



Division of Facilities Development

With



Capital Planning & Budget

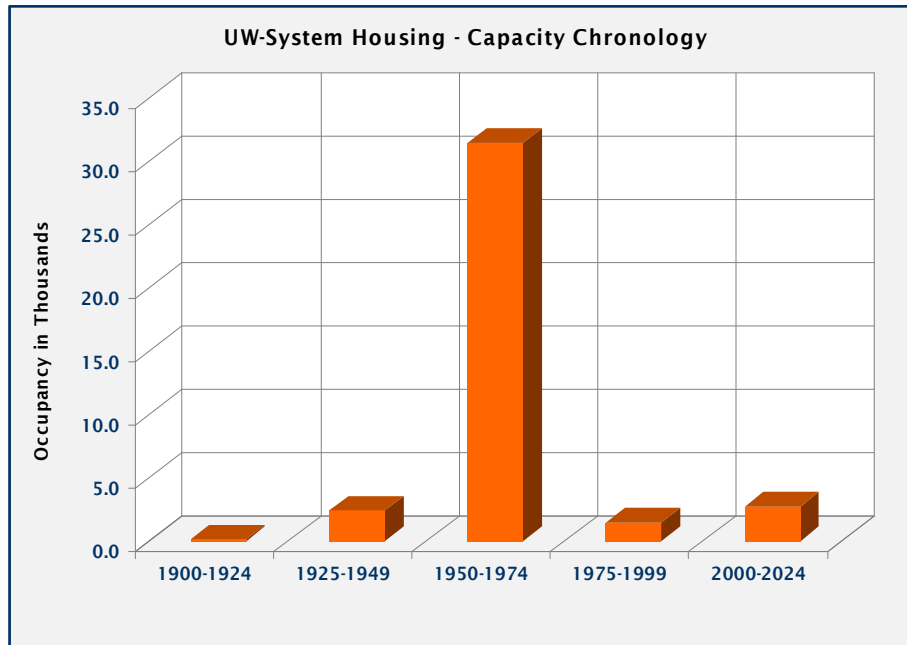
**NEW RESIDENCE HALL FACILITY STUDY
&
BUILDING STANDARDS DEVELOPMENT
FOR
The University of Wisconsin Residence Halls**

DFD # 12A3G

August 29th, 2012

Background and Purpose

The purpose of this study is to provide a comprehensive database of information and a set of recommendations for UW System and individual universities to use to help accurately plan for the type, size, cost and schedule for additional housing in response to student needs as approved by the Board of Regents. It is not the intent to this study to mandate a “one size fits all” residence hall plan configuration or procurement process for UW Campuses.



The majority (85%) of the current housing stock on University of Wisconsin four-year campuses is over 45 years old. Due to projected growth at several campuses combined with a shortage of housing to adequately accommodate all freshman and sophomores as required by the UW System Board of Regents, there is a substantial need System-wide to quickly bring new residences halls on line.

Several campuses have looked to private developers to quickly construct residence halls. Reasons for this include:

1. Lack of available land either on campus or nearby for purchase; purchase costs may also be high, funding may not be available, and timeframes for approvals can be long.
2. The timing of the biennial budget cycle may not be aligned with the timing of need for beds, and the many steps required in the capital budget cycle and project implementation create delays in meeting needs.

This study will include information on non-traditionally delivered projects to provide Campuses information about how these types of delivery methods compare to “traditional” delivery methods, including cost and quality differences.

Project Description

This study is based on factual evaluation of:

1. Current Division of Facilities Development Master Specifications/Design Guidelines along with a broad range of potential alternatives as well as common upgrades requested by user groups to accommodate market conditions and improve operations, and
2. Design components and construction costs of recently-completed state, not-for-profit, and private residence halls in Wisconsin.

To facilitate informed planning and decision-making by agency representatives, this study addresses current trends in student housing, first cost versus long term durability/energy use, and project duration/schedules as related to a broad range of variables including construction delivery method, structural systems, MEP systems, construction details and specifications, materials and finishes, etc.

The process for this study involved representatives from DFD, UW, and the A/E working in a team format to refine an initial work plan and schedule. A/E then organized and facilitated workshops with the study leaders. A/E recorded decisions made in a summary document.

Audience: The audience for this document is Campus Housing Management, UW-System Administration Planners, Division of Facilities Development Architects & Engineers and selected A/E teams on future residence halls.

Scope

The scope of this study includes three distinct components:

Part 1: Compile information and statistics in a consistent format on all halls built in the past seven years for either the UW System four-year campuses or associated off line Foundation built process.

Part 2: Perform a comparison of cost/schedule/construction & MEP systems of a select cross section of residence halls as identified by the Study Leaders. Halls selected for inclusion were:

- a. UWSA, Design/Build - UW Platteville - Southwest Hall (382 beds) 2006
- b. UWSA/DFD - UW-La Crosse - Reuter Hall (382 beds) 2006
- c. UWSA/DFD - UW-Madison - Ogg Hall (622 Beds) 2007
- d. Viterbo University Clare Apartments - (118 beds) 2012
- e. UW-Platteville Real Estate Foundation - Rountree Commons (600 beds) 2012

Part 3: Develop a “Specification Checklist” organized in CSI Masterformat, for all building systems, with identification of those systems acceptable to both Division of Facilities Development and the UWSA Capital Planning & Budget office, as well as other alternatives, with cautions and concerns identified for systems that are not endorsed by UWS/DFD. Interactive sessions were conducted with DFD and UWSA professional staff to review existing DFD building guidelines and identify reasons for recommending use of systems identified in guidelines, and provide reasons for concern about systems that do not comply with guidelines. The report format includes a simplified spreadsheet where for each

component a “Basic Code Compliant”, “Medium Quality”, “Recommended Quality”, and “Enhanced Option” are identified. “Recommended Quality” is the level of quality that is consistent with DFD Guidelines, based on DFD/UWSA/AE discussion during workshops. Commentary related to first-cost and total cost of ownership is identified where relevant.

Report Components:

Report Components are available in electronic formats that are automated where practical, updatable, printable, and useable by those entities planning future residence halls.

Residence Hall Study Summary Document

Executive Summary -- Introduction, Background, Synthesis, and Conclusions Related to Recommended Parameters for Future Residence Halls

Section 1: Data Summary

- a. Identification of the Campus and Hall
- b. Description of housing configuration (i.e. traditional, suite, apartment, etc)
- c. Number of beds
- d. Number of stories
- e. Number of parking stalls (bike, moped and vehicular)
- f. Description of non-residential uses developed in a tabular format by floor, and description of use (e.g. food service, central housing offices, etc.).
- g. Description of major building systems (i.e. roof and envelope, structural, MEP, interiors, etc.)
- h. Basic site and building plans
- i. Cost breakdown: Information on soft costs, including A/E fees, DFD fees, Developer fees, borrowing costs, and furnishings, fixtures and equipment (FF&E). Use DOA Form 4265 to illustrate costs for General Construction, Mechanical, Electrical, Fire Protection, and Plumbing costs. Break out of size of major non-housing functions, i.e. food service, large meeting spaces, office space, etc. List utility types, Sustainable Design attributes, any unusual project conditions or challenges.
- j. Square footage breakdown – total GSF, GSF/ASF per bed, ASF per unit, ASF of lounge spaces, SF of non-housing functions, area of overall building footprint, area of directly associated site, area of parking (structured and surface)
- k. Project schedule including month and year of RFP or enumeration, approvals, AE selection, bidding or CMAR selection or negotiation, construction.

Section 2: Planning Document

- a. Space Planning commentary indicating commentary on typical arrangements illustrated in 5 representative projects
 - i. Square footages and plan diagrams of representative typical dwelling unit arrangements like suites and doubles.
 - ii. Square footages and plan diagrams of floor plan arrangements of typical arrangements illustrated in 5 representative projects for units, lounges, and circulation, and their associated efficiencies
- b. Construction and MEP Systems Planning
 - i. Matrix comparing components meeting DFD guidelines, life spans, efficiencies and costs to other construction standards, life spans, efficiencies and costs. Costs are illustrated as cost per square foot, with escalation factor to today’s construction costs and scheduling factors.
- c. Schedule Planning
 - i. Matrix comparing typical State of Wisconsin project schedule to Design Build and Foundation built schedules.

Section 3: Project Construction System and MEP System Component Planning Checklist

- a. “Specification Checklist” organized in CSI Masterformat

Study Leaders

Agency	Contact	Phone	e-mail
DFD	Larry Earll	608-266-1290	larry.earll@wisconsin.gov
UWSA	Maura Donnelly	608-263-5742	mdonnelly@uwsa.edu
Eppstein Uhen Architects	Jonathan Parker	608-442-6681	jonathanp@eua.com
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Executive Summary

Introduction

The purpose of this study is to provide a comprehensive database of information and a set of recommendations for UW System and individual universities to use to help accurately plan for the type, size, cost and schedule for additional housing in response to student needs as approved by the Board of Regents. It is not the intent to this study to mandate a “one size fits all” residence hall plan configuration or procurement process for UW Campuses.

Background

The majority of the current housing stock on University of Wisconsin four-year campuses is over 45 years old. Due to projected growth at several campus combined with a shortage of housing to adequately accommodate all freshman and sophomores as required by the UW System Board of Regents, there is a substantial need System-wide to quickly bring new residences halls on line.

Several campuses have looked to private developers due to a perception that this is a faster way to construct new residence halls. This study provides timeline information for several representative projects which shows that project timeline opportunities for both Foundation led and DFD led projects can be similar when using certain implementation practices.

Synthesis

Data has been compiled and formatted to illustrate, in a consistent manner, the scope, cost, and schedule for 17 Residence Halls constructed in the past 7 years to house students attending UW Campuses, plus one project at a private university. The project team has analyzed this data to identify commonalities, anomalies, successes and challenges

Conclusions

1. There is no “one size fits all” solution to providing student housing at UW Campuses
2. There is great value in using this compiled data for initial general planning, and subsequent analysis of proposed designs created for Campuses.
3. While it is tempting to build project budgets around the lowest first cost of systems, experience has shown that investment in higher quality/higher efficiency critical items like superstructure, envelope, and MEP systems is a more efficient use of funds long term.
4. Sustainable Design is a topic that requires a great degree of discussion in conjunction with early project definition. DFD Sustainability guidelines are similar to LEED parameters, but not identical. If campuses are interested in renewable energy resources like domestic solar, photovoltaics, or geothermal, the first cost and payback of these systems should be thoroughly analyzed. It has been shown on previous projects that these systems have a very long payback in the Wisconsin climate, especially for residence halls that have little use during the summer months.

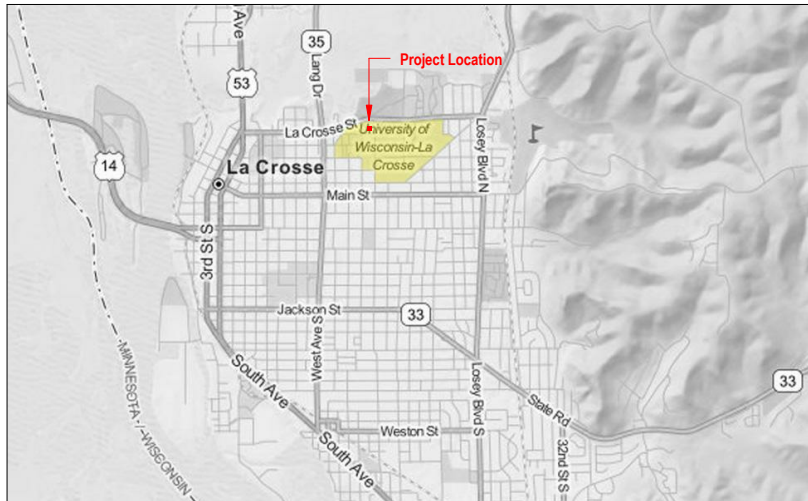
5. Project costs should be analyzed on a cost per bed and cost per unit basis in addition to traditional metrics such as cost per square foot and building efficiency. It is possible to have a low cost per square foot but a high cost per bed if a building design is not providing efficiently sized housing units and support space.
6. Selection of construction systems and MEP systems has the largest impact on overall project first cost and life cycle cost. The second major factor affecting project first cost, cost per bed and energy consumption, is the amount of program space provided in addition to bedroom space. This includes the size of common living space within units, the size of common space on resident floors, and the size of common space for building-wide use. This is an observation, not a condemnation of the provision of this type of space, which is necessary for building community, but on a tight budget project campuses should place a higher priority on providing sleeping, toileting, and study spaces. The third major factor affecting project cost and cost per bed is the inclusion of non-program space like full basements, parking, district food service venues, and/or office space. This study recognizes that for analysis purposes these types of elements need to be culled out, so the cost and efficiency of a project can also be viewed for just the housing portion.

Section 1: Data Summary

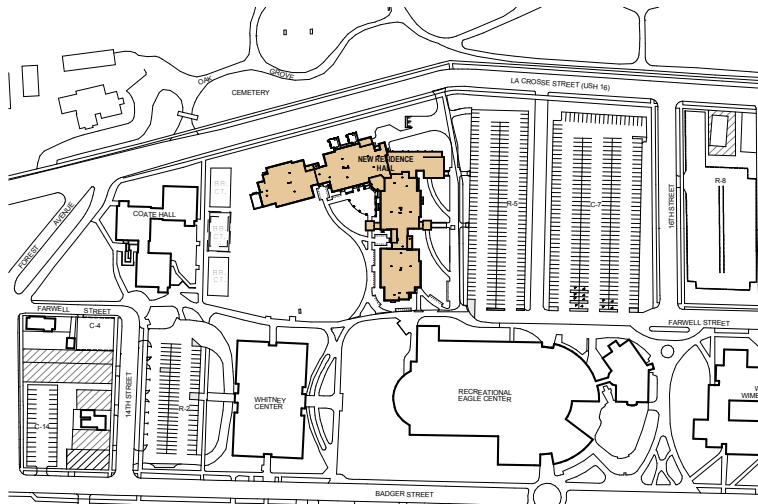
This section contains data on 17 Residence Halls completed in the past +/-7 years to house students attending UW Campuses. Data is formatted identically for each project, including scale, definition of spaces, definition of schedule, and cost for ease of cross comparison. Projects analyzed were delivered via the traditional DFD process, design/build turn key process, Foundation led process, and a private independent project. The projects are organized alphabetically by campus. The spreadsheets provided in this report are available as live electronic documents from UW System for use by UW System and User Agencies for planning purposes.

1. UW La Crosse Eagle Hall, 08B3M
2. UW La Crosse Reuter Hall, 02G3H
3. UW Madison Lakeshore Residence Hall Phase I, 04D1I
4. UW Madison Lakeshore Residence Hall Phase II, 10G3D
5. UW Madison Ogg Hall, 04D1I
6. UW Madison Smith Hall, turn key
7. UW Milwaukee Cambridge Commons, Real Estate Foundation led project
8. UW Milwaukee Riverview Residence Hall, Real Estate Foundation led project
9. UW Oshkosh New Residence Hall, 08K3J
10. UW Parkside Pike River Suites, 06K1G
11. UW Platteville Southwest Residence Hall, turn key
12. UW Platteville Rountree Commons, Real Estate Foundation led project
13. UW River Falls, South Forks Suites Addition, 09D2H, 99K4N
14. UW Stevens Point Residence Hall, 09D2H
15. UW Stout Red Cedar Hall, 02H2J
16. UW Whitewater Residence Hall, 06C1Q
17. Viterbo University Clare Apartments
18. Executive Data Summary of all of the residence halls listed above

UW La Crosse - Eagle Hall

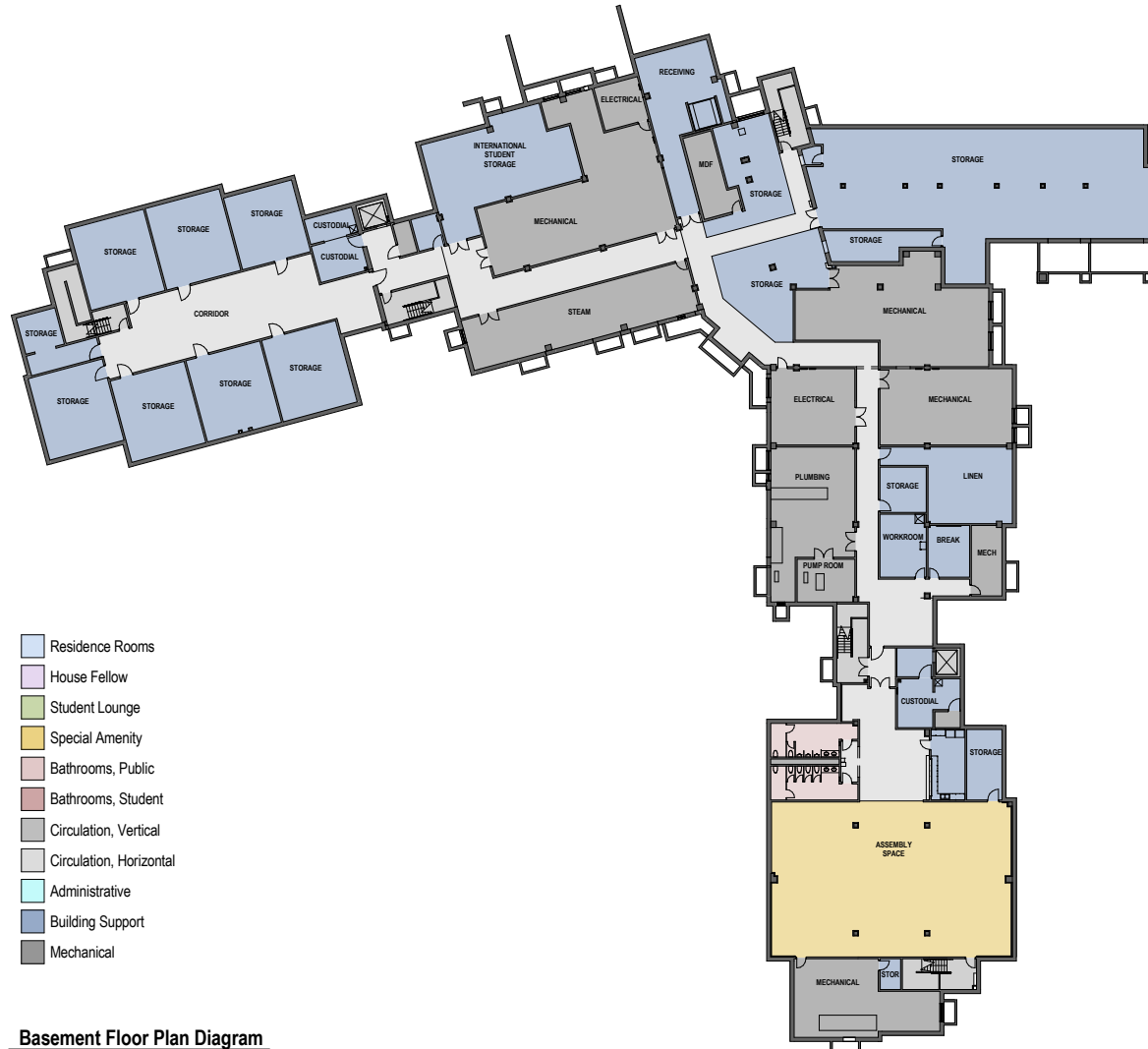


Campus Location Map
N.T.S.



Site Plan Diagram
N.T.S.

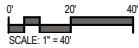
DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		DIVISION OF FACILITIES DEVELOPMENT	
BUILDING DATA/COST REPORT			
Architect/Engineer:	Eppstein Uhen Architects	Today's Date:	8/13/2012
Project Name:	Eagle Hall	Bid Date:	12/8/2009
Agency/Location:	University of Wisconsin - La Crosse	LEED Achieved:	LEED v2 - GOLD
Project Number:	08B3M		
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	II-B	SF. Roof Area:	41,836
Gross SF:	228,248	No. Elevator Stops:	12
Assignable SF:	203,758	No. Plumbing Fixtures:	626
No. Floors Below Grade:	1.0	MBH Heating Capacity:	6533 Mbh
No. Floors Above Grade:	5.0	MBH Cooling Capacity:	5010 Mbh
Cu. Ft. Bldg. Volume:	2,369,207	SF. Fire Protection:	227,548
No of Beds (Resident/Staff)	504 (486/18)	KVA Electrical Capacity:	997 KVA
SF. Developed Site Area:	186,200 3 stalls	Dom Water Heating:	4000 Mbh
No of Dwelling Units:	270	Construction Complete:	July, 2011
		Project Delivery Method:	Traditional D-B-B
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Pay Request	
General Construction <>	\$15,001,147	Electrical Work <>	\$2,956,657
- Structure:	\$2,989,254	- Power/Lighting:	\$2,275,991
- Envelope:	\$4,030,729	- Audio/Visual:	\$34,863
- Interior:	\$6,933,664	- Voice/Data:	\$441,132
- General Conditions:	\$686,957	- Fire Alarm/Security:	\$103,671
- Elevator Work.:	\$314,115	- Emergency Power:	\$101,000
Special Construction/Equipment:	\$46,428	FF&E Cost*	\$4,500,000
(Material Lift in Dock)		Total Project Cost*:	\$39,000,000
		* Cost Data from UW System	
Mechanical Work <>	\$6,281,524	Site Work <>	\$730,992
- Plumbing:	\$1,596,964	- Site Preparation:	\$299,325
- Fire Protection:	\$425,140	- Site Development:	\$276,891
- HVAC:	\$3,967,730	- Site Utilities:	\$154,776
- Test & Balance:	\$35,000		
- Energy Management Syst:	\$256,690	Total Construction Cost:	\$24,970,320
Enumerated Amount \$48M			
Enumeration Date 2009-11			
A/E advertisement May-08			
A/E Selection Jul-08			
BOR/SBC Approval Jun-09			
Bid Opening Dec-09			
Substantial Completion Jun-12			
Occupancy Aug-12			
Cost per SF	\$109		
Cost per bed	\$49,544		
GSF per bed	453		
SF of ave dwlg unit/suite	730		
Bed/Bathroom Ratio	4 to 1		
Total SF by space category			
Residence Rooms	66,579		
Resident Bathrooms	19,934		
Administrative	6,214		
House Fellow	5,694		
Basement Alt/Storage	19,862		
Study/Lounge †	24,625		
Special Amenity**	8,123		
FICM assignable sf	151,031		
Efficiency	74.1%		
General Circulation	41,745		
Mechanical	10,982		
Public Bathroom	994		
Structured Parking	N/A		
Food Service	N/A		
Retail	N/A		
% of Upper Floor Plate to Vertical Circulation	3.7%		
Net SF (total from above)	203,758		
Gross SF	228,248		
† Contrary to FICM, Lounges are considered assignable herein			
**500 occupant assembly space, computer tech room			
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 2.7%; Basement Alt/Storage, 8.7%; Circulation, 18.3%; Mechanical, 4.8%; Resident Suites, 40.4%; Special Amenity, 3.6%; Lounges, 10.8%; Unassigned/other, 10.7%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
The building superstructure consists of concrete topped 8 inch precast plank bearing on 8 inch CMU. Basement walls are 16 inch cast in place concrete while the foundations are conventional spread footings. The first and second floor framing above the central zone is structural steel transFer beams supported by steel wide flange columns. Likewise, the first floor framing in the south wing is supported by steel transFer beams, plate girders, and steel wide flange columns.. CIVIL: Civil work included demolition, grading, erosion control concrete paving, sand volleyball court, dumpster enclosure, traditional and mountable curb and gutter, bike parking, sanitary, water, storm sewer, steam and chilled water. Stormwater management was achieved through five biofiltration basins around the project.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
Building is heated and cooled using campus steam and chilled water. Two energy recovery units provide ventilation and exhaust for the building with operable windows to provide ventilation to the resident rooms. Two air handling units serve the main floor office spaces and a gather space in the basement. Four pipe fan coils are provided for each resident room. Building is fully sprinkled except 2-hr rated electrical room. Steam is used for heating domestic water. Building has a duplex water softener for treating domestic hot water. Building is served from 4160 V campus loop with a 1200 A main panel. Emergency power is provided by a 200 kW generator.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
100 hp fire pump, backup gas fired water heaters, 2 computer room units. Technology systems include voice, data and cable television. One telecom room is located on basement level and four telecom rooms are located on floors first, second, third, fourth and fifth floors.			



- Residence Rooms
- House Fellow
- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administrative
- Building Support
- Mechanical



Basement Floor Plan Diagram

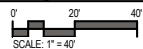




- Residence Rooms
- House Fellow
- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administrative
- Building Support
- Mechanical



Entry Floor Plan Diagram

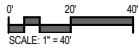


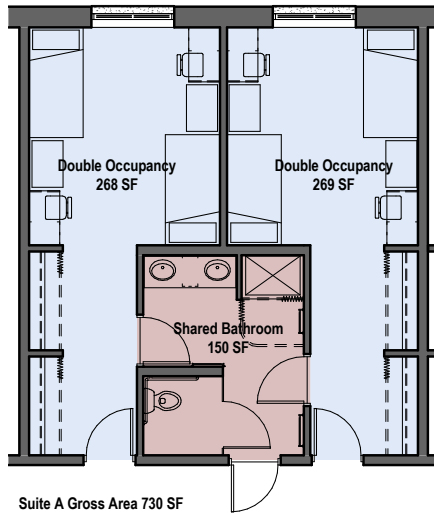


- Residence Rooms
- House Fellow
- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administrative
- Building Support
- Mechanical

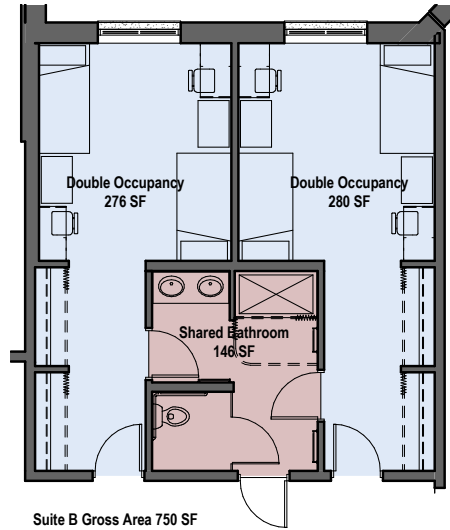
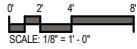


Typical Residence Floor Plan

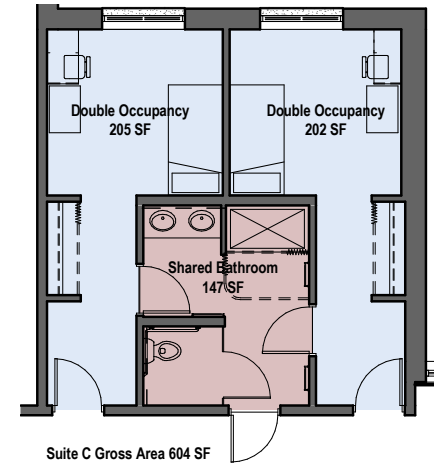
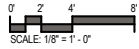




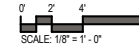
Typical Residence Suite A



Typical Residence Suite B

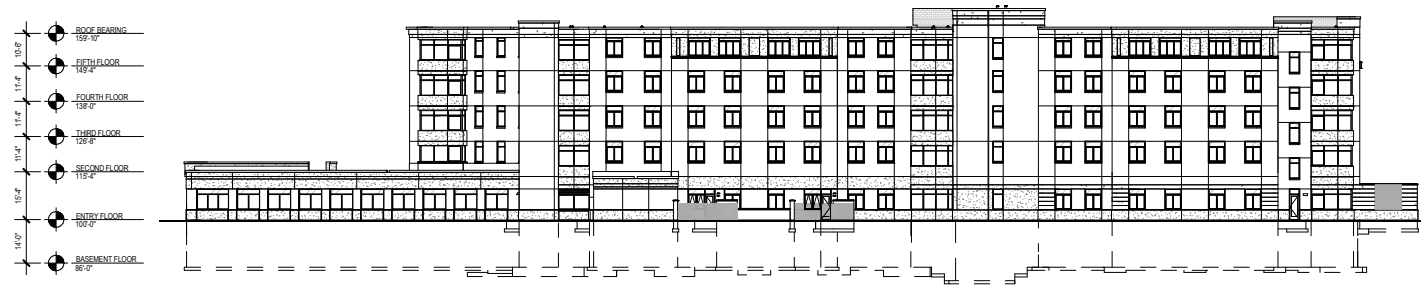
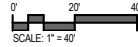


Typical Residence Suite C

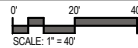




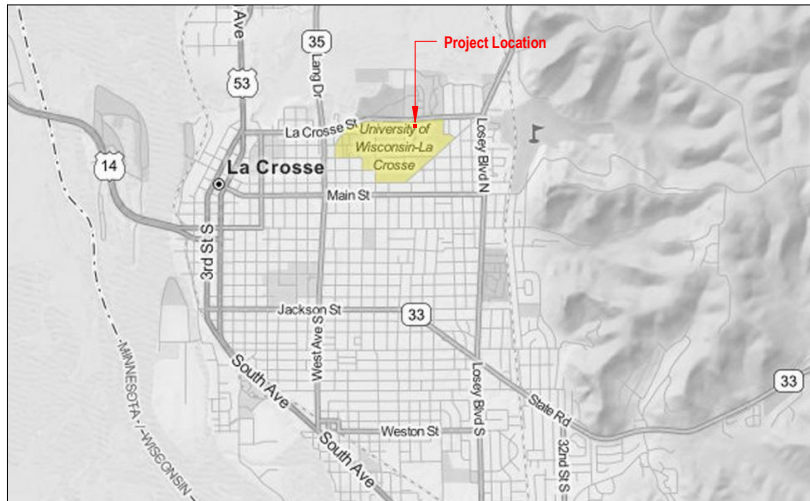
Representative East Elevation



Representative North Elevation

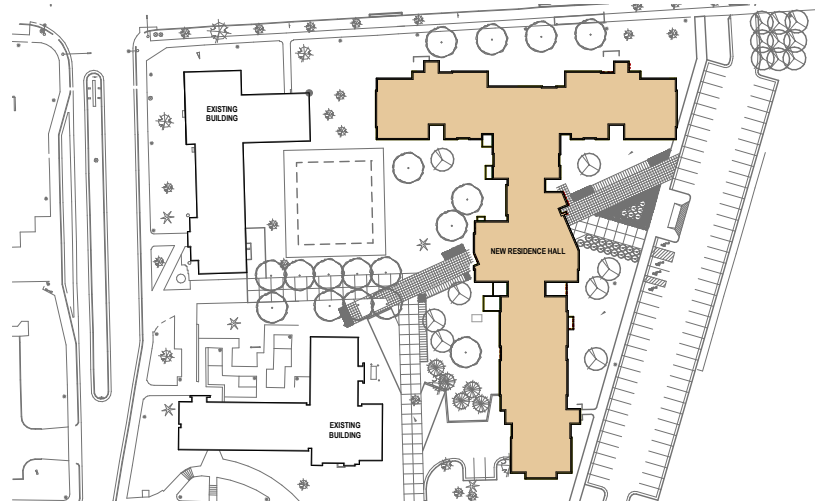


UW La Crosse - Reuter Hall



Campus Location Map

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Site Plan Diagram

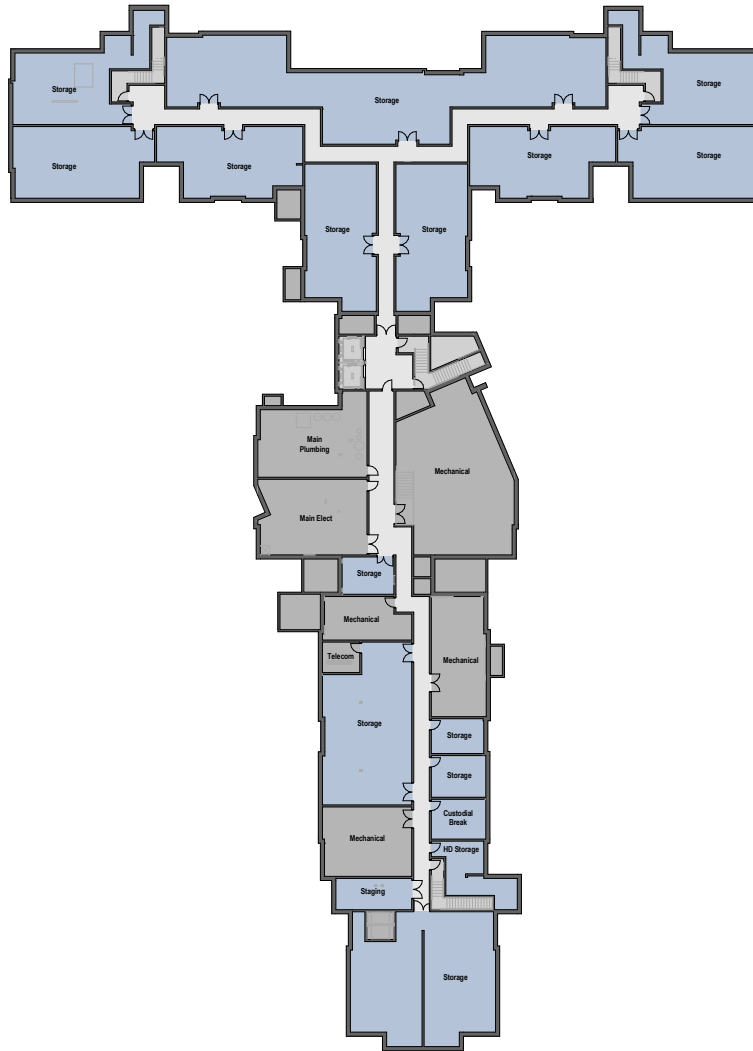
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DSF Project # 02G3H

UW La Crosse - Reuter Hall

La Crosse, WI

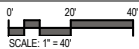
DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		DIVISION OF FACILITIES DEVELOPMENT	
BUILDING DATA/COST REPORT			
Architect/Engineer:	Eppstein Uhen Architects	Today's Date:	8/13/2012
Project Name:	UW La Crosse Reuter Hall	Bid Date:	Dec-04
Agency/Location:	University of Wisconsin - La Crosse	LEED Achieved:	None
Project Number:	02G3H		
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	II-B	SF. Roof Area:	27,442
Gross SF:	164,583	No. Elevator Stops:	6
Assignable SF:	106,973	No. Plumbing Fixtures:	514
No. Floors Below Grade:	1.0	MBH Heating Capacity:	5545 Mbh
No. Floors Above Grade:	5.0	MBH Cooling Capacity:	312 Mbh
Cu. Ft. Bldg. Volume:	1,948,800	SF. Fire Protection:	164,530
No of Beds (Resident/Staff)	382 (370/12)	KVA Electrical Capacity:	415 KVA
SF. Developed Site Area:	159,310 77 stalls	Dom. Water Heating:	5015 Mbh
No. of Dwelling Units:	96	Construction Complete:	6/30/2006
		Project Delivery Method:	Traditional D-B-B
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		DFD SOV	
General Construction <>	\$12,085,260	Electrical Work <>	\$2,051,490
- Structure:	\$3,270,735	- Power/Lighting:	\$1,198,990
- Envelope:	\$3,986,950	- Audio/Visual:	\$3,000
- Interior:	\$3,916,600	- Voice/Data:	\$200,000
- General Conditions:	\$584,165	- Fire Alarm/Security:	\$545,500
- Elevator Work.:	\$326,810	- Emergency Power:	\$104,000
Special Construction/Equipment:		FF&E Cost*:	\$1,063,000
		Total Project Cost*:	\$22,359,000
		* Cost Data from UW System	
Mechanical Work <>	\$3,435,775	Site Work <>	\$931,630
- Plumbing:	\$945,310	- Site Preparation:	\$487,860
- Fire Protection:	\$417,900	- Site Development:	\$220,495
- HVAC:	\$1,949,070	- Site Utilities:	\$223,275
- Test & Balance:	\$20,350		
- Energy Management Syst:	\$103,145	Total Construction Cost:	\$18,504,155
Enumeration Amount			
Enumeration Date	2003-05		
A/E advertisement	May-03		
A/E Selection	Aug-03		
BOR/SBC Approval	May-04		
Bid Opening	Dec-04		
Substantial Completion	May-06		
Occupancy	Jul-06		
Cost per SF	\$112		
Cost per bed	\$48,440		
GSF per bed	431		
Avg dwlg unit SF	1,020		
Bed/Bathroom Ratio	4 to 1		
Total SF by Category			
Resident Room	72,408		
Resident Bathroom	10,882		
Administration	1,233		
Hall Director Apartment	909		
Basement Alt/Storage	18,189		
Study/ Lounge †	1,703		
Special Amenity**	1,649		
FICM assignable sf	106,973		
Efficiency	65.0%		
General Circulation	24,553		
Mechanical	18,510		
Public Bathroom	567		
Structured Parking	N/A		
Food Service	N/A		
Retail	N/A		
% of Upper Floor Plate to Vertical Circulation	5.1%		
Net SF (Total of Above)	140,603		
Gross SF	164,583		
† Contrary to FICM, Lounges are considered assignable herein			
** Seminar Room, Computer Room			
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 0.7%; Basement Alt/Storage, 11.1%; Circulation, 14.9%; Mechanical, 5.2%; Resident Suites, 51.2%; Special Amenity, 1.0%; Lounges, 1.0%; Unassigned/other, 14.9% 77 Exterior parking stalls including 4 accessible ones			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
Abatement and demolition of existing 38,560 SF concrete frame, brick clad residence hall. Concrete footings & foundations. CMU bearing (ext/int) bearing walls. Precast concrete plank floor & roof structure. Architectural precast and face brick veneer exterior. Operable sash aluminum frame insulated windows. Ballasted single-ply EPDM roof over tapered insulation. CIVIL: Civil work included demolition, grading, retaining walls, erosion control concrete paving, asphalt paving, traditional curb and gutter, sanitary, water, storm sewer. Stormwater management for the south portion of the project was achieved through a biofiltration basin that serves multiple campus facilities. Stormwater from north portion of the project discharged to municipal storm sewer. Sanitary and water services were provided from adjacent public right of way.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
One four-pipe fan coil per unit with ventilation ducted to return of unit. Energy recovery wheel system for exhaust & make-up air provides make-up air & exhaust for all units. Energy recovery unit has Campus steam and chilled water for pre-treating make-up air stream. VAV system serves conditioned common spaces on First Floor. VAV system is equipped with steam pre-heat coil, chilled water cooling coil, return fan, air-flow measuring stations and economizer cycle. Plumbing system included a booster pump, water softeners, and 2 steam water heaters. Building is served by 4160v, 3Ph, 3 wire distribution system, in loop-feed configuration with 500 A main panel. 480/277v, 3Ph, four-wire for large HVAC motors. Two 208/120v dist panels on each floor. 150kw emergency generator for exit signs, emergency egress lighting and fire alarm.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
Abatement and demo bids, let separately, were \$85,305 and \$138,600. A heat recovery system was included in the project for \$95,000. Using DFD review criteria, the payback was projected at 6.0 years. A 1,000 gpm fire pump with 88 psi boost was provided. A pressure booster was required for plumbing. Technology systems include voice, data, cable television, telecommunications grounding and access control on exterior doors. One telecom room is located on basement level and first floor and two telecom rooms per floor on second, third, fourth and fifth floors.			



