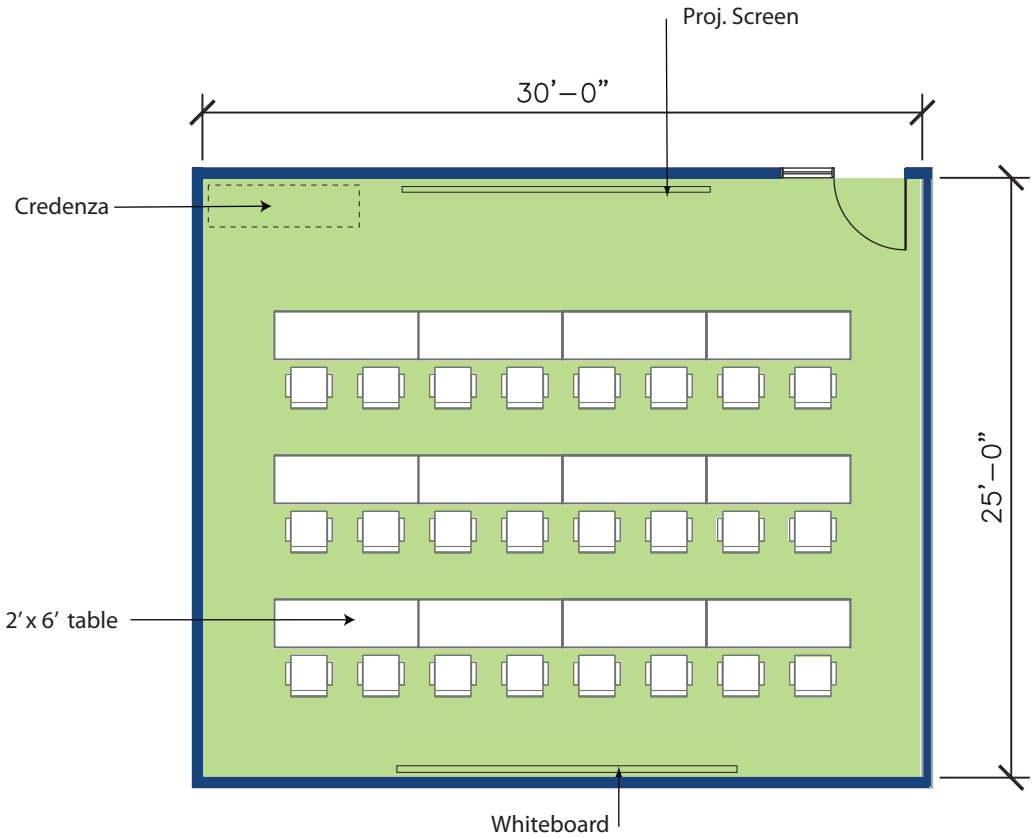
EQUIPMENT/FURNISHINGS

Built-In Features	Pull down projection screen
Fixed	1 Magnetic whiteboard, Window blinds, Credenza
Moveable Equipment/ Furnishings	12 tables, 24 stackable chairs
Special Requirements	-

COMMUNITY SPACE - LARGE MEETING ROOM

WING 'C' EAST

ROOM DIAGRAM



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

NOTES: 12 tables, 24 chairs

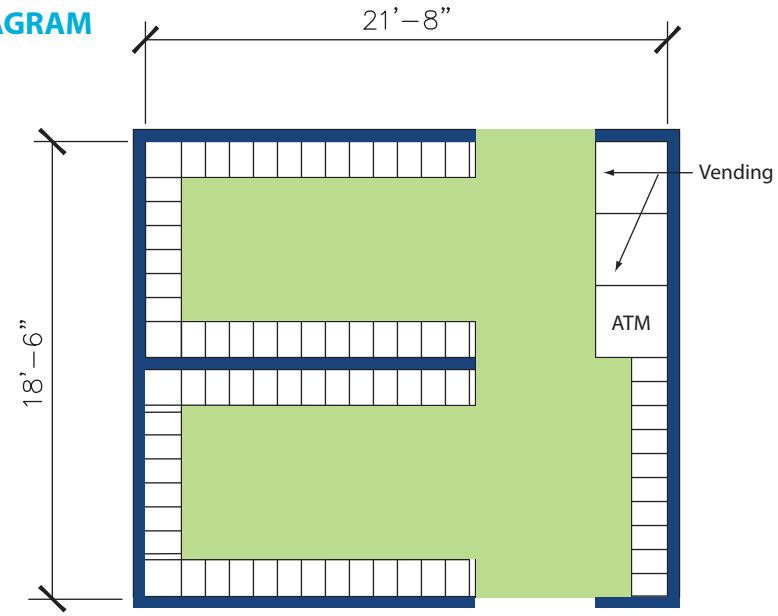
COMMUNITY SPACE - STUDENT SUPPORT

WING 'C' EAST

GENERAL INFORMATION

Name	**Student Support**
Function	*Locker area for students/staff*
No. of Occupants	Per layout
Area (Assignable)	400 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Main entrance/Dining
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stone or tile
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/ Resilient
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Provide electrical for ATM, Video camera, Vending machines Duplexes on wall per code
Lighting	15-25 Fc direct/indirect lighting
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	Security camera
Telecom/Data	1 Phone/ 2 data
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	280 Lockers (4 high), Vending machines (water only), ATM
Moveable Equipment/ Furnishings	-
Special Requirements	-

COMMUNITY SPACE - MEDIUM MEETING ROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**Medium Meeting Room**
Function	*Meeting room for students/staff*
No. of Occupants	16
Area (Assignable)	500 ASF (x2)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Prefunction
Additional Notes	2 medium meeting rooms req.

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood/Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall duplexes per code, Floor box, Ceiling projector
Lighting	Min. 50 Fc, Lighting controls
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	AWP on one wall
Security	Card key access/Camera at entrance to room
Telecom/Data	1 phone/4 data, One for clg. mount projector, Wireless AP
Audio/Visual	Ceiling mounted projector

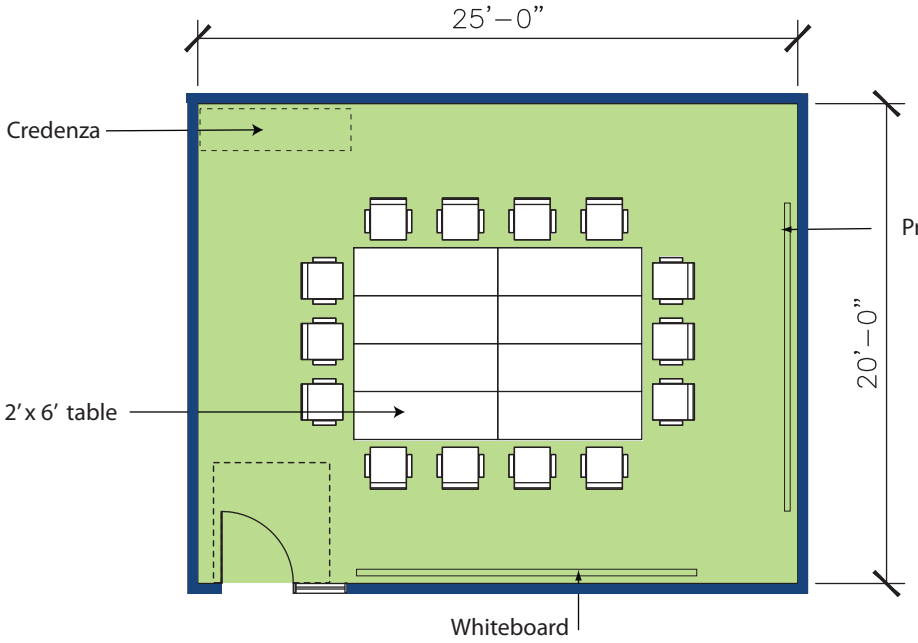
EQUIPMENT/FURNISHINGS

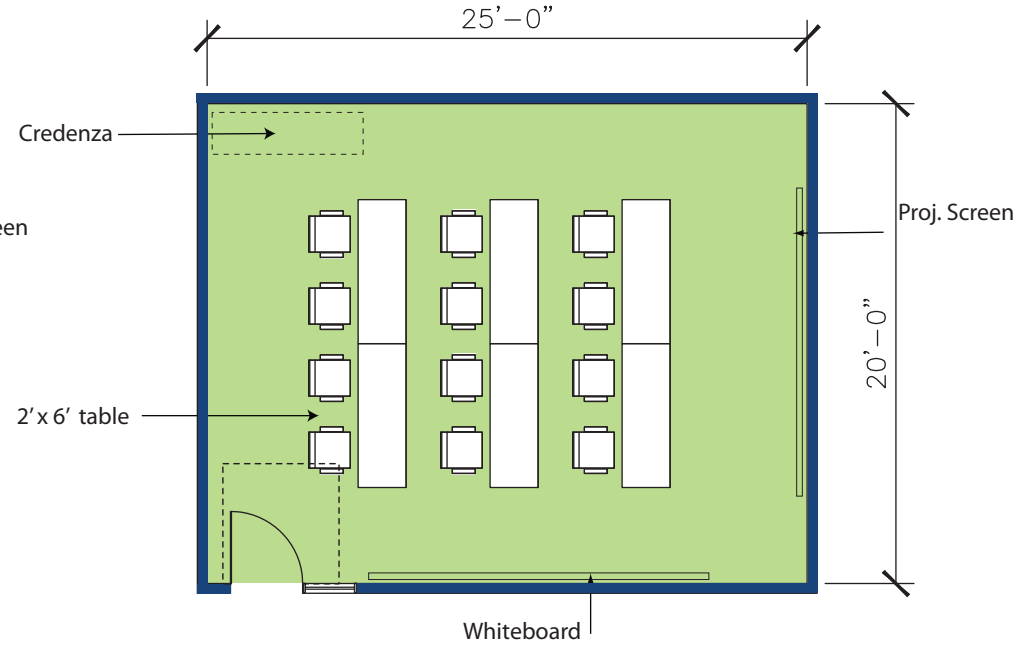
Built-In Features	Pull down projection screen
Fixed	1 Magnetic whiteboard, Window blinds, Credenza
Moveable Equipment/ Furnishings	8 tables, 16 stackable chairs
Special Requirements	-

COMMUNITY SPACE -MEDIUM MEETING ROOM

WING 'C' EAST

ROOM DIAGRAM





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

NOTES: 6-8 tables, Chair amount varies

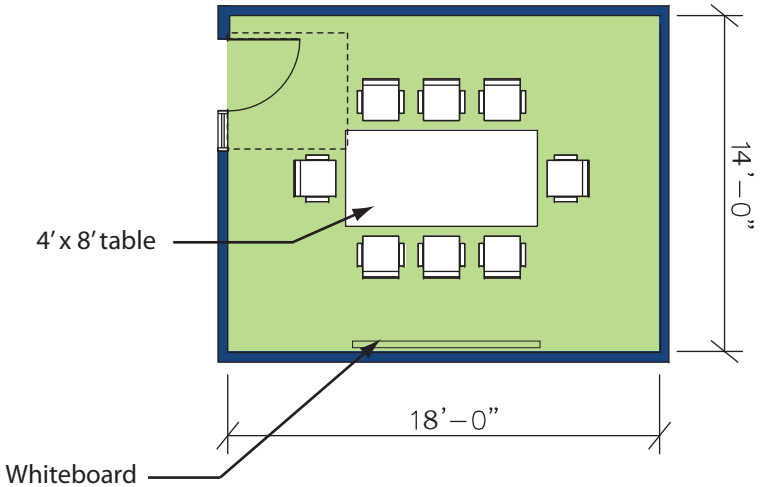
COMMUNITY SPACE -SMALL MEETING ROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**Small Meeting Room**
Function	*Meeting room for students/staff*
No. of Occupants	8
Area (Assignable)	252 ASF (x2)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Prefunction
Additional Notes	2 small meeting rooms req.

ROOM DIAGRAM



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

NOTES: 8 chairs

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood/Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall duplexes per code, Floor box
Lighting	Min. 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	AWP on one wall
Security	Card key access
Telecom/Data	1 phone/4 data under table, Wireless AP
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	1 Magnetic whiteboard, Window blinds
Moveable Equipment/ Furnishings	1 table, 8 stackable chairs
Special Requirements	-

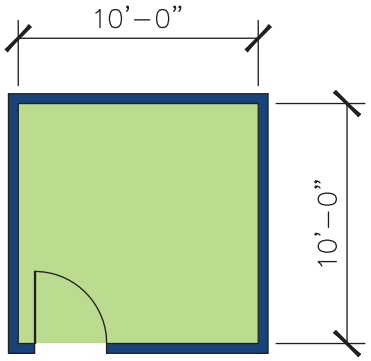
COMMUNITY SPACE - CHAIR STORAGE

WING 'C' EAST

GENERAL INFORMATION

Name	**Chair Storage**
Function	*Storage area for conference room chairs*
No. of Occupants	-
Area (Assignable)	100 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	-
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB /Resilient
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 6ACH No humidity control
Electrical (Power)	N/A
Lighting	20-30 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card Key Access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	-
Moveable Equipment/ Furnishings	-
Special Requirements	-

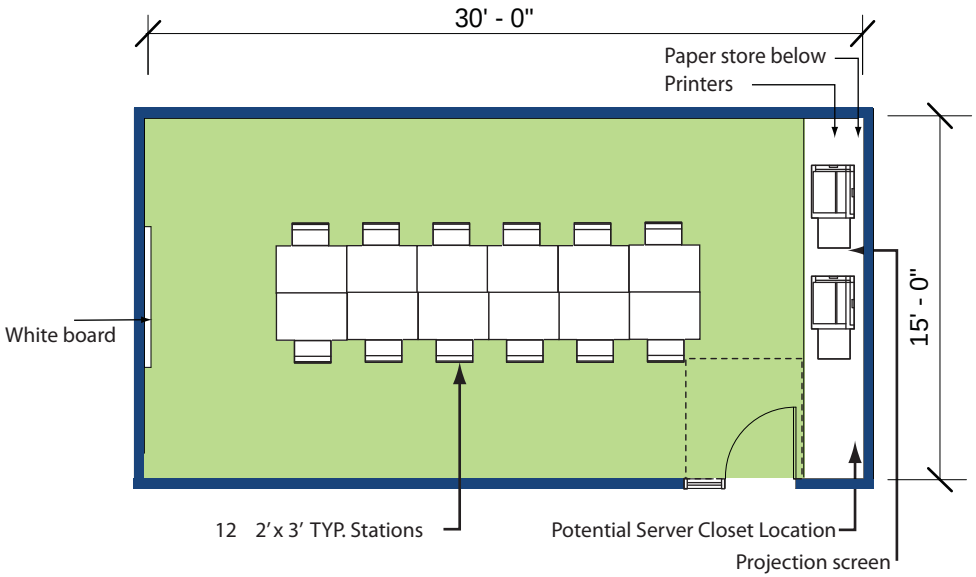
COMMUNITY SPACE - COMPUTER LAB

WING 'C' EAST

GENERAL INFORMATION

Name	**Computer Lab**
Function	*Computer & printing area for students*
No. of Occupants	12
Area (Assignable)	450 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Prefunction/Meeting rooms
Additional Notes	

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if ext. exposure
Doors/Frames	Solid core wood door/Alum. frame w/ sidelight
Additional Notes	Wireless internet (in progress for bldg)

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control, may need ventilation for printers
Electrical (Power)	(10) std. duplex outlets in floor, (12) computer power outlets in floor & (1) duplex outlet for copier; Projector
Lighting	30-35 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	AWP on one wall
Security	Card key access/Video camera
Telecom/Data	1 phone/12 data in floor, 12 computer connections, 2 data for printers
Audio/Visual	Video projector

EQUIPMENT/FURNISHINGS

Built-In Features	Potential server closet/Counter for printers w/ locking cabinet doors
Fixed	1 Magnetic whiteboard/Window blinds if req, Projection screen
Moveable Equipment/ Furnishings	12 task chairs/12 stations
Special Requirements	12 computers/2-3 printers/ Trash and recyling containers

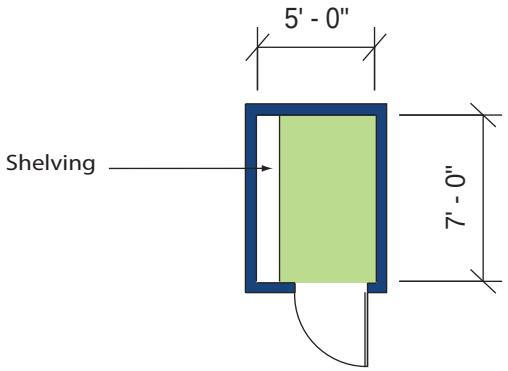
COMMUNITY SPACE - STORAGE

WING 'C' EAST

GENERAL INFORMATION

Name	**Storage**
Function	*Storage area for educational supplies/ seasonal decorations*
No. of Occupants	-
Area (Assignable)	35 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	-
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 6ACH No humidity control
Electrical (Power)	N/A
Lighting	20-30 Fc
Plumbing	-
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	
Fixed	Poly plastic adjustable shelving
Moveable Equipment/ Furnishings	-
Special Requirements	-

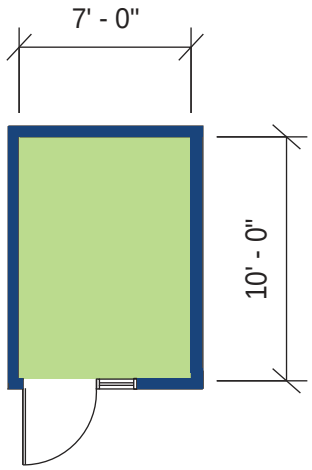
COMMUNITY - MUSIC PRACTICE ROOM

AT SPINE

GENERAL INFORMATION

Name	**Music Practice Room**
Function	*Music practice room for students*
No. of Occupants	-
Area (Assignable)	70 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Emporium-Lounge/Game room
Additional Notes	To fit upright piano

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	N/A
Doors/Frames	Solid core wood/Aluminum frame w/ sidelight
Additional Notes	Door to accommodate a piano

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	30-35 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke Detector
Acoustics	High STC rated partitions
Security	Card key access
Telecom/Data	-
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	-
Moveable Equipment/ Furnishings	Piano, Piano stool
Special Requirements	-

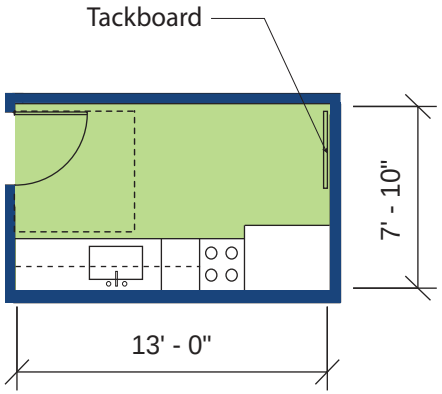
COMMUNITY SPACE - STUDENT KITCHEN

AT SPINE

GENERAL INFORMATION

Name	**Student Kitchen**
Function	*Kitchen for student use*
No. of Occupants	Per layout
Area (Assignable)	102 ASF
Minimum Ceiling Height	9′-0″
Critical Adjacencies	Meeting rooms/Exterior patio
Additional Notes	Maximize counter space

ROOM DIAGRAM



SCALE: 1/8″=1′-0″

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Resilient
Ceiling	Low VOC painted GWB
Walls/Base	Low VOC painted GWB/Resilient
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood door/ Aluminum frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH
Electrical (Power)	Duplexes on wall per code (counterheight), Dedicated circuit at fridge
Lighting	30-40 Fc
Plumbing	Double compartment sink w/ disposal/Refrigerator-ice maker
Fire Protection	Sprinklered/Fire alarm/Smoke detector/Fire extinguisher
Acoustics	-
Security	Card key access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features Fixed	Cabinets (upper and lower) Sink, Refrigerator, Oven, Cooktop, Microwave
Moveable Equipment/Furnishings	Trash and recycling bins, Tackboard
Special Requirements	-

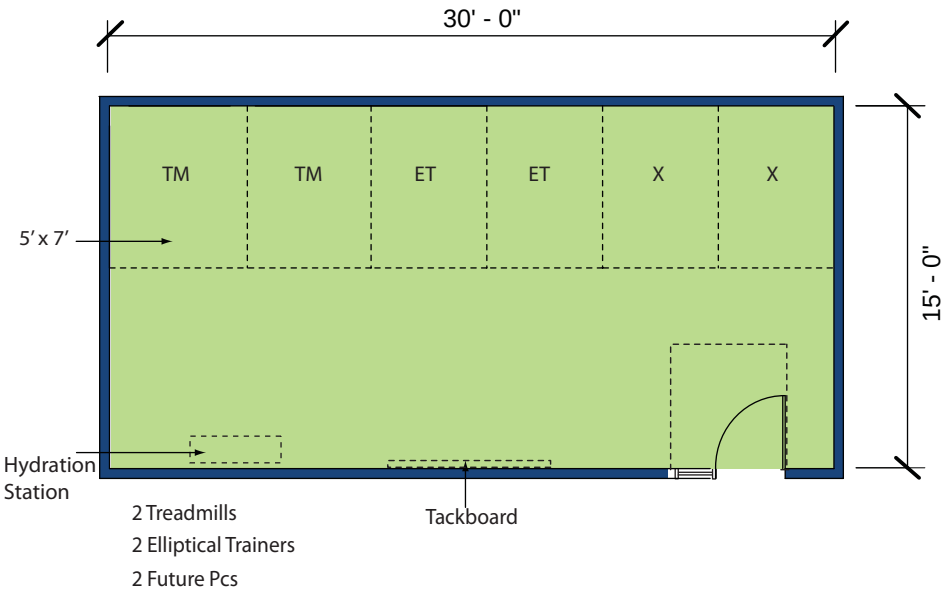
COMMUNITY SPACE - FITNESS CENTER

AT SPINE

GENERAL INFORMATION

Name	**Fitness Center**
Function	*Workout area for students*
No. of Occupants	Per layout
Area (Assignable)	450 ASF
Minimum Ceiling Height	9′-0″
Critical Adjacencies	Centralized location
Additional Notes	-

ROOM DIAGRAM



SCALE: 1/8″=1′-0″

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Rubber flooring
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if ext. exposure
Doors/Frames	Solid core wood door/ Aluminum frame w/ sidelight
Additional Notes	If ext. windows, provide blinds

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control 2 wall or ceiling-mounted fans
Electrical (Power)	Dedicated circuits for treadmill Provide plug mold multi-outlet strip on equip. wall. (2) duplex outlets/wall & type of outlet for appliances/equip. per manuf. req. power connections
Lighting	30-35 Fc
Plumbing	Provide for hydration station
Fire Protection	Sprinklered/Fire alarm/Smoke Detector
Acoustics	-
Security	Card key access/Security camera
Telecom/Data	Wireless internet
Audio/Visual	Cable connection for individual tv monitors attached to machines

EQUIPMENT/FURNISHINGS

Built-In Features	Wall mounted hydration station
Fixed	Towel hooks, Lrg. wall-mounted mirror
Moveable Equipment/ Furnishings	2 treadmills/2 elliptical machines w/ indiv. tv monitors, Tackboard
Special Requirements	-

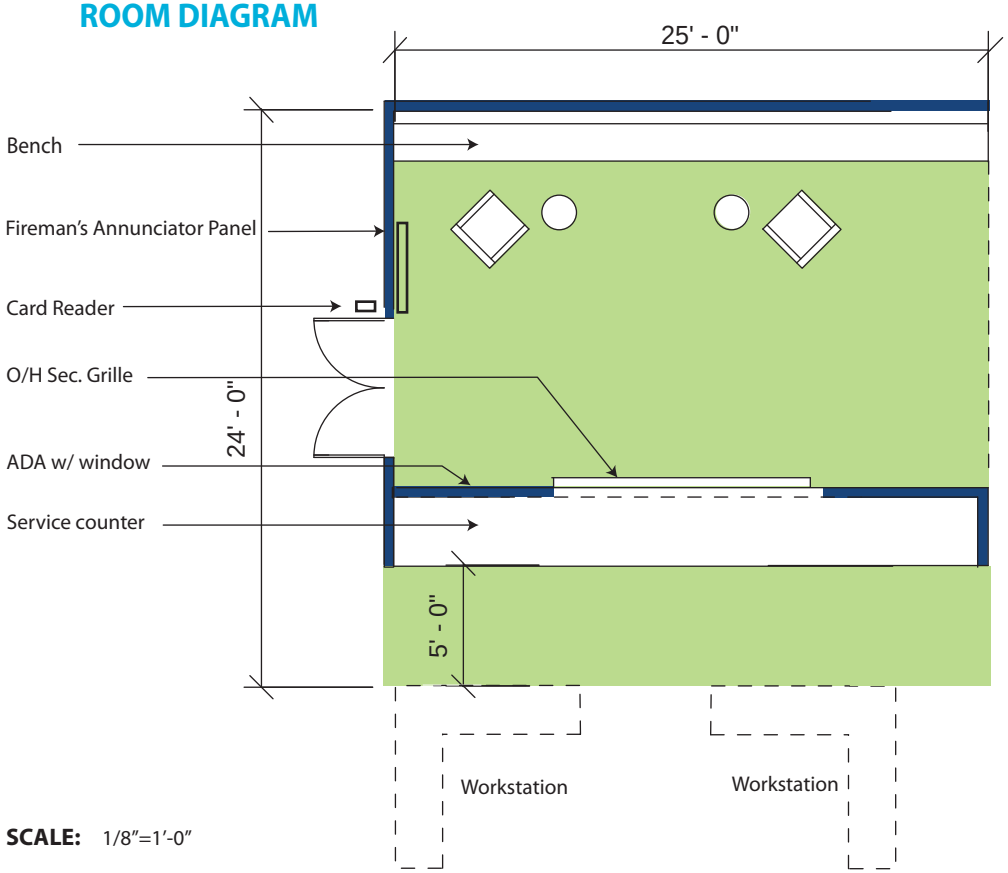
RESIDENT SERVICE OFFICE - RECEPTION

WING 'C' EAST

GENERAL INFORMATION

Name	**Reception**
Function	*Reception Area for students/staff*
No. of Occupants	3 staff at counter
Area (Assignable)	600 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Student support package room
Additional Notes	24 Hour security counter

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stone or Tile
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	New double-glazing if exterior exposure
Doors/Frames	Ext doors - Glass aluminum door, Alum. frame
Additional Notes	Window shades as necessary

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Counter Equip. & wall duplexes per code, Video cameras to view counter traffic, Monitors, Electrical powered security grille
Lighting	15-25 Fc - direct/indirect lighting 40-50 Fc - task lighting
Plumbing	N/A
Fire Protection	Main fire alarm annunciator panel
Acoustics	-
Security	Card key access, Transaction window
Telecom/Data	1 phone/3 data (counter height)
Audio/Visual	Flat screen info monitor

EQUIPMENT/FURNISHINGS

Built-In Features	42" high reception counter w/ ADA access
Fixed	Display board
Moveable Equipment/ Furnishings	Computers, Time clock
Special Requirements	Walk off grating (LEED)

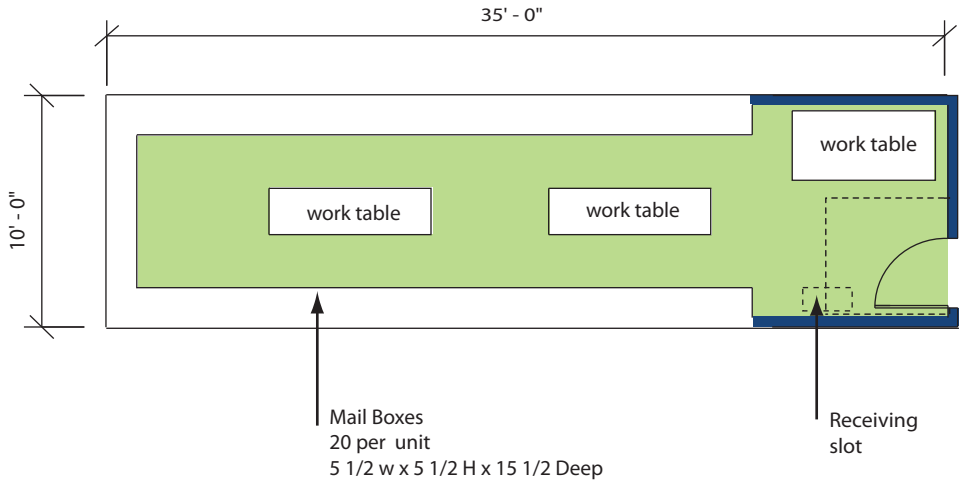
RESIDENT SERVICE OFFICE - MAIL

WING 'C' EAST

GENERAL INFORMATION

Name	**Mail**
Function	*Mail drop-off/collection for student mail*
No. of Occupants	-
Area (Assignable)	350 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Main lobby/ RSO
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Resilient
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	Solid core wood/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code/Door-bell at ext. drop off/Security camera
Lighting	30-40 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	1 phone/2 data
Audio/Visual	Cameras to view exterior of mailboxes and entry to back door

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	1000 mailboxes w/ receiving slot
Moveable Equipment/ Furnishings	Work tables, Computer, Tackboard
Special Requirements	-

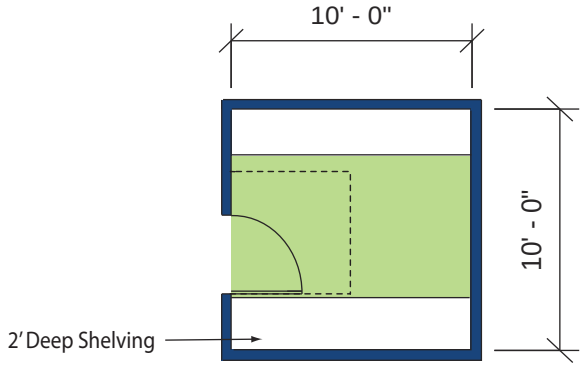
RESIDENT SERVICE OFFICE - PACKAGE ROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**Package Room**
Function	*Storage room for packages for the students*
No. of Occupants	-
Area (Assignable)	100 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Reception counter/Resident offices/Mail
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Resilient
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/resilient
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code,
Lighting	15-20 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	-
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	24" Shelving
Fixed	Poly plastic adjustable shelving
Moveable Equipment/ Furnishings	-
Special Requirements	-

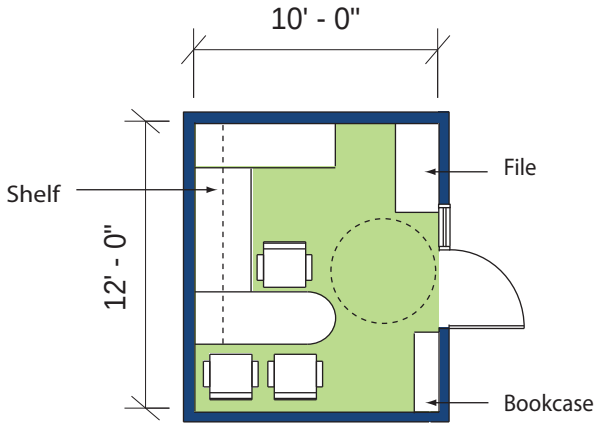
RESIDENT SERVICE OFFICE - RESIDENT DIRECTOR OFFICE

WING 'C' EAST

GENERAL INFORMATION

Name	**Resident Director Office**
Function	*Office for the Resident Director*
No. of Occupants	One and guest
Area (Assignable)	120 ASF (x2)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Other resident offices
Additional Notes	2 offices required. Direct and unobstructed egress out of room is required.

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood door/ Aluminum frame w/ sidelight
Additional Notes	

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	Min. 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access/Panic button
Telecom/Data	1 phone/2 data
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Window blinds, Enclosed overhead storage bins
Moveable Equipment/ Furnishings	Executive desk/chair, 2 guest chairs, Computer, Printer, Lateral file, Bookcase, Task lighting
Special Requirements	-

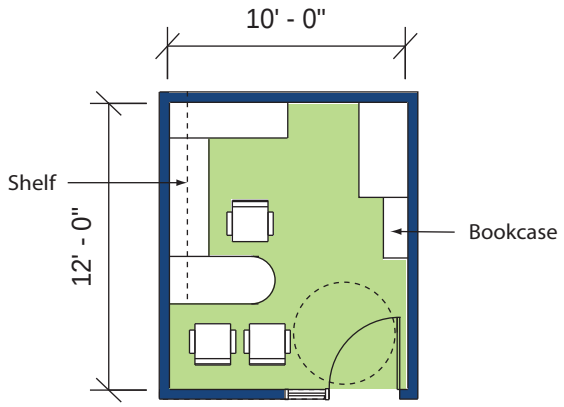
RESIDENT SERVICE OFFICE - HEAD RESIDENT OFFICE

WING 'C' EAST

GENERAL INFORMATION

Name	**Head Resident Office**
Function	*Office for Head Resident*
No. of Occupants	One and guests
Area (Assignable)	120 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Other resident offices
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood door/ Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	35-40 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Provide sound attenuation
Security	Card key access
Telecom/Data	1 phone/2 data
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Window blinds, Enclosed overhead storage bins
Moveable Equipment/ Furnishings	Executive desk/chair, Guest chairs, Computer, Printer, Bookshelf, Lateral file, Task lighting
Special Requirements	-

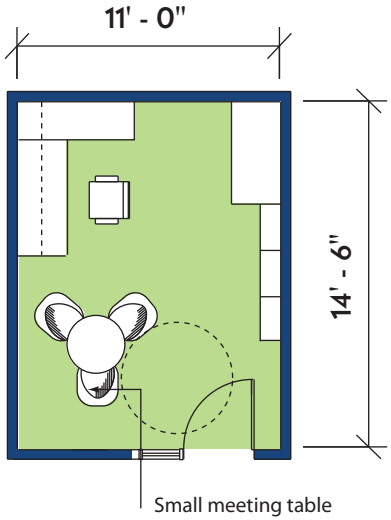
RESIDENT SERVICE OFFICE - RSO MANAGER OFFICE

WING 'C' EAST

GENERAL INFORMATION

Name	**RSO Manager Office**
Function	*Office for the RSO Manager*
No. of Occupants	One and guests
Area (Assignable)	160 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Other resident offices
Additional Notes	Staff mtgs/Record storage

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood door/ Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Provide sound attenuation
Security	Card key access
Telecom/Data	1 phone/2 data
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Window shades
Moveable Equipment/ Furnishings	Executive desk/4 chairs/Bookcase/ 3 lateral files/2 overhead stor. bins/ 1 pedestal storage, Task lighting
Special Requirements	Small meeting table

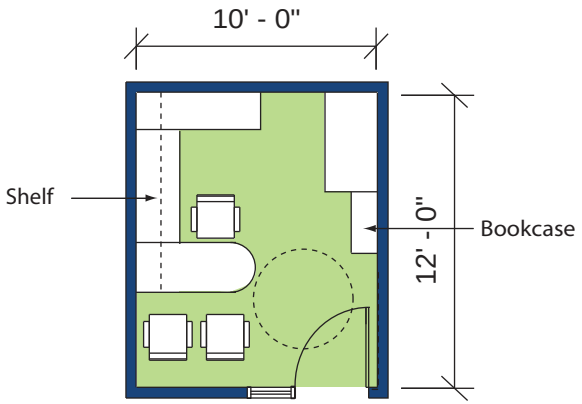
RESIDENT SERVICE OFFICE - STAFF OFFICES

WING 'C' EAST

GENERAL INFORMATION

Name	**Staff Offices**
Function	*Offices for the professional staff*
No. of Occupants	One and guests
Area (Assignable)	120 ASF (x4)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Other resident offices/Reception counter
Additional Notes	One is a shared faculty-in-residence office

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	New double glazing if exterior exposure
Doors/Frames	Solid core wood door/ Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Provide sound attenuation
Security	Card key access
Telecom/Data	1 phone/2 data ea. office
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Window blinds, Enclosed overhead storage bins
Moveable Equipment/ Furnishings	Executive desk/chair, 2 guest chairs, Computer, Printer, 1 lateral file, 1 bookcase, Task lighting
Special Requirements	-

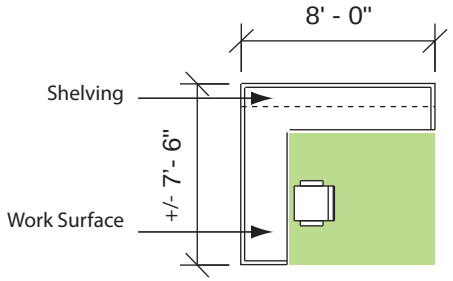
RESIDENT SERVICE OFFICE - STAFF WORKSTATIONS

WING 'C' EAST

GENERAL INFORMATION

Name	**Staff Workstations**
Function	*Workstations for the staff*
No. of Occupants	1
Area (Assignable)	60 ASF (x4)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Other resident offices/Reception counter
Additional Notes	Need visibility to security monitors at reception desk

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes per code - at workstation height
Lighting	Indirect/direct lighting 5-10 Fc Task lighting 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	N/A
Telecom/Data	1 phone/2 data ea. workstation
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	-
Moveable Equipment/ Furnishings	Workstation desk/1 chair/ 1 lateral file, Desk lamp
Special Requirements	-

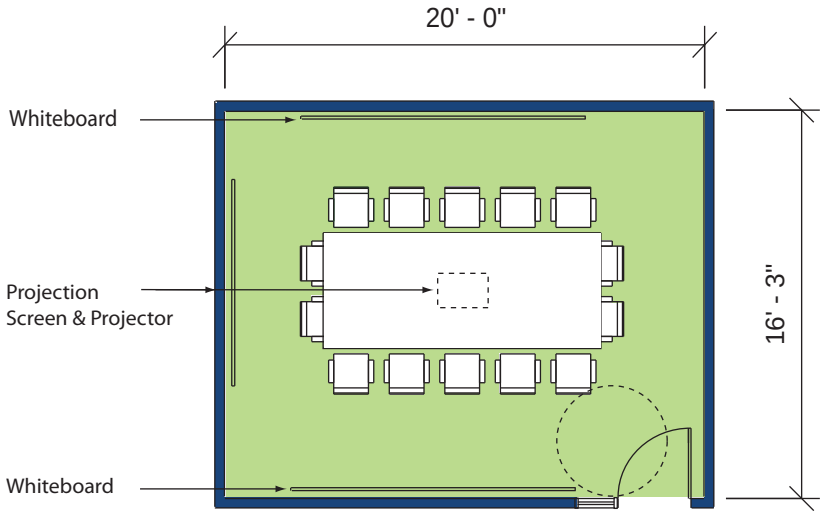
RESIDENT SERVICE OFFICE - RSO CONFERENCE

WING 'C' EAST

GENERAL INFORMATION

Name	**RSO Conference**
Function	*Conference room for the staff*
No. of Occupants	14
Area (Assignable)	325 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Provide direct access from outside RSO
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB /Resilient
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood door/ Alum. frame with sidelight
Additional Notes	

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Floor box at center. Duplexes on wall per code
Lighting	50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	AWP one wall
Security	Card key access
Telecom/Data	1 phone/4 data ports
Audio/Visual	Ceiling mounted projector

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Pull down screen/Window blinds if required/2 Magnetic whiteboards
Moveable Equipment/ Furnishings	1 Table/14 chairs
Special Requirements	-

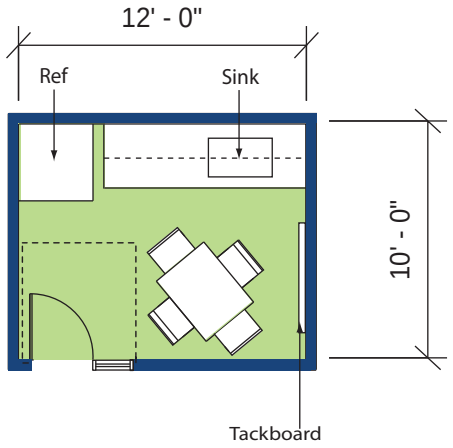
RESIDENT SERVICE OFFICE - BREAKROOM

WING C 'EAST'

GENERAL INFORMATION

Name	**Breakroom**
Function	*Breakroom for the staff*
No. of Occupants	Four
Area (Assignable)	120 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Resident offices
Additional Notes	Natural light desirable

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Resilient
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	New double-glazing if exterior exposure
Doors/Frames	Solid core wood door/ Aluminum frame sidelight
Additional Notes	

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Exhaust fan
Electrical (Power)	Ded. circuits at fridge. Duplexes on wall per code (also counterheight)
Lighting	20-30 Fc
Plumbing	Double compartment sink w/ disposal/Refrigerator w/ Ice maker
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	-
Telecom/Data	2 data and wireless access
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Cabinets
Fixed	Sink, Refrigerator, Microwave, Window shades, Tackboard
Moveable Equipment/ Furnishings	1 table/4 chairs, Recycling bins
Special Requirements	-

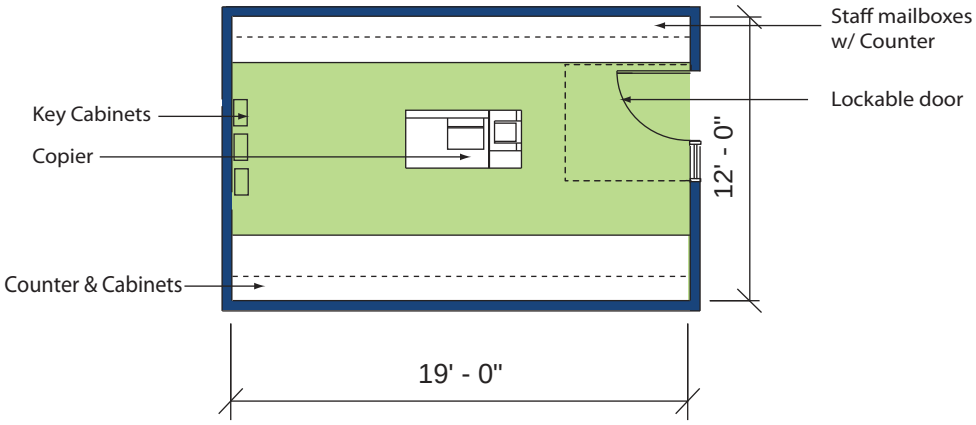
RESIDENT SERVICE OFFICE - WORKROOM

WING C 'EAST'

GENERAL INFORMATION

Name	**Workroom**
Function	*Workroom for the staff*
No. of Occupants	-
Area (Assignable)	228 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Resident offices
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Resilient
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	Solid core wood door/ Aluminum frame sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Exhaust fan
Electrical (Power)	Floor outlet - Duplexes on wall per code. Ded. circuit at copier (and at counter height/copier area)
Lighting	20-30 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	Dedicated power/Data req. at key box level; 1 phone/4 data/Data at copier
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Upper/lower cabinets
Fixed	62 staff mailboxes, Key storage - 3 wall mounts
Moveable Equipment/ Furnishings	Central copier, Computer, Paper cutter
Special Requirements	-

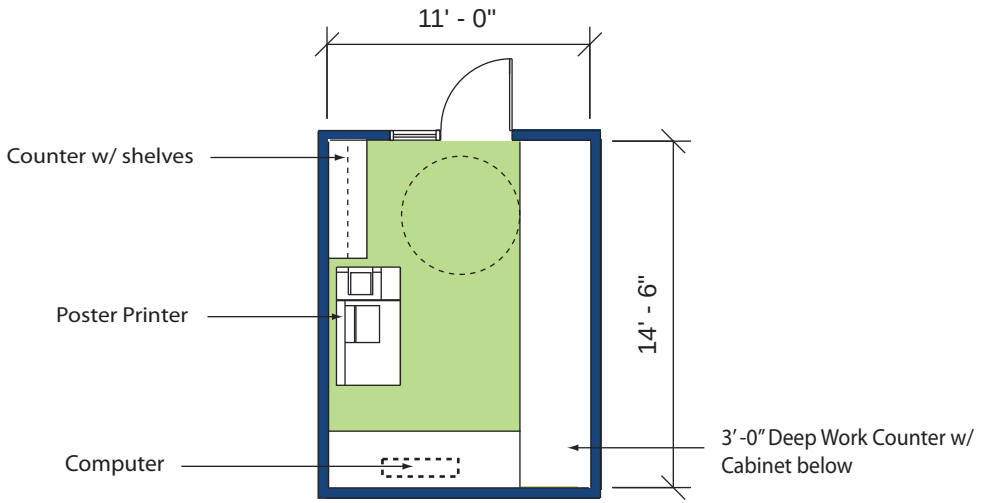
RESIDENT SERVICE OFFICE - GRAPHICS ROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**Graphics Room**
Function	*Room for the staff to make posters*
No. of Occupants	2-3 occupants at a time
Area (Assignable)	160 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Resident offices
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Resilient
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust fan
Electrical (Power)	(1) duplex outlet/ Poster printer - ded. circuit
Lighting	30-40 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	4 data/data for poster printer; 1 voice
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Cabinets/Work counter
Fixed	Poly plastic adjustable shelving, Tackboard
Moveable Equipment/ Furnishings	Computer, Poster printer
Special Requirements	-

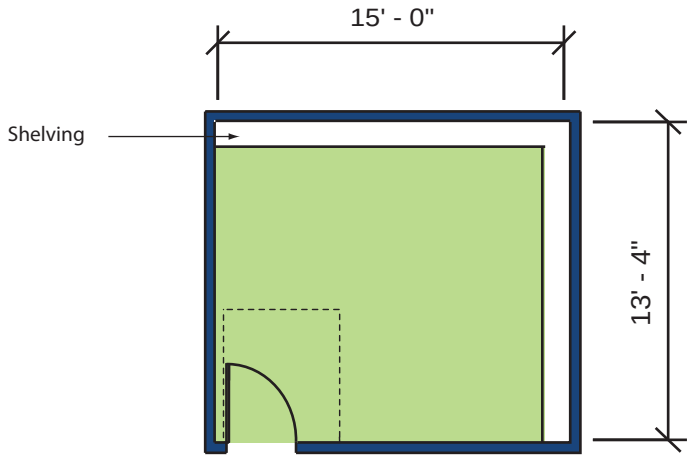
RESIDENT SERVICE OFFICE - STORAGE

WING 'C' EAST

GENERAL INFORMATION

Name	**Storage**
Function	*General storage room for the staff*
No. of Occupants	-
Area (Assignable)	200 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Resident offices
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Resilient
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 6ACH No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	15-20 Fc
Plumbing	-
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Poly-plastic adjustable shelving
Moveable Equipment/ Furnishings	-
Special Requirements	-

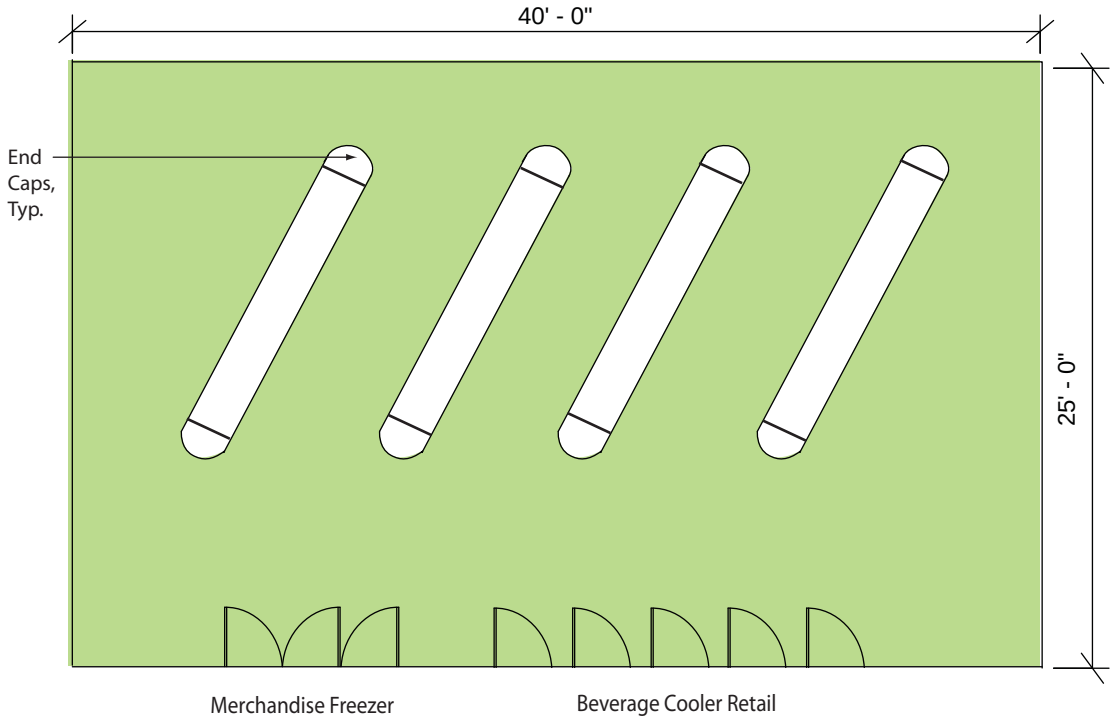
EMPORIUM - GENERAL MERCHANDISING

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - General Merchandising**
Function	*Convenience Store in Emporium Facility*
No. of Occupants	-
Area (Assignable)	1,000 ASF
Minimum Ceiling Height	10' - 0"
Critical Adjacencies	Emporium - Cashier/Coffee/Reach-in freezer and refrigerator
Additional Notes	4 merchandise gondolas with end caps

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	FRP w/ metal T-bar -white
Walls	Tile on concrete curb
Base	6" coved tile
Windows	Aluminum frame - double glazed
Doors/Frames	-
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	120/208/480v
Lighting	50 Fc
Plumbing	Coldwater, 120 degree hot water floor sinks, Drains
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Security camera/Card key access
Telecom/Data	-
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	End caps, Condiment counter
Fixed	Walk-in freezer and Refrigerator with glass doors
Moveable Equipment/ Furnishings	Gondola displays, Trash containers
Special Requirements	-

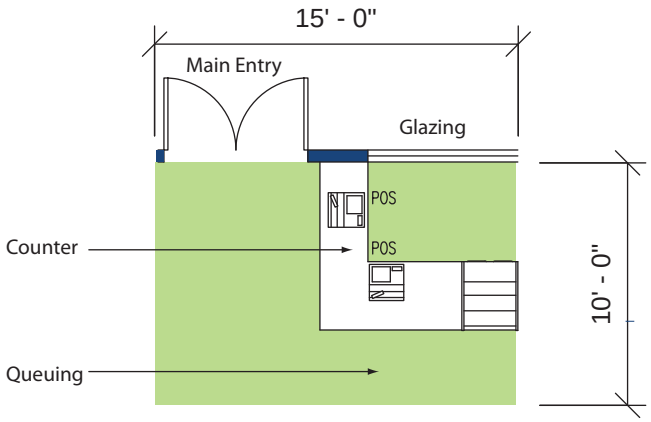
EMPORIUM - CASHIER

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Cashier**
Function	*P.O.S. in Emporium Retail*
No. of Occupants	-
Area (Assignable)	150 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Emporium Entry / General Merchandising
Additional Notes	Sight lines to Retail Display

ROOM DIAGRAM



CASHIER

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	Acoustical ceiling tile
Walls/Base	On concrete bases
Windows	Double glazed aluminum Visibility from exterior
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	2 emergency power outlets at both cash registers/Security camera, Phone, Emergency power
Lighting	50 Fc on a rheostat dimmer
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Alarm/Security camera/Card key access
Telecom/Data	Connection for 2 P.O.S.; Phone at POS
Audio/Visual	Wireless internet, Music system

EQUIPMENT/FURNISHINGS

Built-In Features	Reception counter
Fixed	Display boards below all counter areas
Moveable Equipment/ Furnishings	Stool/2 P.O.S.
Special Requirements	Trash/Recycling

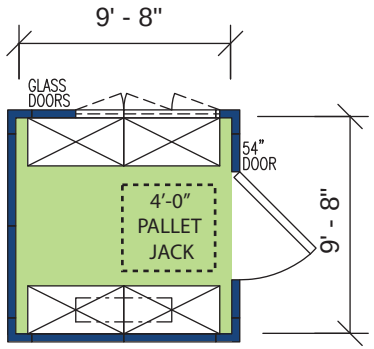
EMPORIUM - MERCHANDISE FREEZER

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Merchandise Freezer**
Function	*Merchandise Freezer in Emporium Kitchen*
No. of Occupants	-
Area (Assignable)	93 ASF
Minimum Ceiling Height	8'-6"
Critical Adjacencies	Emporium - Retail gondolas & Beverage refrigeration
Additional Notes	Floor recessed 7" to 8"

ROOM DIAGRAM



MERCHANDISE FREEZER

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Insulated with Diamond Plate/ Walking surface flush with kitchen floor
Ceiling	Stainless steel
Walls	Stainless steel
Base	N/A
Windows	N/A
Doors/Frames	Double insulated glass with locks
Additional Notes	-

SYSTEMS

Mechanical	Temp. between -10F and -5F/ Min. of 10 ACH
Electrical (Power)	160 AMP-208V, 3 phase/Remote air cooled compressor/Rack mounted outside on slab/Provide emergency power
Lighting	40 Fc, Provide emergency power
Plumbing	Drains to floor sink outside the walk-in ref.
Fire Protection	N/A
Acoustics	-
Security	Door locks master keyed
Telecom/Data	Temperature alarm system connected to central alarm
Audio/Visual	Alarm at door for temperature monitoring

EQUIPMENT/FURNISHINGS

Built-In Features	Side-lite glass doors with locks
Fixed	Poly plastic adjustable, angled shelves display
Moveable Equipment/ Furnishings	-
Special Requirements	4'-6" door to allow pallet access

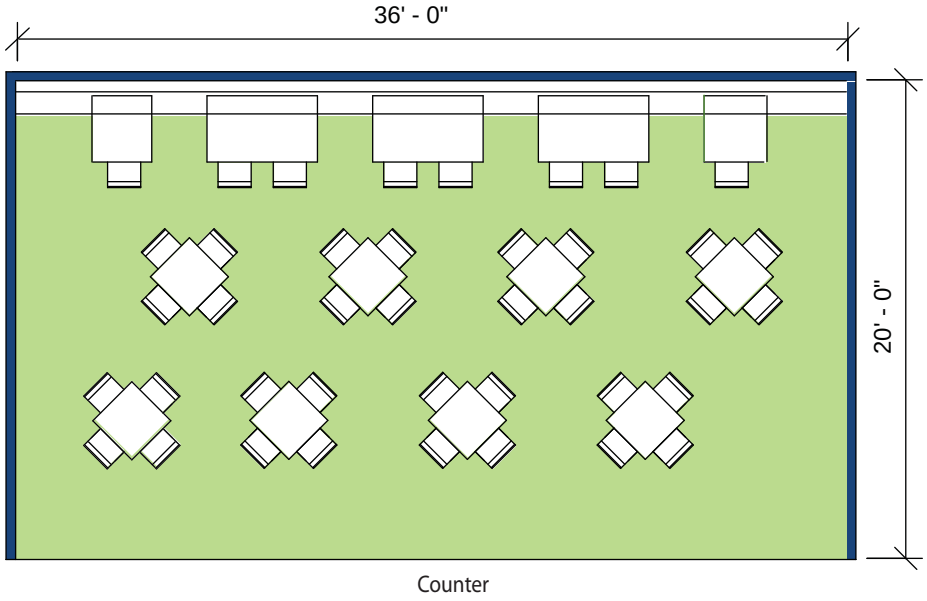
EMPORIUM - DINING

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Dining**
Function	*Dining in Emporium Facility*
No. of Occupants	48 seated
Area (Assignable)	720 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Emporium - Counter Seating/ Game Room,
Additional Notes	A significant amount of meals will be take-out

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	Acoustical ceiling tile
Walls/Base	Painted GWB w/ coved base
Windows	New double-glazing if exterior exposure
Doors/Frames	Ext doors - glass aluminum door, alum. frame
Additional Notes	Washable, durable finishes/Fabrics

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall every 8 to 10 feet for computer use
Lighting	10-50 Fc with Rheostat dimmer in accent areas. Lighting must be zoned - controlled by staff
Plumbing	Floor drain
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Security camera/Card key access
Telecom/Data	-
Audio/Visual	Wireless internet, Music system

EQUIPMENT/FURNISHINGS

Built-In Features	Banquette seating
Fixed	Countertop
Moveable Equipment/ Furnishings	13 Tables, 40 chairs
Special Requirements	-

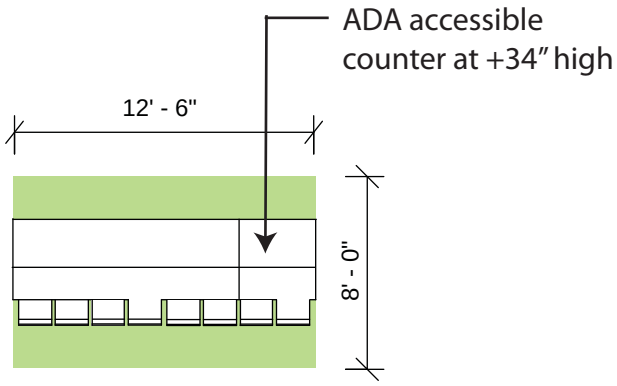
EMPORIUM - COUNTER SEATING

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Counter Seating**
Function	*Seating area in Emporium Dining Facility*
No. of Occupants	8
Area (Assignable)	100 ASF
Minimum Ceiling Height	12'-0"
Critical Adjacencies	Emporium - Dining
Additional Notes	8 stools

ROOM DIAGRAM



COUNTER SEATING

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	Acoustical ceiling tile
Walls/Base	Coved bases
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Exhaust fan
Electrical (Power)	Duplexes in counter face - GFI
Lighting	Downlights 10-50 Fc
Plumbing	-
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	-
Telecom/Data	-
Audio/Visual	Wireless internet, Music system

EQUIPMENT/FURNISHINGS

Built-In Features	Countertop w/ lower portion for ADA access
Fixed	8 Bar stools
Moveable Equipment/ Furnishings	-
Special Requirements	-

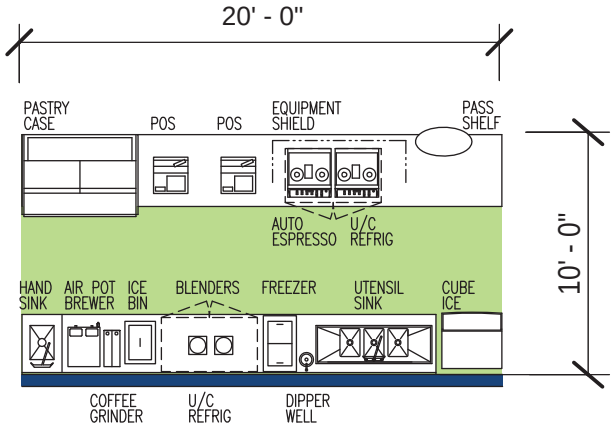
EMPORIUM - COFFEE

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Coffee**
Function	*Coffee prep and sales in Emporium Dining Facility*
No. of Occupants	-
Area (Assignable)	200 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Emporium - Diner/Grill, C-Store P.O.S., Condiment counter
Additional Notes	

ROOM DIAGRAM



COFFEE

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy or Protect-ALL
Ceiling	FRP-T-Bar drop/Plastic coated T-bar
Walls/Base	Low VOC GWB on concrete bases or ceramic tile
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	Temperature at 68 to 72 degrees F in heat producing areas
Electrical (Power)	Required for espresso machine, Brewer, Blenders, Refrigeration - 120V, 1 phase/208 V, 3 phase. Refrigeration should be remote.
Lighting	Required for beverage counters
Plumbing	Hand sink, Cold water & Floor sinks
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	2 security cameras over P.O.S.
Telecom/Data	Telephone and data lines for P.O.S.
Audio/Visual	P.O.S. monitor for beverages

EQUIPMENT/FURNISHINGS

Built-In Features	Countertops, Ice cream freezer, Ice machine, Pastry case, Dipper well, Sinks
Fixed	Remote refrigerators
Moveable Equipment/ Furnishings	Trash/recycling, Espresso maker, Coffee brewer(s), Cash registers, TV monitor, Freezer and Blenders
Special Requirements	-

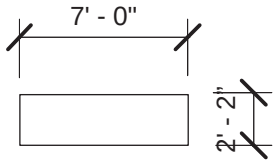
EMPORIUM - CONDIMENT STATION

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Condiment Station**
Function	*Condiments in Emporium Dining Facility*
No. of Occupants	-
Area (Assignable)	15 ASF
Minimum Ceiling Height	12'-0"
Critical Adjacencies	Emporium - Dining
Additional Notes	On concrete base

ROOM DIAGRAM



CONDIMENT STATION

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	N/A
Ceiling	N/A
Walls/Base	N/A
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on backsplash
Lighting	10 to 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	N/A
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Stainless steel or Corian countertop
Fixed	Condiment dispensing system
Moveable Equipment/ Furnishings	Trash/Recycling, Coffee condiments
Special Requirements	Enclosed and locked counter

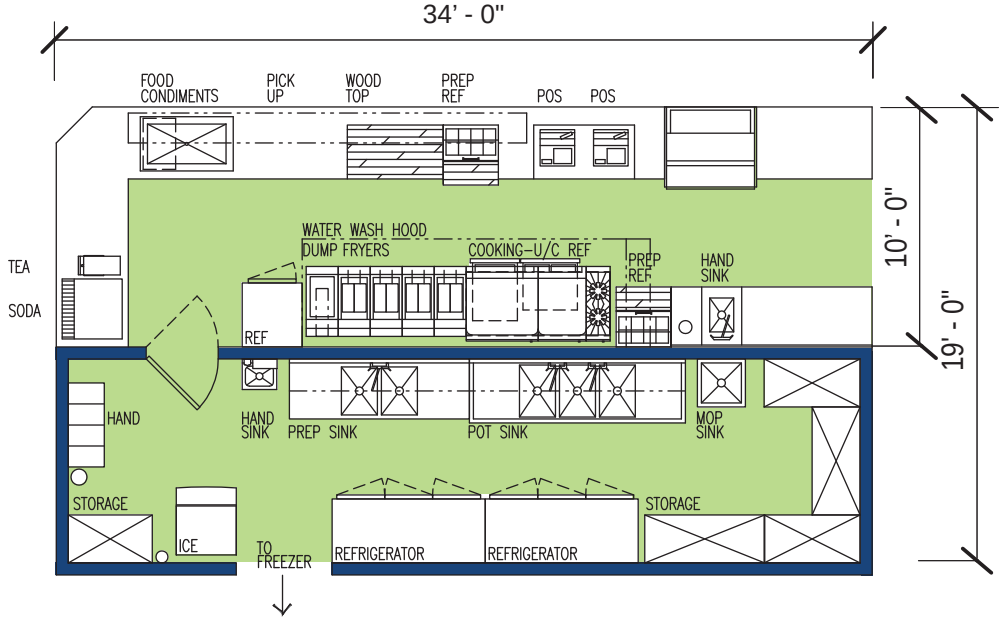
EMPORIUM - PREP AREA/SERVICE

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Prep Area/Service**
Function	*Food prep/production area*
No. of Occupants	-
Area (Assignable)	646 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Emporium - Dining, C-Store P.O.S.
Additional Notes	

ROOM DIAGRAM



PREP AREA/SERVICE

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stonehard Epoxy or Protect-ALL
Ceiling	FRP & plastic coated T-bar
Walls	FRP waterproof gyp on concrete base/Ceramic tile when visible to guests
Bases	Epoxy 6" coved "Stonehard"
Windows	N/A
Doors/Frames	Eliason
Additional Notes	-

SYSTEMS

Mechanical	(1) 4' x 4' Type 1 grease hood-water wash hood. Temp at 68 to 72 degrees F in heat producing areas
Electrical (Power)	120v, 208v, 480v Freezers on emergency power
Lighting	50 Fc
Plumbing	Drains to exist. 6" drain; 140 degree Hot water, Cold water & Gas, Floor/ Hand sinks
Fire Protection	Sprinklered/Fire alarm/Smoke detector. Req for 2 hoods
Acoustics	-
Security	Security camera
Telecom/Data	Telephone/data for 2 P.O.S.
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Pot sinks, Prep sinks, Counters, Mop sink, Walk-in freezer
Fixed	Hood, Hand sinks, Under counter cab
Moveable Equipment/ Furnishings	Racks, Tables, Ranges, Fryers, Convection ovens, Prep refrigerators, Slicers, Sandwich press, Beverage equip., Display refrigerator, Cash register, 3 door refrigerator, Monitors for menu boards
Special Requirements	-

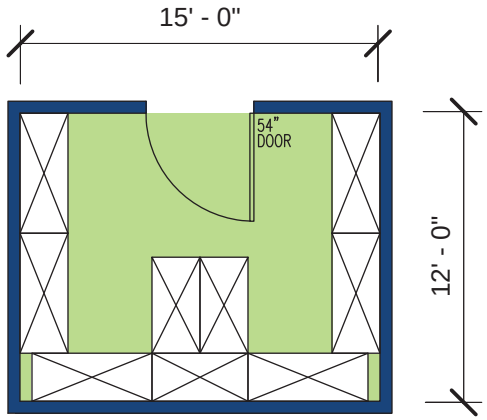
EMPORIUM - DRY STORAGE

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Dry Storage**
Function	*Dry Food Storage in Emporium Kitchen*
No. of Occupants	-
Area (Assignable)	180 ASF
Minimum Ceiling Height	-
Critical Adjacencies	Emporium - Prep area & receiving
Additional Notes	-

ROOM DIAGRAM



DRY STORAGE

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stonehard Epoxy or Protect-ALL
Ceiling	FRP & T-bar drop - white
Walls	FRP - light color
Bases	Concrete base w/ 6" coved epoxy "Stonehard"
Windows	N/A
Doors/Frames	4'-6" door with vent at bottom and pallet access
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall duplexes per code
Lighting	50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	Card key access
Telecom/Data	Connection for 1 computer
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Poly-plastic adjustable shelving
Moveable Equipment/ Furnishings	-
Special Requirements	-

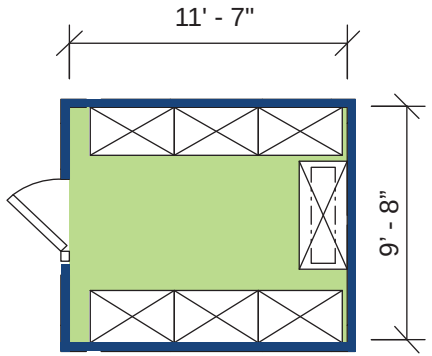
EMPORIUM - FREEZER STORAGE

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Freezer Storage**
Function	*Bolt Freezer in Emporium Kitchen*
No. of Occupants	-
Area (Assignable)	112 ASF
Minimum Ceiling Height	8'-6"
Critical Adjacencies	Emporium - Cooler/Dry Storage
Additional Notes	May enter via cooler if necessary, Floor recessed 7" to 8"

ROOM DIAGRAM



FREEZER STORAGE

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Diamond tred flooring
Ceiling	Stainless steel
Walls	Stainless steel
Base	-
Windows	N/A
Doors/Frames	Stainless steel
Additional Notes	-

SYSTEMS

Mechanical	Temp. between -10F and -5F/ No humidity control
Electrical (Power)	160 AMP-208V, 3 Phase remote air cooled compressor, Provide emergency power (similar to cooler)
Lighting	40 Fc, Provide emergency power
Plumbing	Drains to floor sink outside the walk-in freezer
Fire Protection	N/A
Acoustics	-
Security	Door locks master keyed
Telecom/Data	Temperature alarm system connected to central alarm
Audio/Visual	Alarm at door for temperature monitoring

EQUIPMENT/FURNISHINGS

Built-In Features	
Fixed	Rack shelving
Moveable Equipment/ Furnishings	-
Special Requirements	-

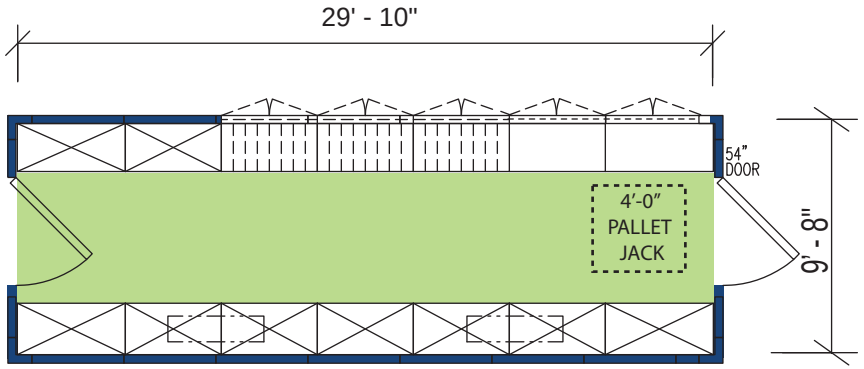
EMPORIUM - BEVERAGE COOLER RETAIL

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Beverage Cooler Retail**
Function	*Beverage Cooler in Emporium General Merchandising*
No. of Occupants	-
Area (Assignable)	288 ASF
Minimum Ceiling Height	8'-6"
Critical Adjacencies	Emporium - Freezer/Dry Storage
Additional Notes	Floor recessed 7" to 8"

ROOM DIAGRAM



BEVERAGE COOLER RETAIL

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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Insulated with Diamond Plate/ Walking surface flush with kitchen floor
Ceiling	Stainless steel
Walls/Base	Stainless steel
Windows	N/A
Doors/Frames	Stainless steel
Additional Notes	4'-6" door to allow pallet access

SYSTEMS

Mechanical	Temp. between 35F and 40F
Electrical (Power)	160 AMP-208V, 3 Phase/Remote air cooled compressor/Rack mounted outside on slab/Provide emergency power
Lighting	40 Fc, Provide emergency power
Plumbing	Drains to floor sink outside the walk-in ref.
Fire Protection	N/A
Acoustics	-
Security	Door locks master keyed
Telecom/Data	Temperature alarm system connected to central alarm
Audio/Visual	Alarm at door for temperature monitoring

EQUIPMENT/FURNISHINGS

Built-In Features	Side-lite glass doors with locks
Fixed	Poly-plastic adjustable shelving display
Moveable Equipment/ Furnishings	
Special Requirements	-

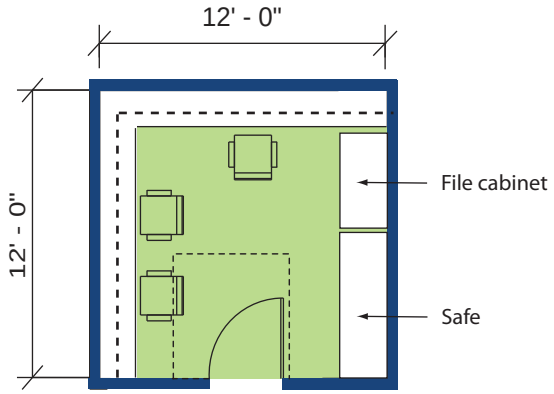
EMPORIUM - OFFICE

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Office**
Function	*Manager's Office in Emporium Dining Facility*
No. of Occupants	3
Area (Assignable)	144 ASF
Minimum Ceiling Height	8'-0"
Critical Adjacencies	Emporium - Lockers/Toilet
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy/ Coved base
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	-
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	Min 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Security camera/Alarm/Card key access
Telecom/Data	Min. of one phone; Connection for 2 computers
Audio/Visual	Camera over cash counting

EQUIPMENT/FURNISHINGS

Built-In Features	Built in safe (on concrete curb)/ Counter/Storage cabinet over counter except at window to kitchen
Fixed	-
Moveable Equipment/ Furnishings	3 chairs/File cabinet
Special Requirements	-

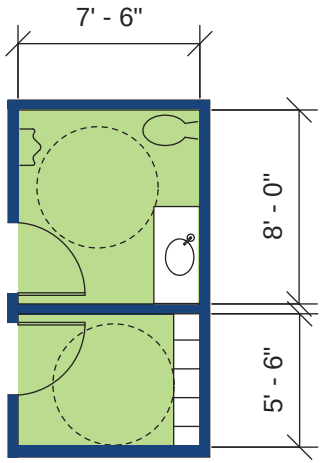
EMPORIUM - LOCKERS/TOILET

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium - Lockers/Toilet**
Function	*Employee Area in Emporium Kitchen*
No. of Occupants	-
Area (Assignable)	100 ASF
Minimum Ceiling Height	8'-0"
Critical Adjacencies	Emporium - Office/Prep Area
Additional Notes	Single Occupancy toilet - ADA accessible

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stonehard epoxy or Protect-ALL
Ceiling	Low VOC GWB
Walls/Base	Tile wainscoat, Low VOC painted GWB/Resilient
Windows	-
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust Fan
Electrical (Power)	Duplexes on wall per code-GFI
Lighting	50 Fc
Plumbing	Floor Drains/RR fixtures
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Privacy Lock
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Toilet, Urinal, Sink, Grab bar, Toilet accessories
Fixed	Lockers, Mirror, Hardware
Moveable Equipment/ Furnishings	-
Special Requirements	-

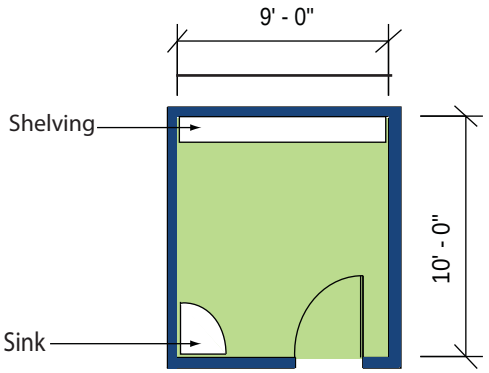
EMPORIUM - JANITOR

WING 'D' WEST

GENERAL INFORMATION

Name	**Janitor**
Function	*Janitor's cleaning area in Emporium Kitchen*
No. of Occupants	-
Area (Assignable)	90 ASF
Minimum Ceiling Height	8'-0"
Critical Adjacencies	Emporium - Prep Area/Pots
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stonehard Epoxy or Protect-ALL
Ceiling	Low VOC painted GWB
Walls/Base	Low VOC painted GWB/W.P. wainscoat around mop sink
Windows	N/A
Doors/Frames	Solid core wood/ Alum. frame with vent at bottom of door
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust fan
Electrical (Power)	Duplexes on wall per code
Lighting	20-25 Fc
Plumbing	Floor sink/Drain
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Mop sink
Fixed	Poly-plastic adjustable shelving, Hook strip
Moveable Equipment/ Furnishings	-
Special Requirements	-

