06 April 2011

DFCM Project #10290700

Program for the New Student Housing

Snow College

HFS Architects

SNOW COLLEGE

REVIEW SIGNATURES

We, the representatives for Snow College, have reviewed the Program for the New Student Housing and hereby sanction that this Program adequately represents our request for a facility to fulfill our mission and programmatic needs. We further acknowledge that all appropriate parties involved in the programming effort have reviewed this document for completeness and accuracy.

Marvin Dodge, Snow College — Date
Vice President Finance & Administrative Service

Kurt Baxter, DFCM — Date
Capitol Budget Manager

ACKNOWLEDGEMENTS

The following is a list of the individuals involved in the Program for the New Student Housing process:

Snow College

Scott Wyatt, President
Marvin Dodge, Vice President of Finance & Administrative Services
Craig Mathie, Vice President for Student Services
Bob Oliver, Director of Facilities
Tim Dolan, Residential Life Manager
Shawn Lindow, Chief Information Officer
Lynn Poulson, Professor of Home & Family Studies
John Ruell, Controller

State of Utah - DFCM

Kurt Baxter, Manager, Capital Budget

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Project Justification

Snow College is pleased to present this programming document for construction of a new dormitory building on its Ephraim, Utah campus. It has been over forty-one years since the last dorm was built at Snow. With on-campus housing ranging in age between 41 and 70 years old, this project represents a significant step into the future for Snow and its students. Historically low construction costs and bond rates create a perfect window of opportunity for the College to embark on this journey.

Snow enjoys continual enrollment growth and while the private sector has built to meet increased demand, growth is now exceeding what they can readily provide. In 1969, when Snow's last dorm was built, over two-thirds of the entire student body could live in on-campus housing. Less than 15% of students have that same opportunity today.

This project also represents a unique opportunity for Snow to create a new gateway into campus. At the corner of 100 East and College Avenue, a new modern dormitory will speak to young students anxiously beginning their college experience. Opposite the dorm stands the historic Noyes Building, signifying the historic values and principles Snow has embraced since its creation in 1888. We look forward to the participation of contractors and craftspeople to bring the pages of this document to life.

Space Requirement Summary

The New Student Housing building will be a new four-story, 86,000 gross square feet (GSF) facility. The spaces to be housed in this new building are three-bedroom student dormitory suites, married resident assistant apartment, great room lounge with kitchen, game room lounge with kitchen, theater lounge, exercise and/or generic lounge, group study rooms, private study rooms, laundry room, unisex visitor restroom, main lobby with information/computer kiosk, and game equipment storage. The project is currently programmed at:

• Dormitory Suites	53,248 NSF
• Married RA Apartment	857 NSF
• Great Room Lounge/Kitchen	957 NSF
• Game Room Lounge/Kitchen	957 NSF
• Theater Lounge	720 NSF
• Exercise Lounge	720 NSF
• Group Study Rooms	1,344 NSF
• Private Study Rooms	1,920 NSF
• Laundry Rooms	772 NSF
• Unisex Visitor Restroom	288 NSF
• Game Equipment Storage	60 NSF
• Main Lobby	1,025 NSF

EXECUTIVE SUMMARY

COST MODEL

Site Construction Cost Summary

Site Costs			$517,740
		Subtotal	***$517,740***
General Conditions	5%		$25,887
Overhead & Profit	5%		$25,887
Bonds	1%		$5,177
		Subtotal	***$56,951***
Site Construction Cost		***Total***	***$574,691***

Building Construction Cost Summary

Architectural Costs			$4,177,460
Structural Costs			$2,142,656
Mechanical Costs			$2,924,000
Electrical Costs			$1,357,000
		Subtotal	***$10,601,116***
General Conditions	5%		$530,056
Overhead & Profit	5%		$530,056
Bonds	1%		$106,011
		Subtotal	***$1,166,123***
Building Construction Cost		***Total***	***$11,767,239***

TOTAL CONSTRUCTION COST = $12,341,930
CONSTRUCTION COST PER SQUARE FOOT = $143

PROPOSED PROJECT SCHEDULE

Stage I Interviews:	04/05/2011
Finalist Short List & Stage II Documents:	04/06/2011
User Conference I:	04/08/2011
User Conference II:	04/22/2011
Stage II Proposals Due:	05/03/2011
Finalist Interviews:	05/10/2011
Substantial Completion:	08/15/2012

Physical Characteristics

Site Location

Snow College is located in Ephraim, Utah approximately 120 miles south of Salt Lake City in Sanpete County.

In the year 2000, the population of Ephraim was approximately 4,505 and the approximate number of families was 1,128.

The amount of land area in Ephraim is 3.6 square miles. Ephraim is positioned 39°21′29″ north of the equator and 111°35′2″ west of the prime meridian.

The elevation in Ephraim is 5,543 feet above sea level.

Regional Climate

The climate for Ephraim is moderate. Ephraim averages 12.8 inches of precipitation and approximately 51.8 inches of snow per years. The average winter temperature is 25.6°F and 72.7°F in the summer. The average spring and fall temperatures average between 47.1°F and 49.8°F.

Site Planning Principles

Views

Preserve/enhance existing view opportunities to south and east. Prioritize views from very public outdoor and public indoor spaces over those from private spaces. Create "viewing platforms" as well as peripheral views out of the campus open spaces. Link campus spaces together with selective views from one to the other. Planning should encourage view corridors or direct views away from undesirable views, such as the service/deck area.

Shade & Shadow

Minimize building shadowing of habitable outdoor spaces in winter, spring and fall -- maximize shade in summer. Utilize mature deciduous tree canopies as much as possible to achieve this end. Allow areas of un-shaded seating to extend the useful seasons into late fall and early spring.

Outdoor Spaces

Create linked outdoor spaces or "outdoor rooms," with both spatial closure and views outward. Create a variety of campus space types, quiet/active, green/paved, open/closed, shaded/sunny, etc. Limit hardscape areas to those which will attract large gatherings; in principle most outdoor spaces should not be hardscape.

Outdoor amenities desired near the new student housing include, but are not limited to, a gas barbecue pit, picnic area with tables and benches, a sand volleyball court and a basketball half-court.

SITE ANALYSIS

PARTIAL CAMPUS MASTER PLAN

Site Utilities

Water

There is a culinary water main in the street at 100 North. Provide a new water main and fire sprinkler main for the new building. New lines shall be connected to the mains in the street. Coordinate with Ephraim city to provide a new water meter for the building. Landscaping sprinkler piping shall directly connect to water main on site after meter. Provide backflow protection and sprinkler clock as required. Maintain and protect the water lines to adjacent buildings throughout the project.

Natural Gas

Coordinate with Questar gas to provide a new gas line and meter for the new building. The new line shall be tied into the existing natural gas line in the street at 100 North. Maintain and protect the natural gas lines to adjacent buildings throughout the project.

Power

The building primary service shall be served from the campus medium voltage distribution system. A new pad mounted transformer shall be located outside the facility. Secondary voltage will be 120/208 volt. The connection point into the system shall be at existing medium voltage switch 'S7'. Fern Young Hall (being demolished) is currently connected to switch to 'S7' and the medium voltage feed and transformer shall be removed. Salvage transformer to Snow College.

The existing medium voltage connection between switch 'S7' and 'S6' (located adjacent to Social Sciences Building) routes thru the new building site. Relocation of this line shall be included as part of this project.

Sanitary Sewer

Provide a new sanitary sewer line for the new building, and tie into the existing sanitary sewer line in the street at 100 North. Coordinate with sewer district requirements. Maintain and protect sewer lines to adjacent buildings throughout the project.

Storm Drainage

The storm drainage shall be designed by the project civil engineer, and coordinated with the project LEED goals and requirements.

Steam and Condensate

The building shall be heated by the central steam system. There is an existing 4" steam line serving the Fern Young building, that continues on to Mary Neilsen and Castilleja. The steam feeds both the heating and the domestic hot water in the existing buildings. When Fern Young is demolished, the 4" line should be re-routed to feed the new building, and re-connected to the main that feeds Mary Nielsen and Castilleja. This line will need to remain in service with minimal shut downs and downtime during construction. Because it is routed through the site of the new project, the construction team will need to protect, maintain, and re-route as necessary to accommodate the project, without interrupting the service to the other buildings. There is an existing 1-1/2" pumped condensate that runs east, along the south side of Mary Nielsen. This line will also need to be maintained and protected during construction, with minimal downtimes as necessary for change over.

New steam and condensate piping shall be tied into the existing piping. The new building shall include a tunnel stub out for connection to a future extension of the campus tunnel system. The new steam and condensate piping shall be direct buried from the existing tunnel to the new building. Direct buried steam and con-

SITE ANALYSIS

densate piping shall be schedule 80 steel pipe, installed in Gilsulate or approved equal. Maintain and protect the steam and condensate lines to Mary Nielson and Castilleja Halls throughout the project.

Independent Testing & Surveying

The Architect / Engineer, and the selected testing lab, shall perform periodic construction observations, testing, and special inspections, as outlined in the DFCM Design Criteria for Architects and Engineers. The design engineer shall list all required special inspections on the contract drawings, and perform periodic construction observations as required by the A/E agreement. Costs for special inspections and testing services will be paid for directly by the owner.

Fern Young Hall Demolition & Associated Site Work

Power

- Remove medium voltage connection to switch 'S7' and pad mounted transformer (salvage to Owner).
- Relocation of medium voltage connection between switch 'S7' and switch 'S6'.

Telecommunications

- Remove fiber optic connection to communications box.
- Provide new fiber optic pathway with vaults between new vault and tunnel at Heating Plant.
- Intercept fiber optic line from west campus and provide new pull box at 100 North and splice to existing fiber optic line between communications box and Noyes Building.
- Relocate communications box as required for new building.

CCTV System

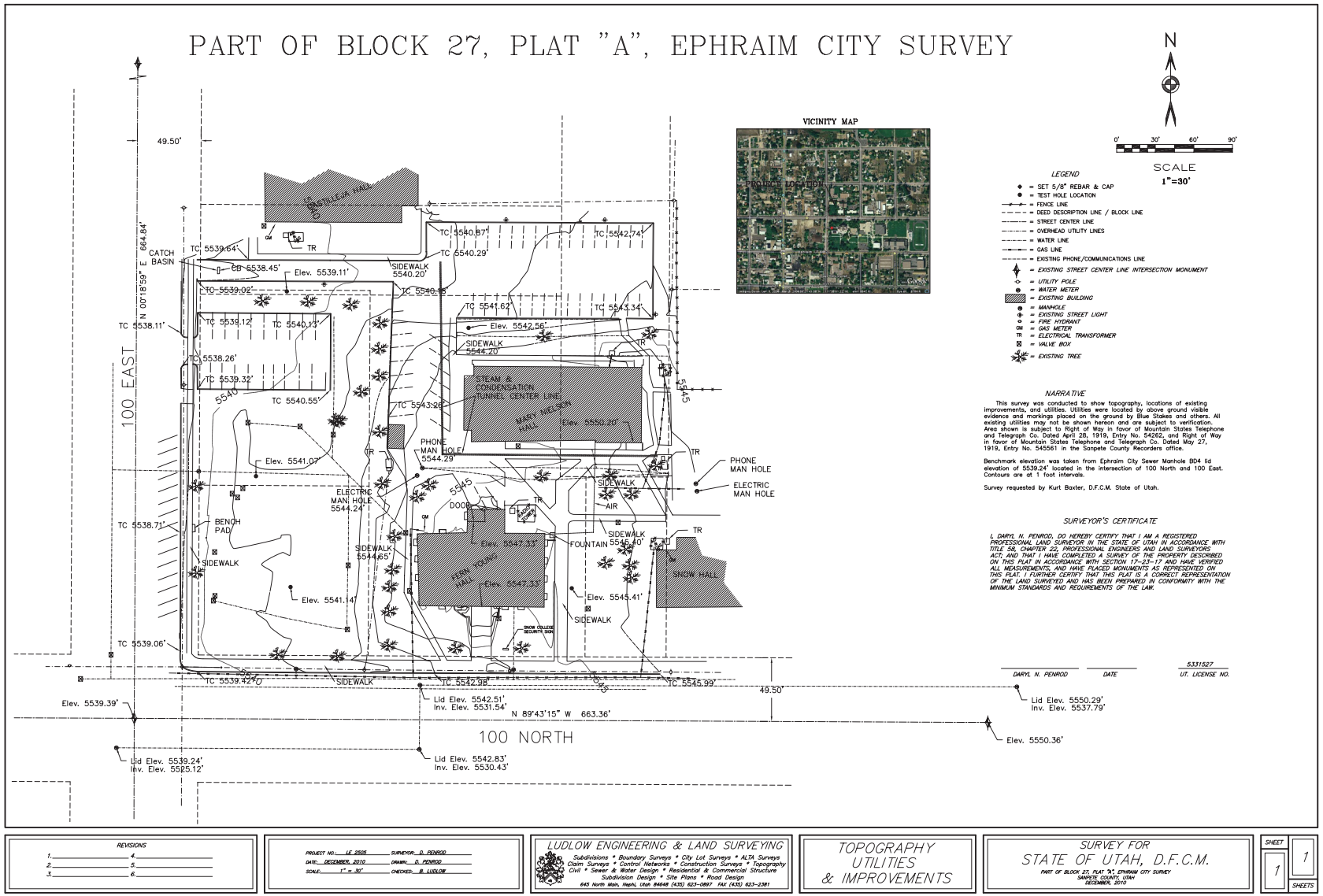
- Remove existing CCTV cameras, digital video recorder (DVR) and salvage to Owner.
- Provide new digital video recorders (DVRs) in Snow Hall, Mary Nelson Hall and Castilleja Hall and route existing cameras located within these buildings to new DVRs. Provide a network cable drop to each DVR.