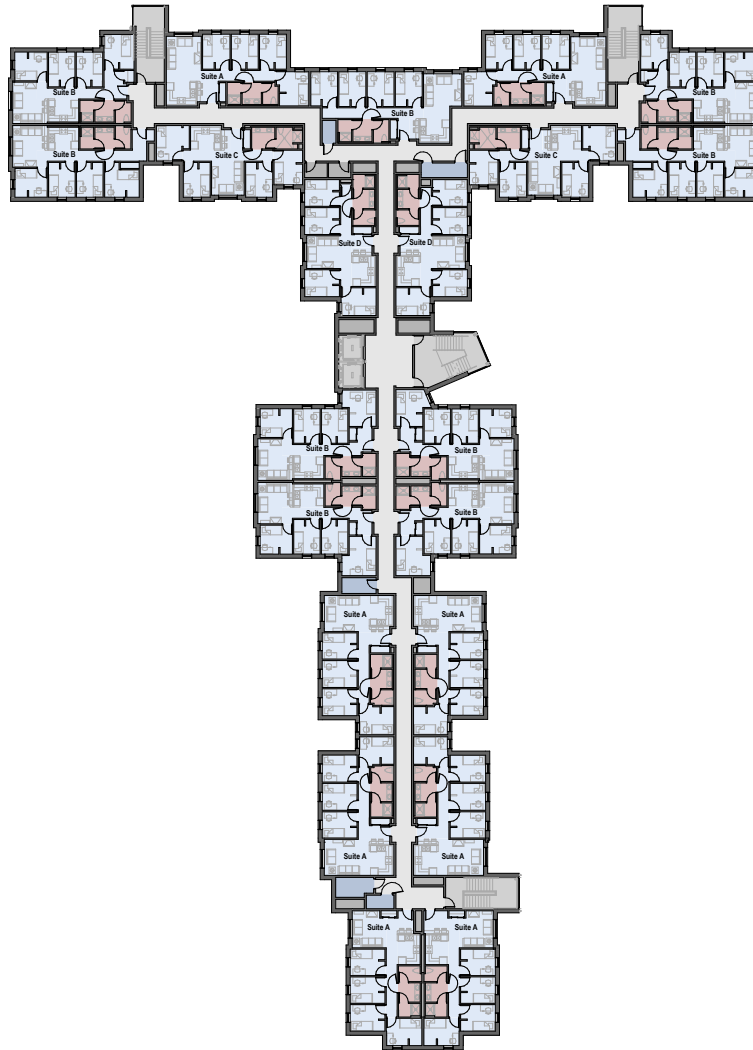
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Basement Floor Plan Diagram



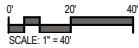


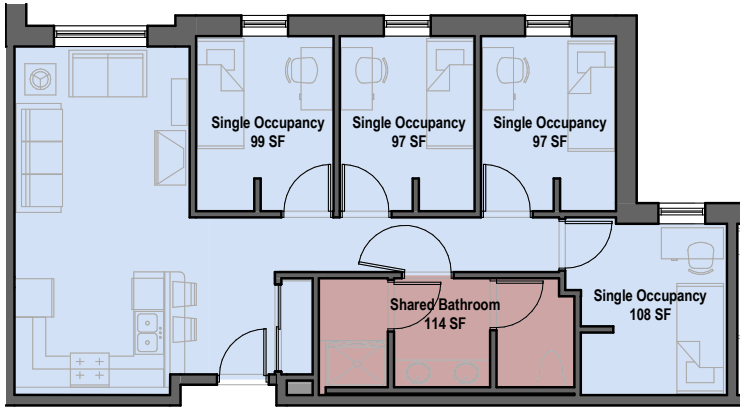


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

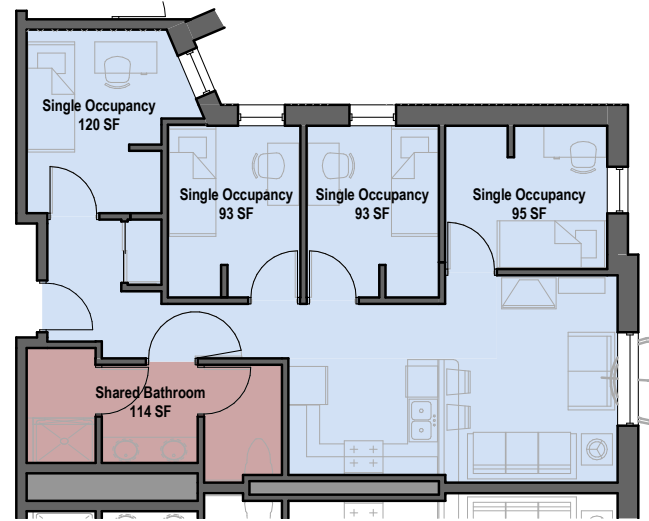


Typical Floor Plan Diagram



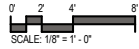


Suite A Gross Area 1020 SF

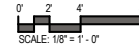


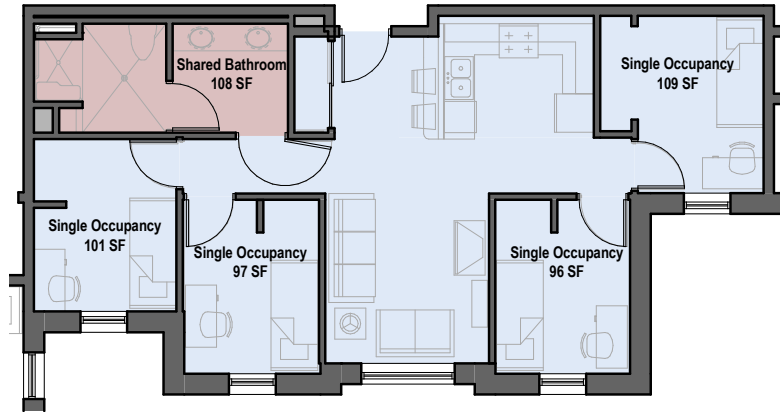
Suite B Gross Area 982 SF

Typical Residence Suite Type A



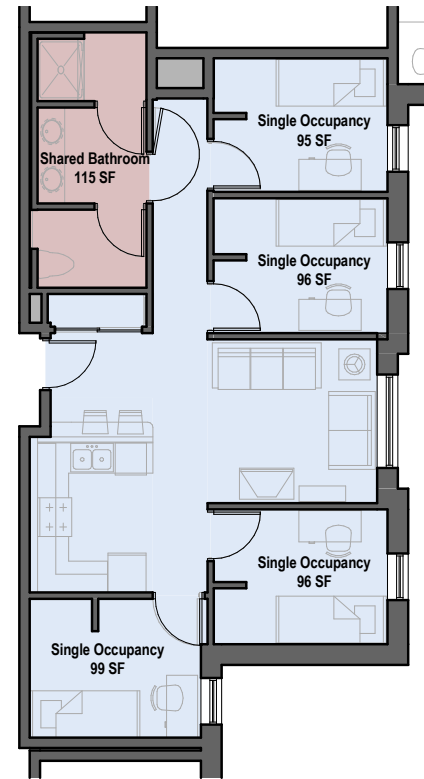
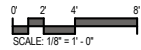
Typical Residence Suite Type B





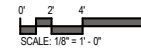
Suite C Gross Area 923 SF

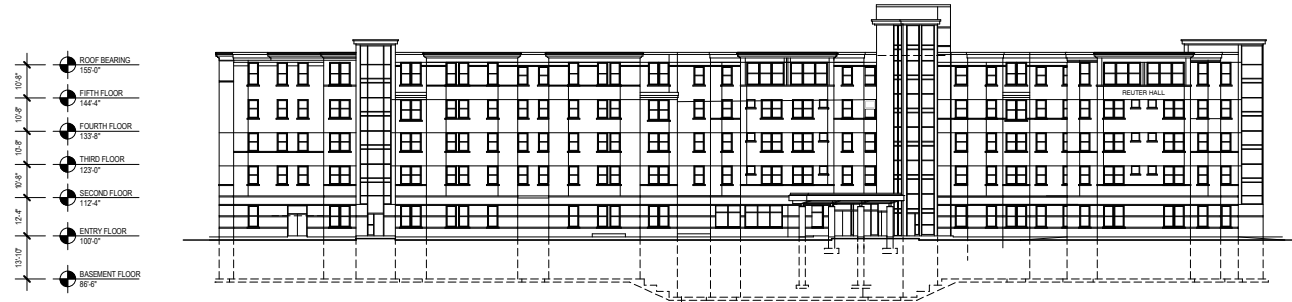
Typical Residence Suite Type C



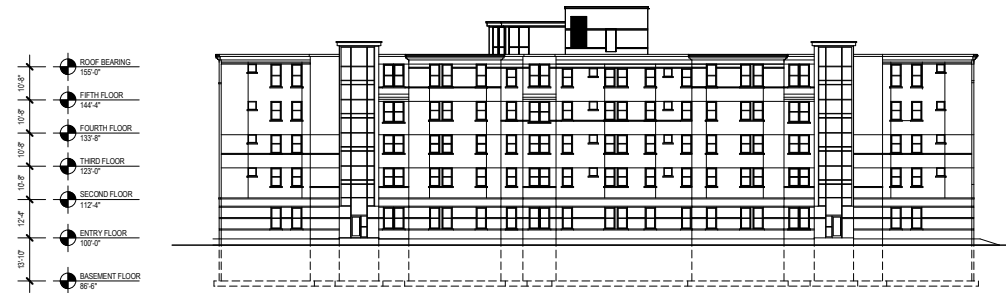
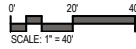
Suite D Gross Area 928 SF

Typical Residence Suite Type D

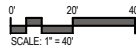




Representative East Elevation



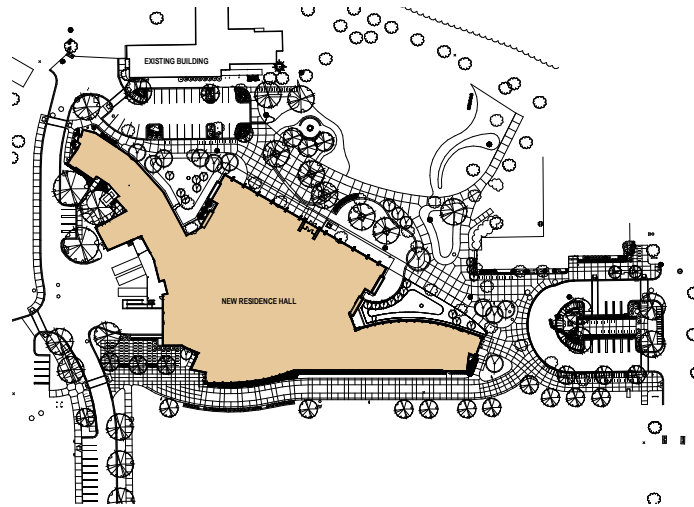
Representative North Elevation



UW Madison - Lakeshore Residence Hall Phase I



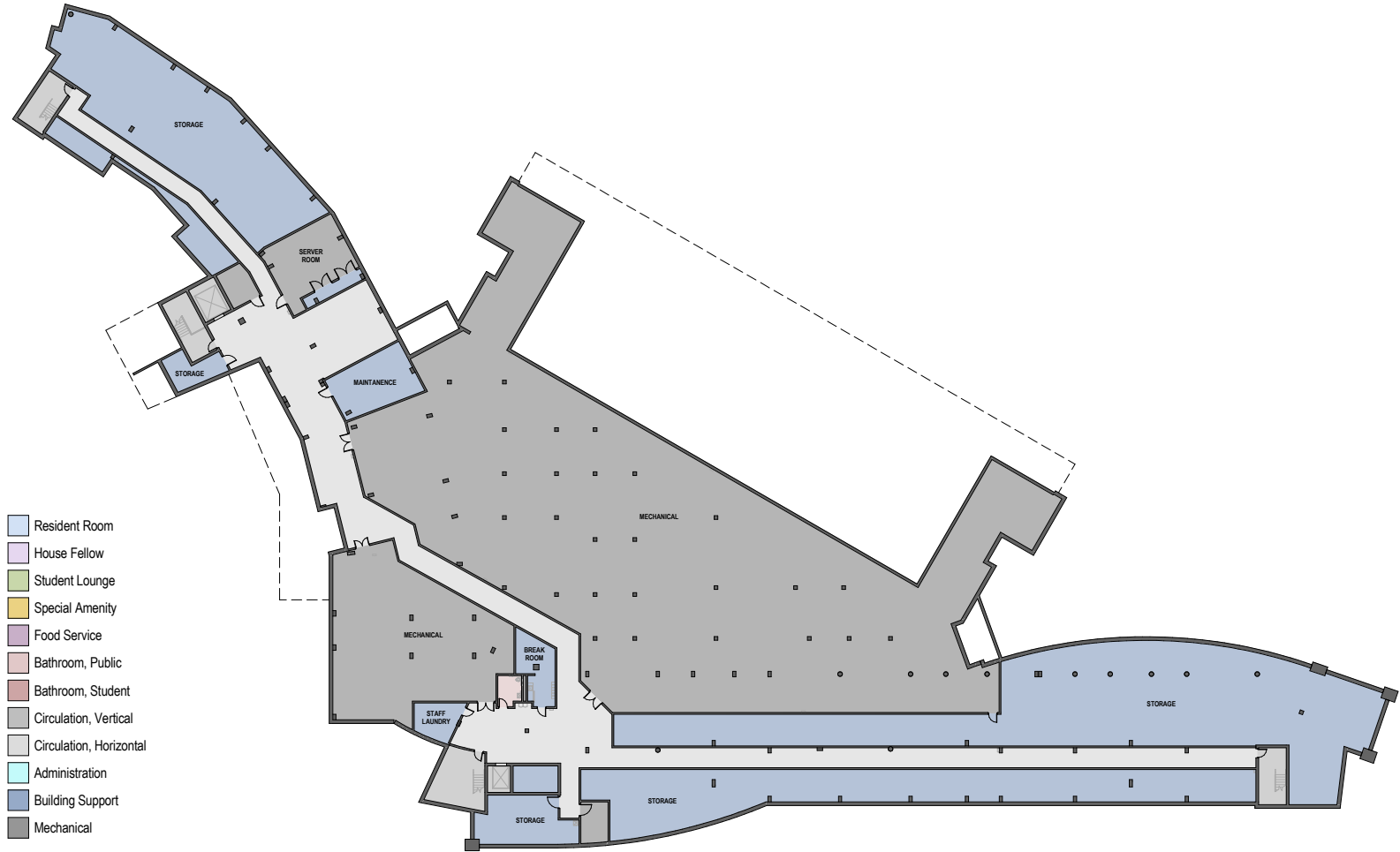
Campus Location Map
N.T.S.



Site Plan Diagram
N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		Enumeration Amount ** \$59.5M	
DIVISION OF FACILITIES DEVELOPMENT BUILDING DATA/COST REPORT		Enumeration Date 2009-11	
		A/E advertisement Jun-07	
Architect/Engineer: Engberg Anderson/Mackey Mitchell		A/E Selection Sep-07	
Project Name: UW Madison Lakeshore Residence Hall - Phase I		BOR/SBC Approval Jun-10	
Agency/Location: UW Madison		Bid Opening Nov-10	
Project Number: 06K2R		Substantial Completion Jun-12	
		Occupancy Jul-12	
†† Phase II Enumerated with Phase I			
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Cost per SF \$174	
Type Construction: II-B	SF. Roof Area: 63,551	Cost per bed \$94,084	
Gross SF: 228,639	No. Elevator Stops: 18	GSF per bed 539	
Assignable SF: 130,827	No. Plumbing Fixtures: 429	Avg dwlg unit SF 240	
No. Floors Below Grade: 1.0	MBH Heating Capacity: 11230 Mbh	Bed/Bathroom Ratio 10 to 1	
No. Floors Above Grade: 5.0	MBH Cooling Capacity: 6000 Mbh		
Cu. Ft. Bldg. Volume: 3,134,820	SF. Fire Protection: 226,989		
No of Beds (Resident/Staff): 424	KVA Electrical Capacity: 2078 KVA		
SF. Developed Site Area: 373,650	Dom Water Heating: 7200 Mbh		
No of Dwelling Units: 213	Construction Complete:		
	Project Delivery Method: Traditional D-B-B		
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		DFD SOV	
General Construction <>	\$26,137,357	Electrical Work <>	\$4,327,853
- Structure:	\$4,195,553	- Power/Lighting:	\$3,958,353
- Envelope:	\$5,541,989	- Audio/Visual:	\$0
- Interior:	\$13,395,463	- Voice/Data:	\$0
- General Conditions:	\$2,430,102	- Fire Alarm/Security:	\$271,000
- Elevator Work:	\$574,250	- Emergency Power:	\$98,500
		FF&E Cost*	\$1,634,000
Special Construction/Equipment:	\$0	Total Project Cost*:	\$48,170,000
		* Cost Data from UW System	
Mechanical Work <>	\$7,614,829	Site Work <>	\$1,811,467
- Plumbing:	\$2,058,326	- Site Preparation:	\$845,350
- Fire Protection:	\$517,986	- Site Development:	\$718,817
- HVAC:	\$4,989,667	- Site Utilities:	\$247,300
- Test & Balance:	\$48,850		
- Energy Management Syst:	\$0	Total Construction Cost:	\$39,891,506
Functional Description: (List primary functional uses & percent of assigned area for each.) Administration, 1.6%; Basement Alt/Storage, 8.4%; Circulation, 19.6%; Mechanical, 12.2%; Resident Suites, 28.1%; Special Amenity, 3.2%; Lounges, 5.7%; Unassigned/other, 11.0%. †† FICM. Food Service is assignable for General Use Facilities (Code 635)			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.) Foundations are conventional spread footings for both walls and columns. The superstructure is a post-tensioned concrete moment frame.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.) Campus steam and chilled water for heating/cooling. 2 energy recovery units and 3 air handling units. Four pipe fan coil to condition each resident room with operable windows for ventilation. Steam for domestic hot water along with solar. Duplex water softener for domestic hot water. Building is served from 13,800 V campus loop with a 2500 A main panel. Emergency power is provided by a 350 kW generator.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.) 150 hp, 1250 gpm fire pump. Wood ceiling with fp above and below in dining area. 48 panel solar domestic water system. Kitchen and associated equipment. Technology systems include voice, data, cable television, telecommunications grounding, overhead paging, area of rescue assistance system, audio video systems, digital signage, dining menu board system, CCTV camera system and access control. One telecom room is located on basement level and first floor and two telecom rooms are located on second and fourth floors.			
†† Contrary to FICM, Lounges are considered assignable herein ** Seminar, Computer and Game Rooms			

UW Madison - Lakeshore Residence Hall Phase I

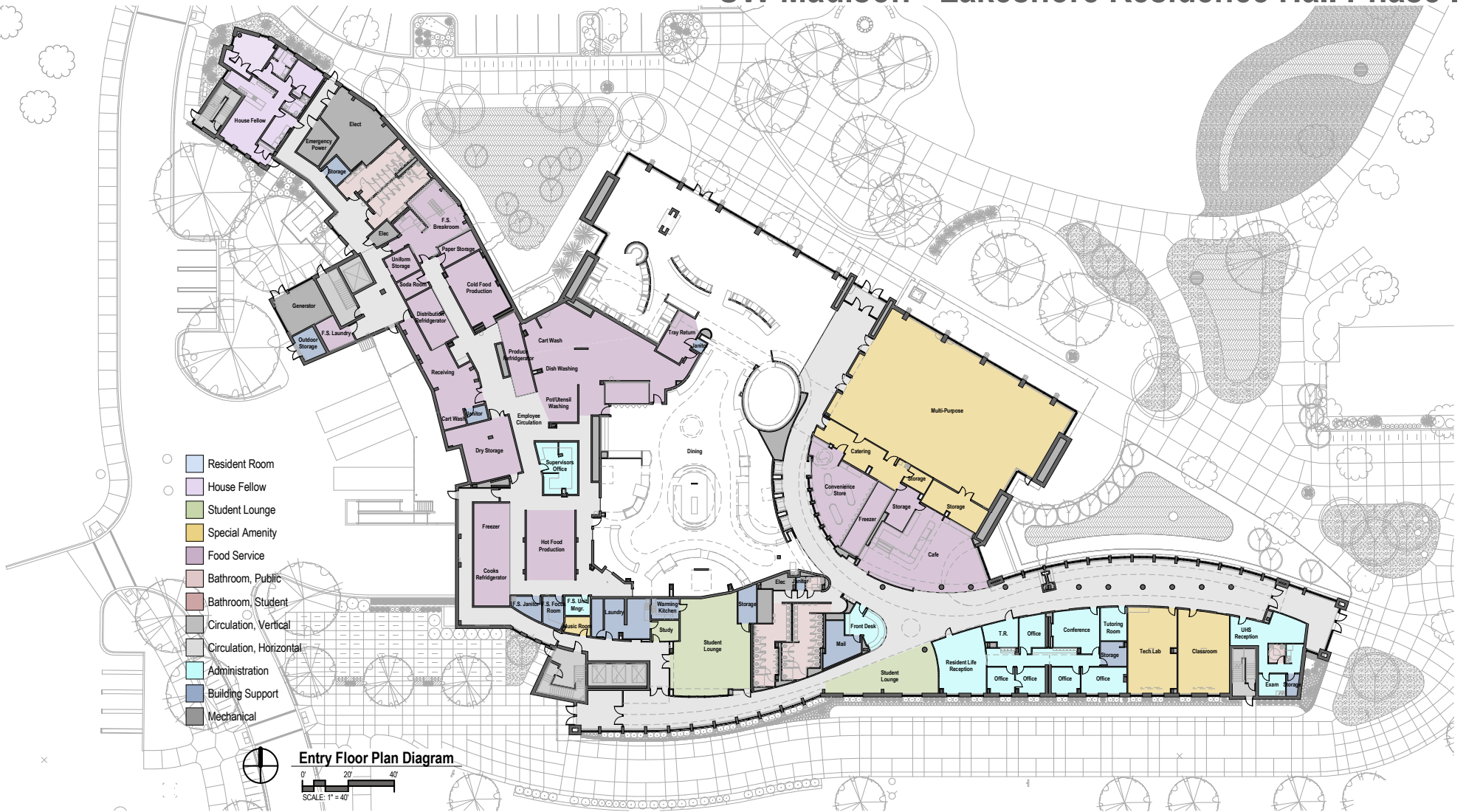


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

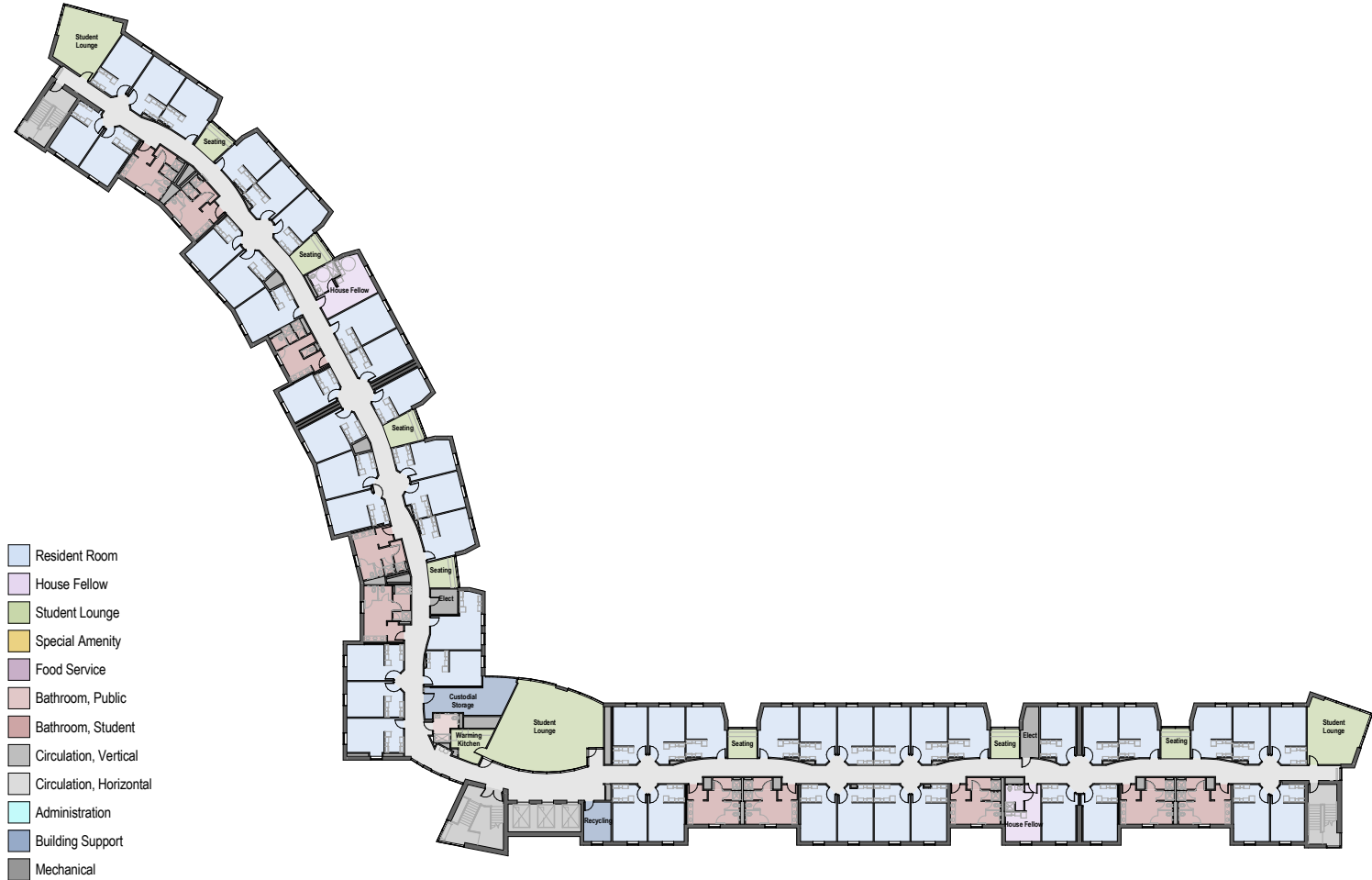
Basement Floor Plan Diagram

 SCALE: 1" = 40'

UW Madison - Lakeshore Residence Hall Phase I



UW Madison - Lakeshore Residence Hall Phase I

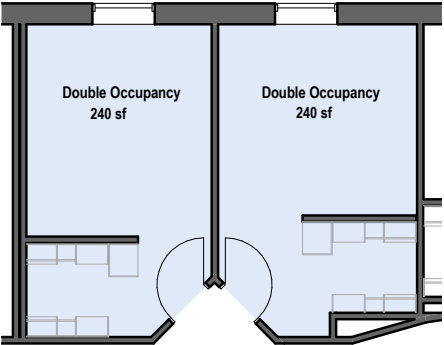


- Resident Room
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- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

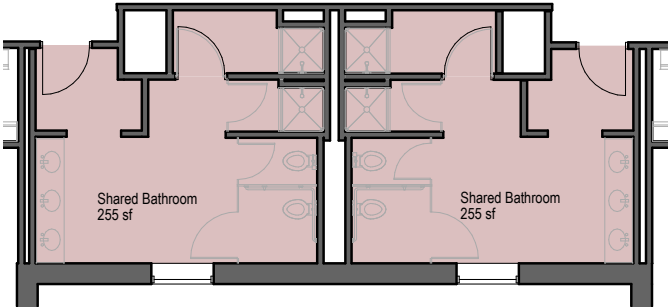
Typical Floor Plan Diagram

 SCALE: 1" = 40'

UW Madison - Lakeshore Residence Hall Phase I

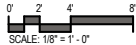


Residence Room Gross Area 480 SF

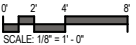


Shared Bathroom Gross Area 510 SF

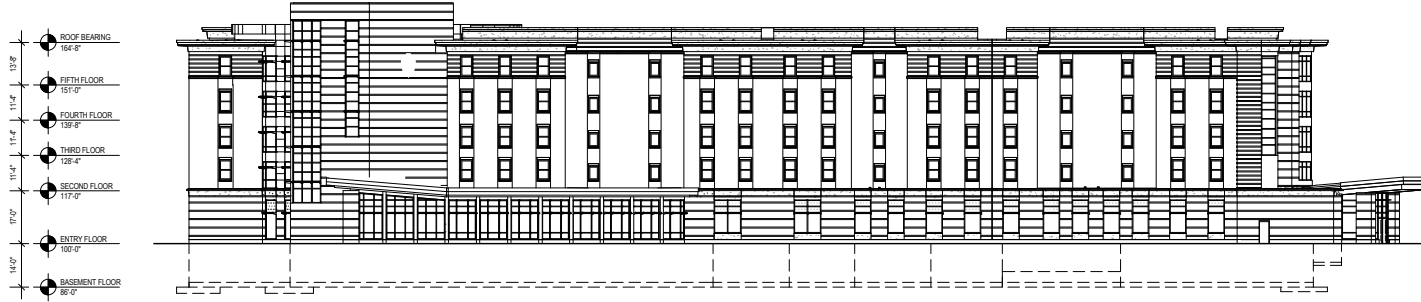
Typical Residence Room Plan Diagrams



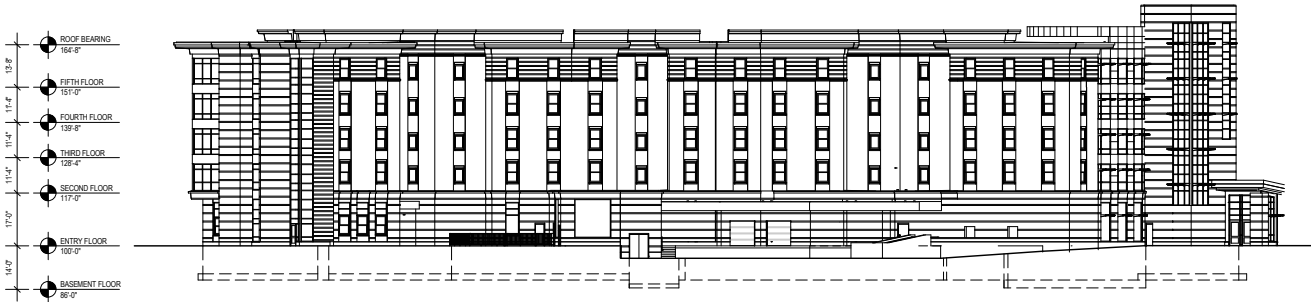
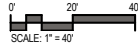
Typical Bathroom Plan Diagrams



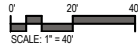
UW Madison - Lakeshore Residence Hall Phase I



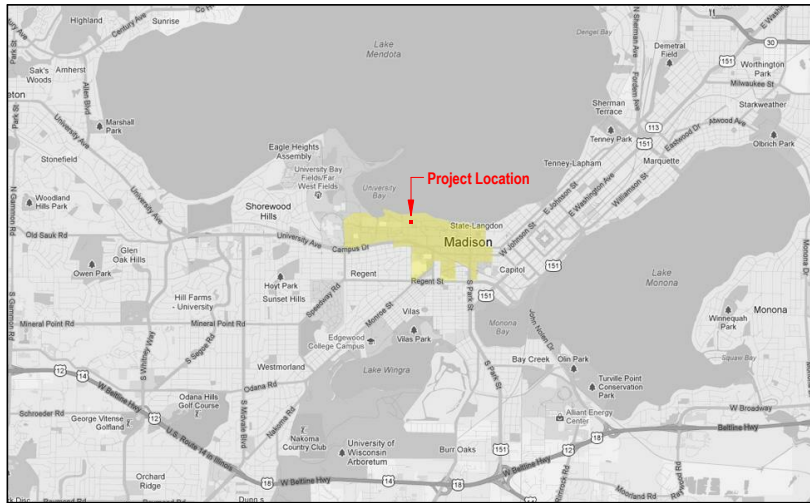
Representative South Wing South Elevation



Representative North Wing West Elevation

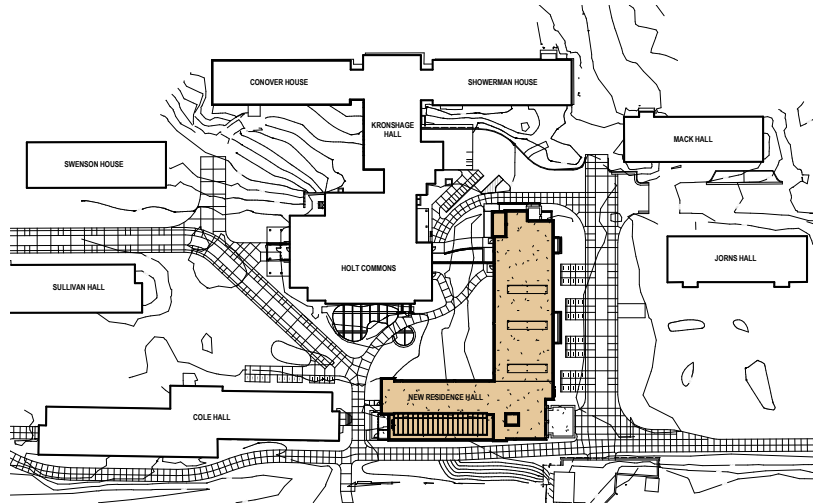


UW Madison - Lakeshore Residence Hall Phase II



Campus Location Map

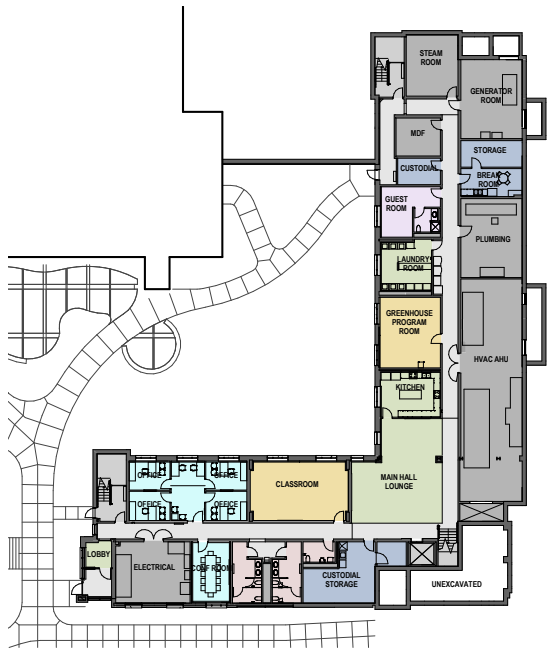
N.T.S.



Site Plan Diagram

N.T.S.

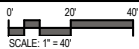
DOA-4265 (R03/00)		S. 16.85(1) Wis. Statutes.		All data excludes Holt Commons	
DIVISION OF FACILITIES DEVELOPMENT					
BUILDING DATA/COST REPORT					
Architect/Engineer: <u>Eppstein Uhen Architects</u>		Today's Date: <u>8/13/2012</u>		Enumeration Amount	
Project Name: <u>Lakeshore Residence Hall - Phase II</u>		Bid Date: <u>2/14/2012</u>		w/ Phase I	
Agency/Location: <u>University of Madison</u>		Targeted LEED 2009		2009-11	
Project Number: <u>DFD # 10G3D</u>		LEED Achieved: <u>Silver/Gold</u>		A/E advertisement	
				Aug-10	
				A/E Selection	
				Oct-10	
				BOR/SBC Approval	
				Aug-11	
				Bid Opening	
				Jan-12	
				Substantial Completion	
				Jun-13	
				Occupancy	
				Aug-13	
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)					
Type Construction:	II-B	SF. Roof Area:	13,010	Cost per SF	\$198
Gross SF:	64,501	No. Elevator Stops:	6	Cost per bed	\$71,720
Assignable SF:	37,612	No. Plumbing Fixtures:	196	GSF per bed	362
No. Floors Below Grade:	0.5	MBH Heating Capacity:	3500 Mbh	Avg dwlg unt SF	240
No. Floors Above Grade:	4.5	MBH Cooling Capacity:	1485 Mbh	Bed/Bathroom Ratio	10 to 1
Cu. Ft. Bldg. Volume:	598,460	SF. Fire Protection:	64,501	Total SF by Category	
No of Beds (Resident/Staff)	178 (172/6)	KVA Electrical Capacity:	665 Mn/524 Dmd	Resident Room	20,298
SF. Developed Site Area:	136,000	Dom Water Heating:	1680 Mbh	Resident Bathroom	5,262
No of Dwelling Units:	91	Construction Complete:	Target June 2012	Administration	919
		Project Delivery Method:	Traditional D-B-B	Housefellow	2,587
				Basement Alt/Storage	1,654
				Study/ Lounge †	4,718
				Special Amenity**	2,174
				FICM assignable sf	37,612
				Efficiency	58.3%
				General Circulation	12,304
				Mechanical	4,115
				Public Bathroom	382
				Structured Parking	N/A
				Food Service	N/A
				Retail	N/A
				% of Upper Floor Plate to Vertical Circulation	6.4%
				Net SF (total from above)	61,969
				Gross SF	64,501
				† Contrary to FICM, Lounges are considered assignable herein	
				**Greenhouse and Workshop	
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)					
General Construction <>		Electrical Work <>		Bid Tab	
\$6,969,242		\$1,898,050			
- Structure:	\$0	- Power/Lighting:			
- Envelope:	\$0	- Audio/Visual:			
- Interior:	\$0	- Voice/Data:			
- General Conditions:	\$0	- Fire Alarm/Security:			
- Elevator Work:	\$198,060	- Emergency Power:			
- Greenhouse	\$211,000	FF&E Cost*	no data		
Special Construction/Equipment:		Total Project Cost*:	\$14,718,600		
		* Cost Data from UW System (-) 15% for Holt			
Mechanical Work <>		Site Work <>			
\$2,362,868		\$1,338,000			
- Plumbing:	\$501,288	- Site Preparation:			
- Fire Protection:	\$132,000	- Site Development:			
- HVAC:	\$1,729,580	- Site Utilities:			
- Test & Balance:		Total Construction Cost:	\$12,766,220		
- Energy Management Syst:					
Functional Description: (List primary functional uses & percent of assigned area for each.)					
Administration, 1.4%; Basement Alt/Storage, 2.6%; Circulation, 19.1%; Mechanical, 6.4%; Resident Suites, 43.6%; Special Amenity, 3.4%; Lounges, 7.3%; Unassigned/other, 16.2%: The portion of this project analyzed is the residence hall (project also included a significant remodeling of adjacent Holt Commons).					
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)					
Superstructure is cast in place concrete foundations with normal spread footings, precast plank bearing on CMU. Interior partitions are painted CMU. Corridors receive a skim coat of plaster. Exterior walls are brick and manufactured stone with CMU backup and a typical DFD grade rain screen assembly. Roof is a fully adhered black EPDM membrane on tapered polyiso insulation. Windows are DFD grade single hung.					
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)					
The building is supplied high-pressure steam and chilled water from the Campus system. Student room are heated/cooled by a 4-pipe fan coil units with operable windows for natural ventilation. Total energy recovery wheel reduces total building energy usage. 13.5 KV feeder loop off the campus system. Separate panel boards are provided serving lighting, plug loads, and HVAC loads so each could be metered separately on each floor. Duplex water softener for domestic hot water. Building is served from 13,800 V campus loop with a 800 A main panel. Emergency power is provided by a 150 kW generator.					
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)					
This project features a working greenhouse on a portion of it's top floor, for use as a laboratory for the living/learning community that resides in this residence hall. Technology systems include voice, data, cable television, telecommunications grounding, overhead paging, audio video systems, digital signage, CCTV camera system and access control. One telecom room is located on basement level, second and fourth floors.					



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administrative
- Building Support
- Mechanical



Basement Floor Plan Diagram

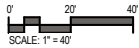




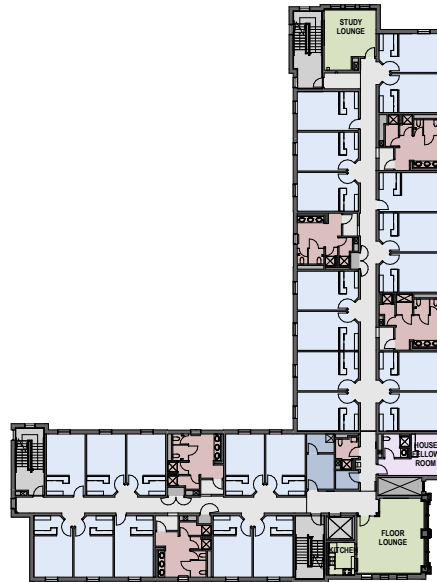
- Resident Room
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- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administrative
- Building Support
- Mechanical



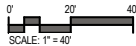
Entry Floor Plan Diagram



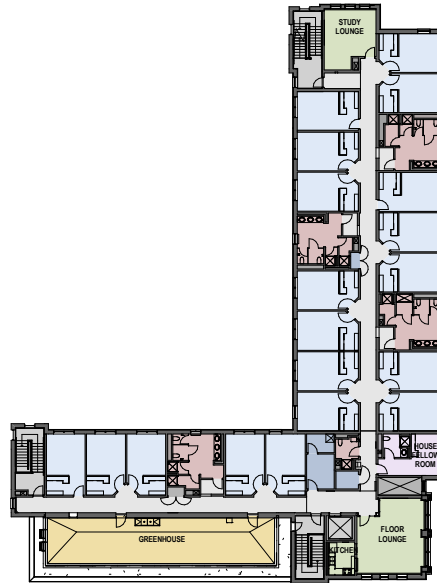
- Resident Room
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- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administrative
- Building Support
- Mechanical



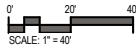
Typical Residence Floor Plan Diagram

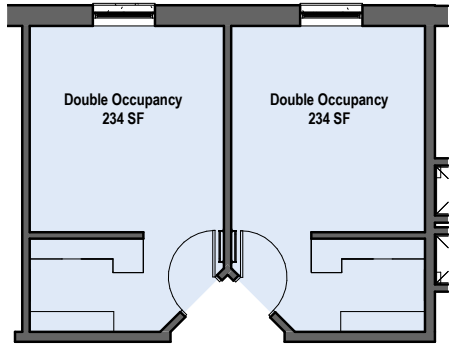


- Resident Room
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- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administrative
- Building Support
- Mechanical



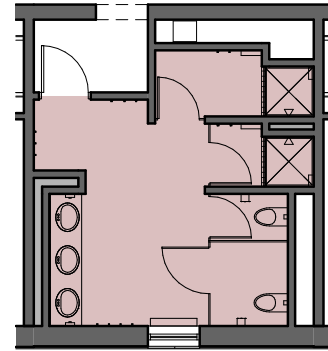
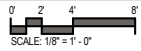
Unique Residence Floor Plan Diagram





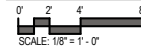
Suite Gross Area 568 SF

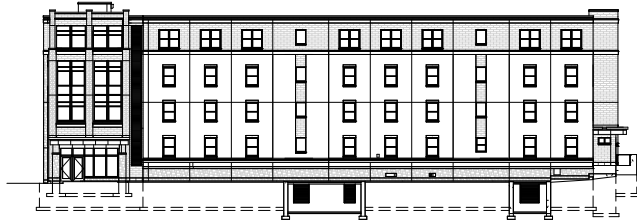
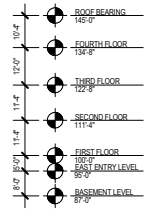
Typical Residence



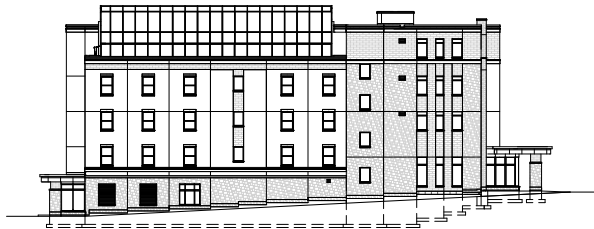
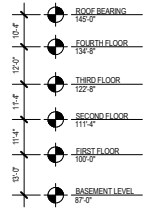
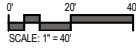
Shared Bathroom Gross Area 268 SF

Residence Bathroom Plan

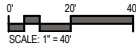




Representative East Elevation



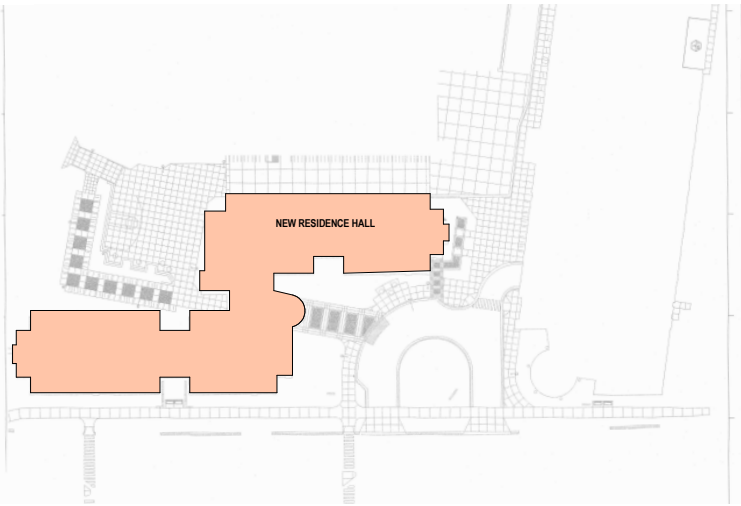
Representative South Elevation



UW Madison - Smith Hall



Campus Location Map
N.T.S.