EMPORIUM - LOUNGE

WING 'D' WEST

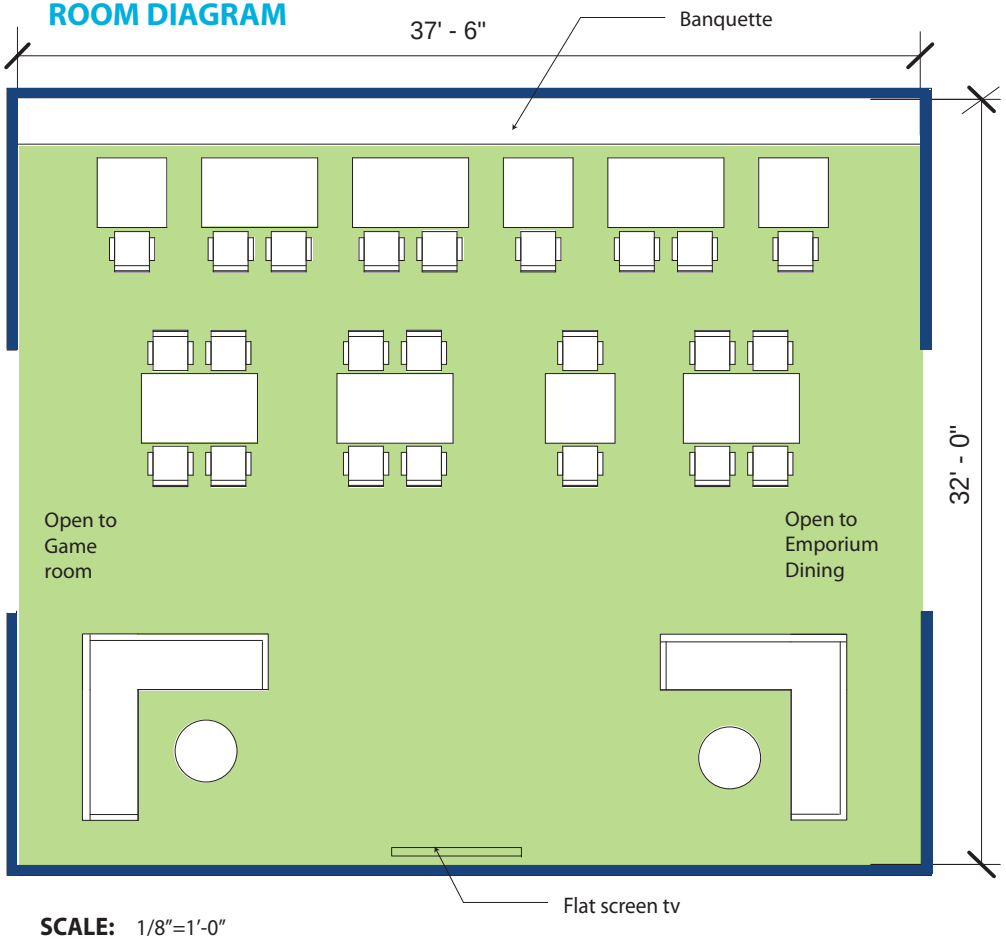
GENERAL INFORMATION

Name	**Lounge**
Function	*Lounging room for students*
No. of Occupants	40 seated
Area (Assignable)	1,200 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Emporium/Game room
Additional Notes	Accessory Dining - Area for Emporium

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	New double-glazing if exterior exposure
Doors/Frames	Aluminum door/frame as appl.
Additional Notes	Wireless internet

ROOM DIAGRAM



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

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes every 8 to 10 feet for computer usage/1 flat screen
Lighting	15-20 Fc for general lighting, 40-50 Fc for task lights, Place on staff controlled rheostat for mood zones
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke Detector
Acoustics	-
Security	Security camera
Telecom/Data	1 phone/3 data
Audio/Visual	1 flat screen tv, Sound system

EQUIPMENT/FURNISHINGS

Built-In Features	Banquette seating
Fixed	Window blinds
Moveable Equipment/ Furnishings	2 Couches/23 Chairs/10 Tables/ 2 Coffee tables
Special Requirements	-

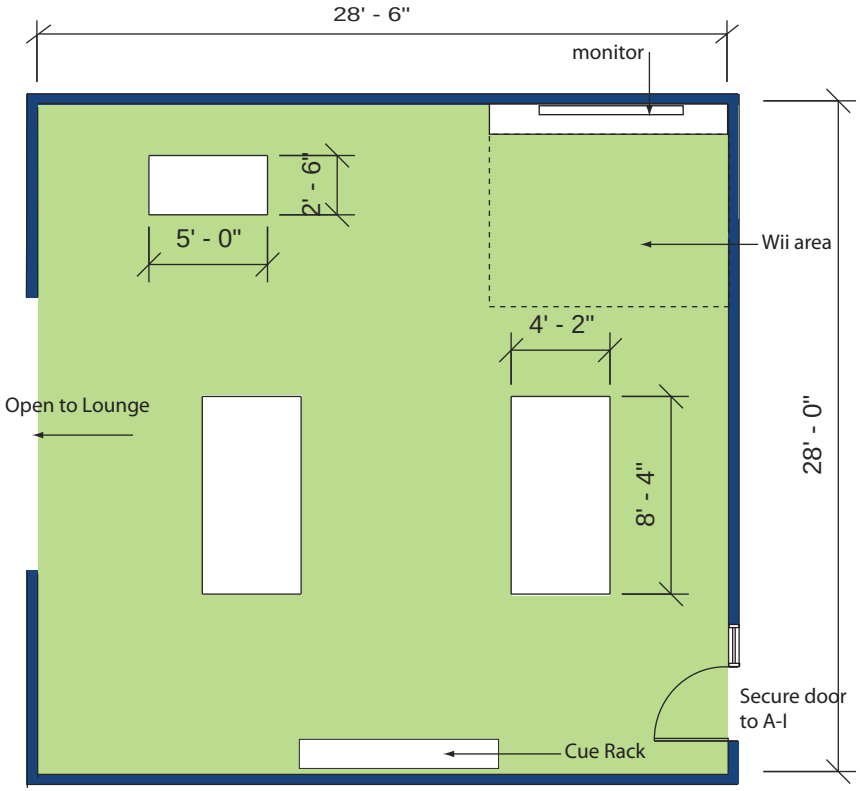
EMPORIUM - GAME ROOM

WING 'D' WEST

GENERAL INFORMATION

Name	**Game Room**
Function	*Recreation for students*
No. of Occupants	Per layout
Area (Assignable)	800 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Emporium Lounge
Additional Notes	Includes 2 pool tables /Foosball/Wii system

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB
Windows	Aluminum frame double-glazed
Doors/Frames	Solid core wood door/ Aluminum frame w/ sidelight
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Connectivity for tv, Wii system and speakers, Duplexes on wall per code
Lighting	30-40 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Provide special sound attenuation
Security	Card key access to/from A- I, Security camera
Telecom/Data	1 phone/2 data (1 for wii)
Audio/Visual	Speaker system/Flat screen monitor

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Window blinds
Moveable Equipment/ Furnishings	2 Pool tables/1 Foosball table/ TV console/Cue rack
Special Requirements	-

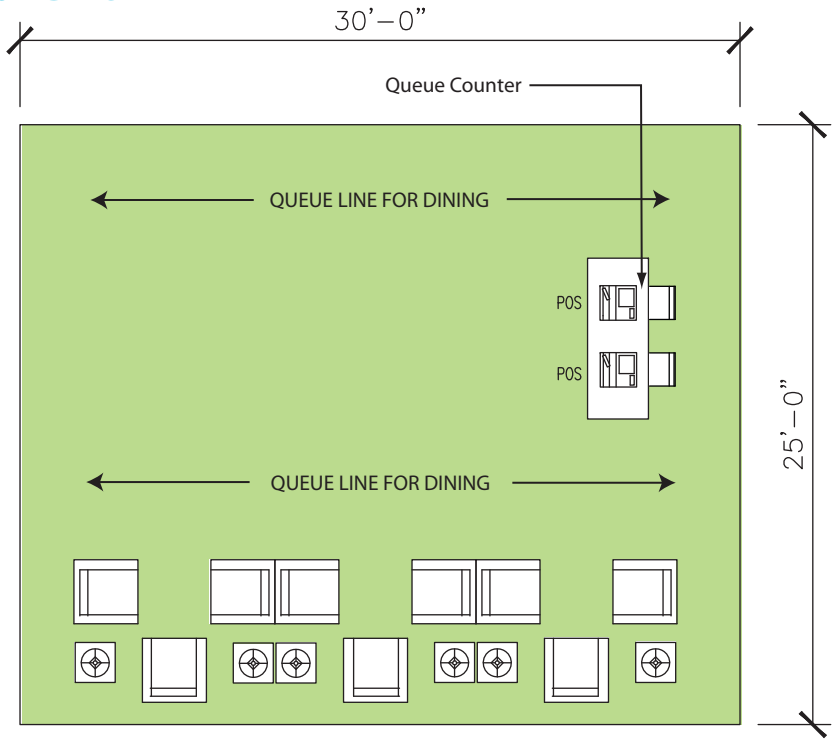
RESIDENTIAL RESTAURANT - LOBBY

WING 'C' WEST

GENERAL INFORMATION

Name	**Lobby**
Function	*Queue for dining for students /staff/lounge*
No. of Occupants	Per layout
Area (Assignable)	750 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Reception/Dining
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stone or Tile
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Wall duplexes per code, Security cameras to monitor queue lines, 2 POS stations, 2 Monitors for display of food 'specials'
Lighting	15-25 Fc - direct/indirect lighting 40-50 Fc - task lighting
Plumbing	N/A
Fire Protection	-
Acoustics	-
Security	Security camera
Telecom/Data	1 phone/4 data
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Queue counter
Moveable Equipment/ Furnishings	2 Desk chairs, 9 lounge chairs, 6 side tables, 6 lamps, 2 POS and 2 Display monitors
Special Requirements	-

RESIDENTIAL RESTAURANT - STAFF BREAKROOM

WING 'B' EAST

GENERAL INFORMATION

Name	**Breakroom**
Function	*Breakroom for the staff*
No. of Occupants	Per layout
Area (Assignable)	388 ASF (approximation)
Minimum Ceiling Height	Existing ceiling height
Critical Adjacencies	Main corridor
Additional Notes	

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet/Vinyl
Ceiling	Existing
Walls/Base	Low VOC painted GWB/Resilient
Windows	Existing
Doors/Frames	Existing
Additional Notes	

SYSTEMS

Mechanical	Existing
Electrical (Power)	Existing
Lighting	Existing
Plumbing	Existing
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Existing
Security	Existing
Telecom/Data	Existing
Audio/Visual	Existing

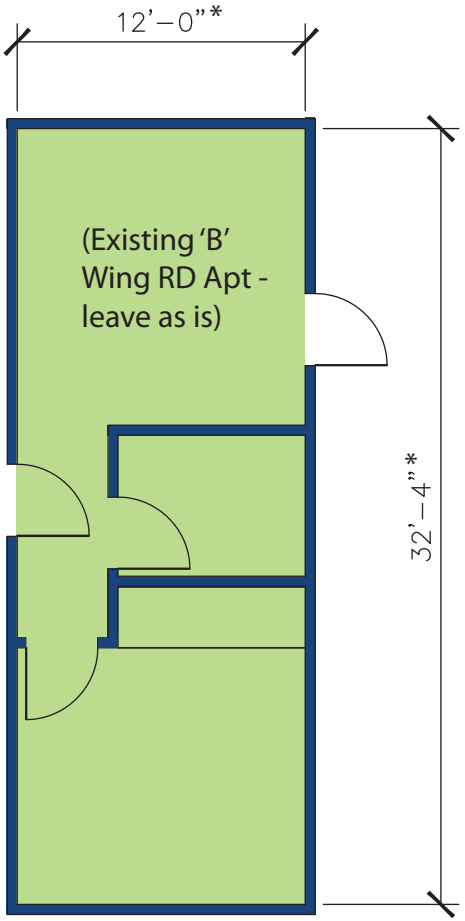
EQUIPMENT/FURNISHINGS

Built-In Features	Existing
Fixed	-
Moveable Equipment/ Furnishings	-
Special Requirements	-

RESIDENTIAL RESTAURANT - STAFF BREAKROOM

WING 'B' EAST

ROOM DIAGRAM



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

*Dimensions are approximate, existing dimensions to be field verified

RESIDENTIAL RESTAURANT - MAIN DINING ROOM

WING 'B' WEST

GENERAL INFORMATION

Name	**Main Dining Room**
Function	*Dining and beverage area for UCR students*
No. of Occupants	575
Area (Assignable)	9,500 ASF
Minimum Ceiling Height	12' -0"
Critical Adjacencies	Dish return/Lobby/Locker room Private dining
Additional Notes	Must have exits to exterior

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile, carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient or ceramic tile base
Windows	Aluminum frame double glazed
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	(1) duplex outlet space 25 ft. on center. Additional outlets at stage area for lights/speakers. 108 V single phase for beverages
Lighting	10 to 50 Fc
Plumbing	Req. for beverage counters, Cold water & floor sinks
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Provide sound attenuation
Security	Card key access
Telecom/Data	Wireless internet
Audio/Visual	Sound system, Speakers, TV/ Monitors throughout dining area

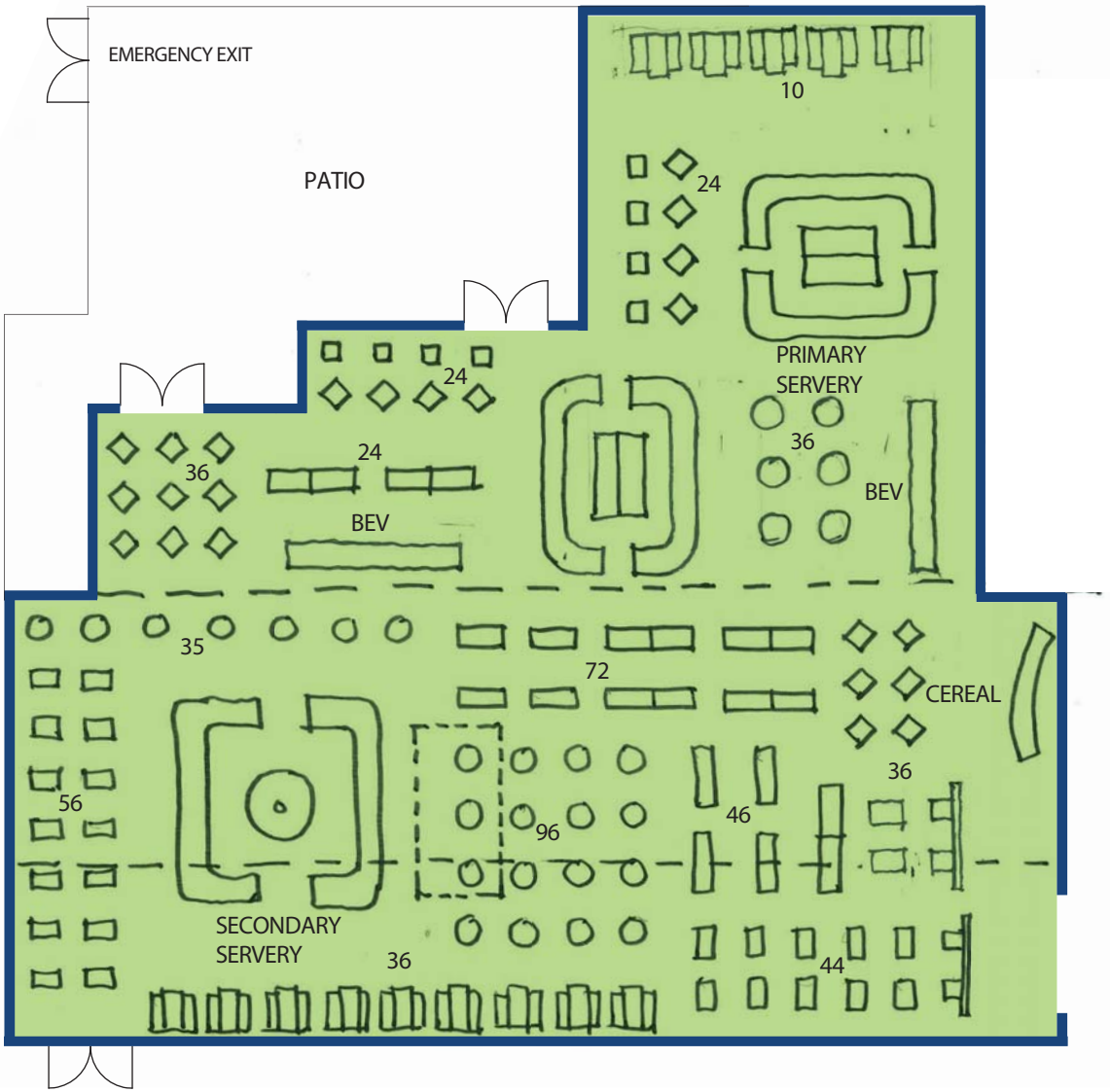
EQUIPMENT/FURNISHINGS

Built-In Features	Booth & banquette seating, Screen walls
Fixed	6 Television monitors
Moveable Equipment/ Furnishings	Stage, 575 seats
Special Requirements	-

RESIDENTIAL RESTAURANT - MAIN DINING ROOM

WING 'C' WEST

ROOM DIAGRAM



DINING AREA = 9,500 SF
(NOT INCLUDING SERVERY AREAS)

TOTAL SEAT = 575 SEATS

SCALE = N.T.S.

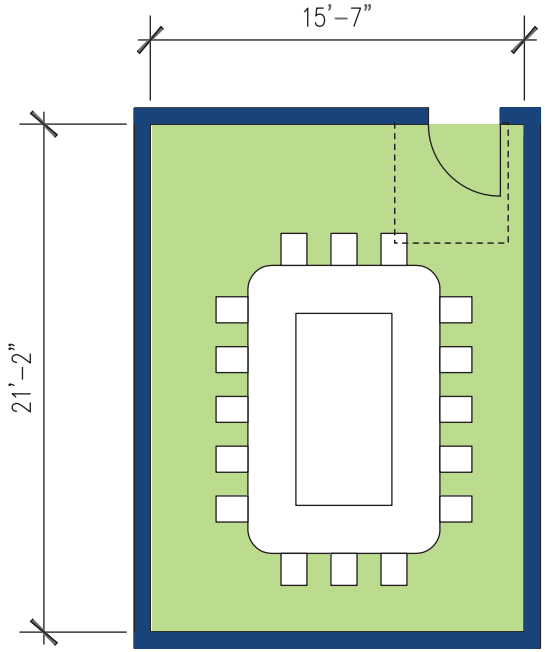
RESIDENTIAL RESTAURANT - PRIVATE DINING ROOM

WING 'B' WEST

GENERAL INFORMATION

Name	**Private Dining Room**
Function	*Private Dining area for UCR students*
No. of Occupants	16
Area (Assignable)	330 ASF (x2)
Minimum Ceiling Height	12'-0"
Critical Adjacencies	Servery/Main Dining Room
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile, Carpet
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient
Windows	Aluminum frame double glazed
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code, Power provided through conference table, Power for video camera
Lighting	10 to 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Provide sound attenuation
Security	Security camera, Card key access
Telecom/Data	Wireless internet
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Window blinds
Moveable Equipment/ Furnishings	Large table, 16 stackable chairs
Special Requirements	-

RESIDENTIAL RESTAURANT - SERVERY - PRIMARY

WING 'C' WEST

GENERAL INFORMATION

Name	**Servery - Primary**
Function	*Service food 'stations' that serve dining*
No. of Occupants	-
Area (Assignable)	2,415 ASF (1,269 International /Hot carving + 1,146 Appetizers and Grille)
Minimum Ceiling Height	12'-0"
Critical Adjacencies	Dining/Kitchen
Additional Notes	Two island service platforms will have five cooking stations with Type 1 water wash grease hoods; All refrigeration should be remote to keep heat down

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile on customer side, Stonehard Expoxy on staff side
Ceiling	FRP with metal T-bar white with plastic coating
Walls	Tile on concrete curbs
Base	6" coved tile
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	Temp at 68 to 72 degrees F in heat producing areas - negative pressure. Total CFM: 23,600 FM (4) 16' Lg water wash grease hoods
Electrical (Power)	Per equip. manufacturer's req. power connections -120/208/480V, TV's and Monitors at each station
Lighting	50 Fc
Plumbing	120 degree H.W. and floor sinks
Fire Protection	Req. at all grease hoods/Sprinklered/ Fire alarm/Smoke Detector
Acoustics	-
Security	N/A
Telecom/Data	TV/Monitors for display of food 'specials'
Audio/Visual	N/A

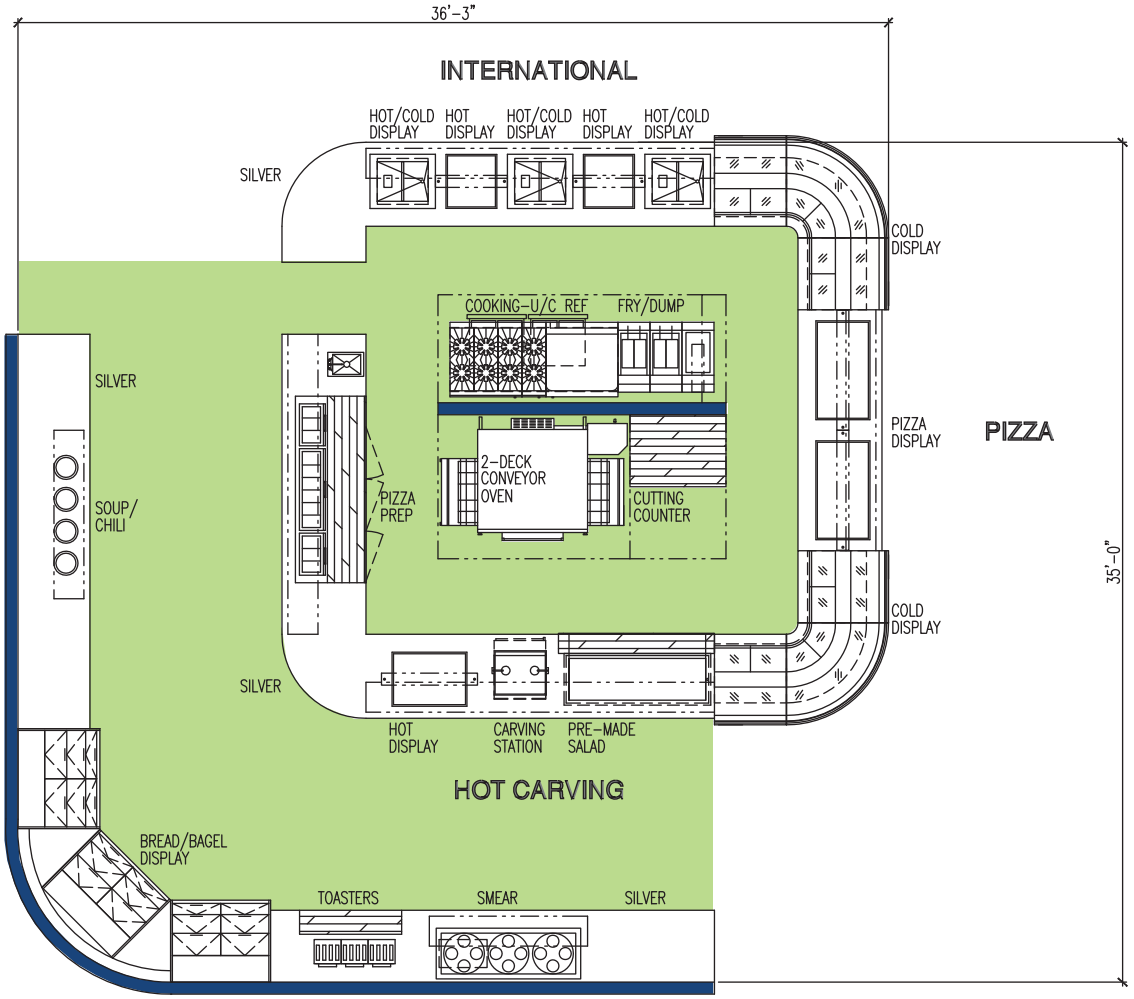
EQUIPMENT/FURNISHINGS

Built-In Features	Soffits and graphics over cooking platforms
Fixed	Built-in custom counters for serving, ceiling hung ventilators (4) @ 8'-16'; Specialty lighting, back lit graphics
Moveable Equipment/ Furnishings	-
Special Requirements	Refrigerated display case, remote condensor

RESIDENTIAL RESTAURANT - SERVERY - PRIMARY

WING 'C' WEST

ROOM DIAGRAM

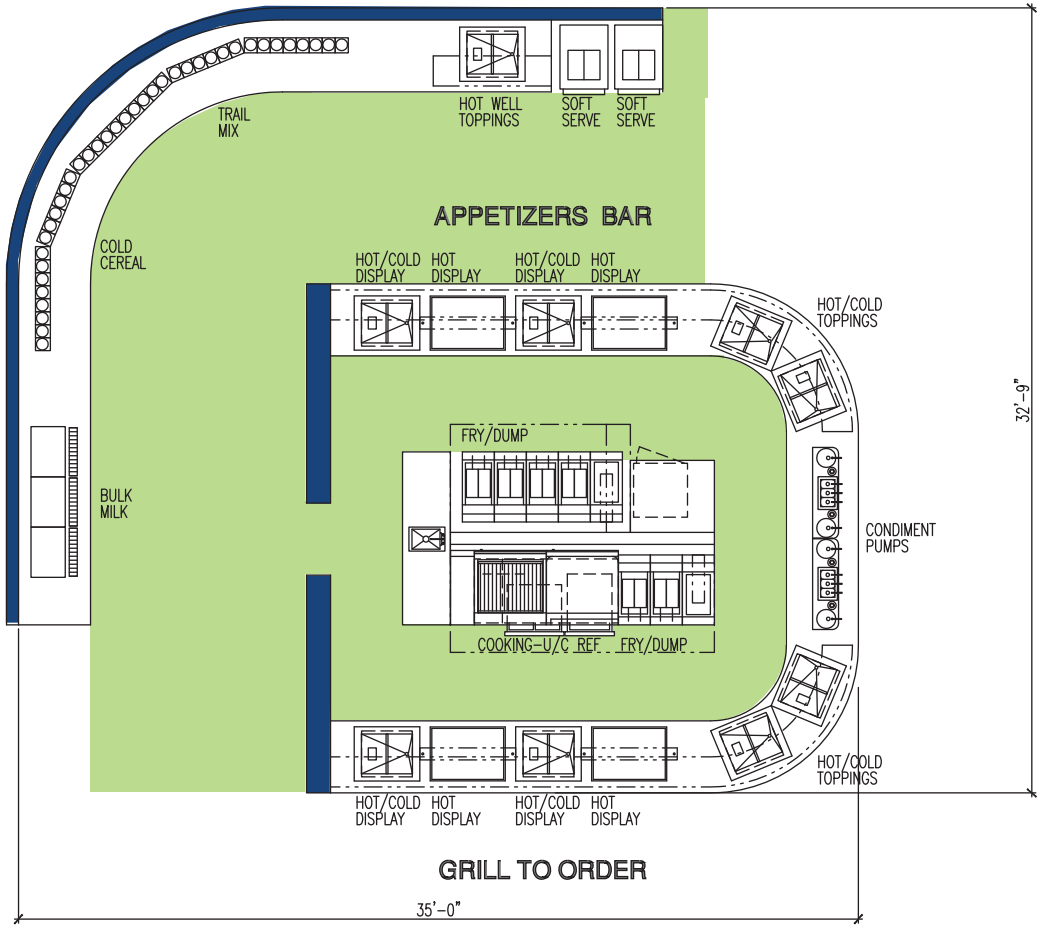


SCALE: 1/8"=1'-0"

RESIDENTIAL RESTAURANT - SERVERY - PRIMARY

WING 'C' WEST

ROOM DIAGRAM



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

RESIDENTIAL RESTAURANT- SERVERY - SECONDARY

WING 'C' WEST

GENERAL INFORMATION

Name	**Servery - Secondary**
Function	*Service food 'stations' - Salad bar and grille + 2 Beverage stations*
No. of Occupants	-
Area (Assignable)	1,584 ASF (1,408 salad bar and grille + 88 beverage station (x2))
Minimum Ceiling Height	12'-0"
Critical Adjacencies	Dining/Kitchen
Additional Notes	Station with Type 1 grease hood + 2 beverage stations; All refrigeration should be remote to keep heat down

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile on customer side, Stonehard Epoxy on staff side
Ceiling	FRP with metal T-bar white with plastic coating
Walls	-
Base	6" coved tile
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	Temp at 68 to 72 degrees F in heat producing areas - negative pressure (1) 8' Lg water wash grease hood
Electrical (Power)	120/208V, TV's and Monitors at ea. station
Lighting	50 Fc
Plumbing	3/4" Gas, Floor sinks
Fire Protection	Req. at all grease hoods/Sprinklered/ Fire alarm/Smoke Detector
Acoustics	-
Security	N/A
Telecom/Data	TV/Monitors for display of food 'specials'
Audio/Visual	N/A

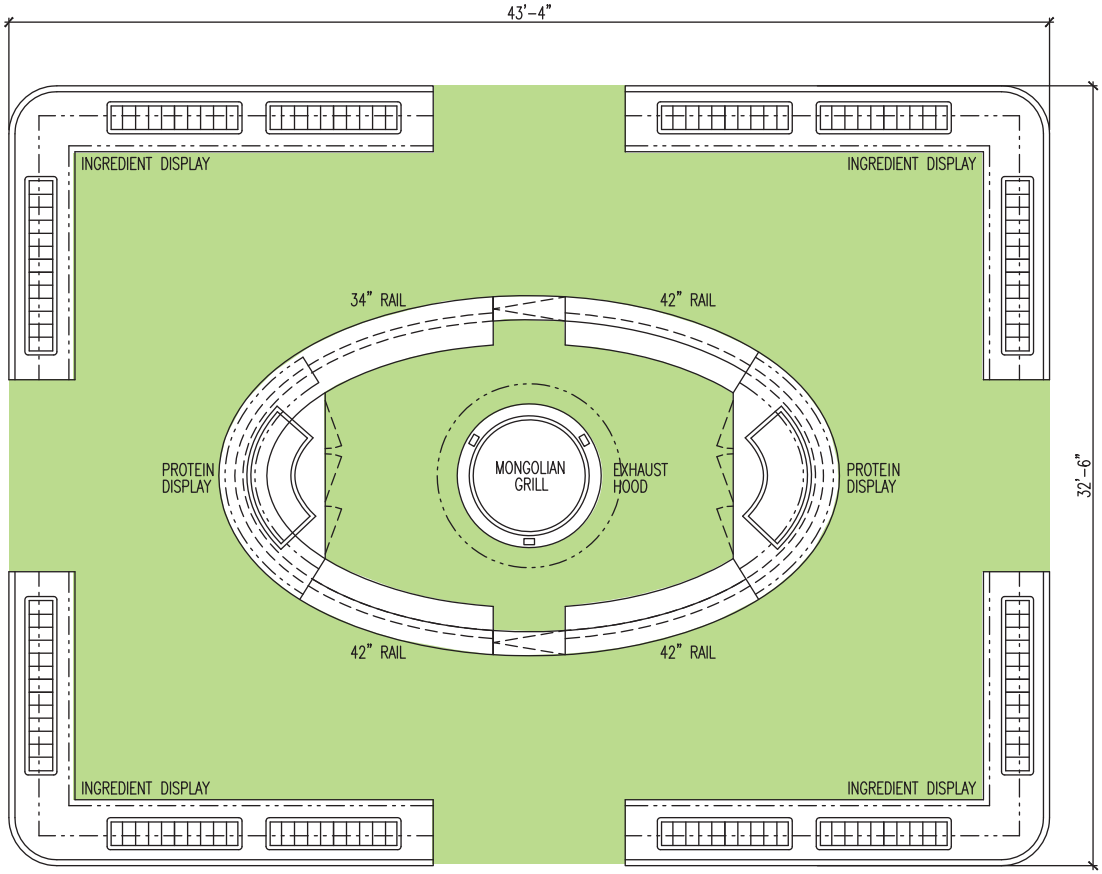
EQUIPMENT/FURNISHINGS

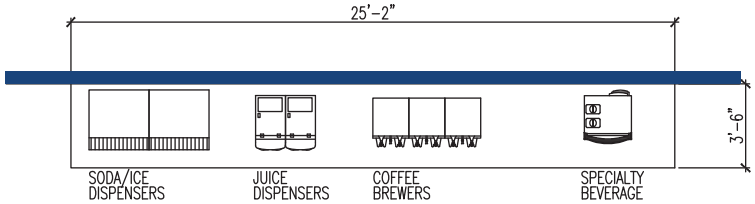
Built-In Features	Soffits and graphics over cooking platform
Fixed	Built-in custom counters for serving; ceiling hung water wash ventilator & 6'-0" dia grille (1) 8' x 8" dia., Specialty lighting, back lit graphics
Moveable Equipment/ Furnishings	-
Special Requirements	Refrigerated display case, remote condesnor

RESIDENTIAL RESTAURANT - SERVERY - SECONDARY

WING 'C' WEST

ROOM DIAGRAM





2 BEVERAGE STATIONS

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

RESIDENTIAL RESTAURANT - DISHWASHING

WING 'C' WEST

GENERAL INFORMATION

Name	**Dishwashing**
Function	*Dishwashing area/Tray drop-off*
No. of Occupants	2 to 4
Area (Assignable)	1,158 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Dining, Exit from dining room
Additional Notes	Room will be hot and humid. All surfaces will be wet

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy "Stonehard"- light color
Ceiling	FRP-T-bar drop/plastic coated T-bar
Walls	FRP - on concrete curbs, light color
Base	Epoxy cove" Stonehard" finish on concrete curb
Windows	Tray drop window to have stainless steel frame and sill shelf
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 F to 72 F/Negative pressure-30 air changes/hr vent -ensure proper ventilation and conditioning of space to minimize impact of heat and humidity producing equip.
Electrical (Power)	Per equip. manuf's req. power connections - 70 AMPS at 480V, 3 phase
Lighting	50 Fc
Plumbing	140 degree H.W., 3" drain
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	N/A
Telecom/Data	N/A
Audio/Visual	N/A

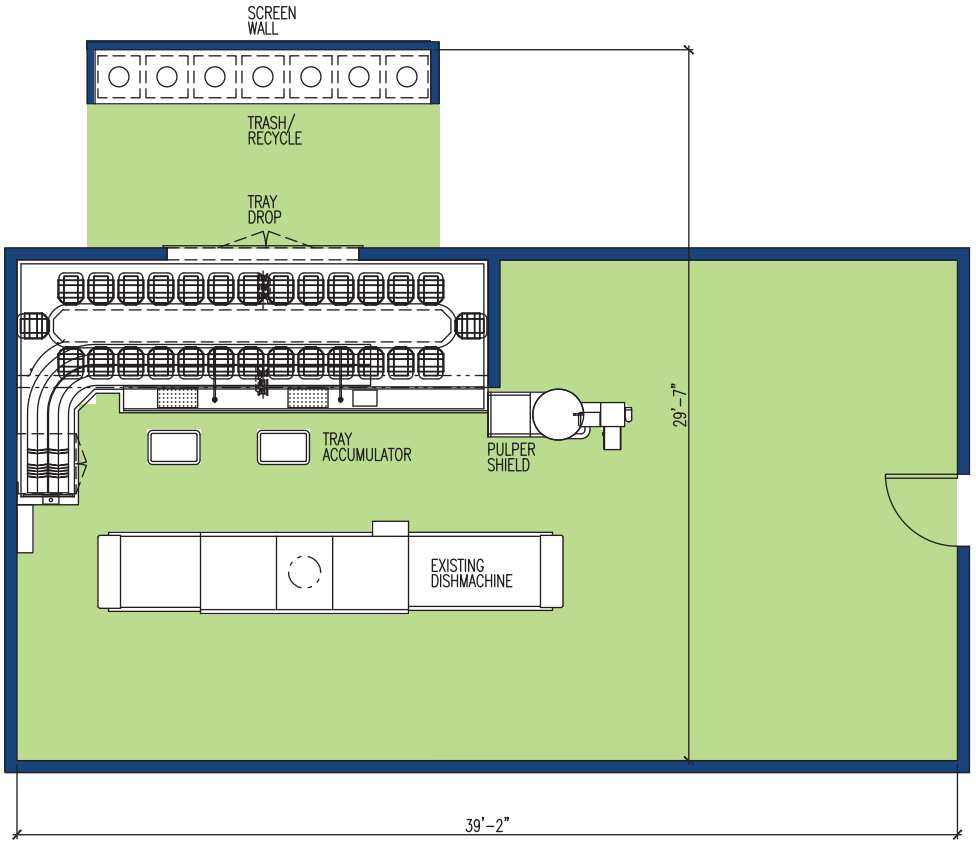
EQUIPMENT/FURNISHINGS

Built-In Features	Dishwasher (existing)/Conveyer, Pulper (w/ water press system) & Accumulator will all be added to Conveyor (all new)
Fixed	-
Moveable Equipment/ Furnishings	Dish rack, Rollies, Metro shelves, Soak sinks
Special Requirements	480V , 3 phase power

RESIDENTIAL RESTAURANT - DISHWASHING

WING 'C' WEST

ROOM DIAGRAM



DISHWASHING

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

RESIDENTIAL RESTAURANT - KITCHEN

WING 'C' WEST

GENERAL INFORMATION

Name	**Kitchen**
Function	*Food Preparation for Dining Commons*
No. of Occupants	50
Area (Assignable)	1,780 ASF
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Serving/Dining/Loading Dock
Additional Notes	-

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy "Stonehard" light color or Protect-ALL
Ceiling	FRP & 7 Bar DVLP - white
Walls	FRP waterproof gyp on concrete bases - light color
Base	Epoxy 6" coved "Stonehard"
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	(2) 5' x 24' type I water wash hoods, hoods, (1) 5' x 24' type II vapor hood, 68 F to 72 F in heat producing areas/76 in prep areas
Electrical (Power)	120V, 208V, 480V/Computer station/UDS for cook lines
Lighting	50 Fc
Plumbing	Drains to exist 6" drain 140 degree hot water (for water wash hoods) & cold water & natural gas
Fire Protection	Required for two (2) 5'x 24' type I water wash hoods. Sprinklered/ /Fire alarm/Smoke detectors
Acoustics	-
Security	Security camera/Card key acces
Telecom/Data	1 wall mounted cook's computer and phone, temp monitor for all walk-in refrigerators/freezers
Audio/Visual	-

RESIDENTIAL RESTAURANT - KITCHEN

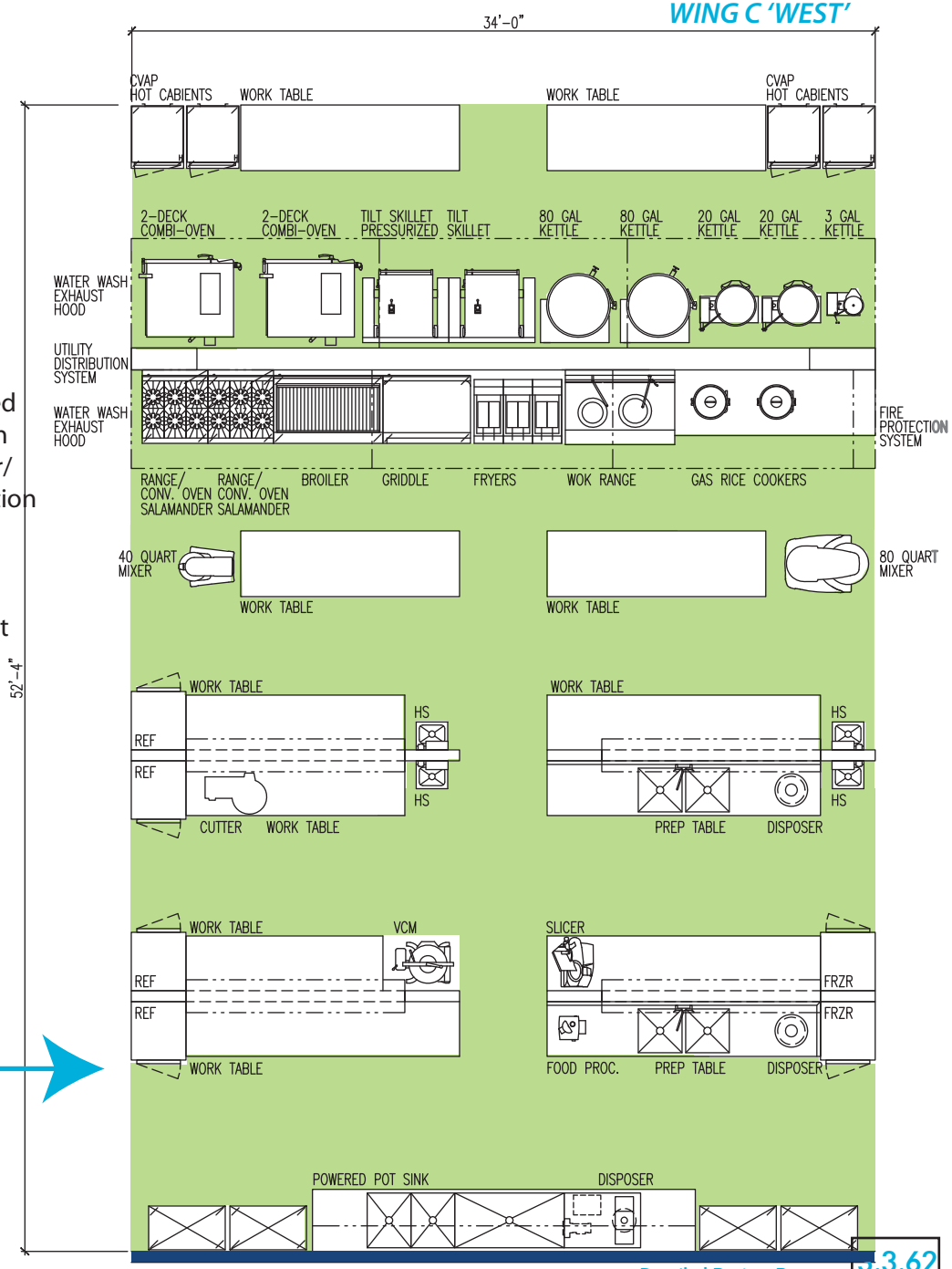
EQUIPMENT/FURNISHINGS

Built-In Features	Vegetable/salad prep area w/ ded refrigeration, w/ (3) 2-compartment sinks, garbage disposal, 16' of prep table space
Fixed	(2) double-stack combi ovens (similar to Lothian set-up); (2) tilt braising pans (1 a pressurized model); (2) 80 gallon steam jacketed kettles; (1 a pressurized model ; (2) 20 gallon steam jacketed kettles; (1) 3 gallon steam jacketed kettle; (1) 10 burner range w/ 2 convention ovens below and above range salamander/ broiler; (1) flattop griddle (48") w/ convention ovens below; (1) char-broiler (60"); (3) vat fryer w/ reach-in freezer nearby; (1) 80 qt Hobart floor mixer; (1) 2 wok cooker w/ plumbed water and drain; (1) 40 qt. Hobart floor mixer; (1) buffalo chopper; (2) 70 qt. rice cookers - gas; (1) meat slicer; (4) full size single door warming boxes (CVAPS), on casters but have a ded space for them; (4) full size single door reach-in coolers; (2) full size single door reach-in freezers; (1) Power soak system in pot wash; (1) blast chiller
Moveable Equip/Furnishings	At least 4 distinct prep table/work areas w/ reach-in coolers in close proximity; spice rack & ready to use dry stock racks
Special Req	Max. room temp. 76 degrees

ROOM DIAGRAM

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

WING C 'WEST'



RESIDENTIAL RESTAURANT - BAKERY

WING 'C' WEST

GENERAL INFORMATION

Name	**Bakery**
Function	*Baked Food Preparation for Dining Commons*
No. of Occupants	Per layout
Area (Assignable)	833 ASF (750 + 83 (display))
Minimum Ceiling Height	10'-0"
Critical Adjacencies	Serving/Dining/Loading Dock/Kitchen
Additional Notes	-

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy "Stonehard" light color or Protect-ALL
Ceiling	FRP & 7 Bar DVLP - white
Walls	FRP waterproof gyp on concrete bases - light color
Base	Epoxy 6" coved "Stonehard"
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 F to 72 F in heat producing areas/76 in prep areas
Electrical (Power)	120V, 208V, 480V
Lighting	50 Fc
Plumbing	Drains to exist 6" drain; provide for sinks
Fire Protection	Sprinklered/Fire alarm/Smoke detectors
Acoustics	-
Security	Security camera/Card key acces
Telecom/Data	-
Audio/Visual	-

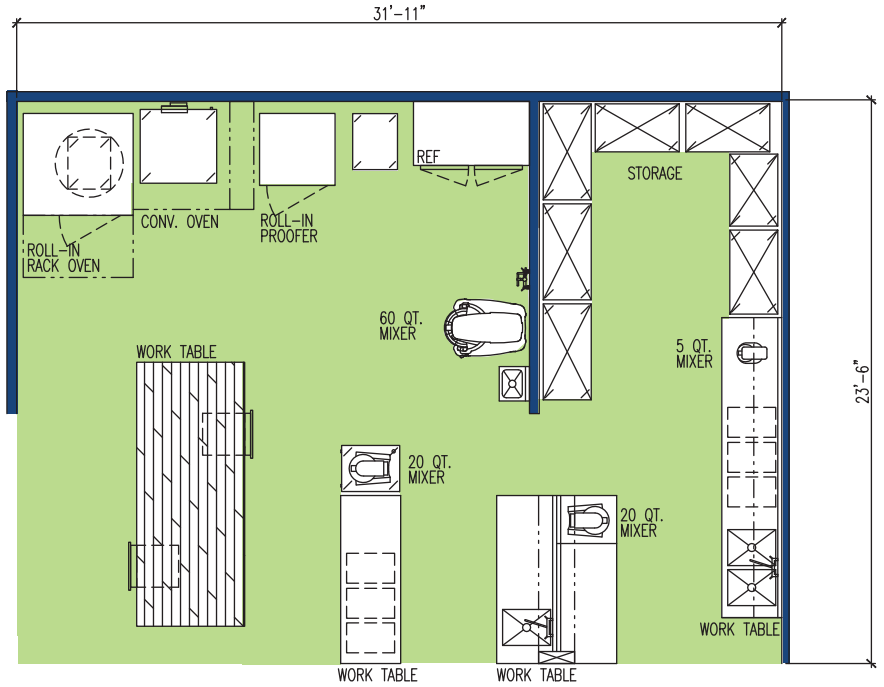
EQUIPMENT/FURNISHINGS

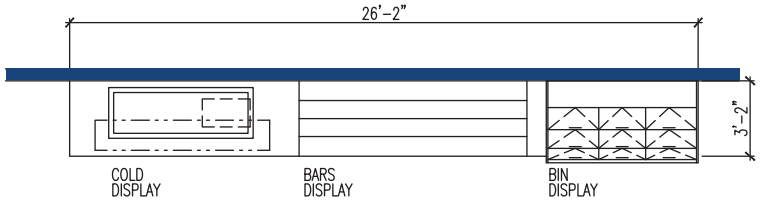
Built-In Features	-
Fixed	(1) rack oven; (1) double stack convention oven; (1) proofing oven/ cabinet; 2 door reach-in cooler
Moveable Equipment/ Furnishings	Large prep table
Special Requirements	-

RESIDENTIAL RESTAURANT - BAKERY

WING 'C' WEST

ROOM DIAGRAM





Bakery Display

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

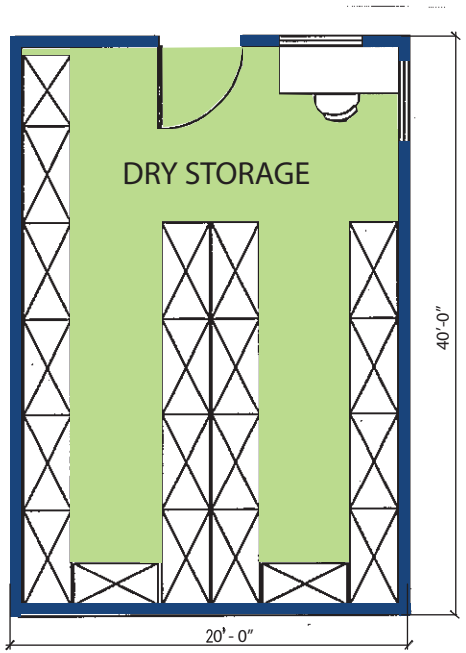
RESIDENTIAL RESTAURANT - DRY STORAGE

WING 'B' WEST

GENERAL INFORMATION

Name	**Dry Storage**
Function	*Storage for dry goods and storage clerk*
No. of Occupants	1- Supply Clerk
Area (Assignable)	800 ASF
Minimum Ceiling Height	10' - 0"
Critical Adjacencies	Loading Dock/Kitchen
Additional Notes	Clerk needs data, power and a phone in storage room

ROOM DIAGRAM



SCALE: N.T.S.

ARCHITECTURAL MATERIALS/FINISHES

Flooring	"Stonehard" Epoxy or Protect-ALL
Ceiling	FRP T-bar drop - white
Walls	FRP - light color
Base	Concrete base w/ 6" coved epoxy "Stonehard"
Windows	Int. window to corridor
Doors/Frames	4' Door with vent at base
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	Duplexes on wall per code/Power for clerk's computer
Lighting	50 Fc
Plumbing	(4) floor drains
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Card key access
Telecom/Data	1 phone/2 data for clerk
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Poly-plastic adjustable shelving
Moveable Equipment/ Furnishings	Stand up desk, tall stool
Special Requirements	Desk - view to corridor

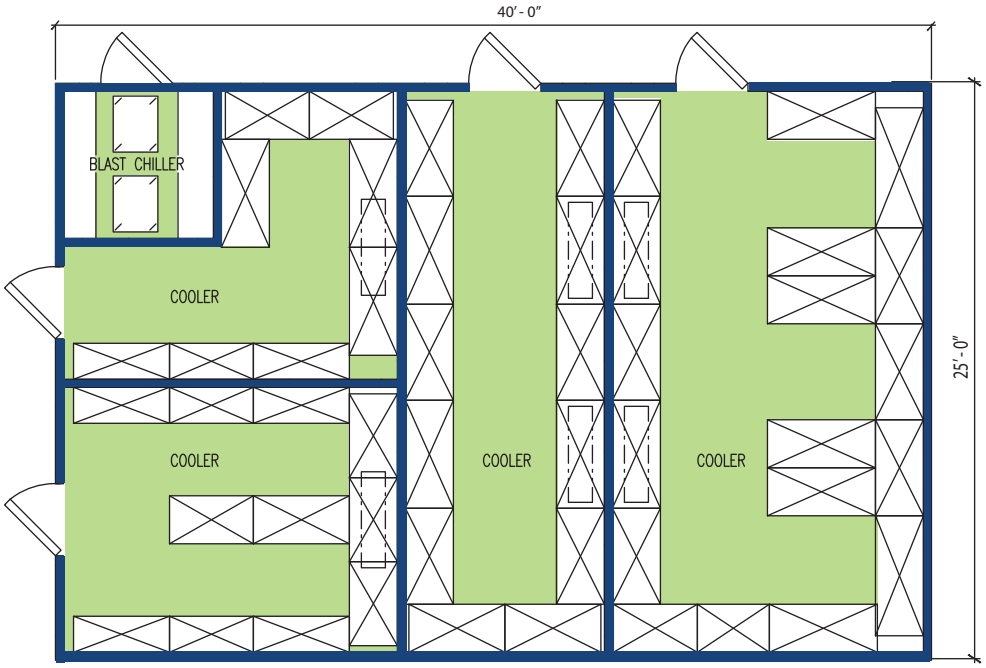
RESIDENTIAL RESTAURANT - REFRIGERATION

WING 'B' WEST

GENERAL INFORMATION

Name	**Refrigeration**
Function	*Cold Food Storage*
No. of Occupants	0
Area (Assignable)	1,000 ASF
Minimum Ceiling Height	8' - 6"
Critical Adjacencies	Kitchen/Loading Dock
Additional Notes	1 blast chiller/4 coolers with outdoor slab mounted air-cooled compressor rack; Air- Cooled Compressors can be placed on roof

ROOM DIAGRAM



SCALE: N.T.S.

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stainless steel diamond plate flush w/ kitchen floor
Ceiling	Stainless steel
Walls/Base	Stainless steel
Windows	In doors, heated
Doors/Frames	Stainless steel
Additional Notes	-

SYSTEMS

Mechanical	Temp. between 35F and 40F
Electrical (Power)	160AMP-208V phase, Provide Emergency Power Remote air cooled compressor; Rack mounted outside on slab
Lighting	40 Fc, Provide emergency power
Plumbing	Drains to floor sink outside the walk-in ref/freezer
Fire Protection	N/A
Acoustics	N/A
Security	Door locks master keyed, Card key access
Telecom/Data	Alarm system connected to central alarm
Audio/Visual	Alarm at door

EQUIPMENT/FURNISHINGS

Built-In Features	Floor recessed 7" to 8"
Fixed	Poly-plastic adjustable shelving + racks
Moveable Equipment/ Furnishings	
Special Requirements	-

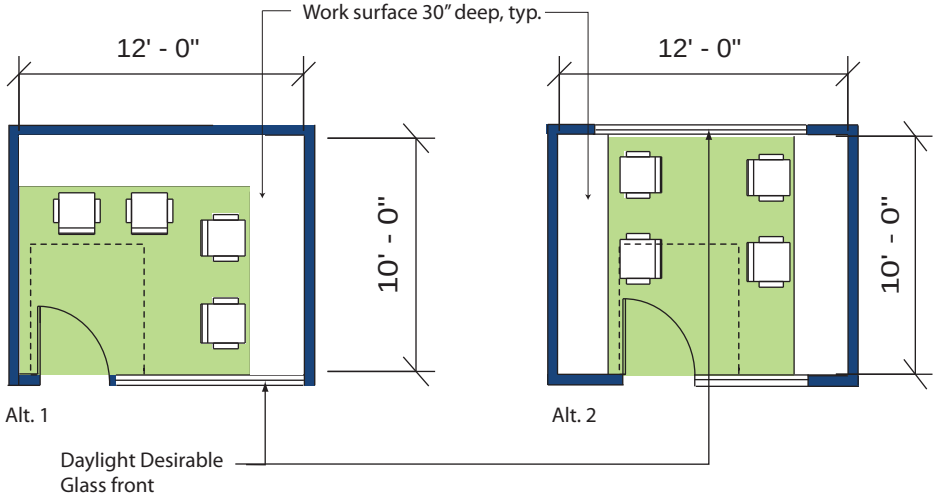
RESIDENTIAL RESTAURANT - SUPERVISOR'S OFFICE

WING 'B' WEST

GENERAL INFORMATION

Name	**Supervisor's Office**
Function	*Supervisor's office - shared space*
No. of Occupants	4
Area (Assignable)	120 ASF
Minimum Ceiling Height	9' - 0"
Critical Adjacencies	Kitchen/Other offices
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Seamless vinyl
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient GWB or vinyl base
Windows	Aluminum frame double-glazed to ext/Interior window
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	Add windows into kitchen/ production where possible

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	4 Computers - 120V/Security camera
Lighting	Min. 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke Detector
Acoustics	-
Security	Card key access/Security camera
Telecom/Data	4 phone/4 data (4 computers)
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	Work counter(s), Overhead storage and file drawers, Safe on a curb w/ a camera overhead of the cash counting area
Fixed	-
Moveable Equipment/ Furnishings	4 chairs
Special Requirements	-

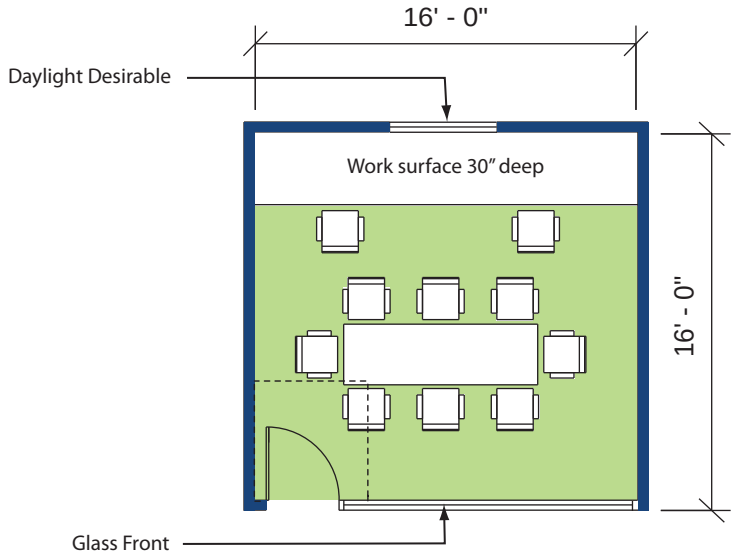
RESIDENTIAL RESTAURANT - MANAGER'S OFFICE

WING 'B' WEST

GENERAL INFORMATION

Name	**Manager's Office**
Function	*Manager's office and meeting space*
No. of Occupants	6-10
Area (Assignable)	256 ASF
Minimum Ceiling Height	9' - 0"
Critical Adjacencies	Kitchen/Other offices
Additional Notes	Can be meeting space for vendors

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Seamless vinyl
Ceiling	Acoustical ceiling tile
Walls	Low VOC painted GWB/Resilient GWB or vinyl base
Windows	Aluminum frame double-glazed to ext/Interior window
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	Add windows into kitchen/ production where possible

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	2 Computers - 120V
Lighting	Min. 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke Detector
Acoustics	-
Security	Card key access
Telecom/Data	2 phone/2 data (2 computers)
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	2 Desks/Counter, Overhead storage and file drawers
Fixed	-
Moveable Equipment/ Furnishings	Table, 6 to10 chairs
Special Requirements	-

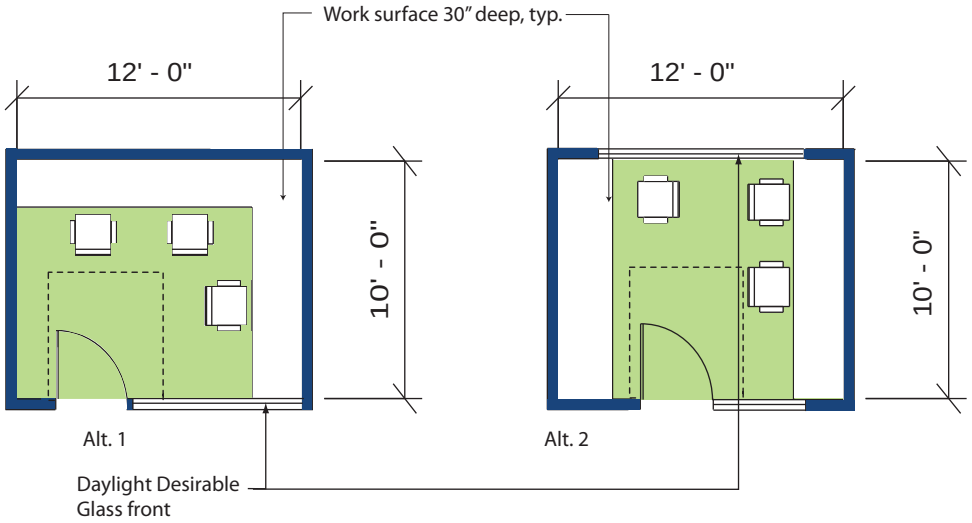
RESIDENTIAL RESTAURANT - CULINARY OFFICE

WING 'B' WEST

GENERAL INFORMATION

Name	**Culinary Office**
Function	*Culinary office for chef + 2 cooks*
No. of Occupants	3
Area (Assignable)	120 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Kitchen/Other offices
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Seamless vinyl
Ceiling	Acoustical ceiling tile
Walls/Base	Low VOC painted GWB/Resilient GWB or vinyl base
Windows	Aluminum frame double-glazed to ext/ Interior window
Doors/Frames	Solid core wood/Alum. frame
Additional Notes	Add windows into kitchen/ production where possible

SYSTEMS

Mechanical	68 degrees F to 78 degrees F No humidity control
Electrical (Power)	3 Computers - 120v
Lighting	Min. 50 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	
Security	Card key access
Telecom/Data	3 phone/3 data (3 computers)
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	Work counter(s), Overhead storage and file drawers
Fixed	-
Moveable Equipment/ Furnishings	3 chairs
Special Requirements	-

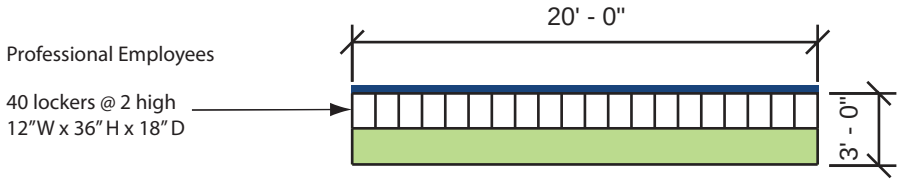
RESIDENTIAL RESTAURANT - PROFESSIONAL EMPLOYEE LOCKERS

WING 'B' WEST

GENERAL INFORMATION

Name	**Professional Employee Lockers**
Function	*Designated space for employee lockers*
No. of Occupants	-
Area (Assignable)	60 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Kitchen/Loading Dock
Additional Notes	Locate in service corridor

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy or Protect-ALL
Ceiling	FRP/T-Bar
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH No humidity control. If enclosed, add exhaust
Electrical (Power)	Duplexes on wall per code, Power for video camera
Lighting	50 Fc
Plumbing	Floor drains
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Security camera
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Lockers
Moveable Equipment/ Furnishings	-
Special Requirements	-

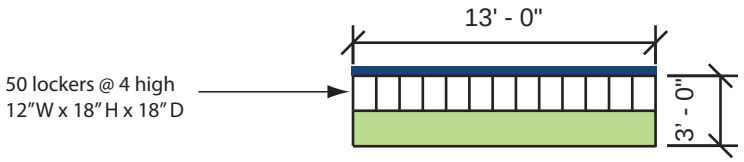
RESIDENTIAL RESTAURANT - STUDENT EMPLOYEE LOCKERS

WING 'B' WEST

GENERAL INFORMATION

Name	**Student Employee Lockers**
Function	*Designated space for student employee lockers*
No. of Occupants	-
Area (Assignable)	39 ASF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Kitchen/Loading Dock
Additional Notes	Locate in service corridor

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy or Protect-ALL
Ceiling	FRP/T-Bar
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	N/A
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH. No humidity control. If enclosed, add exhaust
Electrical (Power)	Duplexes on wall per code, Power for video camera
Lighting	50 Fc
Plumbing	Floor drains
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Security camera
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Lockers
Moveable Equipment/ Furnishings	-
Special Requirements	-

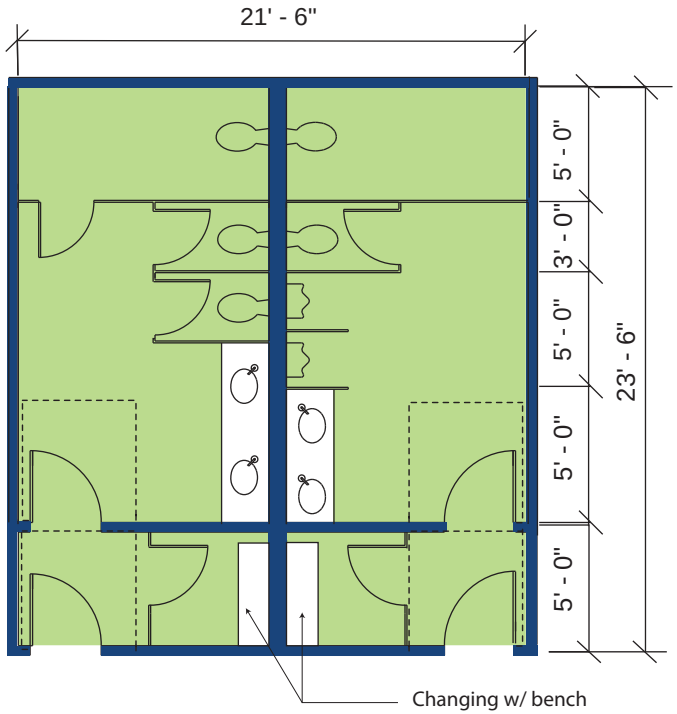
RESIDENTIAL RESTAURANT - EMPLOYEE RESTROOMS

WING 'B' WEST

GENERAL INFORMATION

Name	**Employee Restrooms**
Function	*Restrooms for A-I kitchen staff*
No. of Occupants	-
Area (Assignable)	250 ASF (x2 - 1 Men/1Women)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Employee lockers/kitchen
Additional Notes	Located adjacent to lockers Serves as a change room

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	Moisture resistant GWB
Walls/Base	Low VOC painted GWB/ Ceramic tile wainscot
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust fan
Electrical (Power)	Duplexes on wall per code-GFI
Lighting	30-40 Fc
Plumbing	Self flushing toilets/Urinals/ Automatic sensor sinks/Floor drain
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Privacy lock on changing only
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features Fixed	Plumbing fixtures with sensors Toilet accessories/Mirror/ Grab bar/Trash/bench @ changing
Moveable Equipment/ Furnishings	-
Special Requirements	-

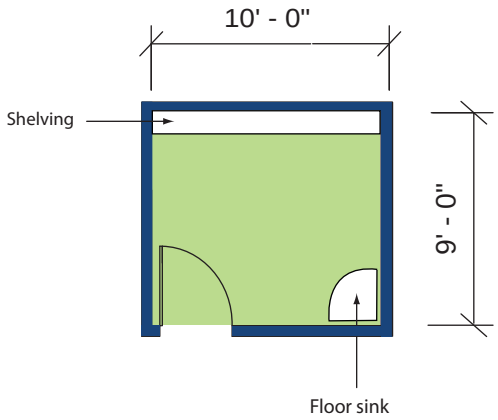
RESIDENTIAL RESTAURANT - CLEANING STORAGE

WING 'B' WEST

GENERAL INFORMATION

Name	**Cleaning Storage (i.e. Janitor's Closet)**
Function	*Janitor's cleaning area*
No. of Occupants	-
Area (Assignable)	90 ASF
Minimum Ceiling Height	8'-0"
Critical Adjacencies	Kitchen/Dining/Loading Dock
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Epoxy "Stonehard"
Ceiling	Low VOC painted GWB
Walls/Base	FRP/Concrete base
Windows	N/A
Doors/Frames	Solid core wood/Alum. frame with vent at base
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust fan
Electrical (Power)	Duplexes on wall per code
Lighting	20-25 Fc
Plumbing	Floor sink/ Drain
Fire Protection	Sprinklered/Fire alarm/Smoke detectors
Acoustics	-
Security	Card key access
Telecom/Data	-
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	Mop sink
Fixed	Poly-plastic adjustable shelving, Hook strip
Moveable Equipment/ Furnishings	
Special Requirements	-

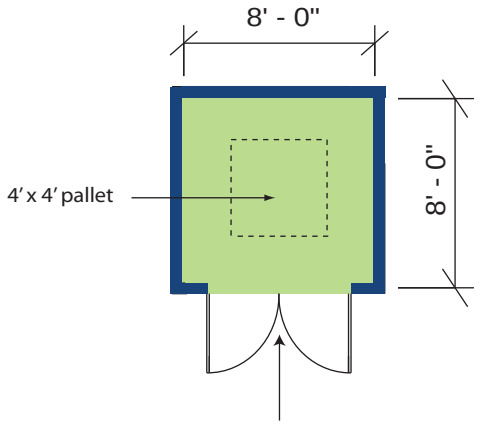
RESIDENTIAL RESTAURANT - FOOD TRUCK STORAGE

WING 'B' WEST

GENERAL INFORMATION

Name	**Food Truck Storage**
Function	*Refrigerated storage area for food trucks*
No. of Occupants	-
Area (Assignable)	64 ASF
Minimum Ceiling Height	8'-6"
Critical Adjacencies	Loading Dock
Additional Notes	The Food Truck pad will be located in the back of A-I and will be completed 2011; the trucks will be serviced at the dock of the of the new restaurant, but the trucks will be held in the back of the building on pre-existing pads. Max truck is 32'.

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stainless steel diamond plate
Ceiling	Stainless steel
Walls/Base	Stainless steel
Windows	N/A
Doors/Frames	Stainless steel
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH No humidity control
Electrical (Power)	On emergency generator
Lighting	40 Fc
Plumbing	Floor drain (1)
Fire Protection	N/A
Acoustics	N/A
Security	Card key access
Telecom/Data	-
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Poly plastic adjustable shelving
Moveable Equipment/ Furnishings	-
Special Requirements	Floor recessed 7" to 8"

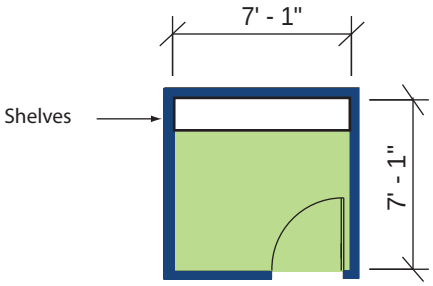
RESIDENTIAL RESTAURANT - MISC/SEASONAL STORAGE

WING 'B' WEST

GENERAL INFORMATION

Name	**Misc/Seasonal Storage**
Function	*Cleaning equipment/storage for seasonal items*
No. of Occupants	-
Area (Assignable)	50 ASF
Minimum Ceiling Height	8'-0"
Critical Adjacencies	Dining
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stonehard epoxy or Protect-ALL
Ceiling	Low VOC painted GWB
Walls/Base	Low VOC painted GWB/Resilient
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame with vent at base and window
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	20-25 Fc
Plumbing	Floor drain
Fire Protection	Sprinklered, Fire alarm, Smoke detector
Acoustics	Card key access
Security	-
Telecom/Data	-
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Poly plastic adjustable shelving
Moveable Equipment/ Furnishings	-
Special Requirements	-

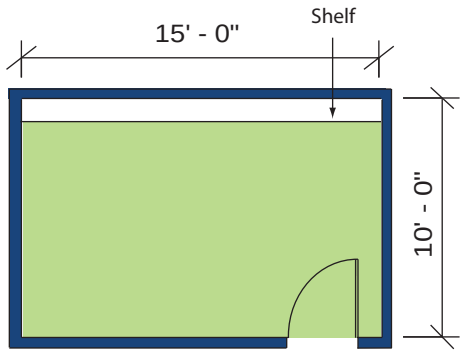
RESIDENTIAL RESTAURANT - CATERING STORAGE

WING 'B' WEST

GENERAL INFORMATION

Name	**Catering Storage**
Function	*Storage area for dining equipment*
No. of Occupants	-
Area (Assignable)	150 ASF
Minimum Ceiling Height	8'-0"
Critical Adjacencies	Kitchen/Dining/Loading Dock
Additional Notes	-

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Stonehard epoxy or Protect-ALL
Ceiling	Low VOC painted GWB
Walls/Base	FRP/concrete base
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame w/ window
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH No humidity control
Electrical (Power)	Duplexes on wall per code
Lighting	20-25 Fc
Plumbing	Floor drain
Fire Protection	Sprinklered, Fire alarm, Smoke detector
Acoustics	Card key access
Security	-
Telecom/Data	-
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Poly plastic adjustable shelving
Moveable Equipment/ Furnishings	-
Special Requirements	-

STAFF RESIDENTIAL

STANDALONE

GENERAL INFORMATION

Name	**Staff Residential**
Function	*Living space for 2 RD's and 2 faculty*
No. of Occupants	-
Area (Assignable)	1,115 ASF (x4)
Minimum Ceiling Height	9'-0" (lower ceiling height in kitchen and bathrooms)
Critical Adjacencies	-
Additional Notes	2 Bedrooms (1 master), 2 Bath, Kitchen, Dining, Living, Laundry and Enclosed patio/deck 4 units - 1 needs to be HC accessible

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Low VOC carpet/Ceramic tile
Ceiling	Low VOC painted GWB
Walls/Base	Low VOC painted GWB/Resilient
Windows	Operable aluminum - dual glazed
Doors/Frames	Solid core wood
Additional Notes	Maximize natural light & privacy

SYSTEMS

Mechanical	Individual control in living room/ Bathroom exhaust 10 ACH.
Electrical (Power)	Doorbell, Wall outlets per code, Power for appliances
Lighting	Individual light switches each room, Appliances, Fixed lighting
Plumbing	2 low flush toilets, 3 sinks, 2 tub/ showers, W/D, Ref., DW
Fire Protection	Sprinkler, Smoke detector
Acoustics	Wall/floor/ceiling/ STC 50
Security	Sec. screens ground floor/Lockable windows & doors/Card key access
Telecom/Data	1 phone/1 data per bedroom/living rm
Audio/Visual	1 cable tv each bedroom/living rm

EQUIPMENT/FURNISHINGS

Built-In Features	Closets/Kitchen/Bath cab and fixtures
Fixed	Window blinds
Moveable Equipment/ Furnishings	Queen bed, 2 twin beds, 1 media table, 4 side tables, 3 dressers, 1 sofa, 1 coffee table, 2 lounge chairs, 1 dining table, 4 dining chairs, 1 flat screen tv, 2 end table and 1 floor lamp, 4 bedside lamps, 1 desk
Special Requirements	Stackable W/D, Ref., Oven, DW, Microwave

STAFF RESIDENTIAL

STANDALONE

ROOM DIAGRAM

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

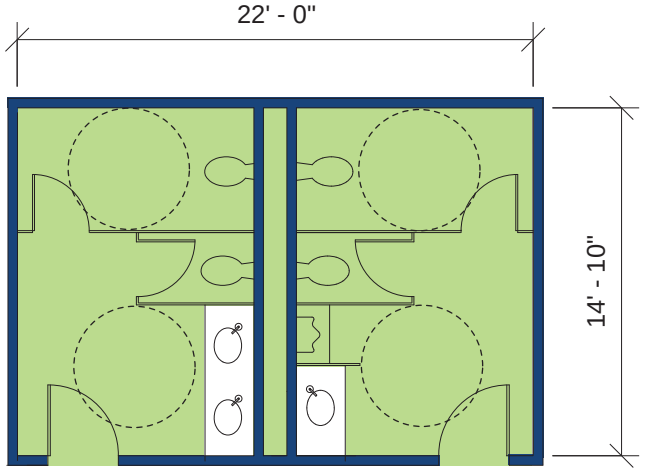
NON ASSIGNED INTERIOR - PRIMARY RESTROOMS

WING 'C' EAST & WING 'D' WEST

GENERAL INFORMATION

Name	**Primary Restrooms**
Function	*Restrooms for A-I students/ staff/visitors*
No. of Occupants	-
Area	325 SF (x2 - 1 Men/1 Women)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Off of main corridor
Additional Notes	Men and Women - one to be located near Emporium, one near meeting rooms, includes HC stall, ADA accessible

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	Moisture resistant GWB
Walls/Base	Low VOC painted GWB/ Ceramic tile wainscot
Windows	Transom fixed alum. frame - dual pane
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust Air
Electrical (Power)	Duplexes on wall per code - GFI
Lighting	30-40 Fc
Plumbing	Auto flush toilets/Urinals/Sinks/ Auto shut-off faucets/Floor drains
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	Provide sound attenuation
Security	Individual stall locks
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Sink/Toilet/Urinal/Counter and Cabinet that is ADA accessible
Fixed	Toilet accessories/Mirror/ Grab bar/Trash
Moveable Equipment/ Furnishings	-
Special Requirements	-

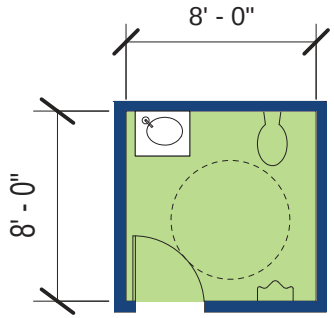
NON ASSIGNED INTERIOR - SINGLE OCCUPANCY RESTROOM

WING B - 'EAST'

GENERAL INFORMATION

Name	**Single Occupancy Restroom**
Function	*ADA Restroom for A-I students/staff/visitors*
No. of Occupants	1
Area	64 SF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Off of main corridor
Additional Notes	Must be ADA accessible

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	Moisture resistant GWB
Walls/Base	Low VOC painted GWB/ Ceramic tile wainscot
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust Fan
Electrical (Power)	Duplexes on wall per code - GFI
Lighting	30-40 Fc
Plumbing	Auto flush toilet/Urinal/Sink/ Auto shut-off faucet/Floor drain
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Privacy Lock
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Sink/Toilet/Urinal/Counter and Cabinet that is ADA accessible
Fixed	Toilet accessories/Mirror/ Grab bar/Trash
Moveable Equipment/ Furnishings	-
Special Requirements	-

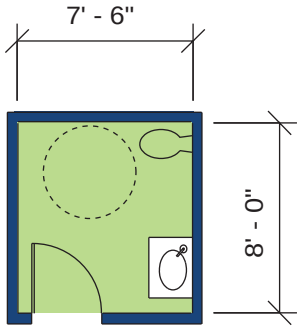
NON ASSIGNED INTERIOR - RSO RESTROOM

WING 'C' EAST

GENERAL INFORMATION

Name	**RSO Restroom**
Function	*Restroom for the staff*
No. of Occupants	-
Area	60 SF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Resident offices
Additional Notes	ADA Accessible

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Ceramic tile
Ceiling	Moisture resistant GWB
Walls/Base	GWB/Ceramic tile wainscot
Windows	N/A
Doors/Frames	Solid core wood door/ Aluminum frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust fan
Electrical (Power)	Duplexes on wall per code - GFI
Lighting	30-40 Fc
Plumbing	Auto flush toilet, Sink, Auto shut-off faucet, Floor drain
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	-
Security	Privacy lock
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Sink/Toilet//Counter and Cabinet that is ADA accessible
Fixed	Toilet accessories/Mirror/ Grab bar/Trash
Moveable Equipment/ Furnishings	-
Special Requirements	-

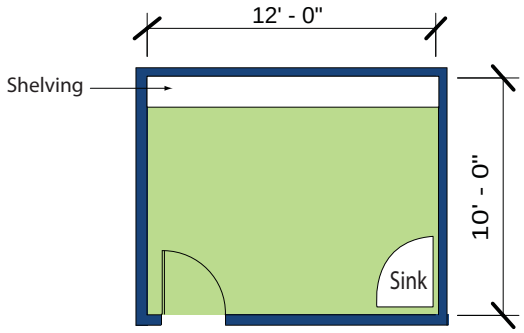
NON ASSIGNED INTERIOR - JANITOR'S CLOSET

WING C - 'EAST'

GENERAL INFORMATION

Name	**Janitor's Closet (i.e. Cleaning Storage)**
Function	*Janitor's closet/Cleaning storage for A-I*
No. of Occupants	-
Area	120 SF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Along spine halfway between wings
Additional Notes	Also a storage area

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Sealed concrete
Ceiling	Low VOC painted GWB
Walls/Base	Low VOC painted GWB
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	Provide W.R. wainscoat at mop sink

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH Exhaust Fan (LEED)
Electrical (Power)	Wall duplexes per code - GFI
Lighting	20-30 Fc
Plumbing	Floor sink/drain
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	Card key access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	Mop sink
Fixed	Poly plastic adjustable shelving, Hook strip, Chemical station and water
Moveable Equipment/ Furnishings	-
Special Requirements	-

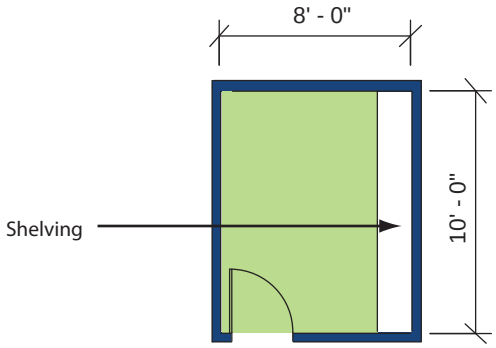
NON ASSIGNED INTERIOR - HOUSEKEEPING CLOSET

WING B - 'EAST'

GENERAL INFORMATION

Name	**Housekeeping Closet**
Function	*Housekeeping room for A-I*
No. of Occupants	-
Area	80 SF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Janitor's Closet
Additional Notes	Storage area for cart/Supplies

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Sealed concrete
Ceiling	Low VOC painted GWB
Walls/Base	Low VOC painted GWB /Resilient
Windows	N/A
Doors/Frames	Solid core wood door/ Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Minimum of 10ACH No humidity control
Electrical (Power)	N/A
Lighting	20-30 Fc
Plumbing	N/A
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	Card key access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	Poly plastic adjustable shelving
Moveable Equipment/ Furnishings	Housekeeping cart
Special Requirements	-

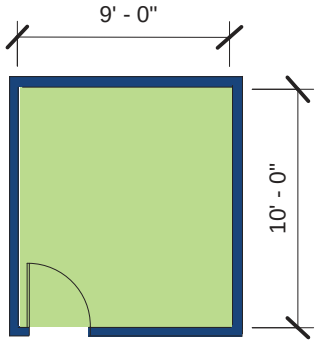
NON ASSIGNED INTERIOR - TELECOM CLOSET

WING 'B' WEST, AND WING 'C' EAST

GENERAL INFORMATION

Name	**Telecom closet**
Function	*Data closet for A-I*
No. of Occupants	-
Area	90 SF (x3)
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Central location to area served
Additional Notes	Provide one closet per wing (3) Locate away from transformers, generators, motors & water piping

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Sealed concrete
Ceiling	Exposed (no ceiling)
Walls/Base	Low VOC painted GWB - 2 coats of fire retardant
Windows	N/A
Doors/Frames	Solid core wood door/Alum. frame
Additional Notes	-

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Humidity control; 24/7 A/C
Electrical (Power)	4 ded 120V AC, 20 amp duplex outlets - connect to bldg's emergency source
Lighting	50 Fc
Plumbing	N/A
Fire Protection	Pre-action sprinklers/Fire alarm/ Smoke Detector
Acoustics	-
Security	Card key access
Telecom/Data	2-3 racks w/ 48 port panels w/ cable mgmt
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	3/4" F.R. plywood backboard
Fixed	Equipment racks
Moveable Equipment/ Furnishings	-
Special Requirements	3' clear in front of wall mounted equip.; 3' clear front & rear rack mounted equip.; Wall backing rack mounted equip.