Utilities

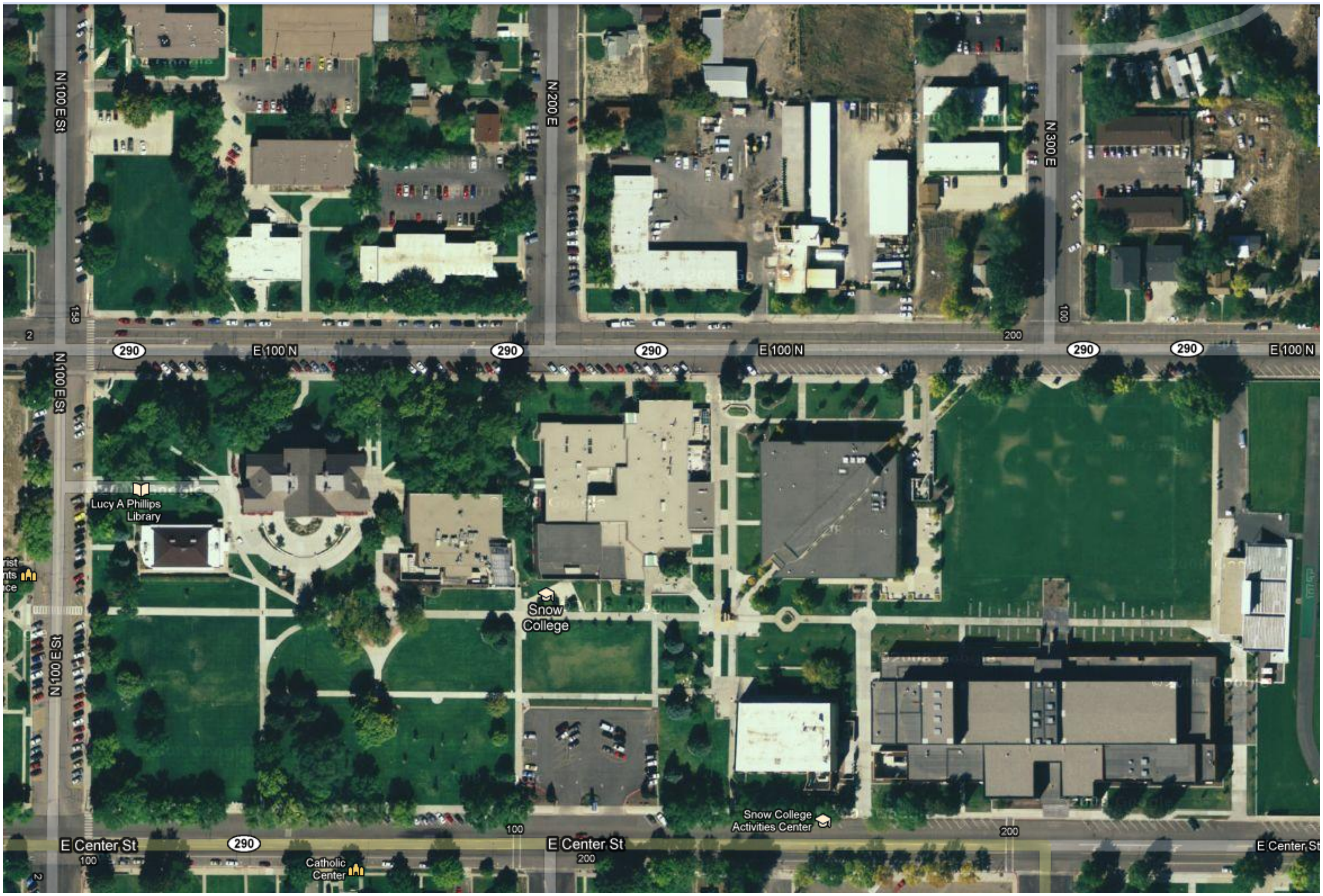
- The existing steam line feeding Mary Nielsen and Castilleja Halls runs through Fern Young Hall. When the building is demolished, the steam line needs to be protected or re-routed so that the other buildings continue to function throughout the project.
- The steam and condensate lines need to be protected and modified to feed the new building.
- The other mechanical systems shall be disconnected and removed.

All utility interruptions shall occur between July 1st and August 15th.

SITE ALTA SURVEY



Aerial Photograph of Site & Campus



Housing Mission

Mission

The mission of Snow College Resident Life is to provide a clean, safe and secure living environment which promotes maturity, supports academic success and enhances personal growth through lasting life lessons in, and out, of the classroom.

Living

Residential Life provides opportunities for residents to live in a safe and secure environment close to their classrooms. We understand that students have different needs, likes (or dislikes), and desires. While we cannot meet the wishes of each and every student, we do try to meet and enhance the basic needs of each student resident. Central to our mission, we focus on providing safe and secure buildings for our residents. We also know that happy, healthy and rested residents will do better academically and set standards to aid in building such an environment.

Personal Growth

For most students, going to college is the first opportunity to live away from home. This is a time to grow personally and gain a better understanding of societal living. Residential life provides a sense of community, opportunities for input within this community and consequences for not meeting our society's standards and policies. We understand that in this time of growth that our residents may have an infraction here or there. Our goal is to assist residents in learning from their miscues and become better citizens in the Resident Life community.

Success

Our staff is committed to promoting an environment where students are more closely connected with the campus and geared toward academic success. We understand that success begins with the individual. We are not in a position to make students eat all their broccoli, nor are we responsible for their success. However, we can provide a safe environment where every resident's academic success is the focal point.

BUILDING REQUIREMENTS

PLANNING SUMMARY

History & Growth

Snow College has seen record enrollment and has experienced a nearly twenty percent growth. Currently enrollment at the College is 4,200 students, 3,000 students at the Ephraim campus and 1,200 students at the Richfield campus. With ninety percent of Snow's students living in residence halls or in off-campus apartment, the need for student housing is essential. The shortage of quality housing has become the single most limiting factor for enrollment growth at Snow College. Current enrollment and enrollment projections show there is a need to add approximately 500 beds. To help meet this urgent need, local private housing owners have been encouraged to expand their facilities. In the fall of 2010 a new apartment complex opened which added 175 new beds.

With the shortage of beds, the College housing office reduced the number of private rooms in an effort to accommodate up to 50 additional students for fall of 2010. It is evident that this is simply a short-term band-aid for a significant challenge requiring a long-term solution. In addition to the housing shortage, the College needs to begin replacing it's aging dorms (the newest of which is 41 years old) to maintain a healthy campus life and provide modern living quarters within a living/learning environment.

This program document is the result of a collaborative process involving a nine member steering committee from Snow College and the State of Utah DFCM and interviews with faculty, staff, students and parents. The committee met several times during the programming process from January through March 2011. Key programming issues, priorities and the findings of the interviews were discussed and the scope for the project was developed.

Issues, Goals and Priorities

Through meeting discussions of the information gleaned during the interviews, the programming goals and priorities were established for the New Student Housing.

The key issues were detailed as follows:

- Location of the new housing building.
- Housing capacity.
- Parking requirements.
- Unit sleep/study types; dorm vs suite style.
- Housing amenities and common spaces.

Once the key issues were established, the goals for the New Student Housing were outlined.

Academically Engaged and Social Connections:
Provide places in the building that offer a social and academic interaction that the students cannot get off-campus. Provide social gathering places for programs and groups. Provide common spaces for amenities such as group kitchen, game room, theater style TV room, exercise room, and private and group study areas. Provide superior technology access.

Affordable:
The New Student Housing must be cost-effective and meet the College's financial goals. That includes providing affordable housing for the students.

Increase Summer Offerings:
Activate the campus by providing housing for summer campus and events. Create a facility that is beneficial for all of Snow College's partners, with sensitivity to the private business community.

Create a Modern and Inviting Environment:
Create comfortable housing that enhances the campus appearance while providing modern conveniences and functionality. Architecturally, the building should respect the character of the Noyes building and library without mimicking them. The College envisions a more unique design that wows and builds upon the spirit of Snow, while appealing to students as a beacon of student life.

Fun Destination:
This facility needs to incorporate the "fun factor". Potential elements such as volleyball, basketball, pool table, barbecue pit, fitness center, and theater style TV room -- amenities that are the focus of student life. The intent is for an engaged destination. The College also intends the facility to be a physical destination -- a facility that looks like the place on campus you what to go.

Safe:
It is the College's intent for this facility to be safe in all of it's subtleties. Socially safe, academically safe, physically safe. Design solutions must be careful with lighting, massing, and punched openings -- using the concept of safety as one of the elements driving the design solution.

Architectural Design Criteria

Throughout the duration of this programming effort the architectural vision of the project was discussed at length. As the first new on-campus housing project at Snow College in over forty years, this project was recognized early on to have the potential to create a gateway to campus and become an icon for "student life" at Snow. The preferred location for the phase 1 building at the corner of College Avenue (100 North) and 100 East provides a great opportunity to create this "gateway". The new building is envisioned to be a 3-4 story structure with a strong architectural style that respects the historic elements of campus while establishing a contemporary expression. This balance between the old and the new was identified to be a key issue. The steering committee expressed the importance of acknowledging the Noyes building across the street while at the same time taking on a contemporary aesthetic in an effort to appeal to and be marketable to students. It was also expressed that the building needed to respect the adjacent residential neighborhood.

Building Massing

It is strongly encouraged that the design of the facility take advantage of opportunities to break up the massing of the building and provide articulation to the facades. This can be done both horizontally and vertically with the massing or within the fenestration or architectural detail of the elevations. Consideration should also be given to stepping the building and breaking the massing up into wings to address scale. In regards to the Noyes building, the steering committee requests the building's status on the campus be respected and not be over-shadowed by the design of the student housing building.

BUILDING REQUIREMENTS

Building Orientation

The building should be oriented to not only meet the goal of serving as a gateway to this main entry to campus but should also take advantage of sustainable practices in response to solar orientation, wind, and take full advantage of views and natural day lighting. Strong considerations must also be given to existing buildings to remain, existing utility infrastructure, pedestrian & vehicular circulation, grading, and parking. In addition, relationship and adjacency to outdoor amenities is an important element to student life and the student experience on campus and must be considered in the development of the building location and orientation.

Natural Light and Views

Every opportunity to utilize natural light and maintain/enhance view corridors should be considered strongly in the design of the facility. In particular all public spaces and bedroom units must maintain access to natural light and views. This is critical to and affects both the comfort and well being of the occupants as well as the building's energy efficiency.

In an effort to achieve this goal the design could consider the use of large windows, clerestory windows, skylights, and other potential transparent and/or translucent materials. Window openings should be oriented to take advantage of soft northern sky or controlled southern exposure. Windows on the west and east sides of the building should also be controlled or minimized.

Additionally, considerations for the type of glass will be important to controlling and minimizing the amount of heat gain and harmful UV exposure. Balancing the type of glass with the size and orientation will be critical to meet the minimum quantities prescribed by the code and to achieve a minimum goal of LEED Silver Certification.

Exterior Materials

The architectural response should consider the context of Ephraim, the surrounding area and in particular the Snow College campus. Existing buildings utilize materials such as brick, stone, precast concrete elements, integral colored honed or split-faced CMU, metal panel, and glass elements. It is the desire of the College to remain within this palette of materials or within complementary materials in an effort to tie the new housing building to campus. In particular, the steering committee voiced strong opinions towards the use of brick as a predominant material used for the housing. It should be noted that the College owns a large amount of brick currently being stored at the campus ball fields that is available for use on this project.

Generally, material selection should be easily maintained and durable. The building should be designed to be warm and inviting to students, faculty, the local community and all that interact with the College.

Interior Materials

The design of the interior spaces should create a strong living learning environment that is warm, bright, inviting, and promotes good health. Selection of interior finishes and materials should be responsive to the use of each of the spaces as outlined in this program document. Consideration must be given to texture, color, acoustics, sustainability, and light reflectance. In regard to durability and maintenance, generally the selection of materials within reason should consider a 50-year building standard and should correspond to the amount of traffic and anticipated use of each space.

Sustainable Design

The State of Utah has recently adopted the policy that all future State owned buildings are required to be designed to a minimum of LEED Silver Certification. With this in mind, the design of the facility must incorporate sustainable practices while balancing budget parameters.

Codes, Regulations & Safety

The materials, design and construction of new Student Housing for Snow College will conform to the standards established by the Utah State Division of Facilities, Construction, and Management (DFCM), Snow College Design Standards and LEED for a minimum silver certification. Furthermore, it will conform to all building, accessibility codes and requirements, and the energy codes adopted by the State of Utah at the time of design and construction, whether or not they are specifically referenced in this document.