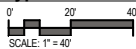


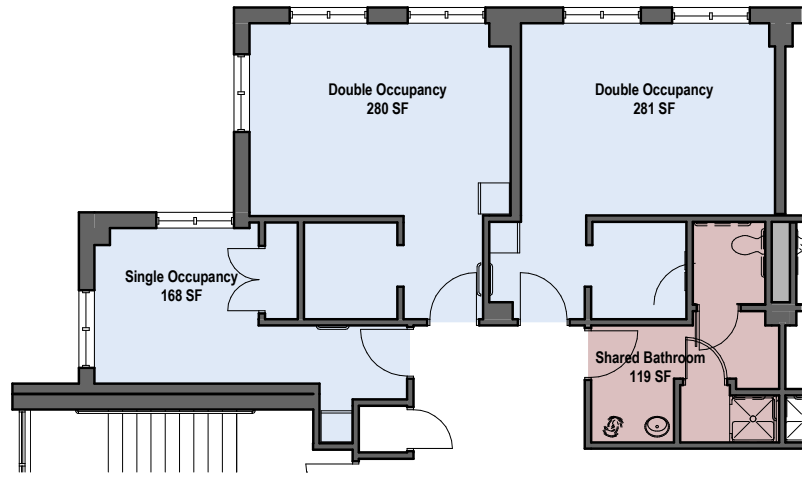
Site Plan Diagram
N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		Enumeration amount	
DIVISION OF FACILITIES DEVELOPMENT		Enumeration Date	\$37.6m
BUILDING DATA/COST REPORT		A/E advertisement	N/A
Architect/Engineer: <u>Zimmerman Architectural Studios</u>	Today's Date: <u>8/13/2012</u>	A/E Selection	N/A
Project Name: <u>UW Madison - Smith Hall</u>	Bid Date: <u>Sep-04</u>	BOR/SBC Approval	N/A
Agency/Location: <u>UW Madison</u>	LEED Achieved: <u>None</u>	Construction Start	Oct-04
Project Number: _____		Substantial Completion	May-06
		Occupancy	Jul-06
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Cost per SF	\$189
Type Construction: <u>I-A (assumed)</u>	SF. Roof Area: <u>26,455</u>	Cost per bed	\$70,716
Gross SF: <u>158,733</u>	No. Elevator Stops: <u>21</u>	GSF per bed	892
Assignable SF: <u>96,718</u>	No. Plumbing Fixtures: <u>512</u>	Avg dwg unit SF	280
No. Floors Below Grade: <u>0.0</u>	MBH Heating Capacity: <u>5295 Mbh</u>	Bed/Bathroom Ratio	5 to 1
No. Floors Above Grade: <u>6.0</u>	MBH Cooling Capacity: <u>4350 Mbh</u>	Total SF by space category	
Cu. Ft. Bldg. Volume: <u>1,886,241</u>	SF. Fire Protection: <u>158,733</u>	Residence Rooms	60,690
No of Beds (Resident/Staff): <u>425 (414/11)</u>	KVA Electrical Capacity: <u>1662 KVA</u>	Resident Bathrooms	10,790
SF. Developed Site Area: <u>85,550</u>	Dom Water Heating: _____	Administrative	2,443
No of Dwelling Units: <u>246</u>	Construction Complete: _____	House Fellow	4,127
	Project Delivery Method: <u>DB - LP</u>	Basement Alt/Storage	4,145
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Study/ Lounge †	8,068
General Construction <>	\$0	Special Amenity**	6,455
- Structure:	\$0	Electrical Work <>	
- Envelope:	\$0	- Power/Lighting:	\$0
- Interior:	\$0	- Audio/Visual:	\$0
- General Conditions:	\$0	- Voice/Data:	\$0
- Elevator Work.:	\$0	- Fire Alarm/Security:	\$0
		- Emergency Power:	\$0
Special Construction/Equipment:		FF&E Cost*	no data
		Total Project Cost*:	\$37,567,000
		<i>* Cost Data from UW System</i>	
Mechanical Work <>		Site Work <>	
- Plumbing:	\$0	- Site Preparation:	\$0
- Fire Protection:	\$0	- Site Development:	\$0
- HVAC:	\$0	- Site Utilities:	\$0
- Test & Balance:	\$0		
- Energy Management Syst:	\$0	Total Construction Cost*:	\$30,054,232
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 1.5%; Basement Alt/Storage, 2.6%; Circulation, 19.2%; Mechanical, 3.4%; Resident Suites, 47.6%; Special Amenity, 4.1%; Lounges, 5.1%; Unassigned/other, 16.4%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
Substructure is conventional shallow concrete foundations. Superstructure is a 2-way concrete flat slab supported on concrete columns. Roof system is a 2-way concrete flat slab supported on concrete columns. Lateral system consists of various concrete shear walls.			
CIVIL: Civil work included demolition, grading, erosion control concrete paving, curb and gutter, sanitary, water, storm sewer, steam and chilled water.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
Building is served from 13,800 V campus loop with a 2000 A main panel. Emergency power is provided by two transfer switches that are connected to a generator in the adjacent office building. Campus steam and chilled water for heating/cooling. 1 air handling units. Four pipe fan coil to condition each resident room with ventilation air from operable windows. Plumbing system includes water softener, booster pumps, and 2 steam water heaters.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
Technology systems include voice, data, cable television, telecommunications grounding, CCTV cameras and access control on exterior doors. One telecom room is located on basement level, first, second, third, fourth, fifth and sixth floors.			

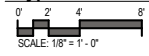


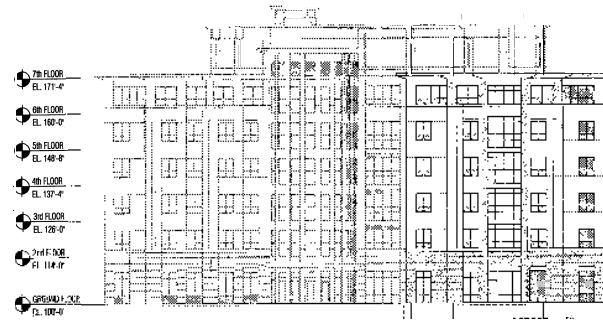
Typical Residence Floor Plan Diagram



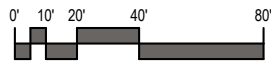


Typical Residence Room

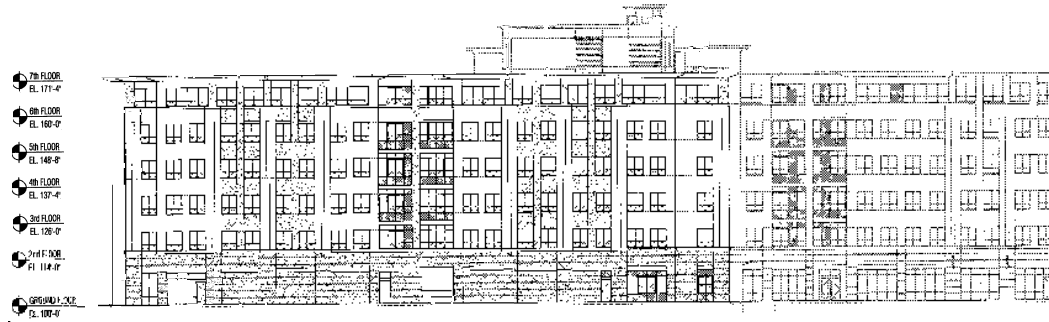




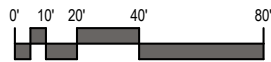
Representative South Elevation



SCALE: 1" = 40'



Representative East Elevation

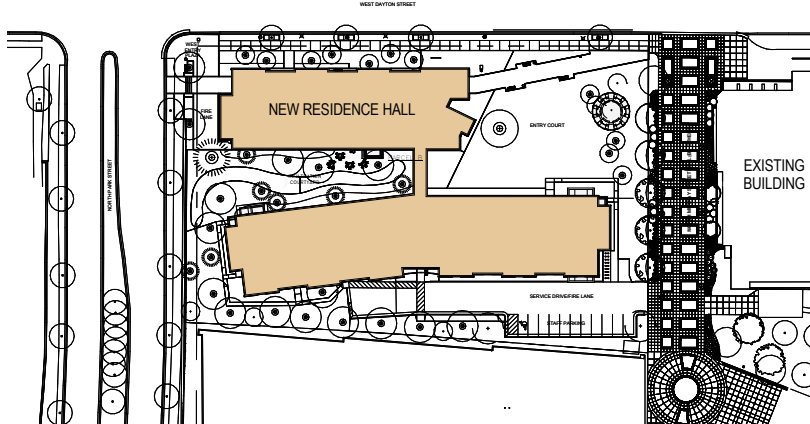


SCALE: 1" = 40'

UW Madison - Ogg Hall

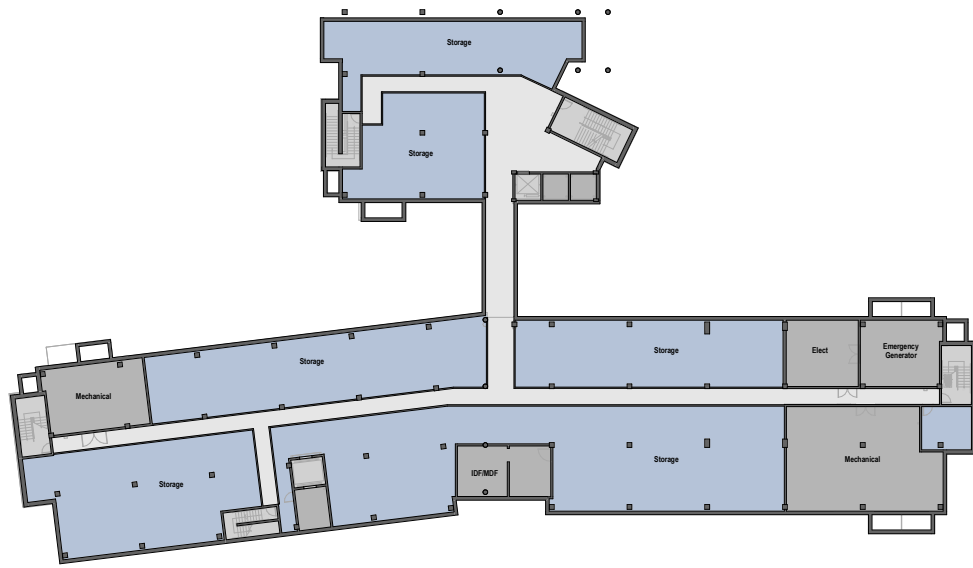


Campus Location Map
N.T.S.



Site Plan Diagram
N.T.S.

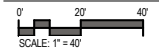
DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		DIVISION OF FACILITIES DEVELOPMENT	
BUILDING DATA/COST REPORT			
Architect/Engineer:	Ullien Wilson with Booth Hansen	Today's Date:	8/13/2012
Project Name:	UW Madison - Ogg Hall	Bid Date:	9/7/2005
Agency/Location:	Madison	LEED Achieved:	None
Project Number:	04D11		
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	I-B	SF. Roof Area:	32,285
Gross SF:	214,533	No. Elevator Stops:	21
Assignable SF:	139,718	No. Plumbing Fixtures:	568
No. Floors Below Grade:	1.0	MBH Heating Capacity:	11531 Mbh
No. Floors Above Grade:	6.0	MBH Cooling Capacity:	5220 Mbh
Cu. Ft. Bldg. Volume:	2,412,343	SF. Fire Protection:	221,879
No of Beds (Resident/Staff):	615 (600/15)	KVA Electrical Capacity:	1000 KVA
SF. Developed Site Area:	84,659	Dom Water Heating:	8000 Mbh
No. of Dwelling Units:	315	Construction Complete:	6/28/2007
		Project Delivery Method:	Traditional D-B-B
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
General Construction <>	\$16,395,272	Electrical Work <>	\$3,379,238
- Structure:	\$5,094,044	- Power/Lighting:	\$2,500,744
- Envelope:	\$5,151,513	- Audio/Visual:	\$15,946
- Interior:	\$6,438,117	- Voice/Data:	\$426,317
- General Conditions:	\$1,390,396	- Fire Alarm/Security:	\$374,101
- Elevator Work:	\$521,202	- Emergency Power:	\$62,130
- Ogg Hall Demo & Plaza	\$ (2,200,000)	FF&E Cost*	no data
Special Construction/Equipment:		Total Project Cost*:	\$35,900,000
		<i>* Cost Data from UW System</i>	
Mechanical Work <>	\$5,322,813	Site Work <>	\$786,380
- Plumbing:	\$1,436,009	- Site Preparation:	\$206,497
- Fire Protection:	\$497,239	- Site Development:	\$378,674
- HVAC:	\$2,826,636	- Site Utilities:	\$201,209
- Test & Balance:	\$35,999		
- Energy Management Syst:	\$526,930	Total Construction Cost:	\$25,883,703
Enumeration Amount \$35.9M			
Enumeration Date 2004*			
A/E advertisement			
A/E Selection Jul-04			
BOR/SBC Approval Mar-05			
Bid Opening Sep-05			
Substantial Completion Jun-07			
Occupancy Jul-07			
*Special			
Cost per SF	\$121	Cost per bed	\$42,087
GSF per bed	349	Avg dwlg unt SF	254
Bed/Bathroom Ratio	8 to 1		
Total SF by Category			
Resident Room	76,890	Resident Bathroom	14,650
Administration	2,589	Housefellow	5,796
Basement Alt/Storage	16,971	Study/Lounge †	12,346
Special Amenity**	10,476	FICM assignable sf	139,718
Efficiency	65.1%	General Circulation	41,600
Mechanical	6,439	Structured Parking	N/A
Public Bathroom	781	Food Service	N/A
Food Service	N/A	Retail	N/A
% of Upper Floor Plate to Vertical Circulation	3.1%	Net SF (total from above)	188,538
Net SF (total from above)	188,538	Gross SF	214,533
† Contrary to FICM, Lounges are considered assignable herein			
** Music, Tech Center & (2) classrooms			
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 1.2%; Basement Alt/Storage, 7.9%; Circulation, 19.4%; Mechanical, 3%; Resident Suites, 45.4%; Special Amenity, 4.9%; Lounges, 5.8%; Unassigned/other, 12.5%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
Poured concrete footings, foundations, columns, basement and first floor slabs; precast concrete wall panels; aluminum windows, storefront and curtain wall; EPDM roof. CIVIL: Civil work included demolition, grading, erosion control, concrete paving, asphalt paving, traditional and mountable curb and gutter, bike parking, sanitary, water, steam, chilled water, storm sewer. Sanitary and water services were provided from adjacent public right of way.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
Campus steam and chilled water are used to heat/cool building. 4-pipe FCUs in resident rooms with operable windows; 3 VAV AHUs system for common spaces; 3 MAUs for ventilation. Plumbing system included a duplex pressure booster, water softeners, 2 steam water heaters. Building is served from 13,800 V campus loop with a 1600 A main panel. Emergency power is provided by a 250 kW generator. Building is served by 750 KVA transformer; 408-208/120 distribution; 24-hour 277/480v emergency generator; fiber/copper data and video; copper voice; card access, CCTV and paging systems.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
Rainwater infiltration courtyard provided to minimize storm run-off. Dry pipe fire protection system in parking area. A 1,000 gpm fire pump with 60 psi boost was provided. Technology systems include voice, data, cable television, telecommunications grounding, audio video rough-in with cabling, overhead paging, CCTV cameras covering entrances and access control on exterior doors. One telecom room is located on basement level and two telecom rooms per floor on second, third, fourth, fifth and sixth floors.			



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

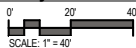


Basement Floor Plan Diagram





Entry Floor Plan Diagram

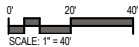


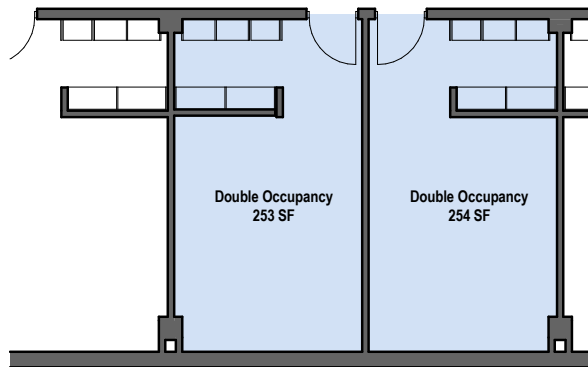
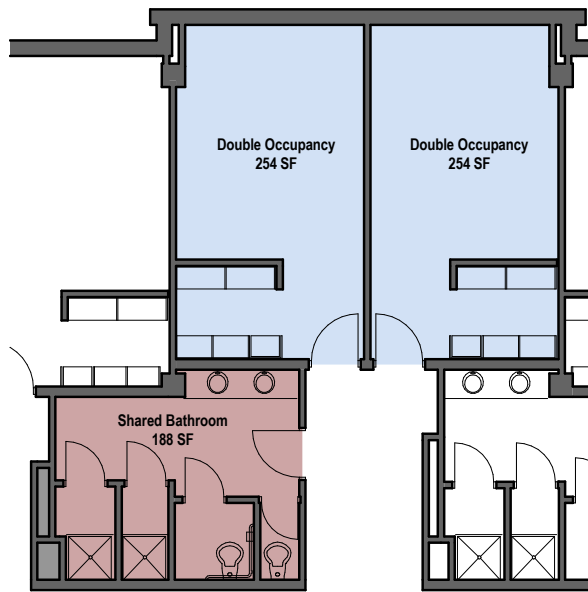


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

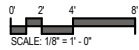


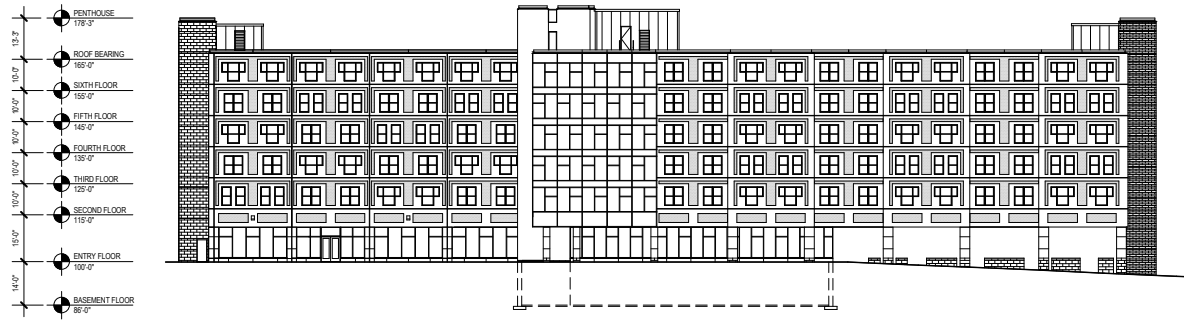
Typical Floor Plan Diagram



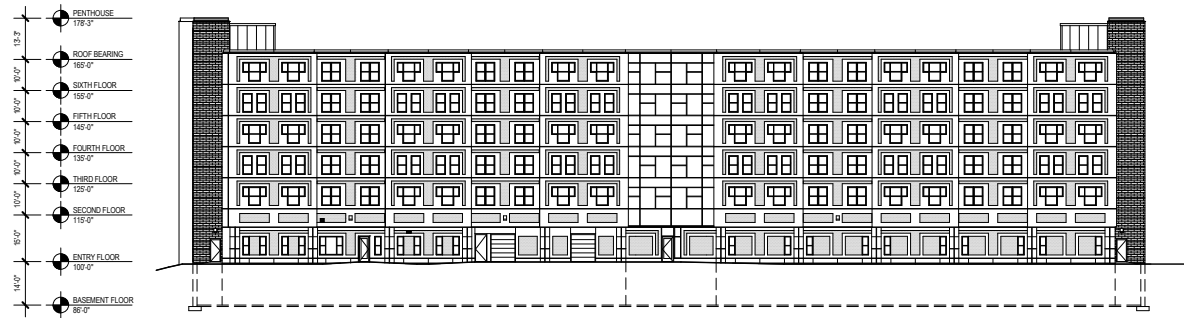
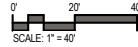


Typical Residence Rooms

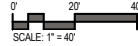




Representative North Elevation North Wing



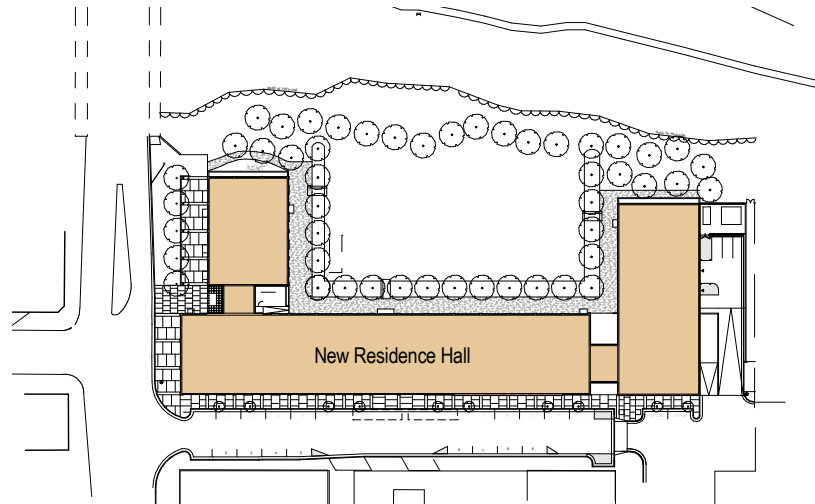
Representative South Elevation South Wing



UW Milwaukee - Cambridge Commons



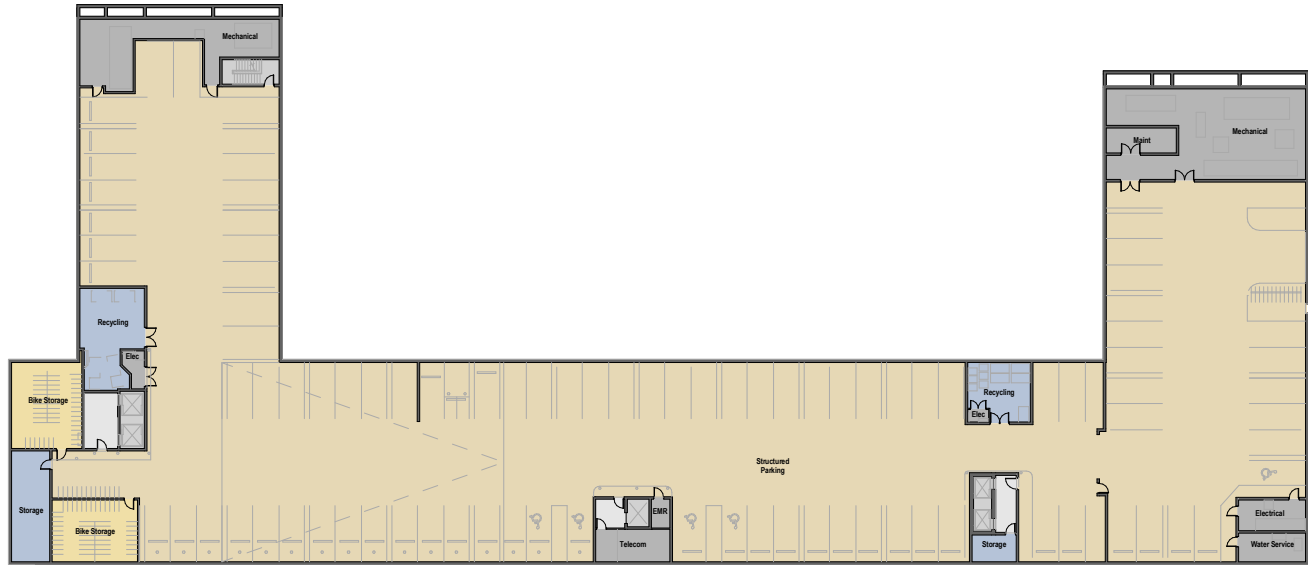
Campus Location Map
N.T.S.



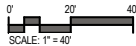
Site Plan Diagram
N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		DIVISION OF FACILITIES DEVELOPMENT	
BUILDING DATA/COST REPORT			
Architect/Engineer:	HGA	Today's Date:	8/13/2012
Project Name:	UWM Cambridge Commons	Bid Date:	
Agency/Location:	UW System/ Milwaukee	LEED Achieved:	None
Project Number:			
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	I-A Below II-A	SF. Roof Area:	36,952
Gross SF:	228,652	No. Elevator Stops:	30
Assignable SF:	120,955	No. Plumbing Fixtures:	874
No. Floors Below Grade:	1.0	MBH Heating Capacity:	8214 Mbh
No. Floors Above Grade:	6.0	MBH Cooling Capacity:	4314 Mbh
Cu. Ft. Bldg. Volume:	2,040,348	SF. Fire Protection:	Complete
No of Beds (Resident/Staff)	702 (684/18)	KVA Electrical Capacity:	2078 KVA
SF. Developed Site Area:	0	Dom Water Heating:	
No of Dwelling Units:	189	Construction Complete:	
		Project Delivery Method:	Foundation Owned
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
General Construction <>		Electrical Work <>	
- Structure:	\$0	- Power/Lighting:	\$0
- Envelope:	\$0	- Audio/Visual:	\$0
- Interior:	\$0	- Voice/Data:	\$0
- General Conditions:	\$0	- Fire Alarm/Security:	\$0
- Elevator Work:	\$0	- Emergency Power:	\$0
Special Construction/Equipment:		FF&E Cost*	
		Total Project Cost*:	\$48,990,000
		* Cost Data from UW System	
Mechanical Work <>		Site Work <>	
- Plumbing:	\$0	- Site Preparation:	\$0
- Fire Protection:	\$0	- Site Development:	\$0
- HVAC:	\$0	- Site Utilities:	\$0
- Test & Balance:	\$0		
- Energy Management Syst:	\$0	Total Construction Cost*:	\$33,745,000
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 2.0%; Basement Alt/Storage, 1.5%; Circulation, 14.5%; Mechanical, 3.2%; Resident Suites, 39.9%; Special Amenity, 1.9%; Lounges, 3.8%; Structured Parking, 13.8%; Food Service, 2.6%; Retail, 1.2%; Unassigned/other, 16.8%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
CIVIL: Civil work included demolition, grading, erosion control concrete paving, sanitary, water, and storm sewer.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
3 condensing boilers for heating. Gas fired makeup air unit for garage heating. Operable windows used for resident room ventilation. Four pipe fan coils to heat/cool each suite. 2 AHU to serve ground floor areas. 2 chillers to cool building. 2 gas fired domestic hot water heaters. Building is served from by a WE Energies utility transformer with a 2500 A main panel. Emergency power is provided by a 500 kW generator.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
500 gpm fire pump, 95 psi. Kitchen, grease interceptor, kitchen exhaust hoods, etc. Technology systems include voice, data, cable television distribution system, CCTV and access control. Three telecom rooms are located on first floor, two on third floor and one on second, fourth and fifth floors.			
Enumeration Amount			
Enumeration Date			
A/E advertisement			
A/E Selection			
BOR/SBC Approval			
Bid Opening			
Substantial Completion			
Occupancy		Aug-10	
Cost per SF		\$148	
Cost per bed		\$48,070	
GSF per bed		326	
Avg dwlg unt SF		573	
Bed/Bathroom Ratio		4 to 1	
Total SF by space category			
Residence Rooms	76,716		
Resident Bathrooms	9,752		
Administrative	4,543		
Housefellow	4,734		
Basement Alt/Storage	3,502		
Study/ Lounge	8,576		
Special Amenity**	4,369		
Food Service	5,982		
Retail	2,781		
FICM assignable sf	120,955		
Efficiency	52.9%		
General Circulation	33,112		
Mechanical	7,317		
Public Bathroom	715		
Structured Parking	31,555		
% of Upper Floor Plate to Vertical Circulation	2.5%		
Net SF (total from above)	193,654		
Gross SF	228,652		
† Contrary to FICM, Lounges are considered assignable herein			
**100 parking stalls & 106 bike racks			

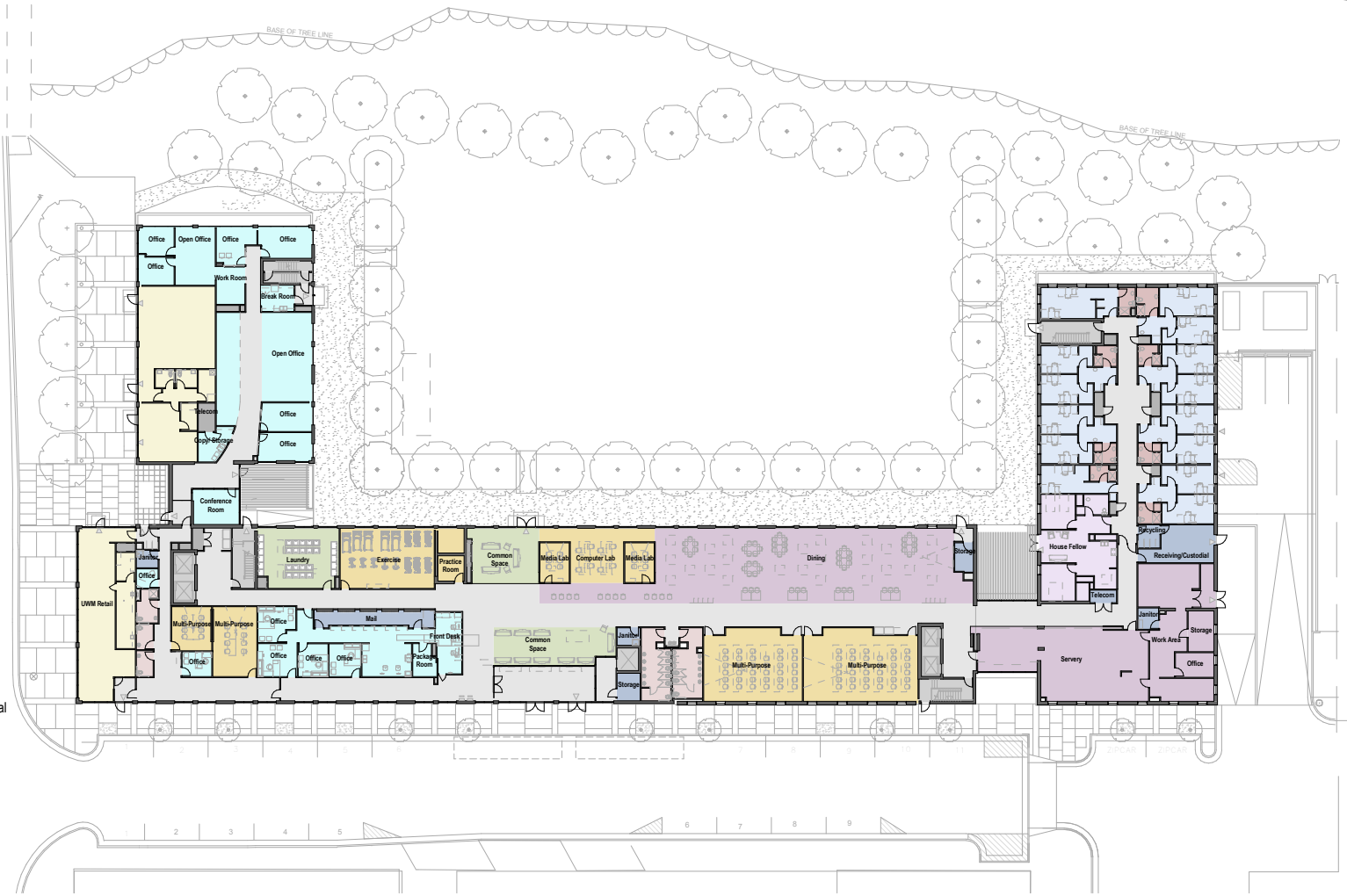
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Food Service
- Building Support
- Structured Parking
- Mechanical



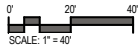
Basement Floor Plan Diagram

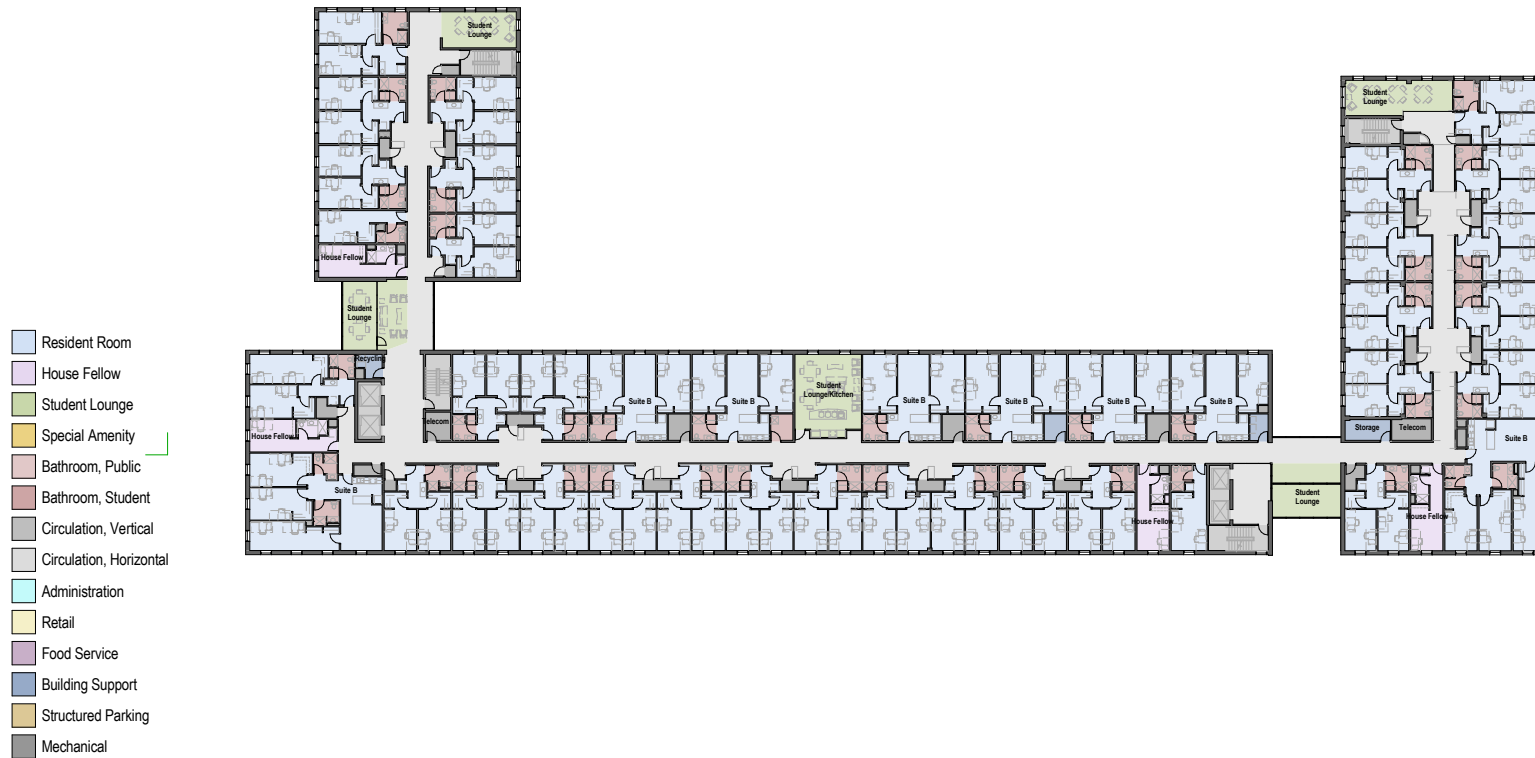


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Food Service
- Building Support
- Structured Parking
- Mechanical

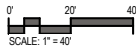


Entry Floor Plan Diagram

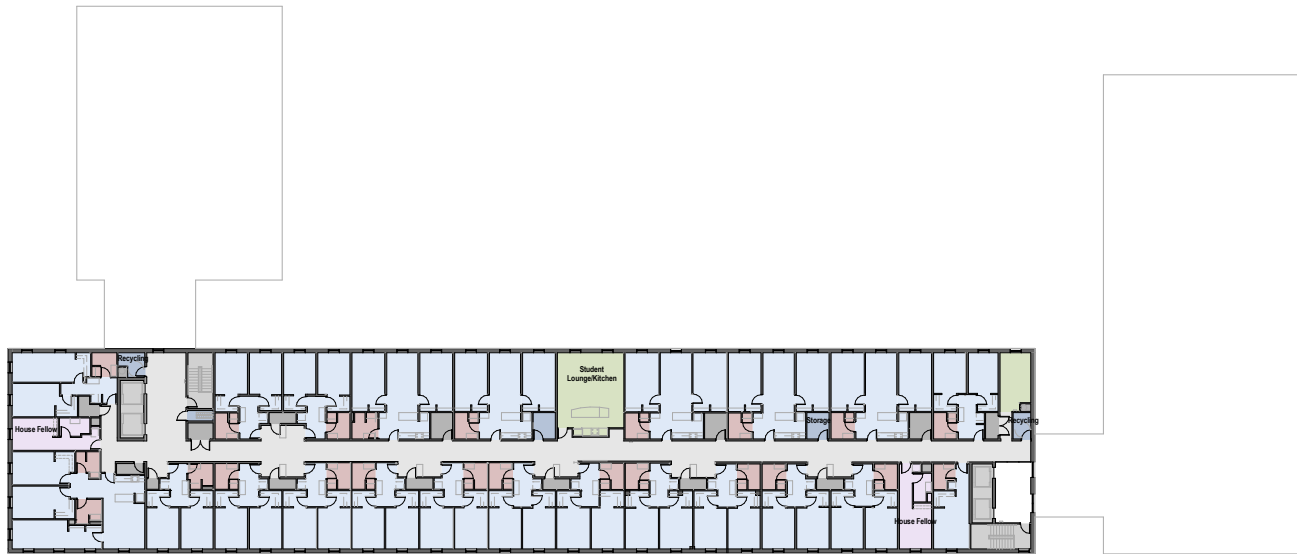




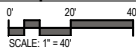
Typical Residence Floor Plan Diagram

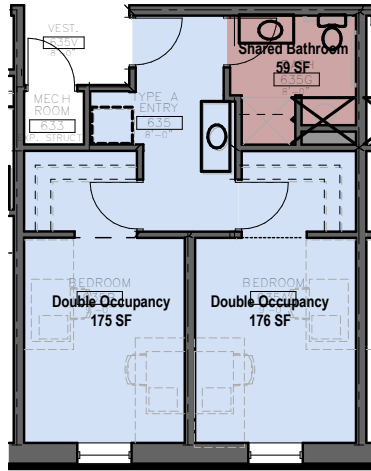


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Food Service
- Building Support
- Structured Parking
- Mechanical

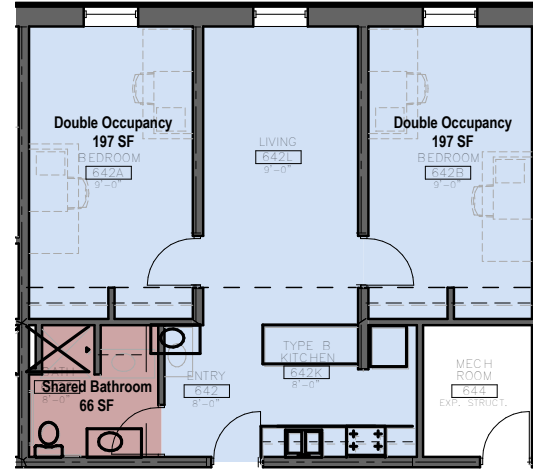


Unique Floor Plan Diagram



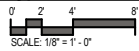


Suite A Gross Area 573 SF

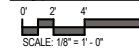


Suite B Gross Area 887 SF

Typical Residence Suite Type A

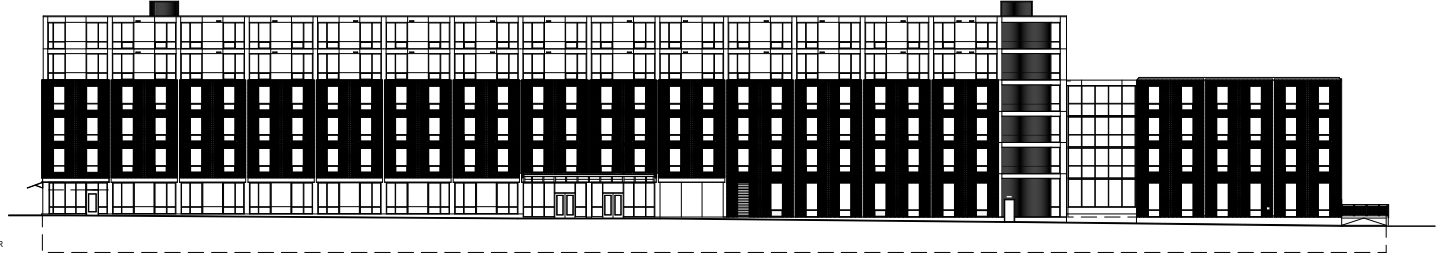


Typical Residence Suite Type B

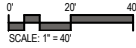


11'-0" |
 10'-0" |
 9'-0" |
 8'-0" |
 7'-0" |
 6'-0" |
 5'-0" |
 4'-0" |
 3'-0" |
 2'-0" |
 1'-0" |
 0'-0" |

● ROOF BEARING
164'-0"
 ● SIXTH FLOOR
153'-0"
 ● FIFTH FLOOR
143'-0"
 ● FOURTH FLOOR
133'-0"
 ● THIRD FLOOR
123'-0"
 ● SECOND FLOOR
113'-0"
 ● ENTRY FLOOR
100'-0"
 ● BASEMENT/GARAGE FLOOR
89'-0"

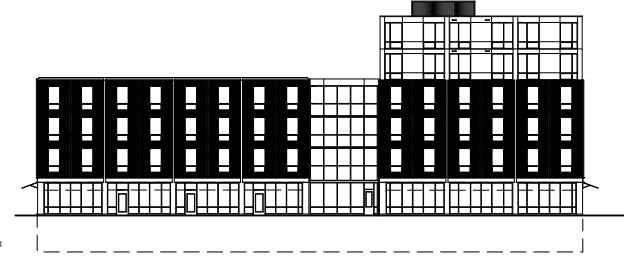


Representative South Elevation

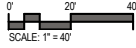


11'-0" |
 10'-0" |
 9'-0" |
 8'-0" |
 7'-0" |
 6'-0" |
 5'-0" |
 4'-0" |
 3'-0" |
 2'-0" |
 1'-0" |
 0'-0" |

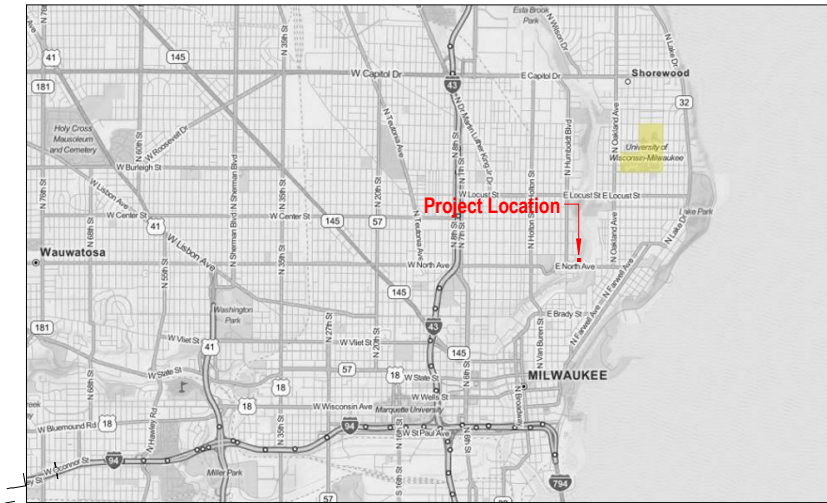
● ROOF BEARING
164'-0"
 ● SIXTH FLOOR
153'-0"
 ● FIFTH FLOOR
143'-0"
 ● FOURTH FLOOR
133'-0"
 ● THIRD FLOOR
123'-0"
 ● SECOND FLOOR
113'-0"
 ● ENTRY FLOOR
100'-0"
 ● BASEMENT/GARAGE FLOOR
89'-0"



Representative West Elevation

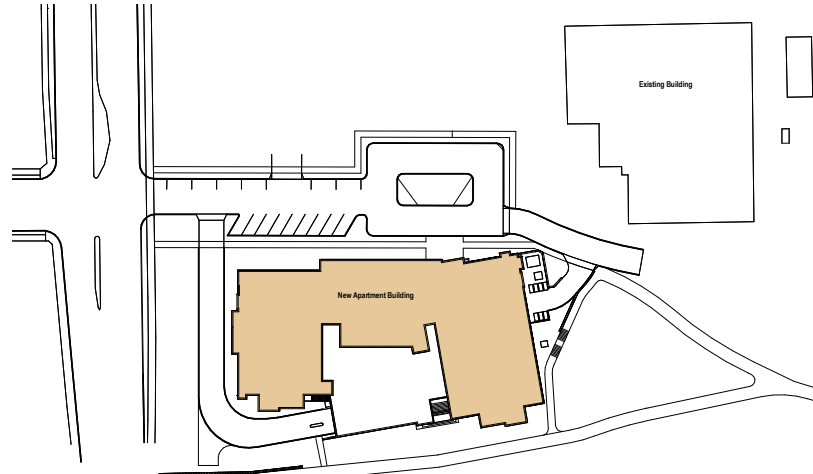


UW Milwaukee - Riverview Residence Hall



Campus Location Map

N.T.S.