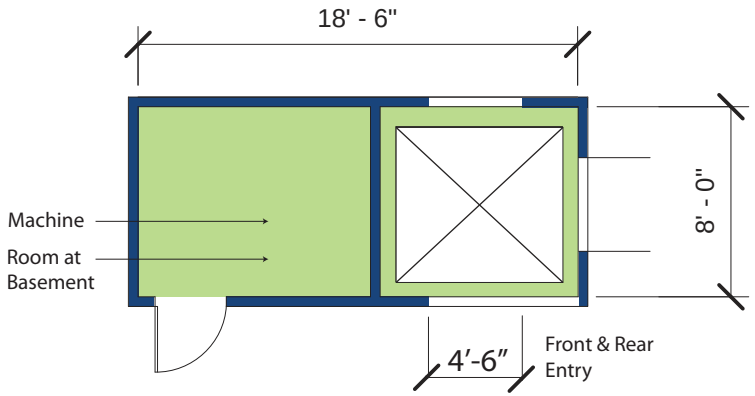
NON ASSIGNED INTERIOR - DINING AND EMPORIUM SERVICE ELEVATOR

WING 'B' & 'D' WEST

GENERAL INFORMATION

Name	**Dining and Emporium Service Elevator**
Function	*Service elevator & machine for Emporium & Residential Dining*
No. of Occupants	-
Area	150 SF
Minimum Ceiling Height	9'-0"
Critical Adjacencies	Emporium back of house & dining
Additional Notes	Service to basement/Clear path of travel for pallet jack

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Sealed concrete machine rm; Steel diamond plate @ cab
Ceiling	Low VOC painted GWB
Walls/Base	Low VOC painted GWB
Windows	N/A
Doors/Frames	Steel door/Metal frame
Additional Notes	P. Lam walls @ cab; 4'-6" door to allow for pallet access

SYSTEMS

Mechanical	68 degrees F to 78 degrees F Exhaust fan
Electrical (Power)	Provide for elevator
Lighting	20-30 Fc
Plumbing	Floor drain
Fire Protection	Sprinklered/Fire alarm/Smoke Detector
Acoustics	High STC walls @ machine
Security	Card key access
Telecom/Data	N/A
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	-
Moveable Equipment/ Furnishings	-
Special Requirements	-

GENERAL INFORMATION

Name	**Bicycle Storage**
Function	*Bicycle storage*
No. of Occupants	150 Bikes
Area	1,540 GSF
Minimum Ceiling Height	8′ - 0″
Critical Adjacencies	None
Additional Notes	Should have visual impact to encourage bike riding

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Concrete
Ceiling	Exposed Underside
Walls/Base	Full height metal mesh
Windows	N/A
Doors/Frames	H.M. exterior or gate H.M. exterior or EQ

SYSTEMS

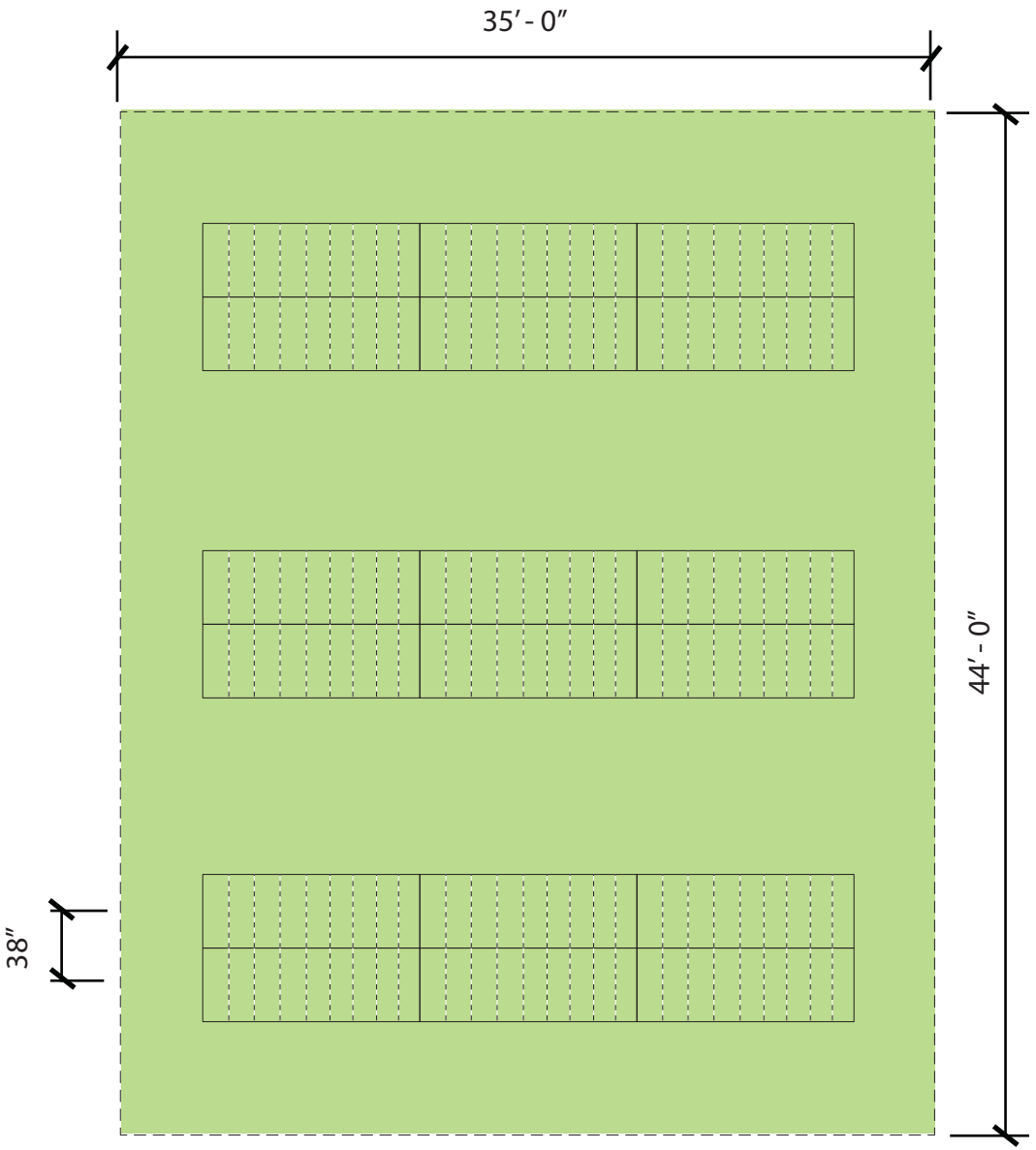
Mechanical	-
Electrical (Power)	2 General duplex receptacles
Lighting	Direct artifical lighting 10-20 Fc
Plumbing	Floor drain, Hose bib
Fire Protection	-
Acoustics	N/A
Security	-
Telecom/Data	-
Audio/Visual	N/A

EQUIPMENT/FURNISHINGS

Built-In Features	None
Fixed	Task lighting & Bicycle storage racks
Moveable Equipment/ Furnishings	For 150 bikes, Square footage assumes 9 Park-a-Bike (Model # 1683) traditional grid style racks 112″ L x 38″ W x 29″ H. Capacity of 18 per rack

EXTERIOR - BICYCLE STORAGE

ROOM DIAGRAM



BASED ON:
PARK A BIKE MODEL # 1683 TRADITIONAL GRID STYLE

112"l X 38"w x 29" h

CAPACITY OF 27 BICYCLES PER RACK
TOTAL CAPACITY = 162

EXTERIOR - DOCK ENCLOSURE

WING 'B' WEST

GENERAL INFORMATION

Name	**Dock Enclosure**
Function	*Loading, Trash, Recycling, Compost*
No. of Occupants	N/A
Area	3,600 ASF
Minimum Ceiling Height	13' - 0"
Critical Adjacencies	Residential Dining Kitchen
Additional Notes	Direct access to service elevator to basement

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Concrete
Ceiling	Insulated Metal Cladding & roof
Doors/Frames	Overhead Coiling door

SYSTEMS

Mechanical	Exhaust fan 6,000 cfm
Electrical (Power)	Power for trucks; Security camera, Trash compactor, Food digester
Lighting	20 - 30 fc
Plumbing	Floor drains and grease trap; Hose bib
Fire Protection	Sprinklered, Smoke detector
Security	Security camera
Audio/Visual	Phone

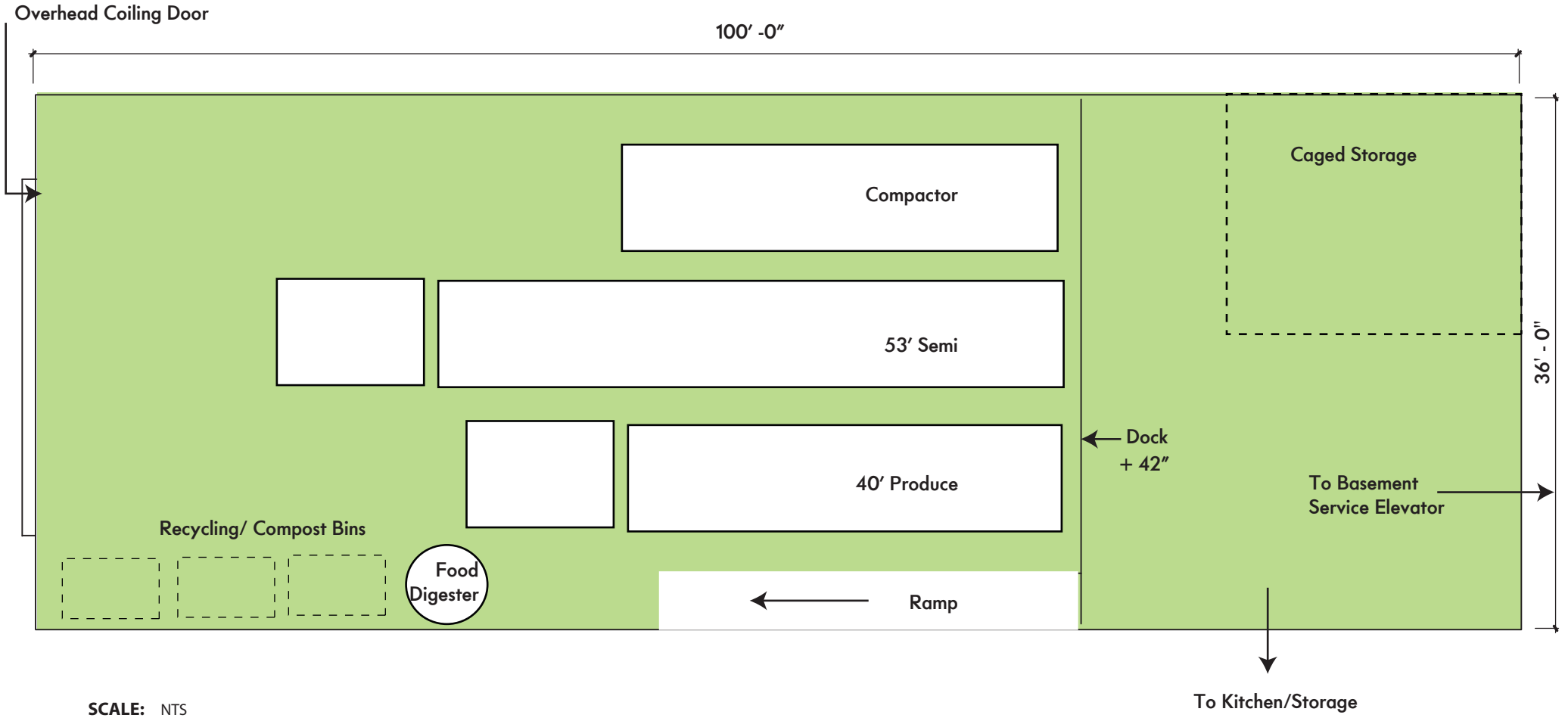
EQUIPMENT/FURNISHINGS

Built-In Features	Caged storage; Dock bumpers and ramp
Fixed	Food Digester/Trash compactor
Moveable Equipment/ Furnishings	Recycling and compost bins

EXTERIOR - DOCK ENCLOSURE

WING 'B' WEST

ROOM DIAGRAM



SCALE: NTS

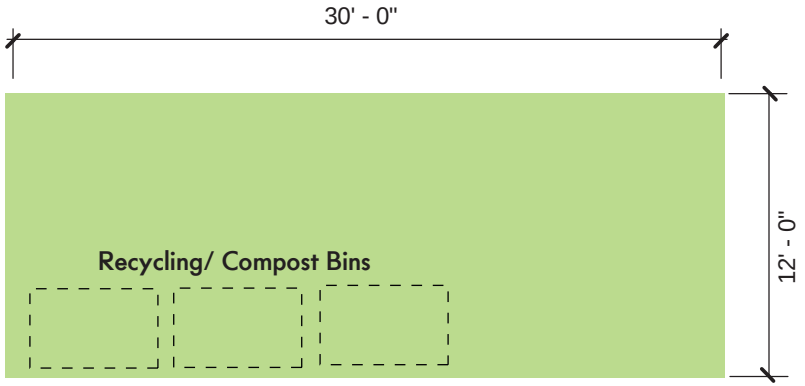
EXTERIOR - EMPORIUM SERVICE YARD

WING 'D' WEST

GENERAL INFORMATION

Name	**Emporium Service Yard**
Function	Trash, Recycling and Compost for Emporium
No. of Occupants	N/A
Area	360 SF
Minimum Ceiling Height	N/A
Critical Adjacencies	Service Elevator
Additional Notes	Option to be located at south loading dock.

ROOM DIAGRAM



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

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Concrete
Ceiling	N/A
Walls/Base	Concrete
Windows	N/A
Doors/Frames	N/A

SYSTEMS

Mechanical	-
Electrical (Power)	
Lighting	20-30 Fc
Plumbing	Floor drains and grease trap; Hose bib
Fire Protection	-
Acoustics	-
Security	
Telecom/Data	-
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	-
Fixed	
Moveable Equipment/ Furnishings	Recycling and compost bins

EXTERIOR - PATIOS

WINGS 'C' EAST & 'C' / 'D' WEST

GENERAL INFORMATION

Name	**Patios**
Function	*Exterior Dining & Meeting*
No. of Occupants	N/A
Area	6,500 SF TOTAL
Minimum Ceiling Height	N/A
Critical Adjacencies	None
Additional Notes	Split into several locations

ROOM DIAGRAM

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Concrete or pavers
Ceiling	-
Walls/Base	-
Windows	-
Doors/Frames	-

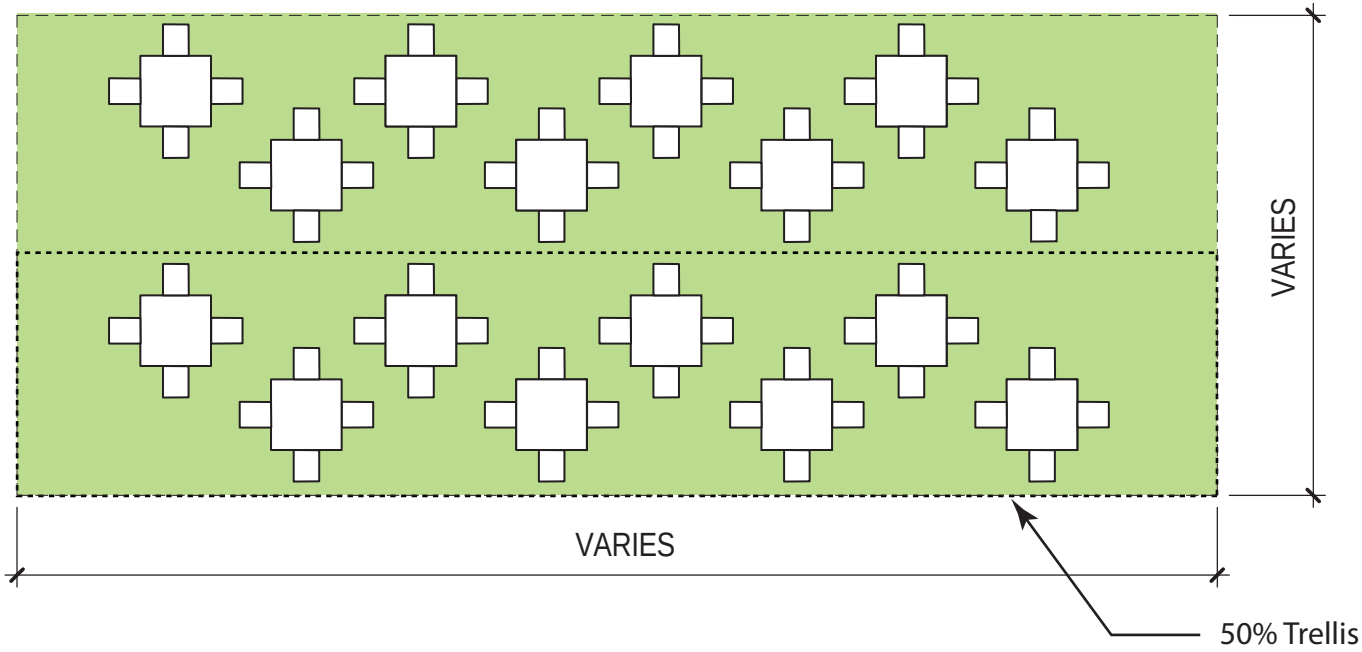
SYSTEMS

Mechanical	-
Electrical (Power)	Duplex receptacles, Built-in Fans
Lighting	Overhead throughout
Plumbing	Hose bib
Fire Protection	-
Acoustics	-
Security	-
Telecom/Data	-
Audio/Visual	-

EQUIPMENT/FURNISHINGS

Built-In Features	Trellis with Built-in Fans and Gas heaters
Fixed	
Moveable Equipment/ Furnishings	Tables and chairs

WINGS 'C' EAST & 'C' / 'D' WEST



EXTERIOR - CENTRAL PLANT

GENERAL INFORMATION

Name	**Central Plant**
Function	*Enclosure for Mechanical & Electrical Equipment*
No. of Occupants	Not normally occupied
Area	2,100 GSF (plus2,100 sf on upper level)
Minimum Ceiling Height	14'-0" Clear of structure
Critical Adjacencies	None
Additional Notes	Provide interior space for chillers and pumps. Provide exterior space for cooling towers and generator. Boilers and pumps to be located in Wing 'C' basement

ARCHITECTURAL MATERIALS/FINISHES

Flooring	Sealed Concrete
Ceiling	N/A
Walls/Base	Concrete Masonry
Windows	N/A
Doors/Frames	H.M. steel Louvers & access panels see plans

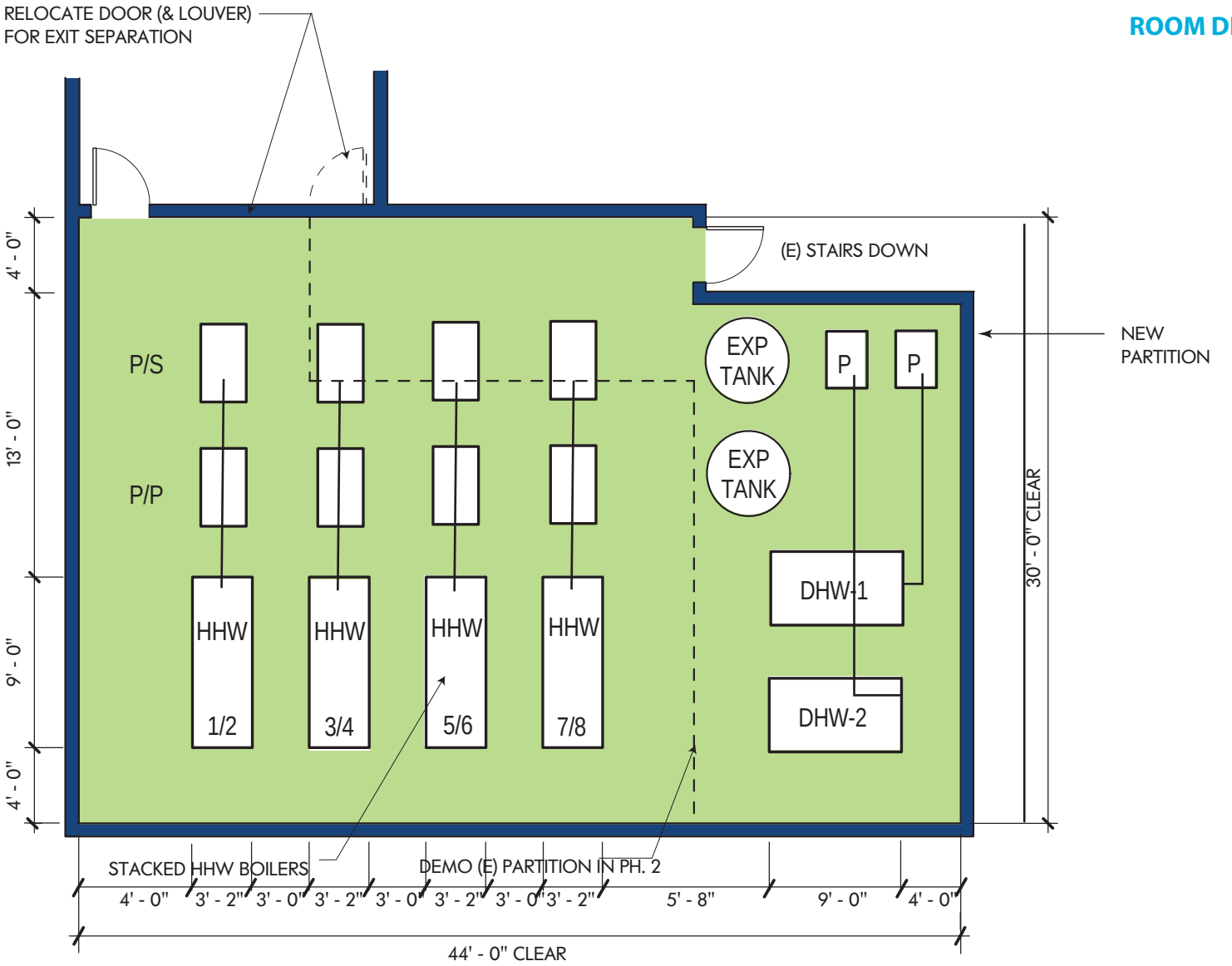
SYSTEMS

Mechanical	85 degrees F Max. Provide exhaust; Ventilation in chiller room
Electrical (Power)	Provide power to all mechanical equip; Provide 4 duplex outlets (W.R.) on each wall - evenly spaced.
Lighting	30-40 Fc
Plumbing	Provide floor sinks at each set of major equipment; Provide make-up water hose bib
Fire Protection	Sprinklered/Fire alarm/Smoke detector
Acoustics	N/A
Security	Card key Access
Telecom/Data	1 phone/data for connection to controls
Audio/Visual	N/A

EXTERIOR - CENTRAL PLANT (IN BASEMENT)

BOILERS & PUMPS

ROOM DIAGRAM

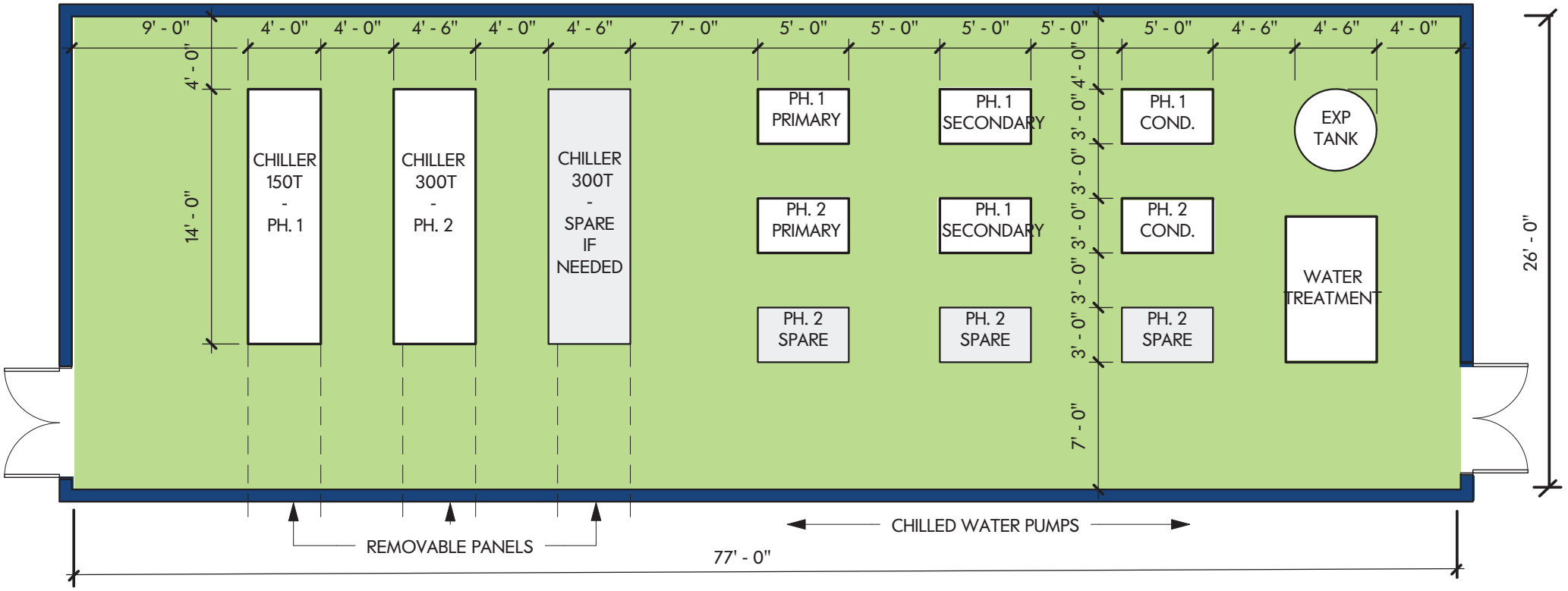


SCALE: 1/8" = 1'-0"

EXTERIOR - CENTRAL PLANT

CHILLERS + PUMPS

ROOM DIAGRAM

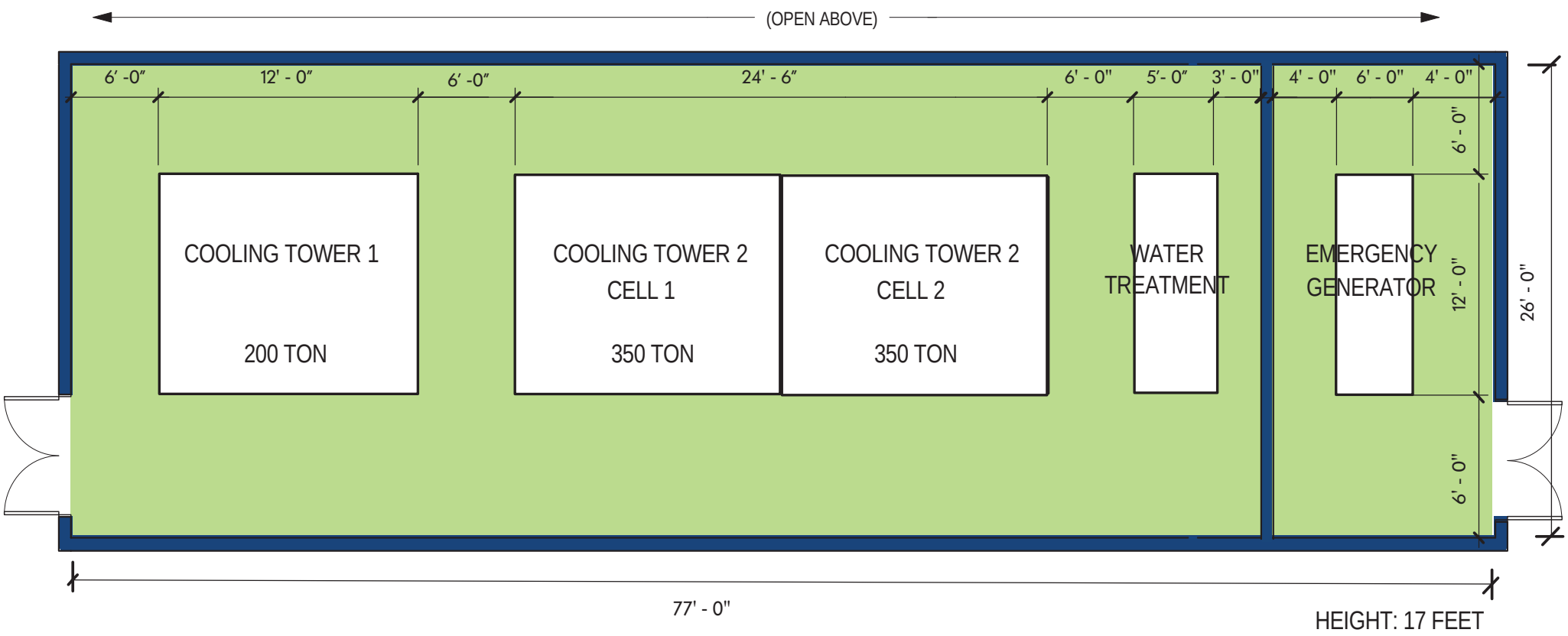


SCALE: 1/8" = 1'-0"

EXTERIOR - CENTRAL PLANT

COOLING TOWERS AND EMERGENCY GENERATOR

ROOM DIAGRAM



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

4.1

SYSTEMS NARRATIVES

The following section contains engineering recommendations for:

- **Seismic analysis** of the five A-I wings, including remediation required to achieve "Good" rating
- **Structural Recommendations** for Program areas requiring extensions beyond the A-I building shell or new freestanding components (Staff Residential / Wing C West)
- **Mechanical, Electrical and Plumbing** systems serving the new and renovated Program areas, including a proposed new freestanding central plant; a phasing scenario is provided to assist in prioritizing upgrades, including future infrastructure improvements for the residential floors
- **Roofing** Replacement Recommendations

See Appendix 6.3 for engineering Infrastructure Evaluations of the existing A-I MEP systems, building Structure and Roofing

SEISMIC ANALYSIS

Preliminary UC Seismic ratings of the A-I building wings, based entirely on review of the original structural drawings, are as follows:

- Wing C East (within DPP scope - one story) is "Fair", because the concrete walkway canopies along the north and south walls create out of plane seismic loads.

- Wings B & D (within DPP scope – 3 story) are "Fair", due to noncontinuous shear walls: concrete walls on ground level with concrete girder on top and masonry walls on upper two levels.

- Wings A & E (not within DPP scope – 2 story) are "Fair", due to rebar lap lengths at foundation and between levels that cannot be entirely confirmed from the original drawings. These wings have a "better" level of "Fair" than B & D.

Seismic review of drawings only usually results in a more a conservative classification. An in-depth analysis of the "Fair" ratings can be provided by computer modeling, and it is possible that some of these wings may elevate to "Good" based on computer modeling. For any wings that remain "Fair" after computer modeling, this analysis may provide less conservative remedial upgrades.

Basic computer models of the A-I Residence Hall Wings A, B, C East, D, and E were created and analyzed. The purpose of the analysis was to determine if the wings which were previously categorized as "Fair" can be classified as "Good" per the UC Seismic Rating System. A summary of the results is below:

Wing A East:	Good
Wing A West:	Good
Wing B East:	Good
Wing B West:	Fair

Wing C East:	Fair
Wing C West:	Good
Wing D East:	Good
Wing D West:	Fair
Wing E East:	Good
Wing E West:	Good

Where a "Good" rating cannot be justified, retrofit option sketches describing structural modifications required to improve the UC Seismic Rating from "Fair" to "Good" are provided. Proposed retrofits are conceptual in nature for preliminary pricing only. The retrofit magnitude needs to be engineered, detailed, and confirmed in subsequent phases with more extensive analysis. Alternative retrofit methods are feasible subject to architectural and program requirements.

The building structural drawings by Ropp and Ropp Structural Engineers dated December 7, 1959 were used in our analyses. The ratings below apply to the wings' structure as shown in the drawings. Existing and future wall openings, wall reductions, or other structural changes not noted in the structural drawings may change the ratings noted below.

Wing A

Computer analysis justifies a UC Seismic Rating of "Good" for Wing A.

Wing B

Computer analysis justifies a UC Seismic Rating of "Good" for Wing B East.

Our analysis confirms a UC Seismic Rating of "Fair" for Wing B West due to existing structural irregularities. See sketches at the end of this section for a possible structural retrofit option to achieve a "Good" rating. The proposed retrofit option

to raise the Rating from "Fair" to "Good" requires the addition of a 12 inch concrete wall below the second floor on Lines A and E. These walls will rest on grade beams connecting existing footings at the ends of the walls. Above the added concrete walls on Line A and E, openings between brick walls will be in-filled with concrete from the second floor to the roof. Additional drag reinforcing on these lines at the second, third, and roof level may include fiberwrap or steel plates on top of the existing concrete slab. Along Line 9, the existing concrete wall will be strengthened by the addition of 12 inch concrete walls below the second floor to the existing foundation. Columns supporting existing concrete walls may require fiberwrapping or an alternate method of strengthening as noted in the attached sketches.

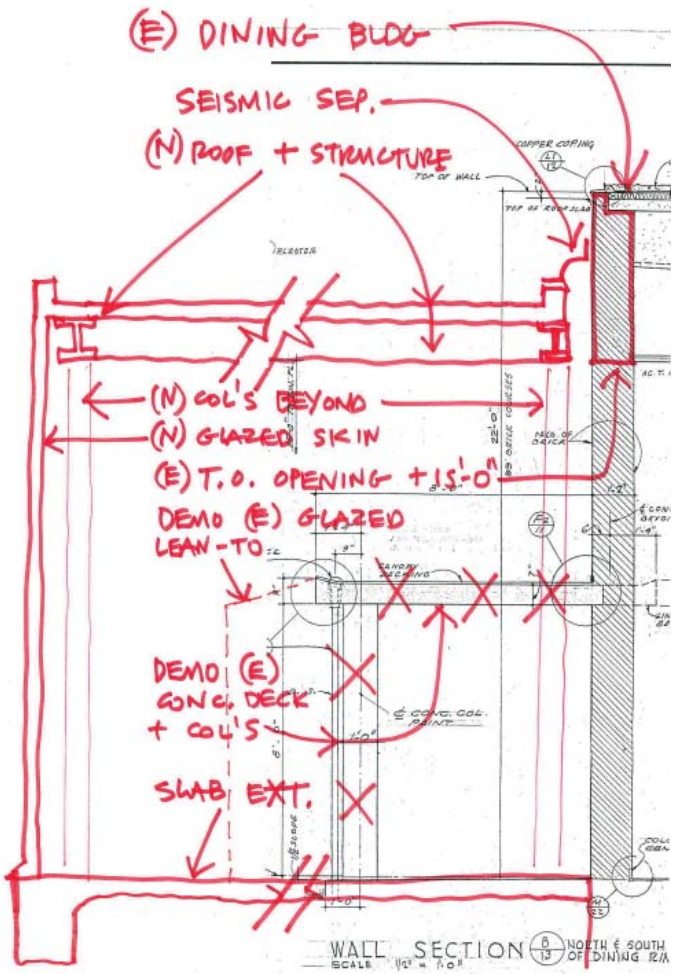
Wing C East

Our analysis confirms a UC Seismic Rating of "Fair" for Wing C East in its current configuration. If the existing covered walkways are removed, Wing C East can be rated "Good".

Wing D

Computer analysis justifies a UC Seismic Rating of "Good" for Wing D East.

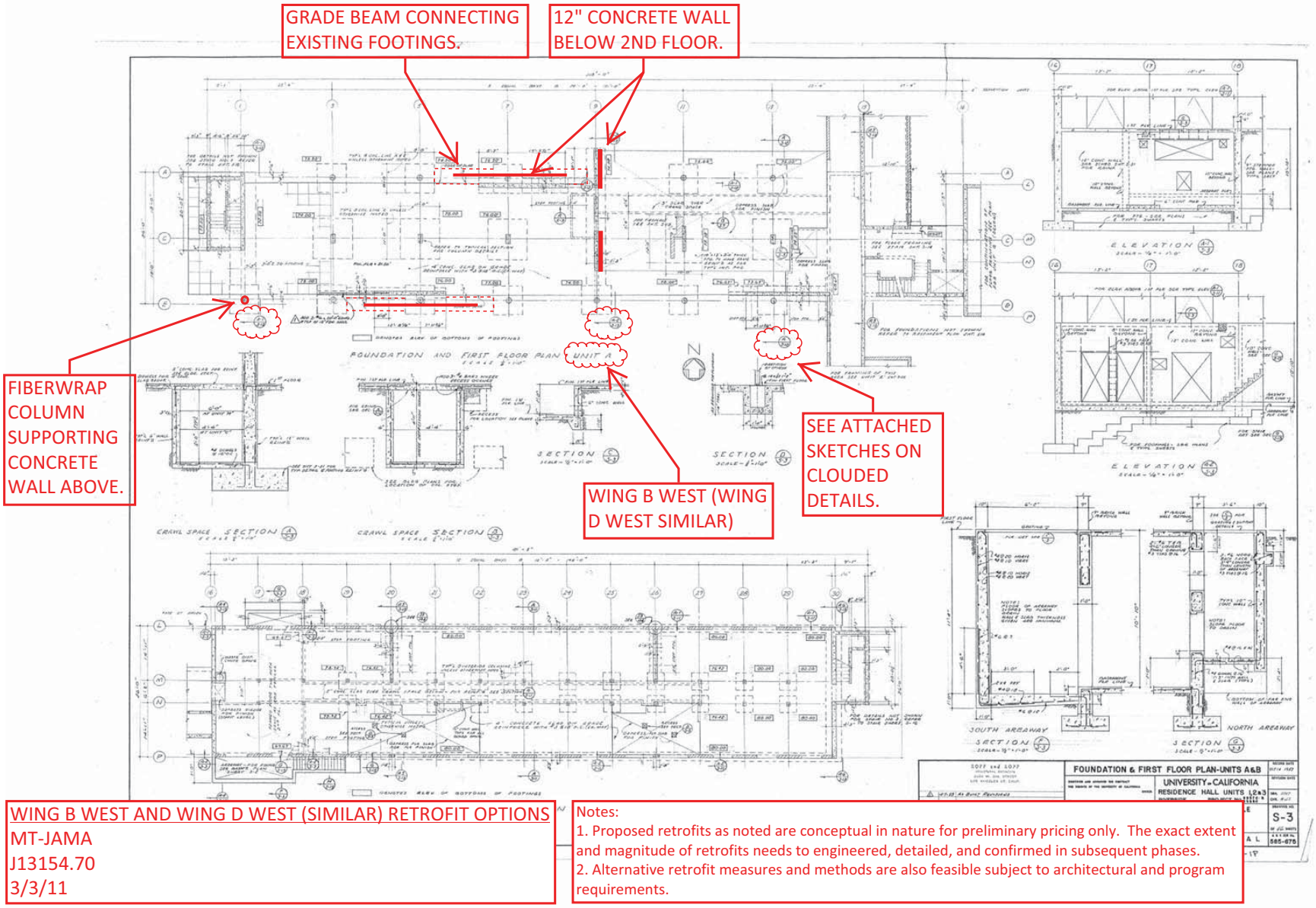
Our analysis confirms a UC Seismic Rating of "Fair" for Wing D West due to existing structural irregularities. See sketches at the end of this section for a possible structural retrofit option to achieve a "Good" rating. The proposed retrofit option to raise the Rating from "Fair" to "Good" requires the addition of a 12 inch concrete wall below the second floor on Lines F and K. These walls will rest on grade beams connecting existing footings at the ends of the walls. Above the added concrete walls on Line F and K, openings between brick walls will be in-filled with concrete from the second floor to the roof. Additional drag reinforcing on these lines at the second, third, and roof level may include fiberwrap or steel plates on top of the existing concrete slab. Along Line 9, the existing concrete wall will be strengthened by the addition of 12 inch concrete walls below the second floor to the existing foundation. Columns supporting existing concrete walls may require fiberwrapping or an alternate method of strengthening as noted in the attached sketches.



(A) SECTION @ DINING ADDITION WING 'C' - EAST

Wing E

Computer analysis justifies a UC Seismic Rating of "Good" for Wing E.



WING B WEST AND WING D WEST (SIMILAR) RETROFIT OPTIONS
MT-JAMA
J13154.70
3/3/11

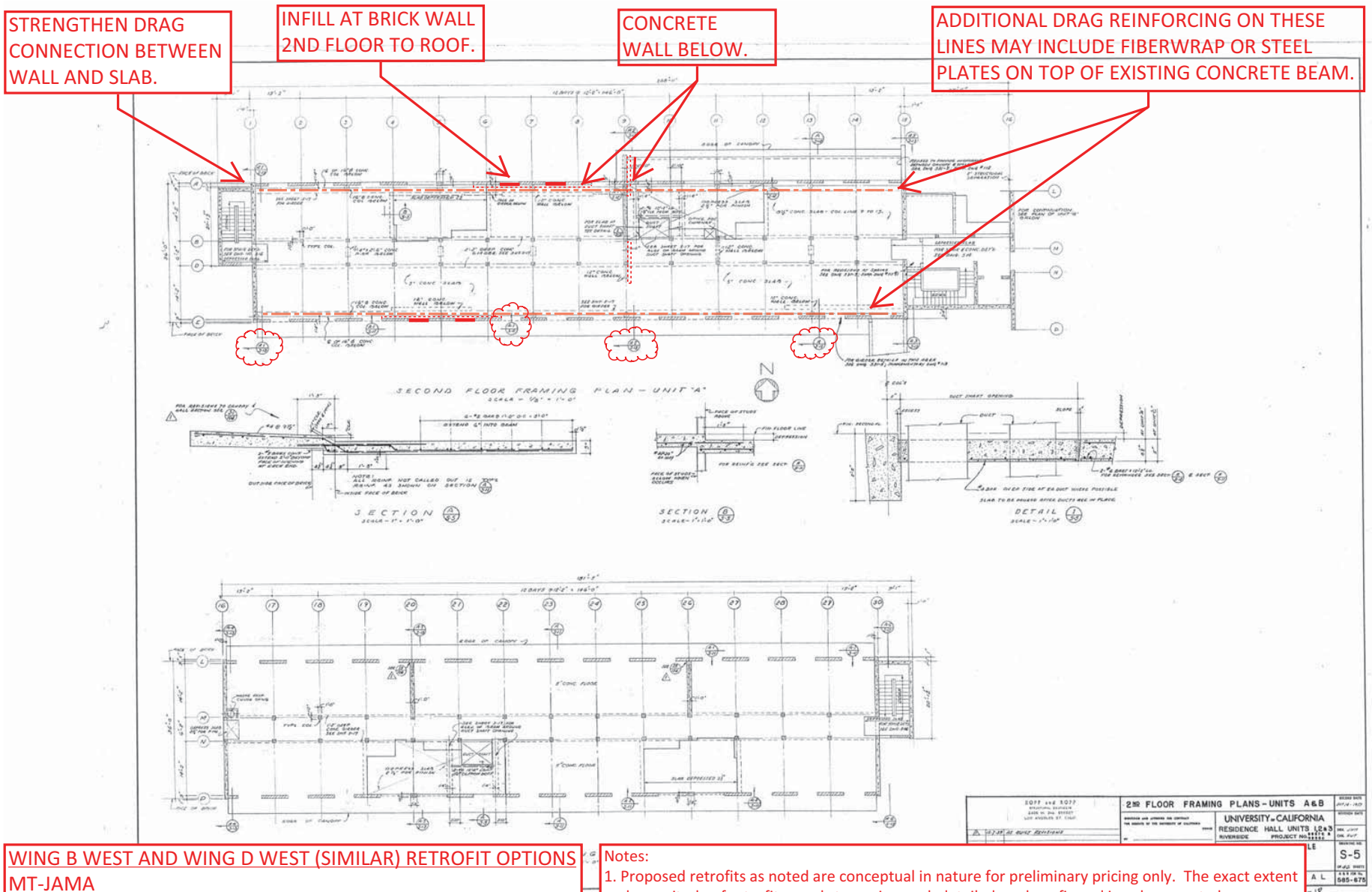
Notes:
1. Proposed retrofits as noted are conceptual in nature for preliminary pricing only. The exact extent and magnitude of retrofits needs to engineered, detailed, and confirmed in subsequent phases.
2. Alternative retrofit measures and methods are also feasible subject to architectural and program requirements.

STRENGTHEN DRAG CONNECTION BETWEEN WALL AND SLAB.

INFILL AT BRICK WALL 2ND FLOOR TO ROOF.

CONCRETE WALL BELOW.

ADDITIONAL DRAG REINFORCING ON THESE LINES MAY INCLUDE FIBERWRAP OR STEEL PLATES ON TOP OF EXISTING CONCRETE BEAM.



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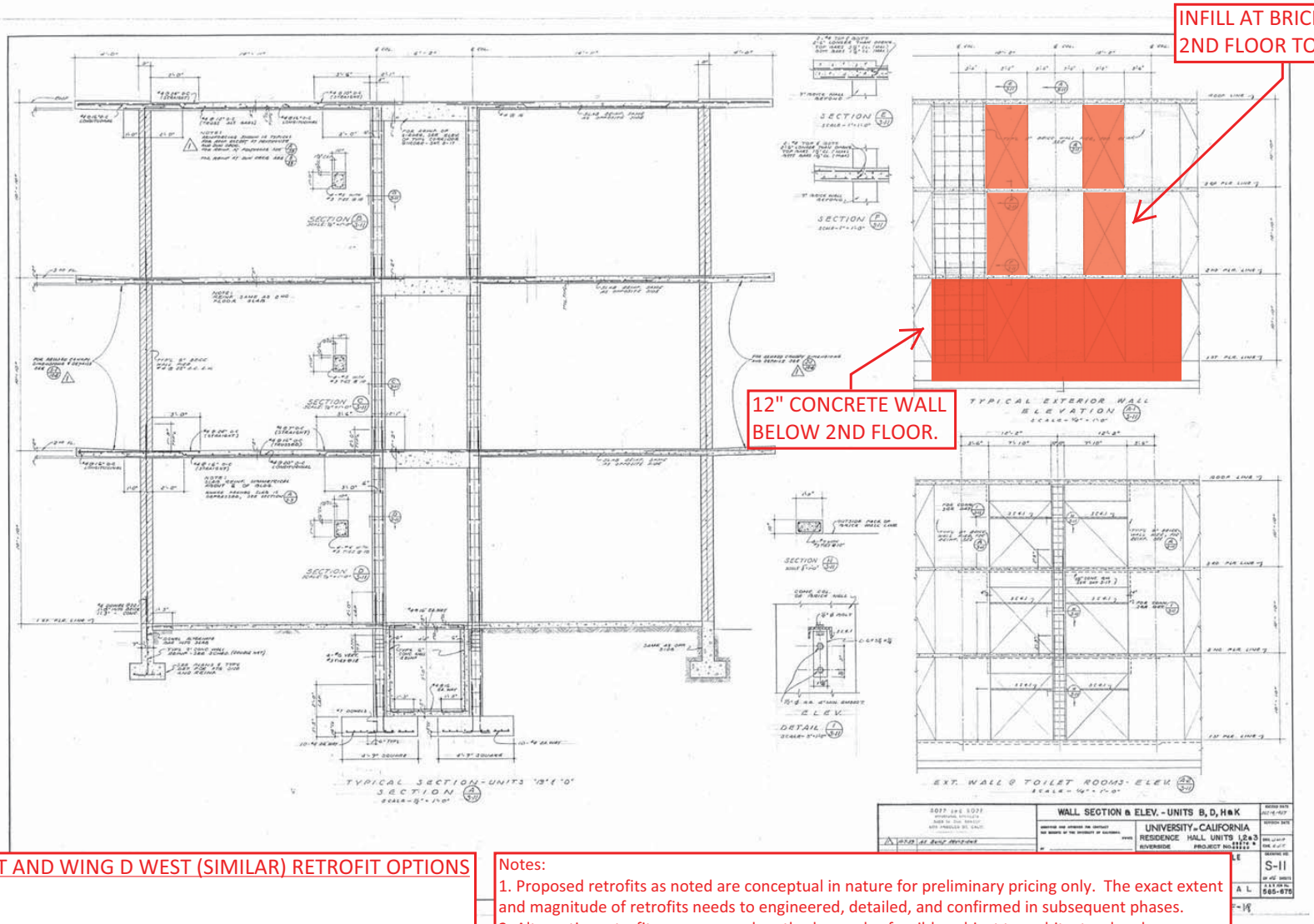

WING B WEST AND WING D WEST (SIMILAR) RETROFIT OPTIONS
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J13154.70
3/3/11

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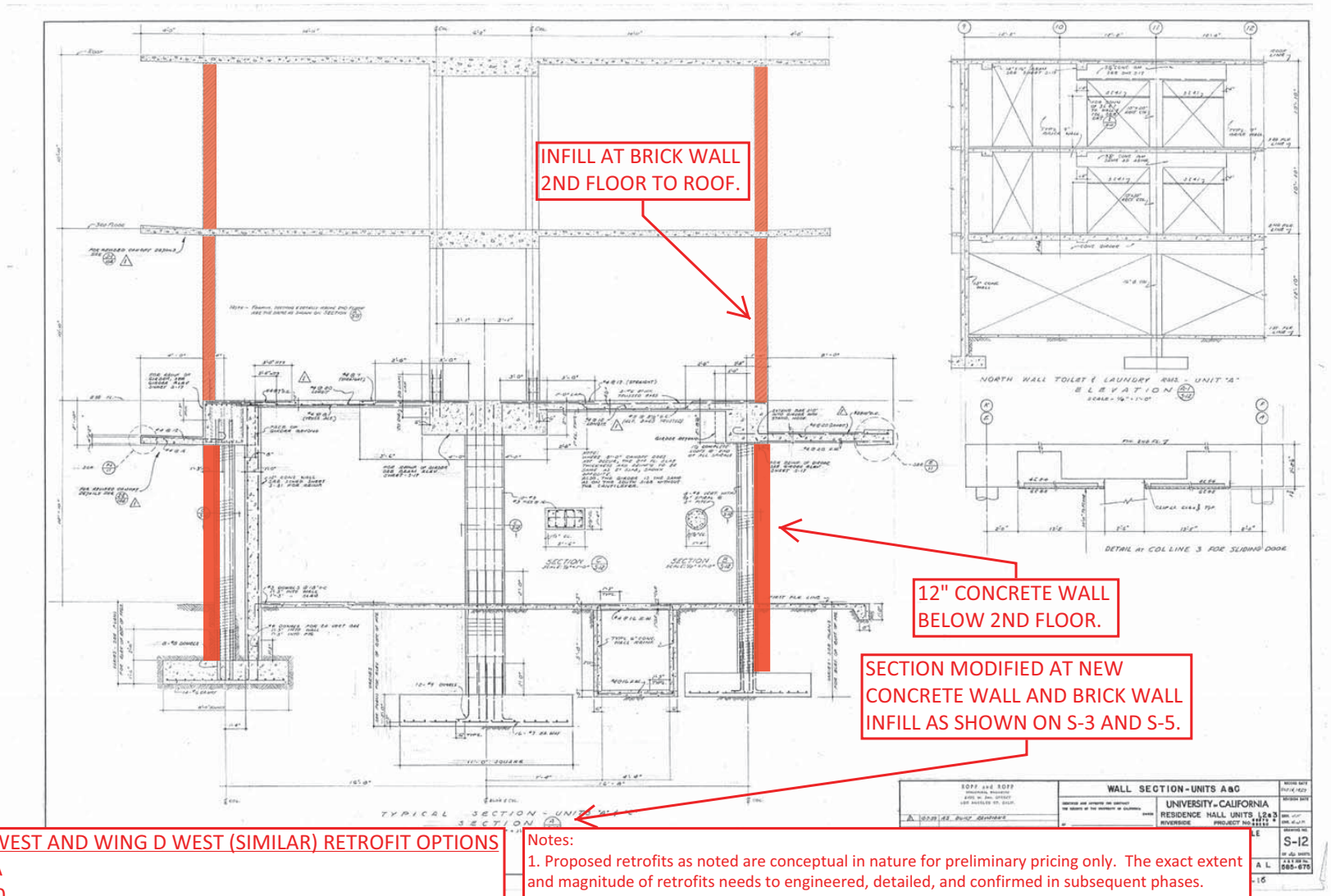

WING B WEST AND WING D WEST (SIMILAR) RETROFIT OPTIONS
MT-JAMA
J13154.70
3/3/11

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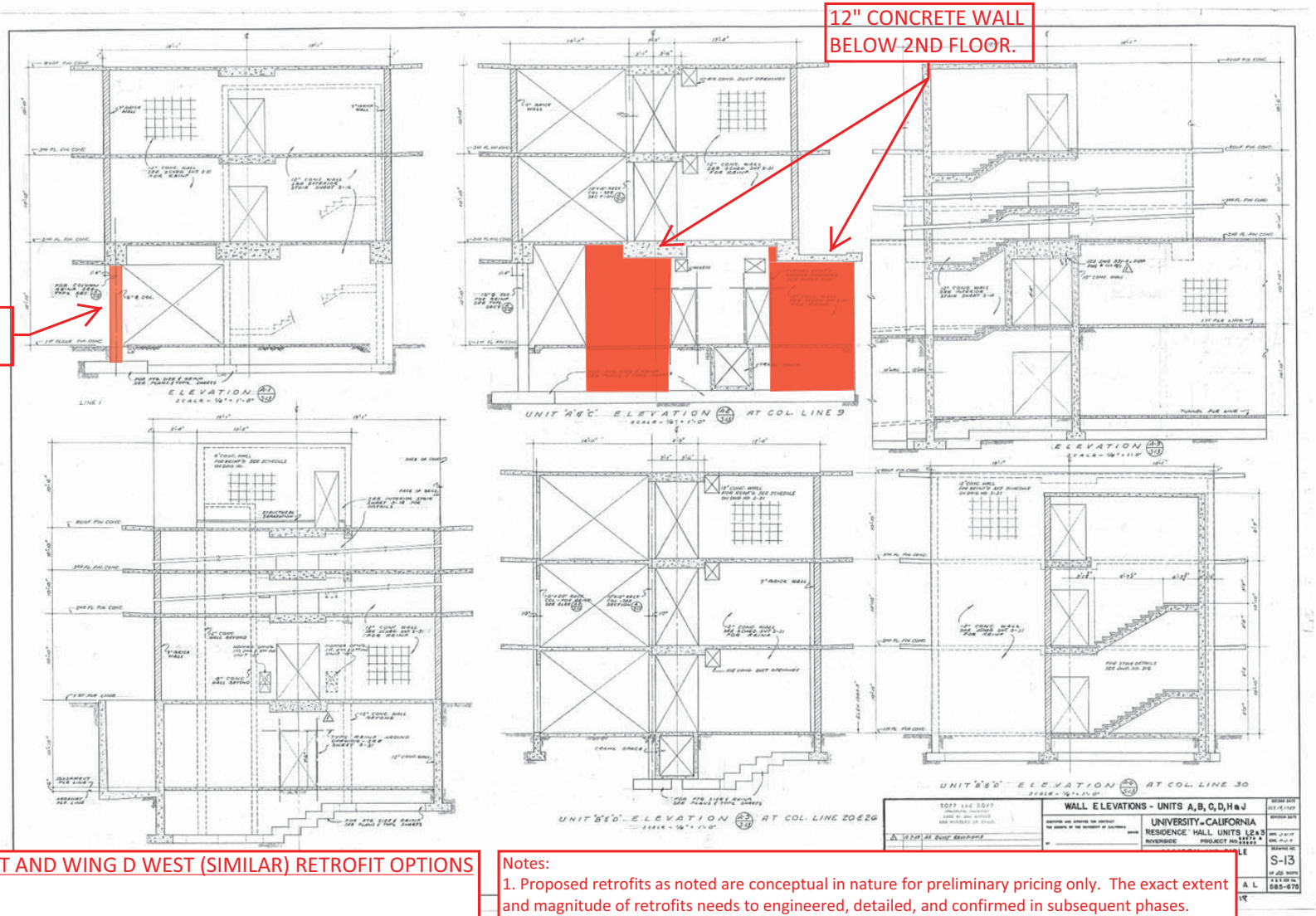


WING B WEST AND WING D WEST (SIMILAR) RETROFIT OPTIONS
MT-JAMA
J13154.70
3/3/11

Notes:
1. Proposed retrofits as noted are conceptual in nature for preliminary pricing only. The exact extent and magnitude of retrofits needs to engineered, detailed, and confirmed in subsequent phases.
2. Alternative retrofit measures and methods are also feasible subject to architectural and program requirements.

General

The structural design for the UC Riverside Aberdeen-Inverness Residence Hall common area improvement will provide structural systems integrated with the program requirements for space layout as well as the architectural and building service needs. User needs in terms of possible future adaptability of the spaces and current flexibility of use have been considered, and the level of user comfort, as determined by the acoustic and vibration sensitivity of the structure, have been addressed.

The Aberdeen-Inverness Residence Hall is a 1959 building comprised of eight wings or halls connected to a common circulation spine. A large dining hall is located in the middle of the building. Reconfiguration of existing common spaces is being proposed to provide common areas and amenities that support residents and residence life programs.

The common area improvement of the residence hall will include the addition of multiple buildings. Staff Residence buildings will be added separate from the residence hall at the south end of the site. Additional one-story buildings will be added adjacent to existing wings of the residence hall and will house dining and kitchen areas, a kitchen service enclosure, student lounges, and bike storage.

The structural design for the new structures will be in accordance with the California Building Code 2010 Edition for resisting vertical, seismic, and wind loading. The 2010 CBC is based on the International Building Code 2009 Edition, which is subsequently based on the ASCE 7-05 reference standard. The minimum design live loads for roofs shall be a minimum of 20 psf except in areas where mechanical equipment occurs, which shall be designed accordingly. The minimum design floor load for Staff Residence buildings will be 40 psf.

Since the buildings are located in a medium to high seismic region, earthquake resistance will be an important objective of the structural design. The new buildings will be designed with a lateral force resisting system that provides ductility for dissipation of energy generated during an earthquake. Structural systems will be detailed to limit the effects of earthquake damage to both structural and nonstructural components of the building.

Alterations

The building code requires the structure to be seismically upgraded when reducing the seismic capacity of a seismic force resisting element by more than 10%. New added openings in existing walls or shortening of existing walls should not reduce the capacity of the walls by more than 10%. A full building seismic upgrade possibly can be avoided by strengthening the remaining portions of the walls receiving new openings such that the strengthened wall is at least the same capacity as the wall before the addition of openings. Shortening existing walls will require structural strengthening of the remaining wall or the addition of new wall along the same line of the modified wall. However, the decision on whether this is possible will require detailed analysis and review by the plan checker or peer reviewer. A detailed analysis will be required and can be performed when information concerning added wall openings is provided.

Structural Framing and Foundation

Staff Residences - Wood Buildings

Wood framing was chosen as the primary structural system for the new Staff Residence buildings for economy. The structural framing will relate to the architectural layout of the space. The buildings will be framed with wood beams supported by wood columns and walls. Wood floor joists will be nominally 12″ deep at 16″ on center and span +/- 20′. Wood roof joists will be nominally 10″ deep at 16″ on center and span +/- 20′.

Plywood shearwalls will be the lateral force resisting system of the Staff Residence buildings. Wood walls will be framed with 6″ studs at 16″ on center and sheathed with ½″ plywood. Hold down anchors will be used to attach the boundaries of shearwalls to the concrete foundation.

The foundations of the Staff Residence buildings will consist of reinforced concrete spread and continuous footings. The at-grade occupied level will consist of a 5″ thick concrete slab on grade reinforced with #4 reinforcing bars at 18″.

Building Additions - One-Story Steel Buildings

New multiple single-story buildings will be added adjacent to existing wings of the residence hall. These additions will be structurally separate from the existing residence hall wings and will require a seismic joint between new and existing construction.

The selection of structural steel as the primary structural system was based on the desire to maintain flexibility in order to be able to incorporate new technologies throughout the life of the building and to accommodate the floor-to-floor height requirements, the mechanical requirements for ductwork and plenums, the acoustic and vibration requirements, program flexibility, and the architectural aesthetics for the building.

The lateral force resisting system will balance the need for maximizing seismic safety, layout functionality, architectural considerations, and economy. The lateral force resisting system may include special concentric braced frames, ordinary concentric braced frames, special steel moment resisting frames, ordinary steel moment resisting frames, or a combination of systems. Both special concentrically braced frames (SCBF) and special steel moment resisting space frames (SMRF) provide excellent performance in the post-elastic range and have been proven effective for adequately resisting imposed earthquake forces. Ordinary braced frames (OCBF) and ordinary steel moment frames (OMRF) are designed to perform elastically during a seismic event, which results in higher design lateral forces. Although OCBFs and OMRFs are designed for higher forces, the degree of detailing is reduced for both systems and may result in cost savings for one-story buildings.

In general, braced frames are more economical when compared to moment frame systems, especially for floor heights greater than fourteen feet. However, the desire to have braces in specific bays throughout the building limits the flexibility of space planning. SCBFs, OCBFs, SMRFs, and OMRFs will be considered as potential lateral load resisting elements as the plan and building layout develop. SMRFs will utilize Reduced Beam Sections (RBS) in compliance with AISC 341 Provisions.

Elevated roofs of the structural steel systems will consist of structural steel beams, girders, and columns. The floors will utilize a 1 ½" deep metal deck without concrete. The depth of wide flange beams will vary from ten inches to sixteen inches depending on span length. The depth of wide flange girders will be fourteen to eighteen inches. Moment Frame beams will vary in depth and will range from W16 to W21 shapes. W10 wide flange structural steel shapes will be utilized at gravity columns. Moment frame columns will consist of W12 or W14 wide flange shapes.

The foundations of the one-story steel buildings will consist of reinforced concrete spread footings. The at-grade occupied level will consist of a 5" thick concrete slab on grade reinforced with #4 reinforcing bars at 18".

Approximate Structural Steel Material Quantities at Steel Buildings

Component	Steel estimate	Area applicable for steel quantity
Steel Floor and Roof Gravity Framing	4.0 psf	Entire area of supported steel structure
Steel Gravity Columns	1.0 psf	Entire area of supported steel structure
Steel Frame Columns	2.5 psf	Entire area of supported steel structure
Steel Frame Beams/Braces	2.5 psf	Entire area of supported steel structure
Miscellaneous	0.5 psf	Entire area of supported steel structure

Notes:
1. Estimate does not include allowances for connections and plates.
2. Estimate may vary once framing plans are confirmed. Maintain an allowance.
3. Estimate is for steel buildings only as described above.

Approximate Structural Concrete Material Quantities

Component	Reinforcing Steel estimate	Area applicable for steel quantity
Foundations	100 lb/cuvd	Volume of Foundations
Slab-on-Grade	1.0 psf	Area of slab-on-grade

Notes:

1. Estimate does not include allowances for splices and support bars.
2. Estimate may vary once framing plans are confirmed. Maintain an allowance.

Design Criteria - Governing Codes and Reference Standards

Governing Codes

a) California Building Code 2010
b) International Building Code 2009
c) Occupancy Category II (CBC 1604.5)
d) Building Wind Speed = 85mph (3 second gust)
e) Wind Exposure Type B
f) Wind Importance Factor Iw = 1.0
g) Wind Directionality Factor Kd = 0.85
h) Seismic Importance factor I = 1.0
i) Special Concentric Braced Frame R = 6
j) Ordinary Concentric Braced Frame R = 3.25
k) Special Steel Moment Frame R = 8
l) Ordinary Steel Moment Frame R = 3.5

Reference Standards

a) American Welding Society - AWS Latest Edition
b) American Society for Testing and Materials (ASTM)
c) American Concrete Institute - ACI 318
d) American Institute of Steel Construction – AISC 360 and AISC 341

Material Standards

Concrete

a) Hardrock Concrete – 4,000 psi
b) Portland Cement – ASTM C150 (Low Alkali)
c) Hardrock Concrete Aggregate – ASTM C33
d) Mixing Operation – ASTM C94
e) Placing Concrete – ACI 304

Concrete Reinforcing

a) Reinforcing – ASTM A615, Grade 60 or ASTM A706, Grade 60
b) Welded Wire Reinforcing – ASTM A185

Structural Steel

a) Structural Steel – ASTM A36 and ASTM A992
b) Pipe Columns – ASTM A53, Grade B
c) Steel Tubes – ASTM A500, Grade B, Fy = 46,000 psi
d) Bolts – ASTM A325 Slip Critical
e) Anchor Studs – ASTM A108, Grades 1015 to 1020
f) Anchor Stud Welding – AWS D1.1
g) Anchor Bolts – ASTM F1554, Grade 36 or 55
h) Welding Electrodes – E70XX

Lumber

a) Beams and Joists – Doug-Fir Larch "No. 1 and Better"
b) Posts and Timbers – Doug-Fir Larch "No. 1"
c) Plywood Sheathing – Structural I Doug-Fir

MECHANICAL, ELECTRICAL, PLUMBING RECOMMENDATION

SCOPE OF WORK – MECHANICAL

General

The following work should be carried out over a series of phases to bring the building mechanical systems into the 21st Century.

- Phase 1 will coincide with proposed improvements of the areas west of the building spine, which includes the new Residential Restaurant, Kitchen, and Emporium. This phase will total approximately 31,000 gross square feet (GSF) with 20,000 GSF being new construction. The standalone Central Plant with underground piping running to the building, and the heating hot water building distribution piping (but not the central heating hot water boilers) will also be built in Phase 1.

- Phase 2 will coincide with the renovation of Wing C East and construction of the freestanding staff residences. The existing chillers located in the basement mechanical room will be removed. Two new chillers will be provided in the new Central Plant building. The new gas fired heating hot water boilers will also be installed within this phase of work.

- Future Phases include replacement of the heating hot water coils at each of the residential wing air handler units, as an interim measure. Once the heating hot water installation is complete and has been commissioned the existing basement steam generators and distribution piping will be removed. Ultimately, the entire air handler and mechanical penthouse on each wing must be replaced. This can either be done as an alternate in lieu of the interim coil replacement, or deferred until adequate funding is in place.

- Existing chilled water distribution piping will be investigated, and if necessary will be replaced as a future phase.

- Other future phase scope includes upgrading the MEP infrastructure within the building's residential wings, which could be carried out as a single or multiple phases depending on funding or operational life of the existing systems.

In the scope of work indicated below, considerable discussion was held regarding the central chiller and boiler plant. The advantages and disadvantages of the following alternatives were discussed between the design team and the University.

- Replace the existing chiller and boiler plant over a summer in its current basement location, prior to Phase 1. This was generally rejected as an alternative due to budget and scheduling issues. It would be extremely difficult to install and commission an entirely new central plant in three months.

- Provide a new chiller and boiler plant in a separate building but sized for the entire A-I building, prior to Phase 1. This was generally rejected as an alternative due to budget issues.

- Provide standalone gas-fired heating hot water boilers located on the roof of each wing adjacent to the mechanical penthouse serving each air handling unit, rather than a centralized boiler system. This was discounted due to maintenance issues and redundancy concerns: the steam boilers will be replaced but it is not likely to happen until after Phase 2.

- Build a new Central Plant building to house the chillers and cooling towers but phasing the installation of the chillers and associated pumps. Thus, under Phase 1, a 150 ton chiller and associated equipment would be installed to serve only Phase 1. The new cooling towers would also be installed under Phase 1 to allow the existing chillers to remain operational. In Phase 2 new chillers would be installed in the new central plant replacing the existing chillers. The steam boilers would be replaced by multiple gas-fired heating hot water boilers (it should be noted that during the Design phase, boiler sizes and number will be considered taking into account space, cost of installation, maintenance and limiting emissions). This solution was selected as the scope of work inside the building could be carried out during the summer months and installing only what was needed for each phase met budget considerations.

Mechanical (HVAC) Phase 1

WEST OF BUILDING SPINE: EMPORIUM - WING D WEST

- Provide new fan coil units for the emporium. Assume 8 fan coil units will be required.
- Provide heating and chilled water piping to each fan coil unit. The chilled water will be provided from the existing chilled water pipes. Heating hot water will be provided from a new boiler mounted on the roof or within the building. Note that this boiler may be shared with the Residential Restaurant facility if piping costs can be minimized.
- Provide 6 exhaust fans and exhaust ducting for the emporium kitchen hoods. The ducting will run to the roof of this wing.
- Provide 2 additional new 1500 cfm fan coil units to serve the new lounge and game room.
- Provide a toilet exhaust system for the new toilets.
- DDC controls. Assume 40 points for the systems described above.

WEST OF BUILDING SPINE: NEW RESIDENTIAL RESTAURANT / KITCHEN BUILDING - WINGS B & C WEST

- Provide new air handling unit (AHU). Assume a total air flow rate of 18,000 cfm. Air handling unit will be Energy lab or equal. AHU will contain the following components: supply fans (minimum 2), return fans (2 off), heating coil, cooling coil, heat recover wheels, economizer, filtration (35% and 85%), VFDs.

- Provide zones for dining perimeter and interiors. Assume 10 zones.

- Provide a 20,000 cfm AHU for the servery areas. This air handling unit will serve the area around the servery stations and the kitchen.

- The AHU's will contain supply fan, heating coil, cooling coil, economizer, filtration, VFDs. Each servery area will be provided with its own terminal control box (minimum of 4 per servery)

- Chilled water will be provided to the AHU's from a new chilled water main located in the building spine basement, which will be served in Phase 1 by a combination of existing basement chillers and the new Central Plant chiller. In Phase 2, the existing basement chillers will be removed and replaced by two new chillers in the Central Plant.

- Heating hot water will be provided to the AHU's by a new boiler mounted on the Wing C roof. This location is temporary and the boiler will be relocated to the basement alongside the other heating hot water boilers once they are installed in Phase 2, to facilitate maintenance.

- Provide 5 exhaust fans for the hoods in the servery areas. The exhaust fan airflow rate will be 1690 cfm, 1565 cfm, 2330 cfm, 1190 cfm and 1070 cfm. All hoods will be provided with a fire suppression system. The provision of the exhaust ducts to the roof will require coordination with the upper floor residential areas.

- Provide a 20,000 CFM Kitchen general exhaust fan with VFD. The provision of the exhaust ducts to the roof will require coordination with the upper floor residential areas.