It is the responsibility of the Design Team and the Architect of Record to verify and utilize all the latest revisions, editions and adopted versions. If there are conflicting standards, code provisions and/or regulations, the most stringent will govern unless such requirement is waived in writing by the Utah State Division of Facilities Construction and Management.

In addition, the Design Team and Architect of Record will be required to coordinate their efforts with the Snow College facilities personnel and DFCM.

The following represents a partial list of currently applicable codes and standards.

- International Building Code (IBC) 2009 w/ Utah Amendments
- International Mechanical Code (IMC) 2009
- International Plumbing Code (IPC) 2009
- National Electric Code (NEC) w/ Utah Amendments 2008
- Life Safety Code NFPA 101 w/ Utah Amendments
- International Fire Code (IFC) 2009
- Laws, Rules, & Regulations of the Utah State Fire Marshal
- 2010 Standards for Accessible Design
- Assessible & Usable Buildings & Facilities 2003

BUILDING REQUIREMENTS

- Planning & Design Criteria to Prevent Architectural Barriers for Aged & Physically Handicapped (4th Revision, w/ lever hardware amendment)
- International Energy Conservation Code 2009
- International Fuel Gas Code (IFGC)
- EIA/TIA, Electronics Industries Association / Telecommunications Industry Association.
- IEEE 1100-1999, Recommended Practice for Power & Grounding Electronic Equipment
- IESNA, Illuminating Engineering Society of North America
- NFPA, National Fire Protection Association (applicable sections including but not limited to): NFPA 70, National Electrical Code & NFPA 72, National Fire Alarm Code
- ASHRAE Indoor Air Quality 62-2001 & Addendum 62n
- Utah Code for Energy Conservation in New Building Construction (ASHRAE Standard 90.1-1989)
- American Society of Heating, Refrigeration & Air Conditioning (ASHRAE)
- Occupational Safety & Health Administration (OSHA)
- Sheet Metal & Air Conditioning Contractor National Association (SMACNA)
- Underwriters Laboratory (UL)
- American Society of Testing Materials (ASTM)
- American Standards Association (ASA)
- DFCM Design Criteria for Architects & Engineers
- DFCM Indoor Air Quality Criteria
- State of Utah Boiler & Pressure Vessel Rules & Regulations

Also recommended: ANSI/ASHRAE Z9.5

Occupancy Classification

The occupancy determination must be confirmed by the Architect of Record with the State Fire Marshall at the time of design.

ADA Accessibility

The new Student Housing building is required to be in compliance with the 2010 ADA Standards for Accessible Design. The Utah State Building Board has adopted the following additional requirements:

- All public entries to the building will be ADA compliant with automatic door operators including required vestibule doors.
- One set of accessible restroom doors shall be equipped with automatic door operators including vestibule doors if applicable.
- ADA compliant parking shall be provided.

2009 International Building Code Review

Occupancy

(Chapter 3)	Residential	R2	(section 304)

Occupancy Separation

(Table 508.3.3)	Not Required

Type of Construction

(Chapter 6)	Type IIB

Frontage

(Section 506.2)	Assume .75

Occupancy Separation Required

No

Fire Sprinklers

Yes

Stories Allowed

(Table 503)	R2	4 stories

Allowable Building Area

Occupancy	R2
Programmed Area	86,000
Basic Allowable Area (503)	16,000
(Note: per floor)	
Frontage Increase (506.2)	1.75
(1.75 assume 30′-0″ setback)	
Multi-Story Increase (506.4.1)	X2
(Note: up to 3x)	
Sprinkler Increase (506.3)	X2
(Not allowed)	
Total Allowable Area	112,000
Actual / Allowable (506.41)	
Total: 0.64 is less than 1	77%

Fire-Resistive Requirements

(Table 601)

Structural Frame	
Including columns, girders, tresses:	0 hour
Bearing Walls	
Exterior Walls:	0 hour
Interior Walls:	0 hour
Non-Bearing Walls and Partitions	
Exterior Walls (Table 602)	0 hour
Interior Walls (Section 602)	0 hour
Floor Construction	
Including supporting beams and Joists:	0 hour
Roof Construction	
Including supporting beams and joists:	0 hour

BUILDING REQUIREMENTS

STRUCTURAL DESIGN CRITERIA

The structural design for this project should provide a building system which will integrate with the program requirements for space layout, as well as with the architectural and building service needs, while meeting current code standards for vertical and horizontal load carrying capacity. User needs in terms of current flexibility of the spaces and future adaptability of use should be considered. The level of user comfort as determined by the acoustic and vibration sensitivity of the structure also should be addressed.

Structural / Service Coordination

Layout of the structural grid will need to respect the planning module established for the various building functions. During the design phase, a completely integrated approach to building systems is recommended. Distribution of HVAC, plumbing and electrical services must be carefully coordinated with the structural elements, particularly at framing intersections and major crossover points. This close coordination must be achieved in order to avoid conflicts and limit penetrations of major structural members.

Codes and Standards

- 2009 International Building Code
- ASCE 7-05
- DFCM Design Criteria for Architects and Engineers
- Snow College Construction Design Standards Book
- American Institute of Steel Construction (AISC) with Commentary
- ACI 318 Building Code Requirements for Reinforced Concrete
- ACI 530 Building Code Requirements for Masonry Structures
- American Iron and Steel Institute (AISI) Specifications for the design of Cold-Formed Steel Structural Members
- American Welding Society (ANSI/AWS) D1.1 Structural Welding Code
- Steel Joist Institute (SJI) for open web Joists and Girders
- Steel Deck Institute (SDI) for Metal floor and roof Decks

Geotechnical Criteria

AGEC Consulting Engineers has completed a project geotechnical report dated December 23, 2010. The results of the geotechnical study indicate that the subsurface soils consist of fill overlying clay. The fill encountered consists of lean clay with variable compaction and contains debris including glass, wood, and paint chips in the upper 3-4 feet. The fill thickness varies from 3 feet to 9 feet thick.

The site is suitable for the proposed development provided the recommendations of the geotechnical report are properly complied with. Spread footings founded on undisturbed native soils and/or structural fill are recommended for foundation support. Removal and replacement of the fill to undisturbed natural soil will be necessary for the building foundations as well as floor slabs on grade. Footings bearing on at least 2 feet of compacted structural fill can be proportioned for a net allowable soil bearing pressure of 3,000 psf. Allowable bearing pressures may be increased by one half for temporary conditions such as wind or seismic loads. Design subgrade basement walls and retaining walls for the equivalent fluid pressures specified in the geotechnical report.

Once the final building size, configuration, structural system, number of levels above and below grade, and column loads have been determined, the project geotechnical consultant shall review the following items to verify the assumptions in the geotechnical report conform with the final proposed design of the facility:

- Soil bearing capacity
- Structural fill requirements
- Potential differential settlements
- Potential for expansion or collapse of soils due to moisture changes
- Liquefaction potential
- Groundwater restrictions and drainage requirements
- Seismic considerations, coefficients, fault traces, etc.
- Lateral bearing pressures – active and passive
- Alternate foundation systems
- Pavement sections

Design Criteria

Occupancy Category

• Occupancy	II

Floor Live Loads

• Residential Areas	40 psf
• Public rooms and corridors serving them	100 psf

Roof Live Loads

• Roof Live Load	20 psf
• Roof Snow Load	
Ground Snow Load, pg	43 psf
Exposure Factor, Ce1.0	
Thermal Factor, Ct	1.0
Importance Factor	1.0

Wind Loads

• Basic Wind Speed, V (3 second Gust)	90 mph
• Exposure Category	C
• Importance Factor	1.0

Seismic Loads

• Soil Site Class	D
• Short Period Spectral Response Acceleration, Ss	0.69 g
• One Second Spectral Response Acceleration, S1	0.23 g
• Importance Factor	1.0
• Seismic Design Category	D

The structural systems in the facility shall be designed to meet the requirements of the 2009 International Building Code (IBC) and the Design Criteria Manual adopted by the Utah State Building Board. Copies of the Design Criteria Manual can be obtained from the Division of Facilities Construction Management (DFCM). Section 4 deals with structural requirements and section 4.5 lists minimum design requirements.

Floor Vibration Criteria

Control of suspended floor and roof structure vibrations due to human and mechanically induced excitation forces shall be considered in the selection of the building structural floor and roof framing systems. Generally accepted vibration performance guidelines for structural systems are as follows:

- Provide a system with a peak acceleration that does not exceed 0.5% g, per the guidelines established in AISC Design Guide 11 “Floor Vibrations Due to Human Activity”.

It is not anticipated that any activities or equipment that are sensitive to floor vibrations will be located within this facility. This should be verified as part of the final design. Should vibration sensitive activities or equipment become necessary within the facility then structural system compatibility should be carefully evaluated.

BUILDING REQUIREMENTS

Structural System Selection

The structural system chosen for the building shall be selected based upon the following criteria:

- Various structural systems comparing building construction time, material availability, coordination of various trades, lead times for ordering materials, appearance, owner preference, maintenance costs, flexibility for future remodeling, and compatibility with surrounding buildings should be considered when choosing the final structural systems for the building.

- Damage to the building structure and its contents due to lateral earthquake and/or wind loads should be evaluated between various structural systems. Damage control to building non-structural systems is a pertinent and important consideration when selecting the building structural system.

More rigid shear wall and/or braced frame lateral force resisting systems provide greater damage control to a building's non-structural systems than does a more flexible moment frame type lateral force resisting system. However, a moment frame lateral force resisting system provides almost unlimited programmatic and planning flexibility initially and during the life of the building.

Future Building Expansion

The A/E designers of the building shall not consider potential future horizontal and/or vertical expansions because:

- Future vertical expansion is not anticipated.
- Future horizontal expansion of the structure is not anticipated.

Testing and Inspections

The Architect/Engineer, and the selected testing lab, shall perform periodic construction observations, testing, and special inspections, as outlined in section 4.6 of the DFCM Design Criteria for Architects and Engineers. The design engineer shall list all required special inspections on the contract drawings, and perform periodic construction observations as required by the A/E agreement. Costs for special inspections and testing services will be paid for directly by the owner.

Mechanical Design Criteria

Mechanical and Plumbing systems shall comply with the Snow College Design and Construction Standards, the DFCM design and construction standards, and all applicable local codes and regulations.

Project Design References, Codes, And Guides

- ASHRAE Guides and Standards
- International Building Code (IBC) and Life Safety Code
- International Mechanical Code (IMC)
- International Plumbing Code (IPC) and Utah Amendments
- ASHRAE/IES 90.1-2007
- State of Utah DFCM Guide Lines and Standards
- Utah State Fire Marshall
- American Society of Mechanical Engineers (ASME)
- American Society of Testing Materials (ASTM)
- American Standard Association (ASA)
- Associated Air Balance Council (AABC)
- National Electrical Code (NEC)
- National Fire Protection Association (NFPA)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- Underwriters Laboratories (UL)
- Utah State Safety Orders (OSHA/UOSH)
- Utah Air conservation Regulations/Waste Disposal Regulations
- Snow College Design Guidelines and Standards

General Mechanical Requirements

Coordinate with architect to provide an exterior entrance to the main mechanical room. Steam, condensate, and chilled water shall be piped directly into the mechanical room.

Building mechanical systems shall be designed to be as maintenance friendly as possible. Include adequate space, access, opportunity, etc. for the best possible maintenance.

Systems shall be designed to maximize life cycle costs. Project LEED goals and requirements shall be coordinated with the owner's representatives and the design team to determine the goals that will provide the most value to the owner.

Mechanical systems shall be designed to comply with Snow College standards, including standardized equipment, valves, labeling requirements, etc.

The mechanical systems shall be tested and balanced by an independent, licensed, test and balance contractor.

The mechanical and plumbing systems shall be commissioned by a third party commissioning agent contracted directly with the owner.

Personnel Load

Number of occupants shall be based on either the architectural layout, or the recommendations of ASHRAE 90.1-2007 for the number of occupants per square foot, per type of occupancy.

Equipment Heat Release

Heat release from computers, servers, electrical equipment, mechanical equipment, etc. shall be included in the heat gain calculations.

Building U-Valves

Walls, roof and glass values shall be coordinated architectural and ASHRAE recommendations. Building envelope and mechanical systems shall be designed together to meet the project LEED goals.

BUILDING REQUIREMENTS

Heating Source And System

The source of heating for the building shall be a shell and tube heat exchanger for building primary heating, and a glycol shell and tube heat exchanger for air handler preheat coils. Both exchangers shall be served by steam from the central boiler plant.

New buried steam and condensate piping shall be schedule 80, installed in Gilsulate or approved equal. Provide tunnel stub out to south for future connection to campus tunnels. Tie into the existing 4″ steam line that currently feeds Fern Young, and re-connect to the main that feeds Mary Nielsen and Castilleja. Tie into the existing 1-1/2″ pumped condensate line that runs east, along the south side of Mary Nielsen. Coordinate exact locations with Snow College and civil site utilities. The steam line runs right through the construction site. Protect and maintain both steam and condensate lines during construction, with minimal downtime as needed for change over. Provide steam PRV station, and electric condensate pump at building mechanical room.