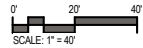
Site Plan Diagram

N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		Enumeration Amount	
DIVISION OF FACILITIES DEVELOPMENT		Enumeration Date	2009-11
BUILDING DATA/COST REPORT		A/E advertisement	Mar-09
Architect/Engineer:	SDS Architects with ESG	A/E Selection	Jun-09
Project Name:	UW River Falls South Forks Suite Addition	BOR/SBC Approval	
Agency/Location:	UW System/ River Falls	Bid Opening	Dec-10
Project Number:	09D2H - 99K4N	Substantial Completion	Jul-11
		Occupancy	Aug-11
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Cost per SF	\$192
Type Construction:	II-B	Cost per bed	\$64,837
Gross SF:	82,054	GSF per bed	338
Assignable SF:	56,416	Avg dwlg unit SF	955
No. Floors Below Grade:	0.0	Bed/Bathroom Ratio	5.5 to 1
No. Floors Above Grade:	4.0		
Cu. Ft. Bldg. Volume:	1,237,150		
No of Beds (Resident/Staff)	243		
SF. Developed Site Area:	0		
No of Dwelling Units:	13		
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Total SF by Category	
General Construction <>	\$9,440,490	Residence Rooms	30,453
- Structure:	\$2,080,000	Resident Bathrooms	5,240
- Envelope:	\$3,126,925	Administration	716
- Interior:	\$3,165,600	Hall Director Apartment	1,811
- General Conditions:	\$918,965	Basement Alt/Storage	1,479
- Elevator Work.:	\$149,000	Study/ Lounge †	12,667
		Special Amenity**	4,050
Special Construction/Equipment:		FICM assignable sf	56,416
		Efficiency	68.8%
		General Circulation	12,320
		Mechanical	3,020
		Public Bathroom	315
		Structured Parking	N/A
		Food Service	N/A
		Retail	N/A
		% of Upper Floor Plate to Vertical Circulation	5.1%
		Net SF (total from above)	72,071
		Gross SF	82,054
		† Contrary to FICM, Lounges are considered assignable herein	
		** Operable partitioned Multi-purpose space and two Seminar	
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 0.9%; Basement Alt/Storage, 1.8%; Circulation, 15.0%; Mechanical, 3.7%; Resident Suites, 45.7%; Special Amenity, 4.9%; Lounges, 15.4%; Unassigned/other, 12.6%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
CIVIL: Civil work included demolition, grading, erosion control concrete paving, curb and gutter, bike parking, sanitary, water, storm sewer, steam and chilled water. Stormwater management was achieved through biofiltration basins on the project.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
Campus chilled water and steam used for heating and cooling. Four pipe fan coils to condition resident rooms. One energy recovery unit for ventilation and exhaust and one air handling unit to server common areas on first floor. Operable windows for resident rooms. Duplex water softener used for softening domestic hot water. Fully sprinkled building with fire pump. Building is served from 4160 V campus loop with a 1600 A main panel. Emergency power is provided by a 40 kW generator.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
8 solar panels for domestic water heating with capacity for several future panels, 2 backup gas fired domestic water heaters. 100 hp fire pump with 1000 gpm of flow. Technology systems include data, cable television, telecommunications grounding, area of rescue assistance system, audio video rough-in, doorbell system, CCTV camera rough-in including cabling, access control on interior and exterior doors. Two telecom rooms are located on first floor and one telecom room on third floor.			
Budget Data:		Electrical Work <>	
General Construction <>	\$9,440,490	Electrical Work <>	\$1,656,911
- Structure:	\$2,080,000	- Power/Lighting:	\$1,360,423
- Envelope:	\$3,126,925	- Audio/Visual:	
- Interior:	\$3,165,600	- Voice/Data:	\$125,353
- General Conditions:	\$918,965	- Fire Alarm/Security:	\$171,135
- Elevator Work.:	\$149,000	- Emergency Power:	
		FF&E Cost*	\$50,000
Special Construction/Equipment:		Total Project Cost*:	\$18,900,000
		* Cost Data from UW System	
Mechanical Work <>	\$3,257,931	Site Work <>	\$1,400,159
- Plumbing:	\$737,829	- Site Preparation:	\$741,259
- Fire Protection:	\$182,800	- Site Development:	\$488,500
- HVAC:	\$2,036,102	- Site Utilities:	\$170,400
- Test & Balance:	\$24,200		
- Energy Management Syst:	\$277,000	Total Construction Cost:	\$15,755,491

- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Structured Parking
- Mechanical
- Food Service

Below Grade Parking Plan Diagram

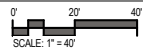


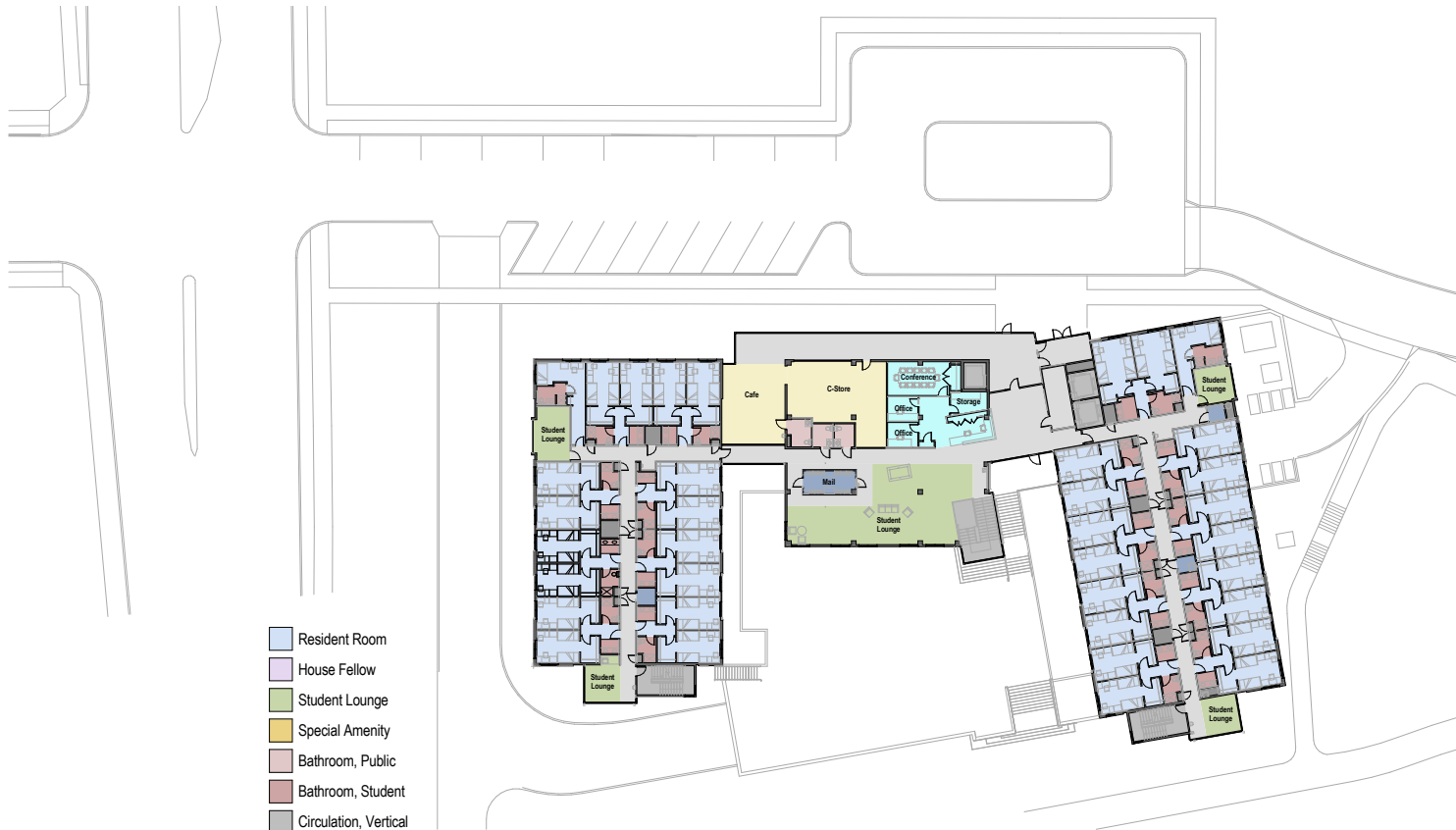


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Structured Parking
- Mechanical
- Food Service



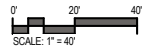
Terrace Floor Plan Diagram

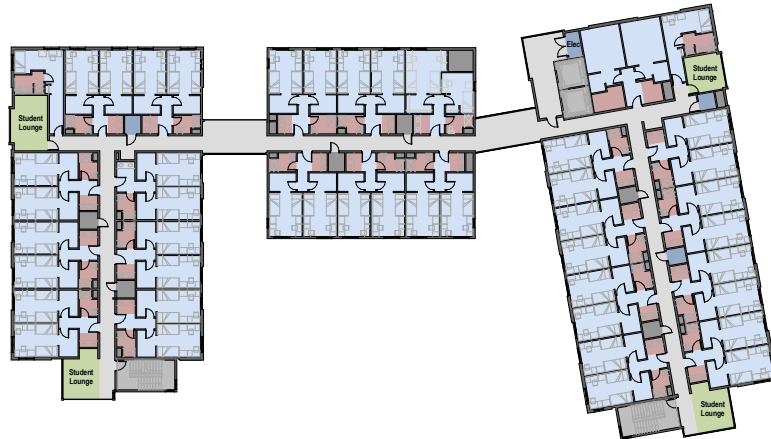




- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Structured Parking
- Mechanical
- Food Service

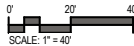
Entry Floor Plan Diagram



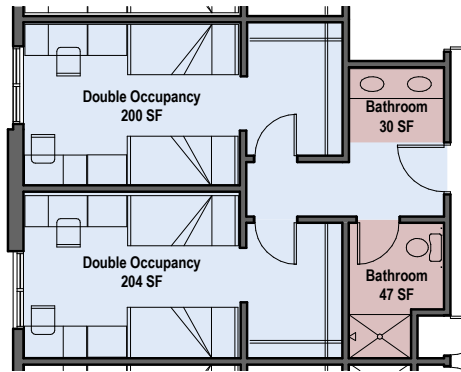


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Structured Parking
- Mechanical
- Food Service

Typical Residence Floor Plan Diagram

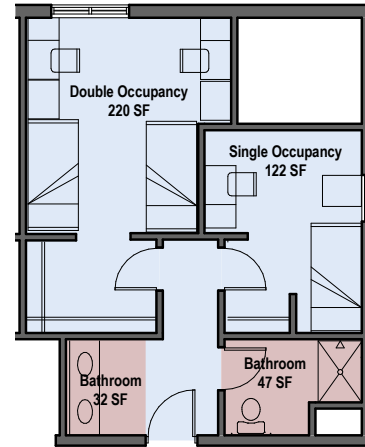
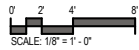


SCALE: 1" = 40'



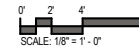
Suite A Gross Area 581 SF

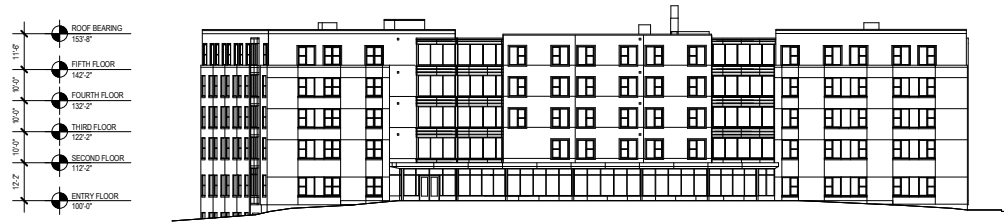
Typical Residence Suite A



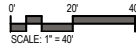
Suite B Gross Area 522 SF

Typical Residence Suite B

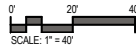




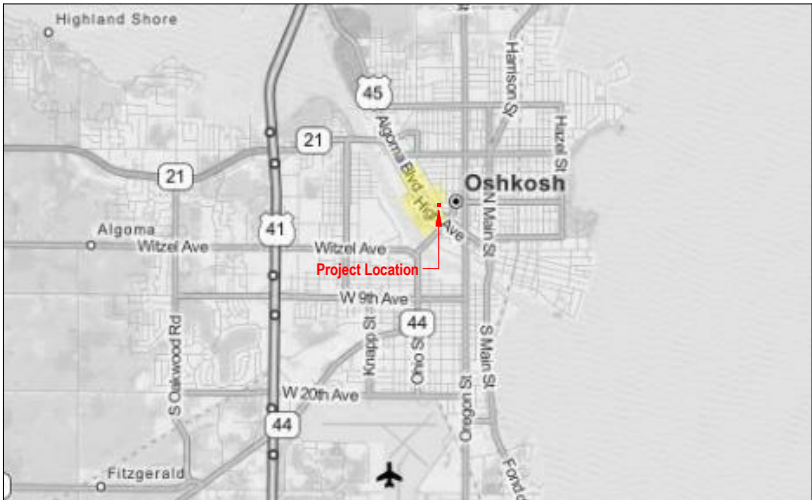
Representative West Elevation



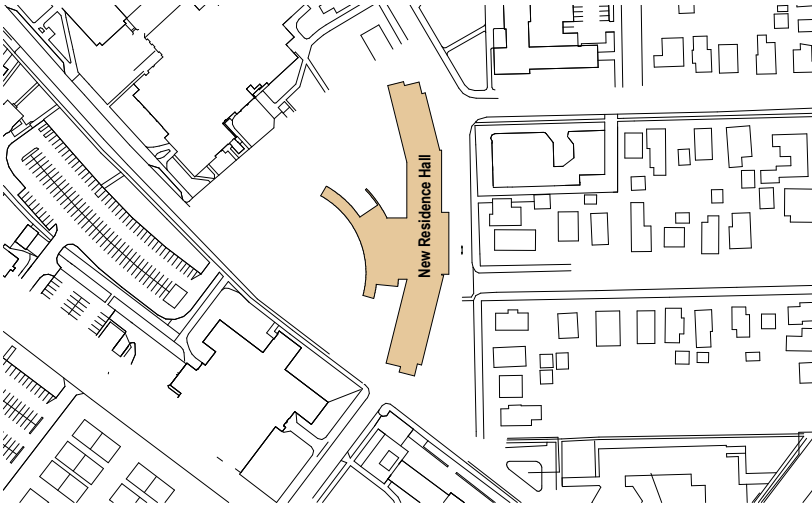
Representative East Elevation



UW Oshkosh - New Residence Hall



Campus Location Map
N.T.S.



Site Plan Diagram
N.T.S.

DOA-4265 (R03/00)		S. 16.85(1) Wis. Statutes.	
DIVISION OF STATE FACILITIES			
BUILDING DATA/COST REPORT			
Architect/Engineer:	Berners-Schober with VOA assoc.	Today's Date:	7/27/2012
Project Name:	UW Oshkosh Residence Hall	Bid Date:	September, 2010
Agency/Location:	UW Oshkosh	Targeted LEED -	
Project Number:	08K3J	LEED Achieved:	Gold
Building Data: (See DSF Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	0	SF. Roof Area:	31,366
Gross SF:	164,354	No. Elevator Stops:	14
Assignable SF:	138,927	No. Plumbing Fixtures:	515
No. Floors Below Grade:	1.0	MBH Heating Capacity:	5795 Mbh
No. Floors Above Grade:	5.0	MBH Cooling Capacity:	4200 Mbh
Cu. Ft. Bldg. Volume:	2,216,530	SF. Fire Protection:	164,354
No of Beds (Resident/Staff)	340	KVA Electrical Capacity:	0
SF. Developed Site Area:	0	Dom Water Heating:	6500 Mbh
No of Dwelling Units:	89 (87/2)	Construction Complete:	
Budget Data: (See DSF Policy & Procedure for A/E-Section III.B.4 for Instructions)		Project Delivery Method: Traditional D-B-B	
General Construction <>		\$17,932,950	
- Structure:		Electrical Work <>	
- Envelope:		- Power/Lighting:	
- Interior:		- Audio/Visual:	
- General Conditions:		- Voice/Data:	
- Elevator Work.:		- Fire Alarm/Security:	
		- Emergency Power:	
		FF&E Cost*	
		\$1,740,000	
Special Construction/Equipment:		Total Project Cost*:	
		\$34,000,000	
		* Cost Data from UW System	
Mechanical Work <>		\$5,675,036	
- Plumbing:		\$1,177,277	
- Fire Protection:		\$374,883	
- HVAC:		\$4,122,876	
- Test & Balance:			
- Energy Management Syst:			
		Site Work <>	
		- Site Preparation:	
		- Site Development:	
		- Site Utilities:	
		Total Construction Cost:	
		\$26,947,093	

System Project Request	
Enumeration request	
Enumeration Date	2007-09
A/E advertisement	
A/E Selection	Apr-09
BOR/SBC Submittal (35%)	
BOR/SBC Approval	
Bid Opening	Sep-10
Substantial Completion	May-12
Occupancy	Jul-12

Cost per SF	\$164
Cost per bed	\$79,256
GSF per bed	923
Avg dwlg unit SF	
Bed/Bathroom Ratio	2 to 1

Total SF by space category	
Administrative	2,133
Student Bathrooms	9,685
Public Bathroom	970
Building Support	4,253
General Circulation	23,347
House Fellow	3,424
Mechanical	12,566
Residence Rooms	66,301
Special Amenity**	7,083
Student Lounge	8,275
Structured Parking	N/A
Food Service	890
Retail	N/A
% of Upper Floor Plate to Vertical Circulation	3.5%
Net SF (total from above)	138,927
Gross SF	164,354
Efficiency	85%
** (2) Music, Multiple Conference, Large Lounge/Rec Rooms, Computer	

Functional Description: (List primary functional uses & percent of assigned area for each.)
Administration, 1.3%; Building Support, 2.6%; Circulation, 14.2%; Mechanical, 7.6%; Resident Suites, 48.3%; Special Amenity, 4.3%; Lounges, 5.0%; Unassigned/other, 16.6%

Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)
CIVIL: Civil work included demolition, grading, erosion control concrete paving, asphalt paving, traditional and permeable pavers, sand volleyball court, dumpster enclosure, traditional curb and gutter, sanitary, water, storm sewer, geothermal well system, steam and chilled water. Stormwater management was achieved through a biofiltration basin and rain garden.

Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)
Campus steam and chilled water for heating/cooling. 2 energy recovery units and 2 air handling units. Four pipe fan coil to condition each resident room with ventilation air form ERUs. Plumbing system includes pressure boosters, water softener, 2 Steam water heaters for domestic hot water along with geothermal. Building is served from **** V campus loop with a ***** A main panel. Emergency power is provided by a *** kW generator.

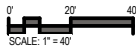
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)
Project demolished three res halls to make way for new one. 500 gpm fire pump along with Jockey pump. 375 LB main and rerserve FE-25 storage cylinders filled with amount of agent required to protect the Server room and Telecom area. Kitchen and associated equipment

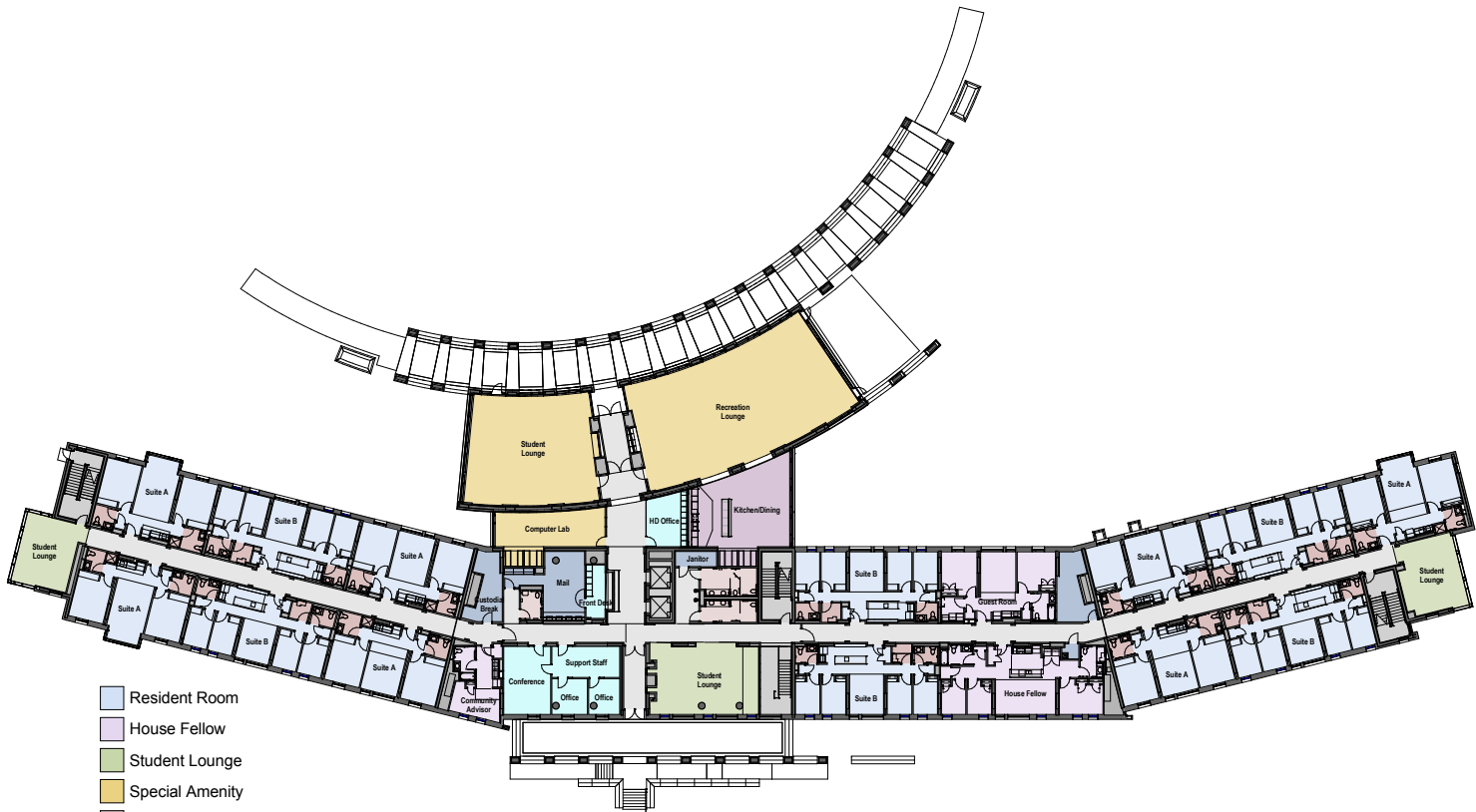


- Student Lounge
- Special Amenity
- Bathroom, Public
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Basement Floor Plan Diagram

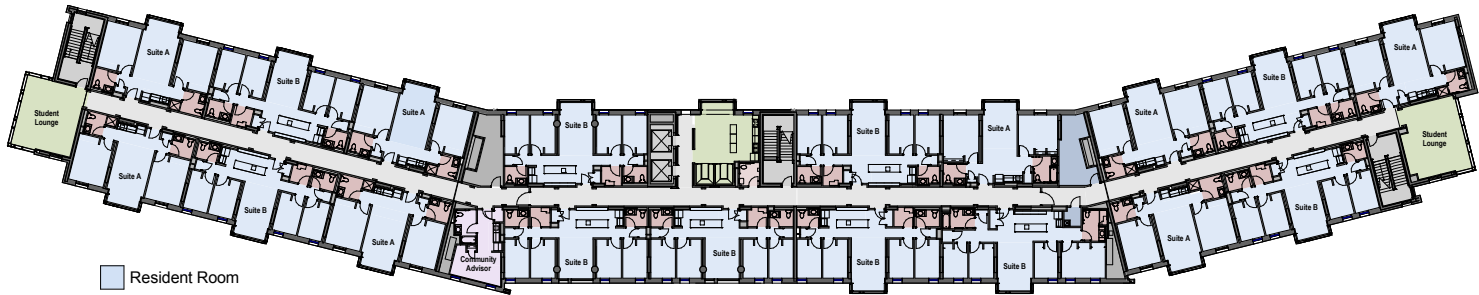




- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Food Service
- Building Support
- Mechanical

First Floor Plan Diagram

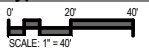
 SCALE: 1" = 40'

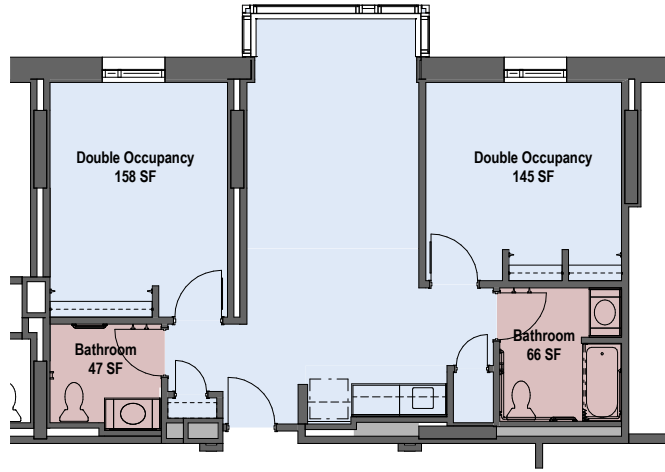


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Building Support
- Mechanical



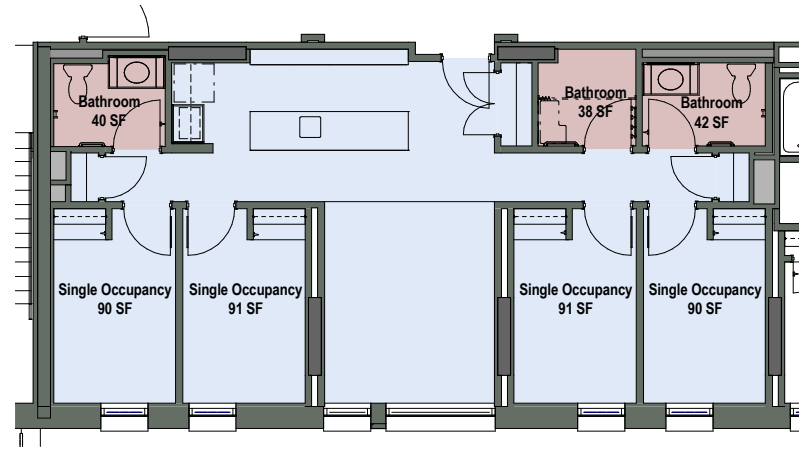
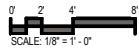
Typical Floor Plan Diagram





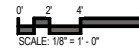
Suite A Gross Area 931 SF

Typical Residence Suite A



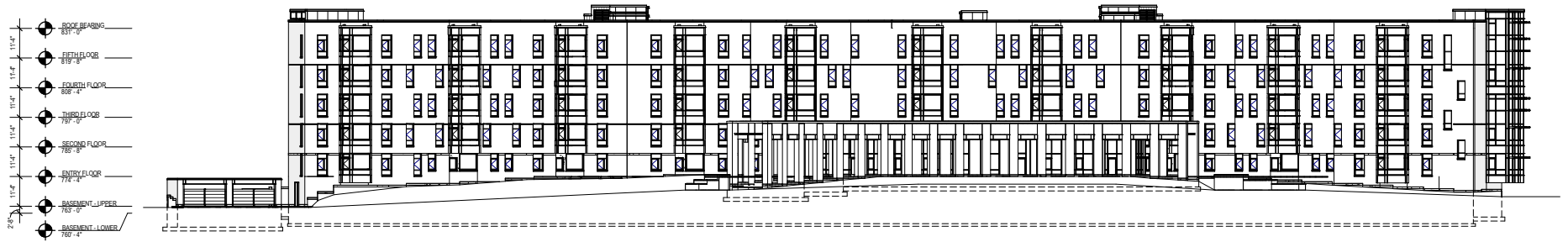
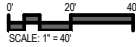
Suite B Gross Area 1109 SF

Typical Residence Suite B

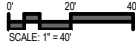




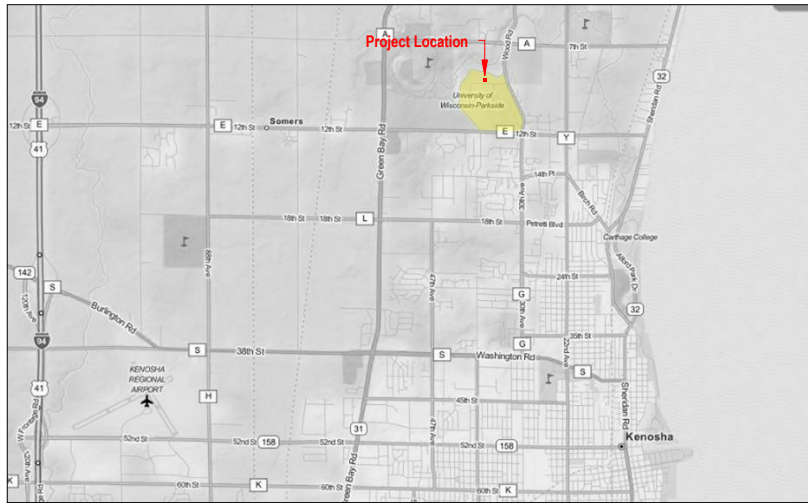
Representative South Elevation



Representative North Elevation

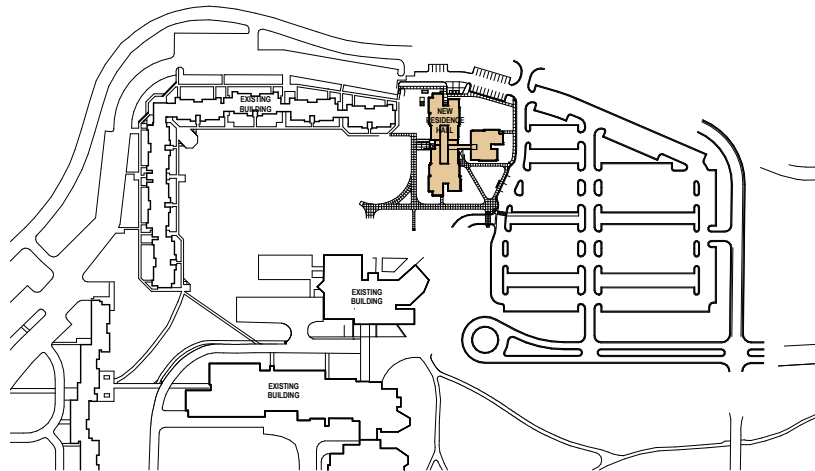


UW Parkside - Pike River Suites



Campus Location Plan

N.T.S.

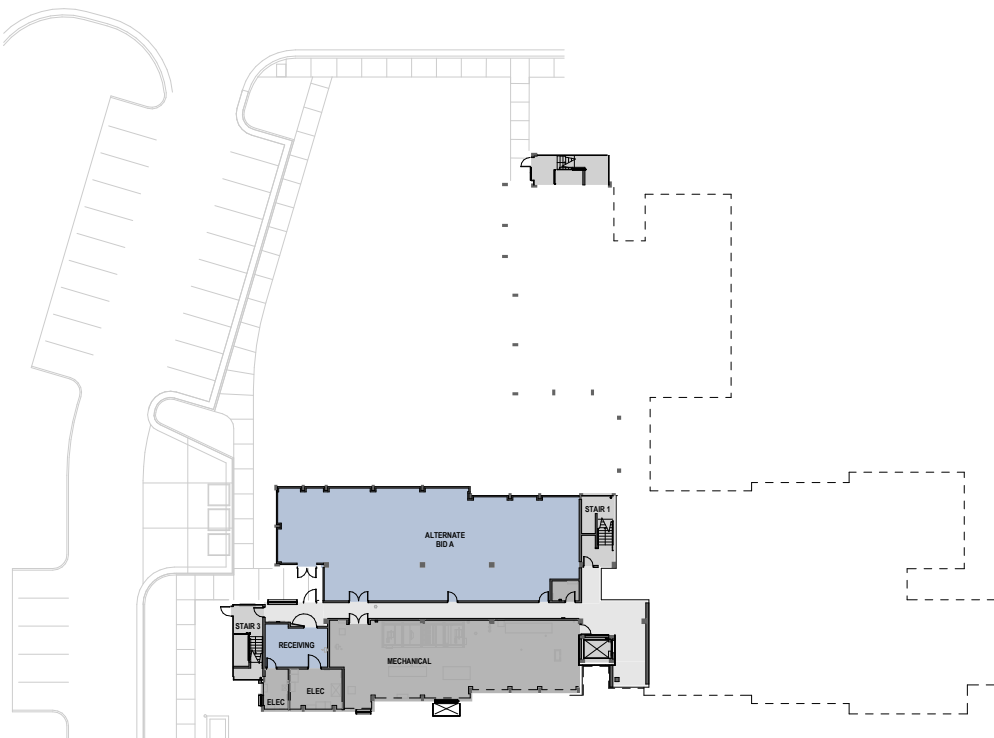


Site Plan Diagram

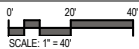
N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		DIVISION OF FACILITIES DEVELOPMENT		BUILDING DATA/COST REPORT	
Architect/Engineer:	Eppstein Uhen Architects	Today's Date:	8/13/2012		
Project Name:	UW Parkside - Pike River Suites	Bid Date:	May, 2008		
Agency/Location:	UW Parkside	LEED Achieved:	None		
Project Number:	06K1G				
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)					
Type Construction:	II-B	SF. Roof Area:	21,900		
Gross SF:	93,287	No. Elevator Stops:	5		
Assignable SF:	58,381	No. Plumbing Fixtures:	257		
No. Floors Below Grade:	1.0	MBH Heating Capacity:	4400 Mbh		
No. Floors Above Grade:	4.0	MBH Cooling Capacity:	1714 Mbh		
Cu. Ft. Bldg. Volume:	1,205,240	SF. Fire Protection:	96,683		
No of Beds (Resident/Staff):	250 (247/3)	KVA Electrical Capacity:	831 KVA		
SF. Developed Site Area:	163,800	Dom Water Heating:	1600 Mbh		
No of Dwelling Units:	49	Construction Complete:	6/30/2009		
		Project Delivery Method:	Traditional D-B-B		
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions) DOA-4265					
General Construction <>	\$9,759,090	Electrical Work <>	\$1,647,755		
- Structure:	\$4,680,660	- Power/Lighting:	\$1,123,755		
- Envelope:	\$1,175,000	- Audio/Visual:	\$5,000		
- Interior:	\$2,684,050	- Voice/Data:	\$216,000		
- General Conditions:	\$1,109,380	- Fire Alarm/Security:	\$243,000		
- Elevator Work:	\$110,000	- Emergency Power:	\$60,000		
Special Construction/Equipment:		FF&E Cost*	\$553,000		
		Total Project Cost*:	\$17,740,000		
		* Cost Data from UW System			
Mechanical Work <>	\$2,686,080	Site Work <>	\$886,050		
- Plumbing:	\$713,075	- Site Preparation:	\$550,000		
- Fire Protection:	\$255,630	- Site Development:	\$149,980		
- HVAC:	\$1,625,200	- Site Utilities:	\$186,070		
- Test & Balance:	\$5,000	Total Construction Cost:	\$14,978,975		
- Energy Management Syst:	\$87,175				
Enumeration Amount					
Enumeration Date	2007-09				
A/E advertisement	Oct-06				
A/E Selection	Jan-07				
BOR/SBC Approval	Dec-07				
Bid Opening	May-08				
Substantial Completion	Jul-09				
Occupancy	Aug-09				
Cost per SF	\$161				
Cost per bed	\$59,916				
GSF per bed	373				
Avg dwlg unit SF	745				
Bed/Bathroom Ratio	6 to 1				
Total SF by Category					
Residence Rooms	36,666				
Resident Bathrooms	7,605				
Administration	810				
Hall Director Apartment	1,268				
Basement Alt/Storage	3,864				
Study/ Lounge †	5,899				
Special Amenity**	2,269				
FICM assignable sf	58,381				
Efficiency	62.6%				
General Circulation	18,873				
Mechanical	4,521				
Public Bathroom	379				
Structured Parking	N/A				
Food Service	N/A				
Retail	N/A				
% of Upper Floor Plate to Vertical Circulation	4.9%				
Net SF (total from above)	82,154				
Gross SF	93,287				
† Contrary to FICM, Lounges are considered assignable herein					
** Conference, Game Room & Fitness Center					
Functional Description: (List primary functional uses & percent of assigned area for each.)					
Administration, 0.9%; Basement Alt/Storage, 4.1%; Circulation, 20.2%; Mechanical, 4.8%; Resident Suites, 48.8%; Special Amenity, 2.4%; Lounges, 6.3%; Unassigned/other, 12.3%; Suite style Residence Hall for freshman and sophomores. 1 "hotel suite" for visiting staff/professors					
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)					
Cast-in-place concrete foundation, post-tension flat slab floors, mild-steel reinforced columns. CIVIL: Civil work included demolition, grading, erosion control concrete paving, dumpster enclosure, traditional and mountable curb and gutter, bike parking, sanitary, water, and storm sewer. Stormwater discharges to storm sewer at the northeast parking improvement project.					
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)					
4-pipe fan coil units serving suites, VAV system for common spaces. Stand-alone boiler. Chilled water from Campus system					
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)					

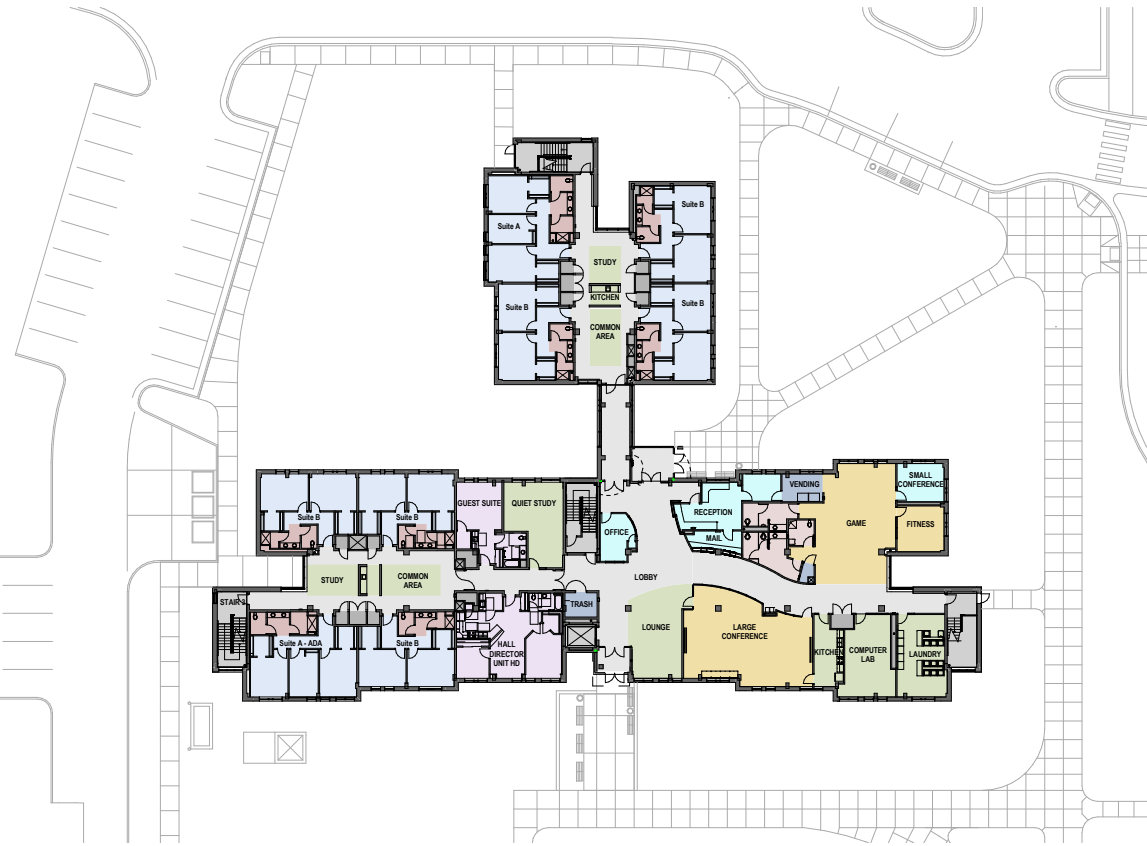
- Residence Rooms
- House Fellow
- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