- DDC controls. Assume 10 points per AHU, 4 points per exhaust fan and 2 points per terminal device)

NEW CENTRAL PLANT

- Provide a new two story standalone central plant enclosure to house the building chillers, cooling towers and associated equipment.
- Provide a new 150 ton chiller, a new 200 ton cooling tower and two new 350 ton cooling towers (two cell). These cooling towers will serve the existing chillers in the basement as well as the new chiller in the new central plant.
- Provide associated pumps with variable speed drives (chilled water and condenser water pumps)
- Provide associated equipment, ventilation air etc.
- Control points. Assume 100 points for the phase 1 installation
- Provide the chilled water and condenser water connections to the existing piping within the building and the two existing chillers. The piping will be sized for the full build out.
- Provide water treatment for the cooling towers and the chilled water system.
- Chiller room ventilation system
- Demolish the existing cooling tower after the new cooling towers are installed and commissioned.

HEATING HOT WATER SYSTEM

- New heating hot water piping distribution for the entire building, including the new Emporium and Residential Restaurant, and existing residential wings, will be installed in this phase. The main distribution will be through the basement service

corridor from the basement mechanical room, with risers located at each wing to transfer the piping up to the rooftop mechanical rooms.

Mechanical (HVAC) Phase 2

EAST OF BUILDING SPINE: RSO & COMMUNITY SPACES - WING C EAST

Replace the existing air handling units (AHUs). Wing C East will convert to meeting rooms, RSO offices and multi-function rooms. Provide AHUs to serve new meeting rooms (10,000 CFM) and AHUs to serve the RSO offices (8,000 CFM). Air handling unit will be Energy Lab or equal. AHU will contain the following components: supply fan(s), return fan(s), heating coil, cooling coil, heat recover wheels, economizer, filtration (35% and 85%) and VFDs.

- Heating hot water in this area will be provided from the new boilers installed in the basement directly below.
- Provide VAV terminal units to serve RSO offices and meeting rooms (15 VAV boxes). Each meeting room will have dedicated terminal units.
- Provide exhaust fan for the new restroom area (2,000 CFM).
- DDC controls. Assume 10 points per AHU, 4 points per exhaust fan and 2 points per terminal device.
- The existing Supply, Return and Exhaust ducting will be replaced.

CENTRAL PLANT

- Provide new chillers in the central plant building constructed in the Phase 1. The following equipment will be provided.

- Two new 300 ton chillers. One of these chillers is a redundant chiller.
- Note that the cooling towers for these chillers were installed in Phase 1.
- New primary chilled water pumps, secondary chilled water pumps with VFD's and condenser water pumps. (2 each)
- DDC controls for the equipment specified for Phase 2. (assume 80 points)
- Electrical connections
- Demolish the existing chillers, piping etc

WING C EAST BASEMENT

After the existing chillers have been removed from the basement, the central heating plant will be installed in the elevated basement level of the existing chiller room (existing partitions to be demolished and rebuilt around perimeter of mezzanine). All new new heating hot water boilers shall comply with SCAQMD emission requirements. The heating hot water system will have the capability to separately heat the Residential Restaurant dining and kitchen areas, the Emporium, the RSO and meeting spaces in Wing C East, and all residential wings.

Note that the heating hot water boiler that was installed in Phase 1 for the new Residential Restaurant and Emporium spaces will be relocated to the basement at the same time as these boilers are installed.

The following equipment will be provided in the basement (existing chiller room mezzanine):

- For reference, assume eight gas-fired heating hot water boilers each at 1750 MBH. Actual count and size shall be determined during Design phase. Smaller boilers (under 2000 MBH) may be installed in a two-high stack to save basement

floor space.

- Primary hot water pump for each boiler.
- Secondary hot water pumps with VFDs.
- Water treatment
- DDC Controls (assume 40 points)

STAFF RESIDENTIAL

- Provide dedicated DX split Heat Pump to each apartment.

Mechanical (HVAC) Future Phase(s)

RESIDENTIAL AHU COIL REPLACEMENT

Replacement of the heating hot water coils at each of the residential wing air handler units is recommended as an interim measure. Once the heating hot water installation is complete and has been commissioned the existing basement steam generators and distribution piping will be removed. Ultimately, the entire air handler and mechanical penthouse on each wing must be replaced. This can either be done as an alternate in lieu of the interim coil replacement, or deferred until adequate funding is in place.

WINGS A, B, D AND E: UPGRADES TO THE RESIDENCES

Each of the eight existing rooftop AHU's shall be replaced in a single phase or multiple sequential phases. The work involved will include the following:

- Replace the AHU on each residential wing to match existing cfm (CFM range from 15,000CFM to 24,000 CFM). The air handling unit will have the following components: supply fans, return fan, heating coil, cooling coil, filters (30% and 65%), economizer, multi-zone dampers.

- Clean interior of existing ducts.

- Replace existing duct insulation in penthouse up to the duct shaft.

- DDC controls. Assume 20 points per air handling unit including multi-zone dampers.

- Mechanical penthouses on the residential wings should be rebuilt at the time that each AHU is replaced. This is also the recommended time to re-roof the entire wing roof.

Remove the existing solar panels and piping on Wing D roof when the penthouses are replaced.

SCOPE OF WORK – ELECTRICAL

Electrical – Phase 1

NEW CENTRAL PLANT

The following electrical work will be included in this phase:

- Install a new 150 KW generator in the new central plant building, complete with flue, diesel piping and fill point, load switch and electrical connections to the existing Automatic Transfer Switches. Fuel tank shall be sized for 24 hours of operation.

- Provide power as required for new Central Plant equipment described on page 4.1.19, from the new unit substation transformer described below.

- Provide panel boards, distribution boards, conduit and wiring, receptacles, lighting fixtures and switches in central plant.

ADJACENT TO NEW CENTRAL PLANT BUILDING

- Install a new 1,000 KVA unit substation on grade complete with primary and secondary switchboard with main and distribution panels. The unit substation is recommended to be positioned adjacent to the new Central Plant building because it will mainly feed the new Phase 1 and 2 mechanical equipment located therein. This proximity would reduce the cost of feeder conduits and wires.

- Electrical and mechanical loads from the new Residential Restaurant and Emporium kitchens will be fed from the existing 750 KVA unit substation in the Wing C East basement. A new 225 KVA step down transformer will be provided for the 120/208V loads in the kitchens. The recommended location is adjacent to the Wing B West dock enclosure, to reduce the cost of feeder conduits and wires.

WEST OF BUILDING SPINE: NEW RESIDENTIAL RESTAURANT, KITCHEN & EMPORIUM

The following electrical work will be included in this phase for the first floors of Wings B West, D West and C West:

- Provide a completely new electrical power and lighting system for the areas renovated and for the new building additions. This will include panel boards, conduit and wiring, receptacles, and lighting fixtures and switches. Include daylight sensors and occupancy sensors.

- Provide new data distribution and outlets

- Modify the fire alarm system as required to accommodate additions and remodeled areas.

Electrical – Phase 2

EAST OF BUILDING SPINE

The following electrical work will be included in this phase:

- Provide a completely new electrical power and lighting system for the areas renovated. This will include panel boards, conduit and wiring, receptacles and lighting fixtures and switches. Include daylight sensors and occupancy sensors.
- Provide new data distribution and outlets. Provide 4 wireless routers
- Modify the fire alarm system as required to accommodate remodeled areas.

NEW CENTRAL PLANT

- Power as required for additional Chiller Plant equipment described on page 4.1.20, provided from the Phase 1 unit substation transformer.

WING C EAST BASEMENT

- Provide power as required for boiler pumps and related equipment described on page 4.1.22

STAFF RESIDENTIAL

- Provide a completely new electrical power and lighting system for the standalone residential units. This includes panel boards, conduit and wiring, receptacles, lighting fixtures and switches.

Electrical – Future Phases

RESIDENTIAL WINGS A, B, D AND E: UPGRADES

When the Residential wings' infrastructure is upgraded, the existing electrical system will be brought up to current code. This will include new panel boards, conduit and wiring. The electrical system will be updated to accommodate the power requirements for the new rooftop AHU's described on pages 4.1.22-23.

SCOPE OF WORK – PLUMBING

Plumbing – Phase 1

WEST OF BUILDING SPINE:

The following plumbing work will be included in this phase:

- Provide new plumbing piping (domestic cold water, domestic hot water and sanitary waste and vent) to new toilets.
- Provide new plumbing piping (domestic cold water, domestic hot water and sanitary waste and vent) to the new Emporium, Residential Restaurant, Servery and Kitchen.
- Note: the addition of approximately 100 fixture units in Phases 1 and 2 can be accommodated by the building's existing 6" water main and 8" sewer main, which currently serve approximately 2,500 fixture units.
- Replace three existing domestic hot water generators in the basement, including expansion tanks, circulating pumps, etc. The new domestic hot water generators will be gas-fired and located in the same general location as existing.

- Provide two-temperature hot water system for the kitchens: 120° F system will be provided from the new gas-fired domestic hot water generators located in the basement; 140° F system will be provided from a new hot water generator located on or adjacent to the roof of Wing C West.

- Roof drainage and overflow piping for the new Residential Restaurant, Kitchen and Emporium additions.

- Provide condensate drainage for air handling units and fan coil units.

- For domestic water, replace all galvanized steel piping with copper.

- Extend fire sprinkler system to new wing, and upgrade as required in existing spaces.

- Provide new grease waste piping system within the two kitchens and service enclosure. This includes extensive site grease waste piping work and new grease traps.

NEW CENTRAL PLANT

The following plumbing work will be included in this phase:

- Provide floor sinks for the new cooling central plant

- Provide industrial water connections to the new cooling equipment

Other plumbing scope in this phase:

- Replace all existing domestic water galvanized steel piping with copper

- Remove the existing solar hot water heating tanks and piping from the well at the south side of Wing C East.

- All of the galvanized plumbing water piping in the basement should be replaced.

Plumbing – Phase 2

EAST OF BUILDING SPINE:

The following plumbing work will be included in this phase:

- Provide new plumbing piping (domestic cold water, domestic hot water and sanitary waste and vent) to new toilets and break rooms in Wing C East.
- Provide condensate drainage for air handling units and fan coil units.
- Remove the existing solar panels and piping on Wing C East roof.
- Replace all existing domestic water galvanized steel piping with copper.
- Upgrade fire sprinkler system as required.

STAFF RESIDENTIAL:

- Provide new plumbing piping (domestic cold water, domestic hot water and sanitary waste and vent) to standalone residential units.
- Provide new roof drainage and overflow piping.
- Provide condensate drainage for heat pumps.

Plumbing – Future Phases

RESIDENTIAL WINGS A, B, D, AND E: UPGRADES

The existing plumbing piping appears to be in reasonable condition and is not in urgent need of replacement. However, as the residential wings' mechanical and electrical infrastructure is renovated in the future phases, it is recommended that the plumbing piping undergo destructive testing and be replaced if required.

ROOFING REPLACEMENT

Recommendations

Without performing destructive probing of the roof membrane we cannot provide more definitive input regarding the roof membrane remaining serviceability. However, due to the advanced age of the roof membrane, UC-Riverside should plan to replace the roofing systems at the A-I Residence Hall in the next two to five years.

If it is not included in the near future, we recommend that the roofing system be replaced when the design team plans to remove the solar panels. The solar panels penetrate the roofing system in many locations. Reroofing over all of these penetrations could cause potential water leakage problems in the future.

We recommend that the existing built-up roofing system be replaced with a more energy efficient roofing system (i.e., PVC roofing over DensDeck over continuous insulation). Despite the fact that the code does not require the provision of insulation when the roof is replaced, we recommend the installation of continuous insulation below the roofing membrane to improve the overall energy efficiency of the building. We recommend a more thorough review of the energy code at the time of installation to provide the most efficient system. The installed roofing system should also meet the minimum energy code requirements for solar reflectance and thermal emmitance or SRI.

4.2

CODE ANALYSIS

The assigned construction types and fire-rated elements presented in the following Code Analysis have been captured in the Concept Design Cost Estimate. Further research and analysis will be necessary during the Design Phase to completely validate the assumptions and code interpretations. Additionally, follow up meetings with the UC Riverside Fire Marshal and other campus review agencies will be necessary.

APPLICABLE STATE CODES:

2010 California Building Code
California Code of Regulations
Title 24, Part 2

Existing A-I Building Type & Occupancy:

A-I Residence Hall is comprised of three-, two- and one-story wings interconnected by a one-story circulation spine. Each multi-level wing has an elevator and three egress stairs leading directly to the exterior, all in protected vertical enclosures*. The building gross area is OGSF 50 - 195,185 square feet. The maximum building roof height (not counting mechanical penthouses) is 35' above the first floor, and there is a basement level under portions of the building.

There is no known record of the existing building Construction Type. According to current codes (CBC Table 601) the **existing building is defined as Type I-B Construction** based on the following criteria:

• All suspended **floors and roof slabs** are minimum 5" thick concrete	**2 hour** rating per Table 721.2.2.
• All concrete **bearing walls** and columns are minimum 5" thick	**2 hour** rating per Table 721.2.1.
• All solid brick **bearing walls** are minimum 3.8" thick	**2 hour** rating per Table 721.4.1(1)
• Dining **roof steel beams** have one-hour fire protection	**1 hour** rating allowed per Table 601
• **Nonbearing Interior Walls** are non-rated	**0 hour** rating allowed per Table 601

All **new structural elements** shall conform to the following fire-resistance ratings (CBC Table 601):

• Structural frame (excluding bracing)	2 hours
• Structural frame supporting a roof only (footnote b)	1 hour (may utilize sprinklers for one hour substitution - Table 601, footnote d)
• Roof construction	1 hour

Type I-B allows Unlimited Area and maximum 11 Stories (Occ. A-2, R-2. B)

CBC Section 503

Occupancy Classifications (existing and new) shall be as follows:

• Student Residential Floors	R-2 (CBC Section 310.1)
• Residential Restaurant / Emporium Dining	A-2 (CBC Section 303.1)
• Meeting Rooms, Lounge, Game Room, Fitness Center	A-3 (CBC Section 310.1)
• Resident Service Offices, Computer Lab	B (CBC Section 304.1)
• Central Plant, Low Hazard Storage, Maintenance Shop	S-2 (CBC Section 311.3)

Nonseparated Occupancies: CBC Section 508.3.2 allows no fire separation between multiple occupancies within the same building provided the allowable area and height of the building or portion thereof is based on the most restrictive allowances for the occupancies under consideration for the type of construction of the building. As Type I-B Construction, all occupancies allow Unlimited Area and 11 Stories height, so no occupancy separations are required.

An exception in CBC Section 508.3.3 requires R occupancies to maintain a one-hour fire separation from all other occupancies. Since all R occupancies in the A-I building are on distinct floors and separated from the circulation spine by a single self-closing fire-rated opening, the R occupancies are considered "fire separated" from the rest of the building. The existing corridors on the Residential floors have non-rated bedroom doors without closers. This is considered an "approved - nonconforming" condition by UCR Campus Fire Marshal (see 1.21.11 meeting notes in Appendix). The existing interior glazed storefront partitions separating the circulation spine from the ground floor of Wings B and D is considered an "approved - nonconforming" condition by the Fire Marshal. However, the proposed new Wing C West must be separated from the spine with a one-hour rated assembly, per conf. call with UCR Fire Marshal on 5.11.11.

A few of the gaps between building wings exceed the maximum fire hose limit of 150' from a fire apparatus staging location. As a nonconforming "legacy building", A-I has fire sprinklers and a fire alarm system that exceed code minimums. UCR Fire Marshal stated that some flexibility can be exercised in the 150' hose limit requirement.

All of the above assumptions and code interpretations were verbally summarized with the Campus Fire Marshal in Workshop #2, who was in general concurrence provided fire sprinklers and a fire alarm system were installed in the remaining unprotected areas of the building.

The **maximum travel distance** to an exit in a fire sprinklered building is 250' for A and R occupancies, and 300' in B occupancies (CBC Table 1016.1).

Vertical exit enclosures shall be one hour fire-rated when connecting less than four stories (CBC Section 1020.1)

* Two unprotected window openings in stair enclosures were observed; these must be protected with a one-hour rated fire assembly or permanently sealed off.

New Staff Residences Type & Occupancy:

The four proposed outlying staff residences will be Type V-B Construction, with NFPA 13R fire sprinklers and a fire alarm system. Each unit shall have a fire riser and tamper switch. All building elements may be of zero fire-rated construction.

The staff residences Occupancy Group will be R-3 if not defined as a townhouse or connected to more than one other dwelling unit. Otherwise it would be an R-2 occupancy.

4.3

SUSTAINABLE DESIGN

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

The A-I improvements project will comply with the most recently adopted UC Policy on Sustainable Practices.

SUSTAINABLE DESIGN & LEED CERTIFICATION

As required by the Policy and UCR sustainability benchmarks, all new buildings and major renovations must be designed to the latest U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver rating as a minimum. New and renovated buildings should also outperform California Energy Code (Title 24) energy efficiency standards by minimum 20%. The Policy encourages the use of resource-, energy-, and water-efficient products, and building materials, systems, components, furnishings and supplies with a high recycled and/or rapidly-renewable content. Some of the strategies offered by this DPP for realizing minimum LEED Silver rating include:

- Significant energy reductions in new mechanical and electrical equipment in the central plant (boilers, chillers, pumps, etc) and rooftop air handlers
- Significant water reductions from a new dishwasher, cooling tower and low-flow plumbing fixtures
- Energy-efficient lighting, occupancy sensors and daylight controls
- Energy-efficient exhaust hoods and (Energy Star) kitchen equipment
- High performance glazing and cladding at new and renovated areas
- High thermal-performing roof insulation and "Cool" roof membrane
- High levels of food composting, recycling and innovative waste stream strategies

As primarily a renovation project affecting less than 40% of the total building area, it is recommeded that LEED 2009 CI (Commercial Interiors) be considered for the main A-I project. The four stand alone staff residential units would need to be submitted to USGBC separately as either LEED 2009 NC or LEED for homes.

LEED 2009 for Commercial Interiors

Project Checklist

UCR Aberdeen-Inverness Residence Hall

10.25.11

Sustainable Sites — Possible Points: 21

Y	?	N			
2			Credit 1	Site Selection	1 to 5
6			Credit 2	Development Density and Community Connectivity	6
6			Credit 3.1	Alternative Transportation—Public Transportation Access	6
2			Credit 3.2	Alternative Transportation—Bicycle Storage and Changing Rooms	2
	?		Credit 3.3	Alternative Transportation—Parking Availability	2

Water Efficiency — Possible Points: 11

Y	?	N			
Y			Prereq 1	Water Use Reduction—20% Reduction	
6			Credit 1	Water Use Reduction	6 to 11

Energy and Atmosphere — Possible Points: 37

Y	?	N			
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
4			Credit 1.1	Optimize Energy Performance—Lighting Power	1 to 5
2			Credit 1.2	Optimize Energy Performance—Lighting Controls	1 to 3
10			Credit 1.3	Optimize Energy Performance—HVAC	5 to 10
2			Credit 1.4	Optimize Energy Performance—Equipment and Appliances	1 to 4
5			Credit 2	Enhanced Commissioning	5
2			Credit 3	Measurement and Verification	2 to 5
	?		Credit 4	Green Power	5

Materials and Resources — Possible Points: 14

Y	?	N			
Y			Prereq 1	Storage and Collection of Recyclables	
1			Credit 1.1	Tenant Space—Long-Term Commitment	1
		N	Credit 1.2	Building Reuse	1 to 2
2			Credit 2	Construction Waste Management	1 to 2
		N	Credit 3.1	Materials Reuse	1 to 2
	?		Credit 3.2	Materials Reuse—Furniture and Furnishings	1
1			Credit 4	Recycled Content	1 to 2
1			Credit 5	Regional Materials	1 to 2
1			Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 17

Y	?	N			
Y			Prereq 1	Minimum IAQ Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 4.5	Low-Emitting Materials—Systems Furniture and Seating	1
1			Credit 5	Indoor Chemical & Pollutant Source Control	1
		N	Credit 6.1	Controllability of Systems—Lighting	1
		N	Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
	?		Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1 to 2
1			Credit 8.2	Daylight and Views—Views for Seated Spaces	1

Innovation and Design Process — Possible Points: 6

1			Credit 1.1	Innovation in Design: Specific Title	1
1			Credit 1.2	Innovation in Design: Specific Title	1
1			Credit 1.3	Innovation in Design: Specific Title	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

1			Credit 1.1	Regional Priority: Specific Credit	1
			Credit 1.2	Regional Priority: Specific Credit	1
			Credit 1.3	Regional Priority: Specific Credit	1
			Credit 1.4	Regional Priority: Specific Credit	1

Total — Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

LEED 2009 for New Construction and Major Renovations

Project Checklist

UC Riverside A-I ResidenceHall

10.25.11

Y	?	N				
13				**Sustainable Sites**	Possible Points:	**26**
Y			Prereq 1	Construction Activity Pollution Prevention		
		N	Credit 1	Site Selection	1	
5			Credit 2	Development Density and Community Connectivity	5	
		N	Credit 3	Brownfield Redevelopment	1	
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6	
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1	
		N	Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3	
	?		Credit 4.4	Alternative Transportation—Parking Capacity	2	
		N	Credit 5.1	Site Development—Protect or Restore Habitat	1	
		N	Credit 5.2	Site Development—Maximize Open Space	1	
		N	Credit 6.1	Stormwater Design—Quantity Control	1	
		N	Credit 6.2	Stormwater Design—Quality Control	1	
	?		Credit 7.1	Heat Island Effect—Non-roof	1	
1			Credit 7.2	Heat Island Effect—Roof	1	
		N	Credit 8	Light Pollution Reduction	1	
2				**Water Efficiency**	Possible Points:	**10**
Y			Prereq 1	Water Use Reduction—20% Reduction		
	?		Credit 1	Water Efficient Landscaping	2 to 4	
	?		Credit 2	Innovative Wastewater Technologies	2	
2			Credit 3	Water Use Reduction	2 to 4	
17				**Energy and Atmosphere**	Possible Points:	**35**
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems		
Y			Prereq 2	Minimum Energy Performance		
Y			Prereq 3	Fundamental Refrigerant Management		
10			Credit 1	Optimize Energy Performance	1 to 19	
		N	Credit 2	On-Site Renewable Energy	1 to 7	
2			Credit 3	Enhanced Commissioning	2	
2			Credit 4	Enhanced Refrigerant Management	2	
3			Credit 5	Measurement and Verification	3	
		N	Credit 6	Green Power	2	
6				**Materials and Resources**	Possible Points:	**14**
Y			Prereq 1	Storage and Collection of Recyclables		
2			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3	
		N	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1	
2			Credit 2	Construction Waste Management	1 to 2	
		N	Credit 3	Materials Reuse	1 to 2	

Y	?	N			
	?		Credit 4	Recycled Content	1 to 2
1			Credit 5	Regional Materials	1 to 2
	?		Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1
13				**Indoor Environmental Quality** Possible Points:	**15**
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
		N	Credit 6.1	Controllability of Systems—Lighting	1
		N	Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1
4				**Innovation and Design Process** Possible Points:	**6**
1			Credit 1.1	Innovation in Design: Specific Title	1
1			Credit 1.2	Innovation in Design: Specific Title	1
1			Credit 1.3	Innovation in Design: Specific Title	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1
1				**Regional Priority Credits** Possible Points:	**4**
1			Credit 1.1	Regional Priority: Specific Credit	1
			Credit 1.2	Regional Priority: Specific Credit	1
			Credit 1.3	Regional Priority: Specific Credit	1
			Credit 1.4	Regional Priority: Specific Credit	1
56				**Total** Possible Points:	**110**

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

4.4

PHASING

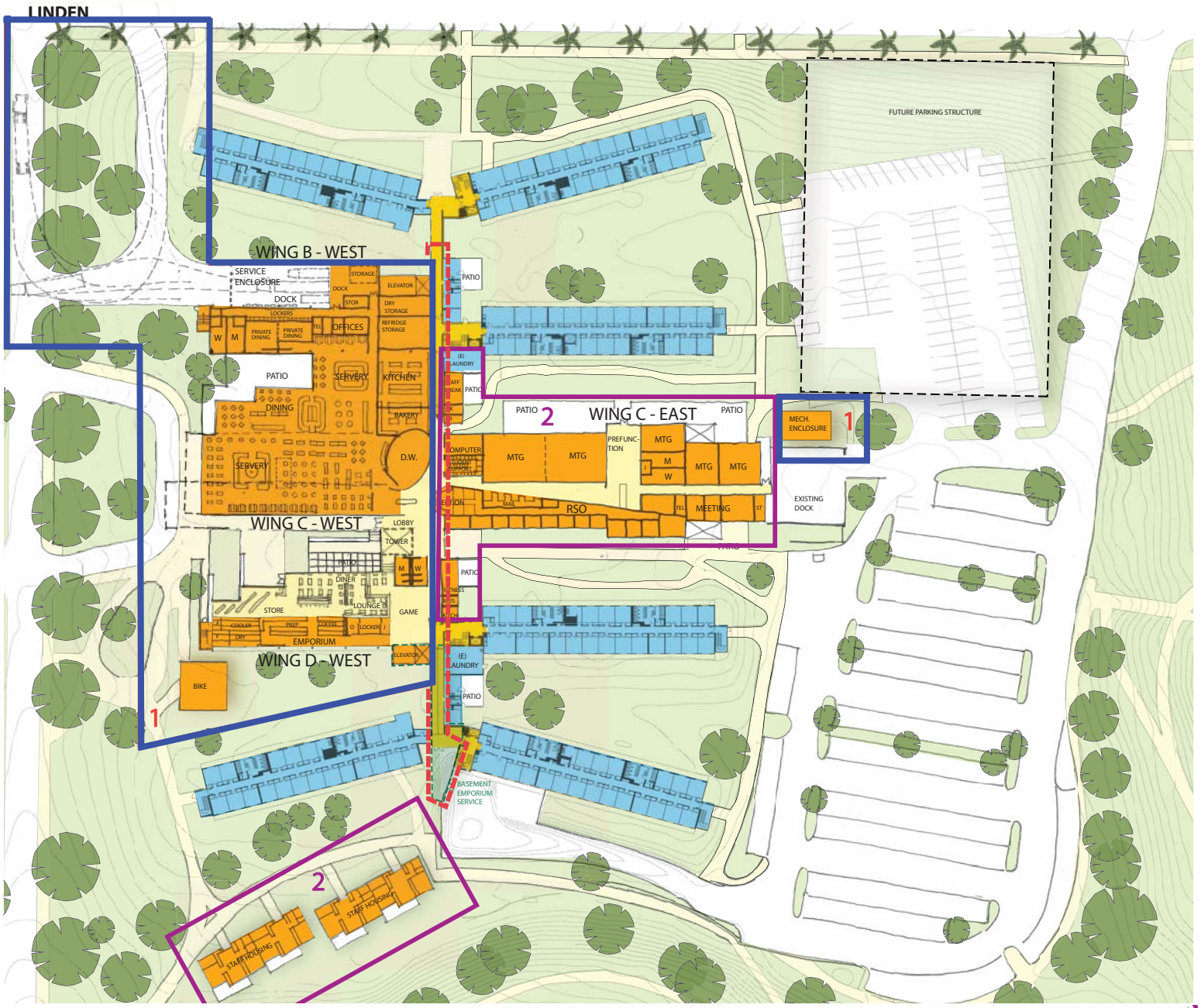
Phasing strategies for the A-I construction project are a critical aspect of this study, due to the complexity of managing invasive renovations and infrastructure upgrades while the residential wings remain fully occupied and accessible, and the need to maintain continuous operation of at least one foodservice facility and a central plant during the academic year.

PHASING STRATEGIES

The intent of the University and Housing, Dining & Residential Services is to deliver the complete A-I project as described in this DPP and noted in the Project Goals. It is critical that during the academic year all residential floors remain occupied and the circulation spine remain functional and secure at all times during construction. The only exception is during the summer break (June – August). A new resident main entry must be established – probably at the south end of the spine, as well as temporary RSO facilities in portables. The existing dining facility in Wing C East must continue serving meals until the new Residential Restaurant facility is ready to open. The much smaller Emporium may become operational prior to the new Residential Restaurant, in which case public access would be provided.

The project scope described in Section 3.1 is envisioned as two sequential phases. Phase One encompasses all work to the west of the circulation spine, plus the standalone central plant. Phase Two completes all work to the east of the circulation spine, plus the standalone staff residences. Infrastructure upgrades to the residential floors described in Section 4.1 and captured in the Estimate would be a separate project, either concurrent with Phase Two or as a single or multiple future phases. The following table shows estimated construction durations, not including mobilization (refer to the following Phasing Plan diagram, and to Section 4.1 for MEP scope detail):

Phase	Description	Construction Time
Phase One	Wings B, C & D West and Central Plant construction and/or renovation; kitchen dock enclosure; two elevators to basement spine; three cooling towers, one chiller, emergency generator, domestic hot water boilers, Wing C West AHU's and heating hot water boiler, heating hot water distribution piping, associated plumbing & electrical.	18 months + 3 months equipment
Phase Two	Staff Residential construction; Wing C East renovation (once the Residential Restaurant is completed ; two chillers, heating hot water boilers, Wing C East AHU's, associated plumbing and electrical.	10 months + 2 months equipment
Future	Residential Wings: • AHU coil replacement, or • AHU complete replacement and reroof	3 months minimum (over summer break), if adequate mobilization time provided and long lead components procured beforehand; could also be accomplished in multiple summer phases
Future	Residential Wings: • Internal MEP Infrastructure Upgrades	Could be accomplished in multiple summer phases



PHASING - PREFERRED CONCEPT

PHASE 1 (BASEMENT)

PHASE 1

PHASE 2

0′ 50′ 100′ 200′

N

4.5

SCHEDULE

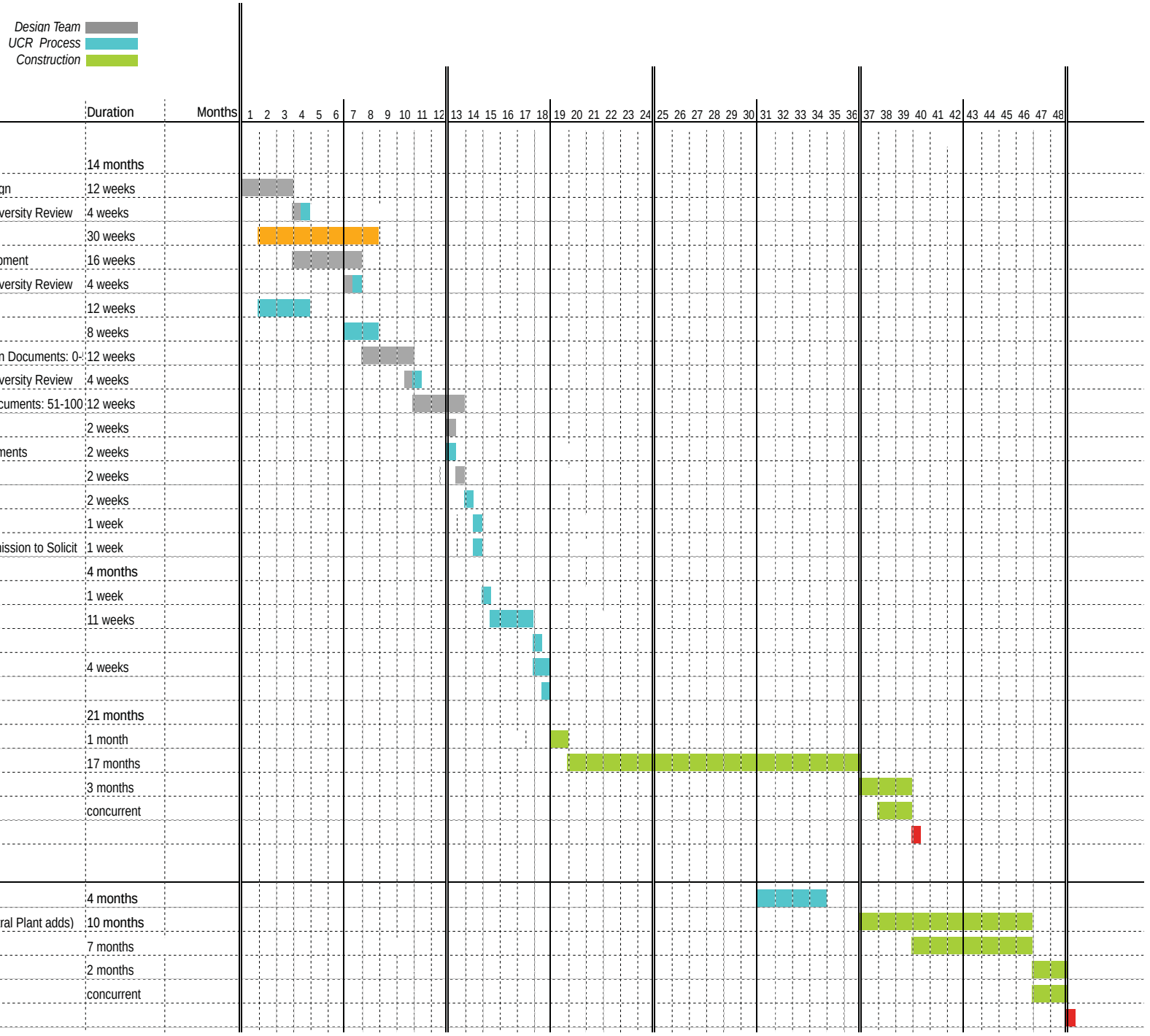
The following Schedule illustrates the phasing scenario described in Section 4.4. Future Phases are not included here since their timing is currently indeterminate.

Phase One scope is comprised of all DPP program west of the circulation spine plus the standalone central plant. Schedule assumptions for Phase One include: fourteen months for Design / Construction Documents (Phases One & Two combined), including University reviews, CEQA approval and necessary Campus approvals; four months Bid and Award period; eighteen months for Construction plus three additional months for equipment installation and burn-in, for a total of 39 months duration. The project should strive to take advantage of the unoccupied building during the summer months. The ideal construction start date would be in June following graduation.

Phase Two scope includes all DPP program east of the circulation spine and the standalone Staff Residences, plus equipment additions to the central plant. A four-month bid / award period is shown in the schedule should a separate general contractor be desired. Since delivery of Phase Two documentation is combined with Phase One, timing of the bidding period is flexible. Construction of the standalone Staff Residences is proposed to start as soon as Phase One is complete, but conceivably could commence sooner provided A-I building access and occupancy are unaffected. In either case, demolition of Wing C East cannot start before actual occupancy of the new Phase One residential restaurant. The Wing C East construction period is projected to take seven months, plus a two-month allowance for equipment and furniture installation. The total project duration for both phases would be 48 months.

This schedule only considers the design and construction period. For budget purposes it is assumed the pre-design process will take about six months from the completion of the DPP. Additional time may affect cost escalations. It is recommended that the University bring a construction manager into the design process early to assist in delivery analysis.

SCHEDULE



Phase One	Duration
Design and Reviews	14 months
Phase One / Two Schematic Design	12 weeks
Develop Cost Estimate / University Review	4 weeks
CEQA Review	30 weeks
Phase One / Two Design Development	16 weeks
Develop Cost Estimate / University Review	4 weeks
CMAR Selection Process	12 weeks
Delegated Authority	8 weeks
Phase One/Two Construction Documents: 0-	12 weeks
Develop Cost Estimate / University Review	4 weeks
Phase One/Two Construction Documents: 51-100	12 weeks
Develop Cost Estimate	2 weeks
University Review and Comments	2 weeks
Respond to Comments	2 weeks
University Backcheck	2 weeks
Final Permit Set and Signatures	1 week
University Contracts Dept. - Permission to Solicit	1 week
Bid & Award	4 months
Public Advertisement for Bids	1 week
Bidding Period	11 weeks
Bid Opening	
Bid Protest Period	4 weeks
Award of Bid	
Mobilization and Construction	21 months
Mobilization	1 month
Demolition and Construction	17 months
Equipment / Furniture Installation	3 months
Punch List & Close Out	concurrent
Occupancy	
Phase Two:	
Bid & Award (if not Phase One G.C.)	4 months
Construction (Staff Residential & Central Plant adds)	10 months
Construction - Wing 'C' East	7 months
Equipment / Furniture Installation	2 months
Punch List & Close Out	concurrent
Occupancy	

5.1

COST MODEL SUMMARY

The following Concept Design Estimate summary covers construction "hard costs" only, plus an escalation factor. Refer to the following page for itemized exclusions. Scope specifically related to the DPP Program described in Section 3.1 plus hazardous material abatement is "above the line". Additional Work, including future infrastructure upgrades to the residential floors and roofs, and temporary facilities for the RSO during construction, is listed "below the line".

See Appendix 6.1 for a detailed breakdown of the Cost Model.

CONCEPT DESIGN CONSTRUCTION ESTIMATE

Basis of Estimate

The estimate is based on preliminary concept drawings, program areas, room data sheets and engineering narratives. Estimated costs include average union labor billing rates with prevailing wages and competitive bid conditions. Competitive bid conditions generally occur when bids are received from a minimum of three general contractors and three subcontractors for each trade. Allowances and assumptions for materials, building systems, specifications and construction schedule, should be confirmed at the next design stage and prior to completion of bid documents. Estimated costs include general contractor markups for general conditions, bonds, insurances, profit, design contingency and cost escalation to mid-point of construction.

The estimated construction cost represents our best judgment as a professional consultant familiar with the construction industry. We have no control over the cost or supply of labor, materials and equipment, a contractor's methods of determining bid prices and market conditions. We cannot and do not warranty or represent that bids or negotiated prices will not vary from the estimated construction cost.

Estimate Exclusions

Professional design, testing, inspection and management fees.
Fire and all risk insurance.
Legal and financing costs.
Building permits and fees.
Construction and project contingencies
Staging costs for temporary relocation of existing building programs except $600,000 RSO trailer allowance
Communications equipment.
Moving costs.
Cost escalation beyond the mid-point of construction.
Cost escalation for future residence hall upgrades.
Independent commissioning.
Offsite work.
Furnishings.
Destructive testing.

Aberdeen-Inverness Residence Hall Common Area Improvement **# 10-2045**
University of California Riverside **30-Aug-11**

Summary	Phase 1	Phase 2	Future	Total
Concept Design Construction Estimate	$	$	$	$
1.0 Wing C East - Community Space		3,522,726		3,522,726
2.0 Wing C East - Residential Service Offices		1,316,625		1,316,625
3.0 Wing D West - Food Retail Emporium	3,993,229			3,993,229
4.0 Wing B & C West - Residential Restaurant, Servery, Kitchen & Support	16,741,905			16,741,905
5.0 First Floor Spine Infill		165,873		165,873
6.0 Staff Residential Units		1,063,816		1,063,816
7.0 New Bike Enclosure	259,099			259,099
8.0 Sitework - Preparation, Development, Utilities	3,868,250	1,337,332		5,205,582
9.0 Central Plant	3,015,991	887,618		3,903,609
10.0 Basement Spine Improvements	782,221			782,221
11.0 Hazardous Material Abatement - Ambient Estimate	36,648			36,648
12.0 Heating Hot Water Piping Distribution	666,666			666,666
13.0 Boiler Replacement		833,933		833,933
TOTAL CONSTRUCTION 08/2011	$ 29,364,009	$ 9,127,923		$ 38,491,931
Cost Escalation to Construction Mid-Point Phase 1; 33 Months @ 3.5% Per Year; 10%	2,936,401			2,936,401
Cost Escalation to Construction Mid-Point Phase 2; 44 Months @ 3.5% Per Year; 14%		1,277,909		1,277,909
TOTAL CONSTRUCTION ESCALATED	$32,300,410	$10,405,832		$ 42,706,241
15.0 Temporary Trailers for RSO	600,000			600,000
16.0 Existing Residential Wings - Future				
16.1 Air Handling Unit Coil Replacement			182,857	182,857
16.2 Demolish Existing Steam Boilers and Piping			241,748	241,748
16.3 Replace Rooftop Mechanical and Re-Roof			4,261,583	4,261,583
16.4 Replace MEP Systems and Repair Finishes			13,321,528	13,321,528
SUBTOTAL	$ 600,000	$ -	$ 18,007,716	$ 18,607,717
TOTAL	$ 32,900,410	$ 10,405,832	$ 18,007,716	$ 61,313,958

6.1

DETAILED COST MODEL

The following Concept Design Estimate covers construction “hard costs” only, plus an escalation factor. Refer to 5.1.1 for itemized exclusions. The detailed breakdown sections follow in the same order as the summary page.

Summary				Phase 1	Phase 2	Future	Total
Concept Design Construction Estimate			$/SF	$	$	$	$
1.0 Wing C East - Community Space							
1.1 Renovations - Meeting Rooms	12,053	SF	277.36		3,343,012		
1.2 Seismic Strengthening					179,714		
					3,522,726		3,522,726
2.0 Wing C East - Residential Service Offices							
2.1 Renovations	4,747	SF	277.36		1,316,625		
					1,316,625		1,316,625
3.0 Wing D West - Food Retail Emporium							
3.1 Renovations	5,707	SF	298.34	1,702,655			
3.2 Expansion	779	SF	782.72	609,738			
3.3 Food Service / Retail Equipment				508,671			
3.4 Elevator and Shaft				440,000			
3.5 Service Yard				95,074			
3.6 Seismic Strengthening				637,091			
				3,993,229			3,993,229
4.0 Wing B & C West - Residential Restaurant, Servery, Kitchen & Support							
4.1 Renovation - Residential Restaurant, Offices	5,664	SF	391.03	2,214,776			
4.2 Expansion - Residential Restaurant, Servery, Kitchen & Dishwashing	19,133	SF	497.87	9,525,654			
4.3 Food Service Equipment				3,098,225			
4.4 Elevator and Shaft				440,000			
4.5 Loading Dock				826,158			
4.6 Seismic Strengthening				637,091			
				16,741,905			16,741,905
5.0 First Floor Spine Infill	625	SF	265.40		165,873		165,873
6.0 Staff Residential Units	4,956	SF	214.65		1,063,816		1,063,816
7.0 New Bike Enclosure	1,540	SF	168.25	259,099			259,099
8.0 Sitework - Preparation, Development, Utilities				3,868,250	1,337,332		5,205,582
9.0 Central Plant				3,015,991	887,618		3,903,609
10.0 Basement Spine Improvements	4,000	SF	195.56	782,221			782,221
11.0 Hazardous Material Abatement - Ambient Estimate				36,648			36,648
12.0 Heating Hot Water Piping Distribution				666,666			666,666
13.0 Boiler Replacement					833,933		833,933
TOTAL CONSTRUCTION 08/2011				$ 29,364,009	$ 9,127,923		$ 38,491,931
Cost Escalation to Construction Mid-Point Phase 1; 33 Months @ 3.5% Per Year; 10%				2,936,401			2,936,401
Cost Escalation to Construction Mid-Point Phase 2; 44 Months @ 3.5% Per Year; 14%					1,277,909		1,277,909
TOTAL CONSTRUCTION ESCALATED				$32,300,410	$10,405,832		$ 42,706,241
14.0 Temporary Trailers for RSO				600,000			600,000
15.0 Existing Residential Wings - Future							
15.1 Air Handling Unit Coil Replacement						182,857	182,857
15.2 Demolish Existing Steam Boilers and Piping						241,748	241,748
15.3 Replace Rooftop Mechanical and Re-Roof						4,261,583	4,261,583
15.4 Replace MEP Systems and Repair Finishes						13,321,528	13,321,528
SUBTOTAL				$ 600,000	$ -	$ 18,007,716	$ 18,607,717
TOTAL				$ 32,900,410	$ 10,405,832	$ 18,007,716	$ 61,313,958

Wing C East - Community Space and Residential Service Office

Concept Design Construction Estimate		Community Space		Residential Service Office		Total	
		12,053 GSF		4,747 GSF		16,800 GSF	
COMPONENT SUMMARY		$ / GSF	$	$ / GSF	$	$ / GSF	$
1. Foundations		0.00	-	0.00	-	0.00	-
2. Vertical Structure		0.00	-	0.00	-	0.00	-
3. Floor and Roof Structure		3.09	37,235	3.09	14,665	3.09	51,900
4. Exterior Cladding		32.56	392,469	32.56	154,571	32.56	547,040
5. Roofing and Waterproofing		21.96	264,684	21.96	104,244	21.96	368,928
Shell (1 - 5)		57.61	694,388	57.61	273,480	57.61	967,868
6. Interior Partitions and Doors		25.22	304,008	25.22	119,732	25.22	423,739
7. Interior Finishes - Floors, Walls, Ceilings		23.30	280,835	23.30	110,605	23.30	391,440
Interiors (6 - 7)		48.52	584,843	48.52	230,337	48.52	815,179
8. Fixed Equipment, Casework and Specialties		12.30	148,252	12.30	58,388	12.30	206,640
9. Stairs and Elevators		0.00	-	0.00	-	0.00	-
Equipment, Stairs and Elevators (8 - 9)		12.30	148,252	12.30	58,388	12.30	206,640
10. Plumbing		13.71	165,298	13.71	65,102	13.71	230,400
11. Heating, Ventilation, Air Conditioning		37.93	457,225	37.93	180,075	37.93	637,300
12. Electrical		35.35	426,074	35.35	167,806	35.35	593,880
13. Fire Protection		4.00	48,212	4.00	18,988	4.00	67,200
Mechanical and Electrical (10 - 13)		91.00	1,096,809	91.00	431,971	91.00	1,528,780
14. Site Preparation and Demolition		8.99	108,334	8.99	42,666	8.99	151,000
15. Site Development		0.00	-	0.00	-	0.00	-
16. Site Utilities		0.00	-	0.00	-	0.00	-
Sitework (14-16)		8.99	108,334	8.99	42,666	8.99	151,000
SUBTOTAL (1-16)		218.42	2,632,624	218.42	1,036,843	218.42	3,669,467
General Conditions, Supervision, Bonds, Insurances	11.0%	24.03	289,589	24.03	114,053	24.03	403,641
Overhead and Profit	4.0%	9.70	116,889	9.70	46,036	9.70	162,924
SUBTOTAL		252.14	3,039,101	252.14	1,196,931	252.14	4,236,033
Design Contingency	10.0%	25.21	303,910	25.21	119,693	25.21	423,603
TOTAL CONSTRUCTION, 08/2011		277.36	$3,343,012	277.36	$1,316,625	277.36	$4,659,636
Seismic Strengthening			$179,714		-		$179,714
TOTAL			$3,522,726		$1,316,625		$4,839,350

Wing C East - Community Space and Residential Service Office

Areas and Control Quantities

AREAS

Renovation	16,800	SF	
Expansion	-	SF	
	16,800	SF	

CONTROL QUANTITIES			Ratio to Gross Area
Gross Area	16,800	SF	1.000
Renovations	16,800	SF	1.000
Exterior Wall - Existing	11,760	SF	0.700
Roof Area	16,800	SF	1.000
Partition Length	1,428	LF	0.085
Interior Doors x 100	40	EA	0.238

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Wing C East - Community Space and Residential Service Office

Component Description	Quantity		Unit Cost	$
1. Foundations				
Earthwork, cut, backfill and cart away				-
Earthwork, over excavation and recompaction				-
Shoring				-
Underpinning				-
Dewatering				-
Reinforced concrete foundations				-
Foundation drainage				-
			$	-
2. Vertical Structure				
Columns and bracing, steel framing				-
Reinforced concrete structural walls, below grade				-
Reinforced concrete structural walls, above grade				-
Reinforced concrete curbs				-
Fireproofing to steel framing				-
			$	-
3. Floor and Roof Structure				
Floor at grade				
Reinforced concrete slab on grade, 5"				-
Dowels to existing slab				-
Repairs to existing slab	16,800	SF	1.50	25,200
Upper floors				-
Roof				
Roof framing and deck				-
Fireproofing to steel framing				-
Equipment pads	100	SF	15.00	1,500
Miscellaneous concrete, metals and carpentry	16,800	SF	1.50	25,200
			$	51,900

Wing C East - Community Space and Residential Service Office

Component Description	Quantity		Unit Cost	$
4. Exterior Cladding				
Wall framing, furring and insulation				-
Exterior wall finish, new				-
Exterior wall finish, existing upgraded	11,760	SF	15.00	176,400
Exterior windows	3,528	SF	75.00	264,600
Exterior doors, frames and hardware	12	EA	4,000.00	48,000
Interior of exterior wall	11,760	SF	4.00	47,040
Soffits	500	SF	22.00	11,000
Exterior wall signage				-
			$	547,040
5. Roofing and Waterproofing				
Waterproofing				
Walls below grade				-
Floors				-
Decks				-
Roof insulation, rigid	16,800	SF	4.76	79,968
Roofing membrane	16,800	SF	10.75	180,600
Green roof				-
Glazed skylights				-
Flashings, gutters and downspouts	16,800	SF	6.00	100,800
Caulking and sealants	16,800	SF	0.45	7,560
			$	368,928
6. Interior Partitions and Doors				
Partition framing and finish	17,136	SF	7.00	119,952
Partition surfacing	34,272	SF	4.50	154,224
Sound insulation	17,136	SF	1.20	20,563
Interior glazed windows and walls	600	SF	55.00	33,000
Interior doors, transom panels, frames and hardware	40	EA	2,400.00	96,000
Elevator smoke guard				-
			$	423,739

Wing C East - Community Space and Residential Service Office

Component Description	Quantity		Unit Cost	$
7. Interior Finishes - Floors, Walls, Ceilings				
Floors	16,800	SF	9.00	151,200
Bases	16,800	SF	1.30	21,840
Walls	16,800	SF	3.00	50,400
Ceilings	16,800	SF	10.00	168,000
			$	391,440
8. Fixed Equipment, Casework and Specialties				
Corner guards, corridor rails and wall protection	16,800	SF	0.40	6,720
Toilet partitions and accessories	16,800	SF	1.25	21,000
Casework and countertops	16,800	SF	4.50	75,600
Code signage	16,800	SF	0.65	10,920
Window blinds and shades	16,800	SF	2.00	33,600
Fixed equipment and specialties	16,800	SF	3.50	58,800
			$	206,640
9. Stairs and Elevators				
Staircase flights, floor to floor				-
Ladders				-
Elevators				-
Elevator cab finishes				-
			$	-
10. Plumbing				
Sanitary fixtures and connection piping	16,800	SF	3.75	63,000
Sanitary waste, vent and service piping	16,800	SF	6.00	100,800
Kitchen systems				-
Domestic hot water equipment and pumps	16,800	SF	1.00	16,800
Natural gas service	1	LS	12,000.00	12,000
Rainwater drainage	16,800	SF	1.75	29,400

Wing C East - Community Space and Residential Service Office

Component Description	Quantity		Unit Cost	$
10. Plumbing				
Testing and sterilizing	16,800	SF	0.50	8,400
				$ 230,400
11. Heating, Ventilating and Air Conditioning				
Heat generation and cooling equipment				-
Piping and insulation	16,800	SF	9.50	159,600
Air handling equipment	18,000	CFM	7.50	135,000
VAV terminal boxes	15	EA	1,500.00	22,500
Ventilation equipment	20,000	SF	1.10	22,000
Air distribution and return	16,800	SF	10.00	168,000
Diffusers and grilles	16,800	SF	1.75	29,400
Controls, DDC and energy management system, 54 PTS	16,800	SF	5.00	84,000
Testing, adjusting and balancing	16,800	SF	1.00	16,800
Trade demolition	1	LS	55,000.00	55,000
				$ 637,300
12. Electrical				
Main power service	16,800	SF	4.25	71,400
Emergency power service	16,800	SF	0.75	12,600
Equipment connections and switches	16,800	SF	1.20	20,160
Power panelboards, feeders, outlets and grounding	16,800	SF	7.00	117,600
Lighting, fixtures, conduit and wire	16,800	SF	13.00	218,400
Telephone and data outlets, conduit and cabling	16,800	SF	5.00	84,000
Communications conduit	16,800	SF	0.60	10,080
TV outlets, conduit and wire	16,800	SF	0.25	4,200
Paging system, conduit, wiring and devices				-
Fire alarm system, conduit, wiring and devices	16,800	SF	3.00	50,400
Rescue call system, conduit, wiring and devices				-
Security system, conduit, wiring and devices	16,800	SF	0.30	5,040
				$ 593,880

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Wing C East - Community Space and Residential Service Office

Component Description	Quantity		Unit Cost	$
13. Fire Protection				
Automatic wet pipe fire sprinkler system	16,800	SF	4.00	67,200
				$ 67,200
14. Site Preparation and Demolition				
Site protective construction, noise and dust control	16,800	SF	0.50	8,400
Hazardous material abatement - see summary page 2				-
Structural demolition- shear wall				-
Structural demolition - covered walkway	1	LS	25,000.00	25,000
Selective demolition incl. solar hot water system	16,800	SF	7.00	117,600
Site clearing and grading				-
				$ 151,000

Wing C East - Seismic Strengthening

Component Description	Quantity		Unit Cost	$
Structural strengthening				
New reinforced concrete wall	30	LF	1,377.50	41,325
New foundations	1	LS	25,000.00	25,000
Additional drag elements	160	LF	345.00	55,200
Slab repairs at locations of structural work	1	LS	20,000.00	20,000
SUBTOTAL				$ 141,525
General Conditions, Supervision, Bonds, Insurances	11.0%			15,568
Overhead and Profit	4.0%			6,284
SUBTOTAL				$ 163,376
Design Contingency	10.0%			16,338
TOTAL CONSTRUCTION, 08/2011				$ 179,714

Wing D West - Food Retail Emporium

Concept Design Construction Estimate		Renovation		Expansion		Total	
		5,707 GSF		779 GSF		6,486 GSF	
COMPONENT SUMMARY		$ / GSF	$	$ / GSF	$	$ / GSF	$
1. Foundations		0.00	-	41.99	32,708	5.04	32,708
2. Vertical Structure		0.00	-	56.41	43,940	6.77	43,940
3. Floor and Roof Structure		3.50	20,000	33.63	26,195	7.12	46,195
4. Exterior Cladding		16.64	94,946	254.97	198,623	45.26	293,569
5. Roofing and Waterproofing		0.46	2,600	21.92	17,075	3.03	19,675
Shell (1 - 5)		20.60	117,546	408.91	318,540	67.24	436,086
6. Interior Partitions and Doors		28.34	161,757	28.34	22,080	28.34	183,837
7. Interior Finishes - Floors, Walls, Ceilings		34.30	195,750	34.30	26,720	34.30	222,470
Interiors (6 - 7)		62.64	357,507	62.64	48,799	62.64	406,307
8. Fixed Equipment, Casework and Specialties		17.65	100,729	17.65	13,749	17.65	114,478
9. Stairs and Elevators		0.00	-	0.00	-	0.00	-
Equipment, Stairs and Elevators (8 - 9)		17.65	100,729	17.65	13,749	17.65	114,478
10. Plumbing		36.25	206,879	36.25	28,239	36.25	235,118
11. Heating, Ventilation, Air Conditioning		47.54	271,309	47.54	37,033	47.54	308,342
12. Electrical		38.40	219,149	38.40	29,914	38.40	249,062
13. Fire Protection		4.00	22,828	4.00	3,116	4.00	25,944
Mechanical and Electrical (10 - 13)		126.19	720,164	126.19	98,302	126.19	818,466
14. Site Preparation and Demolition		7.87	44,896	1.00	779	7.04	45,675
15. Site Development		0.00	-	0.00	-	0.00	-
16. Site Utilities		0.00	-	0.00	-	0.00	-
Sitework (14-16)		7.87	44,896	1.00	779	7.04	45,675
SUBTOTAL (1-16)		234.95	1,340,842	616.39	480,170	280.76	1,821,011
General Conditions, Supervision, Bonds, Insurances	11.0%	25.84	147,493	67.80	52,819	30.88	200,311
Overhead and Profit	4.0%	10.43	59,533	27.37	21,320	12.47	80,853
SUBTOTAL		271.22	1,547,868	711.56	554,308	324.11	2,102,176
Design Contingency	10.0%	27.12	154,787	71.16	55,431	32.41	210,218
TOTAL CONSTRUCTION, 08/2011		298.34	$1,702,655	782.72	$609,738	356.52	$2,312,393
Food Service / Retail Equipment							$508,671
Elevator and Shaft							$440,000
Service Yard							$95,074
Seismic Strengthening							$637,091
TOTAL							$3,993,229

Wing D West - Food Retail Emporium

Areas and Control Quantities

AREAS

Renovation	5,707	SF
Expansion	779	SF
	6,486	SF

CONTROL QUANTITIES			Ratio to Gross Area
Gross Area	6,486	SF	1.000
Renovations	5,707	SF	0.880
Expansion	779	SF	0.120
Exterior Wall - New	1,849	SF	0.285
Exterior Wall - Existing	3,530	SF	0.544
Roof Area - New	779	SF	0.120
Partition Length	525	LF	0.081
Interior Doors x 100	19	EA	0.293

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Wing D West - Food Retail Emporium

Component Description	Quantity		Unit Cost	$
1. Foundations				
Earthwork, cut, backfill and cart away				-
Earthwork, over excavation and recompaction	779	SF	2.20	1,714
Shoring				-
Underpinning				-
Dewatering				-
Reinforced concrete foundations	65	CY	475.00	30,994
Foundation drainage				-
			$	32,708
2. Vertical Structure				
Columns and bracing, steel framing	4	TNS	2,700.00	10,800
Reinforced concrete structural walls, below grade				-
Reinforced concrete structural walls, above grade	20	LF	1,425.00	28,500
Reinforced concrete curbs	150	LF	22.00	3,300
Fireproofing to steel framing	4	TNS	335.00	1,340
			$	43,940
3. Floor and Roof Structure				
Floor at grade				
Reinforced concrete slab on grade, 5"	779	SF	9.75	7,595
Dowels to existing slab	150	EA	36.00	5,400
Repairs to existing slab	5,707	SF	1.50	8,561
Upper floors				-
Roof				
Roof framing and deck	779	SF	15.00	11,685
Fireproofing to steel framing	3	TN	325.00	975
Equipment pads	150	SF	15.00	2,250
Miscellaneous concrete, metals and carpentry	6,486	SF	1.50	9,729
			$	46,195

Wing D West - Food Retail Emporium

Component Description	Quantity		Unit Cost	$
4. Exterior Cladding				
Wall framing, furring and insulation	1,849	SF	12.35	22,840
Exterior wall finish, new	1,849	SF	25.00	46,235
Exterior wall finish, existing upgraded	3,530	SF	15.00	52,946
Exterior windows	1,614	SF	75.00	121,031
Exterior doors, frames and hardware	6	EA	3,000.00	18,000
Interior of exterior wall	5,379	SF	4.00	21,517
Soffits	500	SF	22.00	11,000
Exterior wall signage				-
				$ 293,569
5. Roofing and Waterproofing				
Waterproofing				
Walls below grade				-
Floors				-
Decks				-
Roof insulation, rigid	779	SF	4.76	3,708
Roofing membrane	779	SF	10.75	8,374
Green roof				-
Glazed skylights				-
Flashings, gutters and downspouts	779	SF	6.00	4,674
Caulking and sealants	6,486	SF	0.45	2,919
				$ 19,675
6. Interior Partitions and Doors				
Partition framing and finish	6,567	SF	7.00	45,970
Partition surfacing	13,134	SF	4.50	59,104
Sound insulation	6,567	SF	1.20	7,880
Interior glazed windows and walls	460	SF	55.00	25,283
Interior doors, transom panels, frames and hardware	19	EA	2,400.00	45,600
Elevator smoke guard				-
				$ 183,837

Wing D West - Food Retail Emporium

Component Description	Quantity		Unit Cost	$
7. Interior Finishes - Floors, Walls, Ceilings				
Floors	6,486	SF	15.00	97,290
Bases	6,486	SF	1.30	8,432
Walls	6,486	SF	6.00	38,916
Ceilings	6,486	SF	12.00	77,832
				$ 222,470
8. Fixed Equipment, Casework and Specialties				
Corner guards, corridor rails and wall protection	6,486	SF	1.00	6,486
Toilet partitions and accessories	6,486	SF	1.25	8,108
Casework and countertops	6,486	SF	8.00	51,888
Code signage	6,486	SF	0.65	4,216
Window blinds and shades	6,486	SF	2.75	17,837
Fixed equipment and specialties	6,486	SF	4.00	25,944
				$ 114,478
9. Stairs and Elevators				
Staircase flights, floor to floor				-
Ladders				-
Elevators - see summary				-
Elevator cab finishes				-
				$ -
10. Plumbing				
Sanitary fixtures and connection piping	6,486	SF	7.00	45,402
Sanitary waste, vent and service piping	6,486	SF	15.00	97,290
Kitchen systems and grease waste	6,486	SF	6.50	42,159
Domestic hot water equipment	6,486	SF	4.50	29,187
Natural gas service	6,486	SF	1.00	6,486

Wing D West - Food Retail Emporium

Component Description	Quantity		Unit Cost	$
10. Plumbing				
Rainwater drainage	6,486	SF	1.75	11,351
Testing and sterilizing	6,486	SF	0.50	3,243
				$ 235,118
11. Heating, Ventilating and Air Conditioning				
Heat generation and cooling equipment				-
Heating hot water boiler	1	EA	9,600.00	9,600
Pumps and tanks	1	LS	3,800.00	3,800
Piping and insulation	6,486	SF	9.00	58,374
Air handling equipment				
New fan coil units	8	EA	1,600.00	12,800
Fan coil 1500 cfm - game room and lounge	2	EA	6,000.00	12,000
Ventilation equipment				
General exhaust	6,486	SF	0.90	5,837
Kitchen exhaust	6,486	SF	6.00	38,916
Air distribution and return	6,486	SF	12.50	81,075
Kitchen exhaust ducts and hoods	6,486	SF	3.00	19,458
Diffusers and grilles	6,486	SF	1.75	11,351
Controls, DDC and energy management system, 40 PTS	6,486	SF	7.50	48,645
Testing, adjusting and balancing	6,486	SF	1.00	6,486
				$ 308,342
12. Electrical				
Main power service	6,486	SF	6.00	38,916
Emergency power service	6,486	SF	0.75	4,865
Equipment connections and switches	6,486	SF	2.00	12,972
Power panel boards, feeders, outlets and grounding	6,486	SF	8.00	51,888
Lighting, fixtures, conduit and wire	6,486	SF	12.50	81,075
Telephone and data outlets, conduit and cabling	6,486	SF	5.00	32,430
Communications conduit	6,486	SF	0.60	3,892
TV outlets, conduit and wire	6,486	SF	0.25	1,622
Paging system, conduit, wiring and devices				-
Fire alarm system, conduit, wiring and devices	6,486	SF	3.00	19,458

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Wing D West - Food Retail Emporium

Component Description	Quantity		Unit Cost	$
12. Electrical				
Rescue call system, conduit, wiring and devices				-
Security system, conduit, wiring and devices	6,486	SF	0.30	1,946
				$ 249,062
13. Fire Protection				
Automatic wet pipe fire sprinkler system	6,486	SF	4.00	25,944
				$ 25,944
14. Site Preparation and Demolition				
Site protective construction, noise and dust control	5,707	SF	0.50	2,854
Hazardous material abatement - see summary page 2				-
Structural demolition- shear wall	20	LF	390.00	7,800
Selective demolition	5,707	SF	6.00	34,242
Site clearing and grading	779	SF	1.00	779
				$ 45,675

Wing D West - Food Service Retail Equipment

Component Description			$
General merchandising			95,000
Cashier / condiments			16,800
Cold storage / cold retail			76,400
Coffee counter			30,000
Prep / service area			99,000
Dry storage			6,500
Subtotal			323,700
Sales tax			28,324
Delivery and installation			48,555
SUBTOTAL		$	400,579
General Conditions, Supervision, Bonds, Insurances	11.0%		44,064
Overhead and Profit	4.0%		17,786
SUBTOTAL		$	462,428
Design Contingency	10.0%		46,243
TOTAL CONSTRUCTION, 08/2011		$	508,671

Wing D West - Elevator and Shaft

Component Description	Quantity	Unit Cost	$
Elevator structure and foundations	1 EA	145,000.00	145,000
Elevator exterior cladding, roofing and waterproofing	1 EA	45,000.00	45,000
Elevator equipment	1 EA	130,000.00	130,000
Elevator electrical	1 EA	17,000.00	17,000
Elevator mechanical	1 EA	9,500.00	9,500
SUBTOTAL			$ 346,500
General Conditions, Supervision, Bonds, Insurances	11.0%		38,115
Overhead and Profit	4.0%		15,385
SUBTOTAL			$ 400,000
Design Contingency	10.0%		40,000
TOTAL CONSTRUCTION, 08/2011			$ 440,000

Wing D West - Service Yard

Component Description	Quantity	Unit Cost	$
Service yard structure	360 SF	175.00	63,000
Service yard paving	360 SF	22.00	7,920
Service yard drainage	360 SF	6.00	2,160
Service yard lighting	360 SF	2.00	720
Service yard electrical utilities	360 SF	3.00	1,080
SUBTOTAL			$ 74,880
General Conditions, Supervision, Bonds, Insurances	11.0%		8,237
Overhead and Profit	4.0%		3,325
SUBTOTAL			$ 86,441
Design Contingency	10.0%		8,632
TOTAL CONSTRUCTION, 08/2011			$ 95,074

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Wing D West - Seismic Strengthening

Component Description	Quantity	Unit Cost	$
Structural strengthening			
New reinforced concrete wall below second floor	60 LF	1,377.50	82,650
New foundations	1 LS	45,000.00	45,000
Infill openings above second floor	8 EA	8,000.00	64,000
Additional drag elements	320 LF	345.00	110,400
Shotcrete wall strengthening below second floor	20 LF	1,155.00	23,100
Column strengthening	12 EA	6,380.00	76,560
Slab repairs at locations of structural work	1 LS	40,000.00	40,000
Architectural, MEP repairs			
Typical Wing - below second floor (included in renovation)			
Typical Wing - above second floor	1 LS	60,000.00	60,000
SUBTOTAL			$ 501,710
General Conditions, Supervision, Bonds, Insurances	11.0%		55,188
Overhead and Profit	4.0%		22,276
SUBTOTAL			$ 579,174
Design Contingency	10.0%		57,917
TOTAL CONSTRUCTION, 08/2011			$ 637,091

Wing B & C West - Residential Restaurant, Servery, Kitchen & Support

Concept Design Construction Estimate		Renovation		Expansion		Total	
		5,664 GSF		19,133 GSF		24,797 GSF	
COMPONENT SUMMARY		$ / GSF	$	$ / GSF	$	$ / GSF	$
1. Foundations		0.00	-	9.65	184,593	7.44	184,593
2. Vertical Structure		0.00	-	13.14	251,376	10.14	251,376
3. Floor and Roof Structure		6.06	34,296	32.22	616,541	26.25	650,837
4. Exterior Cladding		50.98	288,750	92.35	1,766,998	82.90	2,055,748
5. Roofing and Waterproofing		21.96	124,381	21.96	420,161	21.96	544,542
Shell (1 - 5)		78.99	447,427	169.32	3,239,669	148.69	3,687,096
6. Interior Partitions and Doors		22.73	128,746	22.73	434,904	22.73	563,649
7. Interior Finishes - Floors, Walls, Ceilings		38.30	216,931	38.30	732,794	38.30	949,725
Interiors (6 - 7)		61.03	345,677	61.03	1,167,697	61.03	1,513,374
8. Fixed Equipment, Casework and Specialties		16.65	94,306	16.65	318,564	16.65	412,870
9. Stairs and Elevators		0.00	-	0.00	-	0.00	-
Equipment, Stairs and Elevators (8 - 9)		16.65	94,306	16.65	318,564	16.65	412,870
10. Plumbing		38.95	220,613	38.95	745,230	38.95	965,843
11. Heating, Ventilation, Air Conditioning		61.66	349,233	61.66	1,179,710	61.66	1,528,943
12. Electrical		37.65	213,250	37.65	720,357	37.65	933,607
13. Fire Protection		4.50	25,488	4.50	86,099	4.50	111,587
Mechanical and Electrical (10 - 13)		142.76	808,584	142.76	2,731,397	142.76	3,539,980
14. Site Preparation and Demolition		8.50	48,144	2.31	44,133	3.72	92,277
15. Site Development		0.00	-	0.00	-	0.00	-
16. Site Utilities		0.00	-	0.00	-	0.00	-
Sitework (14-16)		8.50	48,144	2.31	44,133	3.72	92,277
SUBTOTAL (1-16)		307.93	1,744,138	392.07	7,501,460	372.85	9,245,598
General Conditions, Supervision, Bonds, Insurances	11.0%	33.87	191,855	43.13	825,161	41.01	1,017,016
Overhead and Profit	4.0%	13.67	77,440	17.41	333,065	16.55	410,505
SUBTOTAL		355.48	2,013,433	452.60	8,659,686	430.42	10,673,118
Design Contingency	10.0%	35.55	201,343	45.26	865,969	43.04	1,067,312
TOTAL CONSTRUCTION, 08/2011		391.03	$2,214,776	497.87	$9,525,654	473.46	$11,740,430
Food Service Equipment							$3,098,225
Elevator and Shaft							$440,000
Loading Dock							$826,158
Seismic Strengthening							$637,091
TOTAL							$16,741,904

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Wing B & C West - Residential Restaurant, Servery, Kitchen & Support

Areas and Control Quantities

AREAS

Renovation	5,664	SF
Expansion	19,133	SF
	24,797	SF

CONTROL QUANTITIES			Ratio to Gross Area
Gross Area	24,797	SF	1.000
Renovations	5,664	SF	0.228
Expansion	19,133	SF	0.772
Exterior Wall - New	29,453	SF	1.188
Exterior Wall - Existing	9,250	SF	0.373
Roof Area - New	24,797	SF	1.000
Partition Length	1,736	LF	0.070
Interior Doors x 100	65	EA	0.003

Wing B & C West - Residential Restaurant, Servery, Kitchen & Support

Component Description	Quantity		Unit Cost	$
1. Foundations				
Earthwork, cut, backfill and cart away				-
Earthwork, over excavation and recompaction	19,133	SF	2.20	42,093
Shoring				-
Underpinning				-
Dewatering				-
Reinforced concrete foundations	300	CY	475.00	142,500
Foundation drainage				-
			$	184,593
2. Vertical Structure				
Columns and bracing, steel framing	51	TNS	2,700.00	137,781
Reinforced concrete structural walls, below grade				-
Reinforced concrete structural walls, above grade	60	LF	1,425.00	85,500
Reinforced concrete curbs	500	LF	22.00	11,000
Fireproofing to steel framing	51	TNS	335.00	17,095
			$	251,376
3. Floor and Roof Structure				
Floor at grade				
Reinforced concrete slab on grade, 5"	19,133	SF	9.75	186,547
Dowels to existing slab	300	EA	36.00	10,800
Repairs to existing slab	5,664	SF	1.50	8,496
Upper floors				-
Roof				
Roof framing and deck	19,133	SF	20.00	382,660
Fireproofing to steel framing	67	TN	325.00	21,764
Equipment pads	225	SF	15.00	3,375
Miscellaneous concrete, metals and carpentry	24,797	SF	1.50	37,196
			$	650,837

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Wing B & C West - Residential Restaurant, Servery, Kitchen & Support

Component Description	Quantity		Unit Cost	$
4. Exterior Cladding				
Wall framing, furring and insulation	29,453	SF	12.35	363,738
Exterior wall finish, new	29,453	SF	25.00	736,313
Exterior wall finish, existing upgraded	9,250	SF	15.00	138,750
Exterior windows	7,741	SF	75.00	580,538
Exterior doors, frames and hardware	16	EA	4,000.00	64,000
Interior of exterior wall	38,703	SF	4.00	154,810
Soffits	800	SF	22.00	17,600
Exterior wall signage				-
			$	2,055,748
5. Roofing and Waterproofing				
Waterproofing				
Walls below grade				-
Floors				-
Decks				-
Roof insulation, rigid	24,797	SF	4.76	118,034
Roofing membrane	24,797	SF	10.75	266,568
Green roof				-
Glazed skylights				-
Flashings, gutters and downspouts	24,797	SF	6.00	148,782
Caulking and sealants	24,797	SF	0.45	11,159
			$	544,542
6. Interior Partitions and Doors				
Partition framing and finish	21,559	SF	7.00	150,910
Partition surfacing	43,117	SF	4.50	194,027
Sound insulation	21,559	SF	1.20	25,870
Interior glazed windows and walls	539	SF	55.00	29,643
Interior doors, transom panels, frames and hardware	68	EA	2,400.00	163,200
Elevator smoke guard				-
			$	563,649

Wing B & C West - Residential Restaurant, Servery, Kitchen & Support

Component Description	Quantity	Unit Cost	$
7. Interior Finishes - Floors, Walls, Ceilings			
Floors	24,797 SF	18.00	446,346
Bases	24,797 SF	1.30	32,236
Walls	24,797 SF	6.00	148,782
Ceilings	24,797 SF	13.00	322,361
			$ 949,725
8. Fixed Equipment, Casework and Specialties			
Corner guards, corridor rails and wall protection	24,797 SF	1.00	24,797
Toilet partitions and accessories	24,797 SF	1.25	30,996
Casework and countertops	24,797 SF	8.00	198,376
Code signage	24,797 SF	0.65	16,118
Window blinds and shades	24,797 SF	2.75	68,192
Fixed equipment and specialties	24,797 SF	3.00	74,391
			$ 412,870
9. Stairs and Elevators			
Staircase flights, floor to floor			-
Ladders			-
Elevators - see summary			-
Elevator cab finishes			-
			$ -
10. Plumbing			
Sanitary fixtures and connection piping	24,797 SF	8.00	198,376
Sanitary waste, vent and service piping	24,797 SF	15.00	371,955
Kitchen systems and grease waste	24,797 SF	6.00	148,782
Domestic hot water equipment and pumps	24,797 SF	6.50	161,181
Natural gas service	24,797 SF	1.20	29,756
Rainwater drainage	24,797 SF	1.75	43,395

Wing B & C West - Residential Restaurant, Servery, Kitchen & Support

Component Description	Quantity	Unit Cost	$
10. Plumbing			
Testing and sterilizing	24,797 SF	0.50	12,399
			$ 965,843
11. Heating, Ventilating and Air Conditioning			
Heat generation and cooling equipment			-
Heating hot water boiler	1 EA	22,600.00	22,600
Pumps and tanks	1 LS	7,800.00	7,800
Piping and insulation	24,797 SF	16.00	396,752
Air handling equipment			
Air handling unit	38,000 CFM	8.50	323,000
VAV terminal units	35 EA	1,450.00	50,750
Ventilation equipment	7,835 CFM	1.10	8,619
Air distribution and return	24,797 SF	16.00	396,752
Kitchen exhaust ducts and hoods	24,797 SF	4.26	105,697
Diffusers and grilles	24,797 SF	1.75	43,395
Controls, DDC and energy management system, 112 PTS	24,797 SF	6.00	148,782
Testing, adjusting and balancing	24,797 SF	1.00	24,797
			$ 1,528,943
12. Electrical			
Main power service	24,797 SF	5.00	123,985
Emergency power service	24,797 SF	0.75	18,598
Equipment connections and switches	24,797 SF	2.00	49,594
Power panel boards, feeders, outlets and grounding	24,797 SF	8.00	198,376
Lighting, fixtures, conduit and wire	24,797 SF	14.00	347,158
Telephone and data outlets, conduit and cabling	24,797 SF	3.75	92,989
Communications conduit	24,797 SF	0.60	14,878
TV outlets, conduit and wire	24,797 SF	0.25	6,199
Paging system, conduit, wiring and devices			-
Fire alarm system, conduit, wiring and devices	24,797 SF	3.00	74,391
Rescue call system, conduit, wiring and devices			-