Heating hot water shall be distributed by variable speed, base mounted hot water pumps to hot water coils throughout the building, including but not limited to, re-heat coils at each VAV box, and zone fin tube convectors. Heating water pumps shall be sized for 100% redundancy.

The heating hot water piping design shall be a two-pipe direct return system, designed for maximum 180º F supply and 140º F return temperatures. System temperature shall be re-set based on load to maximize system efficiency.

The pre-heat coils located in the air handling units shall be equipped with an inline coil circulation pump, and glycol freeze protection.

Each suite shall be heated by either a VAV box with a reheat coil, or by a 4 pipe fan coil unit. If fan coil units are used, they shall be floor mounted in a dedicated room with corridor access. Fan coil units shall be serviceable without entering into dorm suites, and shall not be concealed in ceilings. Common areas shall be heated by VAV boxes. Stairs, vestibules, etc. and other areas that are subject to cold temperatures, but do not require air shall be heated by hot water fin tube convectors.

Provide a snow melt system for pedestrian walkways on the north side of the building within 50′ of entrances. Provide a dedicated heat exchanger for the glycol snow melt system. Snow melt sensor shall be located at the lowest point in the most shaded area, not directly next to the building. Snowmelt controls shall be a packaged snowmelt controller, such as Tekmar or approved equal. Packaged snowmelt controller shall be monitored by the Johnson DDC system. Coordinate user adjustable set points with facilities.

Cooling Source And System

Provide a new stand alone air cooled chiller to provide the cooling for the new building.

Chilled water will be distributed by variable speed chilled water pumps to chilled water coils located in the air handling units, and 4 pipe fan coil units. Pumps shall be base mounted with 100% redundancy.

The chilled water piping design shall be a two-pipe direct return system. Direct buried piping from the chiller to the building shall be factory insulated and jacketed piping such as Thermacore or prior approved equal.

The chiller shall include a full BACNET interface tied into the build-

ing Johnson Metasys system.

The data / telecom rooms are to have independent always available dedicated cooling. These independent systems allow the cooling in these rooms to be added to the back-up generator, and will allow the units to be dedicated and always available for cooling. Provide DDC monitoring and alarms at data rooms.

Each suite shall be cooled by either a VAV box, or a 4 pipe fan coil unit. If fan coil units are used, they shall be floor mounted in a dedicated room with corridor access. Fan coil units shall be serviceable without entering into dorm suites, and shall not be concealed in ceilings. Common areas shall be cooled by VAV boxes.

Air System

Air shall be distributed throughout the building by central VAV air handling unit(s) and 4 pipe fan coil units. Fan coil units shall be provided with direct drive fans with ECM motors for improved performance and energy efficiency.

Each suite shall be served by either a dedicated VAV box, or a dedicated 4 pipe fan coil unit. If fan coil units are used, they shall be floor mounted in a dedicated room with corridor access. Fan coil units shall be serviceable without entering into dorm suites, and shall not be concealed in ceilings. Common areas shall be fed by VAV boxes.

The conditioned air from the air handling unit in the mechanical room will be distributed to the spaces by an overhead medium and low pressure metal ducted system with VAV boxes for each zone. Medium pressure duct will be used from the air handling unit to the VAV boxes, and low pressure duct will be used from the VAV boxes to the diffusers.

The air handling units will be equipped with variable frequency drives, outside airflow sensors, internal lights, standard filter sizes, accessible motors, 4-1/2" magnahelic pressure gauges, discharge air, return air, mixed airflow sensors, windows at fan and filters, etc. as required by Snow College.

Each room shall include low return. Transfer air under doors shall not be allowed.

All air systems shall be balanced upon completion by a Snow College approved test and balance contractor.

Ventilation System

The central air handling units will have full economizer capabilities. Fresh air will be ducted to the air handling units.

The central air handling system shall include an outside airflow measuring station at each air handler. Adequate outside airflow shall be provided to make-up the exhaust at all times.

Exhaust shall be provided for:

- Electrical rooms
- Restrooms
- Janitors closets
- Kitchens
- Other areas with smells, odors, or heat as necessary.

General exhaust fans for the housing units shall be consolidated into central exhaust fans. Each exhaust fan will be provided with an air to water heat recovery coil, which will be used to temper the outside air into the air handling units.

Kitchenettes shall have residential range top hoods, and shall be ex-

hausted to the outdoors.

Make-up air for the laundry areas shall be provided by a VAV box from the central air handling unit.

Laundry rooms shall be ducted to the outside without the use of dryer booster fans. Current codes require that the dryer ducts be less than 25 equivalent feet.

If 4 pipe fan coil units are used for the individual suites, a portion of the required outside air for make-up air at each suite shall be ducted directly to each fan coil unit.

LEED IEQ credit 3.2 requirements shall be met by either using air handling units and fan coil units, or temporary fans, or by air quality testing.

Insulation

All insulation shall comply with ASHRAE 90.1-2007. The following is a breakdown of the insulation for the piping and equipment:

- Rectangular ductwork will be lined.
- Low pressure round ductwork will be wrapped using round duct insulation.
- Medium velocity ductwork in the mechanical room, shaft, and first level will be double wall round or flat oval with and internal perforated liner rated for medium pressure. Medium velocity ductwork at other levels may be wrapped externally.
- Heating hot water supply and return piping will be insulated.
- Domestic hot and cold water piping will be insulated.
- Roof drain piping will be insulated on horizontal runs, including roof drain bowl.
- Chilled water supply and return piping will be insulated.
- Chilled water equipment – Pump casings, air eliminator, expansion tank, etc., will be insulated.
- Hot water equipment – air eliminator, expansion tank, etc., will be insulated.

Controls System

The new building will have a new DDC control system tied into the Johnson/Metasys BACNET campus head end.

Each suite shall have a thermostat in the common space, with a remote sensor in a representative bedroom for each suite. Thermostat shall control either a dedicated fan coil unit or VAV box for each suite. Fan coil unit thermostat shall be programmable and monitored by DDC system. VAV boxes shall include a DDC controller for full integration with building management system.

Plumbing System

All domestic water, waste, rainwater, and vent piping shall be sized and designed to comply with DFCM, Snow College, and IPC design standards and criteria.

Plumbing fixtures shall be standard commercial type, and shall be ADA compliant where required.

Culinary hot and cold water piping shall be routed to the restrooms, mechanical room, sinks, service sinks, any other fixtures that require water. Culinary water piping above ground shall be Type L copper. Culinary piping below ground shall be Type K copper at building, and poly-pipe on site. Provide meter at culinary water supply to building. Provide PRV station at new building.

Battery operated flush valves shall be used at urinals. Provide the slide over manual valves with push button over-ride. Exposed flush

valves with lever handles shall be used at all public and private water closets.

Soil, waste, and vent piping above grade shall be cast iron no-hub. No-hub is not allowed below grade. Soil and waste piping below grade shall be cast iron or schedule 80 PVC.

Where trap primers are required by code, or requested by the facilities, use a distribution system (such as PPP) in an accessible location.

Plumbing fixtures will be designed to be low flow type as required to meet the project LEED requirements. These shall include pint flush urinals, 1.28 gpf high efficiency toilets, and low flow (1.5-1.8 gpm) showerheads.

Kitchen sinks shall include residential type garbage disposers. Individual lavatories and hand sinks shall have non-removable grid strainers.

Water closets shall be wall mounted with a plumbing chase in public restrooms, and floor mounted in housing restrooms.

Showers shall include thermostatic and pressure balanced mixing valves. Include ADA handheld showerheads in ADA showers.

Each fixture shall have individual shut off valves. Each bathroom group shall have isolation valves. Main lines shall have isolation valves at mechanical room, and each floor.

Culinary Hot Water

Domestic hot water shall be provided by high efficiency storage type water heaters, manifolded together as necessary to meet the building demand. Design team shall verify that storage and recovery capacity be designed to allow every student to shower within a 1 hour time period.

Provide hot water re-circulating system, with balance valves at each connection to hot water system.

All domestic hot water shall be softened. Provide a twin alternating softener system, including a minimum of 2 resin tanks, and 1 brine tank. Provide polypropylene brine tank, and fiberglass resin tanks. Resin shall be Dow HCR (high capacity resin) or approved equal. Control valve shall be Fleck, or Pentair, or prior approved equal.

Water Treatment

Water treatment shall be performed by the campus Water Treatment Service Organization.

Both the air cooled chiller system and the heating glycol system will be treated with propylene glycol for freeze protection.

Seismic Support And Anchorage Of Mechanical Equipment

All mechanical equipment and piping shall be supported and anchored per the current seismic guidelines.

Requirements for the seismic supports and vibration isolation will be written as a performance specification with deferred submittals from the manufacturer.

ADA Requirements

The restrooms, drinking fountains, and other plumbing fixtures will be ADA compliant where required.

Electrical Design Criteria

Electrical Systems

Codes and Standards

Codes directly applicable to the design of the electrical systems are the 2008 National Electric Code (NEC), 2009 International Building Code (IBC), 2009 International Fire Code (IFC), 2009 International Energy Conservation Code (IECC), applicable standards of ASHRAE for Energy Conservation. State of Utah DFCM Design Criteria. Standards of UL, The National Electrical Manufacturer's Association and OSHA should be incorporated in the design of the electrical system.

Site Electrical Work

Description of work in the program shall be followed.

- Communications service entrance shall be as described in the program.
- Site Lighting: Provide site lighting to meet IES Standards throughout the project site, site lighting shall match fixtures used on the recent Karen Huntsman Building. Fixtures shall use LED lamp technology.

Lighting Systems

Lighting systems for the facility shall maximize energy efficiency while providing adequate illumination for performance of specified tasks. Lighting should be in conformance with the recommended luminance categories and luminance values for lighting design, IES Lighting Handbook, 9th Edition. Total lighting load for the facility should not exceed the calculated lighting power budgets determined by IECC and ASHRAE Standards.

Ballasts for fluorescent systems; Ballasts for full-sized fluorescent lamps (non-compact fluorescent) shall be electronic, Class P; A-rated with total harmonic current distortion of less than 20% and power factor above 95%. Ballast for compact fluorescent lamps shall be electronic, high power factor.

Lamps; full-size fluorescent lamps shall T-8, thick coat, triphosphor lamps with color rendering index greater than 80, temperature rating of 41k. Suitable for operation on ballasts indicated above. Compact fluorescent lamps shall be 26 watt quad 4 pin. Where applicable for lighting in apartments, small areas, for task lighting and for accent lighting, LED lamp technologies should be employed.

Exit signs; Provide green LED exit signs at appropriate locations.

Control systems; Consideration shall be given to multi-level switching systems, occupancy sensors (Common areas) and relay control systems (public areas).

Power Distribution Systems

Service entrance equipment shall be circuit breaker type. Future capacity and expandability are of prime importance. Time current system coordination and coordinated ground fault protection should be studied to ensure minimum system outage due to malfunction. A Square D power logic meter shall be provided and tied to campus Metasys system.

Distribution equipment shall be circuit breaker type. Equipment shall be provided with copper bussing.

Electrical rooms shall be provided on each floor of the building to serve apartment and common area loads. Panels shall be located on the floor being served. Panelboards shall not be located in the units.

Special Systems

Telecommunications/Data Systems

Telecommunications rooms shall be provided on each floor of the building to serve the floor on which it is located. Telecommunications rooms shall be stacked within the building. Telecommunications cabling shall meet EIA/TIA standards. Data outlets are to be incorporated in accordance with campus telecommunications standards. A trunk cable tray system (solid bottom) with conduit branches to individual outlets should be provided.

Clock Systems

Provide battery powered RF signal corrected clocks throughout the facility. Clocks shall be provided in each apartment, computer rooms and common areas. Securely attach clocks to wall to prevent theft.

Fire Alarm System

Provide an addressable, ADA compliant fire alarm system in accordance with code requirements and requirements of Utah State Fire Marshall. System shall be networked and connected into the campus system (Simplex 4100). Smoke detectors shall be provided in each apartment and connected to the building system. All devices shall be white.

Security System

A card access system networked to campus system shall be provided on all exterior doors, apartment and suite doors, computer rooms and enclosed common areas. Exterior doors shall include door contact switches to monitor forced door and held open conditions.

Video Surveillance System

A video surveillance system with digital recording equipment is required. Cameras shall be located at all exterior entries, parking areas, interior building entry areas, all common areas, laundry rooms, game rooms, elevator lobbies and computer rooms. Cameras shall be Pelco 8100 series fixed analog cameras. Digital video recorder shall be networked and provided with dual 1 terabit hard drives for storage of images.

Television System

A central CATV system shall be provided in common area on each floor. System shall be connected to Centracom system. Headend equipment shall be located on the individual floor telecommunications closet.

Emergency Power System

Emergency power shall be provided for life safety functions. Life safety functions include means of egress lighting, lighting in certain critical spaces, and power for the fire alarm, telephone, security system. Stand-by power shall be provided to HVAC units associated with the telecommunications rooms.