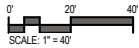
Basement Floor Plan Diagram

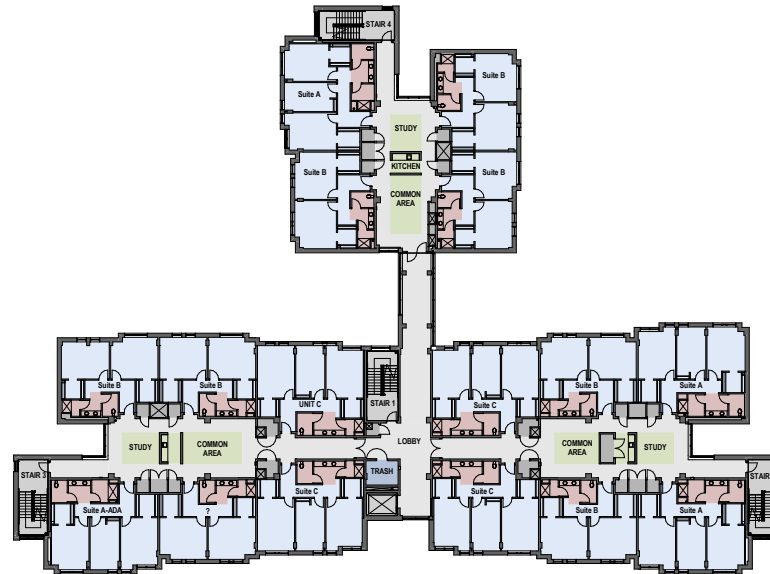


- Residence Rooms
- House Fellow
- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Entry Floor Plan Diagram

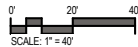


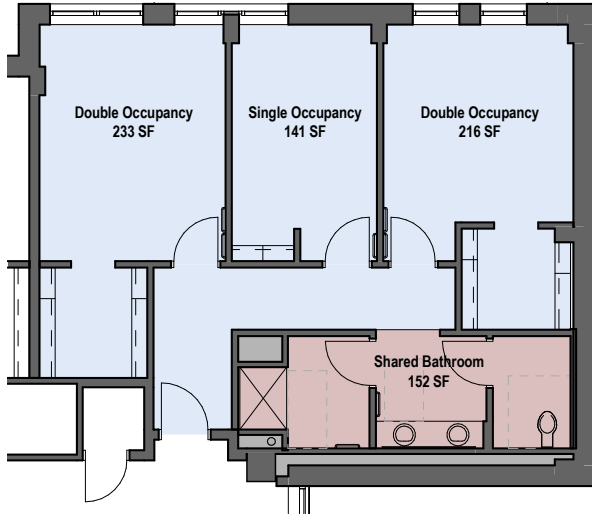


- Residence Rooms
- House Fellow
- Student Lounge
- Special Amenity
- Bathrooms, Public
- Bathrooms, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



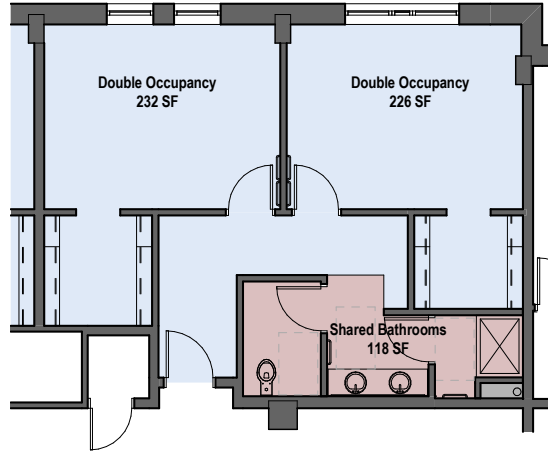
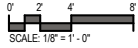
Typical Residence Floor Plan Diagram





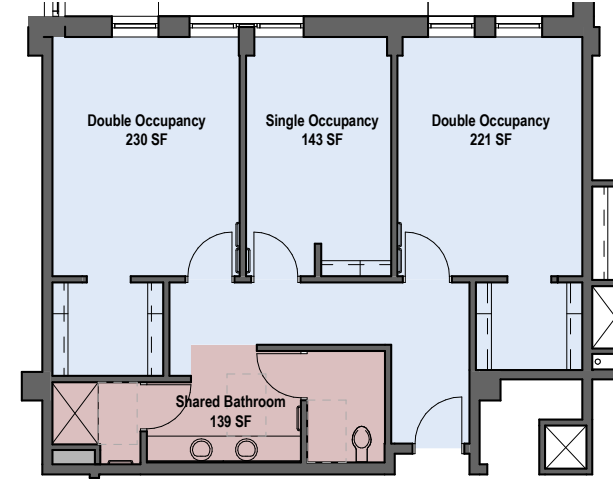
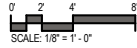
Suite A Gross Area 987 SF

Typical Residence - Suite A



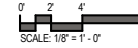
Suite B Gross Area 744 SF

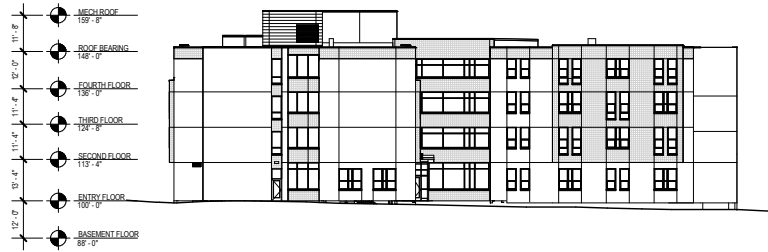
Typical Residence - Suite B



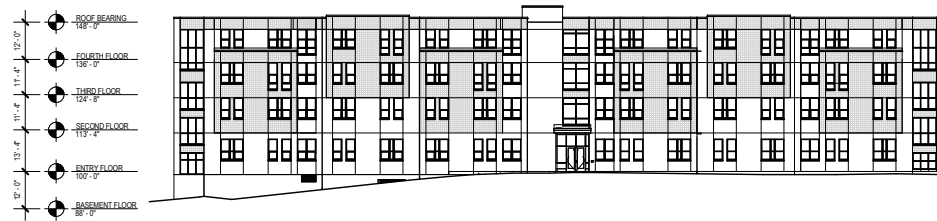
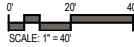
Suite C Gross Area 937 SF

Typical Residence - Suite C

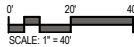




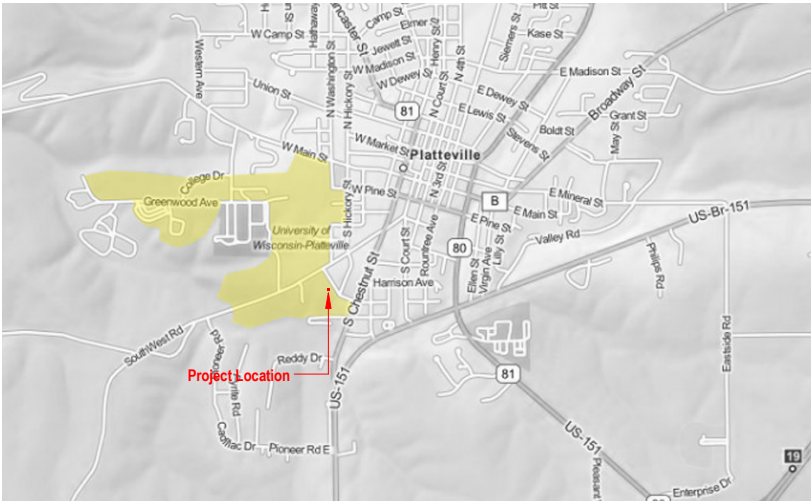
Representative South Elevation



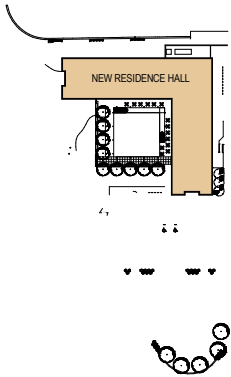
Representative West Elevation



UW Platteville - Rountree Commons

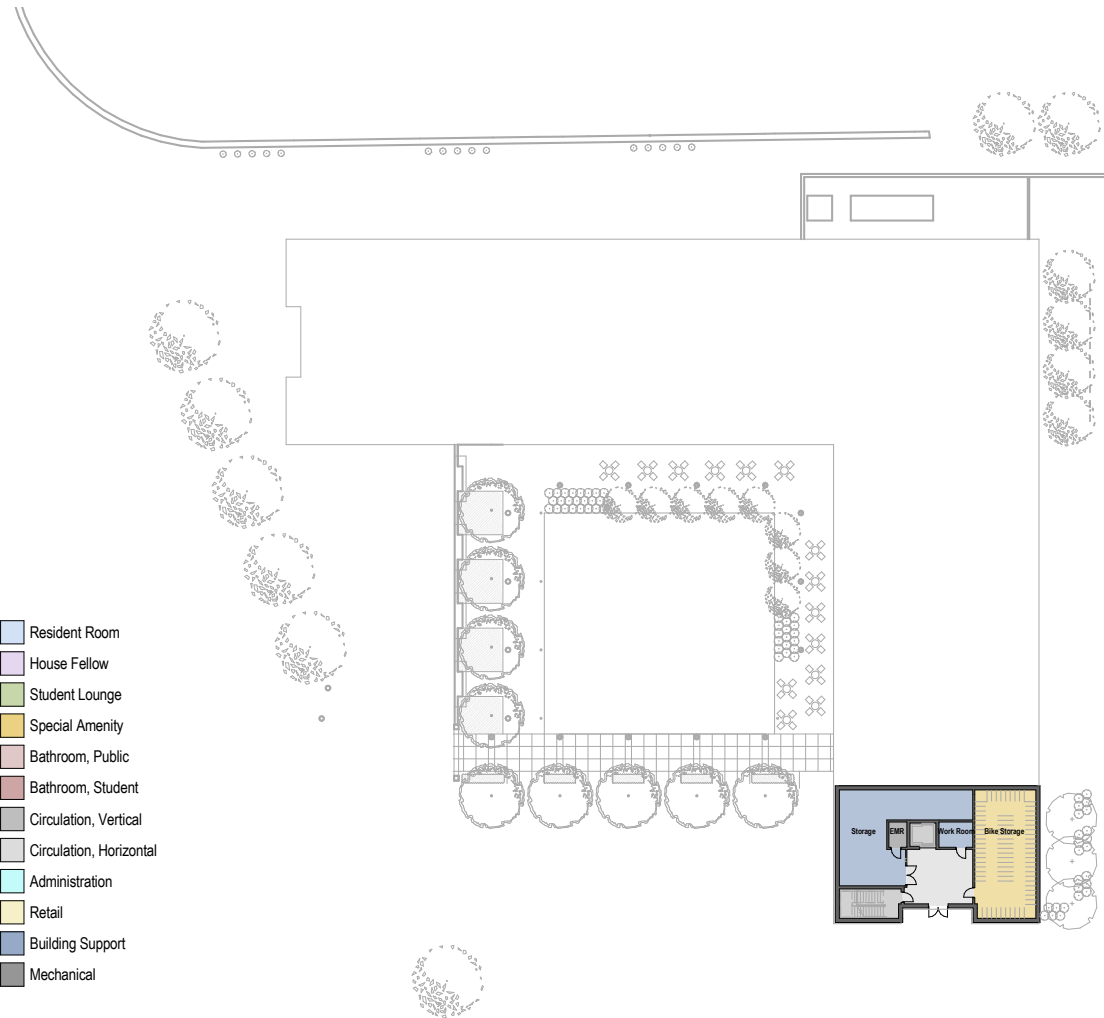


Campus Location Map
N.T.S.



Site Plan Diagram
N.T.S.

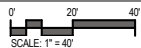
DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		Enumeration Amount	
DIVISION OF FACILITIES DEVELOPMENT		Enumeration Date	N/A
		A/E advertisement	Dec-09
BUILDING DATA/COST REPORT		A/E Selection	Apr-10
		BOR/SBC Approval	N/A
Architect/Engineer: HGA Architects	Today's Date: 8/13/2012	Bid Opening	Jan-11
Project Name: UW Platteville Rountree Commons	Bid Date: 14-Jan-11	Substantial Completion	Jul-12
Agency/Location: UW System/Platteville, WI	LEED Achieved: None	Occupancy	Aug-12
Project Number:			
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	I-A below II-A	SF. Roof Area:	25,918
Gross SF:	153,068	No. Elevator Stops:	14
Assignable SF:	98,280	No. Plumbing Fixtures:	728
No. Floors Below Grade:	0.2	MBH Heating Capacity:	3239 Mbh
No. Floors Above Grade:	6.0	MBH Cooling Capacity:	2343 Mbh
Cu. Ft. Bldg. Volume:	1,676,031	SF. Fire Protection:	Complete
No of Beds (Resident/Staff)	622 (600/22)	KVA Electrical Capacity:	1662 KVA
SF. Developed Site Area:	58,580 35 stalls	Dom Water Heating:	
No of Dwelling Units:	171	Construction Complete:	Target July, 2012
		Project Delivery Method:	Foundation Led
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		AIA G703	
General Construction <>	\$11,103,700	Electrical Work <>	
- Structure:	\$4,212,634	- Power/Lighting:	\$1,471,068
- Envelope:	\$1,429,676	- Audio/Visual:	
- Interior:	\$4,121,432	- Voice/Data:	
- General Conditions:	\$981,318	- Fire Alarm/Security:	
- Elevator Work.:	\$358,640	- Emergency Power:	
Special Construction/Equipment:		FF&E Cost*	\$935,417
		Total Project Cost*:	\$18,615,629
		* Cost Data from UW System	
Mechanical Work <>	\$2,842,110	Site Work <>	\$1,005,434
- Plumbing:	\$945,405	- Site Preparation:	\$556,606
- Fire Protection:	\$345,070	- Site Development:	\$340,047
- HVAC:	\$1,551,635	- Site Utilities:	\$108,781
- Test & Balance:		- Land Cost*	\$480,850
- Energy Management Syst:		- A/E Fee*	\$777,050
		Total Construction Cost:	\$16,422,312
Enumeration Amount			
Enumeration Date		N/A	
A/E advertisement		Dec-09	
A/E Selection		Apr-10	
BOR/SBC Approval		N/A	
Bid Opening		Jan-11	
Substantial Completion		Jul-12	
Occupancy		Aug-12	
Cost per SF		\$107	
Cost per bed		\$26,402	
GSF per bed		246	
Avg dwlg unit SF		600	
Bed/Bathroom Ratio		4 to 1	
Total SF by space category			
Residence Rooms	65,890		
Resident Bathrooms	13,815		
Administration	457		
Housefellow	6,533		
Basement Alt/Storage	2,804		
Study/ Lounge †	3,705		
Special Amenity**	3,001		
Retail ††	2,075		
FICM assignable sf	98,280		
Efficiency	64.2%		
General Circulation	30,525		
Mechanical	3,846		
Public Bathroom	492		
Structured Parking	N/A		
Food Service	N/A		
% of Upper Floor Plate to Vertical Circulation	2.7%		
Net SF (total from above)	133,143		
Gross SF	153,068		
† Contrary to FICM, Lounges are considered assignable herein			
** Bike Storage, Exercise, Multi-purpose Rooms, Media Center			
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 0.3%; Basement Alt/Storage, 1.8%; Circulation, 19.9%; Mechanical, 2.5%; Resident Suites, 56.3%; Special Amenity, 2.0%; Lounges, 2.4%; Unassigned/other, 14.7%. †† FICM. Retail is assignable for General Use Facilities (Code 660)			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
Civil work included demolition, grading, erosion control, concrete paving, pervious crushed stone walkway, sanitary, water, and storm sewer.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
Building is served from by an Alliant Energies utility transformer with a 2000 A main panel. Emergency power is provided by a 150 kW generator. 2 high efficiency non condensing boiler for heating water and 1 air cooled chiller for the chilled water system. 2 direct gas fired MAU for the Laundry and Kitchen area and 1 AHU for Ground floor service. 2 pipe fan coil units for resident rooms. Water softener for the potable water and gas fired domestic water heater.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
300 gpm@70 psi fire pump. Technology systems include voice, data, cable television, CCTV and access control. One telecom room is located on first, second, third, fourth, fifth and sixth floors.			



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Mechanical



Basement Floor Plan Diagram



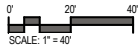
UW Platteville - Rountree Commons

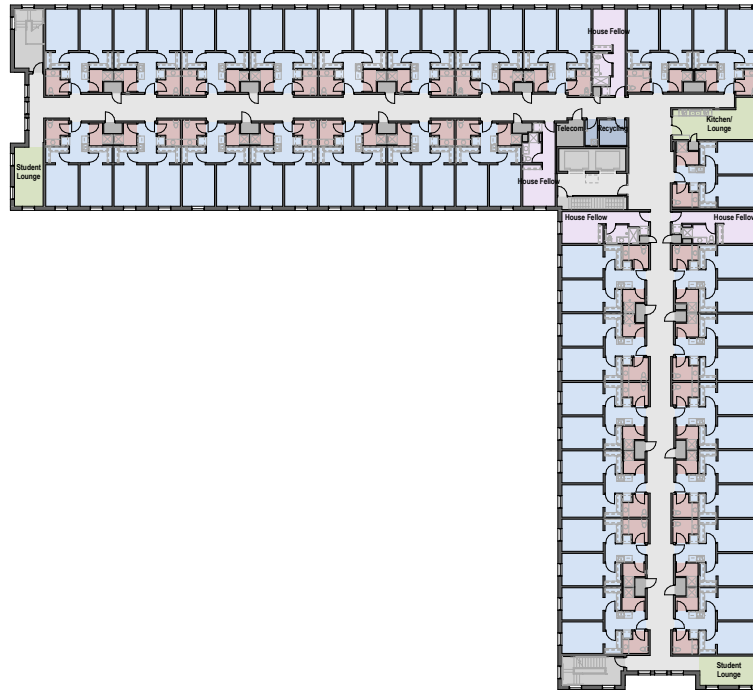


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Mechanical



Entry Floor Plan Diagram

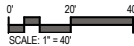


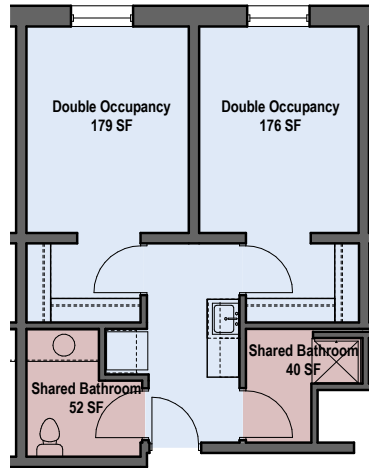


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Mechanical



Typical Residence Floor Plan Diagram

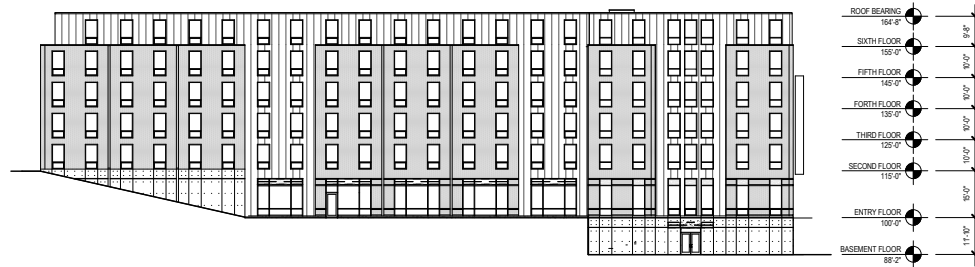




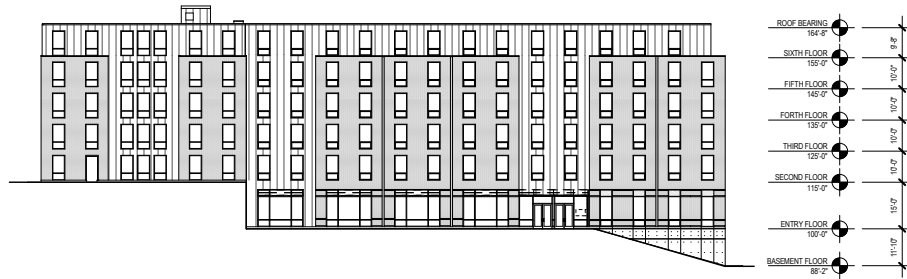
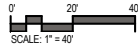
Residence Room Gross Area 606 SF

Typical Residence Room

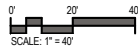




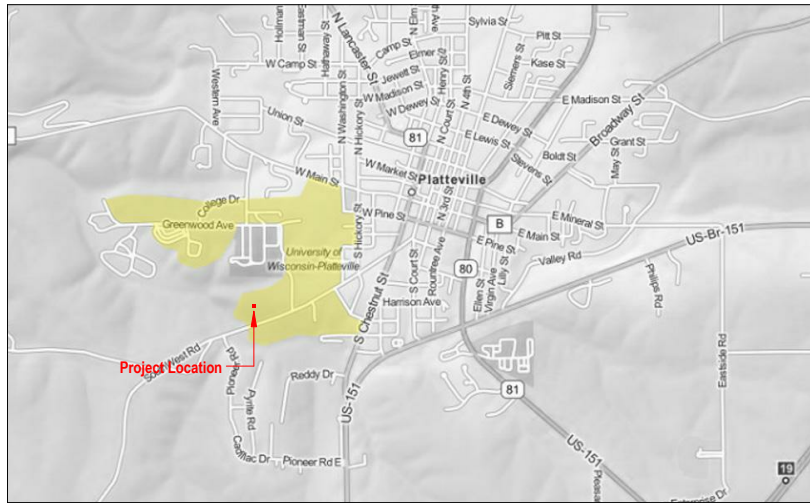
Representative South Elevation



Representative West Elevation

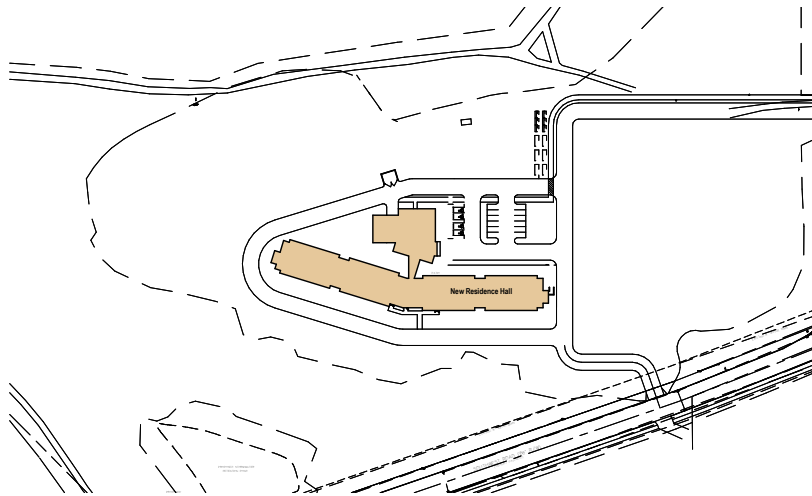


UW Platteville - SouthWest Residence Hall



Campus Location Map

N.T.S.



Site Plan Diagram

N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		DIVISION OF STATE FACILITIES	
BUILDING DATA/COST REPORT			
Architect/Engineer:	Plunkett Raysich Architects	Today's Date:	7/27/2012
Project Name:	UW Platteville Southwest Hall	Bid Date:	May-05
Agency/Location:	UW System/ Platteville, WI	LEED Achieved:	None
Project Number:			
Building Data: (See DSF Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	I-B	SF. Roof Area:	29,978
Gross SF:	154,157	No. Elevator Stops:	12
Assignable SF:	134,662	No. Plumbing Fixtures:	854
No. Floors Below Grade:	0.2	MBH Heating Capacity:	5748 Mbh
No. Floors Above Grade:	6.0	MBH Cooling Capacity:	2400 Mbh
Cu. Ft. Bldg. Volume:	1,515,648	SF. Fire Protection:	Complete
No of Beds (Resident/Staff)	382 380/2	KVA Electrical Capacity:	997 KVA
SF. Developed Site Area:	0	Dom Water Heating:	3600 Mbh
No of Dwelling Units:	96	Construction Complete:	
		Project Delivery Method:	
Budget Data: (See DSF Policy & Procedure for A/E-Section III.B.4 for Instructions)			
General Construction <>		Electrical Work <>	\$0
- Structure:		- Power/Lighting:	
- Envelope:		- Audio/Visual:	
- Interior:		- Voice/Data:	
- General Conditions:		- Fire Alarm/Security:	
- Elevator Work.:		- Emergency Power:	
		FF&E Cost*	\$1,300,000
Special Construction/Equipment:		Total Project Cost*:	\$21,100,000
		* Cost Data from UW System	
Mechanical Work <>		Site Work <>	
- Plumbing:	\$0	- Site Preparation:	
- Fire Protection:	\$0	- Site Development:	
- HVAC:	\$0	- Site Utilities:	
- Test & Balance:			
- Energy Management Syst:		Total Construction Cost:	\$17,500,000

System Project Request	
Enumeration request	
Enumeration Date	
A/E advertisement	
A/E Selection	
BOR/SBC Submittal (35%)	
BOR/SBC Approval	
Bid Opening	May-05
Substantial Completion	Jul-06
Occupancy	Aug-06

Cost per SF	\$114
Cost per bed	\$45,812
GSF per bed	404
Avg dwlg unit SF	1080
Bed/Bathroom Ratio	4 to 1

Total SF by space category	
Administration	721
Student Bathrooms	12,119
Public Bathroom	235
Building Support	2,733
General Circulation	24,142
Hall Director Apartment	998
Mechanical	8,265
Residence Rooms	81,616
Special Amenity**	1,783
Student Lounge	2,050
Structured Parking	N/A
Food Service	N/A
Retail	N/A
% of Upper Floor Plate to Vertical Circulation	2.9%
Net SF (total from above)	134,662
Gross SF	154,157
Efficiency	87%

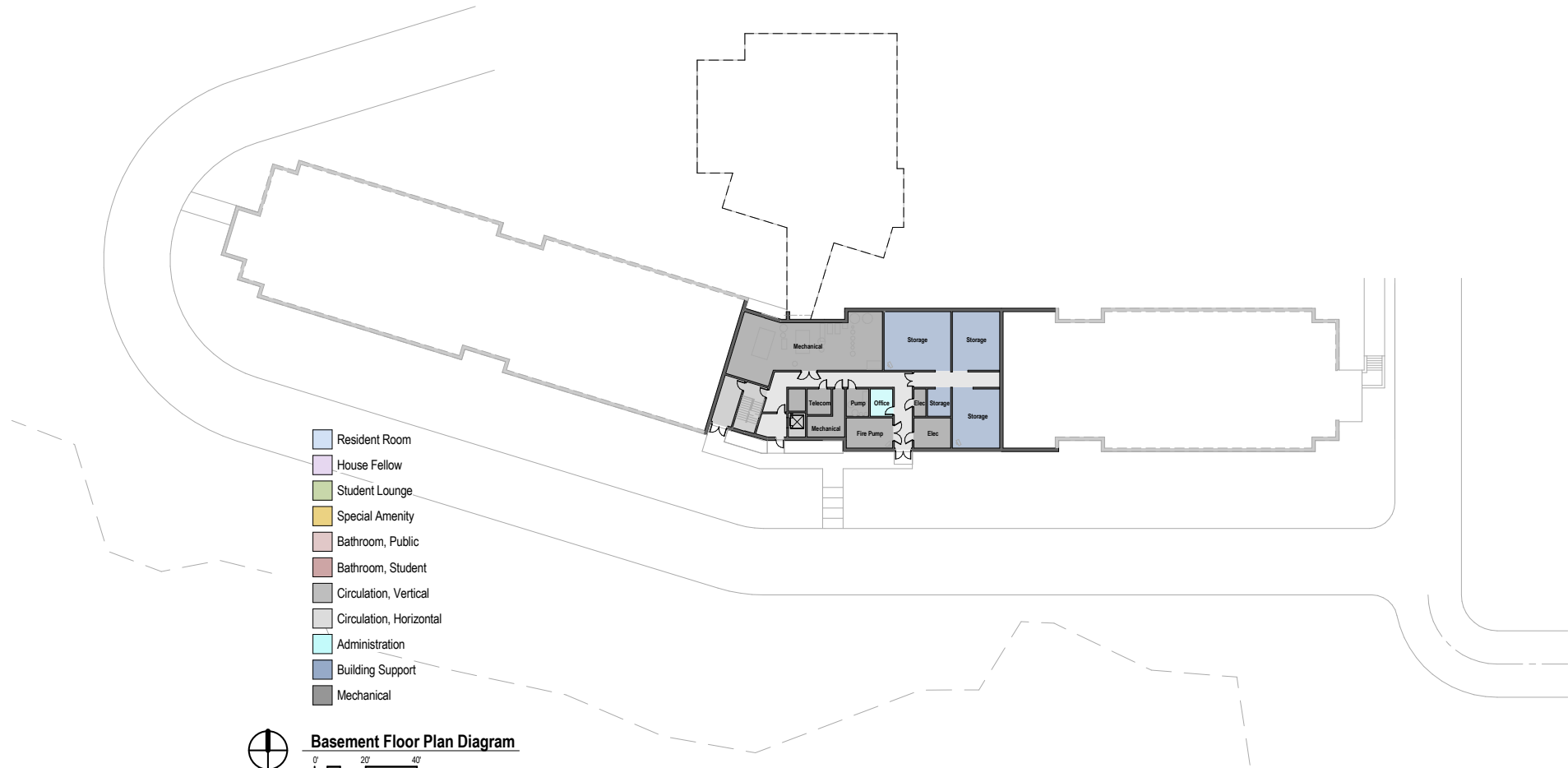
*** "Community" Room and Multi-Purpose Space

Functional Description: (List primary functional uses & percent of assigned area for each.)
 Administration, 0.5%; Building Support, 1.8%; Circulation, 15.7%; Mechanical, 5.4%; Resident Suites, 61.5%; Special Amenity, 1.2%; Lounges, 1.3%; Unassigned/other, 12.8%

Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)
 CIVIL: Civil work included demolition, grading, erosion control concrete paving, dumpster enclosure, curb and gutter, bike parking, sanitary, water, and storm sewer. Stormwater management was achieved through a wet detention pond south of the project.

Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)
 Water cooled chiller for cooling. Campus steam for heating and domestic water. Four pipe fan coil units with ducted ventilation to return of fan coil for heating and cooling. One provided per suite. Steam/chilled water makeup air unit for ventilation and AHU for common areas. Plumbing system includes duplex water softeners and 2 steam water heaters. Building is served from 12,470 V campus loop with a 1200 A main panel. Emergency power is provided by a 350 kW generator.

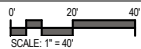
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)
 1000 gpm, 100 hp fire pump. Technology systems include voice, data, cable television, telecommunications grounding, and access control rough-in. One telecom room is located on basement level, first, second, third, fourth, fifth and sixth floors.



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Basement Floor Plan Diagram

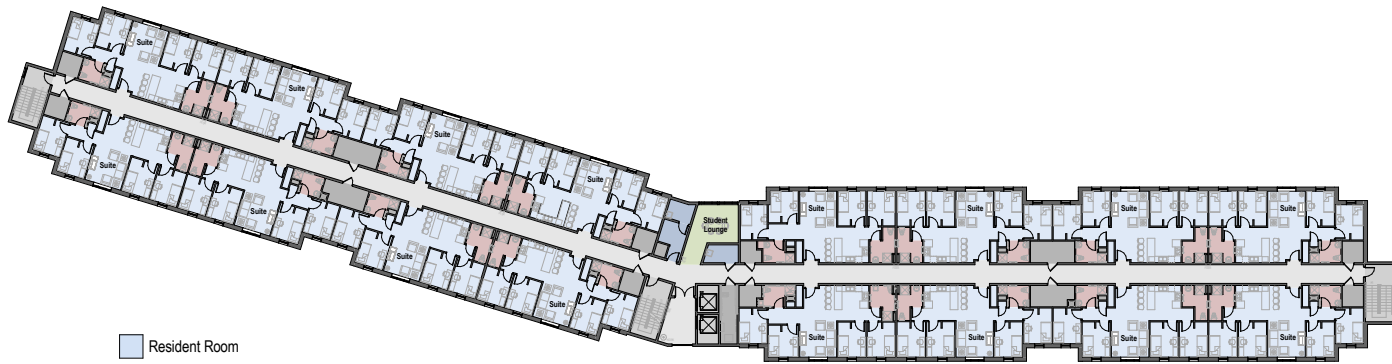




- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

Entry Floor Plan Diagram

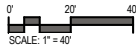
 SCALE: 1" = 40'

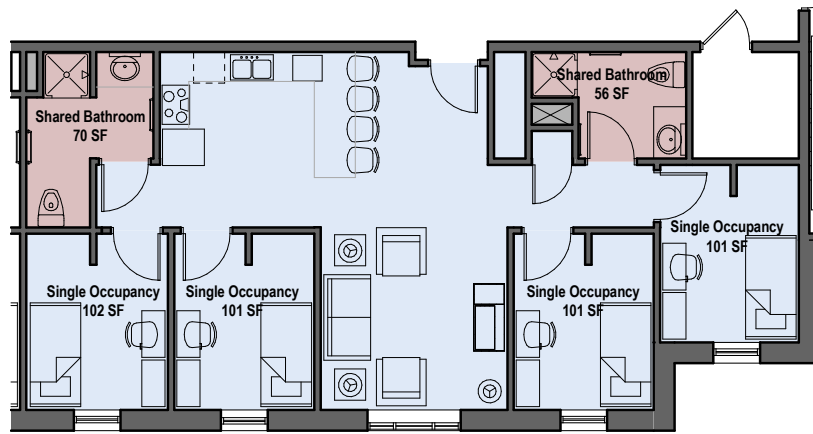


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



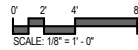
Typical Residence Floor Plan Diagram





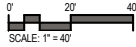
Suite Gross Area 1109 SF

Typical Residence Suite

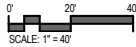




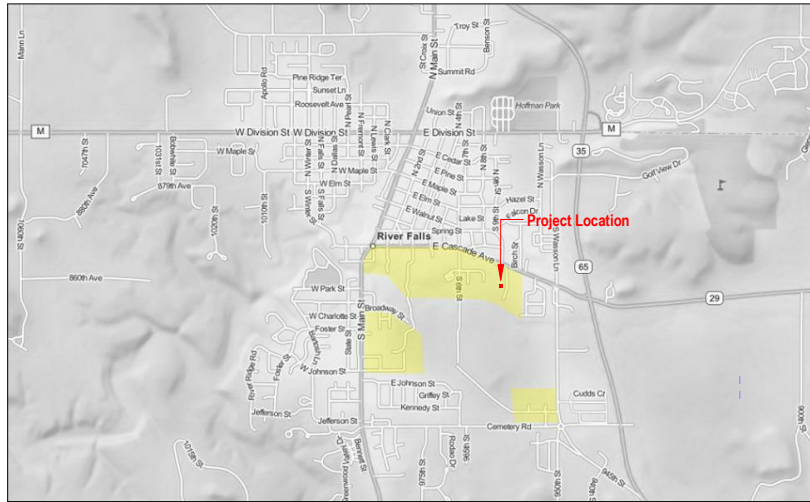
Representative South Elevation



Representative East Elevation

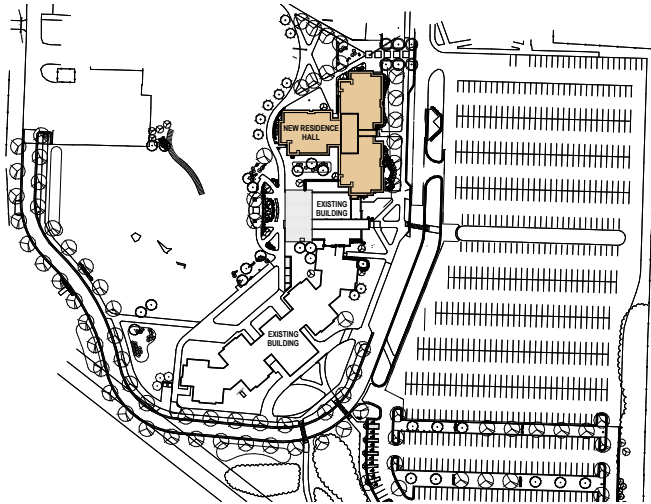


UW River Falls - South Forks Suites Addition



Campus Location Map

N.T.S.



Site Plan Diagram

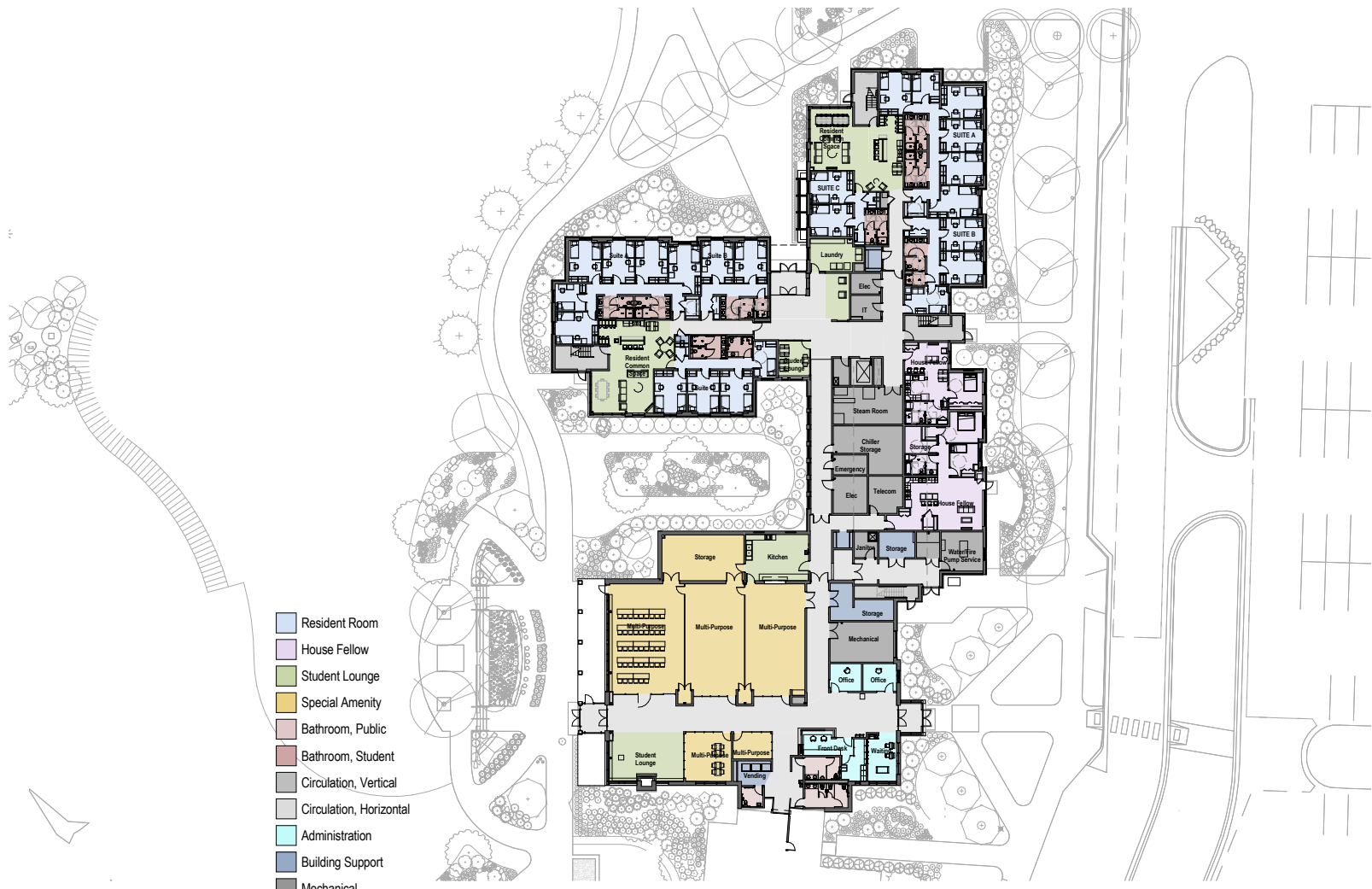
N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		Enumeration Amount	
DIVISION OF FACILITIES DEVELOPMENT		Enumeration Date	2009-11
BUILDING DATA/COST REPORT		A/E advertisement	Mar-09
		A/E Selection	Jun-09
Architect/Engineer:	SDS Architects with ESG	BOR/SBC Approval	Jan-11
Project Name:	UW River Falls South Forks Suite Addition	Bid Opening	Jan-11
Agency/Location:	UW System/ River Falls	Substantial Completion	Aug-12
Project Number:	09D2H - 99K4N	Occupancy	Aug-12
Today's Date:		8/23/2012	
Bid Date:		Jan-11	
LEED Achieved:		None	
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	II-B	SF. Roof Area:	16,803
Gross SF:	84,288	No. Elevator Stops:	4
Assignable SF:	56,416	No. Plumbing Fixtures:	229
No. Floors Below Grade:	0.0	MBH Heating Capacity:	3800 Mbh
No. Floors Above Grade:	4.0	MBH Cooling Capacity:	1980 Mbh
Cu. Ft. Bldg. Volume:	1,237,150	SF. Fire Protection:	84,288
No of Beds (Resident/Staff)	243	KVA Electrical Capacity:	1330 KVA
SF. Developed Site Area:	0	Dom Water Heating:	1600 Mbh
No of Dwelling Units:	13	Construction Complete:	June, 2011
		Project Delivery Method:	
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
		DFD SOV	
General Construction <>	\$9,041,011	Electrical Work <>	\$1,722,645
- Structure:	\$2,752,476	- Power/Lighting:	\$1,352,295
- Envelope:	\$2,533,893	- Audio/Visual:	
- Interior:	\$2,974,377	- Voice/Data:	\$175,250
- General Conditions:	\$635,365	- Fire Alarm/Security:	\$195,100
- Elevator Work.:	\$144,900	- Emergency Power:	
		FF&E Cost*	\$50,000
Special Construction/Equipment:		Total Project Cost**:	\$18,900,000
		<i>* Cost Data from UW System</i>	
Mechanical Work <>	\$3,790,365	Site Work <>	\$1,395,563
- Plumbing:	\$751,565	- Site Preparation:	\$435,428
- Fire Protection:	\$219,800	- Site Development:	\$580,735
- HVAC:	\$2,652,600	- Site Utilities:	\$379,400
- Test & Balance:	\$65,000		
- Energy Management Syst:	\$101,400	Total Construction Cost:	\$15,976,484
Functional Description: (List primary functional uses & percent of assigned area for each.): Residence Hall with 240 Beds. 12% of beds are associated with a Living/Learning Center			
Administration, 0.9%; Basement Alt/Storage, 1.8%; Circulation, 15.0%; Mechanical, 3.7%; Resident Suites, 45.7%; Special Amenity, 4.9%; Lounges, 15.4%; Unassigned/other, 12.6%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.): Superstructure: Precast concrete planks with concrete topping on load bearing masonry walls and steel beams. Limited steel columns. Exterior Walls: Load bearing and non-load bearing cavity walls with concrete masonry backup clad with brick, stone and metal wall panel.			
CIVIL: Civil work included demolition, grading, erosion control concrete paving, curb and gutter, bike parking, sanitary, water, storm sewer, steam and chilled water. Stormwater management was achieved through biofiltration basins on the project.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.): Campus chilled water and steam used for heating and cooling. Four pipe fan coils to condition resident rooms. One energy recovery unit for ventilation and exhaust and one air handling unit to server common areas on first floor. Operable windows for resident rooms. Duplex water softener used for softening domestic hot water. Fully sprinkled building with fire pump. Building is served from 4160 V campus loop with a 1600 A main panel. Emergency power is provided by a 40 kW generator.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.): The project is designed to obtain LEED certification and allow for addition of renewable energy technologies in the future. The project also includes a 120-stall parking lot expansion, a road extension to link the existing road to other interior circulation, retention pond, bio-swales, rain gardens, boardwalk, and related landscaping and activity areas.			
8 solar panels for domestic water heating with capacity for several future panels, 2 backup gas fired domestic water heaters. 100 hp fire pump with 1000 gpm of flow. Technology systems include data, cable television, telecommunications grounding, area of rescue assistance system, audio video rough-in, doorbell system, CCTV camera rough-in including cabling, access control on interior and exterior doors. Two telecom rooms are located on first floor and one telecom room on third floor.			