Wing B & C West - Residential Restaurant, Servery, Kitchen & Support

Component Description	Quantity		Unit Cost	$
12. Electrical				
Security system, conduit, wiring and devices	24,797	SF	0.30	7,439
				$ 933,607
13. Fire Protection				
Automatic wet pipe fire sprinkler system	24,797	SF	4.50	111,587
				$ 111,587
14. Site Preparation and Demolition				
Site protective construction, noise and dust control	5,664	SF	0.50	2,832
Hazardous material abatement - see summary page 2			-	-
Building demolition	1,000	SF	25.00	25,000
Structural demolition - shear wall				-
Selective demolition	5,664	SF	8.00	45,312
Site clearing and grading	19,133	SF	1.00	19,133
				$ 92,277

Wing B & C West - Food Service Equipment

Component Description		$
Primary servery		475,300
Secondary servery		305,200
Dishwashing		146,000
Kitchen cooking		435,000
Kitchen prep		123,400
Bakery		175,400
Dry storage		28,600
Refrigeration		282,700
Subtotal		1,971,600
Sales tax		172,515
Delivery and installation		295,740
SUBTOTAL		$ 2,439,855
General Conditions, Supervision, Bonds, Insurances	11.0%	268,384
Overhead and Profit	4.0%	108,330
SUBTOTAL		$ 2,816,569
Design Contingency	10.0%	281,657
TOTAL CONSTRUCTION, 08/2011		$ 3,098,225

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Wing B & C West - Elevator and Shaft

Component Description	Quantity	Unit Cost	$
Elevator structure and foundations	1 EA	145,000.00	145,000
Elevator exterior cladding, roofing and waterproofing	1 EA	45,000.00	45,000
Elevator equipment	1 EA	130,000.00	130,000
Elevator electrical	1 EA	17,000.00	17,000
Elevator mechanical	1 EA	9,500.00	9,500
SUBTOTAL			$ 346,500
General Conditions, Supervision, Bonds, Insurances	11.0%		38,115
Overhead and Profit	4.0%		15,385
SUBTOTAL			$ 400,000
Design Contingency	10.0%		40,000
TOTAL CONSTRUCTION, 08/2011			$ 440,000

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Wing B & C West - Loading Dock

Component Description	Quantity	Unit Cost	$
Loading dock structure	3,600 SF	120.00	432,000
Loading dock levellers and truck bumpers	3,600 SF	15.00	54,000
Loading dock compactor	1 EA	35,000.00	35,000
Loading dock paving	3,600 SF	16.00	57,600
Loading dock drainage	3,600 SF	4.00	14,400
Loading dock lighting	3,600 SF	6.00	21,600
Loading dock electrical utilities	3,600 SF	4.00	14,400
Loading dock mechanical utilities	3,600 SF	6.00	21,600
SUBTOTAL			$ 650,600
General Conditions, Supervision, Bonds, Insurances	11.0%		71,566
Overhead and Profit	4.0%		28,887
SUBTOTAL			$ 751,053
Design Contingency	10.0%		75,105
TOTAL CONSTRUCTION, 08/2011			$ 826,158

C. P. O'Halloran Associates Inc.
Construction Cost Management

Wing B West - Seismic Strengthening

Component Description	Quantity		Unit Cost	$
Structural strengthening				
New reinforced concrete wall below second floor	60	LF	1,377.50	82,650
New foundations	1	LS	45,000.00	45,000
Infill openings above second floor	8	EA	8,000.00	64,000
Additional drag elements	320	LF	345.00	110,400
Shotcrete wall strengthening below second floor	20	LF	1,155.00	23,100
Column strengthening	12	EA	6,380.00	76,560
Slab repairs at locations of structural work	1	LS	40,000.00	40,000
Architectural, MEP repairs				
Typical Wing - below second floor (included in renovation)				
Typical Wing - above second floor	1	LS	60,000.00	60,000
SUBTOTAL				$ 501,710
General Conditions, Supervision, Bonds, Insurances	11.0%			55,188
Overhead and Profit	4.0%			22,276
SUBTOTAL				$ 579,174
Design Contingency	10.0%			57,917
TOTAL CONSTRUCTION, 08/2011				$ 637,091

First Floor Spine Infill

Component Description	Quantity		Unit Cost	$
Interior partitions and doors	625	SF	45.00	28,125
Interior floor, wall and ceiling finishes	625	SF	25.00	15,625
Fixed equipment and casework	625	SF	12.00	7,500
Plumbing	625	SF	13.00	8,125
Heating, ventilation, air conditioning	625	SF	45.00	28,125
Electrical	625	SF	38.00	23,750
Fire protection	625	SF	6.00	3,750
Interior demolition	625	SF	25.00	15,625
SUBTOTAL				$ 130,625
General Conditions, Supervision, Bonds, Insurances	11.0%			14,369
Overhead and Profit	4.0%			5,800
SUBTOTAL				$ 150,794
Design Contingency	10.0%			15,079
TOTAL CONSTRUCTION, 08/2011				$ 165,873

Staff Residential Units

Concept Design Construction Estimate

		4,956 GSF	
COMPONENT SUMMARY		$ / GSF	$
1. Foundations		9.06	44,900
2. Vertical Structure		5.48	27,136
3. Floor and Roof Structure		21.19	105,000
4. Exterior Cladding		47.46	235,200
5. Roofing and Waterproofing		7.91	39,200
Shell (1 - 5)		91.09	451,436
6. Interior Partitions and Doors		20.08	99,520
7. Interior Finishes - Floors, Walls, Ceilings		15.05	74,600
Interiors (6 - 7)		35.13	174,120
8. Fixed Equipment, Casework and Specialties		8.15	40,400
9. Stairs and Elevators		0.00	-
Equipment, Stairs and Elevators (8 - 9)		8.15	40,400
10. Plumbing		8.64	42,800
11. Heating, Ventilation, Air Conditioning		9.69	48,000
12. Electrical		12.91	64,000
13. Fire Protection		2.62	13,000
Mechanical and Electrical (10 - 13)		33.86	167,800
14. Site Preparation and Demolition		0.81	4,000
15. Site Development		0.00	-
16. Site Utilities		0.00	-
Sitework (14-16)		0.81	4,000
SUBTOTAL (1-16)		169.04	837,756
General Conditions, Supervision, Bonds, Insurances	11.0%	18.59	92,153
Overhead and Profit	4.0%	7.51	37,196
SUBTOTAL		195.14	967,106
Design Contingency	10.0%	19.51	96,711
TOTAL CONSTRUCTION, 08/2011		214.65	$1,063,816
Cost per Residence			$265,954

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Staff Residential Units

Areas and Control Quantities

AREAS

New Construction	4,956	SF

CONTROL QUANTITIES			Ratio to Gross Area
Gross Area	4,956	SF	1.000
Exterior Wall	5,500	SF	1.110
Roof Area	4,956	SF	1.000
Partition Length	450	LF	0.091
Interior Doors x 100	16	EA	0.323

Staff Residential Units

Component Description	Quantity		Unit Cost	$
1. Foundations				
Earthwork, cut, backfill and cart away				-
Earthwork, over excavation and recompaction	5,000	SF	1.76	8,800
Shoring				-
Underpinning				-
Dewatering				-
Reinforced concrete foundations	95	CY	380.00	36,100
Foundation drainage				-
			$	44,900
2. Vertical Structure				
Columns and bracing, steel framing	2	TNS	2,160.00	4,320
Wood framing	5,000	SF	4.00	20,000
Reinforced concrete structural walls, below grade				-
Reinforced concrete structural walls, above grade				-
Reinforced concrete curbs	160	LF	17.60	2,816
Fireproofing to steel framing				-
			$	27,136
3. Floor and Roof Structure				
Floor at grade				
Reinforced concrete slab on grade, 5"	5,000	SF	7.80	39,000
Dowels to existing slab				-
Repairs to existing slab				-
Upper floors				-
Roof				
Roof framing and deck	5,000	SF	12.00	60,000
Fireproofing to steel framing				-
Equipment pads				-
Miscellaneous concrete, metals and carpentry	5,000	SF	1.20	6,000
			$	105,000

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Staff Residential Units

Component Description	Quantity		Unit Cost	$
4. Exterior Cladding				
Wall framing, furring and insulation	5,500	SF	8.80	48,400
Exterior wall finish, new	5,500	SF	16.00	88,000
Exterior wall finish, existing upgraded				-
Exterior windows	1,100	SF	52.00	57,200
Exterior doors, frames and hardware	8	EA	2,400.00	19,200
Interior of exterior wall	5,500	SF	3.20	17,600
Soffits	400	SF	12.00	4,800
Exterior wall signage				-
			$	235,200
5. Roofing and Waterproofing				
Waterproofing				
Walls below grade				-
Floors				-
Decks				-
Roof insulation, batt	5,000	SF	1.40	7,000
Roofing, concrete tile	5,000	SF	4.80	24,000
Green roof				-
Glazed skylights				-
Flashings, gutters and downspouts	5,000	SF	1.40	7,000
Caulking and sealants	5,000	SF	0.24	1,200
			$	39,200
6. Interior Partitions and Doors				
Partition framing and finish	5,000	SF	5.60	28,000
Partition surfacing	10,000	SF	3.60	36,000
Sound insulation	5,000	SF	0.96	4,800
Interior glazed windows and walls				-
Interior doors, transom panels, frames and hardware	16	EA	1,920.00	30,720
Elevator smoke guard				-
			$	99,520

Staff Residential Units

Component Description	Quantity	Unit Cost	$
7. Interior Finishes - Floors, Walls, Ceilings			
Floors	5,000 SF	6.00	30,000
Bases	5,000 SF	0.92	4,600
Walls	5,000 SF	1.60	8,000
Ceilings	5,000 SF	6.40	32,000
		$	74,600
8. Fixed Equipment, Casework and Specialties			
Corner guards, corridor rails and wall protection			-
Toilet partitions and accessories	5,000 SF	0.24	1,200
Casework and countertops	5,000 SF	4.80	24,000
Code signage	5,000 SF	0.24	1,200
Window blinds and shades	5,000 SF	1.60	8,000
Fixed equipment and specialties	5,000 SF	1.20	6,000
		$	40,400
9. Stairs and Elevators			
Staircase flights, floor to floor			-
Ladders			-
Elevators			-
Elevator cab finishes			-
		$	-
10. Plumbing			
Sanitary fixtures and connection piping	5,000 SF	3.20	16,000
Sanitary waste, vent and service piping	5,000 SF	4.00	20,000
Kitchen systems			-
Domestic hot water equipment and pumps	5,000 SF	0.96	4,800
Natural gas service			-
Rainwater drainage			-

Staff Residential Units

Component Description	Quantity	Unit Cost	$
10. Plumbing			
Testing and sterilizing	5,000 SF	0.40	2,000
		$	42,800
11. Heating, Ventilating and Air Conditioning			
Allowance	5,000 SF	9.60	48,000
		$	48,000
12. Electrical			
Allowance	5,000 SF	12.80	64,000
		$	64,000
13. Fire Protection			
Automatic wet pipe fire sprinkler system	5,000 SF	2.60	13,000
		$	13,000
14. Site Preparation and Demolition			
Site protective construction, noise and dust control			-
Hazardous material abatement - see summary page 2			-
Selective demolition			-
Site clearing and grading	5,000 SF	0.80	4,000
		$	4,000

Bike Enclosure

Component Description	Quantity	Unit Cost	$
Bike enclosure structure	1,540 SF	90.00	138,600
Bike enclosure paving	1,540 SF	12.00	18,480
Bike racks	1,540 SF	25.00	38,500
Bike enclosure drainage	1,540 SF	2.00	3,080
Bike enclosure lighting	1,540 SF	1.50	2,310
Bike enclosure electrical utilities	1,540 SF	2.00	3,080
SUBTOTAL		$	204,050
General Conditions, Supervision, Bonds, Insurances	11.0%		22,446
Overhead and Profit	4.0%		9,060
SUBTOTAL		$	235,555
Design Contingency	10.0%		23,544
TOTAL CONSTRUCTION, 08/2011		$	259,099

Sitework

Concept Design Construction Estimate		Phase 1		Phase 2		Total	
		77,700 GSF		33,300 GSF		111,000 GSF	
COMPONENT SUMMARY		$ / GSF	$	$ / GSF	$	$ / GSF	$
1. Foundations		0.00	-	0.00	-	0.00	-
2. Vertical Structure		0.00	-	0.00	-	0.00	-
3. Floor and Roof Structure		0.00	-	0.00	-	0.00	-
4. Exterior Cladding		0.00	-	0.00	-	0.00	-
5. Roofing and Waterproofing		0.00	-	0.00	-	0.00	-
Shell (1 - 5)		0.00	-	0.00	-	0.00	-
6. Interior Partitions and Doors		0.00	-	0.00	-	0.00	-
7. Interior Finishes - Floors, Walls, Ceilings		0.00	-	0.00	-	0.00	-
Interiors (6 - 7)		0.00	-	0.00	-	0.00	-
8. Fixed Equipment, Casework and Specialties		0.00	-	0.00	-	0.00	-
9. Stairs and Elevators		0.00	-	0.00	-	0.00	-
Equipment, Stairs and Elevators (8 - 9)		0.00	-	0.00	-	0.00	-
10. Plumbing		0.00	-	0.00	-	0.00	-
11. Heating, Ventilation, Air Conditioning		0.00	-	0.00	-	0.00	-
12. Electrical		0.00	-	0.00	-	0.00	-
13. Fire Protection		0.00	-	0.00	-	0.00	-
Mechanical and Electrical (10 - 13)		0.00	-	0.00	-	0.00	-
14. Site Preparation and Demolition		1.79	148,550	1.50	49,950	1.79	198,500
15. Site Development		16.59	1,288,700	20.62	686,700	17.80	1,975,400
16. Site Utilities		20.71	1,609,000	9.50	316,500	17.35	1,925,500
Sitework (14-16)		39.21	3,046,250	31.63	1,053,150	36.93	4,099,400
SUBTOTAL (1-16)		39.21	3,046,250	31.63	1,053,150	36.93	4,099,400
General Conditions, Supervision, Bonds, Insurances	11.0%	4.31	335,088	3.48	115,847	4.06	450,934
Overhead and Profit	4.0%	1.74	135,254	1.40	46,760	1.64	182,013
SUBTOTAL		45.26	3,516,591	36.51	1,215,756	42.63	4,732,347
Design Contingency	10.0%	4.53	351,659	3.65	121,576	4.26	473,235
TOTAL CONSTRUCTION, 08/2011		49.78	$3,868,250	40.16	$1,337,332	46.90	$5,205,582

Sitework - Preparation, Development, Utilities - Phase 1

Component Description	Quantity		Unit Cost	$
Site Preparation				
Site clearing and grading	77,700	SF	1.50	116,550
Remove hot water storage tanks	2	EA	16,000.00	32,000
				$ 148,550
Site Development				
Vehicular paving and curbs	5,600	SF	24.00	134,400
Pedestrian paving and curbs	19,600	SF	20.00	392,000
Site walls and miscellaneous structures	1	LS	175,000.00	175,000
Site drainage	1	LS	84,000.00	84,000
Site lighting	1	LS	38,500.00	38,500
Landscaping and irrigation	23,100	SF	18.00	415,800
Site accessories	1	LS	14,000.00	14,000
Site signage	1	LS	35,000.00	35,000
				$ 1,288,700
Site Utilities				
Mechanical				
Sewer	700	LF	180.00	126,000
Grease waste	1	LS	100,000.00	100,000
Water, domestic	700	LF	150.00	105,000
Water, fire	700	LF	150.00	105,000
Gas	700	LF	140.00	98,000
Fuel				-
Chilled water supply and return	950	LF	350.00	332,500
Condenser water	900	LF	300.00	270,000
Electrical				-
Power	900	LF	280.00	252,000
Communications	900	LF	245.00	220,500
				$ 1,609,000

Sitework - Preparation, Development, Utilities - Phase 2

Component Description	Quantity		Unit Cost	$
Site Preparation				
Site clearing and grading	33,300	SF	1.50	49,950
				$ 49,950
Site Development				
Vehicular paving and curbs	8,000	SF	24.00	192,000
Pedestrian paving and curbs	8,400	SF	20.00	168,000
Site walls and miscellaneous structures	1	LS	75,000.00	75,000
Site drainage	1	LS	36,000.00	36,000
Site lighting	1	LS	16,500.00	16,500
Landscaping and irrigation	9,900	SF	18.00	178,200
Site accessories	1	LS	6,000.00	6,000
Site signage	1	LS	15,000.00	15,000
				$ 686,700
Site Utilities				
Mechanical				
Sewer	200	LF	180.00	36,000
Water, domestic	200	LF	150.00	30,000
Water, fire	200	LF	150.00	30,000
Gas	200	LF	140.00	28,000
Chilled water supply and return	250	LF	350.00	87,500
Electrical				
Power	200	LF	280.00	56,000
Communications	200	LF	245.00	49,000
				$ 316,500

Central Utility Plant

Concept Design Construction Estimate		Phase 1		Phase 2		Total	
		2,100 GSF		2,100 GSF		2,100 GSF	
COMPONENT SUMMARY		$ / GSF	$	$ / GSF	$	$ / GSF	$
1. Foundations		18.03	37,870	0.00	-	18.03	37,870
2. Vertical Structure		106.67	224,000	0.00	-	106.67	224,000
3. Floor and Roof Structure		42.00	88,200	0.00	-	42.00	88,200
4. Exterior Cladding		31.86	66,900	0.00	-	31.86	66,900
5. Roofing and Waterproofing		8.30	17,430	0.00	-	8.30	17,430
Shell (1 - 5)		206.86	434,400	0.00	-	206.86	434,400
6. Interior Partitions and Doors		8.09	16,991	0.00	-	8.09	16,991
7. Interior Finishes - Floors, Walls, Ceilings		2.50	5,250	0.00	-	2.50	5,250
Interiors (6 - 7)		10.59	22,241	0.00	-	10.59	22,241
8. Fixed Equipment, Casework and Specialties		3.30	6,930	0.00	-	3.30	6,930
9. Stairs and Elevators		10.48	22,000	0.00	-	10.48	22,000
Equipment, Stairs and Elevators (8 - 9)		13.78	28,930	0.00	-	13.78	28,930
10. Plumbing		15.00	31,500	0.00	-	15.00	31,500
11. Heating, Ventilation, Air Conditioning		940.33	1,300,700	320.95	674,000	940.33	1,974,700
12. Electrical		270.48	543,000	11.90	25,000	270.48	568,000
13. Fire Protection		3.25	6,825	0.00	-	3.25	6,825
Mechanical and Electrical (10 - 13)		896.20	1,882,025	332.86	699,000	1229.06	2,581,025
14. Site Preparation and Demolition		3.57	7,500	0.00	-	3.57	7,500
15. Site Development		0.00	-	0.00	-	0.00	-
16. Site Utilities		0.00	-	0.00	-	0.00	-
Sitework (14-16)		3.57	7,500	0.00	-	3.57	7,500
SUBTOTAL (1-16)		1131.00	2,375,096	332.86	699,000	1463.86	3,074,096
General Conditions, Supervision, Bonds, Insurances	11.0%	124.41	261,261	36.61	76,890	161.02	338,151
Overhead and Profit	4.0%	50.22	105,454	14.78	31,036	65.00	136,490
SUBTOTAL		1305.62	2,741,810	384.25	806,926	1689.87	3,548,736
Design Contingency	10.0%	130.56	274,181	38.43	80,693	168.99	354,874
TOTAL CONSTRUCTION, 08/2011		1436.19	$3,015,991	422.68	$887,618	1858.86	$3,903,609

Central Plant - Phase 1

Component Description	Quantity		Unit Cost	$
1. Foundations				
Earthwork, cut, backfill and cart away				-
Earthwork, over excavation and recompaction	2,100	SF	2.20	4,620
Shoring				-
Underpinning				-
Dewatering				-
Reinforced concrete foundations	70	CY	475.00	33,250
Foundation drainage				-
			$	37,870
2. Vertical Structure				
Columns and bracing, steel framing				-
Wood framing				-
Reinforced concrete structural walls, below grade				-
CMU structural walls, above grade	8,000	SF	28.00	224,000
Reinforced concrete curbs				-
Fireproofing to steel framing				-
			$	224,000
3. Floor and Roof Structure				
Floor at grade				
Reinforced concrete slab on grade, 5"	2,100	SF	15.00	31,500
Dowels to existing slab				-
Repairs to existing slab				-
Upper floors				-
Roof				
Roof framing and deck	2,100	SF	25.00	52,500
Fireproofing to steel framing				-
Equipment pads				-
Miscellaneous concrete, metals and carpentry	2,100	SF	2.00	4,200
			$	88,200

Central Plant - Phase 1

Component Description	Quantity	Unit Cost	$
4. Exterior Cladding			
Wall framing, furring and insulation			-
Exterior wall finish, new	6,000 SF	8.00	48,000
Exterior wall finish, existing upgraded			-
Exterior louvers	220 SF	45.00	9,900
Exterior doors, frames and hardware	3 EA	3,000.00	9,000
Interior of exterior wall			-
Soffits			-
Exterior wall signage			-
		$	66,900
5. Roofing and Waterproofing			
Waterproofing			
Walls below grade			-
Floors			-
Decks	2,100 SF	8.00	16,800
Roof insulation, batt			-
Roofing, concrete tile			-
Green roof			-
Glazed skylights			-
Flashings, gutters and downspouts			-
Caulking and sealants	2,100 SF	0.30	630
		$	17,430
6. Interior Partitions and Doors			
Partition framing and finish	709 SF	7.00	4,961
Partition surfacing	1,418 SF	4.50	6,379
Sound insulation	709 SF	1.20	851
Interior glazed windows and walls			-
Interior doors, transom panels, frames and hardware	2 EA	2,400.00	4,800
Elevator smoke guard			-
		$	16,991

Aberdeen-Inverness Residence Hall Common Area Improvement **# 10-2045**
University of California Riverside **30-Aug-11**

Central Plant - Phase 1

Component Description	Quantity	Unit Cost	$
7. Interior Finishes - Floors, Walls, Ceilings			
Floors	2,100 SF	2.00	4,200
Bases	2,100 SF	0.50	1,050
Walls			-
Ceilings			-
		$	5,250
8. Fixed Equipment, Casework and Specialties			
Corner guards, corridor rails and wall protection			-
Toilet partitions and accessories			-
Casework and countertops	2,100 SF	2.00	4,200
Code signage	2,100 SF	0.30	630
Window blinds and shades			-
Fixed equipment and specialties	2,100 SF	1.00	2,100
		$	6,930
9. Stairs and Elevators			
Staircase flights, floor to floor	1 EA	22,000.00	22,000
Ladders			-
Elevators			-
Elevator cab finishes			-
		$	22,000
10. Plumbing			
Sanitary fixtures and connection piping			-
Sanitary waste, vent and service piping			-
Floor sinks	2,100 SF	2.00	4,200
Domestic hot water equipment and pumps			-
Generator flue	2,100 SF	5.00	10,500

Central Plant - Phase 1

Component Description	Quantity		Unit Cost	$
10. Plumbing				
Generator fuel piping and fill point	2,100	SF	4.00	8,400
Natural gas service				-
Rainwater drainage	2,100	SF	3.50	7,350
Testing and sterilizing	2,100	SF	0.50	1,050
				$ 31,500
11. Heating, Ventilating and Air Conditioning				
Heat generation and cooling equipment - Phase 1				-
Chillers	150	TN	680.00	102,000
Cooling towers	900	TN	235.00	211,500
Variable frequency drives	1	LS	45,000.00	45,000
Cooling tower clean system	1	LS	65,000.00	65,000
Chemical pot feeder	1	LS	4,400.00	4,400
Water treatment	1	LS	15,000.00	15,000
Pumps and tanks				-
Primary chilled water pumps	3	EA	12,300.00	36,900
Secondary chilled water pumps with VFD's	3	EA	12,100.00	36,300
Condenser water pumps	3	EA	9,600.00	28,800
Air separators	1	LS	2,300.00	2,300
Expansion tank	1	LS	6,000.00	6,000
Piping and insulation	1	LS	500,000.00	500,000
Ventilation equipment	1	LS	32,500.00	32,500
Controls, DDC and energy management system, 100 PTS	1	LS	120,000.00	120,000
Testing, adjusting and balancing	1	LS	45,000.00	45,000
Demolition, chillers, cooling towers and piping	1	LS	50,000.00	50,000
				$ 1,300,700
12. Electrical				
Main power service - 1000 KVA unit substation, switchboards and feeders	1	LS	270,000.00	270,000

Aberdeen-Inverness Residence Hall Common Area Improvement **# 10-2045**
University of California Riverside **30-Aug-11**

Central Plant - Phase 1

Component Description	Quantity		Unit Cost	$
12. Electrical				
New transformer 225 KVA to existing unit substation	1	LS	63,000.00	63,000
Emergency power 150 KW, boards, switches, feeders and day tank	1	LS	150,000.00	150,000
Equipment connections and switches	1	LS	25,000.00	25,000
Power panel boards, feeders, outlets and grounding	1	LS	12,000.00	12,000
Lighting, fixtures, conduit and wire	1	LS	7,500.00	7,500
Telephone and data outlets, conduit and cabling	1	LS	1,000.00	1,000
Communications conduit	1	LS	1,500.00	1,500
TV outlets, conduit and wire				-
Paging system, conduit, wiring and devices				-
Fire alarm system, conduit, wiring and devices	1	LS	3,000.00	3,000
Rescue call system, conduit, wiring and devices				-
Security system, conduit, wiring and devices				-
Demolition, solar hot water heaters, tanks and piping	1	LS	10,000.00	10,000
				$ 543,000
13. Fire Protection				
Automatic wet pipe fire sprinkler system	2,100	SF	3.25	6,825
				$ 6,825
14. Site Preparation and Demolition				
Site protective construction, noise and dust control				-
Hazardous material abatement - see summary page 2				-
Selective demolition				-
Site clearing and grading	1	LS	7,500.00	7,500
				$ 7,500

Central Plant - Phase 2

Component Description	Quantity		Unit Cost	$
11. Heating, Ventilating and Air Conditioning				
Heat generation and cooling equipment - Phase 2				
Chillers	600	TN	680.00	408,000
Pumps and tanks				
Primary chilled water pumps	2	EA	12,300.00	24,600
Secondary chilled water pumps with VFD's	2	EA	12,100.00	24,200
Condenser water pumps	2	EA	9,600.00	19,200
Piping allowance	1,200	LF	85.00	102,000
Controls, DDC and energy management system, 80 PTS	1	LS	96,000.00	96,000
				$ 674,000
12. Electrical				
Equipment connections and switches	1	LS	25,000.00	25,000
				$ 25,000

Basement Spine Improvements

Component Description	Quantity		Unit Cost	$
Interior partitions and doors	4,000	SF	25.00	100,000
Interior floor, wall and ceiling finishes	4,000	SF	20.00	80,000
Fixed equipment and casework	4,000	SF	8.00	32,000
Plumbing	4,000	SF	9.00	36,000
Heating, ventilation, air conditioning	4,000	SF	36.00	144,000
Electrical	4,000	SF	30.00	120,000
Fire protection	4,000	SF	6.00	24,000
Interior demolition	4,000	SF	20.00	80,000
SUBTOTAL				$ 616,000
General Conditions, Supervision, Bonds, Insurances	11.0%			67,760
Overhead and Profit	4.0%			27,350
SUBTOTAL				$ 711,110
Design Contingency	10.0%			71,111
TOTAL CONSTRUCTION, 08/2011				$ 782,221

Hazardous Material Abatement - Ambient Environmental Inc. Estimate

Component Description	Quantity	Unit Cost	$
Ambient Environmental Inc. Estimate dated March 2, 2011			
Fireproofing	2,500 SF	9.00	22,500
Pipe insulation	857 LF	7.00	6,000
Black mastic	60 LF	6.00	360
SUBTOTAL			$ 28,860
General Conditions, Supervision, Bonds, Insurances	11.0%		3,175
Overhead and Profit	4.0%		1,281
SUBTOTAL			$ 33,316
Design Contingency	10.0%		3,332
TOTAL CONSTRUCTION, 08/2011			$ 36,648

Heating Hot Water Piping Distribution - Phase 1

Component Description	Quantity	Unit Cost	$
10. Plumbing			
			$ -
11. Heating, Ventilating and Air Conditioning			
Piping and insulation - boilers	8 EA	63,750.00	510,000
Trade demolition	120 HR	125.00	15,000
			$ 525,000
12. Electrical			
			$ -
SUBTOTAL			$ 525,000
General Conditions, Supervision, Bonds, Insurances	11.0%		57,750
Overhead and Profit	4.0%		23,310
SUBTOTAL			$ 606,060
Design Contingency	10.0%		60,606
TOTAL CONSTRUCTION, 08/2011			$ 666,666

Boiler Replacement - Phase 2

Component Description	Quantity		Unit Cost	$
10. Plumbing				
Industrial water connections for new HVAC equipment	8	EA	2,000.00	16,000
Natural gas service	8	EA	3,300.00	26,400
			$	42,400
11. Heating, Ventilating and Air Conditioning				
Heating hot water boilers 1750 Mbtu/hr, gas fired	8	EA	46,500.00	372,000
Primary hot water pumps	8	EA	8,800.00	70,400
Secondary heating hot water pumps	3	EA	8,391.00	25,173
Water treatment	8	EA	2,000.00	16,000
Piping and insulation - see phase 1				-
Ventilation equipment	8	EA	3,000.00	24,000
Controls, DDC and energy management system, 40 PTS for boilers	40	EA	1,200.00	48,000
Testing, adjusting and balancing	8	EA	2,000.00	16,000
Trade demolition	150	HR	125.00	18,750
			$	590,323
12. Electrical				
Equipment connections and switches for boilers	8	EA	3,000.00	24,000
			$	24,000
SUBTOTAL			$	656,723
General Conditions, Supervision, Bonds, Insurances	11.0%			72,240
Overhead and Profit	4.0%			29,159
SUBTOTAL			$	758,121
Design Contingency	10.0%			75,812
TOTAL CONSTRUCTION, 08/2011			$	833,933

Temporary Trailers for RSO

Component Description	Quantity		Unit Cost	$
Temporary trailers including sitework	3,150	SF	150.00	472,500
SUBTOTAL			$	472,500
General Conditions, Supervision, Bonds, Insurances	11.0%			51,975
Overhead and Profit	4.0%			20,979
SUBTOTAL			$	545,454
Design Contingency	10.0%			54,546
TOTAL CONSTRUCTION, 08/2011			$	600,000

Air Handling Unit Coil Replacement - Future

Component Description	Quantity	Unit Cost	$
10. Plumbing			
			$ -
11. Heating, Ventilating and Air Conditioning			
New air handling unit coils	8 EA	18,000.00	144,000
			$ 144,000
12. Electrical			
			$ -
SUBTOTAL			$ 144,000
General Conditions, Supervision, Bonds, Insurances	11.0%		15,840
Overhead and Profit	4.0%		6,394
SUBTOTAL			$ 166,234
Design Contingency	10.0%		16,623
TOTAL CONSTRUCTION, 08/2011			$ 182,857

Demolish Existing Steam Boilers and Piping - Future

Component Description	Quantity	Unit Cost	$
Demolish existing steam boilers	2 EA	25,000.00	50,000
Demolish and remove steam piping	165,149 SF	0.85	140,377
SUBTOTAL			$ 190,377
General Conditions, Supervision, Bonds, Insurances	11.0%		20,941
Overhead and Profit	4.0%		8,453
SUBTOTAL			$ 219,771
Design Contingency	10.0%		21,977
TOTAL CONSTRUCTION, 08/2011			$ 241,748

Residential Wings - Replace Rooftop Mechanical and Re-Roof - Future

Component Description	Quantity	Unit Cost	$
Heating, Ventilating and Air Conditioning			
New air handling units 20,000 CFM each average	8 EA	170,000.00	1,360,000
Controls, DDC and energy management system	8 EA	25,000.00	200,000
Clean ductwork	8 EA	35,000.00	280,000
Replace duct insulation in penthouse	8 EA	10,000.00	80,000
Demolition, air handling units	8 EA	6,250.00	50,000
			$ 1,970,000
Electrical			
Equipment connections and switches	8 EA	3,500.00	28,000
			$ 28,000
Roofing			
New roofing, insulation, equipment pads and flashings	56,000 SF	14.50	812,000
Rebuild / repair mechanical penthouse	8 EA	50,000.00	400,000
Demolition, roofing	56,000 SF	1.75	98,000
Demolition abandoned roof mounted solar hot water system D East and West (C East with estimate for C	400 HR	120.00	48,000
			$ 1,358,000
SUBTOTAL			$ 3,356,000
General Conditions, Supervision, Bonds, Insurances	11.0%		369,160
Overhead and Profit	4.0%		149,006
SUBTOTAL			$ 3,874,166
Design Contingency	10.0%		387,417
TOTAL CONSTRUCTION, 08/2011			$ 4,261,583

Residential Wings - Replace MEP Systems and Repair Finishes - Future

Component Description	Quantity	Unit Cost	$
Plumbing			
New fixtures, water, waste and vent piping, natural gas piping and rain water drainage.			
Wing A	32,974 SF	15.00	494,610
Wing B	33,260 SF	15.00	498,900
Wing D	33,250 SF	15.00	498,750
Wing E	33,242 SF	15.00	498,630
First Floor Spine / Apts. / Laundries	13,082 SF	15.00	196,230
Basement and Penthouses	19,341 SF	5.00	96,705
			$ 2,283,825
Heating Ventilation and Air Conditioning			
New diffusers, new thermostat controls at each building wing floor, ductwork cleaning, testing and balancing.			
Wing A	32,974 SF	9.50	313,253
Wing B	33,260 SF	9.50	315,970
Wing D	33,250 SF	9.50	315,875
Wing E	33,242 SF	9.50	315,799
First Floor Spine / Apts. / Laundries	13,082 SF	9.50	124,279
Basement and Penthouses	19,341 SF	6.00	116,046
			$ 1,501,222
Electrical			
New main service, power, lighting, tel / data conduit and outlets and security system.			
Wing A	32,974 SF	24.00	791,376
Wing B	33,260 SF	24.00	798,240
Wing D	33,250 SF	24.00	798,000
Wing E	33,242 SF	24.00	797,808
First Floor Spine / Apts. / Laundries	13,082 SF	24.00	313,968
Basement and Penthouses	19,341 SF	10.00	193,410
			$ 3,692,802

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Residential Wings - Replace MEP Systems and Repair Finishes - Future

Component Description	Quantity		Unit Cost	$
Repairs				
Replace interior finishes and repair interior walls.				
Wing A	32,974	SF	20.00	659,480
Wing B	33,260	SF	20.00	665,200
Wing D	33,250	SF	20.00	665,000
Wing E	33,242	SF	20.00	664,840
First Floor Spine / Apts. / Laundries	13,082	SF	20.00	261,640
Basement and Penthouses	19,341	SF	5.00	96,705
				$ 3,012,865
SUBTOTAL				$ 10,490,714
General Conditions, Supervision, Bonds, Insurances	11.0%			1,153,979
Overhead and Profit	4.0%			465,788
SUBTOTAL				$ 12,110,480
Design Contingency	10.0%			1,211,048
TOTAL CONSTRUCTION, 08/2011				$ 13,321,528

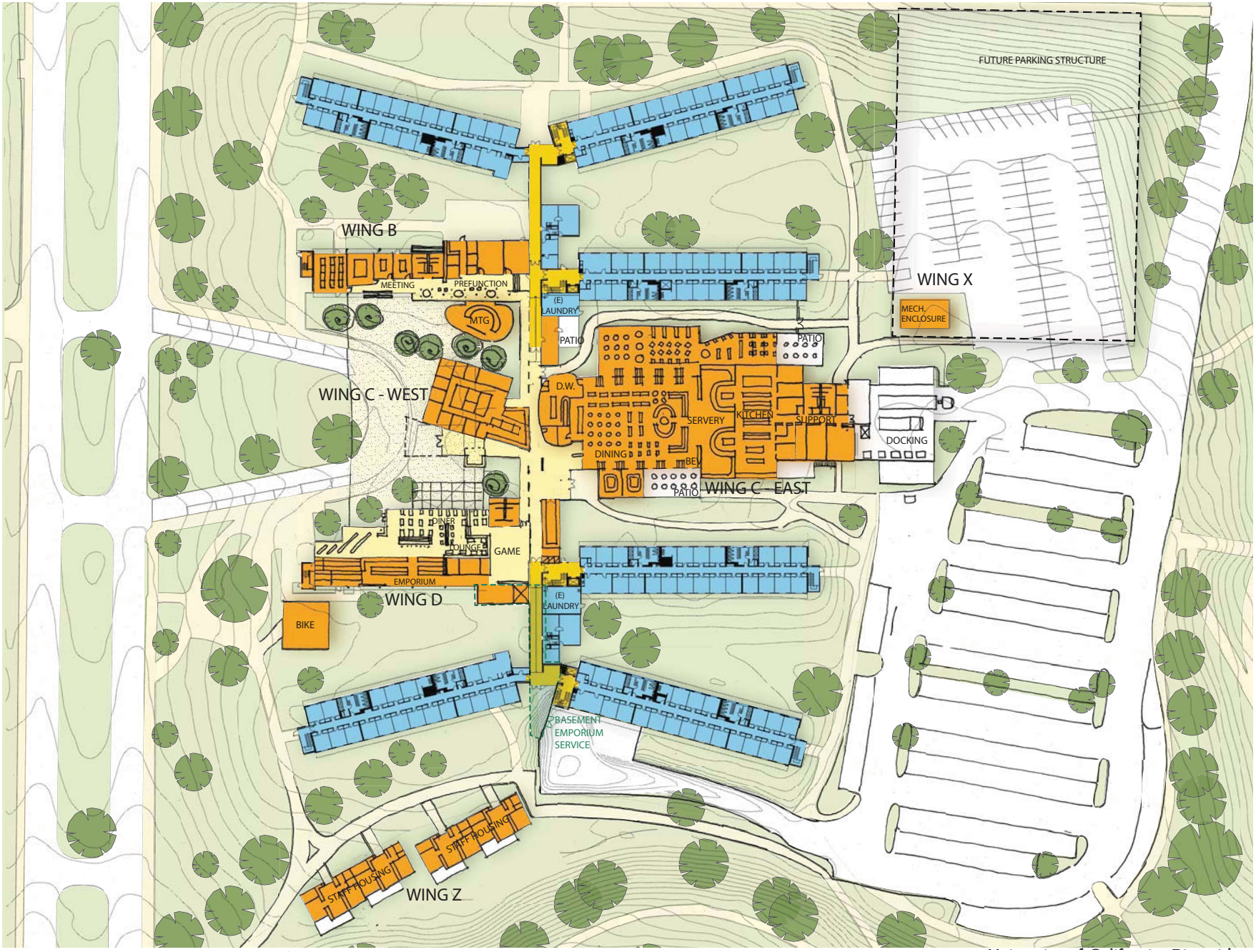
6.2

ALTERNATIVE STUDIES

The following preliminary concept diagrams are included for reference. Alternate Concept 1 sought to renovate and reuse an expanded version of Wing C East for the Residential Restaurant facility. All subsequent Concepts proposed the construction of a new wing or freestanding building for the Residential Restaurant facility: Alternate Concept 2 envisioned its location at Wing C West; Alternative Concept 3 considered a new building in the parking lot east of Wing D East. Alternate Concepts 4, 5 and 6 considered by the Project Management Team (PMT) as described in Section 6.7 were never graphically illustrated.

The Preferred Concept (Alternate 7) described in Section 2.3 was developed from desirable aspects of Alternative Concept 2, as selected by the PMT.

SITE PLAN - ALTERNATE CONCEPT 1

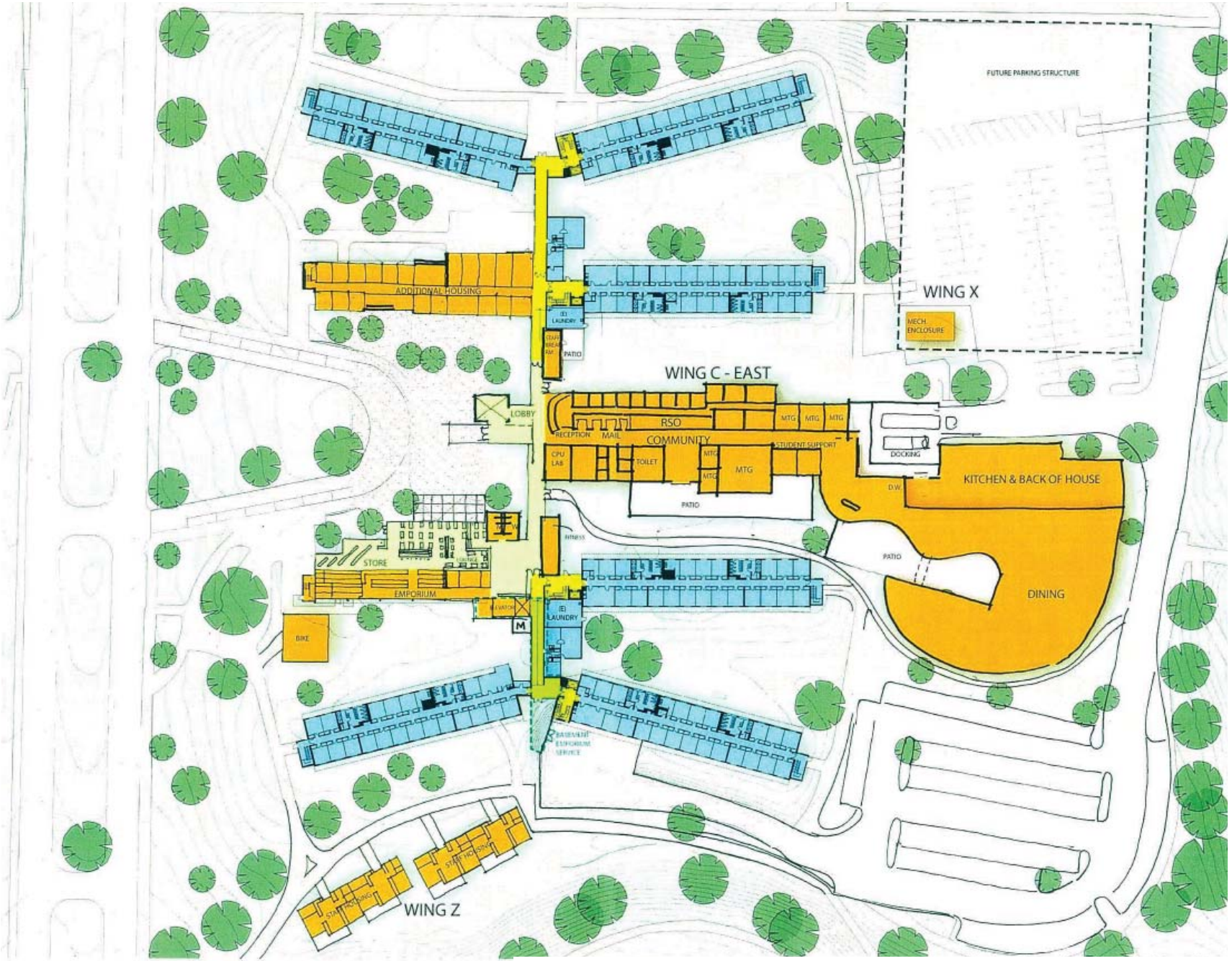


50′ 100′ 200′

SITE PLAN - ALTERNATE CONCEPT 2

50' 100' 200'

SITE PLAN - ALTERNATE CONCEPT 3



50' 100' 200'

6.3

INFRASTRUCTURE REPORTS

The following engineering reports document observations and evaluations of the existing A-I building conditions.

- Mechanical, Electrical, Plumbing
- Structural
- Roofing

STUDY OF CURRENT MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS

TABLE OF CONTENTS

PHOTOGRAPH INDEX

MECHANICAL SYSTEMS

INTRODUCTION

The objective of this study is to assess the current condition of the MEP system in the Aberdeen Inverness Residence Hall to provide basis of analysis for future renovation and improvement.

The Aberdeen Inverness Residence Hall consists of five wings as indicated in Figure 1. The facility was originally built in 1959. The HVAC system is independent of the campus chilled water and heating hot water system and serves this Aberdeen and Inverness Building only. The central heating plant comprises two steam boilers with associated pumps and was installed when the building was built in 1959. Two centrifugal chillers have been installed in 1974 to replace the original evaporative cooling system to provide comfort during summer. The air distribution system consists of constant flow multi-zone air handling units located in the penthouses of each building block wing on the roofs and serves the respective wing of that block. The mechanical ventilation system consists of roof mounted exhaust fans to serve restroom exhaust, kitchen, laundry, transformer rooms etc.

Based on ASHRAE data for HVAC equipment life expectancy, mechanical equipment life span range from 15 to 27 years, piping and ductwork has life expectancy of 30 years. The mechanical equipment and the piping and ductwork in the Aberdeen Inverness Residence Hall have been operated for almost 50 years and well beyond the life expectancy of the equipment, piping and ductwork. The observation of the system reveals that the system to be aged and in fair to poor condition.

BOILERS

The heating plant in the basement of Aberdeen Inverness Residence Hall was originally built in 1959. It consists of two 13,650 MBH gas fire steam boilers, two boiler feed pumps with 82.7 GPM at 70 feet capacity of each, one 42 inch diameter 96 inch long condensate receiver and associated auxiliary equipment. The boilers installed in 1959 are still under operation to produce steam to heat exchangers for

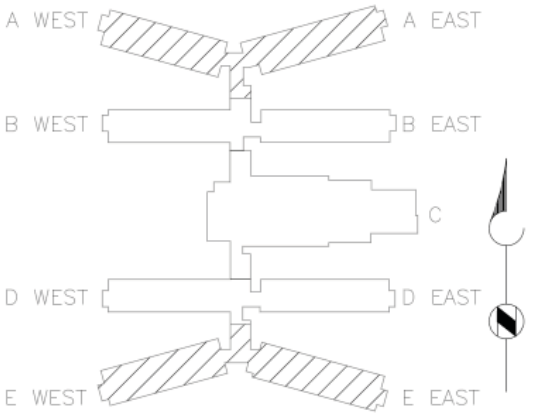


Figure 1: Aberdeen Inverness Residence Hall Location Plan

Figure 2: 13,650 MBH Steam Boilers in the Basement

Figure 3: Pumps of Steam Heating System in the Basement

production of domestic hot water and to steams coils of air handling units at various locations. The boilers operate on a run and standby basis.

The life expectancy of a steam boiler is normally thirty-five (35) years depending on the maintenance and operation condition of the boiler. For the steam boilers over fifty (50) years in Aberdeen and Inverness Residence Hall the condition of the boilers is fair in that they are operational and well maintained. However, the existing steam boilers are way beyond their life expectancy and they could stop operation at any time. In fact when a boiler is in need of repair there are no maintenance manuals for the boilers. Thus the maintenance personnel have to rely on personal history of past failures to get the failed boiler up and running again. Considering that the boiler plant is the only heating source for this residence hall for both domestic hot water and thermal comfort system, failure of both the boilers operation will make the residence halls uninhabitable during the winter periods.

The condition of the pumps and associated piping for the steam boiler system is poor as the piping is rusted and has leaks in some of the fittings. The pumps should be overhauled and possibly even replaced if UCR decides to keep the existing steam boilers in operation for a longer period of time (more than 3 years). Piping insulation is broken in many locations and piping is rusty though is still in operation and will be for the foreseeable future.

As soon as funding becomes available, we recommend that the steam boilers to be replaced with heating hot water boilers in the near future. The steam boilers are very expensive to maintain and the next time they fail to operate they may not be repairable.

The issue with steam boilers is that they require experienced steam mechanics to run and maintain them. They also tend to be inefficient when compared to the modern hot water boiler.

However, replacement of steam boilers to hot water boilers implies that the steam heating piping system in the entire facility will be inappropriate to the new boiler system. Steam piping is generally smaller than heating hot water piping and therefore will be inappropriate for a heating hot water system.

It is suggested that hot water boilers for the domestic hot water system only should be installed at the first stage to separate the domestic hot water system with the thermal comfort heating system.

The emergency generator which is located in the same room as the boilers is not in compliance with current code. The emergency generator should be relocated outside the boiler room and the area could be used for the new domestic hot water boiler(s).

In selecting the boilers in the design phase a life cycle cost will be carried out to ensure the equipment selected is not only energy efficient but also minimizes maintenance.

Figure 4: Cooling Tower in the Courtyard of Loading Dock

COOLING TOWER

Two centrifugal chillers have been installed in 1974 with only one cooling tower. A cooling tower life expectancy is usually 20 years. The 35 year old cooling tower (BCA VLT490B) appears short of capacity with its age. Based on the operation and maintenance staff of the University, during a hot summer day, the return water temperature can reach more than 100 degrees F and therefore the normal operation of the chillers cannot be maintained.

Inspection of the cooling tower also reveals that the tower is in bad condition. The vibration support of the tower is severely rusted. The chemical water treatment plant is out of order and water is constantly discharged to the drain causing a huge waste of water.

Figure 5: Cooling Tower in Rusty Condition

Figure 6: 300 Ton Centrifugal Chillers

There were two condenser water pumps located in the chiller room. One of the condenser pumps has been demolished at some stage and only one condenser water pump is available and the pump is rusty. This reduces the standby capability of the cooling water system.

It is recommended to replace the cooling tower with associated water pumps as soon as possible. We recommend the project provide a dedicated enclosure to the cooling tower.

CHILLERS

Two water cooled centrifugal chillers with 300 tons capacity each have been installed in 1974. It has been confirmed that the chillers are duty and stand-by. One chiller has sufficient capacity to provide thermal comfort for the whole building in summer.

The condition of the chillers is good for their age. However, the refrigerant used is chlorofluorocarbons (CRC) refrigerant R-11 which has been phase out fifteen years ago. The refrigerant R-11 production has been stopped since 1995. Today R11 refrigerant is obtained from reclaimed units that are no longer in operation. This guarantees that that the service and maintenance cost will increase significantly with time.

The possibility of replacing refrigerant only without changing the chiller has been studied and discussed with a number of chiller manufacturers (Carrier, York, McQuay). We have been told that the cost of replacing the refrigerant of the chiller is very high and comparable with installing a new chiller. In addition, the efficiency, performance, and life expectancy of a retrofit chiller cannot be guaranteed.

New chillers offer great improvements in operating efficiency over units installed in the past 10-15 years. Even if the existing chiller has been well maintained and is operating efficiently, upgrading to a new generation, high efficiency chiller typically will result in reduced annual energy requirements of at least 25 percent.

System reliability is another factor that needs to be considered when evaluating chiller replacements. As chillers age, the frequency of breakdowns and the cost of maintenance increases. The maintenance requirements will increase with chiller age. For older chillers, getting replacement parts might become very difficult, resulting in prolonged downtime.

Finally, refrigerant type used in the old chillers needs to be considered. While no shortage exists yet for chlorofluorocarbons (CFC), the price is increasing. Refrigerant that loses its charge in an older chiller using CFCs could be very expensive to replace, and the result could be lengthy downtime.

The existing chillers operate well and could well run for the next 5 years with little repair. Thus while the chillers are well maintained and could operate for many years to come the dependency of out of date refrigerants is a major concern and we would recommend that the chillers be replaced under this project

AIR DISTRIBUTION SYSTEM

Air handling units are constant flow multi-zone with reheating coil. This is energy inefficient and cannot comply with the current energy efficiency code in California. The air handling units in the penthouses on the roofs of each residential wing are in poor to fair condition. The concerns are:

- The base plates of some air handling units are in bad condition.
- The air handling units are multi-zone units and do not meet current energy efficiency code requirements.
- The drain pans in the majority of the units are corroded and subject to leaking
- For the most part, the controls on the multizone dampers are not operable. The controls are antiquated (pneumatic)
- In a number of the penthouses chilled water piping was leaking at the coils.

Figure 7: Rusty Baseplate Found on Most AHUs

Figure 8: Flexible Connection Broken on Most AHUs

Figure 9: Crack on Baseplate of AHU (Building A West Wing)

Figure 10: Nonworking Instrument on Control System

- In each of the penthouses the ductwork insulation needed to be replaced.

- Flexible connections to the ducting were torn in a number of the AHU's in multiple places.

Control System Issues

The automatic control of the air handling units is pneumatic and overall controls to the multi-zone dampers and to the outside air dampers are no longer operational. Also as the air handling units are not part of a smoke control system they should shut down in case of fire. The current situation is that the air handling units controls have not been linked to the fire alarm system. In addition, in half of the air handling units the supply fan and return fan are not interlocked. When the supply fan stopped the return fan was still running. This can cause increased pressure difference between indoors and outdoors resulting in difficulty opening or closing doors, or significant air infiltration. These issues will be addressed during the design phase of the project

As can be seen from Figure 10 below, a number of the instrument and measuring devices on the HVAC system do not work correctly. All the air handling units are equipped with economizer control. Thus if the system's temperatures cannot be measured then the economizer will not operate correctly. As can be seen from Figure 10, the control dials are not measuring the temperatures.

Zone Control Issues

The multi-zone units have reheating coils and thermostats on each zone. Each floor of the residential halls have two zones, each zone with its own thermostat. As a result all the rooms in that zone will be subjected to the temperature setting at the one thermostat. This may result in some rooms being uncomfortable for the occupants.
It is recommended to introduce variable air volume system to the air handling units. The variable air volume system can be at room level offering room by room control or at the air handling level (energy savings when the one control thermostat is satisfied).

With the former control boxes are need at each room and this will prove to be very expensive. With the latter option the air handling unit could be variable air volume and the flow rates adjusted when the occupant opens or closes a manual damper at the supply grill in each room. This will allow occupants in individual rooms to have a certain level of control by adjusting the air volume to each room. In addition, multiple thermostats can be used in each zone and an average of the thermostats will be used to control each zone.

The systems will become more energy efficient and the occupants will obtain better control within their individual rooms.

- The cooling coil in most of the air handling units is in reasonably good condition. However when the building was built the outside air requirements for people was a lot less then than it is now. Thus to comply with current codes we will need to increase the outside airflow which in turn requires the cooling coils to increase in size. This should be taken into account when sizing the central plant.

- Insulation on the ductwork was broken in various locations. Some exposed ducts appear rusty, not labeled or some fire dampers are not accessible.

- Some areas have black dust and fiberglass particulate blowing out from the air diffusers, and duct cleaning needs to be performed to increase the air quality of the air provided by the HVAC system.

- Piping system is rusty, leaking in some places and insulation is deteriorated

Figure 11: Zone Control Depends on Location of Thermostats


Figure 12: Rusty Duct, Broken Insulation and No Label to Fire Damper

Figure 13: Rusty Piping and Deteriorated insulation

BUILDING ENERGY MANAGEMENT CONTROL SYSTEM

Currently the building does not have an energy management control system. Thus if there is an issue in the building the maintenance staff have to visit the building to determine what the issue is. This is a waste of resources and thus the new design will include an energy management system.

RECOMMENDATIONS

Based on the above, the entire HVAC system in the Aberdeen Inverness Residence Hall is well beyond its life expectancy and causes problems in energy efficiency, air balance, and indoor air quality. Based on the available funds and assuming phasing will take place we have provided a recommended scope of work in section 4.1 of this DPP.

ELECTRICAL SYSTEMS

INTRODUCTION

The objective of this study is to assess the current condition of the Electrical system in the Aberdeen Inverness Residence Hall to provide basis of analysis for future electrical renovations and improvements.

The Aberdeen-Inverness Residence Hall consists of five wings as indicated Figure 14. The facility was originally built in 1959. The original electrical service was 4.16 KV then upgraded to 12 KV in the early 1990's, the time when all substations in A-I hall were replaced. Since that time, no major upgrades have been made to the Electrical Systems except some minor additions in the main dining area.

In 2009 the Fire Alarm System was upgraded to Simplex 4900-U to accommodate the addition ofAudio/Visual warning system in the Dormitory areas. Common Areas were not included in this upgrade; it is therefore our recommendation that the Common Areas fire alarm system be upgraded.

The basis of the Electrical systems assessment was derived from the available "As-Built Drawings" obtained from the University, the 2002 East Campus Infrastructure DPP done by Bechard Long & Associates, Inc. and also through site visits and visual inspections of existing service equipment.

INCOMING ELECTRICAL SERVICE AND MAIN EQUIPMENT ROOM

The main electrical service to the Residence Hall is at 12KV connected to one of the six 12KV circuits from the Campus Radial Distribution System. The Main Electrical Room is located in the Basement of Building C where the 12KV service is terminated and distributed to the other four wings of the Residence Hall. Wing C is situated at the center of the Residence Hall making it an ideal location not only for power distribution but also for all the utility services to the buildings. Two Unit Substations, 750KVA at 480V, 3-phase, 3-wire feeding the main Mechanical/Plumbing equipment and 300KVA at 208/120V, 3-phase, 4-wire serving the general power and lighting are located in Wing C.

NORMAL POWER SERVICE

The Electrical power service to the Residence Hall is connected to the 12KV Campus Distribution System. The building power system is served from two utilization voltages, 480V, 3-phase, 3-wire and 208/120V, 3-phase, 4-wire system. Mechanical and Plumbing equipment are fed from the 480V system and the Residence Hall's general power and lighting are fed from the 208/120V system. The utilization voltages are transformed from the 12KV Campus Distribution System through Unit Substation Transformers installed in each of the five wings of the Aberdeen Inverness Residence Hall. The original Unit Substations in the building were replaced and upgraded to 12KV in the early 1990's per the East Campus Infrastructure, DPP done in June 2002 by Bechard Long & Associates, Inc.

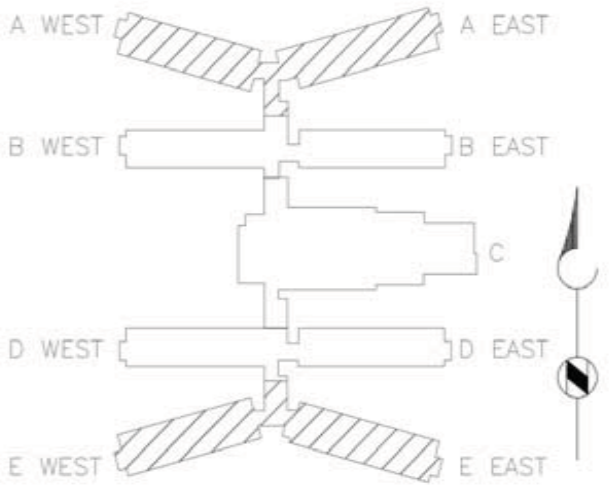


Figure 14 - Aberdeen Inverness Residence Hall Location Plan

Figure 15 - The 750 KVA, 480 V Unit Substation Serving the Chillers, Boilers, and Pumps

Switchgear and Distribution Boards are the original equipment installed when the building was built in 1959, and have deteriorated. Replacement of Switchgear, Panels and Distribution Boards could be done on a wing by wing or floor by floor basis.

After calculating the existing connected loads of the 750KVA Unit Substation which serves the Chillers and Pumps, we found out that it has no spare capacity and cannot take any new additional 480 V loads. The Electric Meter reading provided is the summation of the power consumptions of all the wings and therefore cannot be used as the basis of measurement for each wing power usage. Based on our analysis of the "As-Built" drawings and the information from the maintenance staff, there is no history of any buildings panel's circuit breaker tripping except switchgear's circuit breaker being not operational; based on this information we can conclude that each wing's 300KVA Unit Substation should be adequate until the wing's infrastructure is due for renovations. As the design progresses we will have enough information to determine whether an upgrade and substation is necessary.

Each of the wings have a separate 12 KV service coming from Wing C and therefore independent of other buildings' power connection. Renovation of each wing will not affect the electric service of the other wings.

EMERGENCY POWER SERVICE

The emergency power service to the Residence Hall is fed from the existing 25KW, 208/120V, 3- phase, 4-wire Natural Gas fueled Generator. The generator is located in the lower Basement of Building C where the Chillers and Boilers are located. The Generator was installed when the building was built in 1959. Maintenance Log was not available during the site visit. The Generator serves the Hall's Life Safety System (emergency lighting and exit signs) and is required to be exercised at least once a month for 30 minutes and with a minimum 30% load to make sure that it will start when needed. The existing Automatic Transfer Switch is located in the same room as the generator and Maintenance Log was not available during the site visit. Per our visual inspection, we found out that it has deteriorated and is beyond its life expectancy. The life expectancy of an Engine-Generator set is from 20 to 25 years. Emergency lighting panels were provided for the connection of emergency lighting of each building.

There was a discussion during the 1/19/2011 meeting that new freezers and refrigerators will be connected to the emergency generator when the Kitchen is renovated. The existing generator has no spare capacity for this future load. The generator when replaced shall be rated to include all the required and optional loads and will be Diesel fueled. It will be located in the proposed stand alone Central Plant.

ELECTRICAL UTILIZATION EQUIPMENT AND LOCATIONS

Wings A, B, C, D & E were provided with separate electrical service connected from the 12KV system. A typical 300KVA, 12KV-208/120V, 3-phase, 4-wire Unit Substation was provided to each wings (A, B, D, and E) located in the electrical room of each building. Wing C is an exception being the center of the Residence Hall where the main 12KV Campus Service is terminated and distributed. There are two Unit Substations located in the main electrical room in this building, the 750KVA, 12KV-480V, 3-phase, 3-wire serving the Chillers, Boilers and Pumps and the 300KVA, 12KV-208/120V, 3-phase, 4-wire serving the general power and lighting in Bldg C. Figure E5 below is the picture of a typical 300KVA Unit Substation serving each wing of the Residence Hall and in good operational condition.

As mentioned above, each wing is provided with a separate Unit Substation and therefore independent of other wings' power service. This statement also means that replacing the existing Distribution Board and Panelboards can be done on a wing by wing or floor by floor basis and will not affect the other wings.

LIGHTING SYSTEMS

The existing lighting systems in all the buildings are primarily fluorescent fixtures. They are functional except consuming too much energy considering the existing fixtures are still with the old style magnetic ballast and T12 fluorescent lamp. These fixture components are not very efficient anymore. A few of the old fixtures, most of them incandescent downlights, have been replaced with fluorescent; there is energy saving with this replacement. The least that we can recommend to save energy is to replace the lamp and ballast of all existing fluorescent fixtures with high power factor electronic ballast and T8 lamps until new more efficient fixtures are specified. Existing lighting controls also have to be looked at for additional energy savings.

Figure 16 - Main Switchboard for the 300 KVA, 208/120 V Unit Substation Serving the General Power and /Lighting of Building C

Figure 17 – 25 KW, 120/208 V Natural Gas Fueled Emergency Generator

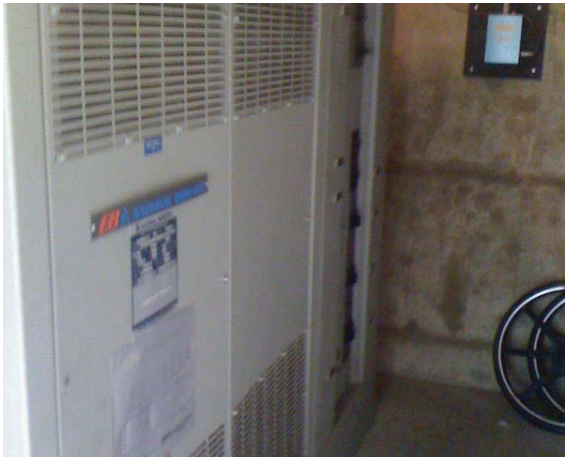


Figure 18 - Typical Building 300 KVA, 208/120 V Unit Substation

Figure 19 - Typical Panelboard, Operational but Beyond Its Service Life

Figure 20 - Typical Motor Control Center, Operational but Beyond Its Service Life

RECOMMENDATIONS

All the electrical equipment in the Aberdeen-Inverness Residence Hall from the Main Service to the panelboards (except the unit substations) is well beyond its service life and may cause problems when worked on. It was also found out that insulation of the majority of power wiring is falling apart when touched or repaired. It will be dangerous for the maintenance staff to touch or repair any of the existing wiring. It is our recommendation that whenever a renovation is done in any of the wings that a complete replacement of the electrical equipment and all wiring excluding the unit substation be considered. In prioritizing the replacement of electrical equipment, it is suggested, as mentioned above, that it can be done on a floor by floor or wing by wing basis.

The Emergency Generator serving the Life Safety System of the Hall is recommended to be given the top priority, taking into consideration that it is a very important piece of equipment for the safety of the occupants. It is also recommended to check all the designated emergency lighting fixtures and verify that all are in good working condition. As mentioned above, the new Emergency Generator will be diesel fueled and will be located in proposed Central Plant. Based on the proposed Kitchen loads (approximately 250KVA of future loads at 480V) from the Kitchen Consultant in addition to our calculations of the existing loads, the 480V Unit Substation will definitely have to be upgraded to a larger unit.

The typical 300 KVA Unit Substation serving the other wings will be further analyzed as the design progresses to determine if it needs upgrading. The existing Unit Substation serving each wing will not be replaced unless the capacity will require to be upgraded.

See section 4.1 of this DPP Report for additional recommendations.

PLUMBING SYSTEMS

INTRODUCTION

The objective of this study is to assess the current condition of the Plumbing system in the Aberdeen Inverness Residence Hall to provide basis of analysis for future plumbing renovations and improvements.

The Aberdeen Inverness Residence Hall main incoming lines and hot water equipment are located at the basement of the "C Wing". The original domestic hot water equipment was replaced through the years but no major upgrades were done to the plumbing piping systems.

In 2008, a Fire Sprinkler System was installed in all the residential wings of the building.

The basis of the Plumbing systems assessment was derived from the available "As-Built Drawings" obtained from the University and also through site visit and visual inspections of existing service equipment.

SANITARY DRAINAGE AND VENT SYSTEMS

No major upgrades have been done to the sanitary drainage piping systems.

Although no major leaks were reported on the existing interior sanitary drainage system, it is recommended that destructive pipe test be done randomly along the entire system so as to ensure that pipes are not corroded or clogged, to determine if any needs to be replaced.

Any new plumbing fixtures are better served by providing new risers and branch piping for the sanitary waste & vent systems.

Figure 21 - Typical Building Panel board

Figure 22 - Corroded Storm Drains on the Roof

Plumbing fixtures below house sanitary drainage system level are currently drained by gravity to a sump and pumped into a gravity house drain. The pumps seem to be in good working condition.

Portions of the existing site sewer clay pipe system have been reported to have been broken.

KITCHEN GREASE WASTE SYSTEMS

There is no existing grease waste system. The project calls for two new kitchens plus a kitchen service enclosure.

To comply with Code, a new kitchen grease waste system and piping shall be provided to serve the kitchens. The new grease waste shall pass through a grease trap before connecting to the domestic waste system.

A grease waste system would help minimize maintenance and clogging of the sewer system.

STORMWATER DRAINAGE SYSTEMS

The existing building has roof drains that are drained at low points by gravity to discharge into the site storm drainage system. All storm drains need replacement whenever the roof they are located in is replaced.

DOMESTICWATER SUPPLY SYSTEMS

No major upgrades have been done to the domestic water piping systems.

Domestic water service is brought to the building at the C Wing basement.
The domestic water service is separate from the fire sprinkler service; however Class 2 standpipes are currently connected to the existing domestic system.

The existing domestic water is a combination of copper and galvanized iron piping. Although no major leaks were reported on the existing domestic water system, it is recommended that destructive pipe test shall be done randomly along the entire system so as to ensure that pipes are not clogged with carbonate build up or corroded. The existing hot water equipment has exceeded its life expectancy. It's reported to have gone through several stages of complete overhaul. They need to be replaced with new more efficient models. The metered water service mains are galvanized steel and need to be replaced with copper piping.

The existing domestic hot water heat exchangers are in good working condition . However, 3 out of 4 have exceeded their life expectancy and should be replaced with new, more efficient water heaters.

Figure 23 - Existing Domestic Hot Water Heat Exchangers

SOLAR DOMESTIC HOTWATER SYSTEMS

Since it is already abandoned, the existing solar hot water equipment and piping system needs to be demolished.

PLUMBING FIXTURES

The existing plumbing fixture count is sufficient for the current occupancy levels of the building.

However, most of the existing plumbing fixtures have high water usage characteristics; it would make sense to replace them with water efficient fixtures.

NATURAL GAS SYSTEMS

An existing metered and regulated natural gas system serves the building gas fired boiler and emergency generator and should be updated. The new gas piping will be distributed through risers and branches to any required equipment. Natural gas shall be supplied at 7"w.g. pressure.

Figure 24: The Incoming Main and Meter in Need of Replacement

FIRE SUPPRESSION SYSTEM

The existing building has a functional fire protection system in most areas.

The residential portions are protected by a fire sprinkler system installed in 2008.

The Class 2 standpipes that are installed in the 1950's are currently connected to the domestic water system. These need to be connected to a separate fire system.

RECOMMENDATIONS

Based on the above, the entire plumbing system in the Aberdeen-Inverness Residence Hall is well beyond the life expectancy of the system. Plumbing fixtures are mainly old and are not water efficient. Based on the budget and phase of the project, we recommend the following:

- Replace broken site sewer piping.
- It is recommended that all plumbing fixtures, including risers and branch piping for sanitary waste and vent systems be replaced with water efficient plumbing fixtures in the next few years.
- Separate the Class 2 standpipes from the domestic system.
- For the domestic water piping, it is recommended that all galvanized steel piping be replaced with copper.
- Demolish existing abandoned solar hot water system.
- Perform random destructive testing on all the piping system to verify the integrity of the piping system.
- See Section 4.1 of this DPP Report for additional recommendations.

Figure 1: Crack in Wing B West at Gridlines A-1

Figure 2: Closeup of Crack in Wing B West at Gridlines A-1

STRUCTURAL

Work Observed: Condition of existing structure of Aberdeen-Inverness Wings A, B, C, D, E

The following conditions were either noted and/or discussed:

John A. Martin and Associates performed a limited observation of the exposed existing structure of Aberdeen-Inverness (A-I) Residence Hall. We observed the exposed exterior structure of Wings A, B, C, D, and E. In general, the condition of the existing structure we observed was good. Many of the exposed concrete walls had minor cracks that are not of structural concern. The brick masonry appeared to be in good condition.

We observed a crack in one of the Wing B west concrete walls. See Figures 1 and 2 below. This crack occurs at the attachment of the 2nd level concrete transfer girder to the perpendicular stairwell concrete wall. A similar crack was located in Wing D west. See Figures 3 and 4 below. This was expected because Wing D is the mirror image of Wing B. The cracks are likely the result of minimal force transfer between the concrete wall and the girder that transfers the masonry shear wall forces to the concrete shear walls.

After our initial observation, we met with Facilities Management and were informed of a crack in one of the Wing E east concrete walls. See Figure 5 below. The crack appears to be located at a construction joint where a small amount of loose concrete has spalled off over time. This crack is not of structural concern and appears to be possibly due to delaminating of previous grout repairs. No other conditions of concern were identified by Facilities Management.

We observed the roof of Wing C east. No notable structural issues were observed since most of the structure is covered by roofing.

Figure 4: Closeup of Crack in Wing D West at Gridlines K-1

Figure 3: Closeup of Crack in Wing D West at Gridlines K-1

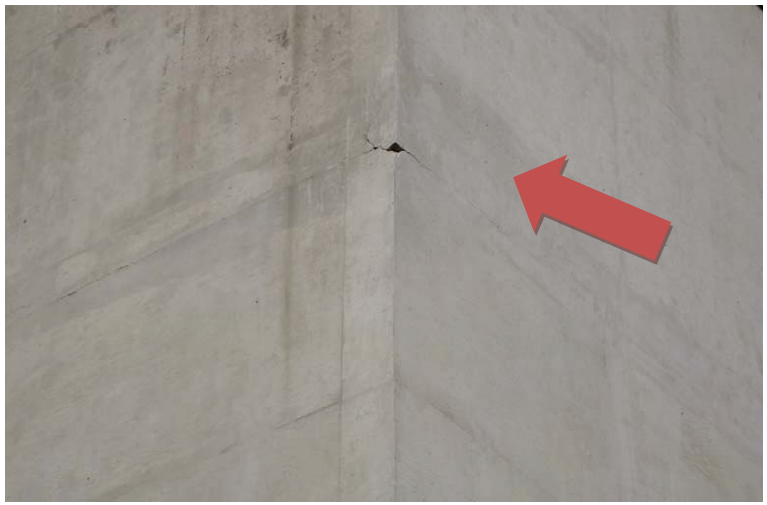


Figure 5: Closeup of Crack in Wing E East at Gridlines RR-59

ROOFING

EXECUTIVE SUMMARY

Studios Architects (Studios) engaged Simpson Gumpertz and Heger (SGH) to perform a condition assessment of the roofing systems at the A-I Residence Hall at University of California's Riverside campus in Riverside, California. Prior to our assessment, we were informed by the building maintenance department that they have no reported leakage into the space below or adjacent to the roofing system except for two locations. The roofing systems are aged approximately twenty-five years on four of the five wings and a portion of the fifth wing (Wing C). The rest of Wing C has a roof with an age of approximately five years.

The A-I Residence Hall comprises five wings. The roofing membrane is either gravel or mineral-surfaced built-up roofing system. In conjunction with the age of these roofs, we also observed conditions throughout the roof that indicate it is near the end of its service life, including little to no slope to drain, "grapes" (i.e., asphalt deposits exuding through the gravel surfacing the size of a quarter or larger), and cracked filler in the pitch pockets at penetrations in the roofing systems. Despite the fact that the existing built-up roofing system is near the end of its service life, the limited extent of leakage and minimal need for ongoing repairs indicate that the roof is still functional.

UC-Riverside should plan to replace the roof in two to five years if not sooner. We recommend that UC-Riverside replace the existing built-up roofing system with a more energy efficient roofing system and install continuous insulation below the roofing membrane to improve the energy efficiency.

BACKGROUND

Aberdeen-Inverness (A-I) Residence Hall (Photo 1) is located on the northeast side of the University of California's Riverside campus in Riverside, California. The A-I Residence Hall comprises five wings: Wings A, B, C, D, and E. Wing C is located at the

center of the campus site. Wing A is located on the northernmost side of the campus site, and Wing E is located on the southernmost side of the campus site (Photo 2). The wings are roughly rectangular in shape and run lengthwise in the east-west direction. All the wings are connected via an enclosed corridor.

UC-Riverside retained Studios Architects (SA) to perform an overall condition assessment of the A-I Residence Hall including but not limited to mechanical, HVAC, electrical, plumbing and roofing systems, and to prepare a report with recommendations for repair and maintenance items. SA engaged Simpson Gumpertz & Heger (SGH) to perform a condition assessment of the roofing system. We understand that SA will use this information to prepare construction documents for the project, if necessary, and that as the Architect-of-Record, SA will have overall responsibility for the design and construction administration.

INFORMATION FROM OTHERS

Jerry Griffin of SA and the building maintenance department of UC-Riverside told us the following information relevant to the roofing system:

- The building maintenance department reports no leakage below the roofing membrane with the exception of two locations:
    - Below an expansion joint in the corridor between Wings C and B.
    - Below the penthouse on the east wing of Wing D in Room 320.
- The main roofing systems for Wings A, B, C, D, and E are approximately twenty-five years old. The roofing systems along the north and south sides of Wing C are approximately five years old.
- An infill structure and roofing membrane was added in 1967 over the courtyard on the west side of Wing C.
- The solar panels located on Wings C and D are no longer operable. Several of the bathroom exhaust fans and chimneys for the fireplaces are no longer operable.

- Water leakage from mechanical equipment and other sources in the penthouse causes leakage into the building below the exposed concrete slab.

- There is no ongoing roof maintenance program. The roof is repaired as required by maintence staff

DOCUMENT REVIEW

Jerry Griffin of SA provided us with the architectural drawings for the A-I Residence Hall. The Architect is Allison and Rible Architects, Los Angeles, California. The drawings include a portion of the architectural drawings (Drawings 2, 3, 6, 11, 12 and 13) dated 14 October 1957. The drawings show, in part, the following information:

- Drawing A6 – The roof plans show a composition roof over 1 in. or 2 in. of insulation throughout the roofing systems.