A diesel-driven engine generator shall be provided with adequate capacity for life safety and emergency loads. Each area of the facility should be served from an emergency power panel as dictated by load.

Locate generator exterior to the building on a concrete pad and with a weather protective enclosure. Include a skid mounted double walled fuel tank with a minimum capacity of 24 hour fuel supply at full load.

BUILDING REQUIREMENTS

LANDSCAPE DESIGN CRITERIA

Outdoor Space Types & Features

Create a variety of campus space types: quiet / active, green / paved, open / closed, shaded / sunny, etc. Limit hardscape areas to those that will attract large gatherings; in principal most outdoor spaces should not be hardscape. The building and site must provide for quality key open space. The building site offers an opportunity to create additional outdoor activity areas and to enhance the existing outdoor activity areas / green spaces. Provide fixed and movable site furniture at strategic quiet and busy locations to accommodate both quiet lounging and interactions.

Site Accessibility

Paths to building entrances shall meet ADA criteria for slope and landings. Wherever possible, all other site paths shall meet ADA criteria. If that is unfeasible in a particular location, provide elevator access within the Snow College Student Housing building that will allow wheelchair users to transition the non-compliant grade condition. All usable outdoor spaces shall be fully accessible.

Landscape & Site Design Considerations

Bicycles:

Provide for bicycle usage along the pedestrian corridors, and secure bicycle storage adjacent to the entrance. Bicycle racks, rather than bicycle lockers, should be located conveniently near building entrances.

Trash and Recycling Containers:

Locate receptacles near building entrances and in areas where people are encouraged to congregate. Recycle bins should be located adjacent to trash bins to encourage use.

Plant Materials:

Indigenous plant materials should constitute a majority or the plant palette and be able to withstand drought conditions during the heat of summer months. Deciduous trees are encouraged along pedestrian walks and in plaza areas to provide shade. Mass shrub plantings should avoid creating areas of security hazard (i.e. along pedestrian walks and entry ways).

Irrigation:

Irrigation should not be considered as the primary source of plant vitality. Limited focal areas may be considered for irrigation, with consideration of minimal water consumption. Large expansive lawns are to be avoided due to the limited water availability. High drought tolerant grass species should be specified. Alteration of the topography to concentrate water in plant beds and lawn areas instead of storm drains should be considered. Xeriscape design concepts should be incorporated and coordinated with Snow College personnel and DFCM.

Site Lighting:

Lighting is to be provided along pedestrian walks for security. High cut-off fixtures should be used to avoid light wash pollution to adjacent buildings and the sky. Light fixtures should match the style and color recently installed at the new library.

Paving Alternatives:

Consider using pavements in areas of low pedestrian concentration or tertiary circulation patterns. Permeable pavements potentially reduce the amount of storm water run-off.

Anticipated LEED Points

Sustainable Sites

Prerequisite 1 Construction Activity Pollution Prevention:	Required
Credit 1 Site Selection:	1
Credit 2 Development Density & Community Connectivity:	5
Credit 3 Brownfield Redevelopment:	0
Credit 4.1 Alternative Transportation - Public Access:	0
Credit 4.2 Alternative Transportation - Bicycle Storage:	0
Credit 4.3 Alternative Transportation - Low-Emitting Vehicles:	3
Credit 4.4 Alternative Transportation - Parking Capacity:	2
Credit 5.1 Site Development - Protect or Restore Habitat:	1
Credit 5.2 Site Development - Maximize Open Space:	0
Credit 6.1 Stormwater Design - Quantity Control:	1
Credit 6.2 Stormwater Design - Quality Control:	1
Credit 7.1 Heat Island Effect - Nonroof:	1
Credit 7.2 Heat Island Effect - Roof:	1
Credit 8 Light Pollution Reduction:	0
	Subtotal 16

Water Efficiency

Prerequisite 1 Water Use Reduction:	Required
Credit 1 Water Efficient Landscaping:	2
Credit 2 Innovative3 Wastewater Technologies:	0
Credit 3 Water Use Reduction:	3
	Subtotal 5

Energy & Atmosphere

Prerequisite 1 Fundamental Commissioning:	Required
Prerequisite 2 Minimum Energy Performance:	Required
Prerequisite 3 Fundamental Energy Performance:	Required
Credit 1 Optimize Energy Performance:	5
Credit 2 On-Site Renewable Energy:	0
Credit 3 Enhanced Commissioning:	2
Credit 4 Enhanced Refrigerant Management:	2
Credit 5 Measurement & Verification:	0
Credit 6 Green Power:	2
	Subtotal 11

Materials & Resources

Prerequisite 1 Storage & Collection of Recyclables:	Required
Credit 1.1 Building Reuse - Maintain Existing Structural:	0
Credit 1.2 Building Reuse - Maintain Existing Nonstructural:	0
Credit 2 Construction Waste Management:	0
Credit 3 Materials Reuse:	0
Credit 4 Recycled Content:	2
Credit 5 Regional Materials:	2
Credit 6 Rapidly Renewable Materials:	0
Credit 7 Certified Wood:	1
	Subtotal 5

Indoor Environmental Quality

Prerequisite 1 Minimum Indoor Air Quality Performance:	Required
Prerequisite 2 Environmental Tobacco Smoke Control:	Required
Credit 1 Outdoor Air Delivery Monitoring:	0
Credit 2 Increased Ventilation:	0
Credit 3.1 Construction Indoor Air Quality - Construction:	1
Credit 3.2 Construction Indoor Air Quality - Before Occupancy:	1
Credit 4.1 Low-Emitting Materials - Adhesives & Sealants:	1
Credit 4.2 Low-Emitting Materials - Paints & Coatings:	1
Credit 4.3 Low-Emitting Materials - Flooring Systems:	1
Credit 4.4 Low-Emitting Materials - Composite Wood Products:	1
Credit 5 Indoor Chemical & Pollutant Source Control:	1
Credit 6.1 Controllability of Systems - Lighting:	1
Credit 6.2 Controllability of Systems - Thermal Comfort:	1
Credit 7.1 Thermal Comfort - Design:	1
Credit 7.2 Thermal Comfort - Verification:	1
Credit 8.1 Daylight & Views - Daylight:	1

BUILDING REQUIREMENTS

Credit 8.2 Daylight & Views - Views:	1
	Subtotal 13

Innovation in Design

Credit 1 Innovation in Design:	3
Credit 2 LEED Accredited Professional:	1
	Subtotal 4

Regional Priority

Credit 1 Regional Priority:	3
	Subtotal 3

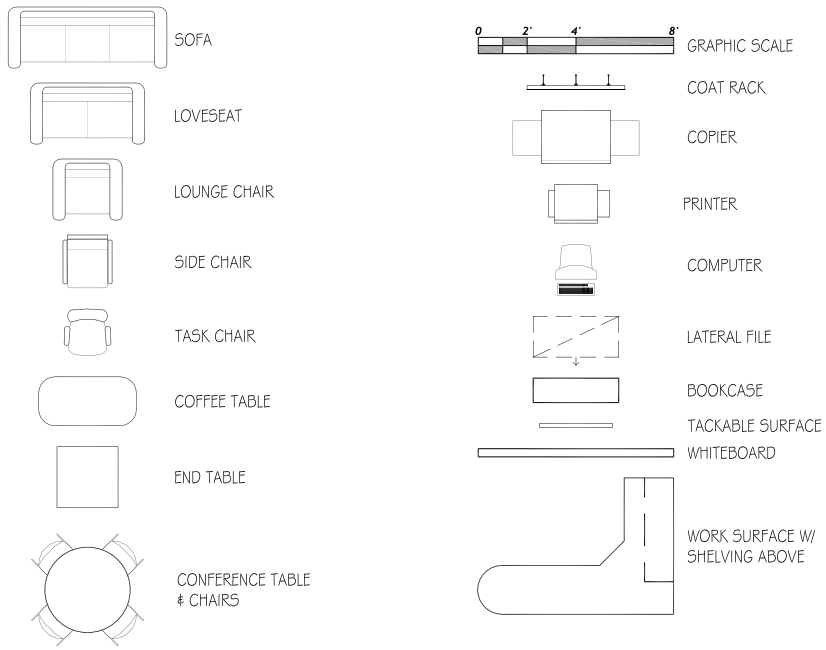
Total 57

Individual Space Outline Format

Overview

The following sections contain the building program space summaries for all the required spaces in the new Student Housing for Snow College. On the following pages, is comprehensive and detailed information regarding the size, character, contents and technical requirements for each space which comprise the building.

Symbol Legend



Terminology

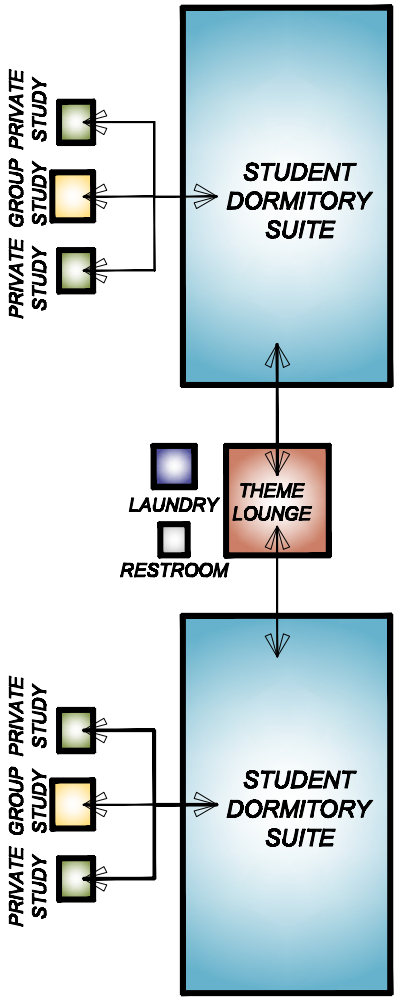
The terminology used in this program is standard terminology used by Architects. Terms such as NSF and GSF are related to the square footage of spaces described in the program. NSF is the Net Square Footage or the area a function will occupy. GSF is the Gross Square Footage which includes corridor systems, wall widths and miscellaneous support spaces such as mechanical rooms, restrooms, etc. Typically in education facilities the GSF can be derived from the NSF by using a multiplying factor. This factor is based on historical trends in education facilities and standards used by the State of Utah. The factor used in this program is 73.1% of the GSF is the NSF for new construction. This is an average factor of utilization; however, the Architect should take extra care to achieve the most efficient use of space.

The term ***FULL SOUND CONSTRUCTION*** refers to a particular construction assembly. This assembly is defined as: Metal studs extending from the floor to the structure above, with sound batts between studs, resilient channel on one side of the studs, and one layer of 5/8" gypsum board on both sides. All penetrations are to be sealed. All return air grilles are to have sound boots. As well as, all penetrations through sound walls. Lay-in ceiling panels in rooms required to have full sound construction should be a foil faced cast tile. All doors in sound walls should be gasketed (i.e., ***SOUND ISOLATION***).

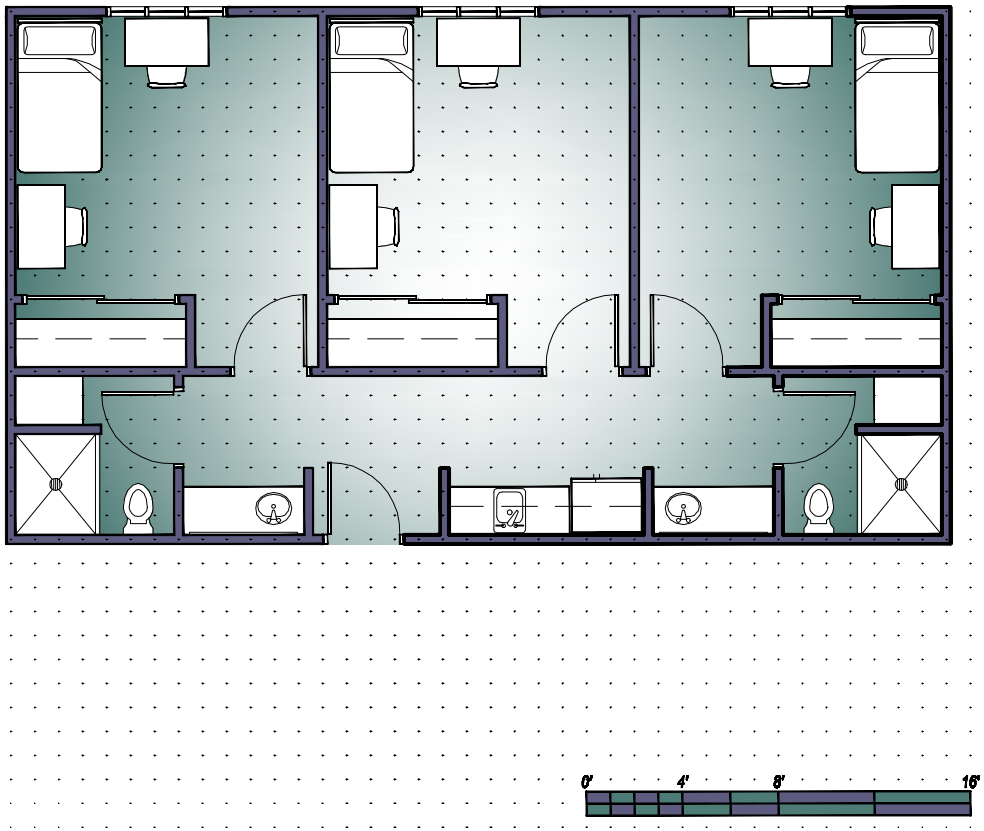
All furnishings shown in the offices and suites is to be systems type furniture. Lineal foot dimensions for work surfaces have been taken along the user side.