Cost per SF	\$190
Cost per bed	\$65,747
GSF per bed	347
Avg dwlg unit SF	955
Bed/Bathroom Ratio	5.5 to 1

Total SF by Category	
Residence Rooms	30,453
Resident Bathrooms	5,240
Administration	716
Hall Director Apartment	1,811
Basement Alt/Storage	1,479
Study/ Lounge †	12,667
Special Amenity**	4,050
FICM assignable sf	56,416
Efficiency	66.9%
General Circulation	12,320
Mechanical	3,020
Public Bathroom	315
Structured Parking	N/A
Food Service	N/A
Retail	N/A
% of Upper Floor Plate to Vertical Circulation	5.1%
Net SF (total from above)	72,071
Gross SF	84,288

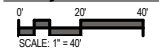
† Contrary to FICM, Lounges are considered assignable herein
 ** Operable partitioned Multi-purpose space and two Seminar

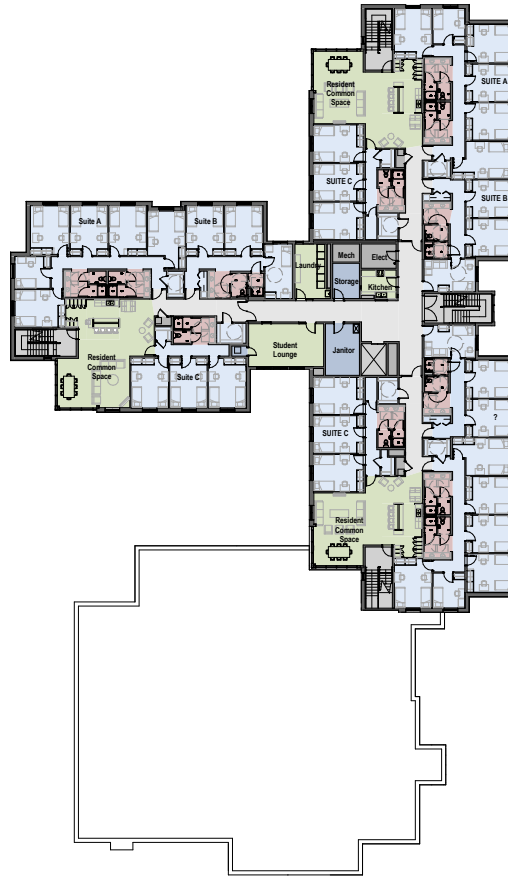


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Entry Floor Plan Diagram

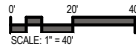




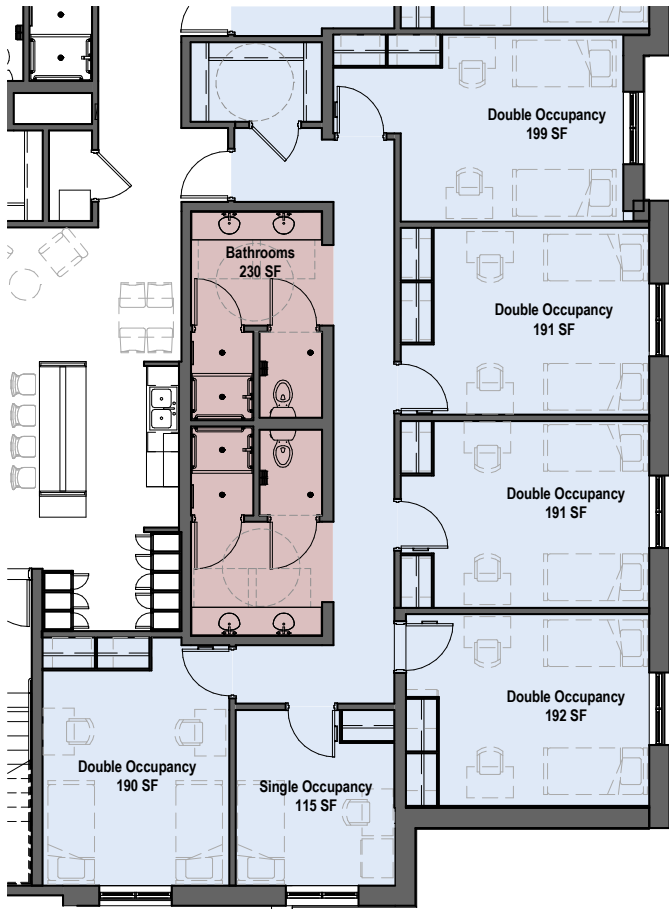
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Typical Residence Floor Plan Diagram

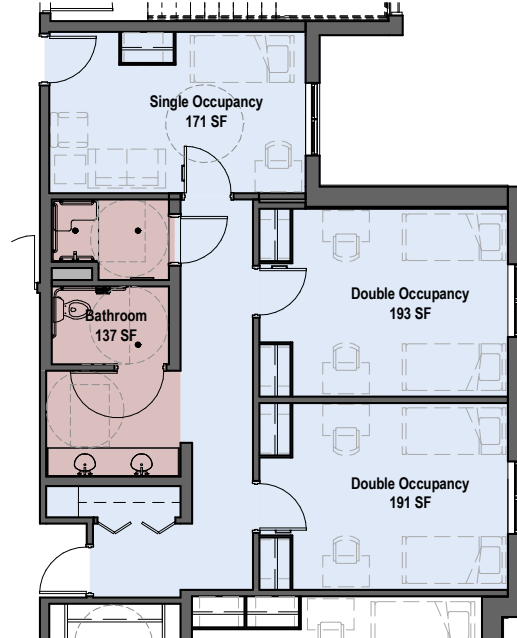
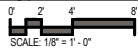


SCALE: 1" = 40'



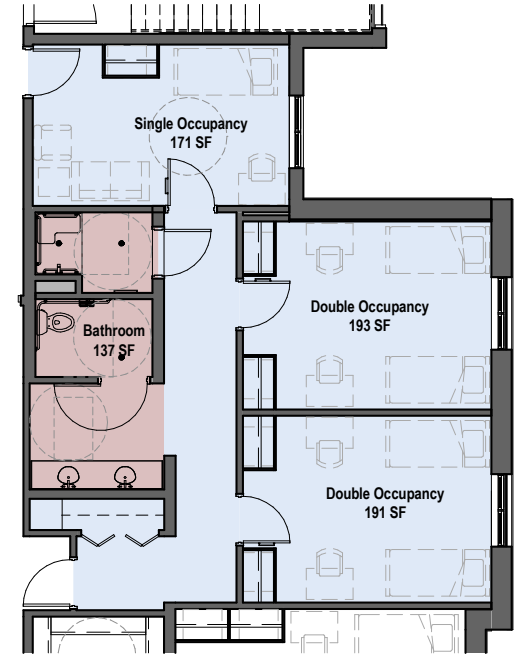
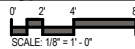
Suite A Gross Area 1724 SF

Typical Residence Suite Type A



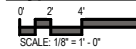
Suite B Gross Area 957 SF

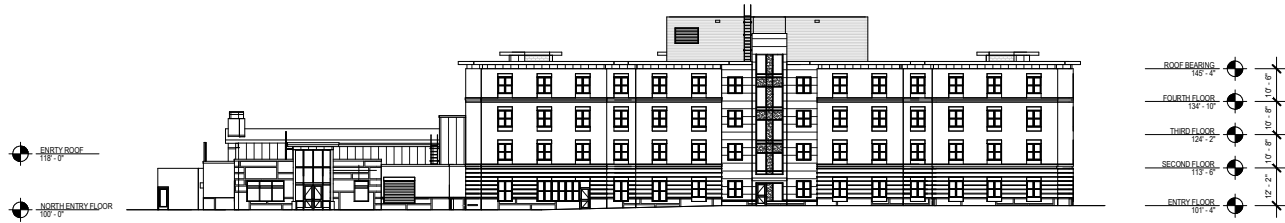
Typical Residence Suite Type B



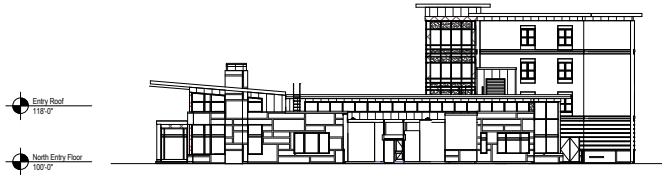
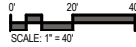
Suite C Gross Area 954 SF

Typical Residence Suite Type C

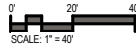




Representative East Elevation



Representative South Elevation

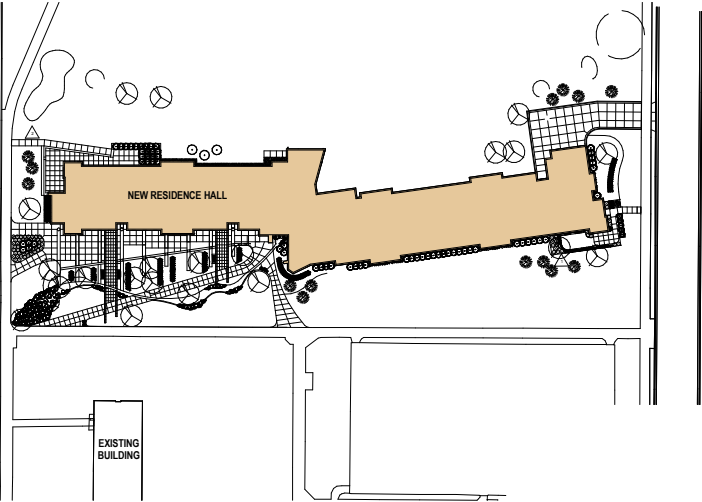


UW Stevens Point - Residence Hall



Campus Location Map

N.T.S.



Site Plan Diagram

N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.
DIVISION OF FACILITIES DEVELOPMENT
BUILDING DATA/COST REPORT

Architect/Engineer: Engberg Anderson/Mackey Mitchell Today's Date: 8/13/2012
 Project Name: UW Stevens Point New Residence Hall Bid Date: October, 2009
 Agency/Location: UW Stevens Point LEED Achieved: None
 Project Number: 09D2H

Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)

Type Construction:	II-A	SF. Roof Area:	26,190
Gross SF:	140,755	No. Elevator Stops:	8
Assignable SF:	89,203	No. Plumbing Fixtures:	531
No. Floors Below Grade:	1.0	MBH Heating Capacity:	5335 Mbh
No. Floors Above Grade:	5.0	MBH Cooling Capacity:	6100 Mbh
Cu. Ft. Bldg. Volume:	1,666,650	SF. Fire Protection:	140,755
No of Beds (Resident/Staff)	332 (331/2)	KVA Electrical Capacity:	720 KVA
SF. Developed Site Area:	85,710	Dom Water Heating:	1251 MWh
No of Dwelling Units:	83	Construction Complete:	8/3/2011
		Project Delivery Method:	Traditional D-B-B

Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)

General Construction <>	\$11,780,639	Electrical Work <>	\$1,836,542
- Structure:	\$3,975,852	- Power/Lighting:	\$1,719,202
- Envelope:	\$2,434,877	- Audio/Visual:	\$0
- Interior:	\$4,036,536	- Voice/Data:	\$150,822
- General Conditions:	\$1,061,601	- Fire Alarm/Security:	\$397,545
- Elevator Work:.	\$271,773	- Emergency Power:	\$68,973
		Reduction, utility extension	-\$500,000
		FF&E Cost*	\$1,300,000

Special Construction/Equipment:

Mechanical Work <>	\$3,869,702	Site Work <>	\$821,668
- Plumbing:	\$1,111,563	- Site Preparation:	\$304,123
- Fire Protection:	\$347,490	- Site Development:	\$225,440
- HVAC:	\$2,256,834	- Site Utilities:	\$292,105
- Test & Balance:	\$30,000		
- Energy Management Syst:	\$123,815		
		Total Construction Cost:	\$18,308,551

Enumeration Amount	\$34M
Enumeration Date	2007-09
A/E advertisement	May-08
A/E Selection	Aug-08
BOR/SBC Approval	May-09
Bid Opening	Oct-09
Substantial Completion	Jul-11
Occupancy	Aug-11

Cost per SF	\$130
Cost per bed	\$55,146
GSF per bed	791
Avg dwlg unt SF	1,019
Bed/Bathroom Ratio	4 to 1

Total SF by space category

Resident Room	67,111
Resident Bathroom	5,968
Administration	523
House Fellow	1,112
Basement Alt/Storage	6,991
Study/ Lounge †	4,854
Special Amenity**	2,644
FICM assignable sf	89,203
Efficiency	63.4%
General Circulation	20,992
Mechanical	5,680
Public Bathroom	1,044
Structured Parking	N/A
Food Service	N/A
Retail	N/A
% of Upper Floor Plate to Vertical Circulation	4.3%
Net SF (total from above)	126,320
Gross SF	140,755

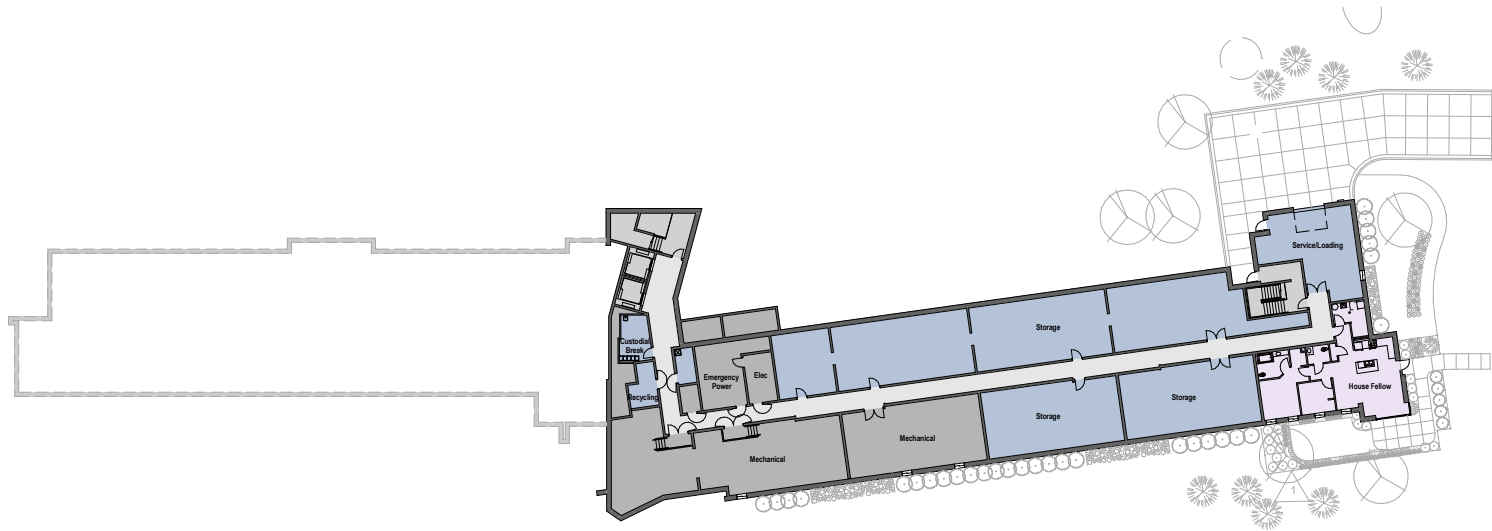
† Contrary to FICM, Lounges are considered assignable herein
 ** Rec Room, Seminar Room & Multi-Purpose Space

Functional Description: (List primary functional uses & percent of assigned area for each.)
 Administration, 0.4%; Basement Alt/Storage, 5.0%; Circulation, 14.9%; Mechanical, 4%; Resident Suites, 52.7%; Special Amenity, 1.9%; Lounges, 3.4%; Unassigned/other, 17.7%

Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)
 Structure system for 5-story tower is reinforced masonry bearing wall with precast plank floor. Structural precast beams & columns were used for the west wing to increase open floor space. Foundation system for both are conventional spread & strip footings with slab-on-grade. Exterior veneer is decorative CMU over CMU back-up; anodized aluminum metal panels over cold formed metal stud framing; Aluminum operable windows, storefront and curtain wall. Fully adhered EPDM. CIVIL: Civil work included demolition, grading, erosion control concrete paving, exposed aggregate concrete paving, reinforced grass emergency route, fence and seat walls, curb and gutter, bike parking, sanitary, water, storm sewer, steam and chilled water. Stormwater management was achieved through aggregate ribbons, runnels and infiltration around the project.

Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)
 Campus steam and chilled water for heating/cooling. 2 energy recovery units and 1 air handling units. Four pipe fan coil to condition each resident room with ventilation air form ERUs. Plumbing system includes water softeners, booster pump, and 2 steam domestic hot water heaters along with solar heating. Building is served from 12,470 V campus loop with a 2000 A main panel. Emergency power is provided by a 150 kW generator.

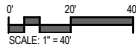
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)
 Storm water management-control flow system. Site has a 'storm-water ribbon' (rain garden) diverts hundreds of rain water per year. Pressure booster for domestic water. 1500 gpm fire pump. Kitchen and associated equipment. 4'x10' Solar collectors, 6 arrays of 6 collectors for solar water heater. Technology systems include voice, data, cable television, telecommunications grounding. One telecom room is located on basement level, first and fourth floors.



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Basement Floor Plan Diagram

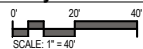




- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Entry Floor Plan Diagram

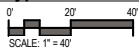


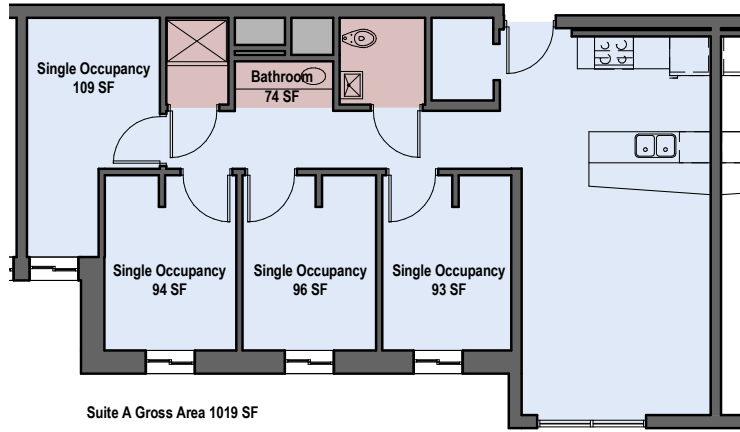


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

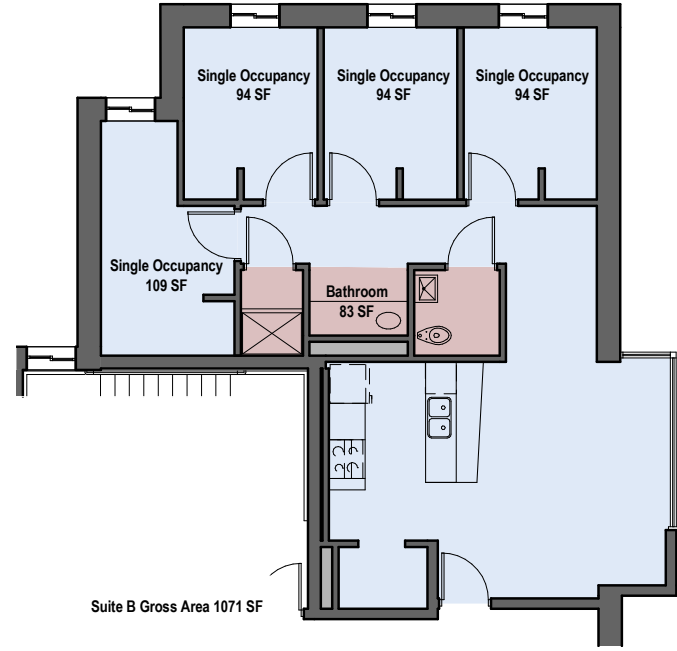
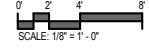


Typical Residence Floor Plan Diagram

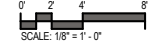




Typical Residence Suite A

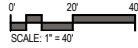


Typical Residence Suite B

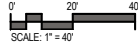




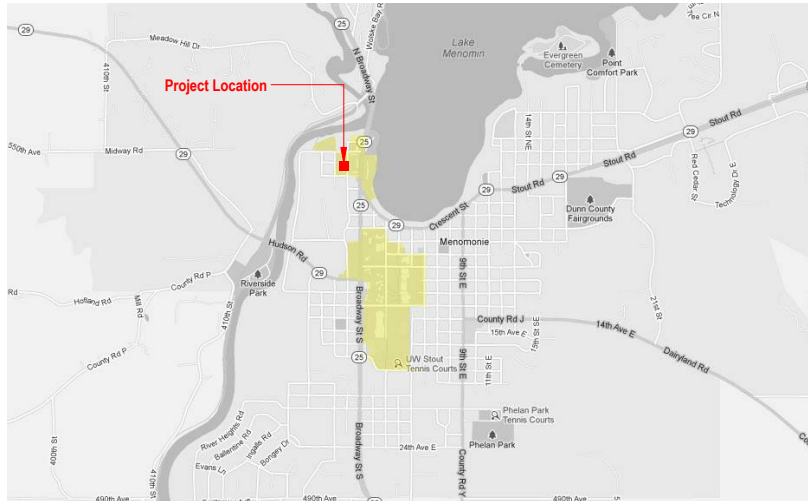
Representative South Elevation



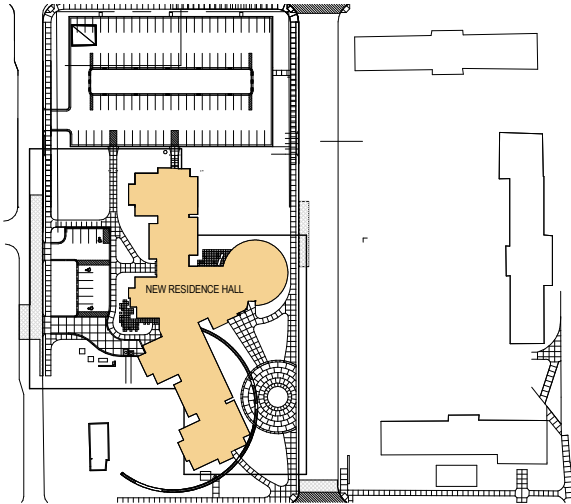
Representative North Elevation



UW Stout - Red Cedar Hall



Campus Location Map
N.T.S.



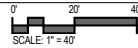
Site Plan Diagram
N.T.S.

DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes		Enumeration Amount	
DIVISION OF FACILITIES DEVELOPMENT		Enumeration Date	N/A
BUILDING DATA/COST REPORT		A/E advertisement	N/A
Architect/Engineer:	SDS Architects with ESG	A/E Selection	
Project Name:	UW Stout Red Cedar Hall	BOR/SBC Approval	
Agency/Location:		Bid Opening	
Project Number:	02H2J	Substantial Completion	
		Occupancy	
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Cost per SF	\$120
Type Construction:	II-B (assumed)	Cost per bed	\$47,111
Gross SF:	119,177	GSF per bed	392
Assignable SF:	90,346	Avg dwlg unit SF	850
No. Floors Below Grade:	0.5	Bed/Bathroom Ratio	4 to 1
No. Floors Above Grade:	5.0		
Cu. Ft. Bldg. Volume:	1,224,262		
No of Beds (Resident/Staff)	304		
SF. Developed Site Area:	193,725		
No of Dwelling Units:	76		
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)		Total SF by space category	
General Construction <>	\$9,095,653	Residence Rooms	63,902
- Structure:	\$2,964,631	Resident Bathrooms	7,369
- Envelope:	\$2,491,000	Administrative	747
- Interior:	\$2,584,000	Housefellow	5,913
- General Conditions:	\$685,500	Basement Alt/Storage	7,398
- Elevator Work.:	\$210,000	Study/ Lounge †	3,684
		Special Amenity**	1,333
Special Construction/Equipment*:	\$160,522	FICM assignable sf	90,346
*CO's		Efficiency	75.8%
		Mechanical	5,533
Mechanical Work <>	\$2,559,647	Public Bathroom	374
- Plumbing:	\$718,495	General Circulation	20,450
- Fire Protection:	\$273,970	Structured Parking	N/A
- HVAC:	\$1,567,182	Food Service	N/A
- Test & Balance:		Retail	N/A
- Energy Management Syst:		% of Upper Floor Plate to Vertical Circulation	4.0%
		Net SF (total from above)	116,703
		Gross SF	119,177
		† Contrary to FICM, Lounges are considered assignable herein	
		** Large Activity Room	
Functional Description: (List primary functional uses & percent of assigned area for each.)			
Administration, 0.6%; Basement Alt/Storage, 6.2%; Circulation, 17.2%; Mechanical, 4.6%; Resident Suites, 64.8%; Special Amenity, 1.1%; Lounges, 3.1%; Unassigned/other, 2.4%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			

- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



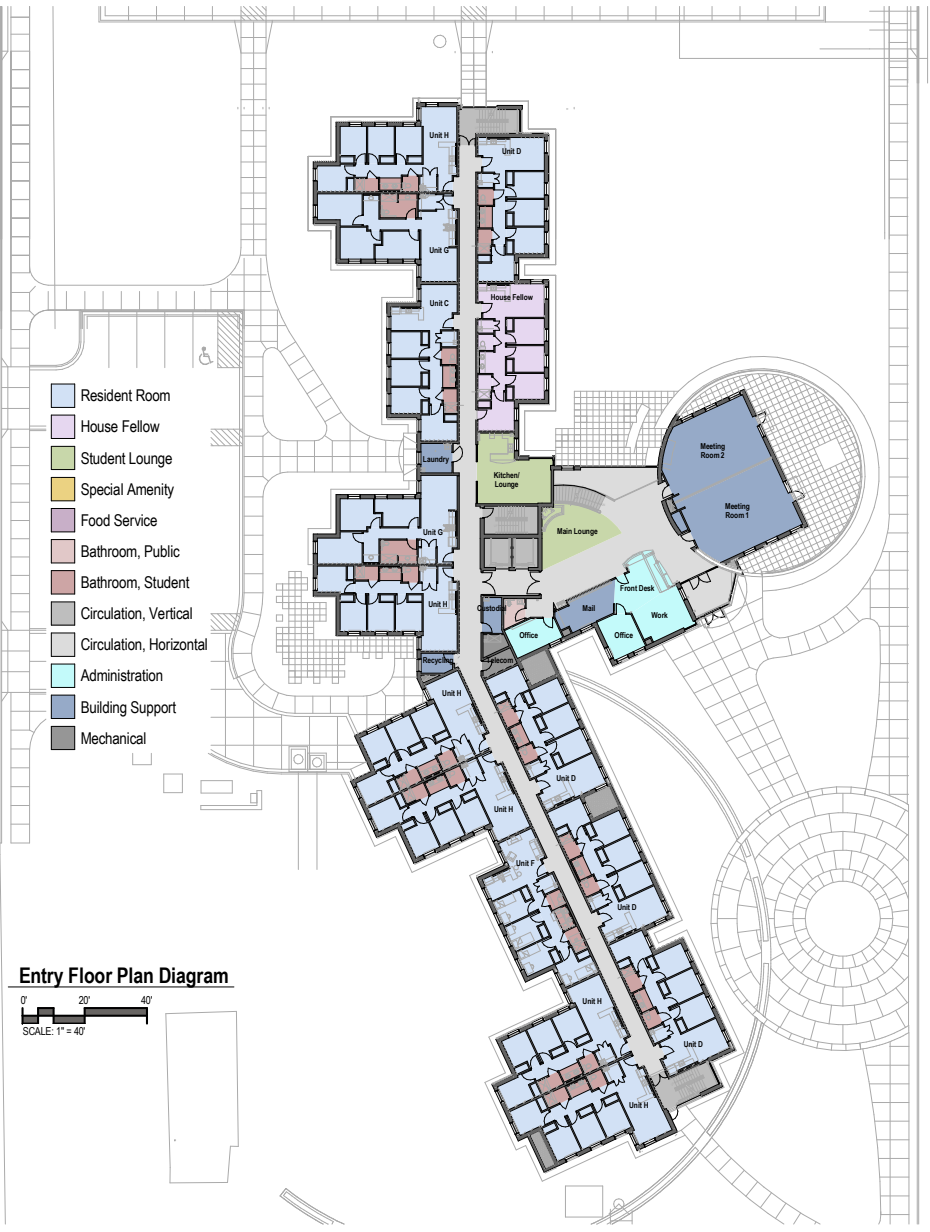
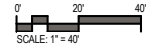
Basement Floor Plan Diagram



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



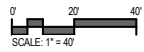
Entry Floor Plan Diagram



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



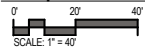
Typical Floor Plan Diagram

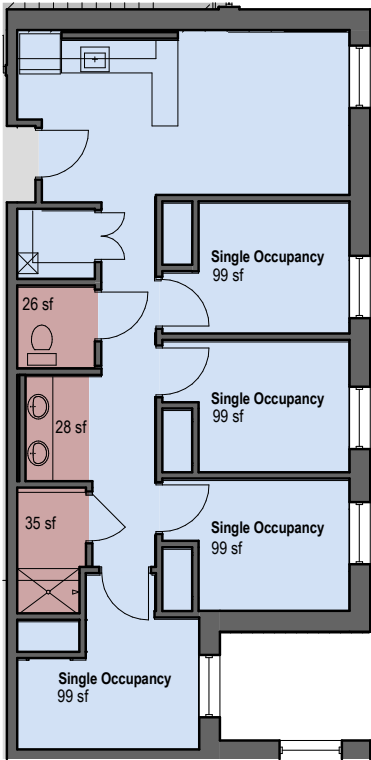


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



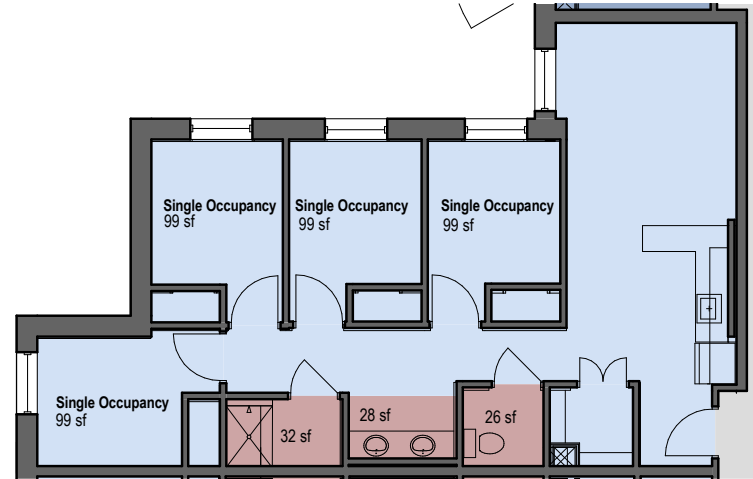
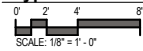
Unique Floor Plan Diagram





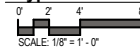
Residence Room Gross Area 974 SF

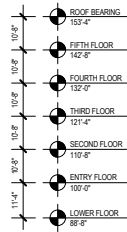
Typical Suite D Plan Diagram



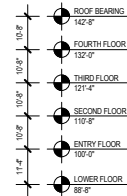
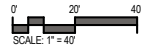
Residence Room Gross Area 1000 SF

Typical Suite H Plan Diagram

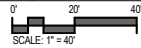




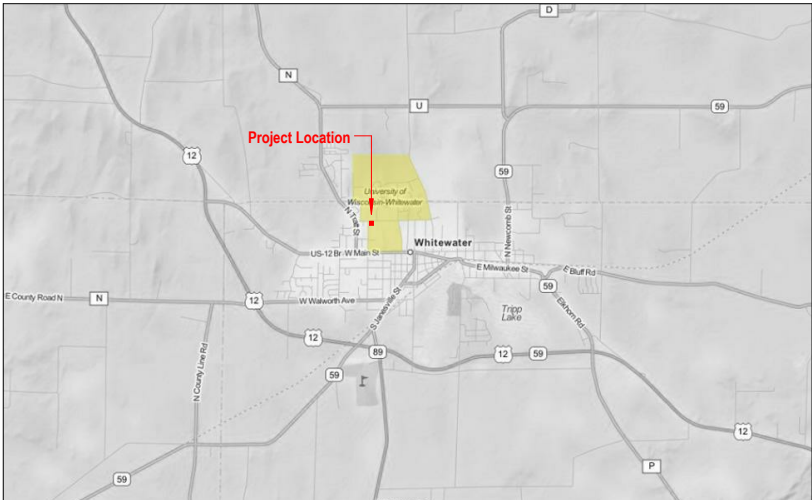
Representative East Elevation



Representative West Elevation

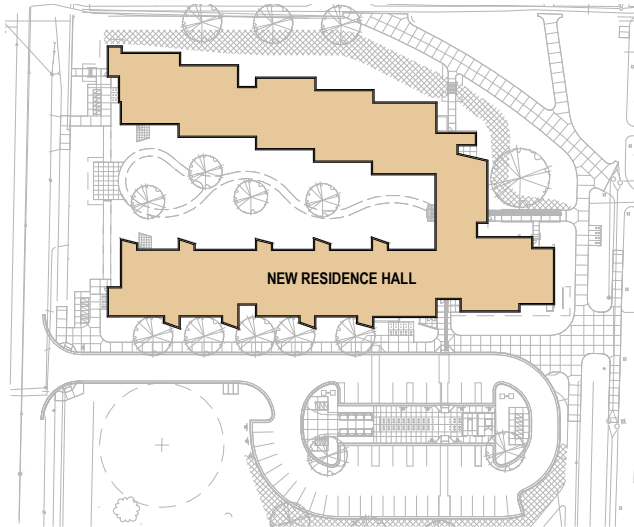


UW Whitewater - Residence Hall



Campus Location Map

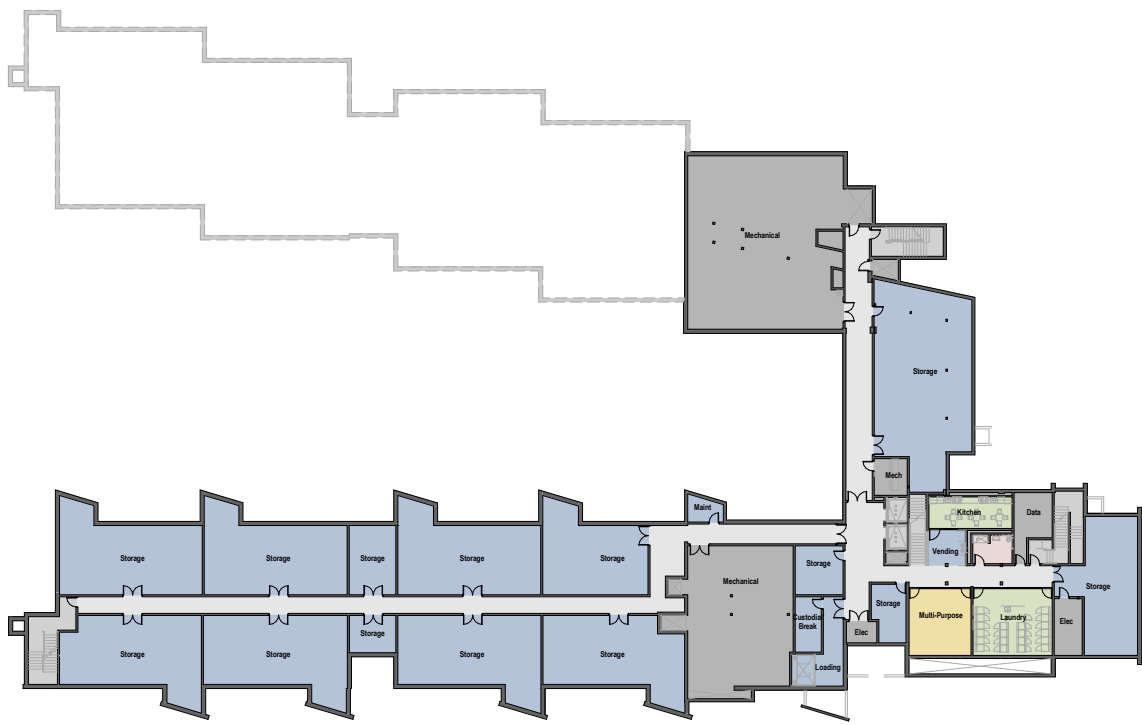
N.T.S.



Site Plan Diagram

N.T.S.