- Detail B/6 – The roof comprises (from bottom to top): concrete slab, 1 in. or 2 in. insulation, and composite roofing. At roof curbs, the composite roofing extends onto the wall over a 4 in. fiber cant. The roofing is counterflashed by the flashing provided by the heating or ventilation contractor.

- Detail L1/12 – The roof extends up and over a 16 oz. copper gravel stop at the coping detail at concrete or brick wall. The joints in the gravel stop are to be butted over 6 ft. wide copper plate and set in mastic. The copper gravel stop counterflashes a 20 oz. piece of lead-coated copper, set in mastic.

- Detail L2/12 – The roof extends up and over a 16 oz. copper gravel stop at the coping detail at concrete or brick wall. The joints in the gravel stop are to be butted over 6 ft. wide copper plate and set in mastic. The copper gravel stop counterflashes the plaster below.

- Detail N5/12 – The roofing membrane extends over a 1 in. expansion joint in the structural deck. The expansion joint comprises a piece of 20 oz. copper with flanges mechanically attached to wood blocking. The copper expansion joint piece is filled in with plastic cement. The flanges and expansion joint are covered with composite roofing.

We performed a cursory review of the 2010 California Energy Code to determine the minimum energy requirements associated with reroofing the A-I Residence Hall. The following summarizes our review:

- The A-I Residence Hall is a Residential Group R-2 structure: Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature including (among others): dormitories.

- Riverside, California is located in California Climate Zone 10.

- Subchapter 6: Nonresidential, High-Rise Residential and Hotel / Motel Occupancies – Additions, Alterations and Repairs: The code stipulates that nonresidential buildings with low-sloped roofs in Climate Zones 2 through 15 shall have minimum aged solar reflectance of 0.55 and a minimum thermal emmitance of 0.75, or a minimum solar reflectance index (SRI) of 64. Table 149-A provides an insulation requirements of R-14 for nonresidential buildings in Climate Zone 10.

- Chapter 7: Low-Rise Residential Buildings – Performance and Prescriptive Compliance Approaches requires that ceilings in buildings in Climate Zone 10 provide R-30 (insulation between wood-framing).

- Chapter 8: Low Rise Residential Buildings – Additions and Alterations in Existing Low-Rise Residential Buildings: The code does not provide requirements for the R-value during replacement of the existing roof. The code stipulates that roofing products with a density less than 5 lbs/sq ft in Climate Zones 10 through 15 shall have a minimum aged solar reflectance of 0.20 and a minimum thermal reflectance of 0.75 or a minimum SRI of 16.

FIELD OBSERVATIONS

Christina T. Parker and Kenneth Klein visited the site on 19 January 2011 to perform visual observations of the roofing membrane. Our field investigation of the A-I Residence Hall included an overall roof survey of Wings A, B, C, D and E, as well as the structures between the wings. We also reviewed the interior finishes below the locations of reported leakage. We did not make any exploratory openings in the roofing system. We used a Tramex Leak Seeker Moisture Meter to take qualitative readings of moisture in the roofing membrane. In general, we observed similar conditions throughout our survey of all five wings. Observations not typical to all five wings are noted below. The following summarizes our observations:

- This is a built-up roofing system. The built-up roofing system is covered with gravel surfacing or a mineral cap sheet (Photo 3). Light-brown gravel ballast covers the roofing membranes on Wings A, B, C, D, E, and F (Photo 3). Green-colored gravel ballast covers the roofing membranes on corridors between Wings B and C and between Wings C and D (Photo 4). A mineral-surfaced cap sheet covers the edge of all roofs and the roofs on the north and south sides of Wing C (Photo3).

- We observed limited to no blistering in the portions of the roofing membrane that we walked during our survey

- A portion of the roof surface of Wing C is covered with an extensive amount of mechanical equipment and solar panels. Solar panels are located on the roof surface of Wing D.

- The access to the penthouse and some mechanical equipment is provided by wood-planked walkways supported on wood blocking bearing on the roof membrane. The walkways are bounded by a metal handrail supported on wood blocking (Photo 5).

- The roofing surface has limited slope to drain. It appears that the slope is less than 1/8 in. per ft. We observed areas of dark staining throughout our survey that may be subject to ponding.

- We observed leaves, pine cones, pine needles, and other debris in the field of the roofs on Wings A and B and at the perimeter of several drains on all roofs (Photo 6). We observed areas of dark staining throughout the roofing membrane (Photo 7).

- We observed "grapes" (i.e., asphalt deposits exuding through the gravel surfacing the size of a quarter or larger) at several locations on each of the roofs we surveyed (Photo 8). In some locations, we observed a white chalk-like residue on the surface of the asphalt "grape" and / or a crack through the top surface (Photo 9).

- The majority of the penetrations on the roofing membrane are flashed with pitch pockets (Photo 10). The pitch pocket filler is cracked, recessed, and debonded in many locations (Photo 11).

- Some of the mechanical equipment on the roof is supported by wood blocking on a piece of mineral-surfaced cap sheet. In some locations, we noted that the fasteners for the wood blocking penetrate the roofing membrane (Photo 12).

- The roofing membrane is counterflashed with metal flashing at the perimeter of the building. The flashing is either surface-sealed, reglet-set, or through-wall flashing. We noted that the flashing was not attached to the building in several locations (Photo 13). In some locations, the base flashing does not continuously cover corner details / changes in elevations between roofs. The flashing terminates along the edge and is covered with sealant. In many locations, we noted that the sealant was cracked and split at this location (Photo 14).

- The gravel stop at the perimeter of the roofing membrane is fastened to the substrate with mechanical fasteners with square or circular plates (Photo 15). The mechanical fasteners are exposed or covered with a thin layer of roofing membrane (Photo 16). Fasteners and plates exposed to the exterior have significant corrosion (Photo 16).

- The roofing membrane and a mineral-surfaced cap sheet extend to the edge of the roof / top surface of the precast concrete coping. The joint between the mineral cap sheet and the edge of the gravel ballast is covered with roofing membrane. At several locations, we observed that the membrane is cracked and pulling away from the edge (Photo 16).

- The roofing system covers the expansion joints in the corridors between Wings B and C and between Wings C and D. The roofing membrane is cracked at this location (Photo 17).

- Vegetation is growing up the walls and onto the gutter of Wing B (Photo 18).

- We observed two buckets of roofing cement patch on Wing B. Adjacent to the buckets, we observed two areas of black patches on the horizontal roofing membrane. The patches are adjacent to the penthouse (Photo 19).

- We observed grease dripping onto the roofing membrane from a duct over the kitchen area in Wing C (Photo 20).

- The Tramex Leak Seeker Moisture Meter recorded readings between 0 and 20 throughout our survey (Photo 21). The reading on the "Leak Seeker" is a relative scale indicating weaker or greater signal. The readings are not an indicator of moisture in the roofing membrane. Tests cuts are required to determine the moisture content in the roofing membrane.

- We observed efflorescence (i.e., white, powdery, mineral deposits consisting of concrete constitute carried out of masonry by water leakage) on the underside of the concrete soffit at the perimeter the wings (Photos 22 and 23).

DISCUSSION

The roofing system at the A-I Residence Hall consists of gravel-surfaced asphaltic built-up roofing system. The built-up roofing system consists of multiple layers of roofing felt adhered together with hot asphalt to create a waterproof roof membrane. For protection from ultraviolet light (UV) and weathering effects, the roof membrane is covered with gravel surfacing or a mineral-surfaced cap sheet. The roofing felts are reinforced with either glass-fiber mats or organic mats. Built-up roofing systems provide a durable, low maintenance option because the multiple-ply system provides redundancy, and the gravel or mineral cap sheet offer impact and traffic protection. As evident at the A-I Residence Hall, well-detailed and constructed built-up roofing systems can last well beyond the twenty year nominal service life typically quoted as their service life expectancy. This roof appears to still be relatively solid with limited to no blistering, limited ongoing maintenance, and few leaks after the recent heavy rainstorms.

Although the UC-Riverside building maintenance department reports limited signs of leakage below the roofing membrane, the built-up roofing membrane shows several visual signs that it is nearing if not at the end of its service life. This conclusion is based on the following conditions that we observed:

- **Cracked Membrane:** As described above, we observed asphalt "grapes" exuding through the gravel surfacing in several locations throughout the roof. These "grapes" form when the top layer of asphalt begins to degrade causing settlement of the gravel in some areas. "Grapes" or quarter-size areas of asphalt are then exposed to UV light. Overtime, the UV rays oxidize the surface of the asphalt, producing the chalk-like residue. In some locations, exposure to UV rays has caused cracking of the asphalt.

- **Signs of Ponding Water**: The areas of dark staining that we observed throughout the roofing membrane show signs that water is standing and may be ponding on the roofing system. Industry standards state that drainage is adequate if there is no standing water after 48 hrs. Ponding water on the roofing membrane will continue to reduce the durability of the roofing membrane due to accelerated oxidation of the roofing membrane.

- **Exposed and Corroded Fasteners:** The fasteners at the gravel stop at the edge of the roof are exposed and have significant corrosion. Exposed fasteners are vulnerable to water infiltration. The corrosion on the fasteners is a sign that the fasteners have been exposed to water for long periods of time. Eventually, the metal will deteriorate and lose the ability to secure the membrane and flashings at the perimeter of the roof, and will provide an outlet for water to enter below the roofing membrane.

- **Cracked Sealant at Pitch Pockets:** As described above, many of the roofing penetrations are flashed with pitch pockets (flanged bottom and topless metal boxes that surround roof penetrations). Although we did not open the pitch pockets to review the construction, these details are usually partially filled with mortar and topped with either low melt asphalt or pourable sealant. The fundamental problem with pitch pockets is the inability of the topping to keep the detail watertight. As noted at the A-I Residence Hall, the pitch pocket filler at the perimeter of the penetration is cracked and pulling away from the penetration in many locations and has receded, thereby allowing water to collect and possibly leak into the roof system..

- **Efflorescence:** We observed efflorescence at the underside of the concrete soffits at the perimeter of the wings. Efflorescence, a white powdery substance, is caused by the leaching and crystallization of soluble salts from within the material. Although we did not perform openings or water testing of the membrane at these locations, we find it likely that water is penetrating beneath the membrane and through the concrete soffit forming efflorescence at the underside of the soffit.

CONCLUSIONS

The existing built-up roofing system is near the end of its service life; however, the limited extent of leakage and ongoing repairs indicate that the roof is still functional

PHOTOGRAPH APPENDIX

1. Overall photo of the exterior of the Aberdeen-Inverness Residence Hall in Riverside, California.
2 Aerial photo of Aberdeen-Inverness Residence Hall, Riverside, California. Note: Buildings identified on photo.
3 Overall photo of the light-brown colored gravel surface on the roofing system over Building C at the Aberdeen-Inverness Residence Hall. Note the mineral-surfaced cap sheet at the edge of the roofing membrane
4 Light-green colored gravel over the corridor between Building B and Building C. Note the debris and palms on the roofing mem brane.
5 Walkway to the penthouse on the roofing membrane over Building C.
6 Debris and leaves at the perimeter of a drain on Building C
7 Debris and leaves on top of the roofing membrane over Building A.
8 "Grapes" or quarter-size mounds of asphalt in the roofing membrane in the field of the roof.
9 "Grapes" or quarter-size mounds of asphalt in the roofing membrane in the field of the roof. Note the white chalk-like residue on the roofing membrane and the crack at the center of a mound (arrow).
10 Pitch pocket at the perimeter of a penetration on Building C. Note that the membrane is cracked at the perimeter of the penetration.
11 Pitch pocket at the perimeter of a support for a solar panel penetration on Building C. Note that the membrane is cracked at the pe rimeter of the penetration.
12 Support on wood blocking for abandoned hot water pipe for solar panel on the roofing membrane.
13 Reglet-set counterflashing (brick side) and surfaced-mounted counterflasing (plaster side) at the perimeter of the roofing membrane.
14 Flashing at the transition between an upper roof and lower roof. Note the opening between the flashing at the wall (arrow).
15 Thin layer of roofing membrane over fasteners (arrow) at the perimeter of the roofing.
16 Thin layer of roofing membrane over fasteners (arrow) at the perimeter of the roofing. Note that the membrane is cracked adjacent to the fastener and that the fastener is corroded
17 Crack (arrow) in the roofing membrane over the expansion joint in the corridor between Building B and Building C
18 Vegetation growing in the gutter at the perimeter of Building B.
19 Patch in the roofing membrane on Building B. Note the roofing cement bucket in the background
20 Grease dripping on the surface of the roofing membrane below a duct on Building C
21 Tramex Leak Seeker moisture meter with a reading of 20 in the field of the roof.
22 Concrete soffit below the roofing membrane.
23 Efflorescence staining on the concrete soffit below the roofing membrane (arrow).

Photo 1

Overall photo of the exterior of the Aberdeen-Inverness Residence Hall in Riverside, California.

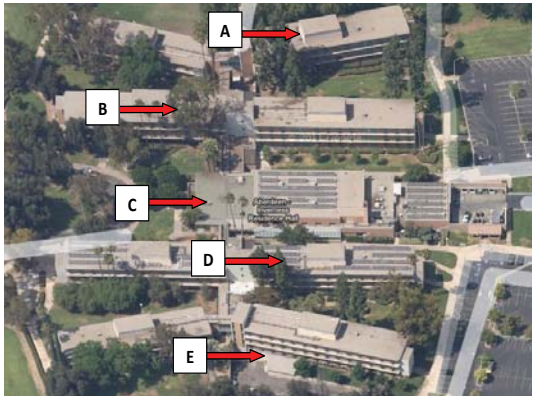


Photo 2

Aerial photo of Aberdeen-Inverness Residence Hall, Riverside, California.
Note: Buildings identified on photo.

Photo 3

Overall photo of the light-brown colored gravel surface on the roofing system over Building C at the Aberdeen-Inverness Residence Hall. Note the mineral-surfaced cap sheet at the edge of the roofing membrane

Photo 4

Light-green colored gravel over the corridor between Building B and Building C. Note the debris and palms on the roofing membrane.

Photo 5

Walkway to the penthouse on the roofing membrane over Building C.

Photo 6

Debris and leaves at the perimeter of a drain on Building C

Photo 7

Debris and leaves on top of the roofing membrane over Building A.

Photo 8

"Grapes" or quarter-size mounds of asphalt in the roofing membrane in the field of the roof.

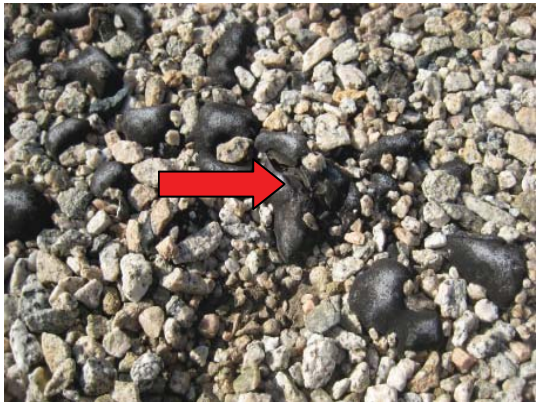


Photo 9

"Grapes" or quarter-size mounds of asphalt in the roofing membrane in the field of the roof.
Note the white chalk-like residue on the roofing membrane and the crack at the center of a mound (arrow).

Photo 10

Pitch pocket at the perimeter of a penetration on Building C.
Note that the membrane is cracked at the perimeter of the penetration.

Photo 11

Pitch pocket at the perimeter of a support for a solar panel penetration on Building C. Note that the membrane is cracked at the perimeter of the penetration.

Photo 12

Support on wood blocking for abandoned hot water pipe for solar panel on the roofing membrane.

Photo 13

Reglet-set counterflashing (brick side) and surfaced-mounted counterflasing (plaster side) at the perimeter of the roofing membrane.

Photo 14

Flashing at the transition between an upper roof and lower roof.
Note the opening between the flashing at the wall (arrow).

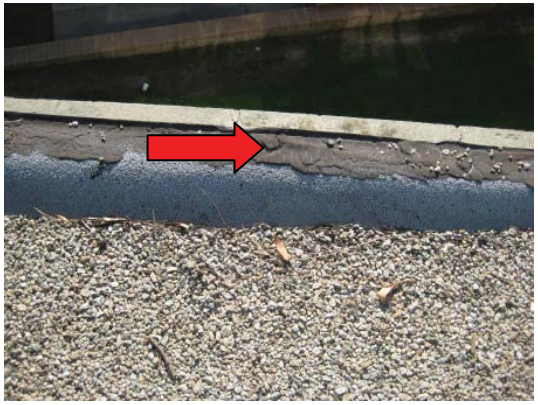


Photo 15

Thin layer of roofing membrane over fasteners (arrow) at the perimeter of the roofing.

Photo 16

Thin layer of roofing membrane over fasteners (arrow) at the perimeter of the roofing. Note that the membrane is cracked adjacent to the fastener and that the fastener is corroded

Photo 17

Crack (arrow) in the roofing membrane over the expansion joint in the corridor between Building B and Building C

Photo 18

Vegetation growing in the gutter at the perimeter of Building B.

Photo 19

Patch in the roofing membrane on Building B. Note the roofing cement bucket in the background

Photo 20

Grease dripping on the surface of the roofing membrane below a duct on Building C

Photo 21

Tramex Leak Seeker moisture meter with a reading of 20 in the field of the roof.

Photo 22

Concrete soffit below the roofing membrane.

Photo 23

Efflorescence staining on the concrete soffit below the roofing membrane (arrow).

6.4

HAZARDOUS MATERIAL SURVEY

The following report documenting asbestos containing materials and lead based paint in A-I Wings B, C, and D was provided by UC Riverside, and is included here for information only.

AMBIENT ENVIRONMENTAL INC.

CONFIDENTIAL AND PRIVILEGED
ASBESTOS AND LEAD BASED PAINT SURVEY

FOR
THE PROPERTY LOCATED AT:

Aberdeen and Inverness
Residence Hall
Project Number
University of California, Riverside
Riverside, California

Prepared for:

University of California, Riverside
Capital Planning
3637 Canyon Crest Drive
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Attn: Mr. Jon Harvey
Project Manager

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Ambient Environment, Inc.
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February 25, 2011

Ambient Environmental Inc. Project #11-1118

Todd Hill
CAC 09-4544

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1.0 EXECUTIVE SUMMARY

The University of California, Riverside Office of Capital Planning, retained Ambient Environmental Inc. to conduct an Asbestos Containing Material (ACM) and Lead Based Paint (LBP) survey for Aberdeen and Inverness residence hall.

Mr. John Lumpkin, a Certified Asbestos Consultant and a United States Environmental Protection Agency (USEPA) certified building inspector for Asbestos Containing Materials (ACM) and a DHS Certified Lead Inspector/Assessor conducted the survey on February 16, 2011.

The purpose of the asbestos and lead survey was to locate and identify accessible friable and non-friable suspect ACM and the presence of LBP within the areas to be impacted by the renovation project. Once a visual inspection was performed, representative asbestos bulk samples were obtained from each homogenous building material. Lead samples were obtained from each homogenous paint color utilizing an X-Ray Fluorescence (XRF) lead-containing paint analyzer. The sample location, material type, friability, condition of material, and quantity were also documented.

Asbestos bulk sampling was obtained in accordance with the USEPA established guidelines document, "Guidance for Controlling Asbestos Containing Materials in Buildings" (USEPA 560/5-85-024, 1985) and USEPA 40 CFR Part 763 "Asbestos Containing Materials in Schools, Final Rule" (AHERA). Each bulk sample was analyzed for asbestos content by Polarized Light Microscopy (PLM). Forensic Analytical is the accredited laboratory that performed the analysis for Asbestos. A total of 65 Asbestos bulk samples were obtained during the survey.

Lead based paint readings were collected in accordance with Chapter 7 of the HUD Guidelines for Evaluation and Control of Lead-Based Paint Hazards in Housing and U.S. Environmental Protection Agency (EPA) 40 CFR part 745 and Title X of the 1992 Housing and Community Development Act. A total of 106 XRF readings were obtained during the survey.

All areas of the areas to be impacted by the renovation project were visually inspected. Asbestos containing building materials and lead based paint not identified in this report may be present within hidden and/or concealed areas of the building.

Locations, amounts, and conditions of each building material and lead-containing paint assessed and sampled can be found in the inventory (Tables).

2.0 SURVEY PROCEDURES

Ambient Environmental Inc. conducted an asbestos containing building material and lead based paint survey for the f renovation project. All areas of the proposed work areas were surveyed for asbestos containing building materials and lead based paint. Asbestos containing materials or lead based paint not identified in this report may be present within hidden or concealed areas of the building.

Asbestos containing material identification was performed by entering each functional space, assessing all structural/mechanical components and architectural finishes. The physical conditions, friability, accessibility, activity and damage of suspect asbestos containing building materials was also assessed and documented.

Lead based paint was identified by entering each functional space and assessing all structural/mechanical compounds and architectural finishes. The physical conditions, accessibility, activity and damage of suspect lead containing paint was also assessed and documented.

For reporting purposes, space designations were assigned each functional space within the facilities using the pre-existing designation on doors or as indicated on the floor plans. Where neither was available, the space was labeled by the inspector as indicated in the report. The following procedures were performed:

1. A visual assessment to identify the location, type and quantity of lead containing paint and friable and non-friable asbestos building materials.
2. Obtain representative bulk samples of from suspect asbestos containing building materials.
3. Obtain representative XRF reading from suspect paints.
4. Asbestos samples were analyzed by an independent accredited laboratory for the presence of asbestos by PLM.
5. Present all survey results in a written report including recommendation, locations, quantities, and laboratory results.

All findings, recommendations, and analytical data presented in this report are based on the information (assessment and sampling data) obtained by our inspectors during the survey.

3.0 BULK SAMPLING PROCEDURES FOR ASBESTOS

Each suspect ACM identified was sampled in accordance with sampling guidelines established by the USEPA. The following summarizes the sampling procedures utilized:

1. Building materials were categorized into homogeneous materials. A homogeneous material is defined as being uniform in texture, color, and date of application.

2. A sampling scheme was developed based upon the location and quantities of the various homogeneous materials.

3. Bulk samples were collected by extracting a representative section of the selected material, placing it in a sampling container and assigning a unique sample number. The samples were placed into a sealed shipping container for delivery to an accredited laboratory for analysis by PLM.

4. The personnel performed proper decontamination procedures to prevent the spread of secondary contamination.

5. Each bulk sample was recorded on a bulk sample log and possession of the samples was tracked by a chain of custody record.

The reported laboratory results in this report are a visual estimate by area of Asbestos concentration. Results for heterogeneous samples examined by component are reported as a composite. The lower limit of reliable detection for this method is 1%. Samples that contain more than 1% of Asbestos are reported in 5% ranges. Samples that contain Asbestos in a concentration lower than the limit of reliable detection (<1%) are considered "Trace."

All bulk samples were analyzed by PLM in accordance with the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples EPA - 600/M4-82-020" dated December 1982 and adopted by the National Voluntary Laboratory Accreditation Program (NVLAP) Title 15, part 7 of the Code of Federal Register as affiliated with the National Institute for Standards and Testing (NIST).

Sixty-five bulk samples were obtained at the subject building and analyzed for Asbestos content by Forensic Analytical of Rancho Dominguez, California. Forensic Analytical is accredited by the American Industrial Hygiene Association (AIHA), National Voluntary Laboratory Accreditation Program (NVLAP), National Institute of Standards and Testing (NIST), and is a successful participant in the Proficiency Analytical Testing Program (PAT).

4.0 X-RAY FLUORESCENCE SAMPLING PROCEDURES FOR LEAD-BASED PAINT

Sampling was accomplished by entering each room equivalent. A room equivalent is an identifiable part of a building such as a room, office, hallway, staircase, foyer and exterior. X-Ray Fluorescence (XRF) lead-containing paint analyzer readings were collected of each testing combination in each room equivalent. A testing combination is a unique combination of room equivalent building component type, and substrate. Visible color may not be an accurate predictor of painting history and is not included in the definition of a testing combination. The sample locations and condition of the paint were documented.

Lead-containing paint readings were collected in accordance with Chapter 7 of the HUD Guidelines for Evaluation and Control of Lead-Based Paint Hazards in Housing and U.S. Environmental Protection Agency (EPA) 40 CFR part 745 and Title X of the 1992 Housing and Community Development Act. A total of 106 XRF readings were obtained during the survey.

California HUD standards definition of LBP is .7 mg/cm^2 or 600 parts per million (ppm), however OSHA requires that all workers be properly protected when working with materials containing any level of lead in accordance with Title 8 CCR Section 1532.1.

5.0 POSITIVE ASBESTOS SAMPLE RESULTS AND LOCATIONS

Material	Sample Number	Asbestos Content	Location of Material	Friable	Square Footage	Damage
Thermal Pipe Insulation	14	7% Chrysotile	Inside Wall Cavities Above Ceiling B, C, D Wings	Yes	Unknown	No
Black Floor Mastic	20	2% Chrysotile	B Wing Telephone Closet	No	60	No
Fireproofing	48-49	5% Chrysotile	C Wing Above Ceiling	Yes	2500	No

6.0 NEGATIVE ASBESTOS SAMPLE RESULTS AND LOCATIONS

Material	Location of Material	Damage
1x1 Ceiling Tile	B Wing	No
1x1 Ceiling Tile Mastic	B Wing	No
Interior Plaster	B Wing	No
Drywall/Joint Compound	B Wing	No
Cove Base & Mastic	B Wing	No
Carpet Mastic	B Wing	No
Spray-on Acoustic	B Wing	No
Green Sheet Flooring	B Wing	No
Cove Base & Mastic	D Wing	No
Brown Sheet Flooring	D Wing	No
Carpet Mastic	D Wing	No
Drywall/Joint Compound	D Wing	No
Interior Plaster	D Wing	No
1x1 Ceiling Tile	D Wing	No
Acoustic Texture	D Wing	No
Mastic	B Wing Under Wood Floor	No
Mastic	D Wing Under Filler	No
Brown Sheet Flooring	D Wing	No
Wall Texture	D Wing Pool Room	No
Drywall/Joint Compound	C Wing	No
Plaster	C Wing	No
White Sheet Flooring	C Wing	No
1x4 Ceiling Tile	C Wing	No
2x2 Ceiling Tile	C Wing	No
1x1 Ceiling Tile (hole pattern)	C Wing	No
1x1 Ceiling Tile (fissure pattern)	C Wing	No
Roof Felt	D Wing	No
Roof Mastic	D Wing	No
Roof Felt	B Wing	No
Roof Mastic	B Wing	No
Roof Felt	C Wing	No
Roof Mastic	C Wing	No
Roof Felt	C Wing (Over Office)	No
Roof Felt	C Wing (Lower Dining Area)	No
Roof Mastic	C Wing (Lower Dining Area)	No
Carpet Mastic	C Wing	No
Cove Base & Mastic	C Wing	No

7.0 HAZARD ASSESSMENTS OF (ACM) MATERIALS

Material	Location of Material	Hazard
Thermal Pipe Insulation	Inside Wall Cavities Above Ceiling B, C, D Wings	Good
Black Floor Mastic	B Wing Telephone Closet	Good
Fireproofing	C Wing Above Ceiling	Good

Good - Material shows little or no damage and requires no remedial action.
Moderate - Material is somewhat damaged and is in need of minor repairs.
Significantly Damaged - Material is in need of immediate remedial action.

8.0 POSITIVE LEAD-BASED PAINT SAMPLE RESULTS AND LOCATIONS

No Lead Based Paint Was Detected

Detection Limit Guidelines for the Housing and Urban Development (HUD) is 1.0 mg/cm^2. As per the OSHA Guidelines the concentration is .7mg/cm^2.

6.5 LIST OF ABBREVIATIONS

LIST OF ABBREVIATONS

A

ACI	American Concrete Institute
ACH	Airchange per hour
ADA	Americans with Disabilities Act
A-I	Aberdeen-Inverness
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
ALUM	Aluminuim
App	Appetizers
Appl	Applicable
ASHREA	American Society of Heating, Refrigeration, and Aircon ditioning Engineers
ASF	Assignable Square Footage
ASTM	American Society of Testing of Materials
AWS	American Welding Society
AWWA	American Waterworks Association

B

BDF	Building Distribution Frame
BTU	British Thermal Unit

C

CATV	Cable Television
Cab	Cabinets
CBC	California Building Code
CCR	California Code of Regulations
CCTV	Closed Circuit Television
CFC	California Fire Code
CFM	Cubic Feet per Minute
CLG	Ceiling
Comm.	Communications (data)
CPC	California Plumbing Code
CM	Construction Manager
CRI	Color Rendering Index
CW	Cold Water

D

DID	Direct Inward Dialing
DED	Dedicated
DPP	Detailed Project Program
DW	Dishwasher
DX	Direct expansion

E

EA	Energy and Atmosphere (LEED category)
Equip	Equipment
Ext	Exterior

F

F	Fahrenheit
°FDB	Degree Fahrenheit Dry Bulb Tem perature
FRP	Fiber reinforced plastic
°FWB	Degree Fahrenheit Wet Bulb Tem perature
f'c	Specified concrete strength

f'm	Specified masonry strength

G

g	Acceleration Gravity
GSF	gross square footage
GWB	gypsum wallboard

H

HVAC	Heating, Ventilation, and Air-conditioning
HW	Hot water

I

ID	Innovation in Design (LEED category)
IDF	Intermediate Distribution Frame
IESNA	Illuminating Engineering Society of North America
INDIV	Individual
INT	Interior
IRC	Infrared Coated

L

LAN	Local Area Network
LCP	Lighting Control Panel
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LRDP	Long Range Development Plan
LRG	large

M

Manuf	Manufacturer
MBH	Thousand BTU Per Hour
MDF	Main Distribution Frame
MEP	Mechanical, Electrical, Plumbing
MFACP	Main Fire Alarm Control Panel
Misc.	Miscellaneous

N

NC	Noise Criteria
NDS	National Design Specification
NFPA	National Fire Protection Agency
NOI	Notice of Intent

O

OSHA	Occupational Safety and Health Association

P

PRI	Primary Rate Interface
psf	pounds per square foot
psi	pounds per square inch
PTHP	Package Terminal Heat Pumps
	PV Photovoltaic
PVC	Polyvinyl Chloride

R

RA	Resident Assistant
REF	Refrigerator
RD	Resident Director
RM	Room
RSO	Resident Services Office

S

Sec	Security
Sep	Separate
sf	square feet
SLRS	Seismic Lateral Resisting System
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SS	Sustainable Sites (LEED category)
STC	Sound Transmission Class
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

T

T1	Telecommunications Data circuit
THD	Total Harmonic Distortion
TV	Television

U

UDACT	Universal Digital Alarm Communicator Transmitter
UDS	Utility Distribution System
UL	Underwriters Laboratory

V

V	Volt
VCT	Vinyl Composition Tile
VOC	Volatile Organic Compounds
VRFZ	Variable Refrigeration Flow Zoning System

W

w/	With
W/D	Washer and dryer
WE	Water Efficiency
WQTR	Water Quality Technical Report

6.6

MEETING NOTES

	DPP Schedule
12.15.10	Workshop #1 (Visioning Session)
01.19.11	A-I Infrastructure Evaluation
01.20,21.11	Workshop #2
02.02.11	Sustainability Conference Call
02.07.11	Workshop #3
02.07.11	Student Workshop
03.04.11	Workshop #4
03.08.11	MEP Systems Conference Call
03.28.11	Workshop #5
5.11.11	Fire Marshal Conference Call
6.24.11	Kitchen Service Access Conference Call
6.30.11	Workshop #6

UC Riverside Aberdeen-Inverness Dining / Common Area DPP

Rev 8/28/2011

	Weeks	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14-17	18-21
TASK	DESCRIPTION	Dec	1/3/11	1/10/11	1/17/11	1/24/11	1/31/11	2/7/11	2/14/11	2/21/11	2/28/11	3/7/11	3/14/11	3/21/11	3/28/11	April	May
1	Mobilization																
2	WS #1: Vision Session - Dec. 15																
3	(E) Info Review / Site & Code Analysis																
4	Building Systems / LEED Criteria																
5	WS #2: First Program'g Wkshp - Jan 20,21																
6	Infrastructure Evaluation																
7	Space Program / Room Data Rqmts.																
8	Concept Design / Develop DPP																
9	WS #3: Second Program'g Mtg. - Feb 7																
10	Preliminary Cost Analysis																
11	WS #4: Review Concepts & Cost - Mar 4																
12	Complete Draft DPP Report																
13	Final Cost Analysis																
14	Review Draft DPP / WS #5 - Mar 28																
15	UCR Site Evaluation Analysis																
16	Alt. Preferred Scheme Recommendation																
17	Proposal for Alt. Preferred Scheme																

Legend

- Design Team
- UC Riverside review
- Steering Committee Meeting

UC Riverside Aberdeen-Inverness Dining / Common Area DPP

Rev 10/27/2011
Page 2 of 2

Weeks	22-25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40-43
TASK	DESCRIPTION	June	6/27/11	7/4/11	7/11/11	7/18/11	7/25/11	8/1/11	8/8/11	8/15/11	8/22/11	8/29/11	9/5/11	9/12/11	9/19/11	9/26/11	October
19	Develop Alternate Preferred Scheme																
20	WS #6: Review Alt. Scheme - Jun 30																
21	Complete Rev. Draft DPP Report																
22	Design Review Board Present																
23	Issue Revised Draft DPP Report																
24	UCR Review Rev. Draft DPP																
25	Issue Rev. Draft DPP Review Comments																
26	Incorporate UCR Comments																
27	Issue Final DPP to UCR - Aug 30																
28	UCR Final Review DPP Report																
29	Incorporate UCR Comments																
30	Publish Final DPP Report - Oct. 28																
31	CPAC Present (TBD)																
32																	
33																	
34																	
35																	
36																	

Legend

- Design Team
- UC Riverside review
- Steering Committee Meeting

12.15.10 - WORKSHOP #1 (VISIONING SESSION)

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Visioning Workshop - 12.15.10
Meeting Minutes
(issued 01.12.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Andy Plumley (AP)
Susan Marshburn (SLM)
Cheryl Garner (CG)
Hassan Ghamlouch (HG)

Design & Construction (D&C)
Don Caskey (DC)
Richard Racicot (RR)
Jacqueline Norman (JN)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

STUDIOS Architecture
Erik Sueberkrop (ES)
Melissa Duffy (MMD)
Jerry Griffin (JG)
Kelly Capp (KC)

Marshall Associates
Steve Marshall (SWM)

ATTMTS: Agenda
DPP Schedule
Wall of Cards Spreadsheet (photos available on request)

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Introduction				
1.1	Introduction	ES reviewed the agenda and goals for the workshop.			
1.2	A-I Tour	ES discussed the Lessons Learned from the earlier A-I tour, including: • Kitchen: o Trayless/epoxy kitchen floor/glazed central manager's office (visual control)/open kitchen/dish return near exit/retractable stage/allow for private meetings • Staff is union pay scale • Dining dollars - system in place for allowing students to eat at other locations • Centralized bakery (serves other foodservice venues) • Staff/student staff projections needed: o Shift counts (number lockers/gender, etc) o Office staff • Current student demographics may influence cuisine: +/- 45% Asian/40% Hispanic • Dining capacity: o 500 to 800 students in A-I; dining capacity is 500 o More information to be provided for future dining capacity • Use of west yards/exterior space between residential wings: o Generally underutilized/minimal usage o Most adjacent interior spaces are locked off for security o Potential for outdoor patios to be activated through increased foot traffic • Circulation issues o Dining is open to all students with a meal plan: HDRS	See item 11.1 for summary of information deliverables		

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ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		security report should address this situation o Some areas are for residents only (fitness/computer room, etc. – like in a hotel) • Student kitchen to be provided; location TBD • A late-night diner in Emporium space: o Could be brand-driven, such as Denny's o HDRS to provide kitchen requirements • Bike Storage o Existing bike "cages" might be captured for new Program o If relocated, bikes should be strategically placed including security measures and cameras • Game room: billiards and foosball well-used; ping pong higher maintenance • Fitness center: o Ideally located adjacent to game room o Should have a symbiotic relationship with game room • Carrier (HVAC) assessment: o Completed a month ago - HDRS to provide report o Design team infrastructure evaluation (MEP, roofing, seismic) to be scheduled in January • Seismic analysis o A-I received a rating of "UC Good" in 1978 seismic assessment o Building will be re-evaluated – codes have changed significantly o Important that building retain "UC Good" rating • More of a grand entrance for the building is desired – should be welcoming			
1.3		HG offered the following post-tour MEP comments: • Electrical upgrades for Common spaces are included in the DPP scope • Transformers, cooling towers, HVAC system and energy savings potential (boiler, chiller, etc.) need to be addressed in the DPP infrastructure evaluation • Back-up generators: o Currently have generator for emergency lighting o New generator system needs to support emergency lighting and kitchen refrigeration • Sprinkler system: o All residential units were fire sprinklered in 2009. o Non-residential first floor is currently not fire sprinklered – but it is needed o New fire riser needed for kitchen; last upgrade (at dock) wasn't designed for increase • Abandoned solar hot water system (including tanks) needs to be removed. • Employee restrooms: fixture calc's to be based on HDRS data			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
2	Project Schedule				
2.1	DPP Schedule & Work Plan	JG reviewed the work plan and milestones for the DPP effort: • Four more Steering Committee meetings scheduled through the winter; draft DPP for UCR review to be issued March 14; final DPP issue April 11. • Meeting #2 scheduled for January 20,21 – first Programming Workshop o Some users will need to attend based on which space is being addressed • STUDIOS will issue agenda and programming questionnaire in early January • Breakout sessions may be needed, particularly for kitchen areas • AP: requested UC internal approval process schedule and HDRS information requirements			
3	Project Vision				
3.1	Project Vision	General discussion of Vision for the Project, with the following selected wall cards (see attached list under Vision for additional cards): Give Back to the Students Sense of Place Building is Iconic Celebrate the Building's History Feel Youthful Embrace the Campus • AP: A-I Building has aged significantly and the goal is to bring it up to today's standard: o Original campus residential building is iconic for housing program o Building is paid for o Building is old but shouldn't feel old o Environment should feel youthful and inviting to campus life o The building should reflect the community and its traditions o Should have a sense of place and vibrancy in community; currently lacks "grandeur" o Dining program has not achieved potential o Building cannot be shut down entirely to update • SLM: The lobby should recognize the history of the building and keep that history alive o Technological updates are needed (flatscreen TV's, better acoustics in lounge areas, etc.) • HG: Building needs to live another 50 years o Existing aluminum frame windows are obsolete: single-glazed, non-operable, no insect screens			

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ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• AP: Previous building improvements include: o Lounges have been updated o Historically, only carpet and paint in rooms were refreshed • ES: We need to investigate the budget and determine scope priorities • DPP infrastructure evaluation will include high level recommendations for future A-I building improvements (without cost estimates)			
4	Project Goals				
4.1	Project Goals	Goals were discussed and captured on wall cards (see attached Wall Cards list under Goals): • LEED Certification o ES: Building can be separated - new components will be built to LEED Silver standard at a minimum; presume the entire building does not need to be certified. o HG/SLM: Confirmed - the remodeled components should be LEED Silver Certified, but the costs of the actual LEED submission will be below the line • JH: We should explore maximizing the usable area without significantly changing the exterior appearance: o Main entry / security desk should become grander o The open space between west wings should be better utilized; improve patios • ES questioned whether the footprint of the building could expand: consensus response - Yes o JN: The building is historic so the challenge if we expand is to respect what is there • HG raised the topic of signage: o SLM: More signage than just way-finding is needed o AP: Signage must follow campus standards, but there is some creative license when it comes to environmental graphics within HDRS facilities. • ES questioned whether A-I would remain a first year student facility: consensus response – Yes • ES: questioned if there was a broader role for this facility • CG: The Emporium will have a small retail component. • Integration of Technology is a goal • CG: Aggressive sustainability is important for the kitchen, primarily, but also the loading dock, dishwashing, etc. • SLM: Maintaining security is a goal; currently working with security consultant – will have a report ready in late January • AP: Revenue generation from meetings in the common spaces during the day is a goal: o Student program usage is most important; o External non-UCR customers are not targeted (there is no parking)			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• CG: Currently there are minimal summer conference programs • Nice dining facilities is the most important goal o We should maximize opportunity for walk-in traffic to the Food Emporium o There should be a perception that A-I is "closer" to the rest of the campus • Business plan o AP: $25 million total project budget is allocated (specific scope, such as general building infrastructure improvements, is unknown at this time)			
5	Stakeholders				
5.1	Confirm Stakeholders	Project stakeholders were verified and listed on wall cards (see attached list under Stakeholders): • Some are directly related to dining facility planning, some are campus regulatory agencies • SLM: Student representatives should be included in the process; one evening session should be sufficient for them to share their opinions regarding the dining and common areas • A Questionnaire (high level program for discussion) will be sent to stakeholders by STUDIOS prior to Programming Workshop			
6	Program / Issues				
6.1	High Level Overview of Program & Issues	ES facilitated discussion of the preliminary program at a high level, and it generally has not changed (see attached Wall Cards list under Needs and Issues). ES facilitated discussion of the immediately surrounding site: o There are soccer fields up Linden Street o There is a recreation "mall" that extends on a North and South axis, west of A-I o There is residential housing proposed directly to the north o There is more transit/pedestrian traffic west of the site • AP: The Emporium will likely need access for deliveries/trash separate from the Dining dock (i.e. from the west) • The programming and appearance of recessed residential loading dock is an issue: could be a good spot for the generator; need to obtain additional information on how waste removal at this loading dock works • Residential dock is also potentially a primary fire truck access. o Get Fire Marshal involved early; good for him to attend the Physical Plant program workshop session. • Abandoned solar hot water system never worked adequately and needs to be removed • UCR open to new solar power options • New hazmat assessment for Common Spaces is needed and should be started; will impact cost (STUDIOS is in possession of 5.11.09 A-I Asbestos Addendum for basement pipe wrap)			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• The project will be considered "infill" if we extend outside the building envelope. • Involvement needs to be scheduled for Director of Physical Planning/Campus Landscape Architect (Nita Bullock) and Principal Environmental Planner (Trisha Thrasher) for CEQA issue • SLM: we should organize our programming meetings by typology of space • A high level overview of program is needed, starting with the program given o More meeting spaces are needed o Residential townhouses programming should be included with "Campus Life" workshop session			
7	Foodservice Strategy				
7.1	Main Dining Commons	David Henry, Director of Residential Dining joined the meeting. SWM led a discussion of the proposed foodservice venues (see attached Wall Cards list under Process): • Phasing the Dining renovation has a much higher cost, and is therefore not recommended • Emporium - themed 1950's diner; possibly a Denny's branding opportunity • Open kitchen design a possibility; advantage is one can see that food preparation is fresh • Centralized bakery discussed; allows for greater control and exhibition possibilities • Locate dishwashing area away from entrance - better near exit: o Separating the exit and entry points could be done to accommodate desirable dishwashing location o Keep dishwashing at entrance but not so invasive? o Dishwashing could be a visual object in the space o Self-busing operation also an option, but not favorable since it is a poor utilization of kitchen staff (requires kitchen staff to sort and separate recycling/compost) • General consensus that a "dispersed" layout concept for Servery functions similar to that exhibited in the "8/18/10 Envision" Dining plan is desirable: o At least one section of the Dining space should be able to support larger events o 2 fixed areas/2 concepts around kitchen is efficient with culinary staff • The kitchen staff front line is all student workers and most of the back line is staff • The "8/18/10 Envision" Dining plan is an axial layout with either side very similar. Asymmetrical sides may be preferable to create different environments (e.g. one lively and one quiet)			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• CG: The seating layout on the "8/18/10 Envision" Dining plan has several compelling ideas			
7.2	Emporium	• General discussion about best location for the entry and back of house • CG: consider Emporium dining area overlapping with game room o Potential issue: they will operate at different times - dining closes first; have to walk past the closed area to get to the recreation area o Coffee house and C-store could stay open later o Could move the staff between Emporium and Dining Commons and close at 1 or 2 am • Single control point is cashier station – visibility very important • It is okay for visitors (non-students) to dine at Emporium • There will be no pub (underage freshman live in the building) • A-I residents with meal plan could perhaps eat in dedicated section of Emporium while the main Dining is out of commission; size to be determined (125-150 covers potential) • Need restrooms for all areas- should be centralized and accessible after hours • Dining facilities have potential for assembly events, which can create a surge at restroom facilities; need to size fixture count for event demand • Outdoor patio would be nice, but can get very hot o Outdoor seating shouldn't be included in total seat count due to weather uncertainties o Mission Inn has a good example of outdoor dining o Needs a draw - just sitting outside with no program hasn't worked			
8	Residential Scope				
8.1	Townhouses	General discussion of the Resident Directors / Faculty-in-Residence Townhouses (refer to attached Wall Cards list under Process): • Conceived as residential suites; size is important - they must be 2 bedroom units as they may have children • Specific site location is not set • Interiors and outdoor space should have privacy; this is their home. • Close proximity to A-I is good; doesn't need to be connected • Trash pick-up and deliveries for Emporium should be screened from the townhouses • Units have completely independent M/E systems from A-I (they never shut down) • A single four-plex may be considered in lieu of two duplexes			
9	Budget				

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9.1	High Level Budget Goals	General high level budget goals discussion (refer to attached Wall Cards list under Budget): • $25 million total project budget is placeholder for Business Plan: o Includes A-I student common areas, main Dining, Emporium, infrastructure improvements, hazmat remediation • The highest priority is addressing the dining needs: what needs to be in operation and makes sense system-wise • Don't want "million dollar" investment in temporary kitchen • Current condition is bad - some exhaust hoods stay on all the time ("throw away" repairs) • Current HVAC system is forced air: o ES: Forced air is not the standard HVAC system for new student housing o Need to consider what HVAC alternatives are realistic in a renovation • The potential transfer of food and trash across the building circulation spine to serve the Emporium needs to be addressed o Residential areas have no "off" hours o Emporium may need to be served from the west • Need a lot of seating while dining area is closed - lunch is biggest demand to address • HUB can take 500 to 1000 covers o Emporium – 150/hour o Food trucks – 100-150/hour o Outdoor patio – 225? (seating,but no meal generation) • Food trucks need to be considered – they aren't temporary: o Trucks are a good food to-go option o UCR purchasing a "Taco Fresco" truck and already has a coffee truck o Pad may be going in behind A-I kitchen for new food truck (where the current smoking area is) o An area for food trucks could be considered at A-I entry horseshoe drive • Further analysis of meal generation needs to be studied			
10	Schedule				
10.1	High Level Schedule Goals	General high level schedule goals discussion (refer to attached Wall Cards list under Schedule): • Dining commons needs to be open by the time the Dundee Residence Phase I expansion is completed • Emporium must open before existing Dining can close; ideally circulation spine remains open during all construction phases • Potential for a different dining program for the year of construction: may have to do all "dining dollars" for the year during construction • Temporary facilities discussion: o Assume students stay living in the residential units			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		o Consider sectioning off a portion of the lobby and enter from the side o Can use rear yard for construction phasing o Consider temporarily housing UCR Resident Services offices in a trailer(s) o Temporary meal preparation and seating critical o Temporary tents for dining were discussed but not supported at this time • Critical that Emporium open for fall semester: o Approximately 6 months construction time o Close and demo D Wing in April – start Emporium construction earlier if necessary for Sept opening • Demo and re-build of main kitchen & dining is estimated to take approximately one year construction duration: o Dining shut down first day of summer for renovation to commence and continue through the following summer o Construction for the Dining Commons should begin by June in order to be completed by fall quarter of the following year • Consider construction in 2 phases instead of 3, as suggested in Master Plan: fewer phases usually results in better construction pricing			
11	PMT Meeting				
11.1	Next Steps	• A-I building infrastructure survey needs to be scheduled for early January 2011 o Studios to provide information regarding which spaces will need to be accessed and how much time is needed by engineering subconsultants o MEP subconsultants should be very familiar with existing systems prior to site survey o A-I common area maintenance schedule was provided to STUDIOS, showing dates for completed and future work o A-I utility bills will be provided for MEP review prior to survey			
11.2	UCR Action Items	• Carrier HVAC Assessment report • A-I Utility bills history • Housing Security report (in progress – end of January) • Dining Demand Analysis • Dining Projections for Staff and Students • Denny's franchise research • A-I Office staff projections • Sustainability Plan • Draft Master Plan (latest proposed campus development) • Hazmat Report (new)	HDRS HDRS HDRS HDRS HDRS HDRS HDRS CPP CPP CPP	ASAP Jan 4 Late Jan Jan 17 Jan 17 Jan 17 Jan 17 Dec 23 Dec 23 ASAP	

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ITEM # | TOPIC | DISCUSSION | OWNER | DUE DATE | STATUS

The above minutes are true and complete to the best of STUDIOS' knowledge.
Please notify STUDIOS within five days of any modifications, additions or deletions.
Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

STUDIOS architecture

12/15/2010

UCR A-I Visioning Workshop Wall of Cards

	VISION	GOALS
	GIVE BACK TO THE STUDENTS	CENTRAL BAKERY
	SENSE OF PLACE	FOOD TRUCK
	NEEDS TO LIVE FOR ANOTHER 50	ENHANCE USE OF YARDS (ACTIVATE)
	FEEL YOUTHFUL	STUDENT KITCHEN
	CELEBRATE BLDG'S HISTORY	KITCHEN FLOW/PROCESS - OPEN KITCHEN
	EMBRACE THE CAMPUS	SPACES "OPEN" TO CIRCULATION
	BLDG IS ICONIC	BRANDED RETAIL/DINING - DENNY'S
	INTEGRATION OF TECHNOLOGY	ACCESSIBLE BIKE STORAGE
	MAIN USE OF DINING IS DINING	SEISMIC ASSESSMENT
		- 1970 REPORT
		- WANT "UC GOOD"
		"GRAND" ENTRANCE
		ENERGY SAVINGS
		WIRELESS BUILDING
		DISHWASHER LOCATION
		- AT THE EXIT
		- DON'T PLUG ENTRY
		SELF-BUSING OPERATION
		- WHO SCRAPES PLATES
		EMPORIUM AS FRANCHISE
		DISPERSED SERVERY
		EXHIBITION COOKING
		MEETING IN THE DINING
		MODERNIZE THE SYSTEMS
		REVENUE GENERATING (COMMON SPACES)
		LEED SILVER
		- CERTIFY IT?
		EXPAND - BUT- RESPECT BUILDING
		SIGNAGE BEYOND WAYFINDING
		MAINTAIN SECURITY AND SAFETY
		UCOP/UCR SUSTAINABILITY GOALS/MANDATE
		SUMMER PROGRAMS
		- ORIENTATION
		- CONFERCING
		MAXIMIZE OPPORTUNITIES
		PROVIDE A MULTITUDE OF DINING ENVIRONMENTS
		CORE INTEGRATION WITH A DIFFERENT FEEL
		SEGMENTATION OF DINING HALL
		- HALL MEALS
		- SMALL MEETINGS

12/15/2010

UCR A-I Visioning Workshop Wall of Cards

STAKE-HOLDERS		STAKE - HOLDERS (CAMPUS REG.)
STEERING COMMITTEE		UCR POLICE
STUDENT FOCUS GROUP		ENVIRONMENTAL HEALTH + SAFETY
- DINING		
- COMMONS		
HOUSING, DINING + RESIDENTIAL SERVICES		
DINING SERVICES		
CONFERENCE, CATERING EVENT SERVICES	HOUSING IT	COMMUNICATIONS (CAMPUS)
RESIDENTIAL LIFE - INCLUDES RECREATION		SERVICES FOR STUDENTS W/ DISABILITIES
RESIDENT SERVICES OFFICE R.S.O.		TRANSPORTATION T.A.P.S.
PHYSICAL PLANT		- TRANSPORT
HOUSING OPERATIONS (+ GROUNDS)		- PARKING SERVICES
CAMPUS FIRE MARSHAL		E.I.R. / C.E.Q.A
		PHYSICAL PLANNER (LANDSCAPE)
		SUSTAINABILITY COORDINATOR

NEEDS	ISSUES
PROJECTIONS - STAFF + STUDENTS	DEMOGRAPHICS - PEAK LOAD
DINING CAPACITY (500 CURRENTLY)	45% ASIAN, 40% HISPANIC
DEMAND ANALYSIS	REC. CENTER CLOSE BY
STAGE/ MULTI - USE	ABANDONED SOLAR H.W. SYSTEM
GAME ROOM	RECREATION MALL EXTENDS NORTH + SOUTH
MEP ASSESSMENT	LINDEN ST. AS CONNECTOR
- WHOLE BUILDING	ABERDEEN TRANSIT/BIKE ORIENTED
- CARRIER REPORT	A-I IS "CLOSER"
BACK - UP GENERATOR	COMMUNICATIONS CAPACITY
- LIGHTING / REFRIGERATORS	COMPOST OPTIONS
SPRINKLERS ON LEVEL 1 (RES. HAS)	SERVICE ACCESS TO EMPORIUM
HAZMAT ASSESSMENT	RENOVATION IN OCCUPIED BUILDING (CLOSED SUMMER)
FRONT DESK AS 24 HR SECURITY	WHERE WILL STUDENTS EAT?
LOADING DOCKS	MITIGATION OF CONSTRUCTION ISSUES
- APPEARANCE	DINER CLOSES FIRST
- APPROACHES	- C-STORE AND COFFEE LAST
- SERVICING	ARROYO IS WATERSHED
NEW GENERATOR, COOLING TOWER LOCATIONS	
PUBLIC RESTROOMS	
REPLACING WINDOWS	
COMMON CASHIER STATION	
LUNCH - 1,000	
- 100/TRUCK	
- 500 "THE HUB"	

12/15/2010
UCR A-I Visioning Workshop Wall of Cards

PROCESS	BUDGET
BREAK OUT SESSIONS?	PRIORITIES
UCR BUDGET PROCESS	DINING $ -> DINING OPTIONS
EARLY BUY-IN FROM FIRE MARSHAL	BUSINESS PLAN: $ 25 MILLION
MEETINGS: BY TYPOLOGY OF SPACES	BUDGET = EVERYTHING EXCEPT ROOMS
DELIVERIES TO EMPORIUM	(SYSTEM, DINING, COMMONS, SEISMIC, ROOFING)
- DON'T CROSS THE SPINE	
SEQUENCE OF CLOSURES	
- DON'T WALK BY CLOSED SPACES	
OUTDOOR DINING	
- DON'T COUNT IN SEATING CAPACITY	
- DRAW STUDENTS OUT	
HOUSING	
- 2 FOR R.D.	
- 2 FOR FACULTY	
- PRIVACY	
- PLACE TO LIVE	
- CLOSE BY	
- MAY HAVE CHILDREN	
HOUSING ON SEPARATE SYSTEMS (ALWAYS ON)	
MEAL PLAN OPTIONS DURING CONSTRUCTION - ALL DINING $	

SCHEDULE	
SEQUENCING	
PHASING OPTIONS	
- CONST	
- DINING NEEDS	
AGE/CONDITION OF EQUIPMENT	
PH.1 DUNDEE OPENING	
EMPORIUM OPEN BEFORE A-I CLOSED	
SUPPLEMENTAL FOOD TRUCKS (SERVING ONLY)	
- PURCHASED BY UCR	
1ST TRUCK BEHIND A-I KITCHEN?	
NO TEMPORARY KITCHEN	
FOOD COURT AT HIGHLANDER FOR DINNER "THE HUB"	
PHASING TIED TO ACADEMIC YEAR - EARLY SUMMER START	
NEED EXTERIOR PATIOS FOR SEATING DURING CONSTRUCTION	
TEMPORARY MODULARS FOR MTC./STUDY	
DELIVERY METHODS - DESIGN ASSIST - DESIGN/BUILD	
MEP SYSTEM UPGRADES/ PHASING	
CONTRACTORS READY TO GO DAY AFTER STUDENTS LEAVE	
Issued 12.22.10	Page 5 of 5

1.19.11 - A-I INFRASTRUCTURE EVALUATION

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Infrastructure Evaluation Survey 01 19 2011
Meeting Minutes
(rev. 02.04.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Troy Bohannon, UCR Housing – Mechanic (TB)
Curtis Tod, UCR Housing – Plumber (CT)
Dennis Cosentino, UCR Housing Maintenance (DC)
Francisco Penaloza, UCR Housing Maintenance (FP)
Jeff Adams, UCR Housing Maintenance (JA)
Randall Clark, UCR Housing Maintenance

Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Hassan Ghamlouch (HG)
Irven Rocher (IR)

Design & Construction (OD&C)
Jacqueline Norman (JN)
George MacMullin (GM)

Capital & Physical Planning (CPP)
Jon Harvey (JH)

IBE, MEP Engineers:
Alan Locke, Principal (AL)
Cirilo Marquez, Electrical (CM)
Nune Egiazarian, Plumbing (NE)
Richard Cruz, Plumbing (RC)
Carol Li, Electrical (CL)

JAMA, Structural Engineers:
Chuck Whitaker, Vice President (CW)
Matt Timmers, Structural Eng. (MT)

SGH, Waterproofing Consultant
Ken Klein, P.E. Senior Principal (KK)
Chrissie Parker, P.E. (CP)

STUDIOS Architecture
Jerry Griffin (JG)

ATTMTS: Agenda

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Introduction Meeting				
1.1	Introduction	JG: the goal of the day is to establish a working knowledge of the building systems as built, including maintenance history, recent performance and concerns / suggestions from Housing Maintenance staff.			
1.2	Building Issues	The A-I maintenance staff was invited to offer their observations and suggestions about the existing building systems: • The original steam boilers are outdated and should be replaced • The chillers appear to be in decent condition for their age • The cooling tower needs major work or replacement • The natural gas-fueled emergency generator is original and should be replaced, potentially with diesel-fueled • Electrical main service capacity may be inadequate for proposed Dining / Kitchen renovation • Existing electrical infrastructure (panels, etc) is not clearly labeled, and many renovations have not been properly documented • Fire sprinkler system currently only covers the residential (bedroom) areas and the basement. • Fire sprinkler main service should be verified for adequate capacity to sprinkle renovation scope • The rooftop air handlers are experiencing problems; the penthouse piping needs replacement			

University of California Riverside
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ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• Residential restroom exhaust fans need increased cfm • Existing HVAC system is constant volume – if changed to variable volume in renovation it will affect the Central Plant equipment • There are two zones on the HVAC system, north side and south side, with one thermostat per wing; existing heating at the ends of the system or wings is not good • The plumbing system is in generally good shape; domestic water piping is copper; interior sanitary sewer piping is cast iron and exterior underground piping is clay; it is unclear if the metal pipes are filling with calcification, but there are no known interior leaks; there are site sewer leaks due to cracked piping • There is no existing grease interceptor at the Kitchen • The roofing system is about 25 years old; it was tested in December 2010 by one of the heaviest sustained rainstorms in many years and only leaked in two known locations – at the expansion joint in the circulation spine roof and in student room #320 in "D"-Wing east (note this is directly under a mechanical penthouse) • The penthouse roofs appear to leak and / or mechanical condensation is leaking through concrete penthouse floor • There is some minor water intrusion through the basement walls, from both rainfall and irrigation • There was a fire in Wing B West third floor in 2008; entire floor was gutted and replaced; some spalled concrete slab had to be repaired			
1.3	Engineering Questions	The Design Team engineers asked the A-I maintenance staff various questions with the following comments: • A-I building is not connected to the campus chilled water system, and there is no known plan to connect in the future • Existing HVAC in residential wings is single duct / single temperature; controls are pneumatic, with multiple modifications over the years; if zoning is changed to individual bedroom controls, it will require trimming coils – there may not be space • The existing cooling tower is 300 tons; it experiences problems in the summer heat, running all day at full capacity; it has never been tested with the two chillers running simultaneously • Main mechanical and plumbing equipment are connected from 12KV – 480 V, 3-phase power; service to residential wings is 12KV – 120/208V, 3 phase, 4 wire; • The transformers are original equipment; the room has overheating issues • The natural gas-fueled generator serves emergency lighting and life safety only; it should be replaced with a diesel-fueled belly tank generator and relocated to the exterior • There is not enough power to run both chillers at the same time			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• Switchgear in the residential wings need to be examined; one switch does not currently work • The domestic water supply is extremely hard – need softener system for Kitchen • The existing steam-generated hot water system is problematic • Water pressure at the street fluctuates, but average is 102 psi • The abandoned solar hot water system should be removed, but future solar hot water or photovoltaic systems can be considered if they can be financially justified • Elevator upgrades are in process (not in this scope) • In a pre-meeting observation of the exterior of the building, the structural engineers noted some cracking in the 2nd floor concrete girder at the west end of "B"-Wing West.			
2	Building Tour / Investigation				
2.1		The engineering team split into groups by discipline and were escorted by A-I maintenance staff to investigate various building systems on the roof, residential floors, ground floor, basement and loading dock. The investigation lasted over three hours in duration.			
3	Recap Meeting				
3.0	Wall of Cards	The engineering and A-I maintenance teams from the morning session reconvened for a recap of the day's findings. Following is a transcription of MEP and Roofing issues captured in a "wall of cards" format:			
3.1	Mechanical	Nine rooftop air handlers were investigated: all are operational but in need of overhaul – new piping, controls, baffles, MCC, insulation; the two on "A"-Wing and the one on "C"-Wing were in the worst condition: • It may prove to be more economical to replace the air handlers; as a rule of thumb, the installed cost is generally $8/cfm • The penthouse enclosures need significant repair to the walls, roofs and waterproofing the concrete floor slabs • The "C"-Wing penthouse enclosure leaks more than others, and the kitchen exhaust fans should relocate to the exterior • The RS Office air handler located in the ground floor closet appears functional, but will likely be replaced with the proposed building expansion in that area • Two chillers appear operationally OK, but the coil sizes should be checked; there is no ventilation or refrigerant monitoring in the chiller room, and the refrigerant type does not meet Code • The cooling tower is undersized and well past its expected functional life; it is the weakest link in the chilled water system • The condenser pumps and the chilled water pumps need overhaul or replacement • The existing steam-generating boilers do not comply with AQMD – recommend replacement			

University of California Riverside
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ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• If changing to hot water boilers, it will have the added expense of all new piping throughout the building • The existing abandoned solar hot water panels and piping should be demolished; the two large storage tanks should be considered for re-use as thermal energy storage, though they may be too small to be effective • The student bedrooms have experienced significant load increases since original: higher occupancy, computers, portable heaters, and other heat-producing devices • Recommend installing adjustable diffusers in the student bedrooms, with air volume sensors in the supply air duct • The residential wing corridors are not ventilated - a potential Code issue			
3.2	Electrical	Electrical loads have significantly increased in the student bedrooms since the building was originally built; there is no apparent overloading of the existing transformers: • Recommend replacing distribution panels, panel boards and transformers at the individual wings over time; this can be achieved incrementally – wing by wing and floor by floor • Existing lighting is generally functional but energy inefficient; recommend replacing with energy efficient fixtures as new areas are renovated • Fire sprinklers should be upgraded to all areas not included in the 2009 upgrade • Cooling should be added to Main Electrical Room (adjacent to basement Central Plant) and to secondary electrical rooms • Check capacity of existing emergency generator to handle new loads of Kitchen refrigeration; recommend replacing with diesel belly tank generator and relocating to exterior • Requested copy of minimum 12 month history of A-I utility bills to determine maximum power demand and usage			
3.3	Plumbing	• Three of four existing heat exchangers should be replaced • A grease trap will be required per Code when the Kitchen is remodeled; best location relative to sanitary sewer elevations appears to be on the west side of the building, but best location to avoid odors around occupants is adjacent to the dock; avoid pumping to sanitary sewer if at all possible • Recommend replacing site sanitary sewer piping where leaking • Recommend destructive testing of domestic water and sanitary sewer pipes to check for calcification / internal build-up			

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ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
3.4	Roofing	The gravel surfaced asphaltic built-up roof is well beyond its expected life, but A-I maintenance staff have discovered virtually no leaks • Exposed fasteners along copings show corrosion; bubbles were observed throughout all areas of roof membrane; the roof was generally firm but a few soft spots were noted • Detector readings vary from 0 – 25% moisture content, though this should not be considered conclusive as the accuracy levels of the device are limited • The preliminary recommendation is that the building should be re-roofed, though there is less urgency because it appears to be performing better than it should for its age; the roof could last months or years - it is difficult to determine precisely • Removing the solar panel / piping system will require re-roofing in those areas – for this reason it might make sense to re-roof the entire building; perhaps the metal panel supports could be cut off above the mounting pads to avoid penetrating the roof membrane, but removing the pipe supports may still damage the membrane, requiring re-roofing • When the building is eventually re-roofed, R-30 rigid insulation board should be installed on the concrete roof slab (approx 4" thick) to improve energy efficiency and meet current Codes; current insulation appears to be 2" thick – the condition at the roof slab edge will need to be considered for the additional thickness • Recommend traffic coating on the mechanical penthouse floor slabs			

The above minutes are true and complete to the best of STUDIOS' knowledge.
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Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

1.20,21.11 - WORKSHOP #2

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2A / Dining, Emporium
01.20.2011 Meeting Minutes 9:30 – 12:00
(rev. 02.04.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Cheryl Garner (CG)
David Henry (DH)
Hassan Ghamlouch (HG)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Design & Construction (D&C)
Don Caskey (DC)
Richard Racicot (RR)
Jacqueline Norman (JN)
George MacMullin (GM)

Marshall Associates
Steve Marshall (SWM)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

ATTMTS: Agenda
CG: Questionnaire / Dining Area Calculations / Dining Peak Office Needs

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Dining Programming				
1.1	Student Restaurant - General	CG confirmed the desired Dining Room capacity is for 560-575 seats. The facility has to absorb initial demand of Glen Mor 2 and proposed Dundee projects CG provided a one page summary of Existing and Required Kitchen / Dining ASF, and a response to the Programming Questionnaire.			
1.2	Loading Dock	CG stated two existing small rooms opening onto Dock are currently utilized as storage for cleaning equipment and seasonal decorations – not for trash and recycling, which are in bins outside on dock apron. Space is needed for the cleaning equipment / seasonal storage (possibly relocated), as well as for catering truck general storage. An 8'x10' refrigerated room with access from the exterior is needed for food truck beverage storage on stacked pallets. The adjacent janitor's closet can remain. The dock requires a cart wash area and 3 bins for cardboard, trash, recycling and compost in the dock area, plus a lift for smaller trucks. It was noted that the dock area has a larger program than just foodservice trucks – see additional discussion in January 21 "Exterior Spaces" notes.			
1.3	Dry & Cold Storage	CG stated the current Kitchen Prep & Storage areas are generally adequate in size but need some reconfiguration: • Dry Storage should include storekeeper desk at an interior window viewing the service corridor just inside the loading doors			

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2 Meeting Minutes
01 20 2011 / 9:30 12:00
STUDIOS Project No: 10566.01

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• Cold Storage (1 freezer / 3 coolers) should expand to include the existing Rough Prep area just outside the current cold storage rooms; sizes similar to Envision study dated 8.18.10 • Central CO2 with outside connection • Central used oil collection unit • Walk-ins to be alarmed and have blast chillers; include steel diamond plate flooring and wainscot			
1.4	Kitchen Prep Area / Dishwash	CG prefers to locate dishwasher near the Dining entry to facilitate bussing in tray-less environment: • dishwasher shall have pulping grinder and hydro extractors, and a power soak sink in the pot-washing area. • Prefer water wash hoods, UDS system and epoxy floors; • All interior partitions shall be installed on concrete curbs • Provide wall-mounted computer for cooks			
1.5	Employee Restrooms / Lockers	CG provided a written Kitchen staff count at peak scheduling; employee restrooms should be sized to peak occupancy loads: • CG to confirm "career" kitchen staff and student employee locker counts and sizes (full or half-size / backpack size for students?) - note possible overlap at shift changes • Changing rooms and locker areas must be segregated by gender • Student lockers could be located along one side of the service corridor	CG	2.4.11	
1.6	Kitchen Offices	CG provided a written list of Kitchen office space needs; rooms should have access to daylight and interior windows to the adjacent kitchen spaces: • Manager's Office shall have 2 desks plus meeting space for 6-10 chairs around a table • Culinary Office shall have a desk for the chef plus shared computer work surface for 2 principle cooks • Supervisors Office shall have shared perimeter work surface for 4 staff			
1.7	Servery	CG: Ideally the Servery is visually open to the Kitchen, and the Kitchen has a minimum of high walls to maximize openness and visibility: • A key consideration is how to utilize staff efficiently • Prefer dispersed food platforms to a central food court • An open bakery area is preferred – it doesn't have to be a dedicated space; baking is done at night. • Essential servery stations include grille, salad bar, deli/sandwich and at least one multi-purpose function. "Action Stations" - flexible counters with multiple power outlets – are desirable • More service points result in shorter queues; self-service can			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		also speed service and may result in less consumption. • All beverages are bulk – no bottled beverages are served in Dining Room; soda dispenser service shall be in a separate room close to the beverage counters General discussion of grains (cereals / bagels / yogurt) service station and desserts (sprinkle around rather than consolidate in one station); do not locate soft serve ice cream near the exit point; provide conveyor pizza oven as part of an "international-theme" action station CG: Emporium – not main Dining kitchen – will serve the proposed A-I west side meeting rooms.			
1.8	Dining Room	As previously noted the Dining area will have 560 - 575 seats. The space will have the ability to support programs: main space requires flexibility for up to 300 seats in a (temporary) stage viewing configuration: • There may be summer conference usage • Minimize chair / table moving to accommodate alternative seating configurations • Primary function of the space is for dining; other functions are secondary • The goal is a beautiful Dining Room with an assortment of environments that allows for smooth transitions from one meal to the next CG: Prefer single Dining entry for check-in and check-out, with backpack cubbies adjacent (outside Dining security). The entry should be gracious. There should be variety in seating configurations, sizes and character; students generally prefer smaller dining zones over wide open spaces There is a need for private dining spaces of varying sizes, including smaller groups: • Ideally there is flexibility in configuration • 60 Hall Dinners per quarter with +/- 40 participants could be held in the Dining Room wings • Dining mezzanines generally don't work (especially with proposed tray-less service) It was noted that the Dining space will need to expand beyond the existing exterior walls in order to accommodate the required number of seats; this is consistent with the Envision concept plan dated 8.18.10.			
2	Emporium Programming				
2.1	Emporium - General	CG: The "D"-Wing West location for the Emporium has been chosen because: • It is directly along the path of the maximum flow of students from the A-I main entry to the rest of campus;			

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Programming Workshop #2 Meeting Minutes
01 20 2011 / 9:30 12:00
STUDIOS Project No: 10566.01

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• It has good visibility from pedestrians passing by along Aberdeen Street; • It has the potential to link in with other student social spaces proposed in the Common Area Improvements • A new freestanding venue for the Emporium is not economically feasible • Note that the 2008 Strategic Plan for Student Housing suggested Emporium diagram extends beyond the existing "D"-Wing building envelope CG: interested in the Denny's "All Nighter" concept; nice franchise kitchen layout and equipment. There is a new installation at Cal Poly Pomona, which also incorporates a convenience store: • Denny's "All Nighter" concept is 3,500 square feet including dining area; requires back of house with office, safe and lockers • 24-hour operation likely for the coffee service and C-store zones; diner portion could be shut down earlier – place the venues that will stay open longest closer to the A-I circulation spine: Lounge / Game Room (furthest east) > C-store > Coffee Shop > Diner (furthest west) • Lounge and Game Room could provide tables, soft seating and billiards, etc open to the C-store / coffee service zones • "D"-Wing west first floor becomes a public space; maintaining security for A-I residents is critical • 24-hour P.O.S. must be near single exit; there would also be two additional P.O.S. at the diner counter and "to-go" location • Exterior signage and "Denny's" brand are essential • C-store should be smaller than "Hub" and bigger than "Scottie's" – CG to provide desired size and/or length of display racks • CG liked the soft seating at Stanford's C-store exit to lounge area (it is a new building – similar to a Barnes & Noble) • Review the Glen Mor 2 food emporium for program components	CG	2.4.11	
2.2	Service	Service of Emporium was discussed: • Service could be from west side of A-I; it probably needs to be independent of Student Restaurant kitchen / dock • There could be 10-12 daily deliveries to C-store and diner; various Emporium loading scenarios were discussed, including servicing through the Emporium entrance from the "horseshoe" entry drive; there are other program elements in this zone that also need to be considered including fire truck access and possible stationing of food truck(s) on the island • Preference is to have deliveries and trash removal use different entrances / exits; Denny's is all disposables; daily trash removal would need a truck pull out created south of "D"-Wing; an enclosed trash holding facility must be provided in the yard south of the Emporium; three bins are 3 cubic yard capacity; location creates a possible conflict with campus pedestrian circulation route			

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2 Meeting Minutes
01 20 2011 / 9:30 12:00
STUDIOS Project No: 10566.01

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• An alternative concept discussed was to service the Emporium from the recessed loading area at the south end of A-I (currently 7 dumpsters with daily trash pick up); possible access route is through the lower level tunnel to "D"-Wing and up to Emporium level by means of an elevator			
3	Dining Breakout Session				
3.1	Servery Component Ideas	CG, DH and SWM continued detailed programming in a separate afternoon breakout session: • Develop center island station with a round exhibition grill including salad bar – open action station with hood • International island to be an action station with grill, fryers, open burners and Impenger 2-deck conveyor pizza oven • Deli bar should be a self-service island • Consider a Mongolian style grill action station with self-serve bowls for cold ingredients for tacos, Asian and steak specials • Develop a grains / cereal and yogurt counter against the wall with milk dispenser and multiple clear plastic dispensers for cereal, toppings, trail mix, etc • Provide self-serve dessert counter in prime location open to Kitchen with pastry, cookies, pudding, bars, fruit bins			
3.2	Beverage Counter Program	DH provided a beverage counter program: • (2) Eight head Pepsi with ice dispenser on separate beverage counters • (2) Horchata dispensers • (2) Rejuvenation water (Nestle dispenser) • (1) Iced Tea • (1) Coffee (Coffee Bean-Tea Leaf) shuttle brewer with 2 shuttles • (1) Hot chocolate machine • (1) Emergen-C machine • (1) Zumex orange juice machine (full-sized stand up)			
3.3	Kitchen Equipment	DH is developing new cooking equipment list: • Energy Star equipment and low / adjustable volume exhaust hoods will be specified			

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Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2B / RSO, Common Areas, To nhouses, Seismic Conf Call
01.20.2011 Meeting Minutes 1:00 – 4:00
(rev. 02.04.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Jeanette Bradeen, Director of Residence Life
Angie Villegas, CFO HDRS
Julie Salgado, A-I RSO
Karen Burleson, A-I RSO
Susan Marshburn (SLM)
Hassan Ghamlouch (HG)

Erica Alcantara, Resident Director
Steven Lerer, Resident Director

Design & Construction (D&C)
Richard Racicot (RR)
Jacqueline Norman (JN)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

STUDIOS Architecture
Erik Sueberkrop (ES
Kelly Capp (KC)
Jerry Griffin (JG)

ATTMTS: Agenda

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Common Areas Programming				
1.0		Note: programming discussions below reference the Program developed for the UCR Strategic Plan for Student Housing dated July 2008.			
1.1	Entry Lobby	The Lobby is outside residential security so must have good visibility from RSO reception counter (see 2.1 below for more detail): • Should feel welcoming: waiting area for visitors / lounge seating for residents • Lobby entry currently locked after late hours – residents have access card; may migrate to 24-hour unlocked • Do not encourage non-resident patrons of Emporium to enter via the Lobby • Do not reduce Lobby from current size: can become crowded at mealtimes from Dining queue or special events • Existing lockers in Lobby are for backpack storage while dining; consider relocating or screening lockers; current locker count will be provided by HG • Provide ATM, copier, display case, info video monitor, vending machines (or at least access to drinking water), phone (for visitors to call residents/RA's/security), fireman's annunciator panel (main one is inside RS Office)	HG	2.4.11	
1.2	Meeting Rooms	Rooms need to function for meetings / classrooms / study groups / tutoring, as well as for summer conferences:			

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		• Provide three rooms @500 ASF and four @ 250 ASF • Available to A-I residents on reservation basis, and rentable to Campus Organizations during off-hours – card key access • Provide flexible tables for various seating arrangements • Consider an internal pre-function space to access meeting rooms, which could also be used for breakout; depending on configuration, the pre-function space may be provided in lieu of one of the conference rooms			
1.3	Public Restrooms	Size toilet fixture counts for Emporium, meeting rooms, possible summer conferences of 300 attendees (based on UPC criteria): • Assume a "hotel" model in which A-I residents will use restrooms in the residential wings • Consider low frequency of high occupant loads in calculations • Restrooms could be split into 2 locations, but that may be more expensive / higher maintenance			
1.4	Computer Lab	Provide desks and infrastructure to serve 12 computer stations and a high speed printer; card key access; wireless network is in progress for the entire building.			
1.5	Fitness Center	Programmed area of 1,000 ASF sounds too large to RSO group – main campus recreation center is across the street; provide 2 treadmills and 2 elliptical trainers – no weights; does not need to be adjacent to Game Room.			
1.6	Game Room	Provide 2 pool tables, 1 foosball table and an alternative to ping pong (due to high maintenance) – such as a Wii game station; could be co-located with Emporium seating / Lounge; acoustics need to be considered during design			
1.7	Lounge	Provide Lounge situated between the Emporium and the Game Room			
1.8	Student Kitchen	Consider a small kitchen for resident use: sink / refrigerator / oven / cooktop / microwave / cabinets / exhaust fan; could potentially also support Meeting Rooms			
1.9	Laundry	As this is frequently a social space, consider methods for improving visibility into existing laundry rooms.			
1.10	Telecom Closet	Consider 295' maximum cable run to serve all west side functions - from Wing B to Wing D; determine if central location in RS Office or two separate closets in "B" and "D" wings meet criteria; conform to campus IT standards for room (110 sf)			
1.11	Housekeeping & Janitor Rooms	Provide single Housekeeping and Janitorial rooms separate from those in the Student Restaurant			
1.12	Educational Supplies Storage	Provide 6'x6' closet for storage of educational supplies / decorations.			