A dimensioning grid is in the background of each space drawing. The increments between the dots represent 1'-0".

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



STUDENT DORM SUITE BEDROOM

General Requirements

Suite Space Summary

- Space Type: Dormitory Suite
- Assigned Occupants: 6
- Number Required: 64
- Area (each): 832 SF
- Total Area: 53,248 SF

Individual Space Summary

- Space Type: Sleep/Study Room
- Assigned Occupants: 2
- Number Required: 3
- Area (each): 183 SF
- Total Area: 549 SF

Function / Tasks

- Provide sleep/study space within the student living quarters

Relationships

- Location: All floors
- Adjacency: None
- Proximity: None
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Painted, suspended gypsum board
- Sound: Full sound construction for perimeter walls of suite

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
  Sliding wood closet doors
- Frame: Painted hollow metal
- Special: Sound isolation at door into suite

Windows

- Natural Light: Required
- Type: Operable, aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: None required

Casework / Fixed Equipment

- Closet shelf
- Clothes rod

Furnishings (NIC)

- Bunk beds: (1) per room / (3) total
- Student desks: (2) per room / (6) total
- Task chairs: (2) per room / (6) total

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Remote sensor in bedroom
  Suite on (1) zone w/ adj. stat in common area
- Sound Criteria: RC (N) 25 to 35
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: Duplex receptacles each wall
  Maximum spacing 12′-0″
- Data: 3 per room/1 per wall, wireless access
- Phone: None required
- Video: (1) TV outlet per room
- Intercom: None required

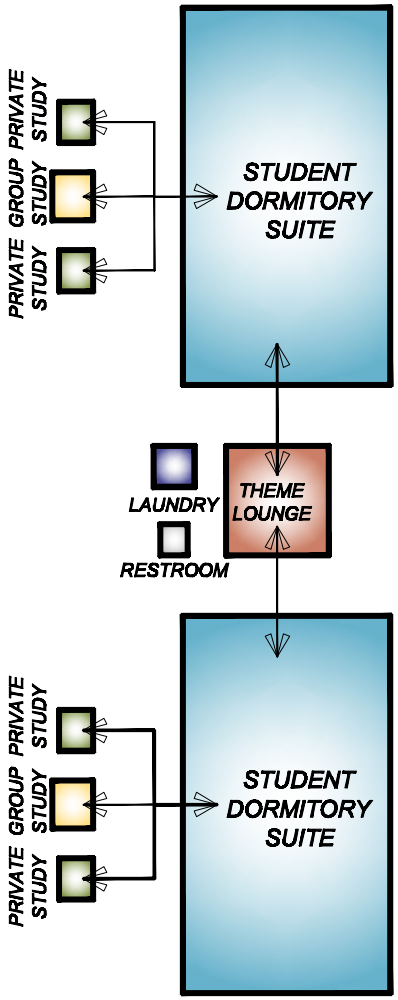
Lighting

- Fixture Type: Compact florescent
- Task Light: At desks
- Foot Candles: 20 ambient, 40 task
- Controls: Occupancy sensor

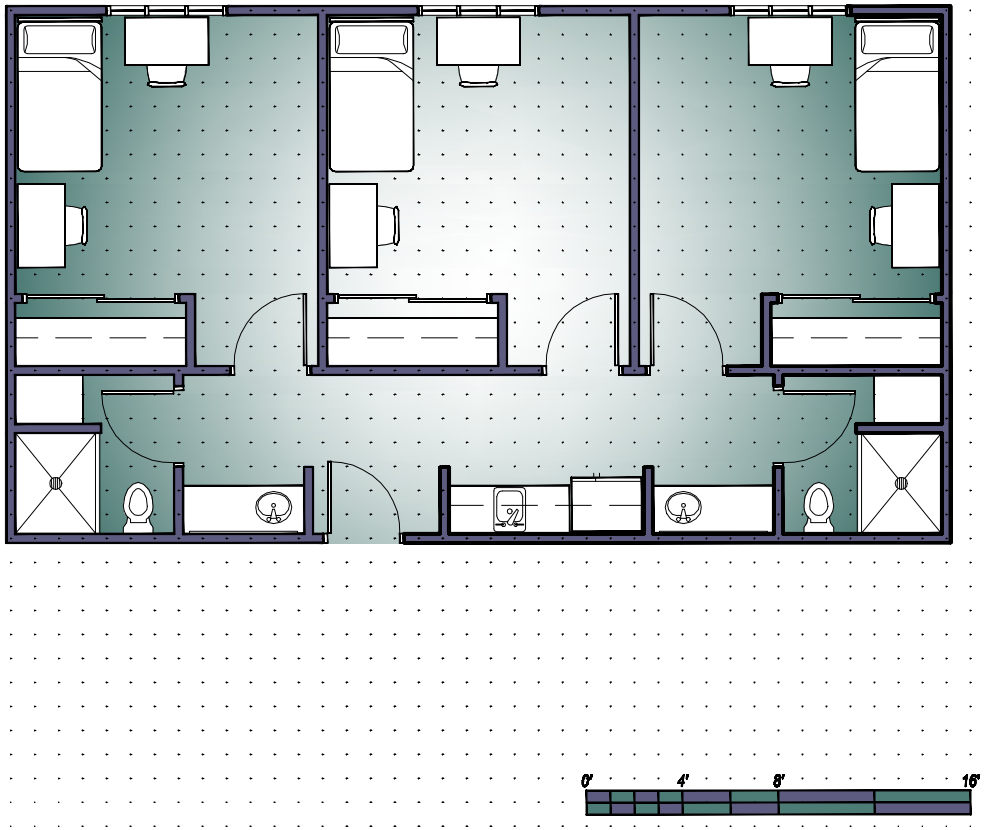
Equipment (NIC)

- Laptop computers, printer, scanner, LCD television, video game systems.

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



STUDENT DORM SUITE RESTROOM

SNOW COLLEGE

General Requirements

Suite Space Summary

- Space Type: Dormitory Suite
- Assigned Occupants: 6
- Number Required: 64
- Area (each): 832 SF
- Total Area: 53,248 SF

Individual Space Summary

- Space Type: Bathroom
- Assigned Occupants: 0
- Number Required: 2
- Area (each): 80 SF
- Total Area: 160 SF

Function / Tasks

- Provide bathing & toilet facilities within the student living quarters

Relationships

- Location: All floors
- Adjacency: None
- Proximity: None
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

TOILET/SHOWER ROOM

- Floor: Ceramic tile w/ tile base
- Walls: Ceramic tile
- Ceiling: Susp. gypsum board, epoxy painted

VANITY AREA

- Floor: Carpet tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Painted suspended. gypsum board
- Sound: Full sound construction for perimeter walls of suite

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: Sound isolation at door into suite

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Mirror: (2) ea. 48″x48″
- Hdwd. veneer cabinets: (5 LF) ea. 24″x34″ w/ doors, drawers & engineered quartz countertop w/ 4″ quartz backsplash
- Hdwd. veneer linen cabinet: 24″x30″x84″ ea. w/ doors & adj. shelves

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: Exhaust per ASHRAE 62.1
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Zoned with suite
- Sound Criteria: None required
- Special Systems: None required
- Plumbing: Lavatory, water closet, shower hot, cold, & DWV piping

Electrical

- Power: (2) ea. GFCI receptacles
- Data: None required
- Phone: None required
- Video: None required
- Intercom: None required

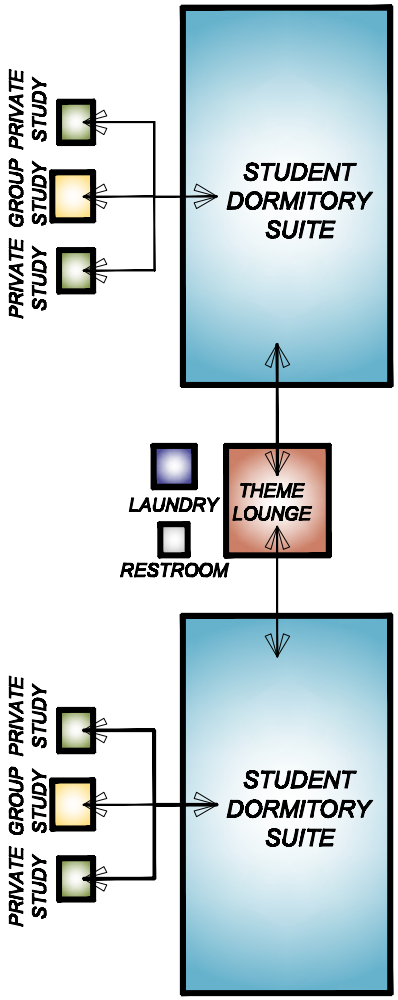
Lighting

- Fixture Type: T8 fluorescent & compact Fluorescent shower light
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

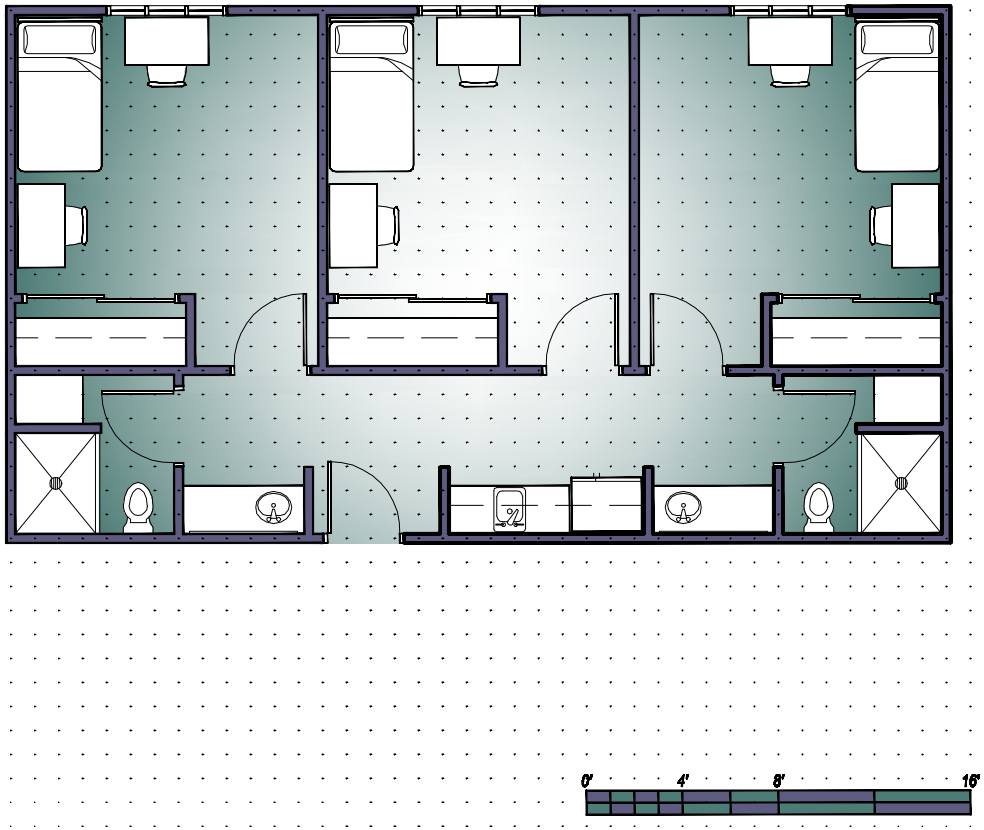
Equipment (NIC)

- Blow dryer, curling iron, electric razor.