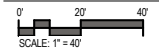
DOA-4265 (R03/00) S. 16.85(1) Wis. Statutes.		DIVISION OF FACILITIES DEVELOPMENT	
BUILDING DATA/COST REPORT			
Architect/Engineer:	Potter Lawson with Cannon Design	Today's Date:	8/13/2012
Project Name:	UW Whitewater	Bid Date:	September, 2008
Agency/Location:	UW System Administration	LEED Achieved:	Certified-Gold
Project Number:	06C1Q		
Building Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
Type Construction:	II-B	SF. Roof Area:	37,940
Gross SF:	196,200	No. Elevator Stops:	12
Assignable SF:	131,513	No. Plumbing Fixtures:	513
No. Floors Below Grade:	0.75	MBH Heating Capacity:	12827 Mbh
No. Floors Above Grade:	5.0	MBH Cooling Capacity:	7208 Mbh
Cu. Ft. Bldg. Volume:	2,233,677	SF. Fire Protection:	196,200
No of Beds (Resident/Staff):	448 (434/14)	KVA Electrical Capacity:	831 KVA
SF. Developed Site Area:	145,012	Dom Water Heating:	5000 Mbh
No of Dwelling Units:	96	Construction Complete:	Jul-10
		Project Delivery Method:	Traditional D-B-B
Budget Data: (See DFD Policy & Procedure for A/E-Section III.B.4 for Instructions)			
General Construction <>	\$17,601,858	Electrical Work <>	\$4,275,790
- Structure:	\$6,077,547	- Power/Lighting:	\$2,621,841
- Envelope:	\$5,199,125	- Audio/Visual:	\$0
- Interior:	\$5,190,520	- Voice/Data:	\$783,608
- General Conditions:	\$899,021	- Fire Alarm/Security:	\$768,341
- Elevator Work.:	\$235,645	- Emergency Power:	\$102,000
Special Construction/Equipment:	\$0	FF&E Cost*	\$1,700,000
		Total Project Cost*:	\$37,728,000
		<i>* Cost Data from UW System</i>	
Mechanical Work <>	\$5,547,476	Site Work <>	\$2,285,041
- Plumbing:	\$1,671,169	- Site Preparation:	\$657,683
- Fire Protection:	\$398,593	- Site Development:	\$277,206
- HVAC:	\$3,419,034	- Site Utilities:	\$250,152
- Test & Balance:	\$58,680	- Parking Lot:	\$1,100,000
- Energy Management Syst:	\$0	Total Construction Cost:	\$29,710,165
Enumeration Amount \$37.7M			
Enumeration Date 2007-09			
A/E advertisement Jun-06			
A/E Selection Oct-06			
BOR/SBC Approval Mar-08			
Bid Opening Sep-08			
Substantial Completion Jul-10			
Occupancy Aug-10			
Cost per SF \$151		Cost per bed \$66,317	
GSF per bed 438		Avg dwlg unit SF 1,100	
Bed/Bathroom Ratio 4 to 1			
Total SF by Category			
Resident Room 94,913		Resident Bathroom 12,224	
Administration 913		House Fellow 3,753	
Basement Alt/Storage 13,649		Study/ Lounge † 3,945	
Special Amenity** 2,116		FICM assignable sf 131,513	
Efficiency 67.0%		General Circulation 33,890	
Mechanical 13,317		Public Bathroom 532	
Structured Parking N/A		Food Service N/A	
Retail N/A		% of Upper Floor Plate to Vertical Circulation 3.3%	
Net SF (total from above) 179,252		Gross SF 196,200	
† Contrary to FICM, Lounges are considered assignable herein			
** Seminar Room, Computer Lab & Multi-Purpose Space			
Functional Description: (List primary functional uses & percent of assigned area for each)			
Administration, 0.5%; Basement Alt/Storage, 7.0%; Circulation, 17.3%; Mechanical, 6.8%; Resident Suites, 56.5%; Special Amenity, 1.1%; Lounges, 2.0%; Unassigned/other, 8.9%			
Architectural Specification: (Brief description of foundation, superstructure, exterior walls & roofing.)			
Pad and strip footings, concrete foundation, precast plank and bearing CMU structure with small area steel framed. Masonry veneer cavity wall; some architectural precast wall panels. Ballasted EPDM roof. Hydraulic passenger elevator and recirculating conveyor. CIVIL: Civil work included demolition, grading and retaining walls, erosion control, concrete paving, asphalt paving, traditional curb and gutter, sand volleyball court, sanitary, water, steam, chilled water, storm sewer. Stormwater discharges to municipal storm sewer in Farwell Street. Sanitary and water services were provided from adjacent public right of way.			
Mechanical & Electrical Specification: (Brief description of mechanical & electrical systems.)			
Campus steam and chilled water are used to heat and cool building. Four pipe fan coils are used in the resident rooms. The building has 2 energy recovery units for ventilation and 2 air handlers to serve common areas. Ventilation was provided to each room by ducting to the return of the fan coil unit. Steam domestic water heaters and two small gas fired water heaters. Duplex water softeners for domestic hot water. Building is served from 4160 V campus loop with a 1200 A main panel. Emergency power is provided by a 200 kW generator.			
Special Features: (Brief description of special design, equipment, or Retail features of significant cost.)			
LEED-Gold. 30 hp, 750 gpm fire pump. Triplex booster pump package, 7.5 hp each. Technology systems include data, cable television, telecommunications grounding, area of rescue assistance system, audio video rough-in, doorbell system, CCTV camera rough-in including cabling, access control on exterior doors and ADA rooms, access control rough-in on all other suite doors and telecom rooms. Individual suite metering of electrical loads			



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

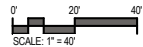


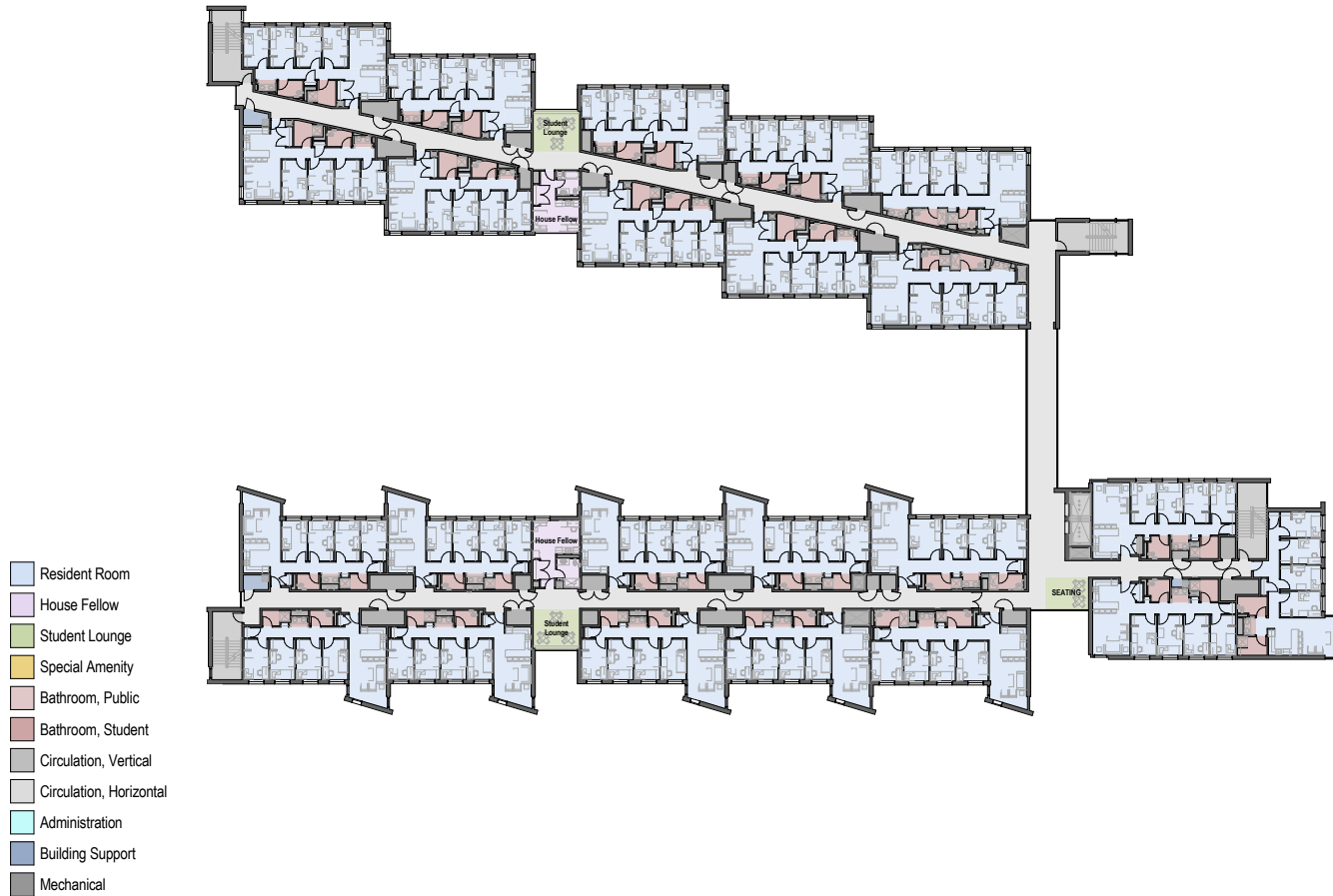
Basement Floor Plan Diagram





Entry Floor Plan Diagram

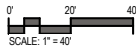


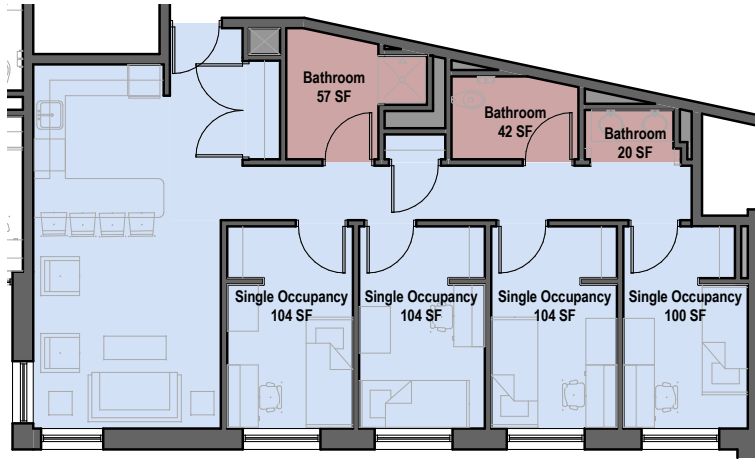


- Resident Room
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- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



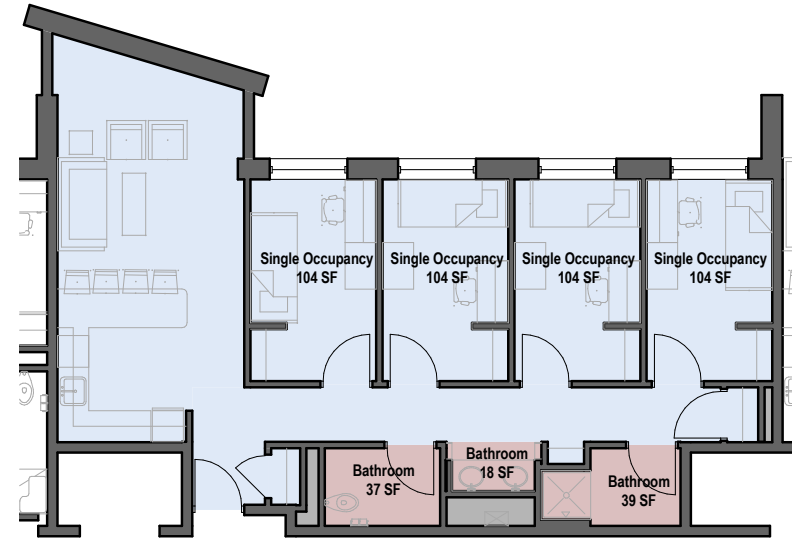
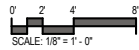
Typical Residence Floor Plan Diagram





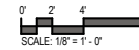
Suite A Gross Area 1111 SF

Typical Residence Suite A



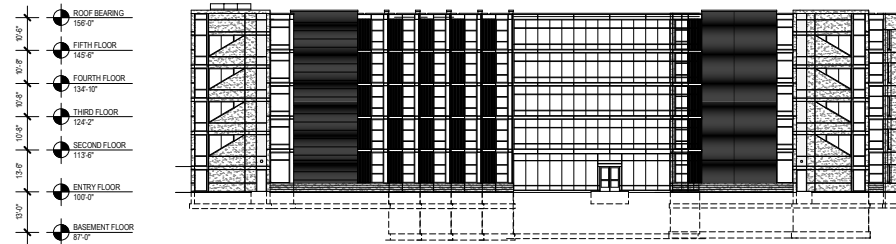
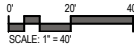
Suite B Gross Area 1096 SF

Typical Residence Suite B

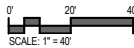




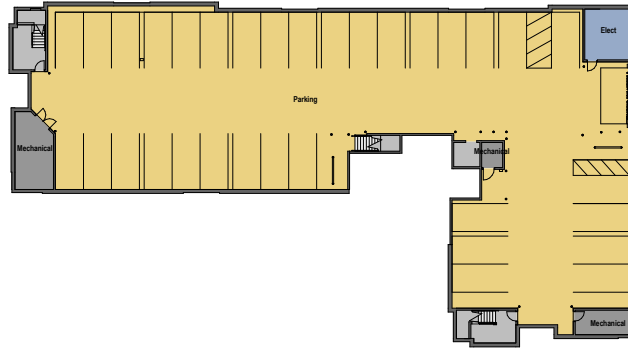
Representative North Wing North Elevation



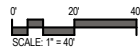
Representative West Elevation



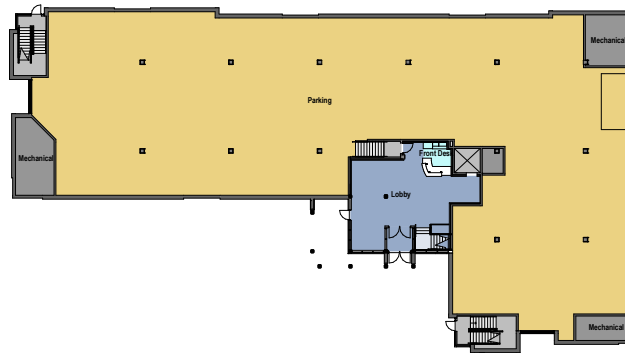
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



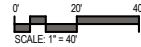
Lower Floor Plan Diagram



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



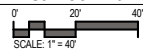
Entry Floor Plan Diagram



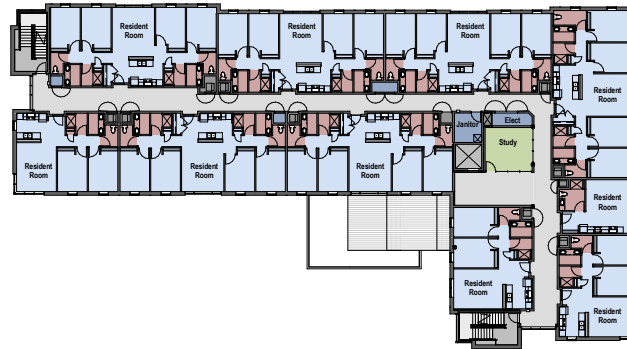
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



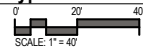
First Floor Plan Diagram

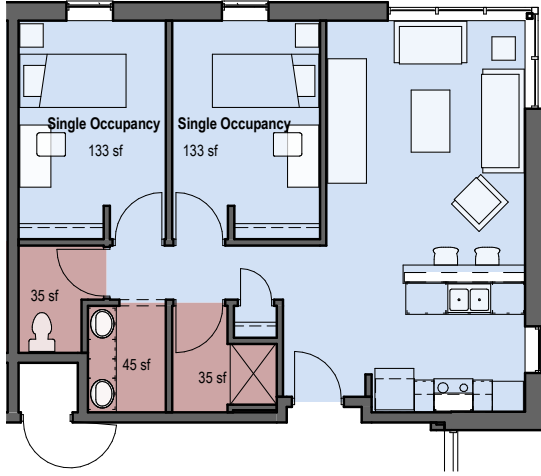


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



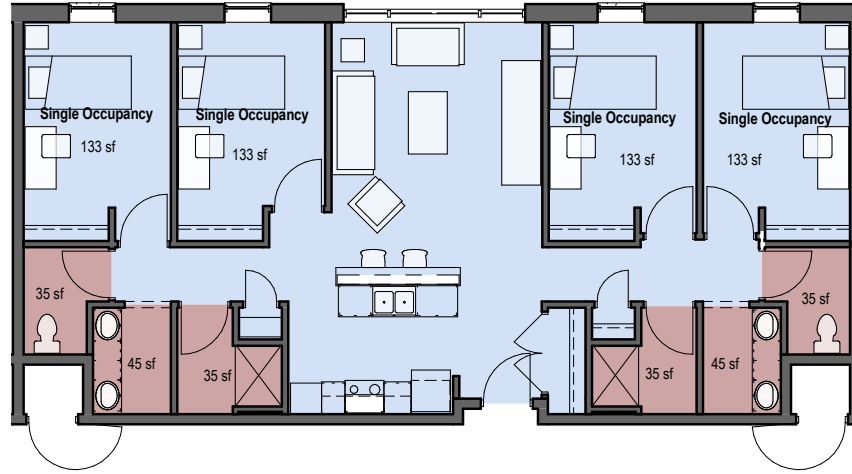
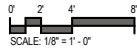
Typical Floor Plan Diagram





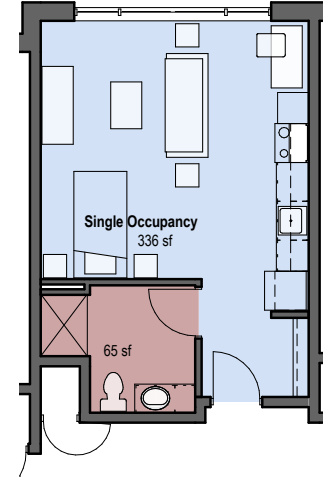
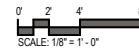
Residence Room Gross Area 810 SF

Typical Unit A Plan Diagram



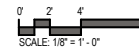
Residence Room Gross Area 1,377 SF

Typical Unit B Plan Diagram



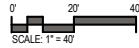
Residence Room Gross Area 465 SF

Typical Unit C Plan Diagram

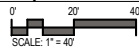




Representative East Elevation



Representative West Elevation



12A3G Information Collection Summary Spreadsheet

8/27/2012	Traditional Process: DFD											Foundation/Non-Traditional Led					Private	
	02G3H	08B3M	06K2R	10G3D	04D11	08K3J	06K1G	09D2H	07K2R	02H2J	06C1Q	UW Madison Smith Hall	UW Milwaukee Cambridge Commons	UW Milwaukee Riverview	UW Platteville Routee Commons	UW Platteville Southwest Hall	Vincennes University, Clare Apartments, La Crose	
Building Data	UW La Crosse Reuter Hall	UW La Crosse Eagle Hall (Freshmen-Sophmore)	UW Madison Lakeshore Res Hall Phase I	UW Madison Lakeshore Res Hall Phase II (Freshmen)	UW Madison Ogle Hall	UW Oshkosh Residence Hall	UW Parkside Pike River Suites	UW River Falls South Forks Suites Addition	UW Stevens Point Residence Hall	UW Stout Red Cedar Hall	UW Whitewater Residence Hall	Zimmerman Architectural Studios	HGA Architects	Epstein Uhen Architects with Mackey Mitchell	HGA Architects	Plunkett Raysich Architects	Epstein Uhen Architects	
Lead A/E	Epstein Uhen Architects	Epstein Uhen Architects	Engberg Anderson with Mackey Mitchell	Epstein Uhen Architects	Lilien Wilson with Booth Hansen	Berners-Schober with VOA assoc.	Epstein Uhen Architects	SDS Architects with ESG	Engberg Anderson with Mackey Mitchell	SDS Architects with ESG	Potter Lawson with Cannon Design	Zimmerman Architectural Studios	HGA Architects	Epstein Uhen Architects with Mackey Mitchell	HGA Architects	Plunkett Raysich Architects	Epstein Uhen Architects	
Year Bid	2004	2009	2011	2011	2005	2010	2008	2011	2008	2003	2008	2004	2007	2005	2011	2005	2011	
Total Construction Cost	\$18,504,155	\$24,970,320	\$39,891,506	\$12,766,220	\$25,883,703	\$26,947,093	\$14,978,975	\$15,976,484	\$18,308,551	\$14,321,694	\$29,710,165	\$30,054,232	\$33,745,000	\$20,363,670	\$16,422,312	\$17,500,000	\$7,643,895	
Cost/SF	\$112	\$109	\$121	\$121	\$198	\$164	\$161	\$190	\$120	\$120	\$151	\$189	\$148	\$139	\$107	\$114	\$102	
Cost/Bed	\$48,440	\$49,544	\$94,084	\$71,720	\$42,087	\$79,256	\$59,916	\$65,747	\$55,146	\$47,111	\$66,317	\$70,716	\$48,070	\$41,729	\$26,402	\$45,812	\$64,779	
Cost/SF 2013	\$137	\$115	\$179	\$203	\$147	\$168	\$173	\$194	\$140	\$146	\$163	\$230	\$197	\$169	\$110	\$138	\$105	
Cost/SF 2013	\$58,908	\$52,022	\$96,436	\$73,513	\$51,178	\$81,238	\$64,410	\$67,391	\$59,282	\$57,287	\$71,291	\$85,990	\$64,733	\$50,742	\$27,062	\$55,707	\$66,398	
Classification of Construction	II-B	II-B	II-B	II-B	II-B	II-B (assumed)	II-B	II-B	II-A	II-B (assumed)	II-B	I-A (assumed)	0	II-A	I-A below II-A	II-B	II-B over I-A	
Housing Type	Type 3	Type 2	Type 2	Type 2	Type 3	Type 3	Type 2	Type 2	Type 3	Type 3	Type 3	Type 2	Type 2	Type 2	Type 3	Type 3	Type 3	
Gross SF	164,589	228,248	228,639	64,501	214,533	164,354	93,287	84,288	140,755	119,177	196,200	158,733	228,652	146,720	153,068	154,157	74,972	
GSF/Bed (Total Building)	431	453	539	362	349	483	373	347	424	392	438	373	326	301	246	404	635	
"Residence Hall" area SF	137,721	190,415	171,101	51,320	174,692	128,821	79,075	67,305	113,752	114,623	176,223	124,642	144,424	102,149	127,610	132,158	55,588	
GSF/Bed ("Residence Hall" Only)	361	378	404	288	284	379	316	277	343	377	393	293	206	209	205	346	471	
Floors Below Grade	1.0	1.0	1.0	0.5	1.0	1.0	0.5	0.0	1.0	0.5	0.8	0.0	1	1.5	0.2	0.2	1.0	
Floors Above Grade	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	5.5	5.0	6.0	4.0	
Cubic Feet of Building Volume	1,577,252	2,369,207	3,134,820	598,460	2,412,343	2,215,530	1,128,672	1,237,150	1,666,650	1,224,262	2,233,677	1,886,241	2,040,348	1,143,116	1,676,031	1,515,648	709,718	
Total No of Beds (Resident/Staff)	382	504	424	178	615	340	250	243	332	304	448	425	702	488	672	382	118	
No of Dwelling Units:	96	270	213	92	313	191	13	13	83	304	96	246	189	130	121	96	38	
SF of Developed Site Area	159,310	186,200	373,650	136,000	84,659	210,075	163,800	163,800	85,710	193,725	145,012	85,550	0	0	58,580	0	40,000	
SF of Roof Area	27,442	41,836	63,551	13,010	32,285	31,366	21,900	16,803	26,190	24,141	37,940	26,455	36,952	26,211	25,918	29,978	15,056	
No Elevator Stops	6	12	18	6	21	14	5	4	8	12	12	21	30	17	14	12	6	
Number of Plumbing Fixtures	514	626	429	196	568	215	257	229	431	447	513	512	874	509	728	854	331	
Bed/Bath Ratio	4 to 1	4 to 1	10 to 1	9.5 to 1	8 to 1	2 to 1	6 to 1	5.5 to 1	4 to 1	4 to 1	4 to 1	5 to 1	4 to 1	4 to 1	4 to 1	4 to 1	2 to 1	
MBH Heating Capacity	5545 MBH	6533 MBH	11230 MBH	3500 MBH	11533 MBH	5795 MBH	4400 MBH	3800 MBH	5335 MBH	0	12827 MBH	5295 MBH	0	3239 MBH	4350 MBH	3748 MBH	1,885	
MBH Cooling Capacity	312 MBH	5010 MBH	6500 MBH	1485 MBH	5220 MBH	4200 MBH	1714 MBH	1980 MBH	0	7208 MBH	0	4314 MBH	0	2343 MBH	0	2400 MBH	1,134	
SF Fire Protection	164,530	227,548	226,989	64,501	221,879	164,354	96,683	84,288	140,755	0	196,200	158,733	Complete	0	Complete	Complete	0	
KVA Electrical Capacity	415 KVA	997 KVA	2078 KVA	524 Demand	831 KVA	831 KVA	1330 KVA	720 KVA	0	831 KVA	1662 KVA	1662 KVA	2078 KVA	1662 KVA	997 KVA	0	0	
Cost Data Sources:	DOA-4265, Bid Tab, System, Other	DOA-4265	DFD SOV	DFD SOV	Bid Tab	DOA-4265	DFD PM	DOA-4265	DFD SOV	DOA 4265	DFD SOV	DOA-4265	System	System	AIA G703	AIA G703	System	AIA G703
General Construction	\$12,085,260	\$15,001,147	\$0	\$6,969,242	\$16,395,272	\$17,932,950	\$9,759,090	\$9,041,011	\$11,780,639	\$9,095,653	\$17,601,858	\$0	\$0	\$1,805,478	\$11,103,700	\$0	\$0	\$4,870,725
Structure	\$3,270,735	\$2,989,254	\$4,195,553	\$0	\$5,094,044	\$0	\$4,680,660	\$2,752,476	\$3,975,852	\$2,964,631	\$6,077,547	\$0	\$0	\$3,489,726	\$4,212,634	\$0	\$0	\$1,023,117
Envelope	\$3,986,950	\$4,030,729	\$5,541,989	\$0	\$5,151,513	\$0	\$1,175,000	\$2,533,893	\$2,434,877	\$2,491,000	\$5,199,125	\$0	\$0	\$2,586,369	\$1,429,676	\$0	\$0	\$1,283,200
Interior	\$3,916,600	\$6,933,664	\$13,395,463	\$0	\$6,438,117	\$0	\$2,684,050	\$2,974,377	\$4,036,536	\$2,584,000	\$5,190,520	\$0	\$0	\$5,199,741	\$4,121,432	\$0	\$0	\$2,089,800
General Conditions	\$584,165	\$686,957	\$2,430,102	\$0	\$1,390,396	\$0	\$1,109,380	\$635,365	\$1,061,601	\$685,500	\$899,021	\$0	\$0	\$1,176,654	\$981,318	\$0	\$0	\$373,558
Elevator	\$326,810	\$314,115	\$574,250	\$198,060	\$521,202	\$0	\$110,000	\$144,900	\$271,773	\$210,000	\$235,645	\$0	\$0	\$330,600	\$358,640	\$0	\$0	\$86,050
Special Construction/Equipment	\$0	\$46,428	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160,522	\$0	\$0	\$0	\$203,585	\$0	\$0	\$0	\$15,000
Electrical Work:	\$2,051,490	\$2,956,657	\$3,737,000	\$1,898,050	\$3,379,238	\$3,339,107	\$1,647,755	\$1,723,645	\$1,836,542	\$1,798,394	\$4,275,790	\$0	\$0	\$1,310,833	\$1,471,068	\$0	\$0	\$685,350
Power/Lighting	\$1,198,990	\$2,275,991	\$3,958,353	\$0	\$2,500,744	\$0	\$1,123,755	\$1,352,295	\$1,719,202	\$0	\$2,621,841	\$0	\$0	\$0	\$0	\$0	\$0	\$0
A/V	\$3,000	\$34,863	\$0	\$0	\$15,946	\$0	\$0	\$5,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Voice/Data	\$200,000	\$441,132	\$0	\$426,317	\$0	\$216,000	\$175,250	\$150,822	\$0	\$783,608	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fire Alarm/Security	\$545,500	\$103,671	\$271,000	\$0	\$374,101	\$0	\$243,000	\$195,100	\$397,545	\$0	\$768,341	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Emergency Power	\$104,000	\$101,000	\$98,500	\$0	\$62,130	\$0	\$60,000	\$26,900	\$86,973	\$0	\$102,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Mechanical Work	\$3,435,775	\$6,281,524	\$7,614,829	\$2,362,868	\$5,322,813	\$5,675,036	\$2,686,080	\$3,790,365	\$3,869,702	\$2,559,647	\$5,547,476	\$0	\$0	\$3,128,232	\$2,842,110	\$0	\$0	\$1,834,820
Plumbing	\$945,310	\$1,596,964	\$2,058,326	\$1,436,009	\$1,177,277	\$713,075	\$751,565	\$1,111,563	\$718,495	\$1,671,169	\$0	\$0	\$0	\$1,021,204	\$945,405	\$0	\$0	\$535,540
Fire Protection	\$417,900	\$425,140	\$517,986	\$132,000	\$497,239	\$374,883	\$235,330	\$219,800	\$347,490	\$273,970	\$998,593	\$0	\$0	\$293,593	\$345,070	\$0	\$0	\$117,690
HVAC	\$1,949,070	\$3,967,730	\$4,989,667	\$1,729,580	\$2,826,636	\$4,122,876	\$1,625,200	\$2,652,600	\$2,256,834	\$1,567,182	\$3,419,034	\$0	\$0	\$1,793,435	\$1,551,635	\$0	\$0	\$1,961,590
TAB	\$20,350	\$35,000	\$48,890	\$0	\$35,999	\$0	\$5,000	\$0	\$30,000	\$0	\$58,680	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Energy Mgmt Systems	\$103,145	\$256,690	\$0	\$0	\$526,930	\$0	\$87,175	\$101,400	\$123,815	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Site Work	\$931,630	\$730,992	\$0	\$1,338,000	\$786,380	\$0	\$886,050	\$1,395,563	\$821,668	\$868,000	\$1,185,041	\$0	\$0	\$1,152,452	\$1,005,434	\$0	\$0	\$868,000
Site Preparation	\$487,860	\$299,325	\$845,530	\$0	\$206,497	\$0	\$550,000	\$435,428	\$304,123	\$633,000	\$657,683	\$0	\$0	\$476,400	\$556,606	\$0	\$0	\$165,000
Site Development	\$220,495	\$276,891	\$718,817	\$0	\$378,674	\$0	\$149,980	\$580,735	\$225,440	\$158,000	\$277,206	\$0	\$0	\$676,052	\$340,047	\$0	\$0	\$88,000
Site Utilities	\$223,275	\$154,776	\$247,300	\$0	\$201,209	\$0	\$186,070	\$379,400	\$292,105	\$75,000	\$250,152	\$0	\$0	\$108,781	\$0	\$0	\$0	\$0

Definitions: Housing Type

Type 1 Double occupancy rooms with common bathrooms (gang) on each floor. This is the most common type of housing in the system, built primarily in the 1950's and 1960's.

Type 2 Double occupancy rooms, with shared bathrooms that range from four, eight to twelve students sharing a common bathroom. Bathrooms are internal between rooms or external accessible from the hallway. External bathrooms are locked and only accessible by the students within the area. Examples include: UW-Parkside, Ranger Hall (1997); UW-Madison, Park Street (2006); UW-Madison, Dayton Street (2007)

Type 3 This style of housing provides small single occupancy rooms with shared bathroom, living area and kitchen or kitchenette. There are often called 'suite' or 'apartment' style units. This is the most common type of housing built in the last five years. Examples include: UW-Eau Claire, Chancellors Hall (2000); UW-Milwaukee, Sandburg Hall (2002); UW-Stout (2005); UW-River Falls (2005); UW-La Crosse (2006); UW-GreenBay (2002, 2003, 2004)

Type 4 This style of housing is primarily for graduates or upper class students. The housing can range from studio, one or two bedroom apartments where either a single person or whole family can live. Examples include: UW-Madison, Eagle Heights; UW-Milwaukee, Kenilworth (2008)

Residence Hall GSF of the following areas within the building: Resident Bathrooms, Public Bathrooms, Basement Alt/Storage, General Circulation, Housefellow/Hall Director, Mechanical, Residence Rooms and Study/ Lounge

Section 2: Planning Document

The following chart provides a simple comparison of the sizes and costs of 5 representative housing projects.

August 29, 2012	12A3G: UW System Housing Study - Executive Comparison of Selected Residence Halls													
Residence Hall	Date Decision Made to Build	Month - Year Bid	Agency & Method Used	Date of Occupancy	Gross Square Feet	Overall Project Cost	Construction Cost	Const Cost per Square Foot	Const cost per Bed	Cost per sf 2013	Cost per bed 2013	Number of Beds	Average Unit Size	Bed:Bath Ratio
UW Platteville - Rountree Commons	Dec-09	Jan-11	Foundation Led	Aug-12	153,068	\$18,615,629	\$16,422,312	\$107	\$26,402	\$108	\$26,666	622	600	4 to 1
UW Madison - Ogg Hall	Jul-04	Sep-05	Traditional D-B-B	Jul-07	214,533	\$35,900,000	\$25,883,703	\$121	\$42,087	\$147	\$51,178	615	254	8 to 1
UW La Crosse - Reuter Hall	Sep-02	Dec-04	Traditional D-B-B	Jul-06	164,583	\$22,359,000	\$18,504,155	\$112	\$48,440	\$137	\$58,903	382	1,020	4 to 1
UW Platteville - Southwest Hall	May-04	Mar-05	DB-LP	Aug-06	154,157	\$21,100,000	\$17,500,000	\$114	\$45,812	\$138	\$55,707	382	1,110	4 to 1
Viterbo University Clare Apartments	Mar-10	May-11	Negotiated GMP	Jul-12	74,972	\$8,056,895	\$7,643,895	\$102	\$64,779	\$103	\$65,427	118	1,065	2 to 1

Space planning commentary:

Demand Analysis: It is strongly recommended that each campus conduct a thorough and accurate assessment of their current housing stock compared to future housing demand in order to identify demand, options, construction costs, and operational costs. This assessment should include an analysis to determine whether or not to remodel, replace, add new, or some combination of these options to address housing needs.

Dwelling Unit Configuration: It is recommended that User Agencies review their current mix of housing types, review their current and future demand, and then focus their planning efforts on a unit type that meets demand. Unit types and support space types recommended for freshmen, sophomores, and upper division students all differ. Additionally, the choice of size and location of lounge spaces and other support spaces will have an impact on the student experience in the hall, but also the first cost and operating cost of the hall, and should be considered carefully. The trends over the past 7 years show a user agency preference to have suite style units for freshmen and sophomores with a two occupant bedroom and 4 to 5 occupants sharing a bathroom with in the suite, and apartment style units for upper division students. Apartment style units constructed at UW campuses over the past 7 years are almost universally configured as 4 single occupant bedrooms, one bathroom (split into separate rooms for toilet, shower and lavatories), a fully functional kitchen, and a living room.

Bathroom configuration: All but one UW institution are building residence halls that have bathrooms accessed from within the suites. Bathrooms designed to have separate enclosure of showers, toilets and lavatories have an efficiency that minimizes the quantity of fixtures while maximizing the ability of occupants to use them concurrently with privacy. This applies to both suite style units and apartment style units. Another bathroom planning issue that is commonly debated is how many bathrooms to provide for a 4 bedroom apartment style unit. Two

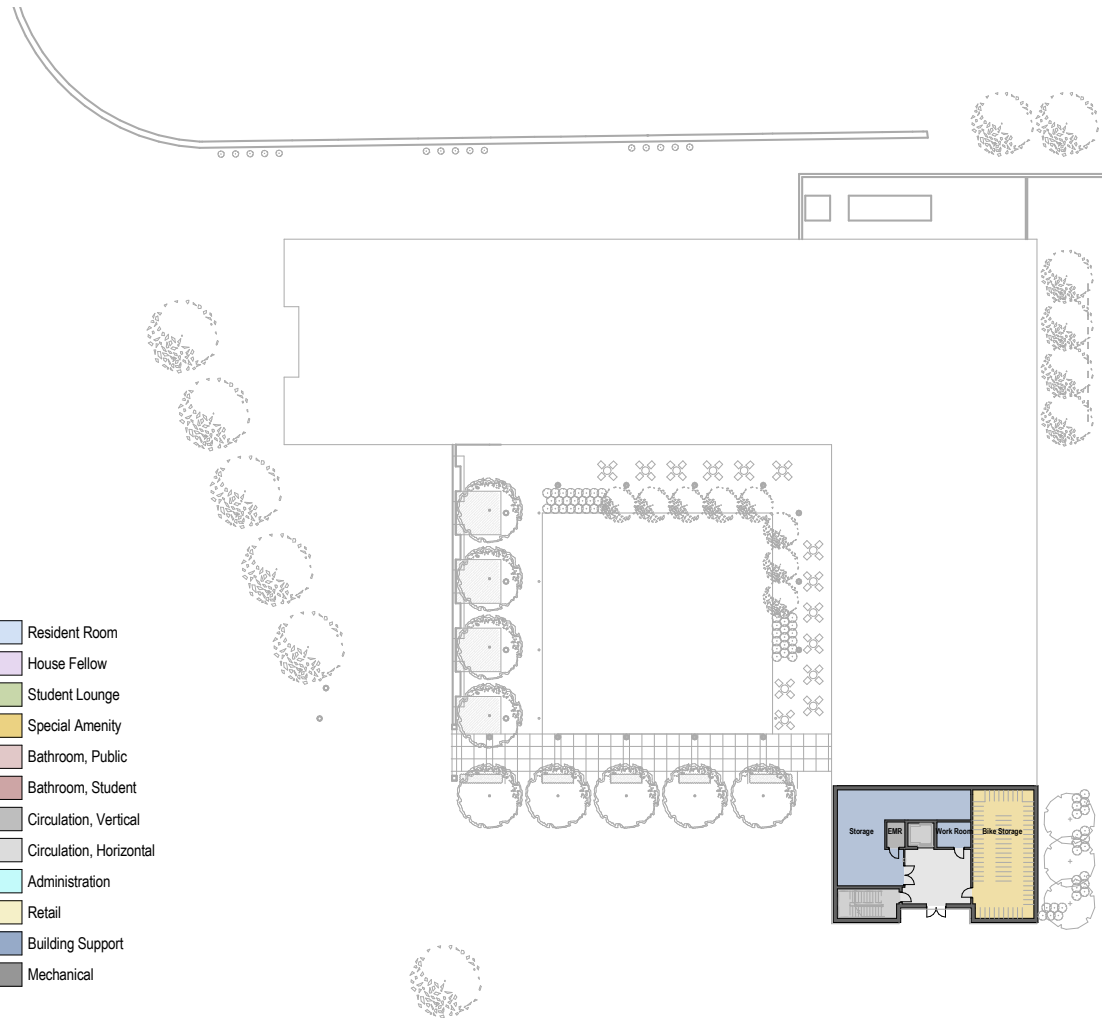
apartment style units designed for UW institutions have 2 bathrooms, and five have “one” bathroom with fixtures in separate enclosures. Privately developed projects are providing up to 4 bathrooms in a 4 bedroom unit, but rent received is commensurate with this added feature.

Lounge Configuration: Lounge space provided in the suite style buildings is generally provided in proximity to a “house” of 30 to 40 students, with the intent of having it be a gathering space outside of the suite where students can form a sense of community, and provide intra-house academic and social support. In the apartment style units, lounge space is far smaller, and is generally provided on the first floor, where it is used by all residents, with no sub-group of a “house” community, since upper division students are typically interested in more independence, and need less direct social and academic support.

Other spaces included in the analyzed Residence Halls are the following. User Agencies should thoroughly study campus needs and student demands, and carefully consider which of these support spaces are needed for their particular campus. These spaces have a large impact on first cost, operational cost and functionality:

1. Residence Hall Director Apartments
2. Staff Offices
3. Laundries
4. Entry lobbies
5. Service areas, storage, and loading docks
6. Full basements
7. Dining Facilities
8. Academic classrooms
9. Computer labs
10. Study rooms
11. Large meeting spaces capable of accommodating all hall meetings
12. Enclosed bike parking
13. Enclosed scooter parking
14. Enclosed automobile parking

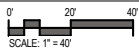
The following illustrations provide information on the building floor plans and dwelling unit plans for the 5 representative projects studied in this section:



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Retail
- Building Support
- Mechanical

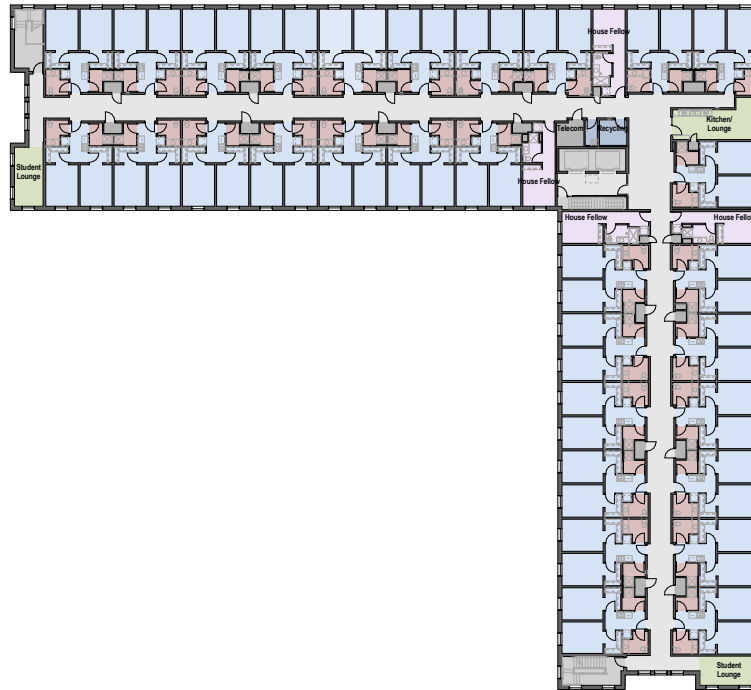


Basement Floor Plan Diagram



UW Platteville - Rountree Commons

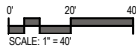


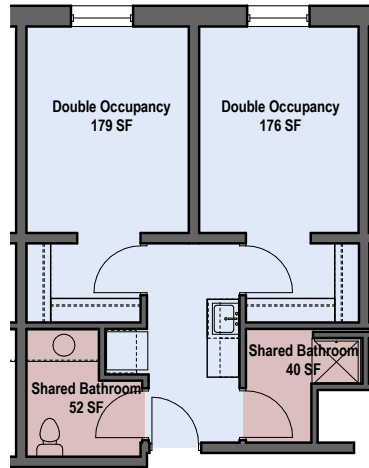


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
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- Circulation, Vertical
- Circulation, Horizontal
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- Retail
- Building Support
- Mechanical



Typical Residence Floor Plan Diagram

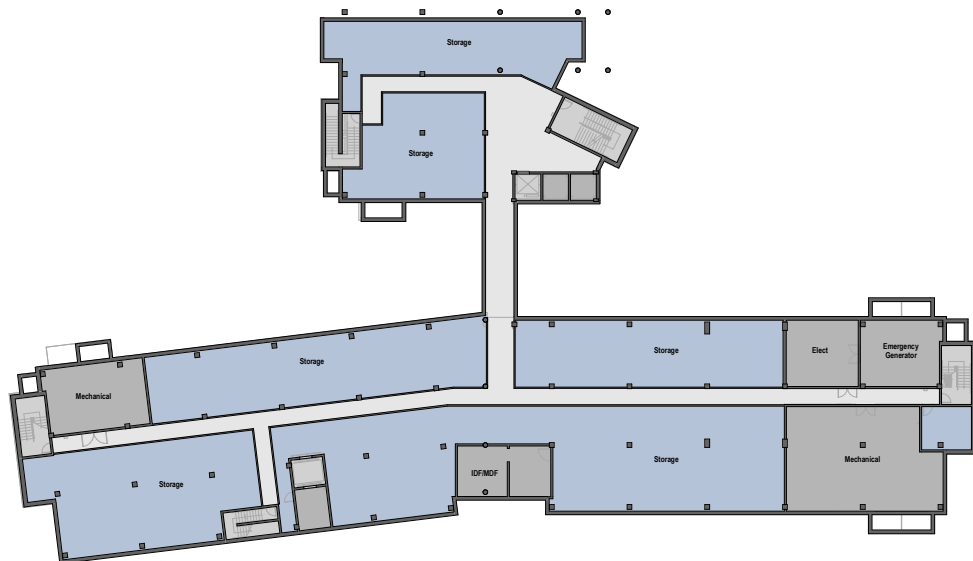




Residence Room Gross Area 606 SF

Typical Residence Room

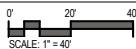




- Resident Room
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- Circulation, Vertical
- Circulation, Horizontal
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- Building Support
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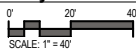


Basement Floor Plan Diagram





Entry Floor Plan Diagram

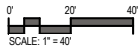


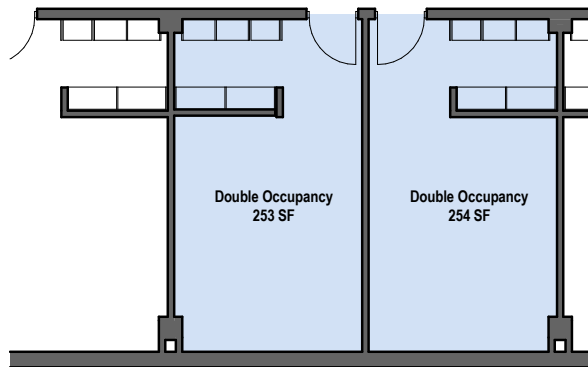
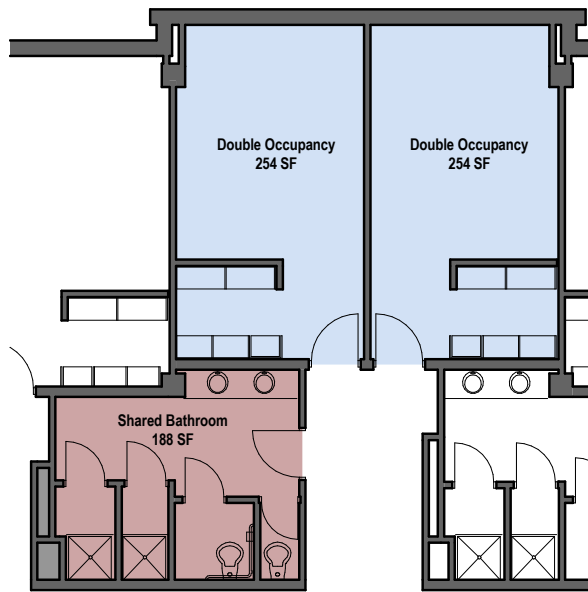


- Resident Room
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- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