1.13	Exterior Areas	Provide exterior bicycle storage to replace existing, with roof and open sides; consider location along student pathway to campus; should be highly visible for security purposes; RSO to provide bike rack count. Existing outdoor patios are underutilized due primarily to poor accessibility; consider providing easy access, visibility, built-in seating, lighting and shade trellises to encourage use	RSO	2.4.11	
2	RSO Offices Programming				
2.1	Reception Counter	Position counter with good visibility for security of Lobby: • Highly active / 24 hour: visitor and resident information, pick up packages (see item 2.8 below), respond to alarms, etc • Staffed by 2 "career" employees and 2 students • 42" high transaction surface for three simultaneous staff positions side by side, with lowered portion per ADA • Provide pull-down security grille; consider providing a glazed transaction window at end of grille for late hours security • Employee time clock location within reach from lobby side • Locate main fire alarm annunciator panel adjacent (in addition to firemen's annunciator panel in lobby)			
2.2	Offices / Workstations	Provide 3-4 workstations (60 ASF each) directly adjacent and facing reception counter: • Provide visibility to security camera monitors located above the reception counter window Provide 9 private offices: RSO Manager, Head Resident, 2 Resident Directors, 5 Staff (RSO to consider if one private office could convert to open workstation): • B: use campus standard office systems components • HR office requires privacy • R/D offices need door on side for rapid exit, if required	RSO	2.4.11	
2.3	Conference	Provide 325 ASF conference room with flexible furniture: • Provide 5' long serving counter / credenza			
2.4	Mailroom	The mailbox location is preferably an interior space off of the main lobby (past problems with overheating in exterior locations): • Number and size of mailboxes to be provided by RSO • Provide mail receiving slot from Lobby • Provide locking door and work counter inside • Provide mail receiving alcove with exterior ("back door") access by Postal Service / doorbell / work counter	RSO	2.4.11	
2.5	Breakroom	Provide sink, refrigerator, microwave, cabinets, tackboard, exhaust fan and table with 4 chairs; natural light is desirable			
2.6	Workroom	Provide lockable room with perimeter upper and lower cabinets and large central copier, computer, paper cutter, etc; provide 60 staff mail boxes with individual keys (RSO to provide mailbox size)	RSO	2.4.11	

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2.7	Poster Room	Usually 2-3 occupants when in use; provide 4'x8' central worktable with poster printer; storage cabinets for paper and combustible ink; exhaust fan is essential to remove noxious fumes; helium tank storage.			
2.8	Support Spaces	Provide lockable 100 ASF Package Holding Room with shelves (lots of internet retail deliveries) adjacent to reception counter; provide 3 wall-mounted key cabinets. Provide separate lockable 200 ASF General Storage room. Provide one single-occupancy restroom.			
3	To nhouses Programming				
3.1		Provide 4 townhouses for Resident Directors and Faculty in Residence: • 2 bedroom (one master) / 2 bath / living / dining / kitchen • Should feel both welcoming and secure • Privacy from exterior is essential; screen outdoor space • May be family-occupied • Consider proximity to parking: groceries / possible children • At least one townhouse should be single level per ADA • Provide stackable laundry and plenty of storage closets • Each unit would have own heating / cooling controls • Review UCR Glen Mor 2 and Dundee DPP's fo RD apartment configurations • Location facing south to arroyo was reviewed and preferred over Aberdeen Street-facing site suggested in master plan because it potentially provides better privacy for occupants; has closer proximity to east parking lot; may provide better views (into arroyo); feels less like observation towers			
4	Seismic Analysis				
	Structural Engineer Conference Call	Participating: Chuck Whitaker (CW) & Matt Timmers (MT), JAMA; KB, DC, RR, GM, JN, JH, ES, KC, JG: • CW: Seismic force levels used 50 years ago are 50-75% of current Code factors; the individual wings are seismically independent from one another; • Preliminary JAMA seismic ratings: o Wing C is "UC Good"; o Wings A & E are "UC Fair" due to rebar lap lengths at foundation and between levels that cannot be entirely confirmed from the original drawings – there is a 50% chance that computer modeling may change to "UC Good"; o Wings B & D are "UC Fair" due to discontinuous shear walls – they are not considered a life safety hazard, but the buildings might sustain moderate damage in a seismic event • DC: what is seismic replacement cost for building relative to			

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		renovation value? Computer modeling should be completed during DPP (rather than schematic design) to understand ROM cost implications • GM: restated UCR policy which requires seismic review of all capital projects (state-funded or not), with engineering cost outside of DPP scope • B: JAMA to provide proposal for computer modeling (est. $10-15,000) direct to UCR; UCR to check conflict of interest issues – may need to consider third party structural engineer for computer modeling and seismic analysis • To be discussed with action items at 1.21.11 PMT meeting			

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Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2C / Fire, Site Utilities, Security, E teriors Spaces
01.21.2011 Meeting Minutes 8:30 – 11:30
(rev. 02.04.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
(sequentially)
Scott Corrin, Campus Fire Marshal (SC)

Brian Hambleton, Physical Plant – Electrical (BH)
Eric Schuler, Physical Plant – Electrical
Mike Terry, Physical Plant – Plumbing (MT)
Tim Gable, Physical Plant – Telecom (TG)

Michael Lane, Campus Police Chief (ML)
Michael Brandeis, IT

Nita Bullock, Director of Physical Planning (NB)

Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Cheryl Garner (CG)
Hassan Ghamlouch (HG)
Andy Plumley (AP)

STUDIOS Architecture (SA)
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Design & Construction (D&C)
Richard Racicot (RR)
Jacqueline Norman (JN)
George MacMullin (GM)

Marshall Associates
Steve Marshall (SWM)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

ATTMTS: Agenda

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Fire / Life Safety				
1.1	Introduction	ES provided a brief overview of the project scope and preliminary Code analysis. The A-I building will be considered a single structure of Type I-B Construction based on existing building shell assemblies. The major Occupancies include R-2 for the Residential areas, A-2 for the Dining and Emporium spaces, B for the Office areas and A-3 for conference rooms and lounges. CBC Section 508.3 allows for Non-Separated Occupancies, except R-2 must maintain a one-hour separation from other Occupancies if building is designed for most stringent (A2) Occupancy			
1.2	Fire Sprinklers / Fire Alarm	SC stated that installing fire sprinklers and a fire alarm system in the remaining unprotected areas of the building will satisfy most of his interior life safety issues. • SC: sprinklers and fire alarm were added to the A-I residential wings after a fire a few years ago; the basement was already equipped with sprinklers • SC: the occupancy is considered a Light Hazard, so the existing			

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Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2 Meeting Minutes
01 21 2011 / 8:30 12:00
STUDIOS Project No: 10566.01

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		4" fire main serving the building should be adequate. He anticipates no need to upsize site infrastructure to sprinkle the remaining unprotected portions of the first floor. • SC: a Detector Check located in a vault at the east end of 'B' Wing East serves the entire building, so a backflow preventer upgrade is not warranted – unless there is code justification for water purity (the domestic and fire water mains are a combined loop). • SC recommended the proposed freestanding Townhouses be protected with NFPA 13R residential sprinklers served by extending the existing fire main from Aberdeen Street. Each Townhouse shall have a fire riser and tamper switch. • SC: fire Alarm can be extended from A-I to the Townhouses with 2" dia. conduit (no new backbone is required). • SC: ADA fire alarm notification devices must be extended throughout the A-I building where currently not installed. • SC: existing main Fire Alarm panel is located in the A-I basement – the room is too warm and should have cooling added. • The existing emergency generator is fueled by natural gas; most have changed to diesel belly tanks due to seismic issues; requires AQMD-approved equipment.			
1.3	Existing Building Conditions	SC: The existing "one-hour" residential corridors without self-closing rated doors on the bedrooms are considered "approved non-conforming" by UCRFD. SC: The existing glazed storefront conditions along various ground floor exit paths are acceptable to UCRFD, and don't need to be changed; indicate one-hour rating limit lines on drawings. SC: don't need to retroactively add areas of refuge or elevator auto-return to the ground floor.			
1.4	Site Fire Access	SC: Primary fire truck access responding to annunciator panel / smoke detector alarm is via the west horseshoe drive. Secondary fire truck access responding to a sprinkler alarm is at the east side parking lot: • SC: A-I is a nonconforming "legacy building" but the fire sprinklers and alarms are over and above Code requirements, so UCRFD can exercise some flexibility in the 150' hose limit. The existing condition of deep yards between the wings is acceptable as long as current access is not compromised. • SC: The existing horseshoe drive turning radius is tight but technically per Code – request to widen curve if possible. If short term Emporium loading is added along the horseshoe, widening of the drive will definitely be required. • SC: an acceptable alternate fire truck staging area would be a properly sized turnout off Aberdeen Street – probably just a single one south of the horseshoe.			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
2	Site Utilities				
2.1	Electrical	BH: Be aware of existing underground high voltage utilities if expanding the building footprint, especially around the loading dock / service yard • Old "4160" running underground adjacent to the dock has been abandoned, but it should be checked to confirm there is no longer any live power feed • A recent 12 kV vault is located just south of the dock; this feeds the existing transformers adjacent to the Central Plant, then power ultimately branches out in the basement to each wing; each wing is metered separately • A 480 V feeder is located on the south wall of the service yard enclosure, serving the Kitchen; this will be cheaper to relocate (if necessary) than the 12 kV line • New loads need to be verified to confirm if existing transformers may need to be re-sized; ideally (but not essential) these transformers would relocate to the exterior • The existing emergency generator is inadequate to support the emergency lighting and the renovated Kitchen refrigerated rooms; an exterior location is desirable for its replacement • The existing transformer in the "E"-Wing basement (adjacent to recessed south loading area) may be able to feed the proposed Townhouses if sited along the arroyo • Use caution if any new floor penetrations are proposed in the Kitchen directly over the main electrical room below • Steam generation in A-I is highly likely to be discontinued			
2.2	Plumbing	MT: There are 6" sanitary sewer laterals on the west side of A–I, running out toward Aberdeen Street: • The existing Kitchen waste lines run to the west site sanitary sewer without a grease interceptor; the elevation of a new grease interceptor located on the east side may be too low • Check invert elevations and fall of existing site sewer piping; highly discourage introducing pumps for sewer • If clay site sewer piping is replaced due to leaks, recommend installing 8" cast iron • It may be more economical to run sanitary sewer from Townhouses over to existing A-I system, rather than laterals out to Aberdeen street • The domestic water service to the Kitchen is 4" with a newly-upgraded softening system that can remain as is • The existing A-I Student Restaurant electric dishwasher is about to be replaced with Hobart 480V 3 phase equipment, including an accumulator, scraping conveyor and pulper; this system will be re-used in the renovated design			
2.3	Telecom	TG: current telecom service to A-I building is at maximum capacity • Data service is not a big issue: just add a "switch" and Telecom Closets per UCR standards; 295' maximum cable run			

University of California Riverside
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STUDIOS Project No: 10566.01

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• Voice service is more problematic to add • Since TG hadn't been briefed about the A-I project before this meeting, JH will forward program scope to UCR IT for review and additional response	JH	1.28.11	
3	Security				
3.1	Interior Functions	ML: All ATM's and P.O.S. / cashier in Emporium or outside Lobby security must be readily visible from passing patrol car along the horseshoe drive; presume security cameras will be installed per UCR standards AP: discourage random intruders from directly entering A-I Lobby or "B"-Wing Meeting areas Comment: customer parking will not be provided for the Emporium			
3.2	Exterior Functions	ML: Bike storage and other outdoor gathering areas should be enhanced with lighting / security cameras, and must be readily visible from passing patrol car from Aberdeen Street or along the horseshoe drive ML: Future plan review will be by Lt. John Freeze			
4	E terior Spaces				
4.1		NB: any new structures must be setback from the top of the Arroyo by minimum 50'; pedestrian walkways or fire access can be within the 50' NB: it is campus policy to add good usable outdoor spaces where possible; one smoking area on east and west side of A-I must be provided – locate at least 25' from entrances, windows, or mechanical air intake NB: mature trees should be retained; low irrigation landscaping is encouraged; reiterated ML's recommendation that CPTED design principles should be employed to naturally enhance safe and secure outdoor areas ES: raised the possibility of secured outdoor dining off of the Student Restaurant; circulation to and from proposed future parking deck(s) should be considered when investigating major/minor access routes from the east			
4.2	Service Yard	There was general discussion about the program of the Kitchen loading dock and service yard area: • CG: semi-trailer trucks unload almost every day – a second dock for several smaller trucks to come and go is desired • Existing raised dock may actually be a hindrance for most deliveries. Raised dock is frequently used by large delivery vehicles. Smaller do not reach that dock height require another method to offload and deliver product.			

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2 Meeting Minutes
01 21 2011 / 8:30 12:00
STUDIOS Project No: 10566.01

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• Truck maneuvering and visual screening must be integrated • Other Kitchen dock area program: catering truck loading; trash/recycling/compost bins; cart wash area; grease trap • Cooling tower should be replaced, and if relocated should move closer to, rather than further from, the chillers situated in the north side of the Main Mechanical Room • Generator and transformers ideally should move from basement to exterior – consider creating a walled utility yard, or incorporate within an expanded service yard enclosure • CG will provide additional clarification of Loading Dock program	CG	2.4.11	

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University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #2 / PMT Meeting
01. 21.2011 Meeting Minutes 11:30-12:00
(rev. 02.04.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)
Cheryl Garner (CG)

Design & Construction (D&C)
Richard Racicot (RR)
Jacqueline Norman (JN)
George MacMullin (GM)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

STUDIOS Architecture
Erik Sueberkrop (ES)

Kelly Capp (KC)
Jerry Griffin (JG)

Marshall Associates
Steve Marshall (SWM)

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	PMT Meeting				
1.1	Seismic Analysis	UCR will obtain structural proposal for computer modeling of A-I to determine UC Rating of building wings: • UCR to determine whether JAMA or third party engineer • JAMA will remain on DPP team, regardless	JH	1.31.11	
1.2	Plan for Phasing	Discussion of Project phasing: • CG: Emporium: demo Dec 2012 / open Sept 2013 • Residential Restaurant: demo June 2013 / open Sept 2014 • RR: allow up to 5 months for advertise / pre-qual / bid / contract / GC mobilization (shop dwgs, long lead) Emporium CD's issue for bid July 2012			
1.3	Sustainability Conference Call	JH will arrange a conference call with SA, John Cook (UCR Sustainability director) and a representative of HDRS' Dining Services and Housing Services sustainability committee to discuss Campus strategies	JH	1.27.11	
1.4	Additional Programming Info	SA provided a list of unanswered programming information required of various Workshop participants	CG / RSO	2.4.11	
1.5	Destructive Testing	SA will provide JH with a list of recommended destructive testing of plumbing components	SA	1.25.11	
1.6	Student Workshop	An evening programming workshop with select A-I student representatives will be scheduled for next SA visit on Monday 2.7.11 – ideally from 6:00 – 7:30 PM (latest)	JH	2.7.11	

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STUDIOS architecture

2.2.11 - SUSTAINABILITY CONFERENCE CALL

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Sustainability Conference Call
02.02.2011 Meeting minutes 1:00-2:00
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
John Cook
Gustavo Plascencia
Humphrey Conant
Hassan Ghamlouch (HG)

Design & Construction
George MacMullin

Capital & Physical Planning
Jon Harvey (JH)

STUDIOS Architecture
Jerry Griffin (JG)
Kristin Lacy

IBE
Beck Price

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	LEED				
1.1	LEED for DPP	The project must ultimately achieve minimum LEED Silver in the Design/ Construction phase; at the DPP level the LEED Scorecard must be populated for likely credits. HG reminded that the cost of LEED improvements must fit the project budget.			
1.2	LEED NC vs. CI	STUDIOS has checked the project for both LEED NC (New Construction and Major Renovations) and CI (Commercial Interiors). Since the project renovation scope is less than 40% of the entire A-I building, it could be considered CI. Silver is readily attainable for LEED NC, but any higher rating will be difficult because the majority of the low-performing shell will not be upgrade in this project. For a similar amount of improvements LEED CI appears to achieve a Gold rating. The proposed freestanding staff residences however, would require a separate NC submission. UCR charged the design team to pursue the LEED strategy that achieves the highest rating for the least additional cost.			
1.3	LEED Credits	Various LEED 2009 credits were discussed: • UCR does not purchase renewable energy contracts (EA-Cr 4, or 6); • A high level of water efficiency (30-40% goal) should be attainable with the replacement of the dishwasher and cooling tower (WE-Cr 1, or 3); • The new Kitchens should have Energy Star appliances (EA-Cr 1.4); • Innovation credits may be possible for high level of campus Kitchen compost/recycle/waste stream strategies; • HG: Enhanced commissioning should be pursued for future UCR projects (EA-Cr 2, or 3); • Several other credits were suggested by UCR participants, all of which were already under consideration by the design team.			
1.4	Next Steps	STUDIOS will provide a high level summary at the 2.7.11 PMT meeting for further direction on LEED NC vs CI	SA	2.7.11	

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STUDIOS architects
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2.7.11 - WORKSHOP #3

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #3 / PMT Meeting
02.07.2011 Meeting Minutes 9:00 – 9:30
(rev 03.03.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)

Design & Construction (D&C)
Jacqueline Norman (JN)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Marshall Associates
Steve Marshall (SWM)

ATTMTS: Agenda
LEED Scorecards

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	PMT Meeting				
1.1	Workshop #3 Goals	1. Finalize Program Areas 2. Complete Detailed Criteria Collection for Room Data Sheets 3. Review Concept Alternatives			
1.2	Implementation / Phasing	ES reviewed the project pre-construction schedule at a high level; assuming 8 months UCR review / processing after 100% CD's, and 10 months Emporium mobilization / construction – a May 2011 start of Schematic Design would be required: • B: a May 2011 SD start is too quick; UCR requires adequate time for funding submissions and approvals; an agreement with Denny's would also entail 2-3 months negotiation prior to starting design • The impact of the future parking structure proposed east of A-I on the DPP scope was discussed; ES: the parking structure in the master plan appears undersized to have an internal ramp, which could impact the Kitchen dock; JH: the future structure should be considered so the A-I solution does not compromise the parking structure ; AP: the structure is important but long term; B: the structure as shown in the master plan is a place holder; the Maintenance Shop program could be relocated; the structure is needed in the area to support Dundee.			
1.3	Infrastructure, Sustainability updates	JG gave a brief overview of the draft Infrastructure Evaluation report which was issued to UCR for review on 2.2.11; the scope will be included in the 3.4.11 ROM cost estimate; further discussion with IBE in the afternoon ES reported that, except for Room Data Sheets, STUDIOS is generally on schedule with the DPP process; draft Room Data Sheets will be issued to UCR for review by 2.18.11 (one week late); next steps are to develop a single Concept Plan based on UCR input later in the day, and to commence the draft DPP Cost Estimate and infrastructure improvement			
		prioritization for review and discussion at the next scheduled Workshop #4 on March 4, 2011 JG gave a summary of the 2.211 sustainability conference call, and provided a brief overview of the LEED NC vs CI issue; the project can readily achieve LEED Silver under NC, but for the same level of improvements it appears to achieve LEED Gold under CI; this is partly due to the significant foodservice renovation scope, which will result in LEED credits for Energy Star appliances and water reduction; if CI is pursued, the freestanding staff residences would need to be split off or submitted separately as NC; UCR reiterated their sustainability goal is for the best value of cost vs LEED rating above Silver			
1.4	Seismic Study	JH: Reported that UCR concluded an independent engineer is not needed at the pre-design stage to complete computer modeling to determine UC Seismic Rating of the A-I wings. SA was asked to submit a proposal for JAMA to complete the computer modeling as an additional service to be billed on an hourly basis. Total cost with reimbursable expenses is not to exceed $15,000.	SA	2.14.11	
1.5	UCR Action Items	JH: a work order for destructive testing of the A-I plumbing pipes has been submitted to campus Physical Plant; there was discussion about timeframe for the tests relative to completion of the DPP in April, concluding that the scope and cost of potential pipe replacement needs to be captured in the DPP estimate (as a "plug" number if the testing cannot occur and be analyzed in time) JH questioned. whether it was required under the DPP scope or could be delayed until the Design phase; the primary concern is identifying potential repair costs at an early stage, but there may not be adequate time to properly investigate by the mid-March DPP Draft submission SM: the Security Report is currently a work in progress; UCR comments are due to the Consultant by Feb 14.			

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University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #3
02.07.2011 Meeting Minutes 9:30-4:30
(rev 03.03.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)
Cheryl Garner (CG)
David Henry (DH)
Hassan Ghamlouch (HG)

Design & Construction (D&C)
Jacqueline Norman (JN)
Don Caskey (DC)

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Kelly Capp (KC)
Jerry Griffin (JG)

Marshall Associates
Steve Marshall (SWM)

IBE
Alan Locke (AL)

ATTMTS: Agenda
Schedules
Concept & Phasing Plans

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Program Areas Validation				
1.1	Program Summary Overview	ES gave an overview of the Program Summary sheets, to which STUDIOS assigned a Net to Gross of 0.70 for the Community & RSO spaces, and a 0.90 for the Dining and Emporium B: use the CPEC standards for Net to Gross			
1.2	Community Spaces	The following Community rooms were discussed with consensus as follows: • Lobby function is too small at 100 ASF (per Strategic Plan for Housing) – it currently contains some lounge seating and the lockers / vending outside the Dining entrance; recommend increasing to 190 ASF and re-naming Student Support • Computer Lab appears too small at 360 ASF (per Strategic Plan for Housing); instead of a perimeter station layout, a central bar layout would consolidate the wiring, set-up similar to a classroom, and would require about 450 ASF; SA to show options; AP may be able to rent the room out in off hours; confirm attributes with students at evening workshop • Fitness Center appears too large at 800 ASF; only four pieces of cardio equipment were requested in WS #2 since the main Recreation Center is across the street; a 450 ASF size would be adequate; AP: confirm at Student Workshop if four pieces of exercise equipment are adequate • Student Kitchen: consider co-locating with Pre-Function to support			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		Meeting Rooms when required; ideally adjacent to outdoor patio for BBQ staging. Needs additional counter space. • Prefunction: 250 ASF is OK as shown • Music Room: locate in Wing D; 70 ASF is OK • Restrooms: two sets of restrooms makes sense to support the Emporium and the Community spaces (see fixture count adjustments in Item 1.7); proposed locations are where Wings B and D connect to the circulation spine			
1.3	Resident Services Offices	The following RSO rooms were discussed with consensus as follows: • Reception includes counter and waiting area • Private Offices should all be the same size for flexibility – 120 ASF; RSO Manager office is an exception because it has small meeting space within – 160 ASF; workstations – 60 ASF • Staff Offices count should reduce from five to four; Workstation count is confirmed at four • Workroom: copier should be in center of room; provide upper and lower cabinets at two long sides of room; staff mailboxes do not need to be lockable • Conference Room: access from outside of RSO is preferred; it could even be freestanding outside of the RSO block • Student Mailboxes: reduce to 350 ASF and consider an articulated layout; student mailbox count was previously identified as 1,000 • Package Room: 24" deep shelves each side; no work table required; size is fine. • Storage and Poster Room are sized OK as shown; Poster Room has a work table and poster printer			
1.4	Emporium	The following Emporium-related rooms were discussed with consensus as follows: • CG: assume 200-240 peak meals per hour at lunch (dinner similar); it's OK to walk through cooler to access freezer, but not to also walk through dry storage; consider Kitchen grease collection / recycling; cardboard / recycling / compost / garbage holding and removal • Dining at tables will be 720 ASF (48 seats x 15 sf each); this is in addition to 6-8 counter seating (50 ASF) and outdoor patio seating • Coffee service will be 80% non-drip, so may be separate from Denny's standard; assume 100 ASF , to be located between the Dining area and the Lounge • Prepared Food Platform (deli case): 340 ASF • General Merchandise: 525 ASF			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		• Kitchen Restroom can be single occupancy, but must provide vestibule if opening directly onto food preparation area; need to provide employee lockers; kitchen Janitor Closet should reduce to 50 ASF • Kitchen Office and Cash Room to be located within Emporium back of house zone; • Lounge: 1,200 ASF confirmed (40 seats x 30 sf each) ; additional seating should be provided on the adjacent patio • Game Room: 800 ASF OK; keep the Wii station - confirm at Student Workshop			
1.5	Student Dining	The following Student Dining / Kitchen – related rooms were discussed with consensus as follows: • Dining seating area to be 11,500 ASF (575 seats x 20 sf); seat area factor is larger than used at Emporium in order to provide for a greater variety in dining environments • Kitchen staff lockers located in service corridor is good; combination Changing area and Restroom Vestibule could work, but needs a privacy device • Kitchen Restrooms: recommended fixture counts are based on Plumbing Code minimums; in order to increase operational efficiency, direction was given to increase lavatory count to two for each gender and add a second urinal			
1.6	Staff Residential	AP: prefers the "C" (single story) plan option; provide built-in cabinets and storage to minimize loose furniture B: increase unit area to 1,125 ASF; figure is based upon Glen Mor 2.			
1.7	Non-Assignable Spaces	The following rooms were discussed with consensus as follows: • Two separate restrooms for each gender located where Wings B and D connect to circulation spine are approved; recommended fixture counts are based on Plumbing Code minimums; to address the occasional demand of large events direction was given to add a third toilet to each Women's and remove one toilet from each Men's (net one toilet and one urinal); total one lavatory in each • Provide an additional single occupancy (gender neutral) restroom. • Four Telecom Rooms at 100 sf each proposed by UCR IT; 2-3 of the rooms may be reduced in size – a Housing IT person will review with Communications • Food Trucks require a serving location along west horseshoe drive while the Main Dining is being constructed and during special events - an 8'x28' concrete pad including utilities (water and power); once the Emporium is open the food truck may no longer need to be positioned in that location; a service location adjacent to the east loading dock is required for parking, stocking, cleaning (provide electrical service for refrigeration)	SLM	2.25.11	

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
2	Concepts Revie				
2.1	Concepts Presentation	ES presented 2 alternative concept plan diagrams, both with the future parking structure dropped in for reference: Alternative 1 proposes the main West entry north of rebuilt Wing C; computer lab positioned at the west end of Wing B; fitness center inhabiting one of the existing staff units; one large interior extension to the south of student Dining with a secured patio to the north (asymmetrical plan); closing off through circulation south of Wing C east – to be used as outdoor dining garden; the Kitchen dock access is rotated to the south; two-story staff housing north of the existing pedestrian walk. Alternative 2 proposes the main West entry south of rotated Wing C; a secondary circulation loop along the existing spine to improve security and avoid level changes; fitness center and computer lab positioned at the west end of Wing B; equal sized interior extensions to the north and south of student Dining and maintaining existing through circulation north and south; single story staff residential with pedestrian walk shifted north.			
2.2	Concepts Discussion	SLM: closing off one yard outside of Wing C east for secure outdoor dining is a good idea; pedestrian circulation from Pentland residential is significant, while flow to future parking structure will be light; recommend flipping the closed off yard to the north side of Wing C east, with resident card reader access CG: Lothian residential has a large patio that seems rarely used – if the reason can be discovered we should not repeat; consider providing a second entrance into Dining off of the proposed south patio to relieve the main Dining entry queue SLM / CG: prefer west entry as shown in Alternate 2 (south of Wing C), as it addresses resident pedestrian flow to campus better AP: refrain from pinching the pedestrian circulation south of Wing C east with too large of a Dining expansion; likes proposed tower gesture at main West entry; prefers the Alt 2 West entry plaza idea of unit pavers to blur line between pedestrian and vehicular circulation; prefers staff housing as shown in Alternate 2 (one story – shift existing pedestrian walk to the north); combine bike storage into one enclosure south of Wing D - closer to pedestrian flow and Aberdeen Street; consider smoking area on east side of A-I (may not need to provide one on west side); proposed Emporium service access through basement spine to south dock is OK, but confirm there is no conflict with existing infrastructure JN: recommend avoid creating too many small outbuildings around the West entry plaza, in deference to the simplicity of the existing A-I building diagram CG: Kitchen dock should remain facing east, as shown in Alt 2; ultimate location of food trucks may be other than west horseshoe drive, to be determined SA will incorporate comments and revise into a singular Concept Plan			

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
3	Infrastructure				
3.1	Existing Equipment Overview	AL gave an overview of the MEP infrastructure evaluation: • Two existing boilers create steam for space heating system and for miscellaneous kitchen equipment; steam system is obsolete (fewer maintenance options), and should be converted to hot water system eventually – but changing out all the building piping will be a significant cost and disruption; both boilers need to be replaced but can be phased – one boiler can continue to provide domestic hot water for residential wings; an alternative scenario is to convert the building to independent penthouse mounted boilers wing by wing – this will spread out the pain, but will require more maintenance; recommend an independent boiler for the critical path first phase Emporium; new hot water boilers should be provided for all renovated program areas; electrical wiring requires updating when spaces are renovated; main electrical switchgear room requires cooling; renovated Kitchens will each require a grease trap; rooftop storm drains will require replacement when re-roofing; domestic water lines appear fine, but should be tested for internal condition • Hot water piping in main mechanical room should be replaced • Cooling Tower should be replaced as soon as possible; due to its age and poor condition, it is wasting water and energy • Existing chillers are in decent shape and could last 5 more years, but they are inefficient and use outdated refrigerant that is increasingly difficult to source and will not meet LEED requirements; it is recommended that replacing chillers rather than refrigerant will be more economical and maintainable in the long run; removing chillers from basement will be a challenge – they could potentially be left in place and decommissioned; • Future Kitchen grease traps were considered at a high level, and it appears that there is enough fall to the sewer lines on the west side to avoid pumping • Rooftop air handlers on residential wings are in varying degrees of deterioration, but most could last another 3-4 years – Wing A east is in the worst condition; the Dining AHU should be replaced with the Wing C east renovation • There is not enough building electrical service to serve two kitchens – need to upgrade 480 V service before main Dining Kitchen comes on line • The emergency generator must be replaced and relocated to the exterior; the existing recessed well could work once the solar hot water tanks are removed • The transformer in A-wing must be replaced			
3.2	New Kitchen MEP Requirements	IBE needs the following information confirmed for both Kitchens: • Number of exhaust hoods and approximate cfm	SLM	2.11.11	

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
		Overall electrical load for the Kitchen is required to understand power upgrade required on the secondary side •			
3.3	Infrastructure Costs	IBE will provide recommended infrastructure improvements in phased groups for the DPP cost estimate preparation			
3.4	Utility Enclosure	DC: consider building a freestanding structure to house the new cooling tower, chiller and related pumps; locate so that it is eventually absorbed into the future parking structure			
4	Schedule / Phasing				
4.1		ES: Phase One is proposed as all construction west of the circulation spine and Phase Two is all work east of the spine, with east basement infrastructure upgrades occurring in both phases; The Emporium in Wing D is on the critical path and must open by August 2013 to help support Glen Mor 2 residents because the A-I Main Dining will be demolished; Assuming 12 months mobilization and construction (2 months +10 months) for Phase One plus 3 months bidding/contract period results in a May 1, 2012 Bid Issue date; if a 12 month period is required for design, documentation and UCR reviews, Schematic design would need to commence May 2011. B: The DPP approval process including analysis of the business case can't be done in pieces – it must be completed prior to Design phase start; obtaining required approvals in the short window presented is a challenge; consideration should be given to reducing Phase 1 to only the 6,000 square foot Emporium project since it is on the critical path; Emporium kitchen will require dedicated infrastructure including underground grease trap, kitchen exhaust to 3rd floor roof and MEP service B: Construction Manager at Risk (CMAR) may be considered as a delivery method, which could support the proposed construction schedule; DC: CEQA review will take six months (assuming negative declaration); CEQA submission can commence after the entire project Schematic Design for all phases is completed; Emporium DD/CD phases can proceed concurrently with CEQA review JN: Three month CMAR selection period starts at Preliminary Design (Design Development); this can happen concurrently with the six month CEQA review B: UCR must have cost estimate before internal review can commence; STUDIOS to forward digital version of conceptual pre-construction schedule for UCR internal review	SA	2.18.11	
5	Room Data Sheets				

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
5.1	Room Data Sheet Follow Up discussion from morning session	CG to provide additional Emporium information relative to trash and recycling volume and other service area storage requirements (Denny's program). CG: Kitchen lighting levels should be 70 footcandles at the worksurface. Kitchen industry-recommended maximum space temperature is 78 degrees; CG requested that 75 degrees maximum be used. Lounge: assume wireless internet will be installed; provide two flat screen TV's. Positioning the Fitness Center in the existing northernmost Staff apartment is approved, since that location is closer to more active student resident areas. Positioning the Student Support function (lockers outside Dining / vending) in the Staff apartment just south of Wing C is approved since that location is adjacent to the proposed Dining entr and the proposed main building entries	CG	2.25.11	

The above minutes are true and complete to the best of STUDIOS' knowledge.
Please notify STUDIOS within three days of any modifications, additions or deletions.
Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #3 / PMT Meeting
02.07.2011 Meeting Minutes 4:30 – 5:00
(rev 03.03.11)
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)

Design & Construction (D&C)
Don Caskey (DC)
Jacqueline Norman (JN)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Marshall Associates
Steve Marshall (SWM)

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	PMT Meeting				
1.1	Room Data Sheets	SA will update Room Data Sheets for Committee review and comment	SA	2.18.11	
1.2	LEED CI vs NC	DC: may be able to refrain from submitting the freestanding staff housing for LEED certification, so that the main A-I project can be submitted under LEED 2009 CI (to achieve possible Gold rating – see item #1.3 in AM PMT meeting); need to "run up the flagpole"	DC	2.18.11	
1.3	MEP Infrastructure	IBE to investigate the previously-discussed possibility of a freestanding mechanical enclosure and abandoning much of the basement equipment in place	IBE	2.14.11	
1.4	Schedule	STUDIOS to send digital version of conceptual construction schedule to UCR for internal manipulation	SA	2.18.11	
1.5	Next Meeting	Workshop #4 is scheduled for Friday 4 March; primary topics include: review of draft cost estimate, review of phasing schedule and review of single updated Concept Plan			

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University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Student Workshop
02.07.2011 Meeting Minutes 6:00-7:00
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Steven Lerer, I-A Resident Director
+/- 20 A-I Student Residents

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Student Workshop				
1.1	Project Overview	ES: gave a quick overview of the project scope, including that it did not involve renovating the residential wings; SA asked the students their opinions about the following program elements.			
1.2	Main Dining	• Main Dining Room is currently not very useful for off-hours meetings, due to closure times and furniture • The queue for meals (especially lunch and dinner) is currently unacceptably long • Storage is required for stage accessories (speakers, etc)			
1.3	Lounge	• Provide scattered floor outlets for computer charging • One TV is probably enough – except for special events, students tend to mostly watch on their own computers (need additional wall-mounted monitor dedicated for Wii, which was enthusiastically received) • Furniture should be flexible and movable • Piano practice rooms: one may not be enough (2 are currently well-used); locate adjacent to Lounge • Non-RSO resident staff currently have their own dedicated break area; use of the RSO conference and break room may be acceptable			
1.4	Computer Lab	• Printing is currently the biggest logjam - there needs to be more than one printer provided • A location close to the spine is preferred (for easy access to printers) • Resident staff needs dedicated computers • WiFi in the bedrooms was desired (not in scope)			
1.5	Fitness Center	• Four pieces of cardio equipment seems enough, with the main campus Recreation Center across the street; free weight equipment not recommended since it will be susceptible to theft			
1.6	Exterior Spaces	• Bicycle storage should be a single enclosure located south of Wing D near the pedestrian walk for convenience; theft is an issue, so visibility from the street is important and security cameras should be installed. • The existing patios north of Wings B and D would have higher usage if they felt more inviting: better access, lighting and seating • The smoking area adjacent to the dock is probably best in its current location and configuration (one is enough)			
1.7	Building Architecture	• The consensus was that residents like the brick and "traditional" feeling of A-I; it should feel like "home"			

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3.4.11 - PROGRAMMING WORKSHOP #4

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #4 / PMT Meeting
03.04.2011 Meeting Minutes 9:00 – 9:30
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)
Cheryl Garner (CG)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Design & Construction (D&C)
Don Caskey (DC))
George MacMullin (GM)

Marshall Associates
Steve Marshall (SWM)

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)

ATTMTS: Agenda

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	PMT Meeting				
1.1	Workshop #4 Goals	1. Preferred Concept Diagram – Final Review 2. Schedule / Phasing – Final Review 3. MEP Infrastructure – Scope Confirmation 4. Room Data Sheets – Final Review 5. Draft Cost Estimate – Scope / Methodology Confirmation			
1.2	Comments From Committee	• Infrastructure Report (issued 2.2.11) review comments coming Tuesday • Destructive Testing must be deferred until after DPP because central plant can't be shut down while student-occupied; item will be carried in the DPP estimate "below the line", but a ballpark price is difficult to ascertain at this point (for the testing or the piping upgrades, if required) • Emporium / Denny's: if any outstanding issues remain after Workshop #4, to be resolved via conference call with CG/SWM/SA • Housing is rethinking overall schedule since delivering the Food Emporium by September 2013 is not possible, a goal discussed in Workshop #3 • Infrastructure: KB stated the MEP report appears too general and ideally should forecast how long the existing central plant equipment might last; it was discussed that this is extremely difficult to predict since the equipment is still running generally alright well past its expected lifespan; CG reminded that the kitchen exhaust hoods are precarious and questioned how long they could be expected to keep running if the project is delayed	UCR	3.8.11	

		• Requested guidance on when equipment could fail.			
1.3	DPP Schedule	STUDIOS is on schedule to deliver Draft DPP on 3.14.11; UCR review period is 1.5 weeks; next Workshop to discuss UCR review comments is 3.28.11; final DPP issue is 4.11.11			
1.4	STUDIOS General Progress Status	• Sustainability: LEED 2009 CI is the proposed strategy for the DPP since it appears to deliver a higher LEED rating (Gold) than LEED 2009 NC (Silver) for an equivalent budget and effort; UCR to determine if the outlying staff residences can be waived from LEED certification (they don't conform to LEED CI) since they are about 11% of the total project area and about 3.5% of the project cost • Seismic Computer Modeling preliminary findings have determined that Wings A, B East, D East and E are "UC Good"; Wing C East will become "UC Good" once the concrete loggias along the north and south are removed as part of the Dining expansion proposed in the DPP; Wings B West and D West will require remedial seismic improvement to achieve "UC Good"; conceptual structural sketches of proposed remediation were distributed for review; this scope will be captured in the Draft DPP estimate			
1.5	UCR Action Items	• Housing Security Report: delivery will be deferred until after the DPP issue • Hazmat Report was received on 3.1.11 • Loading Dock Program: sufficient information for the Draft DPP was transmitted to STUDIOS in the Workshop #3			

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3.4.11 - PROGRAMMING WORKSHOP #4

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #4
03.04.2011 Meeting Minutes 10:30-5:00
rev.03.17.11
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)
Cheryl Garner (CG)
David Henry (DH)
Hassan Ghamlouch (HG)

Design & Construction (D&C)
Don Caskey (DC)
Richard Racicot (RR)
Tricia Thrasher (TT)
George MacMullin

Capital & Physical Planning (CPP)
Kieron Brunelle (KB)
Jon Harvey (JH)
Nita Bullock (NB)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Marshall Associates
Steve Marshall (SWM)

CP O'Halloran Associates
Ciaran O'Halloran (CPO)

ATTMTS: Agenda
Room Data Sheets Review Comments Rev. 3.3.11
Schedule
Concept & Phasing Plan

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Concepts Revie				
1.1	Review Preferred Concept	ES gave an overview of the developments of the Concept Diagram since Workshop #3, with the following Steering Committee comments to be incorporated into the Draft DPP:			
1.2	Wing B	Wing B: move fitness center to Wing B and reclaim Resident Advisor apartment for Staff Break room – could be repurposed almost as is; relocate Music Practice Room to Wing B; orient Meeting Rooms toward west end and Computer/Fitness toward east end (for easier resident access); provide one of the two male/female public Restrooms in Wing B West			
1.3	Wing C	Wing C West: reception service counter overhead security grille should be motorized operation; provide overhead storage bins and task light (in lieu of desk lamp) at all RSO offices; relocate key storage from Package Room to RSO staff Workroom; add computer data outlet in Poster Room; locate the single occupancy Public Restroom in Wing C (accessible from spine) Wing C East: a larger Lobby off the spine immediately outside of the Dining entrance for queuing / waiting was approved; the adjacent proposed Student Support (for lockers/vending) was approved within the existing Resident Advisor apartment just south of Wing C; the +/- 400 sf apartment may be larger than necessary for this function – only take and			

		renovate the portion required; concerns were expressed about the potential of windows in the northward Dining expansion looking directly into Wing B bedroom windows; new windows will be offset either horizontally or vertically to avoid privacy issues; windows in Wing B East and Wing C East Expansion must maintain 20'-2" perpendicular clearance to remain unprotected openings			
1.4	Wing D	Wing D: a continuous clear path of travel was requested for a 4' wide pallet jack (4.5' actual clear) from the south loading dock through the basement spine to the proposed new elevator into Wing D and through the Emporium kitchen back of house; provide one of the two male/female public restrooms in Wing D West; refer to later detailed discussion of Wing D comments in Room Data Sheet section below			
1.5	Staff Residences	Staff Residences: the proposed location of the four residences on the lawn south of A-I was approved, except they should shift slightly north from where shown to clear the top of the slope; the adjacent pedestrian path can be relocated northward to provide adequate clearance from the residences; DC prefers all one-story units, with south-facing decks looking onto the arroyo; UCR to advise whether more than unit must be ADA-accessible			
1.6	Central Plant	Central Plant: the proposed detached mechanical enclosure in the parking lot immediately north of the Kitchen service yard was approved, primarily due to schedule flexibility. It allows MEP construction continuously while the Residential floors are occupied rather than during summers only, which appears to be inadequate time. Also, future expansion of the Central Plant or removal of large components will be much simpler than accessing the basement.			
2	Room Data Sheets Revie				
2.1	General	JH issued a list of UCR review comments of the Room Data Sheets on 03.03.11. The Room Data Sheets will be revised accordingly. The following notes document only the comments and related discussion that affect the Preferred Concept Plan. JH requested a one page Tabulation of the Program Summary sheets that indicates the New and Renovated (Existing) gross areas by wing; also to add the proposed Wing locations on all RDS and assure that the order of the RDS follows the order in the Summary sheets for the Draft DPP			
2.2	Non-Assignable Spaces	SA suggested or recommended that 0.90 net:gross factor be used for the Non-Assignable Spaces			
2.3	Wing B	Maximize seating in Meeting Rooms (a check of existing A-I seating capacity indicates 44 chairs at tables – which the Preferred Scheme exceeds); provide at least 12 seats in the Small Meeting Rooms; provide new Storage Room (for extra chairs) off of Prefunction space; provide additional power and data outlets within the Prefunction space (perhaps in floor slab); Committee revised the Meeting Room program to one 750 ASF, two 500 ASF and two 250 ASF. This is based upon overall use of meeting rooms within Housing.			
2.4	Wing D	CG: the Emporium 140 meal count capacity includes take out orders – 48 Dining seats + 8 Counter seats + 40 Lounge seating capacity + outdoor patio seating is approved; show a clear separation between the Emporium Diner section and the Coffee counter service; Beverages will not be self-service in the Emporium – convert this counter to "Coffee Condiments";			

		show two Points of Sale at the main Retail entrance; eliminate the Prepared Food Platform; provide two separate Freezers – one for food prep and one for Merchandising; enlarge the Dry Storage space; combine the Cash Room into the Kitchen Office; enlarge the Food Prep Area per the Denny's plan (SWM will update Emporium Room Data Sheets in the Draft DPP to conform with Denny's plan)			
2.5	Wing C East	575 seats is total to be accommodated in Main Dining space; confirm 17 gsf / seat is adequate when secondary servery elements are included; add Private Dining Rooms within main Dining space (CG to confirm count); indicate how Hall Dinners seating up to 55 will be accommodated (at least semi-contained within main Dining space) – show all these elements in an illustrative seating plan in Draft DPP; portion of patios should have a hard roof (for rain protection) in addition to semi-open shade elements; provide a larger Lobby off the spine immediately outside of the Dining entrance for queuing / waiting; add 6 TV monitors; provide projection system and speakers in conjunction with temporary stage (stored outside dining area); Food Truck Storage must be refrigerated; Kitchen offices shall have internal windows (not sidelights).			
2.6	Dining General	Remove all reference to "manual key locks" – all doors in Foodservice areas shall have "Card Key Access"; provide 68-72 degrees design temperature at all food prep areas (note – this is cooler than called for by IBE recommendations); the preferred food prep flooring is a semi-cushioned product called "Protect All"			
2.7	Staff Residential	Modified Option B preferred; provide a tub/shower unit in all bathrooms; provide a stacked washer/dryer in all units; vinyl wood flooring may be considered in lieu of carpet			
3	Infrastructure				
3.1	MEP Draft Report	GM questioned whether the proposed 300 ton chiller included any redundancy; he also was not comfortable with the recommendation for no standby chiller; the proposed strategy for converting from existing steam heating hot water to hot water boilers incrementally in the Residential Floors was discussed; a Conference Call with GM, HG, JH and Alan Locke of IBE will be scheduled for the week of March 7 to discuss and resolve direction for Draft DPP			
4	Conceptual Cost Estimate Revie				
4.1		CPO presented the methodology and general scope of the conceptual cost estimate; Committee requested that all Residential Floor MEP upgrades (including rooftop air handlers and reroofing) plus the proposed seismic remediation in the upper floors of Wings B and D West be itemized and moved to "below the line";			
5	Schedule / Phasing				
5.1		• KB: Regents (and other) approvals of the DPP will take more time than shown on previous schedule – assume an October 2011 Design start at the earliest and factor into the Draft DPP Schedule • CG: Emporium opening in January 2014 (vs Sept 2013) may be acceptable			

		• SLM: the Staff Residential units must be ready for occupancy at the time the two Resident Director apartments along the spine are repurposed
		• Two Phasing Options were discussed:
		  • Option A: Phase One 1A + 2A (incl. Central Plant) + 1B = 15 months; Phase Two 2B = 15 months
		  • Option B: Phase One 1A + 1B (incl. Central Plant) = 12 months; Phase Two 2A + 2B = 18 months			

5.2		JH requested that the Draft DPP Schedule show only monthly increments of duration without specific years or month names;			
5.3		There was discussion about the ballpark cost to build a stand alone Dining facility. Option One was 20,000 gsf and Option Two was 30,000 gsf. The cost of Option Two was generally thought to be $21.5 million ($16.5 million building + $3 million kitchen equipment + $2 million site improvements). This is in comparison to the cost of renovating of Wing C of $13.5 million. JH asked SA/CPO to investigate at a high level how a Wing C West Dining replacement building might lay out, what it would cost and approximate schedule impact			
5.4		SA was requested to provide an electronic copy of the Final DPP to UCR on April 11, prior to publishing the hard copy version. Note: the Phasing/Schedule discussion carried over into PMT meeting, so there are no additional closing PMT minutes			

The above minutes are true and complete to the best of STUDIOS' knowledge.
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Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

3.8.8 - HVAC CONFERENCE CALL

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
HVAC Conference Call
03.08.2011 Meeting minutes 4:00-5:00
rev.03.24.11
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Hassan Ghamlouch (HG)

Design & Construction
George MacMullin (GM)

Capital & Physical Planning
Kieron Brunelle (KB)
Jon Harvey (JH)

STUDIOS Architecture
Jerry Griffin (JG)

IBE
Alan Locke (AL)

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	LEED				
1.1	Chillers / Cooling Tower	GM questioned the lack of a standby chiller in the draft A-I report recommendations. AL stated chiller redundancy is no longer common in new residential cooling systems, but would add to MEP report if requested by UCR. HG mentioned that Glen Mor does not have a standby chiller. Discussion about existing A-I chiller capacity: • AL stated that the existing chillers should be able to support the proposed Phase One (West side) additional program area space; however, the cooling tower must be replaced to support any expansion. • An alternative, if continued use of the chillers is neither desirable nor practical, is to provide a new smaller chiller along with the new cooling tower in the proposed new plant building. This central plant could expand incrementally as needed per Workshop #4 discussion. • Note that it is more efficient to run smaller chillers at their capacity than a larger chiller at partial capacity.			
1.2	Boilers	The A-I building is proposed to eventually convert from steam to a hot water heating system. This will require the coil and related piping infrastructure in each residential wing to be converted when its rooftop AHU's are replaced. Two options were discussed: • Remove the existing central steam boilers and provide new central hot water boiler and piping throughout the building • Leave the central steam boiler in place temporarily and provide distributed boilers at each residential wing roof; this scheme has higher maintenance, less redundancy and structural unknowns, and is therefore not preferred			
1.3	Central Plant Phasing Strategy Summery	Build a new plant building (outside the basement) to house new central plant equipment but phase the installation of the chillers, cooling towers and boilers. Under Phase One, a chiller, cooling tower, boiler and associated equipment would be installed sized to serve only Phase One, while the existing basement central plant remains in operation for the balance of the A-I building. Piping from the new plant building to A-I would be sized to serve the entire building. In Phase Two, the existing central plant chillers and boilers would be removed and additional (smaller) chillers and boilers would be installed in the freestanding plant building. This option allows the MEP scope of work inside the building (e.g. piping in the spine ceiling to stub-outs at each wing for future improvements of residential floors) to be implemented during the summer months, and incrementally installing new central plant equipment only as required for each phase, reducing the initial cost burden on Phase One.			
1.4	Residential MEP Improvements Costs	KB requested that the Residential wings be itemized each with a total cost – i.e. Wing A total cost for M/E/P upgrades and Repairs plus Roofing and Rooftop M/E plus General Conditions; same for Wing E and Wings B & D (Residential floors only). The goal is to estimate what these improvements in each individual wing would cost, since they may not be upgraded all at the same time.	STUDIOS	4.11.11	
1.5	Next Steps	STUDIOS to include a detailed description of Scenario C operation and phasing in the Draft DPP Mechanical report, and capture preliminary pricing in the Draft DPP conceptual cost estimate.	STUDIOS	4.11.11	

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Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

3.28.11 - PROGRAMMING WORKSHOP #5

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #5 / PMT Meeting
03.28.2011 Meeting Minutes 10:00-10:30
rev 04.06.2011
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)
Cheryl Garner (CG)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Design & Construction (D&C)
Don Caskey (DC)
George MacMullin (GM)
Jacqueline Norman (JN)

Marshall Associates
Steve Marshall (SWM)

Capital & Physical Planning (CPP)
Jon Harvey (JH)
Tim Ralston (TR)
Nita Bullock (NB)

ATTMTS: Agenda
Revised Program Summary 3.28.11 (handout)

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	PMT Meeting				
1.1	Workshop #5 Goals	1. Review Preferred Concept Plan Alternatives 2. Review UCR Draft DPP Comments: MEP, Cost, Schedule, Phasing, Room Data Sheets and General Content			
1.2	Comments From Committee	1. Program changes between Workshop-4 and the Draft DPP were discussed. ES explained that the spaces that are reduced (such as Dining down from 11,500 asf to 9,600 asf) meet functional requirements and reduces construction costs. The dining/kitchen program elements will be reviewed later in Workshop-5. 2. ES presented the Program review handouts that showed potential area revisions and explained the need to make a few changes, including: a. Wing B West change Prefunction from 500 asf to 1,000 asf ; b. Wing D West change grossing factor from 0.90 to 0.70 c. Wing C East round up the following Draft DPP component areas as follows: • Main Dining from 8,500 to 9,000 asf • Servery – Secondary from 1,584 to 1,700 asf • Kitchen from 1,780 to 2,000 asf • Bakery from 833 to 1,000 asf • Refrigeration from 876 to 1,000 asf			
1.3	DPP Schedule	STUDIOS will issue Final DPP in pdf format for UCR review by EOB 4.8.11. UCR comments will be returned to STUDIOS by 4.15.11, with 15 hard copies delivered to UCR by 4.22.11.			

The above minutes are true and complete to the best of STUDIOS' knowledge.
Please notify STUDIOS within three days of any modifications, additions or deletions.
Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #5
03.28.2011 Meeting Minutes 10:30-5:00
rev. 04.06.2011
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)
Cheryl Garner (CG)
David Henry (DH)
Hassan Ghamlouch (HG)
Michael Neener (MN)

Design & Construction (D&C)
Don Caskey (DC)
George MacMullin (GM)
Jacqueline Norman (JN)

Capital & Physical Planning (CPP)
Jon Harvey (JH)
Tim Ralston (TR)
Nita Bullock (NB)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Marshall Associates
Steve Marshall (SWM)

IBE Engineers
Alan Locke

CP O'Halloran Associates
Ciaran O'Halloran (CPO)

ATTMTS:
Agenda
Alternative Concept Diagrams
Alternative Concept Area Tabulations
Alternative Concept Cost Comparisons
UCR Review Comments (March 24 & March 28)

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Alternate Concepts Revie				
1.1	Alternative Concepts	ES presented three Alternative Concept diagrams 1, 2, 3, including three variations on Concept 1, as follows:			
1.2	Original Preferred Concept	This is the Concept developed during the DPP process and approved in Workshop 4. Pros and cons: + Maximum reuse of existing building + Lowest probable cost + Good adjacencies - Phasing may be tight - Reuse of existing shell space less flexible than new construction			
1.3	Alternative Concept 1	Alt. Concept 1 proposes to leave Wing C East intact (except to demolish the Kitchen portion) for use as a currently unprogrammed Events space. A new Residential Dining building would be constructed between Wings B and D West. Kitchen and back of house would be primarily in Wing B West first floor, with service from the north. The dining room would extend south from Wing B, with the RSO extending south of the dining room. Meeting rooms would be located on a second floor directly above the RSO, requiring an elevator and two exit stairs. The main building entry would be between the RSO and Wing D West, which would still house the Emporium and related functions. Pros and cons:			

		+ New building space is provided for the Dining, RSO and Meeting functions + Good adjacencies + Phasing is improved - Elevator and two stairs required for small second floor is expensive - Wing C is not reused for current program functions - More expensive than Original scheme - Service dock is accessed from the west, adjacent to Wing A residential - Long, narrow Main Entry from the west			
1.4	Alternative Concept 1B	The new Kitchen and back of house would be primarily in Wing D West first floor, with service from the south. The dining room would extend north from Wing D, wrapping around the Emporium located in the west end of Wing D. The RSO would extend north of the dining room. Meeting rooms would be located in the first floor of Wing B West. The main building entry would be down a long narrow passage between the RSO and Dining.			
1.5	Alternative Concept 1C	The new Kitchen and back of house would be immediately north of Wing D West first floor, which houses the Emporium. The two dining facilities would share service from the south dock via the basement spine and elevator. The dining room would extend north from Wing D. The RSO would extend north of the dining room. Meeting rooms would be located in the first floor of Wing B West. The main building entry would be down a long narrow passage between the RSO and Dining.			
1.6	Alternative Concept 1D	The new Kitchen and back of house would be primarily in Wing B West first floor, with service from the north. The dining room would extend south from Wing B, wrapping around the Emporium located in the west end of Wing B West. Meeting rooms would be located on a second floor above the south edge of the Dining. RSO would be located in Wing D West. The main building entry would be between the RSO and Dining.			
1.7	Alternative Concept 2	Alt. Concept 2 proposes to reuse Wing C East for the RSO and Meeting Room functions. A new Residential Dining building would be constructed between Wings B and D West. Kitchen and back of house would be primarily in Wing B West first floor, with service from the north. The dining room would extend south from Wing B. The main A-I building entry would be between new Dining and Wing D, which would still house the Emporium and related functions. Pros and cons: + New space for Dining + Wing C East is reused + Very good phasing (existing Dining remains operational while the Emporium and new Dining are developed simultaneously) + More gracious Main Entry from the west than Alt. Concept 1 (less potential pedestrian conflicts) + Least expensive of the Alternative Concepts - More expensive than the Original Preferred Concept. - Service dock is accessed from the west, adjacent to Wing A residential			
1.8	Alternative Concept 3	Alt. Concept 3 proposes to reuse Wing C East for the RSO and Meeting Room functions. A new Residential Dining building would be constructed to the east of Wing C East, in the existing parking lot. Wing D West would still house the Emporium and related functions, and Wing B West first floor could be used for additional student housing or the proposed Staff Residential units. A new Main Entry lobby would be built in place of the demolished Wing C West. Pros and cons: + New shell space for Dining + Wing C East is reused			

		+ Very good phasing (existing Dining remains operational while the Emporium and new Dining are developed simultaneously) + Reuse existing east Kitchen dock + Possible new income from addition of student residential units, or save cost of building Staff Residential as freestanding structures + Most gracious Main Entry from the west of the Alternative Concepts - Most expensive of the Alternative Concepts - Loss of parking spaces - Dining facility is most remote from A-I resident "energy hub"			
1.9	Alternative Concepts Discussion	DC noted that all three Alternatives have roughly the same cost per square foot; the primary differences in overall cost is due to variations in construction scope. The Original Preferred Concept probably has the higher cost and schedule risk due to renovating Wing C East for Dining use: phasing uncertainties due to foodservice sequencing requirements, and unknown construction snags when renovating the existing shell. To reduce these possible risks, CPO noted that a fourth alternative of demolishing Wing C East and rebuilding a new Residential Dining wing in its place (per the Original Preferred Concept) would cost an additional $2-3 million over its base cost. AP concerned about Kitchen service from the west required by Alternates 1 and 2, especially with a future increase of pedestrians along Aberdeen Drive from proposed student residential projects to the north. SM wondered if extensive new construction on the west side in Alternates 1 and 2 would compromise existing A-I architecture; ES was confident that the new additions could be designed sensitively. CG felt Alternate 2 placed the Residential Dining in the best location to positively activate A-I student life; the additional +/- $1 million for 6,000 gsf of Community space proposed by Alternate 2 seems like good value. Building a dining facility in a new shell addition (Alt's 2 and 3) for minimal extra cost is compelling, especially if phasing can alleviate the need for A-I dining facility downtime since modifying meal plans can be costly. HG noted that building infrastructure improvements still need to be considered in any of the Alternative Concepts. JH.stated the decision is whether to building a new kitchen dining area or renovate the existing facility. There are two key issues to consider with the proposed Alternates: 1. Kitchen service/loading from the West side of A-I in Alternate 2; 2. Loss of Parking in Alternate 3. DC reiterated that defining and reducing risk at the DPP level was of highest importance. Phasing risks can add soft and hard costs. Wing C East appears to present less cost / phasing risks as a simple Meeting Room use rather than as Residential Dining. AP felt one compelling aspect of Alternate 2 was the Meeting Rooms location on the east side, since they would have better proximity and entry access from the parking lot (for non-student users). CG stated that there are currently 16 daily foodservice deliveries on a busy day, in addition to trash and recycling storage and daily pickups; kitchen service from the west appears to be the biggest issue to solve in			

		Alternate 2, i.e. truck access / maneuvering and noise / visual mitigation for adjacent Wings A and B West residential spaces. NB noted that the Aberdeen Drive central median landscape design is a landmark, and should not be altered (for truck access). CPO commented that the parking costs listed in Alternate Concept 3 are for adding a level to the future parking structure proposed in the north lot. Should any of the Alternative Concepts be selected, additional space created in Wing C East due to relocating the foodservice function will be programmed by SA. Direction was given to include a 1,500 asf Meeting Room in Wing C East.			
1.10	Alternative Concepts Discussion (continued at end of meeting, but included here for continuity)	After further consideration and discussion, there was consensus for the Residential Dining facility to be located in a new structure rather than in renovated A-I space. This is due to reduced cost and phasing risks (construction can start at any time and is not dependent on the academic schedule) noted above, meaning one of the proposed Alternate Concepts should displace the Original Preferred Concept. Provided kitchen service from the west can be successfully resolved in all ways, Alternate 2 was preferred for the following reasons: 1. It's location creates a "town center" - an energetic gathering place for residents, with the most potential for enhancing A-I student life; 2. It is integrated with the main A-I building entry and has high visibilty from pedestrian flow on Aberdeen; 3. Meeting Rooms located east of the spine offer better access from the parking lot for non-student usage; 4. It has the lowest probable cost of the Alternates considered; 5. The Emporium remains in its ideal location in Wing D West. Kitchen service access from Linden Avenue was discussed as an option to the Aberdeen Drive access shown in Alternative Concept 2, but there may be insurmountable topography challenges from the north. AP noted that the Meeting Rooms in Wing C East should be considered similar to a "hotel banquet hall" as far as servicing. Additional restroom plumbing fixtures may need to be necessary in Wing C East.			
2	MEP Revie				
2.1	Draft DPP Review Comments	GM presented a new list of MEP-related review comments. The following items were discussed: 1. Locate the Emergency Generator in the proposed stand alone central plant. 2. Provide a water treatment system in Phase 1. 3. State mandate is for 68º-78º in residential uses – revise Room Sheets. 4. Increase Office lighting levels to 50 footcandles in Room Data Sheets. 5. New fire alarm system will require the addition of cards only. 6. Integrate the Infrastructure implementation plan phasing with the Program phasing; provide a Table in the DPP for clarity. 7. In the Executive Summary, clarify the MEP improvements included with the Program scope vs the future residential upgrades. 8. Eight rooftop air handlers could be installed over a single summer if the scope is bid on January 1 and the construction is carefully planned. 9. An MEP Equipment Remaining Useful Life Table will be provided; it was noted that determining remaining useful life is difficult.			

2.2	Central Plant	JH requested a Room Data Sheet be included in the final DPP for the upsized stand alone Central Plant building. DC suggested consideration of the Central Plant building as a single story structure, for cost and visual reasons. This needs to be weighed against additional loss of parking spaces if it remains in its current proposed location. Consideration should be given to moving the stand alone Central Plant building closer to the existing Kitchen dock.			
2.3	Switchgear	HG will identify the location of the residential wing switchgear that needs to be replaced.			
3	Cost				
3.1	Draft DPP Review Comments	JH requested additional detail be provided for Lump Sum Costs. Also, Staging Contingency (e.g. temporary trailers for RSO, temporary dining facilities, etc) should be defined. Housing stated that the temporary facilities will be addressed separately. The item will be listed as "By Owner". Re-roofing of the residential wings may be completed as a separate project from the rooftop air handler replacement; cost estimate summary will separate roofing costs from mechanical equipment costs. SM will provide assumptions used to develop the Foodservice Equipment lump sum budget shown in the Draft DPP estimate summary. An Implementation Table will be included in the final DPP that integrates Program Improvements, Infrastructure Improvements and Costs side by side, by Phase.			
4	Phasing				
4.1	General Discussion	Direction was given to consider Phase 1 to include all improvements west of the spine plus the stand alone Central Plant; Phase 2 will include all improvements east of the spine; Phase 3 (may be multiple phases) will include MEP improvements for the Residential floors. Consideration should be given for the ideal location of temporary trailers for the RSO during construction (main A-I building entry may relocate to the south end of the spine). It was noted in closing that Alternate Concept 2 (compared to the previous Preferred Concept) will take pressure off of Lothien dining, The Hub and other temporary dining facilities. This factor is another reasons for proceeding with a new residential dining and kitchen facility as presented in Alternate Concept 2.			
5	Draft DPP General Comments				
5.1	Vending Machines	Room Data Sheet (RDS) 3.3.45: Direction was given to keep vending machines in the Lobby locker alcove, as they are used by visitors and others.			

5.2	Foodservice Comments	1. Because there is more than one term used in the Draft DPP for the main foodservice facility, direction was given to consistently refer to it as "Residential Dining". 2. RDS 3.3.48: increase Main Dining Room area from 9,000 (AM PMT Meeting) to 9,500 asf 3. RDS 3.3.62: increase Dry Storage area from 600 to 800 asf 4. RDS 3.3.70: Change Kitchen Janitor's Closet to "Cleaning Storage" and increase area from 42 to 90 asf 5. RDS 3.3.41: Change Emporium Janitor's Closet to "Cleaning Storage" and increase area from 50 to 90 asf 6. RDS 3.3.36: Emporium Freezeradd Electrical Power criteria "208 v 3 phase remote air-cooled compressor rack			
5.3	Closing Comments	SA will review with their consultant team the amount of time needed to make changes to the DPP given the revised Preferred Concept. As stated in the AM PMT meeting, delivery schedule will include the initial electronic version for UCR final comments followed by printing 15 hard copies. These latter two steps will take about two weeks duration.			

The above minutes are true and complete to the best of STUDIOS' knowledge.
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Jerry Griffin can be reached at (415) 732.547 or griffin@studiosarch.com

5.11.11 - FIRE MARSHAL CONFERENCE CALL

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Fire Marshal Conference Call
05.11.2011 Meeting minutes 1:00-2:00
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Scott Corrin (SC)

STUDIOS Architecture
Jerry Griffin (JG)

Capital & Physical Planning
Kieron Brunelle (KB)
Jon Harvey (JH)

Attachments: Proposed Site Plan sketch

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Fire / Life Safety				
1.0	Introduction	STUDIOS asked for Fire Marshal Scott Corrin's preliminary opinions about the proposed location of the +/- 20,000 gsf Residential Dining facility proposed to be located in an expanded Wing C West.			
1.1	Site Issues – West Side	SC stated that the modified loop entry drive off Aberdeen Drive did not appear to have adequate clearance and turning radii for fire trucks. The issue is not the reduction of depth into the site from Aberdeen, but rather that the entry drive needs to provide adequate fire apparatus maneuvering and through-circulation when other uses such as vehicular drop off and/or parking present. SC stated that the proposed expansion of the first floors of Wings B and D West, and enlarged Wing B West as shown in the site sketch did not appear to be problematic for exterior emergency access.			
1.2	Site Issues – East Side	SC did not have any issues with the proposed vehicular service ramp down to the basement between wings A and B East, as it did not interfere with access to the fire sprinkler detector check and hydrant located south of the east end of Wing B East. JH will research whether an existing underground high voltage line lies in the path of the proposed dock ramp between Wings A and B East. The possible future parking deck shown dashed in Lot P-22 south must maintain a continuous fire truck lane between itself and the A-I building, which would reduce the parking capacity of that structure (note that the same requirement would be true for a Lot P-22 north location). SC had no preliminary issue with locating a parking deck in Lot P-21, as long as the same criteria were met.			
1.3	Building Issues – Ground Floor	SC stated that the existing A-I building fire water service should have adequate capacity to cover the proposed west side building expansion. SC stated the interface between the circulation spine and the proposed Kitchen/Servery/Dining would need to be one-hour rated. A glazed partition with deluge fire sprinkler system will likely not work due to capacity limitation of the fire sprinkler water supply.			
1.4	Basement	SC reiterated (from the Jan 21 meeting) that the existing fire alarm in the main electrical room in the basement of Wing C East is too warm. Either add cooling or, preferably if space allows, relocate to a new closet on the ground floor of Wing C East. SC noted that a couple other UCR kitchen facilities (Lothian and The Hub) load from an elevator – one from a basement dock. The biggest issue is that the service elevators are too slow, and that staging can sometimes become backed up. SC recommended that adequate basement staging area be provided off the dock / elevator to keep the corridor access clear. SC also noted that the existing basement spine ramps may not be ADA compliant. SC offered that perhaps the trash chutes serving the residential wings north of the proposed basement kitchen dock might be serviced by that dock rather than bypassing to the existing service yard at the south end of the basement spine.			

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6.24.11 - KITCHEN SERVICE ACCESS CONFERENCE CALL

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Conference Call
06.24.2011 Meeting minutes 1:30-2:30
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Andy Plumley (AP)
Susan Marshburn (SLM)
Cheryl Garner (CG)
Don Caskey (DC)
Rich Racicot (RR)
Jacqueline Norman (JN)

Capital & Physical Planning
Kieron Brunelle (KB)
Jon Harvey (JH)
Nita Bullock (NB)
Andy Steward (AS)
Mike Delo (MD)

STUDIOS Architecture
Erik Sueberkrop (ES)
Jerry Griffin (JG)

Steve Marshall (SM)

Attachments: Site Diagrams, Truck Turning Diagrams, Pro's & Con's, Schedule

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1					
1.0	Kitchen Service Access Options	STUDIOS presented 4 options for service access to the Residential Dining Kitchen to be located in Wings B and C West: A. Access off of a modified Aberdeen entry drive. B1. Direct N-S access off of Linden, exiting onto Aberdeen. B2. Similar to B1, but with an angled drive off of Linden. C. Ramp down to the basement spine from the east between Wings A and B, transferring to an elevator up to grade.			
1.1	UCR Comments on Kitchen Service Access	Option A appears to create the worst pedestrian safety issues by mixing service traffic with non-service drop off. One of the biggest concerns is truck noise to the residential wings, caused by excessive backing and maneuvering, which (along with other issues) seems to negate Option C. Options B1 and B2 are both preferable to A and C. The Linden Street access appears more maneuverable for drivers. Signage or a gateway will need to be employed to discourage non-service traffic. It is preferable that the paving material of the service road have a more architectural appearance. It is also critical that the row of palm trees along the south side of Linden be unaffected.			
1.2	Wing C East Interior Layouts	Two plan options were presented for the RSO and Community Spaces within the cleared out Residential Dining Wing C East. Locating the largest meeting rooms in the high ceiling space (Option B) was preferred. The common corridor to the south should also take advantage of the high overhead. This creates a long narrow RSO, but the plentiful windows facing south will help mitigate that. The second (internal) corridor serving the RSO must be maintained for security reasons. The linear single load corridor RSO office configuration was also viewed as problematic and the layout will require further attention. The larger Prefunction shown in Option A is preferred, and the restrooms should be more centrally located (not at the far end of the service corridor). The larger patio space of Option A was also preferred. The RSO Reception as configured in Option A was preferred, with a manager's private office overlooking the 4 workstations serving the counter. It was suggested by UCR that a second level above the RSO be considered due to the building volume. The 17.5' overhead roof structural clearance is not enough to create two comfortable spaces. Also, a second floor could trigger a seismic upgrade for the entire wing, plus an elevator and probably two egress stairs would be required.			
1.3	Emporium Service	There was discussion about Kitchen loading that serves both the Residential Dining and the Emporium diner, to avoid double truck stops. STUDIOS will bring material flow pathway diagrams to the 6.30.11 Workshop, for continued discussion on this matter.			
1.4	Schedule	A draft schedule for the completion of the DPP process was reviewed. UCR requested 3 weeks to review the final draft in digital format.			

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6.30.11 - WORKSHOP #6

University of California Riverside
Aberdeen-Inverness Common Area Improvements DPP
Programming Workshop #6
06.30.2011 Meeting Minutes 1:00-5:00
rev. 07.11.11
STUDIOS Project No: 10566.01

ATTENDING:

UC Riverside:
Housing, Dining & Residential Services (HDRS)
Susan Marshburn (SLM)
Andy Plumley (AP)
Cheryl Garner (CG)
David Henry (DH)
Hassan Ghamlouch (HG)
Michael Neener (MN)

STUDIOS Architecture
Erik Sueberkrop (ES)
Kelly Capp (KC)
Jerry Griffin (JG)

Marshall Associates
Steve Marshall (SWM)

Design & Construction (D&C)
Don Caskey (DC)
George MacMullin (GM)
Richard Racicot (RC)
Jacqueline Norman (JN)

Capital & Physical Planning (CPP)
Tim Ralston (TR)
Kieron Brunelle (KB)
Jon Harvey (JH)
Nita Bullock (NB)

ATTMTS: Agenda
Alternate Scheme 7
Conceptual Section
Program Summary
Cost Estimate

ITEM #	TOPIC	DISCUSSION	OWNER	DUE DATE	STATUS
1	Alternative Concept 7				
1.1	Alternative Concept 7 Presentation	ES presented an overview of the current preferred scheme (see attached). The proposed Wing C West addition housing the residential restaurant will have deep overhangs on the south and west for sunshading in order to keep the glazing as open and transparent as possible. The Wing C West section illustrated multiple opportunities for allowing north light into the dining area. Loading dock will have three bays. Two for deliveries and one for trash. Recycling and compost can be handled in smaller bins between the columns of Wing B (within the service enclosure)			
1.2	Lobby Restrooms	HG questioned whether the two public restrooms located in the Entry Lobby and the Wing C East meeting area had the optimum split of fixtures – presuming the Residential Restaurant / Emporium might create a larger load. AP responded that the fixture allotment appeared adequate, since the majority of foodservice users were residents that would tend to use the restrooms in the wings. There could be periodic occupancy surges in the meeting rooms, which might be non-residents. Restroom sizes will be reviewed for code purposes.			
1.3	Emporium Truck Service	Using the south dock was not viewed as a viable option. Area would need to be reconfigured to support deliveries. The maneuvering and long backing required by semi-tractor trailers serving the Emporium from the south end of the basement spine will potentially create adverse noise affecting residents in Wing E East (currently the truck usage is for trash, which can drive forward down the ramp). To mitigate this potential, semi-tractor trailer loading for the Emporium may be better routed through the Wing B West Residential Restaurant service point. Direction was given to add a second service elevator to the basement from the Wing B West loading dock, for movement of incoming goods through the basement spine to the Emporium service elevator. The distance is about 300'. Emporium waste stream will still be routed through the south service area. Cost plan to include service corridor (basement spine) improvements to facilitate product transport.			
1.4	Food Trucks	CG stated that food trucks will need to be stocked at the new Wing B West dock enclosure. Wastewater disposal system with a grease trap must be provided at the dock. The trucks may be parked overnight in the existing Wing C East enclosure.			
1.5	Central Plant	Reconsider the two-story standalone Central Plant (currently shown on the edge of the north parking lot) location to a place more adjacent to the existing Wing C East dock enclosure. JH requested confirmation that phasing of the new boilers proposed to serve the Residential Wings is coordinated with the removal of the existing steam boilers, and that they are accounted for in the cost estimate. JG confirmed that the 8 boilers and pumps have been tested for fit in the basement space currently housing the Chillers (to be removed).			
1.6	Residential Restaurant Program Area	Direction was given to add the 1,000 ASF to the Residential Restaurant previously discussed in Workshop 5, to provide a looser fit in the dining and servery areas (therefore allowing for a variety of seating environments). The Main Dining Room total will be 9,500 ASF.			
2	Concept Design Cost Estimate 6.29.11				
2.1	Cost Estimate	A request was made for the cost estimator to review the escalation proposed figure. Bid prices are coming in higher than anticipated. The 12.5% Design Contingency needs to be limited to 10%. The 8% General Conditions and 1.5% Bonds/Insurance be rolled up into a single factor of 11% total. Overhead & Profit should be around 4%. The cost for two temporary double-wide trailers to support RSO and other functions needs be carried in the project estimate below the line. Costs to include temporary utility connections. Hazmat abatement costs shall be carried above the line. The revised Concept Design cost estimate will be updated and reissued as part of the final draft report submittal scheduled for July 18.			