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



STUDENT DORM SUITE KITCHENETTE

SNOW COLLEGE

General Requirements

Suite Space Summary

- Space Type: Dormitory Suite
- Assigned Occupants: 6
- Number Required: 64
- Area (each): 832 SF
- Total Area: 53,248 SF

Individual Space Summary

- Space Type: Kitchenette
- Assigned Occupants: 0
- Number Required: 1
- Area (each): 123 SF
- Total Area: 123 SF

Function / Tasks

- Provide an area to prepare small meals within the student living quarters

Relationships

- Location: All floors
- Adjacency: None
- Proximity: None
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Vinyl composite tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Painted, suspended gypsum board
- Sound: Full sound construction for perimeter walls of suite

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: Sound isolation at door into suite

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Hdwd. veneer base cabinets: (5 LF) 24″x34″ w/ doors, drawers, adj. shelves & engineered quartz countertop w/ 4″ quartz blacksplash
- Hdwd. veneer wall cabinets: (8 LF) 14″x26″ w/ doors & adj. shelves

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: Exhaust in kitchenette
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Zoned with suite
  include adjustable state in common area
- Sound Criteria: None
- Special Systems: None
- Plumbing: Kitchen sink, hot, cold & DWV piping

Electrical

- Power: Recepticles at equipment listed below
  (2) Recepticles above counter
- Data: None required
- Phone: None required
- Video: None required
- Intercom: None required

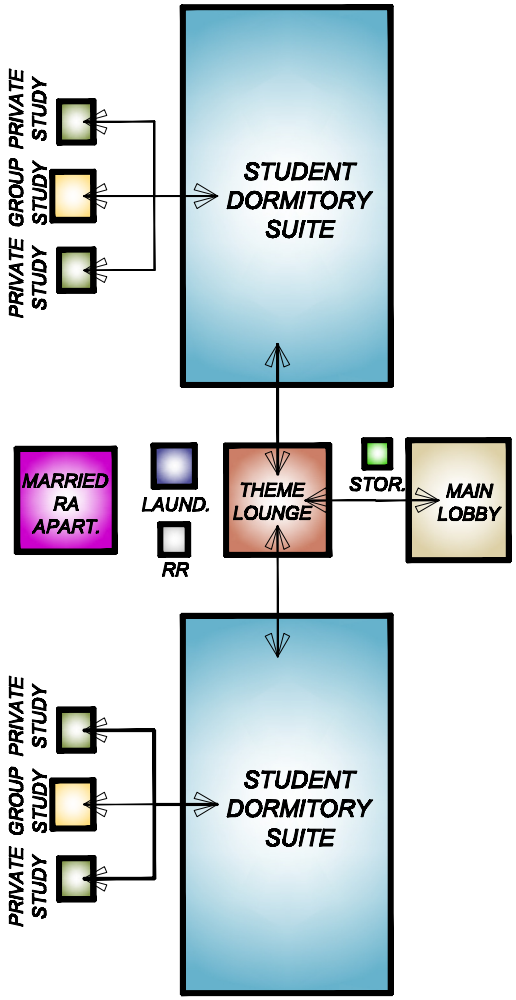
Lighting

- Fixture Type: T8 fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

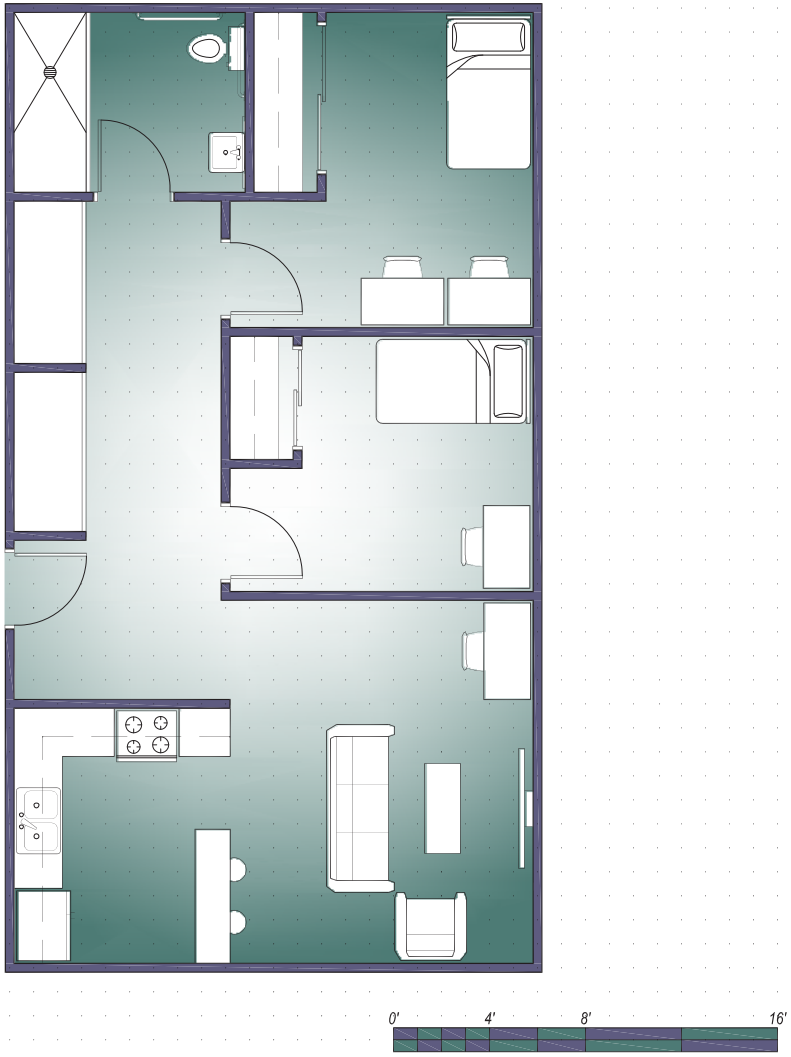
Equipment (NIC)

- Refrigerator, microwave, coffee maker & toaster.

INDIVIDUAL SPACE DIAGRAMS



First Floor Relationship Diagram



RA Apartment Living Room / Foyer

General Requirements

Suite Space Summary

- Space Type: Married RA Apartment
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 857 SF
- Total Area: 857 SF

Individual Space Summary

- Space Type: Living Room / Foyer
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 252 SF
- Total Area: 252 SF

Function / Tasks

- Student living quarters for the married RA

Relationships

- Location: First floor
- Adjacency: Main building entry
- Proximity: Centrally located on floor
- Note: Requires separate outside entry
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Painted, suspended gypsum board
- Sound: Full sound construction for perimeter walls of apartment

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: Sound isolation at door into apartment

Windows

- Natural Light: Required
- Type: Operable, aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: None required

Casework / Fixed Equipment

- None required

Furnishings (NIC)

- Sofa: (1)
- Coffee table: (1)
- Easy chair: (1)
- End table: (1)
- Student desk: (1) 24′x48″
- Task chair: (1)

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Zoned with apartment
  Include adjustable stat
- Sound Criteria: RC (N) ≦ 35
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: Duplex receptacle on each wall
  Maxiumum spacing 12′-0″
- Data: Outet at desk, wireless access
- Phone: None required
- Video: TV outlet located at television
- Intercom: None required

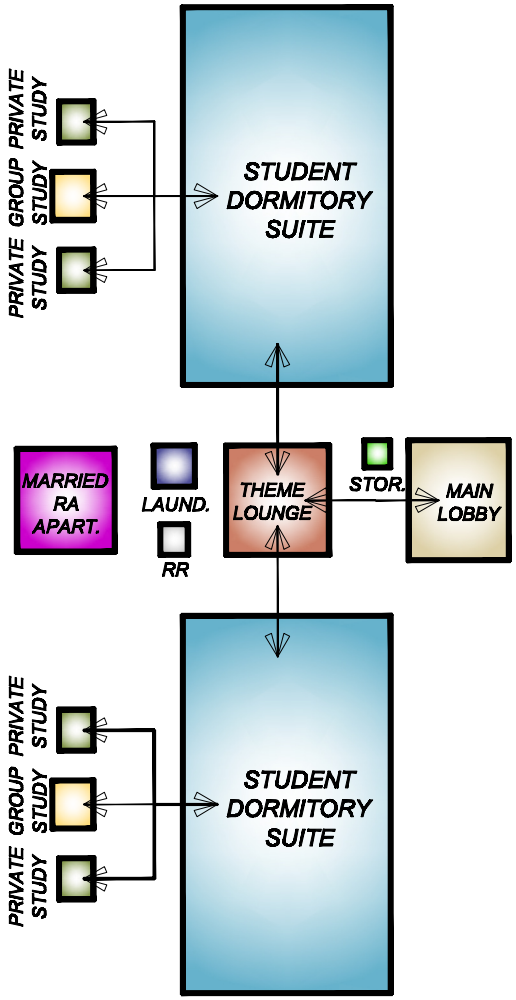
Lighting

- Fixture Type: Compact fluorescent
- Task Light: At desk
- Foot Candles: 20 Ambient, 40 task
- Controls: Occupancy sensor

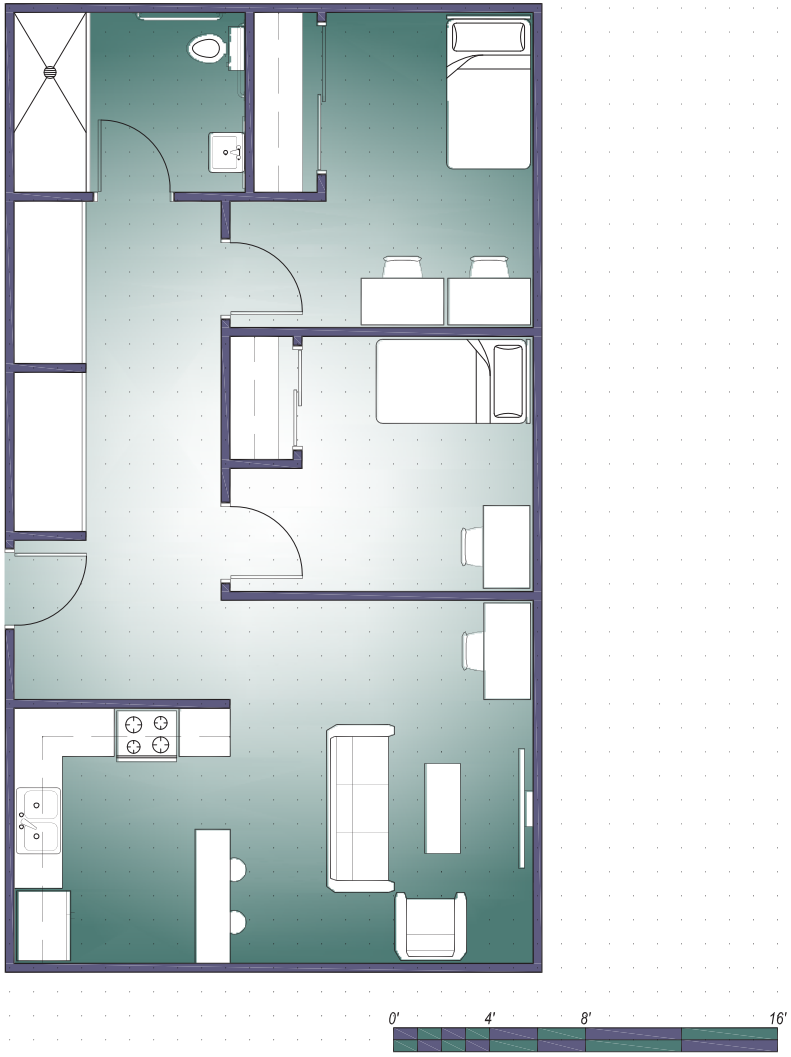
Equipment (NIC)

- LCD television, DVD, video game system, laptop computer, printer & scanner

INDIVIDUAL SPACE DIAGRAMS



First Floor Relationship Diagram



RA Apartment Kitchen / Dining

General Requirements

Suite Space Summary

- Space Type: Married RA Apartment
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 857 SF
- Total Area: 857 SF

Individual Space Summary

- Space Type: Kitchen / Dining
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 96 SF
- Total Area: 96 SF

Function / Tasks

- Provide area for preparing & eating meals within the married RA apartment

Relationships

- Location: First floor
- Adjacency: Main building entry
- Proximity: Centrally located on floor
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Quarry tile w/ 4″ quarry tile base
- Walls: Painted gypsum board
- Ceiling: Painted, suspended gypsum board
- Sound: Full sound construction for perimeter walls of apartment

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- None required

Windows

- Natural Light: Desirable
- Type: Operable, aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: None required

Casework / Fixed Equipment

- Hdwd. veneer base cabinets: (10 LF) 24″x34″ w/ doors, drawers, adj. shelves & engineered quartz countertop w/ 4″ quartz blacksplash
- Hdwd. veneer wall cabinets: (16 LF) 14″x26″ w/ doors & adj. shelves
- Hdwd. veneer island: (1) 3o″x66″x34″ w/ doors, drawers, adj. shelves & engineered quartz countertop

Furnishings (NIC)

- Bar stools: (2)

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: Exhaust in kitchen
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Zoned with apartment
- Sound Criteria: None
- Special Systems: Range exhaust hood
- Plumbing: Kitchen sink, hot, cold & DWV piping, water for refrigerator

Electrical

- Power: Recepticles at equipment listed below
  (2) Recepticles above counter, (2) per section
- Data: None required
- Phone: None required
- Video: None required
- Intercom: None required