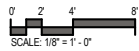


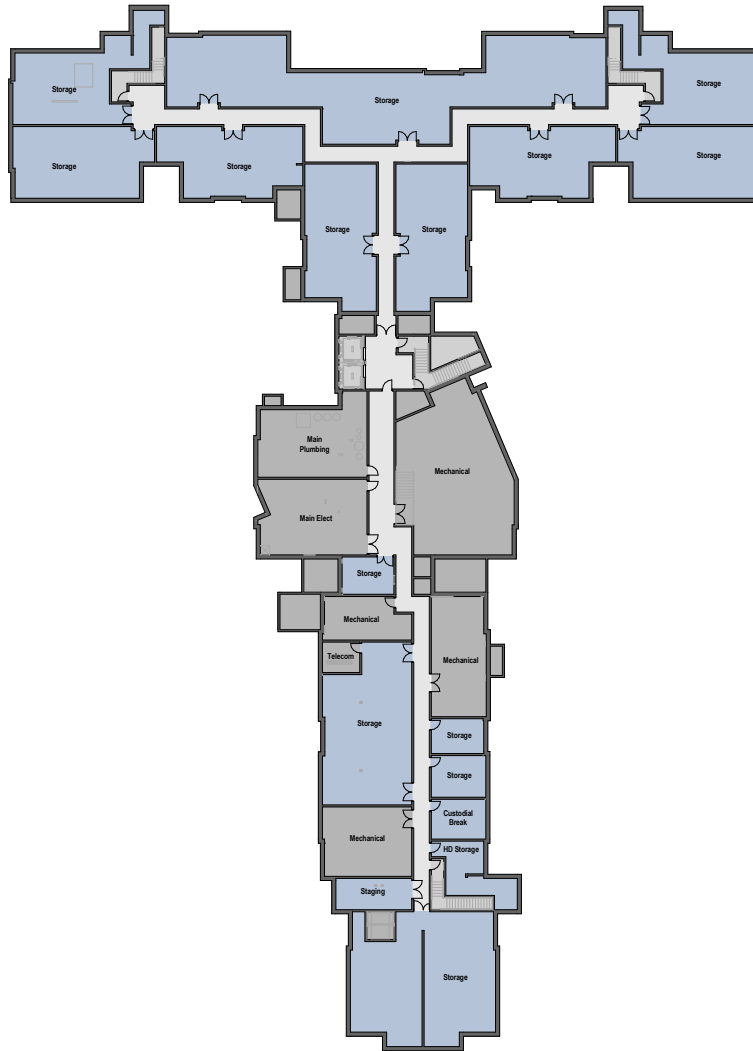
Typical Floor Plan Diagram





Typical Residence Rooms

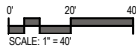




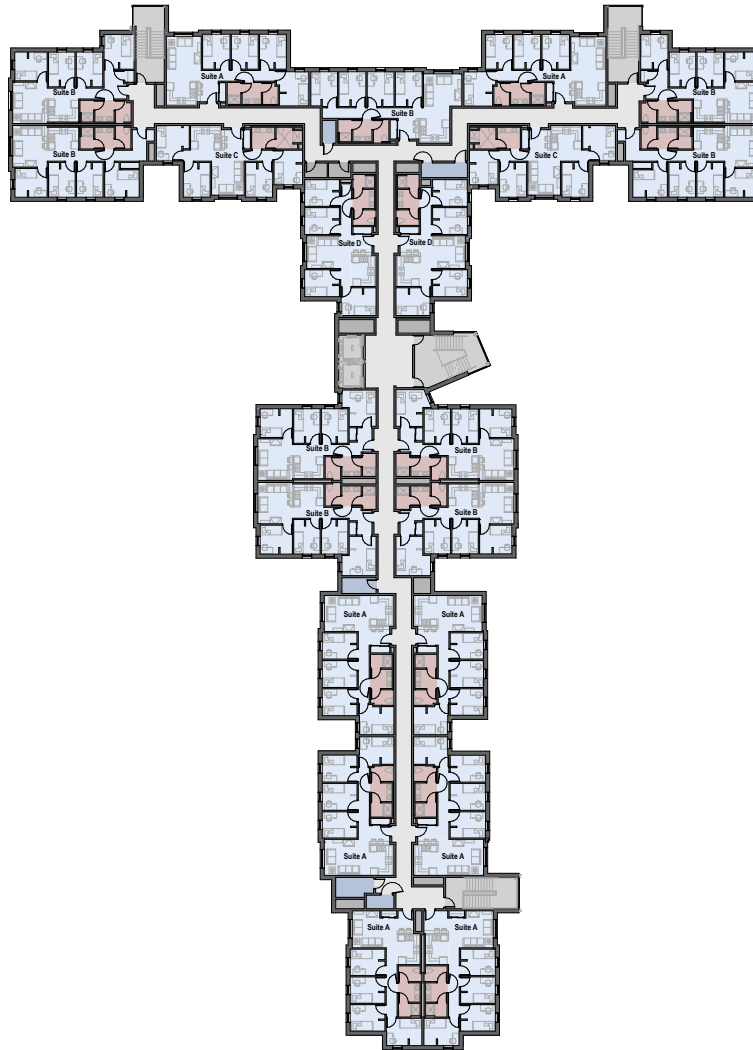
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Basement Floor Plan Diagram



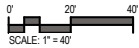


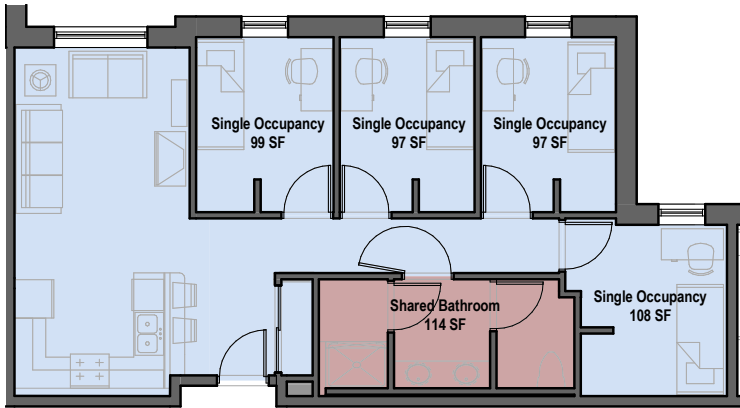


- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



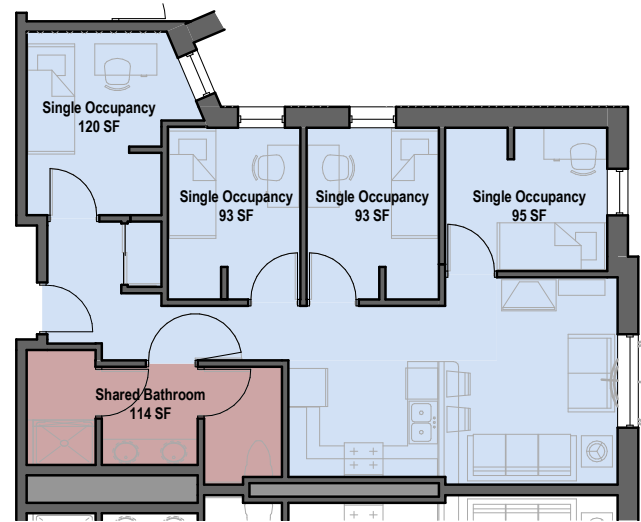
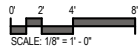
Typical Floor Plan Diagram





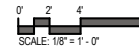
Suite A Gross Area 1020 SF

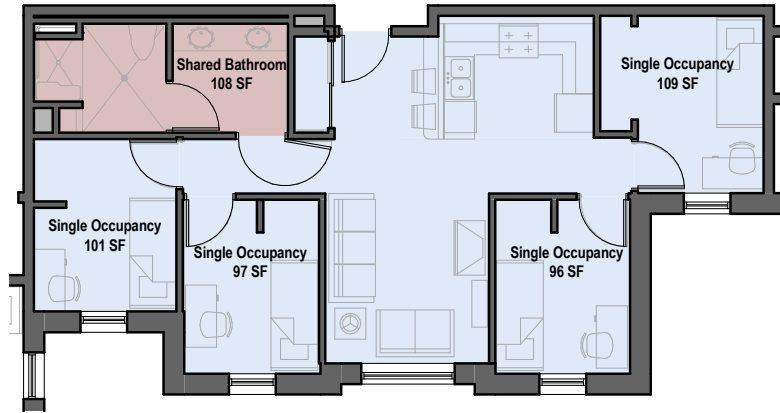
Typical Residence Suite Type A



Suite B Gross Area 982 SF

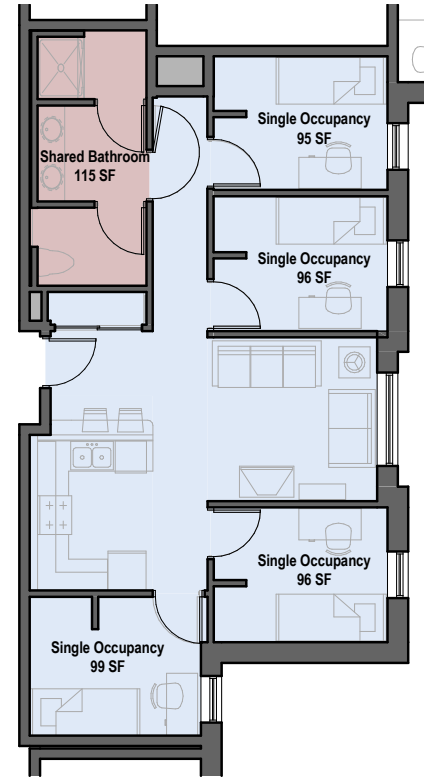
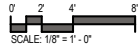
Typical Residence Suite Type B





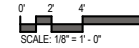
Suite C Gross Area 923 SF

Typical Residence Suite Type C



Suite D Gross Area 928 SF

Typical Residence Suite Type D

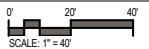




- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



Basement Floor Plan Diagram





- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical

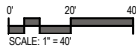
Entry Floor Plan Diagram
 0' 20' 40'
 SCALE: 1" = 40'

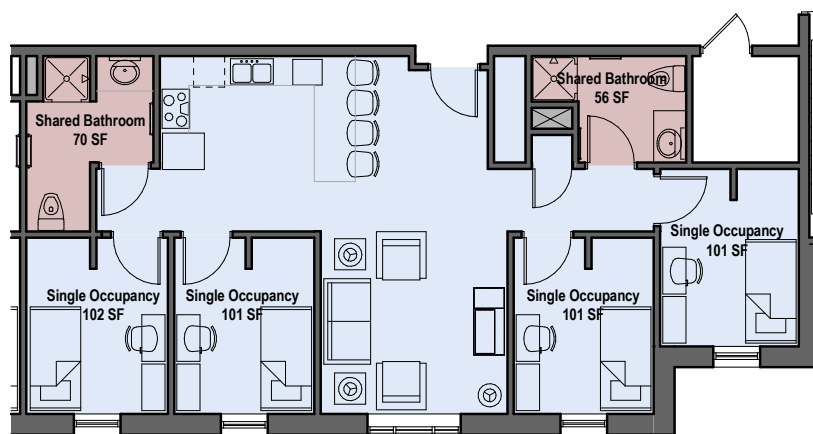


- Resident Room
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- Student Lounge
- Special Amenity
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- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
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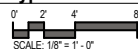
Typical Residence Floor Plan Diagram



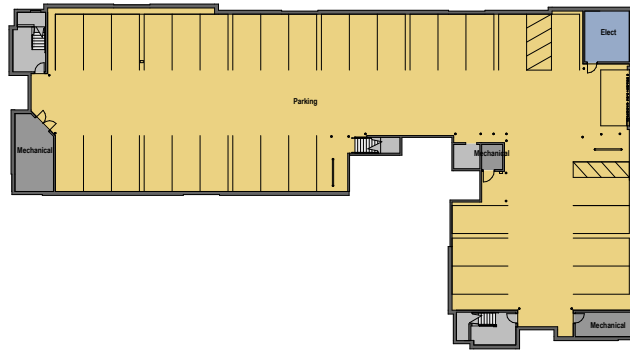


Suite Gross Area 1109 SF

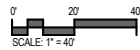
Typical Residence Suite



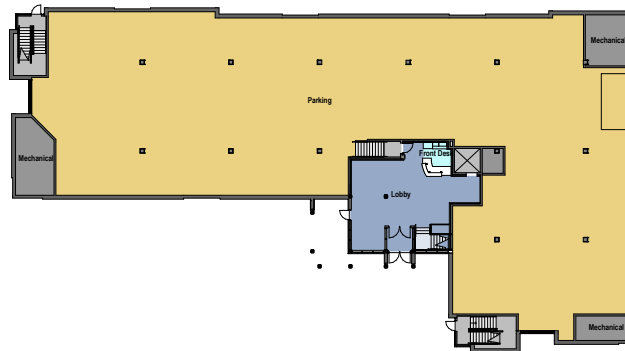
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



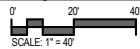
Lower Floor Plan Diagram



- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



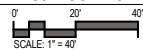
Entry Floor Plan Diagram



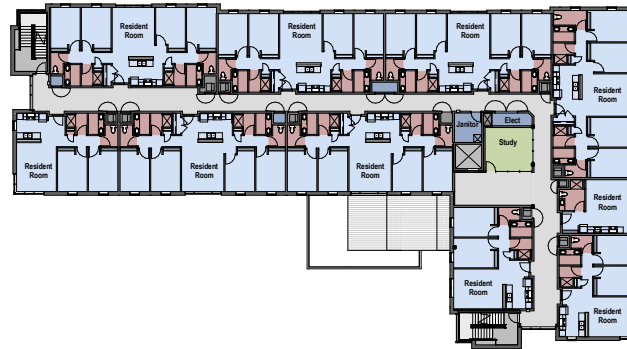
- Resident Room
- House Fellow
- Student Lounge
- Special Amenity
- Food Service
- Bathroom, Public
- Bathroom, Student
- Circulation, Vertical
- Circulation, Horizontal
- Administration
- Building Support
- Mechanical



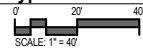
First Floor Plan Diagram

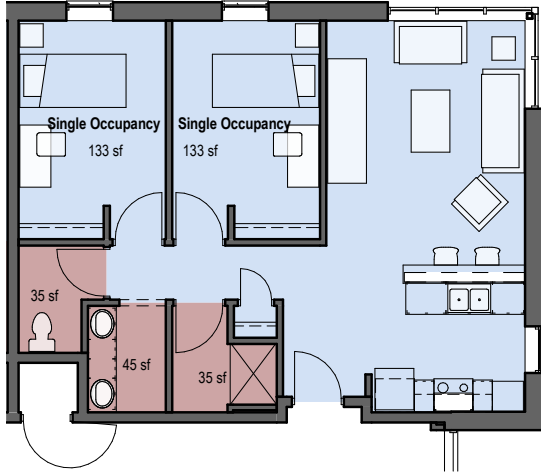


- Resident Room
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- Circulation, Vertical
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- Administration
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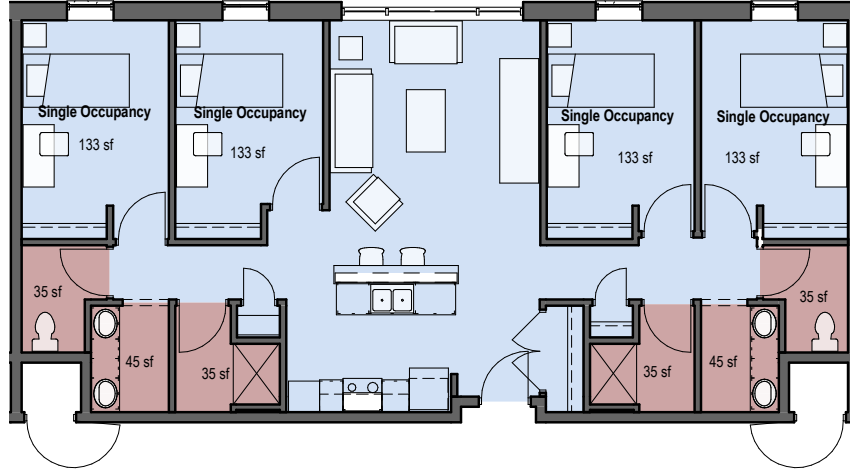
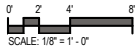
Typical Floor Plan Diagram





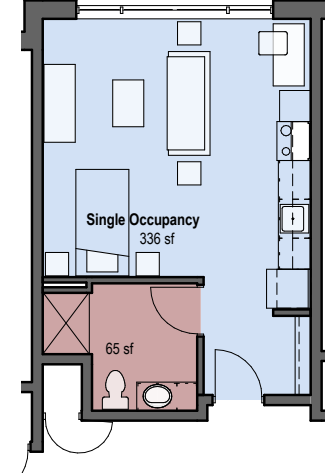
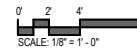
Residence Room Gross Area 810 SF

Typical Unit A Plan Diagram



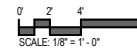
Residence Room Gross Area 1,377 SF

Typical Unit B Plan Diagram



Residence Room Gross Area 465 SF

Typical Unit C Plan Diagram



Construction and MEP Systems Planning

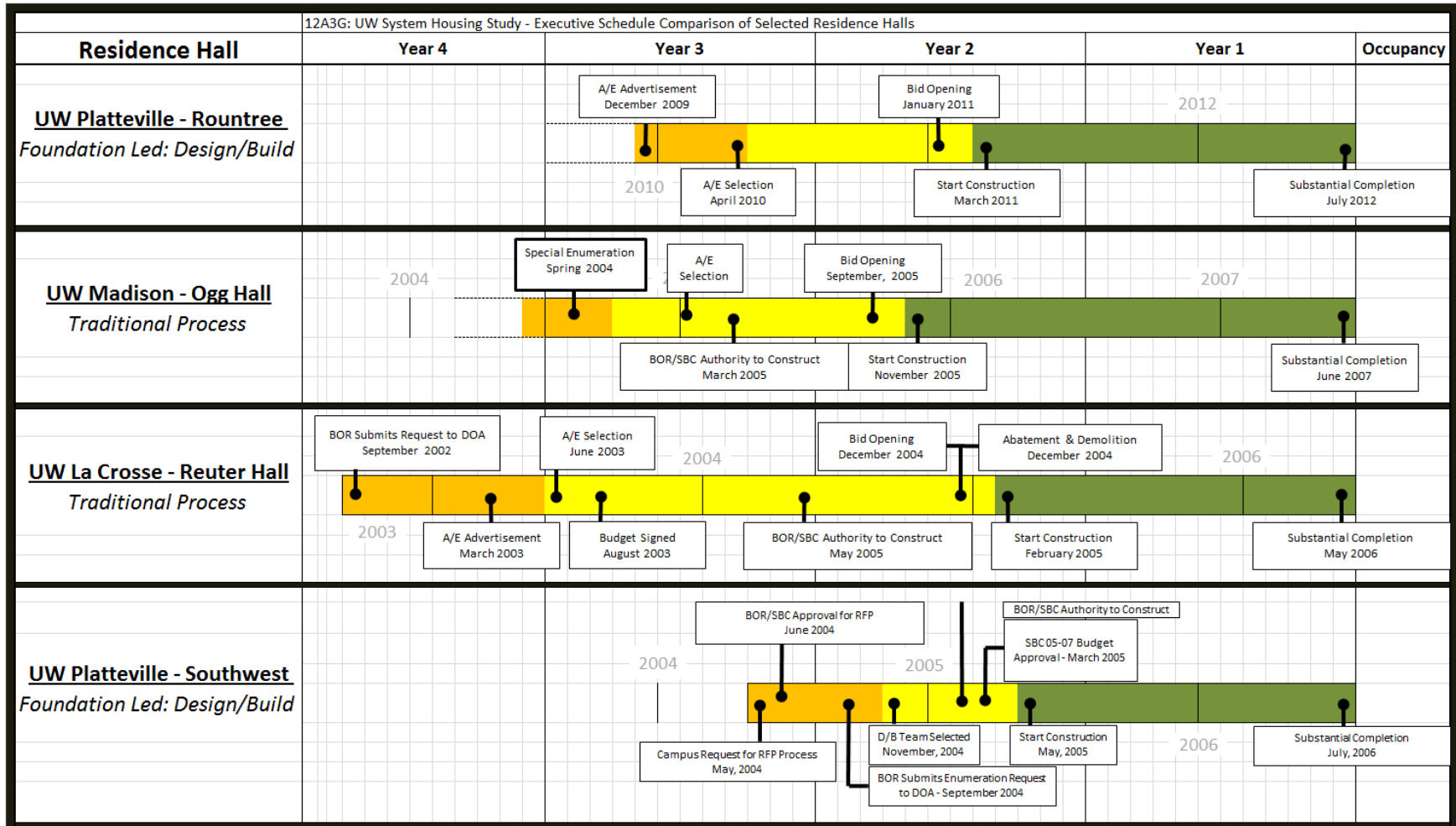
The following matrix provides a simplified overview of recommended construction standards, life spans, efficiencies and costs, and compares them to other construction standards, life spans, efficiencies and costs. Costs and lifespans are provided to illustrate order of magnitude differences for planning purposes. Actual costs and lifespans will vary based on actual elements included in projects. Recommended systems are rooted in the philosophy that you should prioritize funds for quality systems in those areas that are hardest to fix and/or provide the best payback on efficiency.

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
configuration	Owner Choice based on market demand and exit strategy, typically apartment style. Common & Support areas provided at minimum amount demanded by market. Indoor parking provided	User Agency Choice based on market demand. Common & Support areas provided as determined to be necessary by Owner/User Agency	User Agency Choice based on market demand. Common & Support areas provided as determined to be necessary by User Agency	Add large group gathering spaces, full basements, classrooms, dining facilities, and/or indoor parking
superstructure	Can range from wood frame to metal studs, depending on size & height of building	Metal Stud, Steel, CMU or concrete	CMU or Concrete	Concrete column and mild steel flat plate, configured to allow for complete interior reconfiguration in the distant future
floor to floor heights, ceiling heights	10' floor to floor, 8' high ceilings in corridors, bathrooms and kitchens, 9' high ceilings in bedrooms and living rooms	10' floor to floor, 8' high ceilings in corridors, bathrooms and kitchens, 9' high ceilings in bedrooms and living rooms	12'-8" floor to floor, 9' high ceilings in corridors and bathrooms, 11' high ceilings in kitchens, bedrooms and living rooms	Higher floor to floor between first and second floor to accommodate higher ceilings in large meeting rooms
envelope	Can range from wood siding to brick. Exterior walls insulated with batt insulation. Minimal window size and quality. Pitched roof with asphalt shingles	Brick, metal panel. Exterior wall with rain screen air space, rigid and/or sprayed closed cell foam insulation. Larger window sizes to increase views and daylight. Medium range window quality and performance. Ballasted EPDM roofing	Brick, metal panel. Exterior wall with rain screen air space, rigid and/or sprayed closed cell foam insulation. Larger window sizes to increase views and daylight. High quality and performance windows. 30 year EPDM adhered roofing	Add stone, window shading devices, green roof, etc.
vertical circulation	One elevator, two exit stairs	One elevator, two exit stairs	One elevator, two exit stairs	Add another elevator, add central communicating stair
interior construction	Gyp board on wood or metal studs. Gyp board ceilings.	Gyp board on metal studs. Gyp board ceilings.	CMU in common areas, gyp board on metal studs inside dwelling units. Painted concrete ceilings in bedrooms and living rooms, moisture resistant gyp board ceilings in bathrooms and kitchens, ACT in corridors	Add skim coat plaster to CMU partitions, in common areas and/or inside dwelling units

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
interior finishes	Painted walls and ceilings, carpet in corridors, bedrooms, and living rooms. Sheet vinyl in bathrooms and kitchens	Painted walls and ceilings, carpet in corridors, bedrooms, and living rooms. Ceramic tile in bathrooms and kitchens	Painted walls and ceilings, carpet in corridors, bedrooms, and living rooms. Porcelain tile in bathrooms and kitchens	Terrazzo or stone flooring in main lobbies, wood look vinyl plank flooring in kitchens and living rooms
HVAC	"MagicPak" thru wall heating and cooling units	central hot water heating unit, chilled water cooling unit, piped to individual 4 pipe fan coil units serving each dwelling unit	Campus Utility system feeding steam and chilled water from a central plant to a building conversion system. Hot water and chilled water piped to individual 4 pipe fan coil units serving each dwelling unit	Added zones to provide individual room control instead of just overall dwelling unit control. Added fin pipe heating at outside walls to reduce chill effect. Add humidity control in basement storage spaces. Add mechanical ventilation of dwelling units. Add renewable energy sources
Plumbing	Residential grade plumbing fixtures and trim. Tank flush toilets. Gel coat fiberglass shower/tub units. Plastic supply and waste piping.	Commercial grade plumbing fixtures and trim. Tank flush toilets. Acrylic shower/tub units. Plastic supply and waste piping.	Institutional grade plumbing fixtures and trim. Valve flush toilets. Acrylic shower/tub units. Insulated copper supply and cast iron waste piping.	Dual flush toilets, Solid Surface shower stalls, dishwashers
Fire Protection	PEX flexible piping, conventional pendant heads	CPVC piping, concealed heads in dwelling units	Black steel main piping, CPVC branch piping, concealed heads throughout	Fire Pumps only if mandated by AHJ
Fire Alarm	Manual pull stations, individual smoke detectors	Manual pull stations, centrally monitored smoke/fire detectors	Manual pull stations, centrally monitored smoke/fire detectors, addressable paging	
Electrical	Residential grade devices and fixtures, non-metallic cable distribution.	Commercial grade devices and fixtures, metallic flexible cable distribution	Commercial grade devices and fixtures, metallic conduit distribution. Emergency Generator	Emergency Generator that can power more than life safety systems . Higher outlet density.
IT	Cat 6 and coax free air wired to each room	Cat 6 and coax free air wired to each room. Building-wide wireless internet access	Cat 6 and coax wired in conduit to each room. Building-wide wireless internet access	Additional IT outlets per pillow, fiber optic backbone, dense provision of wireless access points, ultra high speed internet service, paging system
Typical GSF per bed	665	320	410	
Typical cost per sf 2012	\$103	\$172	\$153	
Typical cost per bed 2012	\$68,500	\$55,190	\$63,275	
Anecdotal Lifespan Assumption	20 - 25	20 - 30	40 +	

Schedule Planning

The following matrix compares typical State of Wisconsin project tasks and timelines to tasks and timelines for other project delivery methods. Tasks and timelines are provided to illustrate order of magnitude differences between project delivery method. Actual project timeline will vary by user Agency and specific approach and task.



Section 3: Project Construction System and MEP System Component Planning Checklist

The following matrix provides a simplified narrative of options for construction components and mechanical, electrical, plumbing fire protection and information technology systems. This narrative is intended to provide a simplified overview of systems that are being constructed in the private sector for “basic code compliant” buildings, up to buildings compliant with DFD and UW System guidelines. In addition to this, there is a section that notes project enhancements that agencies could consider during their project scope definition process. Information provided herein is intended to encourage discussion about the functional necessity, first cost and operations cost of a variety of components that a user agency could include in a building. Each building will be different as it addresses the specific needs of the user agency, and the synergistic interrelationship of all of the components should also be considered along with the performance of the individual components.

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
General Parameters				
Functional Configuration	Owner Choice based on market demand and exit strategy, typically apartment style. Common & Support areas provided at minimum amount demanded by market. Indoor parking provided	User Agency Choice based on market demand. Common & Support areas provided as determined to be necessary by Owner/User Agency	User Agency Choice based on market demand. Common & Support areas provided as determined to be necessary by User Agency	Add large group gathering spaces, full basements, classrooms, dining facilities, and/or indoor parking
Project Delivery	Owner choice	User Agency and UW System Driven	User Agency, UW System, DSF, BOR, SBC Driven.	
Number of Approving Entities	Owner, Zoning, Building Code	User Agency, Zoning, Building Code. System, BOR and SBC involvement if State Bonding or buy back is requested.	User Agency, Zoning, Building Code, DSF, UW System, BOR, SBC, EIS	
Construction Delivery	Negotiated GMP, one general contractor, MEP Delivered design/build, early start packages	Negotiated, hard bid or GMP. Single Prime. MEP could be delivered design/build. Could have early start packages	Hard Bid. Multiple Prime Contractors	CM on board at beginning of project for cost & constructability input, all subcontracts hard bid, early start packages possible
Financing	Private	Private or Public Bonds	Public Bonds	
Debt Retirement/Depreciation	20 years	30 years	30 years	
Sustainability	Driven by Cost Savings, Market Perception	Driven by Parameters Determined to be appropriate by User Agency	Driven by DSF Sustainability Guidelines and Governor's Energy Conservation Policy	LEED or Green Globe Certified
Accessibility	ADAAG, ANSI, IBC	ADAAG, ANSI, IBC	ADAAG, ANSI, IBC, DSF Guidelines	Universal Design
Commissioning	Not done	User Agency Choice	DSF Guidelines	DSF Enhanced Commissioning
Daylighting	Not Done	User Agency Choice	DSF Guidelines	LEED or Green Globe Certified

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
Site				
Land Purchase	Land Purchased at Market Rate	Land Purchased at Market Rate	Existing Campus Land Utilized	
Zoning Compliance	Compliance with local zoning required	Compliance with local zoning required	Compliance with local zoning not required but usually complied with	
Demolition	Will leave below grade elements in place	Might leave below grade elements in place	Won't leave below grade elements in place	Don't leave below grade elements in place
Environmental Cleanup	EPA Compliant, encapsulation	EPA Compliant, encapsulation	EPA Compliant, complete remediation	
Utility Extensions	Minimum required for project functionality. Connection to public utilities	Minimum required for project functionality. Connection to public utilities	DSF compliant higher quality materials and installation. Connection to campus and public utilities	
Stormwater Management	Minimum required by local code, if any	As required by local code	As required by User Agency and DSF Guidelines	Rain Gardens, Green Roofs, Detention, and/or Retention
Irrigation	not provided	User Agency Choice	DSF Guidelines limit irrigation to playing fields	Full irrigation of all landscaping
Vehicular Parking	Provided as required by zoning and market demand	Provided as required by zoning and market demand	Usually consolidated with other parking on campus	Provide surface or structured parking for residents
Bicycle Parking	Provided as required by zoning and market demand	Provided as required by zoning and market demand	Usually provided per campus interpretation of occupant demand	Indoor bike parking
Paving	Asphalt & concrete curb	Asphalt & concrete curb	Asphalt or concrete, concrete curb & gutter	Pervious paving
Landscaping	Seeded grass turf, minimal ground plantings	Seeded grass turf, minimal ground plantings	Seeded grass turf & ground plantings consistent with campus standards	Sodded turf & ground plantings consistent with campus standards, plus outdoor gathering spaces
Recreational Facilities	not provided	Might be provided	As determined to be needed by user agency	
Site Lighting	minimum industry standard	provided to address safety concerns	provided to address safety concerns, compliant with campus standards and DSF standards	provided to address safety concerns, high efficiency LED fixtures, dark sky compliant
Emergency Phones	not provided	provided per campus standards	provided per campus standards	Provided

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
Superstructure				
Footings	Reinforced concrete, in type as required for soil conditions	Reinforced concrete, in type as required for soil conditions	Reinforced concrete, in type as required for soil conditions	Design for future expansion
Foundations	CMU	Reinforced Concrete	Reinforced Concrete	Design for future expansion
Above Grade Structural System	Wood or Metal Stud, bearing walls	Metal Stud bearing walls	CMU bearing walls with precast plank, Mild Steel Reinforced Concrete, Post Tensioned Concrete	Mild Steel Reinforced Concrete to provide flexibility in future remodeling
Floor to Floor Heights	10' floor to floor, 9' ceilings in living spaces, 8' ceilings in bathrooms and corridors	10' floor to floor, 9' ceilings in living spaces, 8' ceilings in bathrooms and corridors	12'-8" floor to floor, 11' ceilings in living spaces, 9' ceilings in bathrooms and corridors	
Exterior Envelope				
Wall System	Batt insulated stud cavity, gypsum sheathing, fabric air barrier	Foam insulated stud cavity, gypsum sheathing, liquid applied air barrier	CMU, rigid insulation, liquid applied air barrier (or insulated precast panel [caution regarding long term re-caulk cost])	
Exterior Cladding	Wood, vinyl, CMU, concrete brick, or brick	concrete brick or brick, metal wall panel	Brick, stone, architectural precast, or metal wall panel	brick and stone
Windows & Doors	clad wood, thermal pane	prefinished aluminum, thermal pane	thermally broken high performance prefinished aluminum, tinted, insulated, low E glass	
Roofing	Shingles or fully adhered EPDM	Fully adhered EPDM	Fully adhered EPDM	Hot Mopped Built Up Roof; slate tile; clay tile; full depth green roof (not trays)
Thermal Performance	code compliant	code compliant	10% better than code per Governor's Energy Conservation Policy	LEED or Green Globe Certified

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
HVAC				
Residence Room Toilet Exhaust	Code compliant intermittent bathroom exhaust	Code compliant intermittent bathroom exhaust	Code compliant intermittent bathroom exhaust for individual bathrooms and continuous bathroom exhaust for multiple fixture bathrooms	Continuous bathroom exhaust
Residence Room Ventilation	Natural ventilation with use of operable windows for sleeping room and residence units.	Natural ventilation with use of operable windows for sleeping rooms and residence units.	Natural ventilation with use of operable windows for sleeping rooms and mechanical ventilation to corridor	Mechanical ventilation ducted to residence room.
Residence Room Conditioning	PTAC	2-pipe change over system	4-pipe fan coil unit or heat pump in room or ducted to room.	Variable speed 4-pipe fan coil unit or heat pump with ducted air to room
General Space Conditioning	Roof-top units or fan coil units with ducted ventilation air to units	Variable air volume (VAV) air handling unit with ducted ventilation air to unit	VAV air handling unit with ducted ventilation air to unit and CO2 ventilation control for spaces with variable occupancy.	VAV AHU with dedicated outside air system (DOAS) for ventilation and CO2 ventilation control for spaces with variable occupancy.
Storage Room Conditioning	No conditioning	Heating only	Heating and dehumidification for lower level storage	Heating, ventilating, and dehumidification for lower level storage
Telecommunications/Security Room Conditioning	Units may need to operate 24hr/day. Consider stand alone unit. PTAC	PTAC on Emergency Power	Computer room unit.	Computer room unit on emergency power.
Kitchenettes	Recirculating hood	Recirculating hood	Ducted hood with recirculating hood used only in limited applications	Ducted hood
Stand Alone Heating System	Standard efficiency hot water boilers	High efficiency non-condensing hot water boilers	High efficiency non-condensing hot water boilers	High efficiency condensing hot water boilers with year round low heating water temperatures to gain maximum efficiency
Stand Alone Cooling System	Direct expansion (D/X)	Air cooled chiller	Water cooled or Air-cooled chiller	Variable primary flow water cooled chiller
Heat Pump - Stand Alone Heating/Cooling System	Boiler/cooling tower heat pump loop serving individual heat pumps	Ground source heat pump loop with supplemental boiler heating serving individual heat pumps	Ground source heat pump loop with supplemental boiler heating serving individual heat pumps	Ground source heat pump loop with central geothermal unit creating chilled water and heating water
Temperature Controls	Stand alone controls for everything	Stand alone controls for residence rooms and network controls for major equipment such as AHU, ERU, heating system, cooling system.	Network controls for major equipment and individual units serving residence rooms.	Network controls for major equipment, fan coils, energy metering of electric, gas, water, steam, chilled water, etc.

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
Energy Recovery Unit	No energy recovery, unless required by code	Energy recovery with heating coil	Energy recovery with heating coil sized based on energy wheel failure	Energy recovery with heating coil sized based on energy recovery failure
Air Handling Unit Filtration	1" Panel filter	MERV 7 - 2" pleated filter	MERV 11 bag or cartridge type filter with MERV 7 pre-filters	MERV 13 bag or cartridge type filter with MERV 7 pre-filters
100% Non Mixed Air Outside Air Intake Louvers	Standard drainable blade intake louvers sized at 700-900 fpm free area	Standard drainable blade intake louvers sized at 500-600 fpm free area	Standard, drainable style louver sized at 350 fpm free area with ductwork layout to minimize snow intake	Vertical, hurricane style louver sized at 350 fpm free area with ductwork layout to minimize snow intake
Ductwork	Ductboard and unlimited flexible duct lengths	SMACNA standards G60 galvanized, seal class B for low pressure duct and unlimited flexible duct lengths	SMACNA standards G90 galvanized, seal class A for low pressure ductwork and limited 5'-0" flexible duct lengths	SMACNA standards G90 galvanized, seal class A for low pressure ductwork and limited 5'-0" flexible duct lengths
Chilled/heating water piping	Mechanical press connection copper, grooved couplings for steel	Soldered connection copper, grooved couplings for steel	Soldered connection copper, grooved couplings for steel in accessible areas, or welded for steel	Soldered connection copper, welded for steel
Insulation - Ductwork and Piping	Code compliant, internal duct lining possible	Code compliant, limited internal duct lining	Code compliant, limited internal duct lining, polyisocyanurate for chilled water piping	Code compliant, limited internal duct lining, polyisocyanurate for chilled water piping
PLUMBING				
Domestic Hot Water	Standard efficiency, atmospheric glass-lined gas-fired or electric water heater, typically one water heater with storage tank	Standard efficiency, sealed combustion, glass-lined gas-fired or electric water heater may have multiple units with storage tank	High efficiency, sealed combustion stainless steel tank, gas-fired for primary and back-up if using steam. If campus steam is available, steam semi-instantaneous water heater. Gas backup water heater if using steam. Recommended a minimum of two water heaters for redundancy	High efficiency, sealed combustion gas-fired for primary and back-up if using steam. If campus steam is available, steam semi-instantaneous water heater. Gas backup water heater if using steam. Installation would have multiple water heaters with storage tank for redundancy. Solar panels could be provided to provide some system load as a renewable.
Softener	None	Hot water only with timer regeneration control	Hot water only with metered or on demand regeneration control	All hot water and non-drinking cold water with metered or on demand regeneration
Booster pump (if required)	Single pump	Duplex booster pump	Duplex booster pump on VFD	Duplex booster pump on VFD
Plumbing fixtures	Standard flow, residential grade fixtures	Low flow residential grade fixtures in residence areas and light commercial in public	Low flow light commercial fixtures.	Low flow light commercial fixtures. Water closets may be dual flush.

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
Water Closets	Floor mounted, residential grade tank style, gravity fed without insulating tank liner - Any brand	Floor mounted, light commercial tank style, siphon jet without insulating tank liner - American Standard, Crane, Eljer, Gerber, Kohler, Toto or Zurn	Floor mounted tank style, siphon jet with insulating tank liner - American Standard, Kohler, or Zurn	Floor mounted tank style, pressure assist flush with insulating tank liner - American Standard, Kohler, or Zurn
Showers	One piece fiberglass construction with pressure balanced mixing faucet, brass or bronze construction with polished chrome finish - Any brand	One piece fiberglass or acrylic construction with pressure balanced mixing faucet, brass or bronze construction with polished chrome finish	One piece acrylic construction or terrazo base with acrylic wall panels and pressure balanced mixing faucet, brass or bronze construction with polished chrome finish - Leonard, Powers, Speakman, or Symmons valves	Terrazo base with tile enclosure or one piece swanstone constructions. Pressure balanced mixing faucet, brass or bronze construction with polished chrome finish.
Trim			Solid brass with ceramic inserts	
Plumbing piping	PVC sanitary/vent, CPVC, pex or copper for domestic water	PVC sanitary/vent, CPVC, mechanical press connection copper or soldered copper for domestic water	PVC or Cast iron sanitary/vent, CPVC or soldered copper for domestic water	Cast iron sanitary/vent, soldered copper for domestic water
FIRE PROTECTION				
Sprinklers	Exposed, pendent style sprinklers	Semi-recessed style sprinklers	Concealed, security style sprinklers	Concealed, security style sprinklers
Sprinkler piping	CPVC or Schedule 10 steel	CVPC or Combination of schedule 40 and 10 steel, roll/cut grooved and threaded	CVPC for branch pipe and schedule 40 steel, roll/cut grooved and threaded	All schedule 40 steel, roll/cut grooved and threaded
ELECTRICAL				
Resident Room Lighting	Switched outlets for user fixtures	Single overhead switched fixture	Multiple fixtures per room, (1) fixture per person	Vandal resistant fixtures, (1) per person
Building Service	Utility feed (2)	Campus distribution - radial feed	Campus distribution - loop feed with exterior equipment	Campus distribution - loop feed with interior equipment
Power Distribution	Common panels for all loads per floor	Split loads per area per floor (4)	Segregate loads for lighting, receipts, and mech - common panels per floor (4)	Segregate loads for lighting, receipts, and mech - panels per area per floor (4)
Emergency Power Source	Battery back-up for lifesafety loads (6)	Battery back-up for life safety loads (6)	Battery back-up (distributed or centralized) for lifesafety loads (6)	Generator back-up for lifesafety loads, elevator, heating system, and other loads such as MDF

Design Component	Basic Code Compliant	Medium Quality	Recommended Quality	Enhanced Option
Lighting and Receptacle Wiring Method	Non-metallic, insulated cable for non-high rise applications	Conduit with wire for distribution and branch homeruns, MC cable for distribution and branch	Conduit with wire for distribution and branch homeruns, MC cable from junction box to device	Conduit with wire for distribution and branch
Resident Room Circuiting	One 20 amp circuit per room	Two 20 amp circuits per room	Two 20 amp circuits per room for resident devices plus one 20 amp circuit for appliance use	Two 20 amp circuits per room for resident devices plus one 20 amp circuit for appliance use
Resident Room Receptacles	Three duplex receptacles - one on each of three walls (3)	Four duplex receptacles - two on each of two walls (3)	Three duplex receptacles on two walls plus one duplex receptacle on window wall (3)	Three double duplex receptacles on two walls plus two duplex receptacles on window wall (3)
Fire Alarm Notification	Horn notification with visual (5)	Horn notification with visual (5)	Voice notification with visual (5)	Voice notification with visuals, two-way firefighter communications
Fire Alarm Wiring	Free air wiring (5)	Free air wiring (5)	Free air or wiring in conduit optional - recommend conduit	Wiring in conduit
Fire Alarm Detection	120 volt resident room smoke detectors, no common corridor smoke detectors	120V system resident room smoke detectors, common corridor smoke detectors	System programmable resident room smoke detectors, common corridor smoke detectors	System programmable resident room smoke detectors, common corridor smoke detectors
Fire alarm reporting capability	None	Outside party	Campus security	Campus security
Mass Notification	None (7)	Interior separate system (7)	Interior and exterior separate system (7)	Interior and exterior system integrated with fire alarm (7)
(1) dependent upon furniture layout				
(2) location of building on campus factors into whether this is an option - building would need to be on the perimeter of campus				
(3) actual quantity would depend on room configuration and wall lengths				
(4) multiple area building - area could be a wing, a multi-person suite, or other as desired				
(5) building not classified as high rise				
(6) building not more than 4 stories above level of egress, therefore elevator is not required to be on generator				
(7) depends on when projects occur as NFPA is changing to address mass notification				
TECHNOLOGY				
Structured Cabling System	Category 5e cabling system meeting TIA/EIA standards	Category 6 cabling meeting TIA/EIA Standards	Mid grade category 6 cable exceeding TIA/EIA standards to provide small performance margins ensuring better quality cabling and connecting components.	High grade category 6 cable exceeding TIA/EIA Standards to provide larger performance margins ensuring better quality cabling and connecting components.