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6.7

UCR SITE EVALUATION ANALYSIS

Late in the DPP process, the Project Management Team (PMT) elected to consider building an entirely new Residential Dining facility as an alternative to the renovation and reuse of an expanded Wing C East. Preliminary cost estimates were not significantly different, and this would allow the existing foodservice to continue operation until new dining facilities were ready, as described in section 1.2 Executive Summary. The four alternative locations include: Wing C West; South of Wing E West (along the arroyo); east of Wing C East (in the parking lot); east of Wing D East (in the parking lot). The PMT went through a comprehensive analysis including numeric scoring to select the Preferred Scheme. Documentation of this sub-process to the DPP follows.

A-I RESIDENTIAL DINING AND KITCHEN SITE EVALUATION ANALYSIS

Background/Methodology

- At the end of the DPP process, a request was made to examine the possibility of constructing a new Residential Dining and Kitchen facility on the west side of A-I Residence Hall. Multiple concepts were presented at Workshop 5 that illustrated how the facility could be incorporated on the west side and the east side. At that time, the preference was to incorporate the Residential Dining and Kitchen program on the A-I Residence Hall West side.

- A subsequent meeting was held to confirm the direction provided at the workshop, where additional site opportunities were discussed. The outcome from the meeting was to evaluate these sites to determine the preferred location.

- The site evaluation matrix was completed by representatives from Housing, Dining & Residential Services, Office of Design and Construction, and Capital & Physical Planning. A numeric score was also assigned to each evaluation criteria based upon how it supports the project vision and goals as presented in the March 2011 draft DPP. Evaluation the site criteria in terms of the vision and goals provides as basis for the assigned number.

- Goal is to place the building in a location that will support residential programs while enhancing the campus visual quality.

Program Summary

- Residential Dining and Kitchen overall space requirements for this analysis assumed a 24,000 sf footprint. The space includes kitchen and resi-

dential dining area.

- Additional space could be needed for exterior loading dock, outdoor dining or patio areas, and other site features.

Observations

- Each alternative converts the existing Residential Dining and Kitchen space (Wing C East) to RSO and meeting room functions, and furnishes additional meeting space.

- Creating central A-I gathering space that encourages and foster community building is critical to Residential Programs.

- Preferred location for the Resident Director / Faculty Housing is along the arroyo.

Conclusions

- The committee recommends further consideration for alternatives 2 and 4.

- Key area of consideration are:

- Loading Dock issues for both locations

    - Access entry for alternative 4

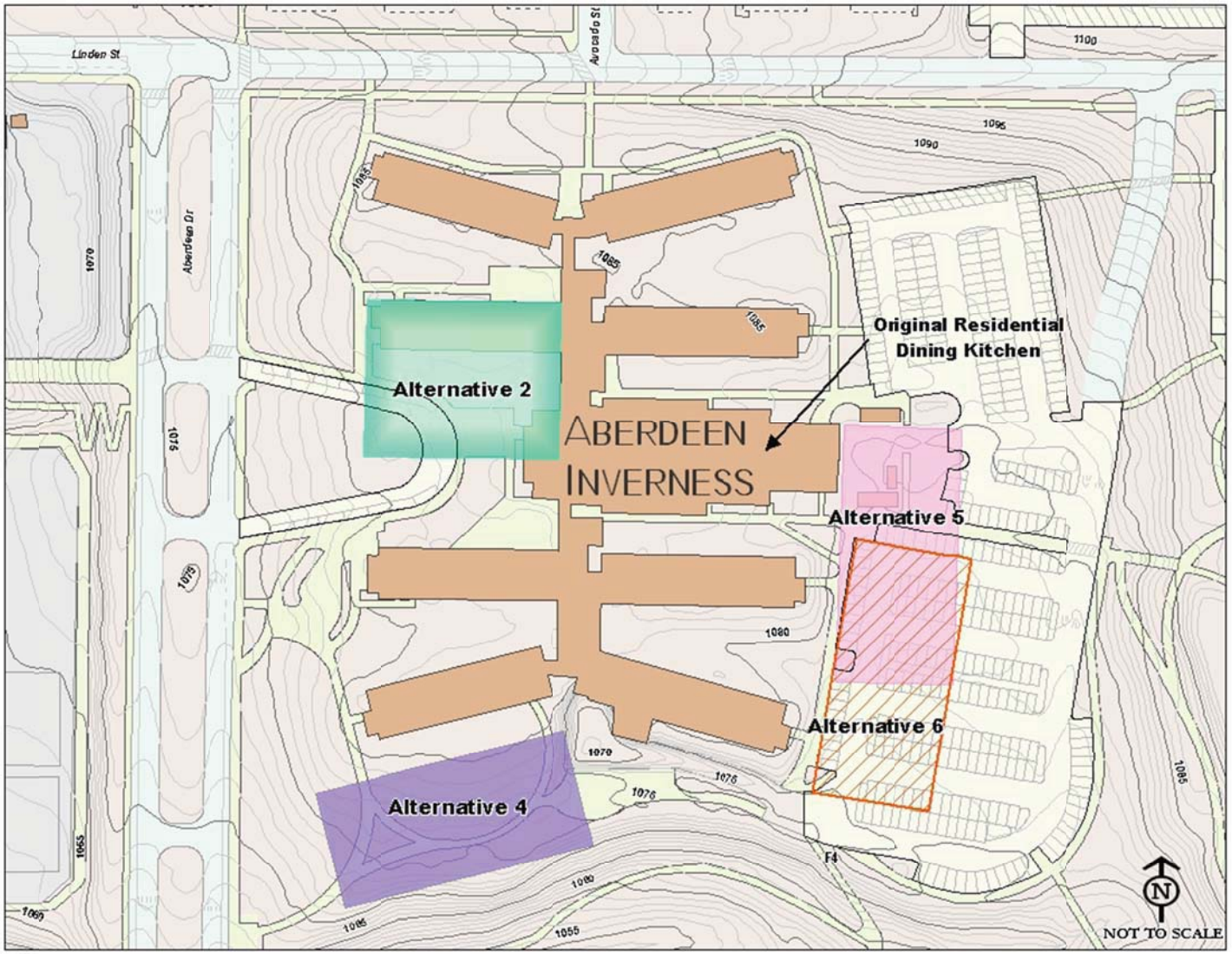
    - Site location for Alternative 4

    -Program elasticity for alternative 2 (overloading area without space flex ibility to make adjustments)

Potential Sites: Residential Dining and Kitchen

Site	Location	Current Use	Description / Comments
2	Wing C West	A-I Entrance, RSO Office	• Combination of new construction in the A-I entrance area and renovation of Wing B West. • Relocates RSO office, fitness area, and computer laboratory to Wing C East (current Residential Dining area). • Places meeting room program into Wing C East. • Kitchen release space provides potential for additional meeting rooms. • May require additional storage space at the south loading dock.
4	South of Wing E West	Open space	• New Construction south of Wing E, east of the south loading dock area. • Site requires review to determine fit given Campus development guidelines. • Relocates RSO office, fitness area, and computer laboratory to Wing C East (current Residential Dining area). • Places meeting room program into Wing C East. • Kitchen release space provides potential for additional meeting rooms. • Moves RD apartments
5	East of Wing C East	Parking Lot	• New Construction would connect to the east side of Wing C East in the area of the current kitchen loading dock. The facility would have a north/south orientation. • Relocates RSO office, fitness area, and computer laboratory to Wing C East (current Residential Dining area). • Places meeting room program into Wing C East. • Kitchen release space provides potential for additional meeting rooms.
6.	East of Wing D East	Parking Lot	• New Construction south of Wing C East pedestrian corridor. The facility would generally have a north/south orientation. • Relocates RSO office, fitness area, and computer laboratory to Wing C East (current Residential Dining area). • Places meeting room program into Wing C East. • Kitchen release space provides potential for additional meeting rooms.

Proposed Alternative Site Locations – Residential Dining and Kitchen



Site Evaluation Matrix

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Residential Programs					
Address Functional Requirements	P	• Furnishes necessary dining and kitchen space • Dining Queuing may increase space needs	• Furnishes necessary dining and kitchen space • Dining Queuing will increase space needs	• Furnishes necessary dining and kitchen space • Dining Queuing may increase space needs	• Furnishes necessary dining and kitchen space
	C	•	•	•	• Dining Queuing may increase space needs could be outside. • May require walking outside to access dining
Meeting Rooms, RSO, Etc	P	• Accessible from parking lot • Provides ability to contain meetings in a small area. • Allows meetings to be run without heating and cooling entire building. • Secure residential bedroom section. • Provides large meeting rooms.	• Accessible from parking lot • Provides ability to contain meetings in a small area. • Allows meetings to be run without heating and cooling entire building. • Secure residential bedroom section. • Provides large meeting rooms.	• Allows meetings to be run without heating and cooling entire building. • Secure residential bedroom section. • Provides large meeting rooms.	• Allows meetings to be run without heating and cooling entire building. • Secure residential bedroom section. • Provides large meeting rooms.
	C	•	• Conference is not directly accessible to dining	• More complicate access since two major program area located in same zone. • Mixes student dining traffic with conference traffic. Design may address issue.	• Access to meeting rooms requires clear wayfinding. • Could mix student dining traffic with conference traffic. Design may address issue.
Conference Room Program	P	• Provides opportunity for additional meeting spaces in Wing C East.	• Provides opportunity for additional meeting spaces in Wing C East.	• Provides opportunity for additional meeting spaces in Wing C East.	• Provides opportunity for additional meeting spaces in Wing C East.
	C	•	•	•	•

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Synergy with other A-I spaces	P	• Central to the building • Separation with good adjacent to meeting space • Great adjacent to Food Emporium (food plan option) • A-I Lobby becomes a gathering space	• The potential for synergy/ connections should be further evaluated in design • A different type of synergy is possible. It's location may draw users for different reasons, and thus create an alternative experiential dynamic	• Good adjacency to meeting spaces.	•
	C	•	• Not synergistic. • Remote location • Destination	• Further from main north/south spine • Dining queuing mixes with circulation space –may be addressed in design development • Poor adjacencies to Food Emporium (food plan option)	• Further from main north/south spine • Poor adjacencies to Food Emporium (food plan option)
Residential Dining					
Proximity for Residents	P	• Generally a great location for residents (Student housing) • Good for A-I,	•	• Good location for Pentland and Glen Mor residents. • Ok for A-I	• Good location for Pentland and Glen Mor residents.
	C	• Not a good location for Pentland and Glen Mor	• Not the best location for A-I or other housing locations. • Front of house location is questionable (i.e., uncertain)	• Requires A-I students to walk pass meeting rooms down long corridor.	• Poor for A-I students; depends on entrance location. • Viewed as a destination.
Proximity for Non-Resident Customers	P	• Great location for non-residents	•	•	•
	C	•	• Potential access issues •	• No visibility from Aberdeen Drive.	• No visibility from Aberdeen Drive.

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Construction Impact	P	• Contained to one side of A-I. • Opportunity to complete as one phase • Assume west side of building is used for laydown area	• Contained to one side of A-I; impacts a larger area (greater student population) • Assume west side of building is used for laydown area	• Appears multiple phases needed to complete food emporium and dining/kitchen.	• Appears multiple phases to complete food emporium and dining/kitchen. • Allows existing loading dock to remain operational.
	C	• Displaces RSO for all phases	• If one phase, multiple work zones	• Requires separate, possibly a temporary loading dock to maintain existing dining operation. • Potential conflict with 12kV distribution line.	• Potential conflict with 12kV distribution line.
Operational Considerations	P	• Single dining management staff.	•	•	• .
	C	•	• May require additional management staff to run two locations.	• May require additional management staff to run two locations.	• May require additional management staff to run two locations
Kitchen					
Loading Dock	P	•	• Presence of existing loading dock offers possibility of access • While different levels is listed as a “con”, different floor levels can be seen as a programmatic/organizational tool	• Provides multiple opportunities for loading dock locations. • Provides good truck circulation to both kitchen and housekeeping loading dock.	• Assume loading dock is on south side, this appears to be the only viable location. • All trucks making deliveries to A-I follow the same route. • Consider consolidating loading docks.

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
	C	• Loading dock entry from west side is close to residential bedroom spaces. • Poor truck access. • May require an additional storage room if A-I south housekeeping dock utilized. • Potential trucks conflicts with pedestrian traffic on Aberdeen Drive. • Delivery times could interfere with residential programs. • Stack trucks at peak delivery times.	• Potential conflict with Dining entry sequence • Dock Location will define kitchen location. Increases possibility of pushing dining entrance towards Aberdeen Drive. • Require additional review to determine elevations (i.e., loading dock level to dining level)	• May require screening dock area due to location along circulation path. • Or move primary pedestrian circulation to the south like Alternative 3. • Note that the public orientation for Alternative 3 is to the south, i.e. meeting space, pedestrian circulation, dining orientation. They all work together with synergy. Service, i.e. docking, kitchen, back of house, and the garage to the north. • Alternative 5 mixes this up unnecessarily. Service with pedestrians…where is the kitchen? Where is the entry with respect to pedestrian circulation? How do I get to the entry from A-I as Well as Pentland? • COMBINE THE PROS OF 3 AND 5.	• May require screening dock area due to location along circulation path.
Kitchen Services (e.g. Food Truck)	P	•	• Consolidates supply and storage in one location for food truck. • If food truck remains at dock, install dumping station.	• Consolidates supply and storage in one location for food truck. • If food truck remains at dock, install dumping station.	• Consolidates supply and storage in one location for food truck. • If food truck remains at dock, install dumping station.

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
	C	• Consider relocating food truck to Lothian. Could overload Lothian. • Requires additional operation review for truck servicing. • Truck supply location is separate from storage location.	•	•	•
Construction Impacts	P	• Allows current kitchen to remain operational during construction.	• Allows current kitchen to remain operational during construction	• Allows current kitchen to remain operational during construction	• Allows current kitchen to remain operational during construction
	C	•	•	• Requires a temporary loading dock to keep current kitchen operational during construction	•
Housing & Dining Services Program/Operation Considerations					
Associated Operational Costs	P	•	•	•	•
	C	•	•	•	•
Parking	P	•	• Changes to parking availability in the A-I area are not anticipated.	•	•
	C	• Requires reconfiguration of main entry, and the possible elimination of current service and temporary parking.	•	• Displaces a minimum of 61 spaces. • Expands scope to replace parking.	• Displaces a minimum of 103 spaces. • Further expands scope to replace parking.
Views	P	• Potential Views to the west. • Provides stronger connection to Student Recreation Center.	• Strong views to arroyo • Provides stronger connection to Student Recreation Center.	•	•
	C	•	•	• Half of the building faces the parking lot	• Half of the building faces the parking lot

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Urban Feel (Active space, dynamic, public spaces)	P	• Increase density to attract additional diners and further encourage students' interactions.	• Expands A-I street frontage along Aberdeen. • Potential to provide unique character.	• Creates a stronger connection to adjacent residence halls. • Need to develop nature of connections from an 'urban' point of view.	• Creates a stronger connection to adjacent residence halls. • Need to develop nature of connections from an 'urban' point of view.
	C	•	•	• Distributes programs to east side of building.	• Distributes programs to east side of building.
RD Apartment Program	P	• Remains south of A-I Wing E West as identified in the draft DPP. • Places RD in best location.	• Could be placed in Wing B West release space or requires additional build out program for Wing B West, i.e. more budget.	• Remains south of A-I Wing E West as identified in the draft DPP. • Places RD in best location. • Requires additional build out program for Wing B West	• Remains south of A-I Wing E West as identified in the draft DPP. • Places RD in best location. • Requires additional build out program for Wing B West.
	C	•	• Requires a new location.	• Option to place apartments in Wing B West release space.	• Option to place apartments in Wing B West release space.
Construction Impacts	P	• Preference is to locate the new facility so construction activities have minimal impact on Residential programs. Students do sleep. • Maintaining dining program during construction is a significant benefit.	• Preference is to locate the new facility so construction activities have minimal impact on Residential programs. Students do sleep. • Maintaining dining program during construction is a significant benefit. • Keeps RSO and building entrance in same location during construction. • Retains A-I amenities (e.g., lounge, game room, meeting space) during construction for residential dining phase.	• Preference is to locate the new facility so construction activities have minimal impact on Residential programs. Students do sleep. • Maintaining dining program during construction is a significant benefit. • Keeps RSO and building entrance in same location during construction. • Retains A-I amenities (e.g., lounge, game room, meeting space) during construction for residential dining phase.	• Preference is to locate the new facility so construction activities have minimal impact on Residential programs. Students do sleep. • Maintaining dining program during construction is a significant benefit. • Keeps RSO and building entrance in same location during construction. • Retains A-I amenities (e.g., lounge, game room, meeting space) during construction for residential dining phase.

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
	C	• Requires relocation RSO and building entrance during construction. • Displaces A-I amenities (e.g., lounge, game room, meeting space) during construction (if single phase).	• Anticipate additional construction costs to incorporate building into the site.	•	•
Site Development Considerations					
Site Availability	P	•	• Existing open space.	• Existing parking lot.	• Existing parking lot.
	C	• Existing entrance green space is displaced	• May require additional environmental reviews. • May not be best/highest use of such premium locations	• Displacement of planned parking will require addt'l site coverage to provide targeted space count	• Displacement of planned parking will require addt'l site coverage to provide targeted space count
Displacement of Existing Land Uses (e.g., parking, open space)	P	•	• Converts open space between A-I and the arroyo into a building site.	•	•
	C	• Removes the grand A-I horseshoe entrance and landscaping. • Displaces temporary driveway parking and service vehicle parking.	• Requires relocation of pedestrian circulation walkways. Design issue.	• Displaces parking and pedestrian circulation walkways.	• Displaces parking. • May require relocation pedestrian paths.
Replacement Facility	P	•	• None	• None	• None
	C	• Requires temporary relocation of the RSO during construction. RSO is relocated as part of the overall project	•	•	•
Program Size / Fit to Site	P	• Site will accommodate program •	• .	• Site will accommodate program	• Site will accommodate program
	C	•	• Further review of the site is necessary to determine if site can accommodate program	•	•

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Program Scale (building height, massing and context)	P	• Single level is compatible with adjacent building scale	• Single level is compatible with adjacent building scale.	• Single level is compatible with adjacent building scale	• Single level is compatible with adjacent building scale
	C	• Places majority of entire DPP program all in one location, which may overwhelm the site and have adverse impact on site, architecture, and atmosphere of adjacent wings.	•	•	•
Expansion Potential	P	•	•	• Site supports minimal expansion opportunities.	• Site supports minimal expansion opportunities
	C	• None	• Limited Potential	•	•
Site Access During Construction	P	• Construction site access from Aberdeen Drive.	• Construction site access from Aberdeen Drive.	• Construction site access from Linden.	• Construction site access from Linden.
	C	• Requires relocating A-I entrance and RSO office	• May require relocating A-I Housekeeping loading dock.	•	•
Compatibility with Existing and Adjacent Land Uses	P	• Compatible with land use	• Compatible with land use	• Compatible with land use	• Compatible with land use
	C	•	•	•	•
Potential Collocations Efficiencies (loading zone, internal and external circulation, open space)	P	•	• Location provides opportunity to utilize Housekeeping loading dock	•	•
	C	• Requires a separate loading dock using Aberdeen Drive	• May require reconfiguring dock area to support deliveries.	•	•
Infrastructure Utilities (Electric, Gas, Water, etc)	P	• Available. Connections on site or via A-I.	• Available. Connections on site or via A-I.	• Available. Connections on site or via A-I.	• Available. Connections on site or via A-I.
	C	•	• Location may result in higher utility connections costs.	• As previously noted, potential conflict with 12kV line and manhole.	• Location may result in higher utility connections costs. • As previously noted,

Site ID Evaluation Criteria		2 New Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Campus Circulation (pedestrian, bicycle, vehicular, shuttle)	P	• Adjacent to Aberdeen Drive and campus pedestrian, bicycle, vehicle and shuttle routes.	• Adjacent to Aberdeen Drive and campus pedestrian, bicycle, vehicle and shuttle routes.	• Parking lot site is on pedestrian circulation paths and bicycle. • Adjacent to A-I parking.	• Parking lot site is on pedestrian circulation paths and bicycle. • Adjacent to A-I parking.
	C	•	•	•	•
General Comments	P	• Connection to Glen Mor could be less important given apartments have kitchens. • Glen Mor students are on a limited meal plan. • Opportunity to provide grand entrance.	• Connection to Glen Mor could be less important given apartments have kitchens. • Glen Mor students are on a limited meal plan. • South expansion could reflect building configuration.	• Connection to Glen Mor could be less important given apartments have kitchens. • Glen Mor students are on a limited meal plan. • Retains feel of existing west side architecture and building history.	• Connection to Glen Mor could be less important given apartments have kitchens. • Glen Mor students are on a limited meal plan. • Retains feel of existing west side architecture and building history.
	C	• West side expansion has the potential to have a major impact to A-I iconic architecture. • Residential Dining location competes with Food Emporium	• Further examination of the site is required to determine potential impact to the arroyo.	• May require additional space to integrate facility into the campus landscape.	• May require additional space to integrate facility into the campus landscape.

Additional Information

Site ID Evaluation Criteria		2 Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Studio Architecture Considerations			**Based upon available information**		
Potential Impact to Residential Programs	P	• Best Synergy for A-I • Good Phasing, West than East. • More gracious Main Entry from the West • New shell for dining	• Best views of a natural feature • New shell for dining	• Potential opportunity to develop scheme so that one gets a new dining facility that is integrated into the planning fabric. • New shell for dining	• Except for lack of parking, least disruptive to ongoing student life while under construction. • Least construction process risk • New shell for dining
	C	• Docking/loading area and access problematic • More expensive than Original Baseline Scheme	• Pedestrian access problematic • Dock to kitchen could be at different levels • Not very synergistic with A-I housing, would need to be designed as a 'destination' • More expensive	• Potential for not being integrated in planning fabric…more remote from A-I Hub than Baseline and Alt 2 • More expensive	Disengaged from Student life of A-I…dining is very remote Challenging from the standpoint of how to integrate building into the planning fabric of A-I. More expensive
Project Phasing	P	• 2 Phases…Phase I: All West side; Phase II: Wing C East	• 2-3 Phases • B and C West could be separate phases	• 2-3 Phases • B and C West could be separate phases	• 2-3 Phases • B and C West could be separate phases
	C	•	•	•	•
Schedule	P	• See write up below for Original/Baseline Alt. As a 2 phase project we see Phase I taking 18-20 months. Phase II 10 to 12 months. So say 28 months total allowing for some overlap of schedule. • Not as intensively schedule driven as Original Baseline Scheme	• Say 28 months if two phases. If B and C West are separate phase then add 10 months to total schedule +/- overlaps. • Not as intensively schedule driven as Baseline	• Say 28 months if two phases. If B and C West is a separate phase then add 10 months to total schedule +/- overlaps. • Not as schedule driven as Baseline	• Say 28 months if two phases. If B and C West is a separate phase then add 10 months to total schedule +/- overlaps. • Not as schedule driven as Baseline

Site ID Evaluation Criteria		2 Wing C West	4 South of Wing E West	5 East Wing C East	6 East of Wing D East
Construction Budget	P	• $34,215,000	• Alt. 4 similar to 3. Alt. 3 was projected at $36,000,000 to $37,000,000 including adding RD housing as a stand-alone complex and developing Wing B West into student housing, NOT including additional costs for adding parking, site work related to the Arroyo and the southern loading dock redevelopment.	• One assumes similar to Alt 3… $36,000,000 to $37,000,000 plus additional parking costs and temporary loading dock costs, if required.	• One assumes similar to Alt 3…$36,000,000 to $37,000,000 plus additional new loading dock costs and additional parking costs
	C	• Additional cost over Original Baseline Scheme	• Additional cost over Baseline and Alt. 2, perhaps more expensive than Alt 5 and 6	• Additional Cost over Baseline and Alt 2	• Additional Cost over Baseline and Alt. 2
Other Considerations	P	• NOTE: Original Baseline Scheme. • Pro: lowest cost ($33,229,000), probably fastest although 'tense' schedule, good adjacencies, maximum reuse of existing building. • Schedule: Phase I and II = 28 months. Assumes allowing for 13 months for Phase I before Phase II starts for a duration of 15 months and a total of 28 months.	• Cost estimate and schedule needs to be developed	• Cost estimate and schedule needs to be developed	• Cost estimate and schedule needs to be developed
	C	• Con: Existing shell space less flexible than new space for the budget above.	•	•	•

Site Evaluation Analysis Support Documents

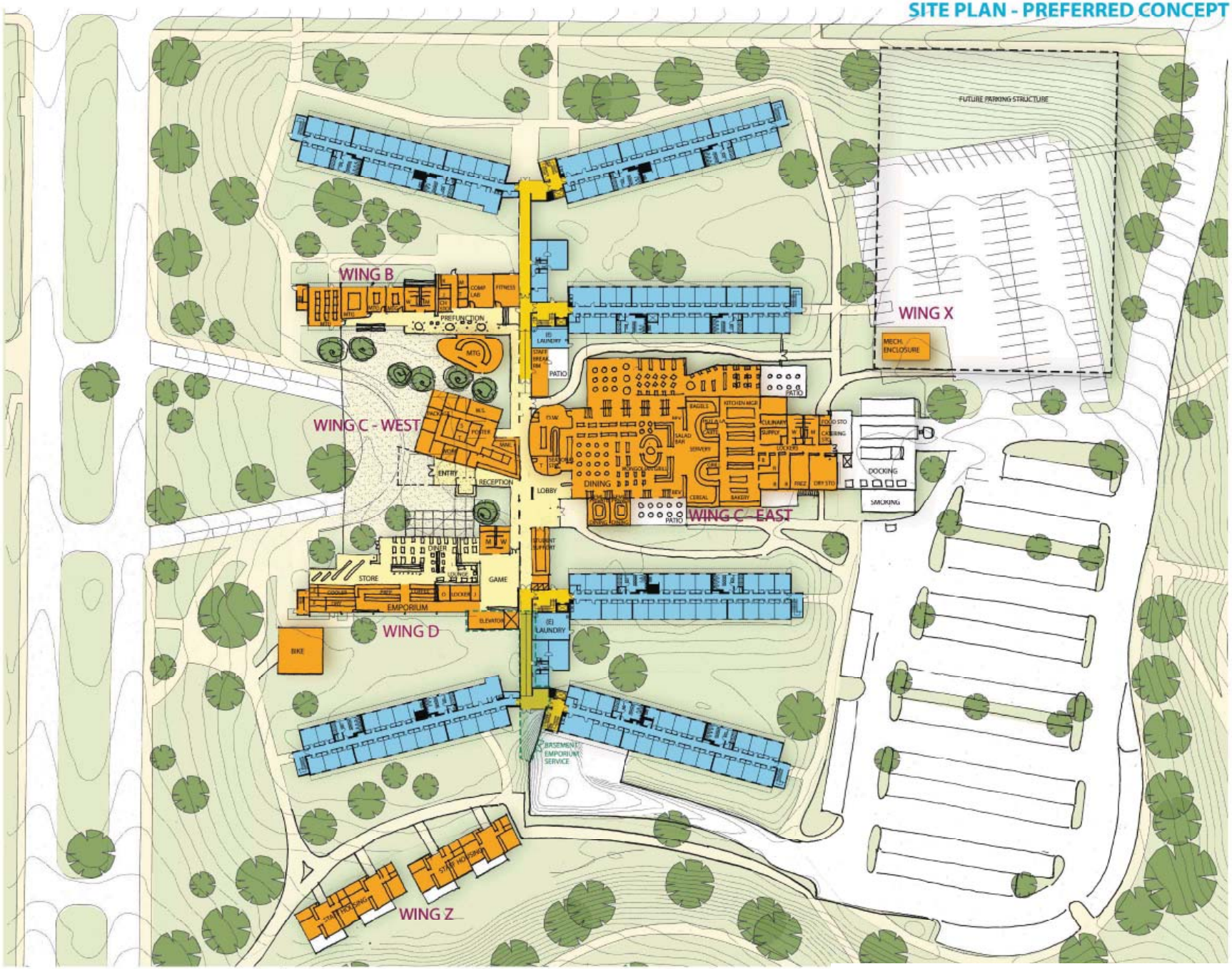
1. Studio Architecture Site Plans Concepts Presented March 28, 2011, at Workshop 5 (pages 2-4)
    a. Site Plan Preferred Concept
    b. Site Plan – Alternative Concept 2
    c. Site Plan – Alternative Concept 3

2. Parking Analysis (pages 5-8)
    a. Alternative 4 Site
    b. Alternative 5 Site
    c. Alternative 6 Site
    d. A-I Site Evaluation – Parking

3. Walking Distances (pages 9-12
    a. Alternative 2
    b. Alternative 4
    c. Alternatives 5 & 6
    d. Lothian Dining

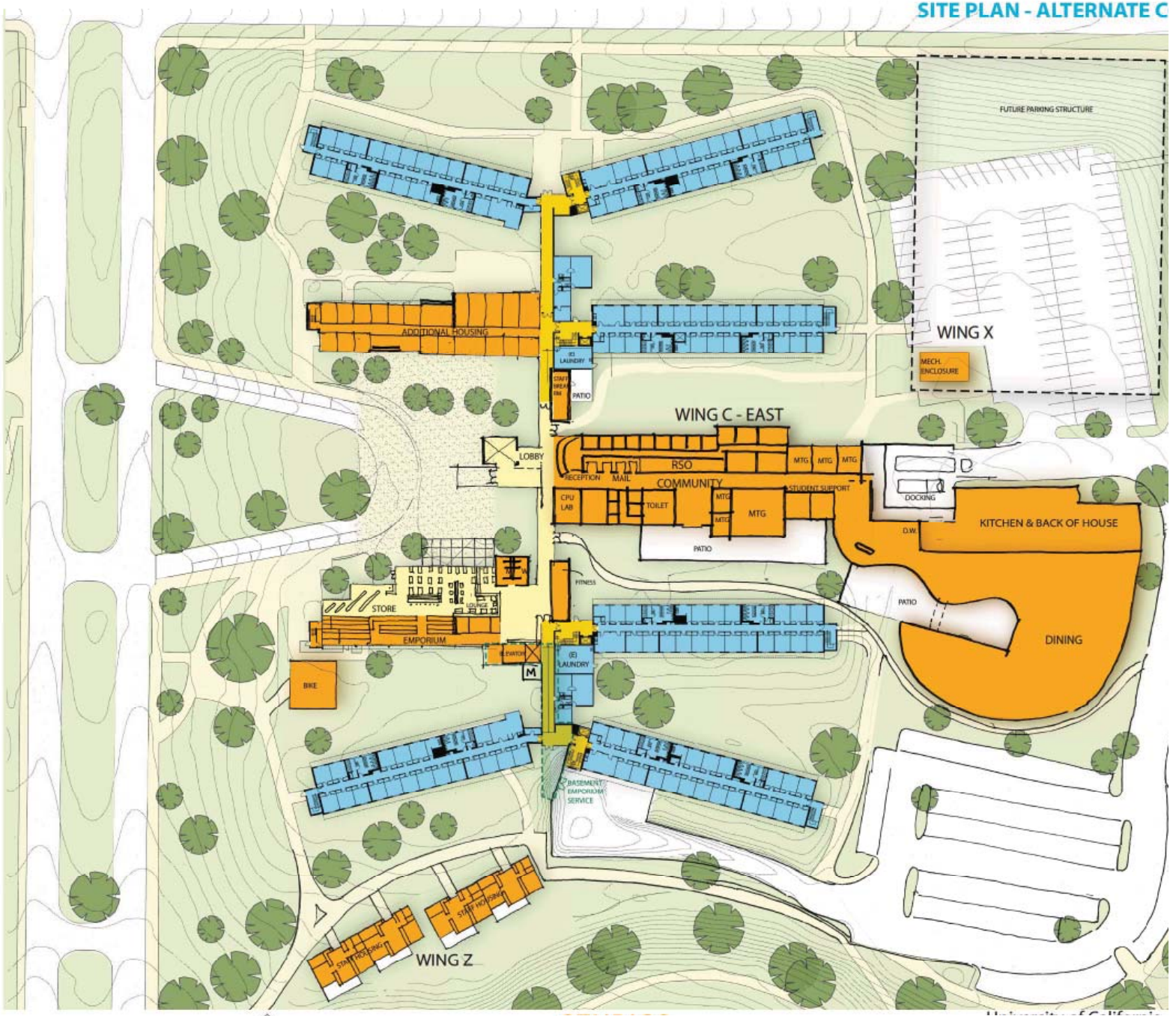
4. Site Evaluation Scoring Table Source Materials (pages 13-19)
    a. Project Vision and Goals
    b. Summary Table, Total Scores
    c. Summary Table, Average Scores
    d. Individual Scores

SITE PLAN - PREFERRED CONCEPT

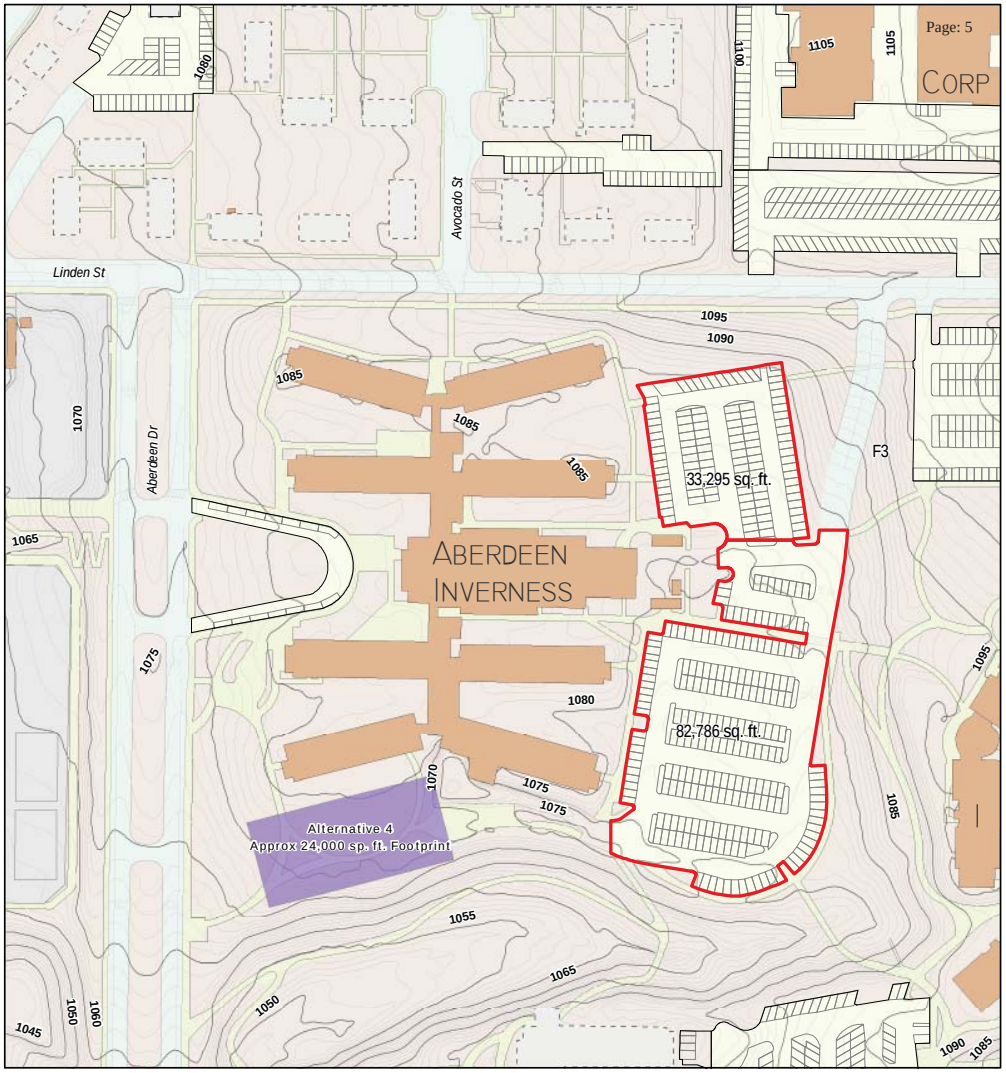


SITE PLAN - ALTERNATE

SITE PLAN - ALTERNATE C



6.7.18 University of California, Riverside
2011 A-I Residence Hall Common Area Improvements DPP
10.28.11



UCR

150 75 0 150

Feet

Legend

- Alternative 4
- Existing Campus Building
- Planned Removal

A-I Residence Hall
Common Area Improvement
Alternative 4 Site

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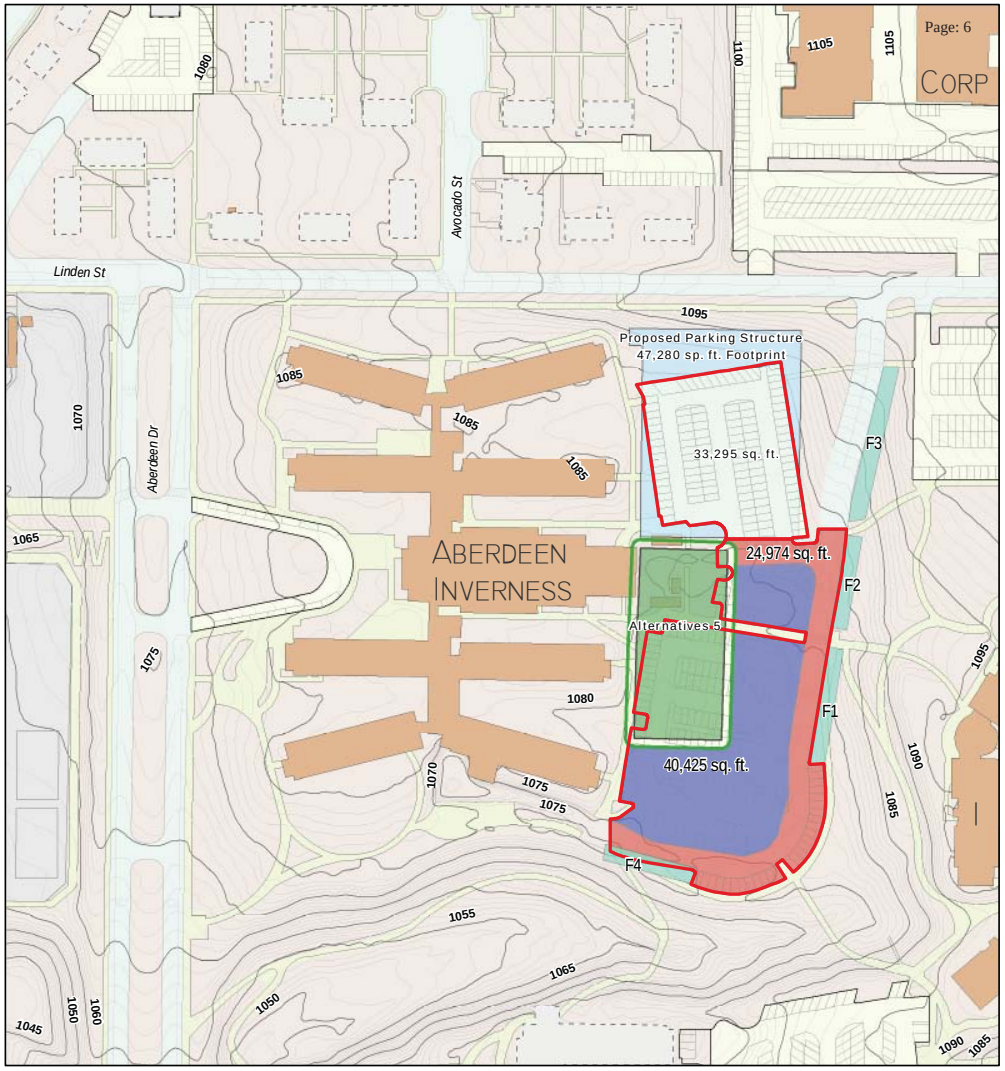

Legend

- Alternative 5
- Alternative 5 Planting Buffer
- Future Parking Structure
- Existing Campus Building
- Planned Removal

Parking Area Available

- Driveway
- Remaining Space
- North Parking
- Parking Expansion Areas (F1)

150 75 0 150 Feet

A-I Residence Hall
Common Area Improvement
Alternative 5 Site

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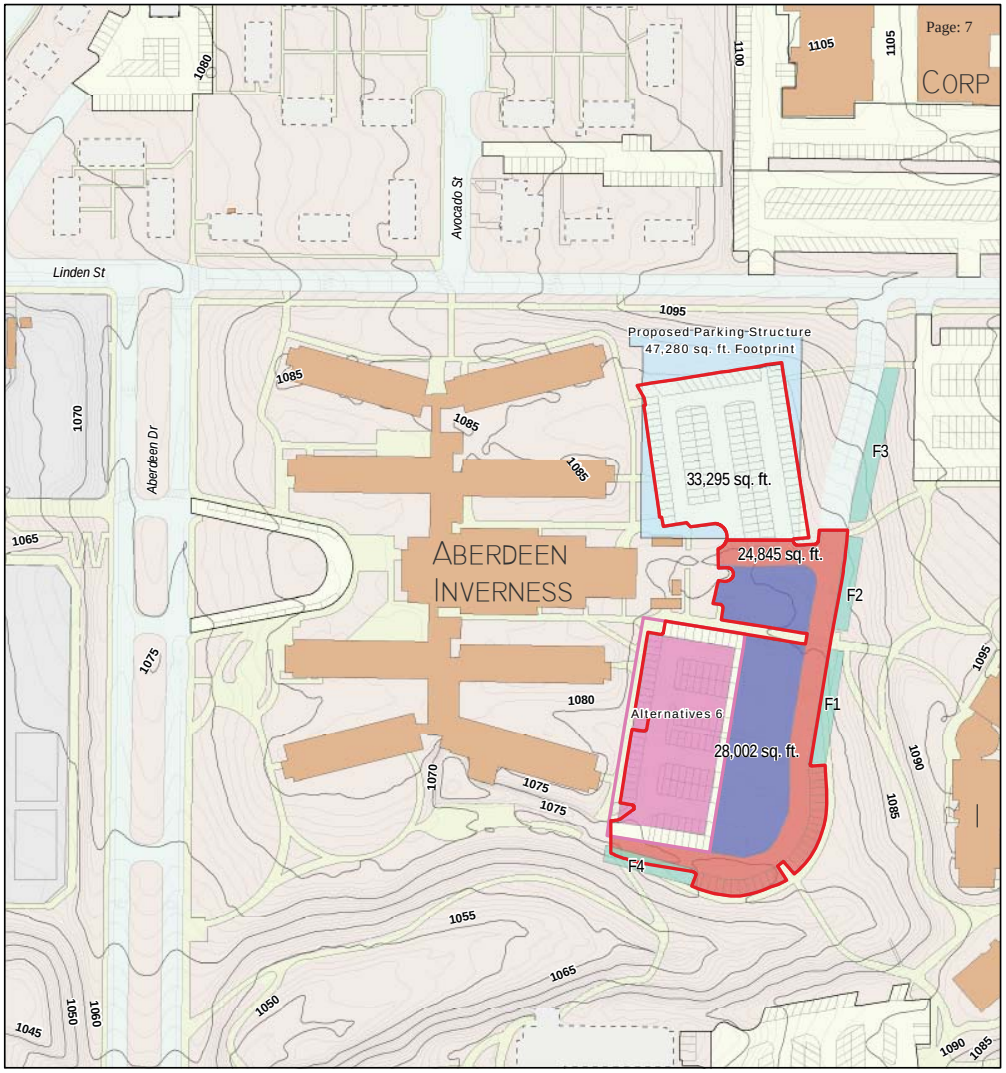

Legend

- Alternative 6
- Alternative 6 Planting Buffer
- Future Parking Structure
- Existing Campus Building
- Planned Removal

Parking Area Available

- Remaining Space
- Driveway
- North Parking
- Parking Expansion Areas (F1)

UCR

150 75 0 150

Feet

A-I Residence Hall
Common Area Improvement
Alternative 6 Site

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A-I Site Evaluation - Parking

April 19, 2011

Existing Conditions - Parking Lot 22

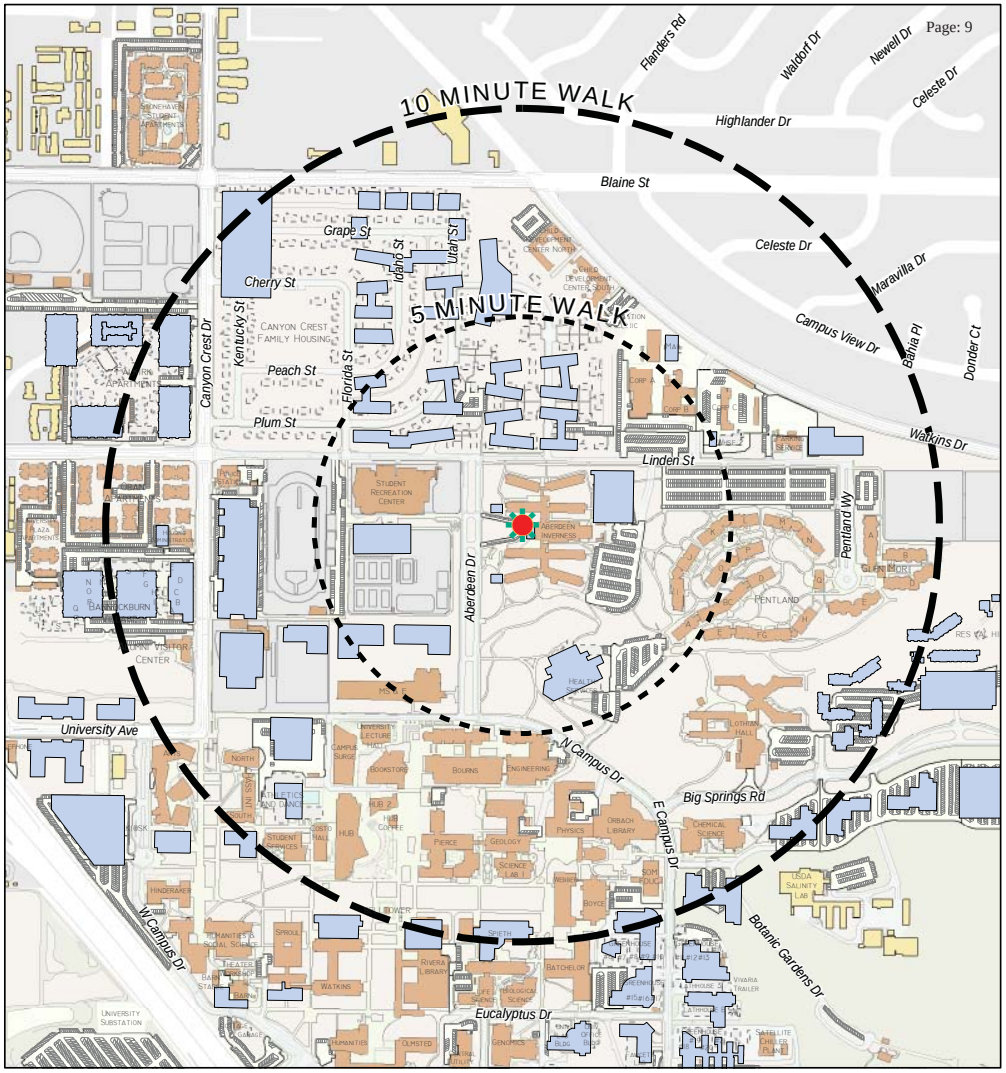
Location	Area (SF)	Spaces	SF/Space	Comments
North Lot	33,295			
Standard		108		
Disabled		2		
Total - North Lot	33,295	110	303	
South Lot	82,786			
Standard		209		
Disabled		5		
Total South Lot	82,786	214	387	
Total Lot 22	116,081	324	358	

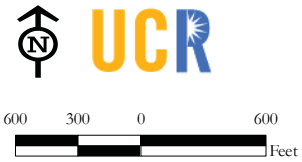
Potential Parking Expansion

Locations	Size (SF)	Spaces	Net Gain	
North Lot	47,280	143	33	Assume 330 SF / Space
South Lot	Size (LF)	Spaces		
F1	136	15		Assumes 9 LF / Space
F2	114	13		
F3	186	21		
F4 (Requires Review)	108	12		
Total	544	61		
Total Additional Spaces			94	

Alternative Site Information	Alternative 5	Alternative 6		
Footprint (SF)	24,000	24,000		
Landscape Buffer (SF)	6,970	9,100		
Total Area	30,970	33,100		
Displaced Parking				
Standard (Spaces)	56	98		
Disabled (Spaces)	5	5		
Total Displaced Parking	61	103		
Remaining Parking Area (SF)	40,422	28,002		
Driveway Area (SF)	24,974	24,845		
Remaining Spaces (Count)	153	111		
Potential Spaces	149	112		
Total Net New Spaces	61	103		

A-I_Alternates_parking_Aprl-19-2011.xlsx





Legend

- Future Campus Buildings
- Existing Campus Building
- Planned Removal

A-I Residence Hall
Common Area Improvement
Alternative 2 Concept Walking Distance

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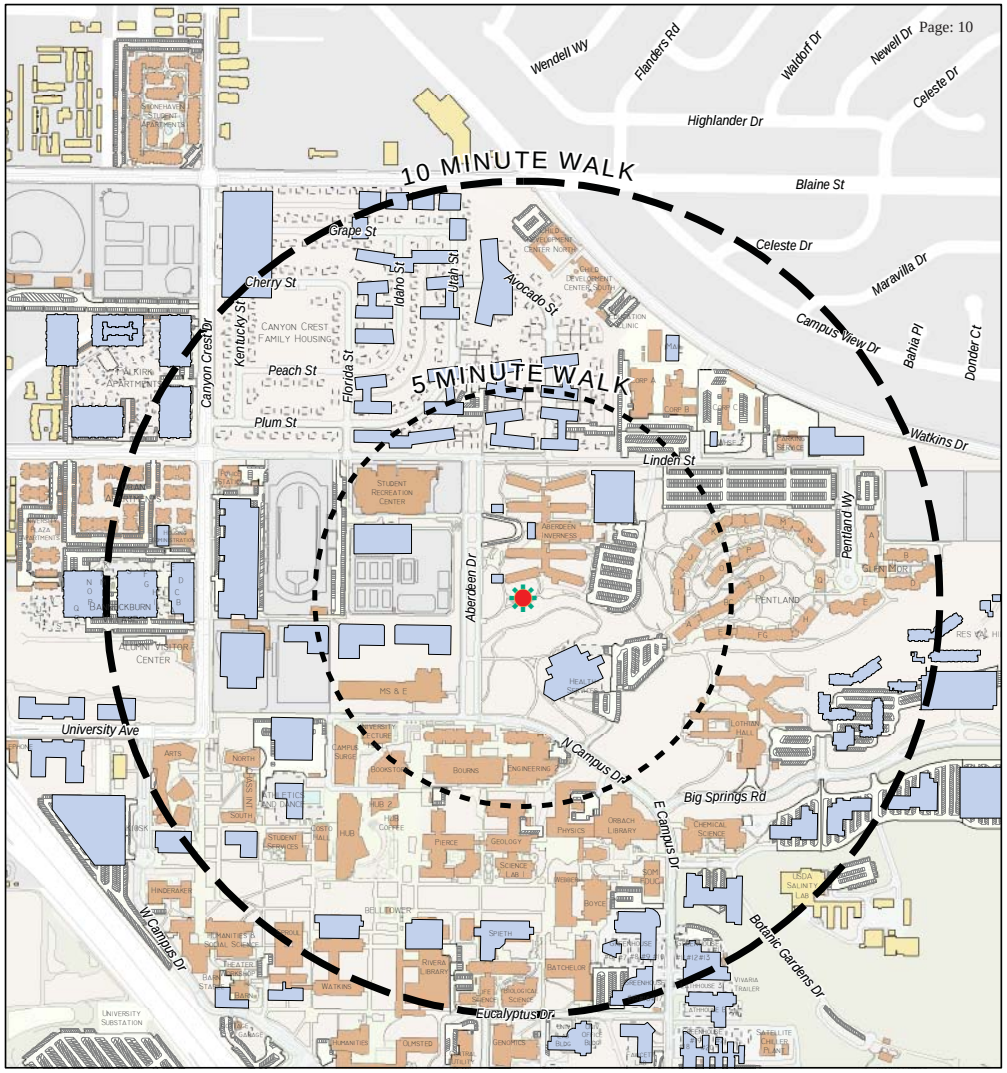

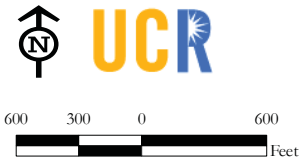

Legend

- Future Campus Buildings
- Existing Campus Building
- Planned Removal

A-I Residence Hall
Common Area Improvement
Alternative 4 Walking Distance

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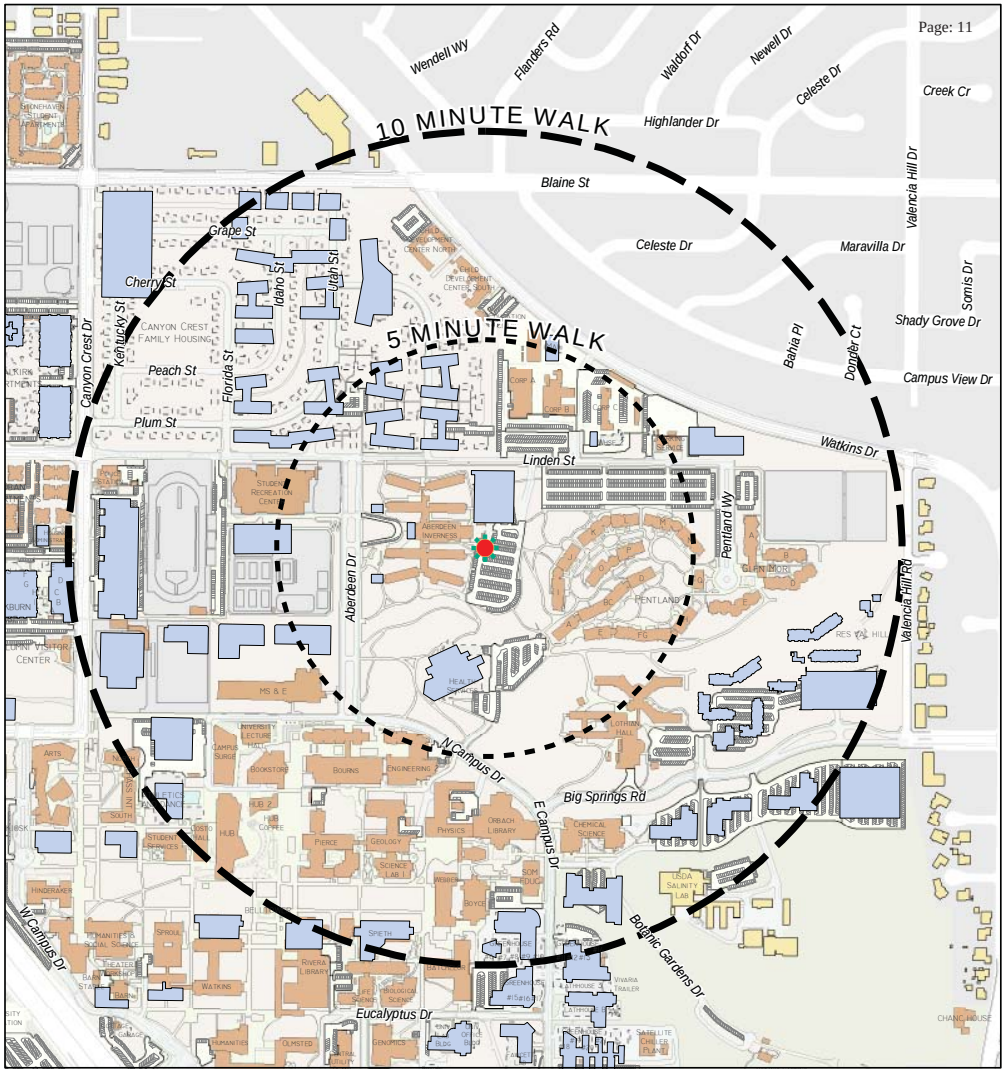

UCR

Legend

- Future Campus Buildings
- Existing Campus Building
- Planned Removal

600 300 0 600

Feet

A-I Residence Hall
Common Area Improvement
Alternative 5 & 6 Walking Distance

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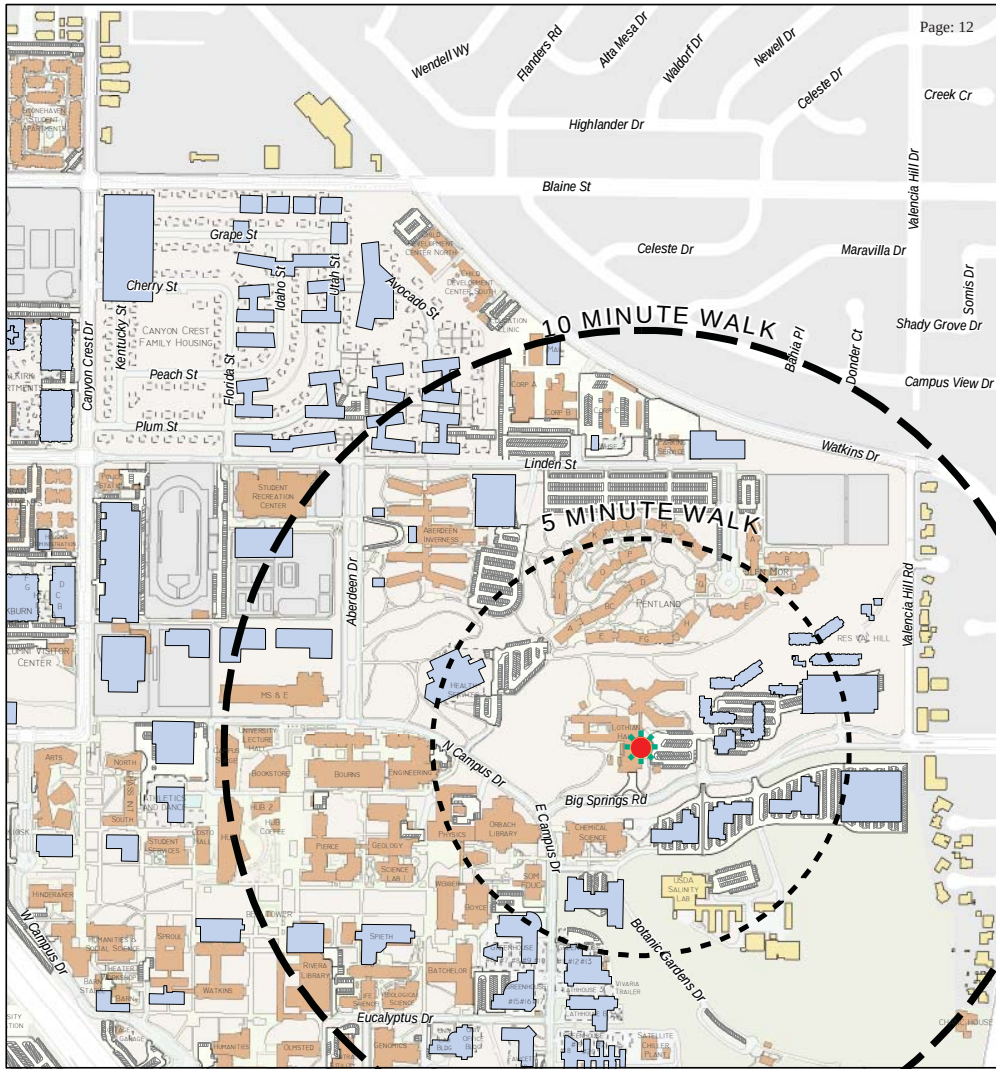

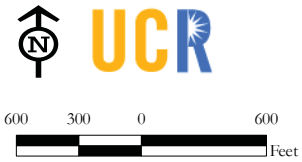

Legend

- Future Campus Buildings
- Existing Campus Building
- Planned Removal

A-I Residence Ha
Common Area Improvemen
Lothian Dining Hall Walking Distanc

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Aberdeen-Inverness Residence Hall
Common Area Improvements
Detailed Project Program DRAFT, March 2011

PROJECT VISION (Page 1.2.1)

A-I Residence Hall is an important component to UC Riverside's east campus student experience. Some of the goals expressed during the DPP process include:

• Give back to the students

• The building is iconic - celebrate the building's history

• Embrace the campus – create a sense of place

• Bring vitality to the common spaces - create a youthful feeling

• Main use of Dining is for Dining

GOALS (Page 1.4.1)

The renovated A-I Residence Hall Dining Facilities and Common Areas will:

• Provide a 575-seat Student Dining facility which will employ an open Kitchen, exhibition cooking, dispersed Servery and multiple Dining environments

• Provide an Emporium which will offer retail, coffee and a branded late night Diner

• Provide upgraded student Common Spaces, RSO offices and Support Functions

• Upgrade the building's seismic performance and MEP infrastructure to lower energy use and improve maintenance

• Embrace environmentally sustainable strategies, with LEED Silver Certifi cation as a minimum target

• Celebrate the building's mid-century origins and its iconic character in the architecture of any exterior additions

• Embrace the campus character and pedestrian fl ow – creating a local "sense of place"

• Create inviting and useful exterior spaces for dining, studying and socializing

• Create interior spaces with a youthful feeling – bringing vitality to Student Common spaces

• Strive for zero impact on residents during the construction phases

• Give back to the Students by creating a physical environment that promotes scholarship and a memorable residence life experience

Aberdeen-Inverness Residence Hall Common Area Improvements
April 21, 2011

Site Evaluation Scoring Table Summary: Total Scores

Site ID	2	4	5	6	Baseline
Evaluation Criteria	Wing C West	South of Wing E West	East of Wing C East	East of Wing D East	Renovate Wing C East
Residential Programs	45	33	29	26	32
Address Functional Requirements	11	9	8	7	7
Meeting Rooms, RSO, Etc.	11	10	8	8	7
Conference Room Program	11	11	8	7	8
Synergy with other A-I spaces	12	3	5	4	10
Other (Identify)	--	--	--	--	--
Residential Dining	41	23	22	21	28
Proximity for Residents	12	4	6	4	10
Proximity for Non-Resident Customers	12	6	4	4	8
Construction Impact	7	8	6	7	4
Operational Considerations	10	5	6	6	6
Kitchen	15	18	20	22	20
Loading Dock	2	5	7	7	9
Kitchen Services (e.g. Food Truck)	4	5	7	7	9
Construction Impacts	9	8	6	8	2
Other Operational Consideration	--	--	--	--	--
Housing & Dining Services Program/Operation Considerations	44	50	33	33	32
Associated Operational Costs	5	5	3	4	2
Parking	8	10	5	3	8
Views	8	12	4	4	5
Urban Feel	10	7	5	5	5
RD Apartment Program	7	6	9	9	9
Construction Impacts	6	10	7	8	3
Site Development Considerations	79	83	82	81	77
Site Availability	9	8	6	6	8
Displacement of Existing Land Uses (e.g., parking, open space)	6	7	6	6	9
Replacement Facility	4	8	6	6	3
Program Size / Fit to Site	9	7	9	9	6
Program Scale (building height, massing and context)	9	10	9	9	7
Expansion Potential	3	3	7	7	5
Site Access During Construction	6	8	9	9	5
Compatibility with Existing and Adjacent Land Uses	9	8	8	8	9
Potential Collocations Efficiencies (loading zone, internal and external circulation, open space)	3	7	7	7	7
Infrastructure	--	--	--	--	--
Utilities (Electric, Gas, Water, etc.)	9	6	7	6	8
Campus Circulation (pedestrian, bicycle, vehicular, shuttle)	11	10	7	7	9
General Comments	1	1	1	1	1
Total Score	224	207	186	183	189

Individual scores were assigned by considering the evaluation criteria in terms of the project vision and goals as presented in the draft DPP.

Aberdeen-Inverness Residence Hall Common Area Improvements
April 21, 2011

Site Evaluation Scoring Table Summary: Average Scores

Site ID	2	4	5	6	Baseline
Evaluation Criteria	Wing C West	South of Wing E West	East of Wing C East	East of Wing D East	Renovate Wing C East
Residential Programs	11.4	8.4	7.3	6.6	8.1
Address Functional Requirements	2.8	2.3	2.0	1.8	1.8
Meeting Rooms, RSO, Etc.	2.8	2.5	2.0	2.0	1.8
Conference Room Program	2.8	2.8	2.0	1.8	2.0
Synergy with other A-I spaces	3	1	1.3	1.0	2.5
Other (Identify)	--	--	--	--	--
Residential Dining	10.3	5.8	5.5	5.3	7.0
Proximity for Residents	3.0	1.0	1.5	1.0	2.5
Proximity for Non-Resident Customers	3.0	1.5	1.0	1.0	2.0
Construction Impact	1.8	2.0	1.5	1.8	1.0
Operational Considerations	2.5	1.3	1.5	1.5	1.5
Kitchen	3.8	4.6	5.1	5.6	5.1
Loading Dock	0.5	1.3	1.8	1.8	2.3
Kitchen Services (e.g. Food Truck)	1.0	1.3	1.8	1.8	2.3
Construction Impacts	2.3	2.0	1.5	2.0	0.5
Other Operational Consideration	--	--	--	--	--
Housing & Dining Services Program/Operation Considerations	11.1	12.6	8.5	8.4	8.2
Associated Operational Costs	1.3	1.3	0.8	1.0	0.5
Parking	2.0	2.5	1.3	0.8	2.0
Views	2.0	3.0	1.0	1.0	1.3
Urban Feel	2.5	1.8	1.3	1.3	1.3
RD Apartment Program	1.8	1.5	2.3	2.3	2.3
Construction Impacts	1.5	2.5	1.8	2.0	0.8
Site Development Considerations	20.9	21.7	21.6	21.3	20.4
Site Availability	2.3	2.0	1.5	1.5	2.0
Displacement of Existing Land Uses (e.g., parking, open space)	1.5	1.8	1.5	1.5	2.3
Replacement Facility	1.0	2.0	1.5	1.5	0.8
Program Size / Fit to Site	2.3	1.8	2.3	2.3	1.5
Program Scale (building height, massing and context)	2.3	2.5	2.3	2.3	1.8
Expansion Potential	0.8	0.8	1.8	1.8	1.3
Site Access During Construction	1.5	2.0	2.3	2.3	1.3
Compatibility with Existing and Adjacent Land Uses	2.3	2.0	2.0	2.0	2.3
Potential Collocations Efficiencies (loading zone, internal and external circulation, open space)	0.8	1.8	1.8	1.8	1.8
Infrastructure	--	--	--	--	--
Utilities (Electric, Gas, Water, etc.)	2.3	1.5	1.8	1.5	2.0
Campus Circulation (pedestrian, bicycle, vehicular, shuttle)	2.8	2.5	1.8	1.8	2.3
General Comments	1.0	1.0	1.0	1.0	1.0
Total Score	57.5	53.1	48.0	47.2	48.8

Individual scores were assigned by considering the evaluation criteria in terms of the project vision and goals as presented in the draft DPP.

Site Evaluation Scoring Values:
3- Exceeds Project Vision and Goals
2 - Meets Project Vision and Goals
1- May Meet Project Vision and Goals; Requires Further Examination
0 - Does Not Address Project Vision and Goals

Aberdeen-Inverness Residence Hall Common area Improvements JH
April 14, 2011

Site Evaluation Scoring Table

Site ID	2	4	5	6	Baseline
Evaluation Criteria	Wing C West	South of Wing E West	East of Wing C East	East of Wing D East	Renovate Wing C East
Residential Programs	9	6	7	6	9
Address Functional Requirements	2	2	2	2	2
Meeting Rooms, RSO, Etc.	2	2	2	2	2
Conference Room Program	2	2	2	1	2
Synergy with other A-I spaces	3	0	1	1	3
Other (Identify)	--	--	--	--	--
Residential Dining	8	5	6	5	8
Proximity for Residents	3	1	2	1	3
Proximity for Non-Resident Customers	3	1	1	1	3
Construction Impact	0	2	2	2	0
Operational Considerations	2	1	1	1	2
Kitchen	2	4	5	6	4
Loading Dock	0	1	2	2	2
Kitchen Services (e.g. Food Truck)	0	1	2	2	2
Construction Impacts	2	2	1	2	0
Other Operational Consideration	--	--	--	--	--
Housing & Dining Services Program/Operation Considerations	6	8	7	7	8
Associated Operational Costs					
Parking	1	2	1	0	2
Views	1	3	1	1	2
Urban Feel	2	1	2	2	2
RD Apartment Program	2	0	2	2	2
Construction Impacts	0	2	1	2	0
Site Development Considerations	13	17	22	22	19
Site Availability	2	2	2	2	2
Displacement of Existing Land Uses (e.g., parking, open space)	0	1	2	2	2
Replacement Facility	0	2	2	2	1
Program Size / Fit to Site	2	1	2	2	2
Program Scale (building height, massing and context)	2	2	2	2	2
Expansion Potential	0	0	2	2	0
Site Access During Construction	0	2	1	2	1
Compatibility with Existing and Adjacent Land Uses	2	2	2	2	2
Potential Collocations Efficiencies (loading	0	1	2	2	2
Infrastructure	--	--	--	--	--
Utilities (Electric, Gas, Water, etc.)	2	1	2	1	2
Campus Circulation (pedestrian, bicycle,	2	2	2	2	2
General Comments	1	1	1	1	1
Total Score	38	40	47	46	48

Individual scores were assigned by considering the evaluation criteria in terms of the project vision and goals as presented in the draft DPP.

Aberdeen-Inverness Residence Hall Common area Improvements
April 14, 2011 SM

Site Evaluation Scoring Table

Site ID	2	4	5	6	Baseline
Evaluation Criteria	Wing C West	South of Wing E West	East of Wing C East	East of Wing D East	Renovate Wing C East
Residential Programs	12	10	7	7	8
Address Functional Requirements	3	3	2	2	2
Meeting Rooms, RSO, Etc.	3	3	2	2	2
Conference Room Program	3	3	2	2	2
Synergy with other A-I spaces	3	1	1	1	2
Other (Identify)	--	--	--	--	--
Residential Dining	11	6	6	6	6
Proximity for Residents	3	1	1	1	2
Proximity for Non-Resident Customers	3	2	1	1	1
Construction Impact	2	2	2	2	2
Operational Considerations	3	1	2	2	1
Kitchen	6	4	6	6	6
Loading Dock	1	1	2	2	2
Kitchen Services (e.g. Food Truck)	2	1	2	2	2
Construction Impacts	3	2	2	2	2
Other Operational Consideration	--	--	--	--	--
Housing & Dining Services Program/Operation Considerations	14	14	9	10	9
Associated Operational Costs	3	3	2	3	1
Parking	2	2	1	1	2
Views	2	3	1	1	1
Urban Feel	3	2	1	1	1
RD Apartment Program	2	1	2	2	2
Construction Impacts	2	3	2	2	2
Site Development Considerations	22	15	18	18	20
Site Availability	3	1	1	1	2
Displacement of Existing Land Uses (e.g., parking, open space)	2	1	1	1	2
Replacement Facility					1
Program Size / Fit to Site	2	1	2	2	2
Program Scale (building height, massing and context)	2	2	2	2	1
Expansion Potential	2	1	3	3	2
Site Access During Construction	2	2	3	3	2
Compatibility with Existing and Adjacent Land Uses	2	1	1	1	2
Potential Collocations Efficiencies (loading	2	3	2	2	2
Infrastructure	--	--	--	--	--
Utilities (Electric, Gas, Water, etc.)	2	1	2	2	2
Campus Circulation (pedestrian, bicycle,	3	2	1	1	2
General Comments	--	--	--	--	--
Total Score	65	49	46	47	49

Individual scores were assigned by considering the evaluation criteria in terms of the project vision and goals as presented in the draft DPP.

Site Evaluation Scoring Values:
3- Exceeds Project Vision and Goals
2 - Meets Project Vision and Goals
1- May Meet Project Vision and Goals; Requires Further Examination
0 - Does Not Address Project Vision and Goals

4/21/2011

Aberdeen-Inverness Residence Hall Common area Improvements
April 14, 2011 JN

Site Evaluation Scoring Table

Site ID	2	4	5	6	Baseline
Evaluation Criteria	Wing C West	South of Wing E West	East of Wing C East	East of Wing D East	Renovate Wing C East
Residential Programs	12	10	11	9	9
Address Functional Requirements	3	3	3	2	2
Meeting Rooms, RSO, Etc.	3	2	3	3	2
Conference Room Program	3	3	3	3	2
Synergy with other A-I spaces	3	2	2	1	3
Other (Identify)	--	--	--	--	--
Residential Dining	11	8	6	6	8
Proximity for Residents	3	1	2	1	3
Proximity for Non-Resident Customers	3	3	1	1	2
Construction Impact	2	2	1	2	1
Operational Considerations	3	2	2	2	2
Kitchen	4	7	6	7	6
Loading Dock	0	2	2	2	3
Kitchen Services (e.g. Food Truck)	1	2	2	2	3
Construction Impacts	3	3	2	3	0
Other Operational Consideration	--	--	--	--	--
Housing & Dining Services Program/Operation Considerations	11	14	9	8	7
~~Associated Operational Costs~~					
Parking	2	3	2	1	3
Views	2	3	1	1	1
Urban Feel	3	2	1	1	1
RD Apartment Program	2	3	2	2	2
Construction Impacts	2	3	3	3	0
Site Development Considerations	20	25	25	25	28
Site Availability	2	2	2	2	3
Displacement of Existing Land Uses (e.g., parking, open space)	2	2	2	2	3
Replacement Facility	1	3	3	3	1
Program Size / Fit to Site	2	2	3	3	2
Program Scale (building height, massing and context)	2	3	3	3	3
Expansion Potential	0	1	1	1	3
Site Access During Construction	2	2	3	3	2
Compatibility with Existing and Adjacent Land Uses	3	3	3	3	3
Potential Collocations Efficiencies (loading	0	2	2	2	2
Infrastructure	--	--	--	--	--
Utilities (Electric, Gas, Water, etc.)	3	2	1	1	3
Campus Circulation (pedestrian, bicycle,	3	3	2	2	3
General Comments	--	--	--	--	--
Total Score	58	64	57	55	58

Individual scores were assigned by considering the evaluation criteria in terms of the project vision and goals as presented in the draft DPP.

Site Evaluation Scoring Values:
3- Exceeds Project Vision and Goals
2 - Meets Project Vision and Goals
1- May Meet Project Vision and Goals; Requires Further Examination
0 - Does Not Address Project Vision and Goals

4/21/2011