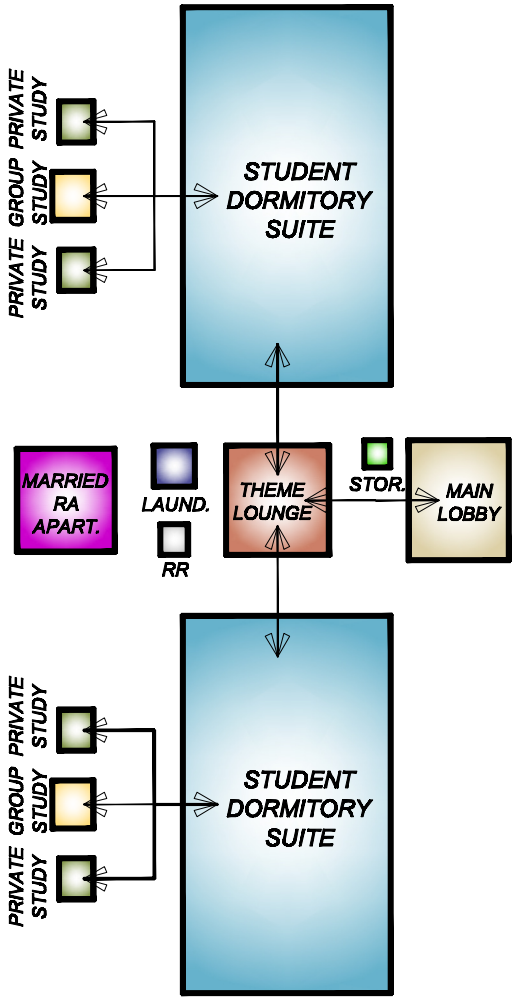
Lighting

- Fixture Type: T8 fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

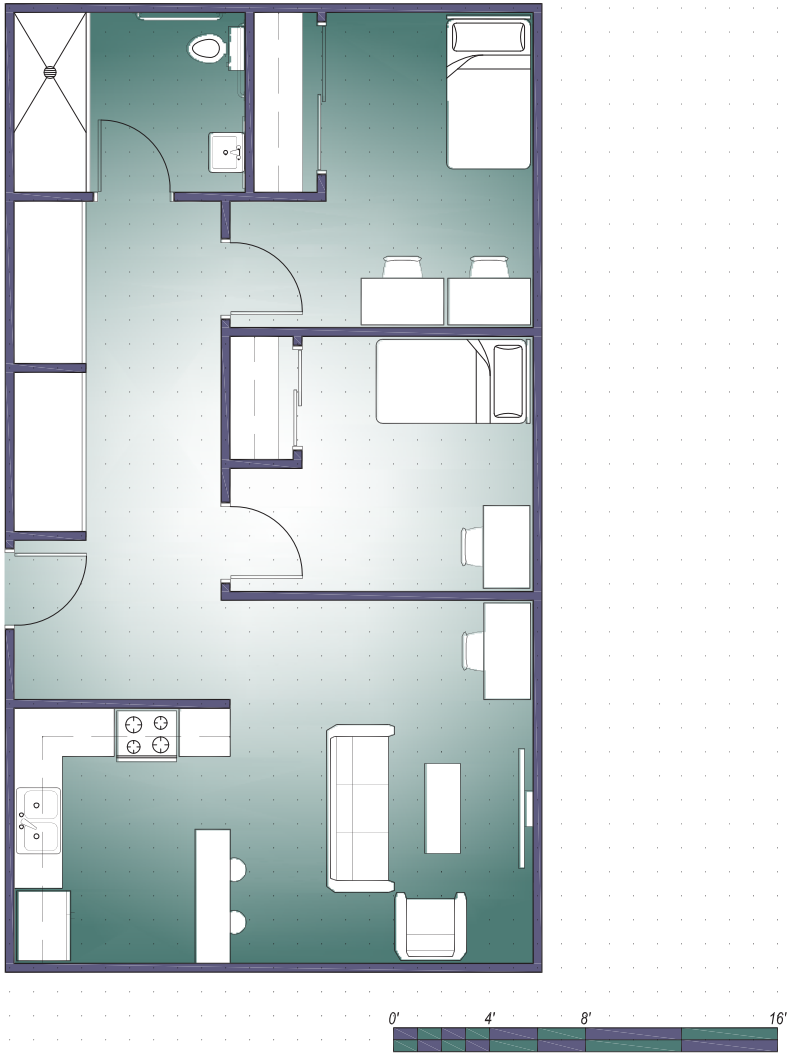
Equipment (NIC)

- Refrigerator, range w/ oven, microwave, coffee maker & toaster.

INDIVIDUAL SPACE DIAGRAMS



FIRST FLOOR RELATIONSHIP DIAGRAM



RA APARTMENT BEDROOMS

General Requirements

Suite Space Summary

- Space Type: Married RA Apartment
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 857 SF
- Total Area: 857 SF

Individual Space Summary

- Space Type: Bedroom
- Assigned Occupants: 2 each / 4 total
- Number Required: 2
- Area (each): 133 SF & 157 SF
- Total Area: 290 SF

Function / Tasks

- Provide area for sleeping & studying within the married RA apartment

Relationships

- Location: First floor
- Adjacency: Main building entry
- Proximity: Centrally located on floor
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Painted, suspended gypsum board
- Sound: Full sound construction for perimeter walls of apartment

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
  Sliding wood closet doors
- Frame: Painted hollow metal
- Special: Sound isolation at door into apartment

Windows

- Natural Light: Required
- Type: Operable, aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: None required

Casework / Fixed Equipment

- Closet shelf
- Clothes rod

Furnishings (NIC)

- Double bed: (1)
- Night stands: (2)
- Bunk bed: (1)
- Student desks: (1) per room / (2) total
- Task chairs: (1) per room / (2) total

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Remote sensor in bedroom
  Suite on (1) zone w/ adj. state in common area
- Sound Criteria: RC (N) 25 to 35
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: Duplex recepticles each wall
  Maximum spacing 12′-0″
- Data: One outlet at desks, wireless access
- Phone: None required
- Video: None required
- Intercom: None required

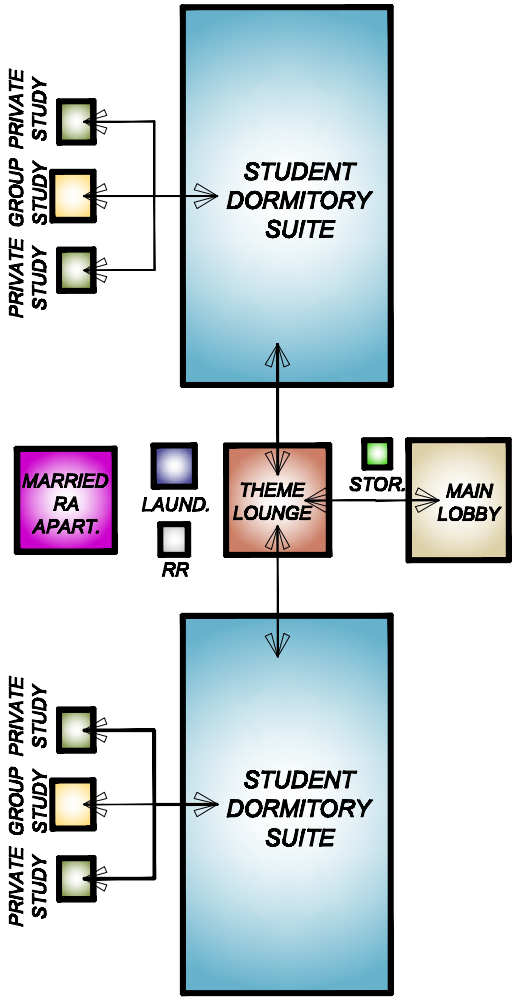
Lighting

- Fixture Type: Compact florescent
- Task Light: At desks
- Foot Candles: 20 ambient, 40 task
- Controls: Occupancy sensor

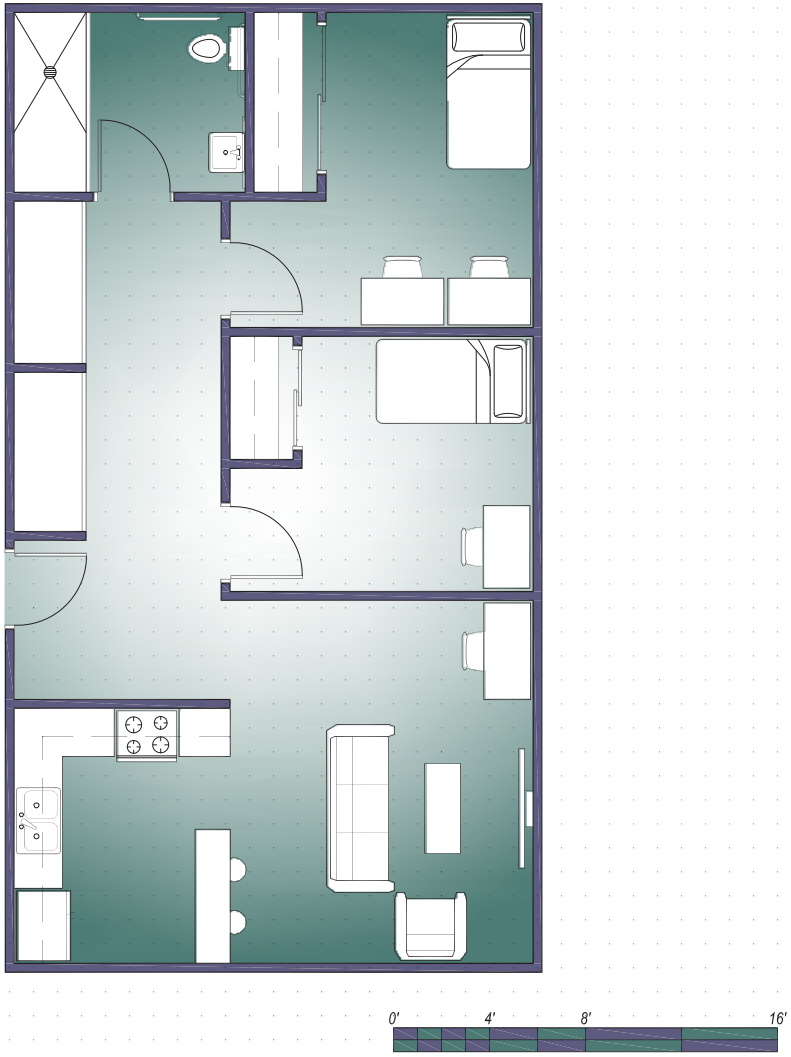
Equipment (NIC)

- Laptop computers, printer, scanner, LCD television, video game systems.

INDIVIDUAL SPACE DIAGRAMS



FIRST FLOOR RELATIONSHIP DIAGRAM



RA APARTMENT RESTROOM

General Requirements

Suite Space Summary

- Space Type: Married RA Apartment
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 857 SF
- Total Area: 857 SF

Individual Space Summary

- Space Type: Bathroom
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 72 SF
- Total Area: 72 SF

Function / Tasks

- Provide bathing & toilet facilities within the married RA apartment

Relationships

- Location: First floor
- Adjacency: Main building entry
- Proximity: Centrally located on floor
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Ceramic tile w/ tile base
- Walls: Ceramic tile
- Ceiling: Susp. gypsum board, epoxy painted
- Sound: Full sound construction for perimeter walls of apartment

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: Sound isolation at door into apartment

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Hdwd veneer cabinet: (3 LF) 24″x34″ w/ doors, drawers & engineered quartz countertop w/ 4″ quartz backsplash
- Mirror: (1) each 30″x48″
- Grab bars: (1) set each for toilet & shower
- Towel bar: (1) each

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: Exhaust per ASHRAE 62.1
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Zoned with apartment
- Sound Criteria: None required
- Special Systems: None required
- Plumbing: Lavatory, water closet, shower hot, cold, & DWV piping

Electrical

- Power: GFCI receptacle at sink
- Data: None required
- Phone: None required
- Video: None required
- Intercom: None required

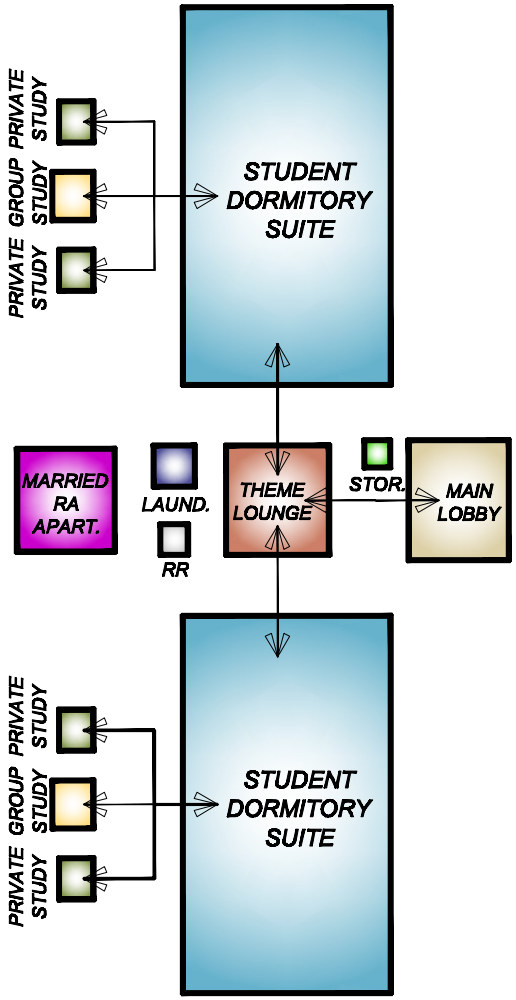
Lighting

- Fixture Type: T8 fluorescent & compact Fluorescent shower light
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

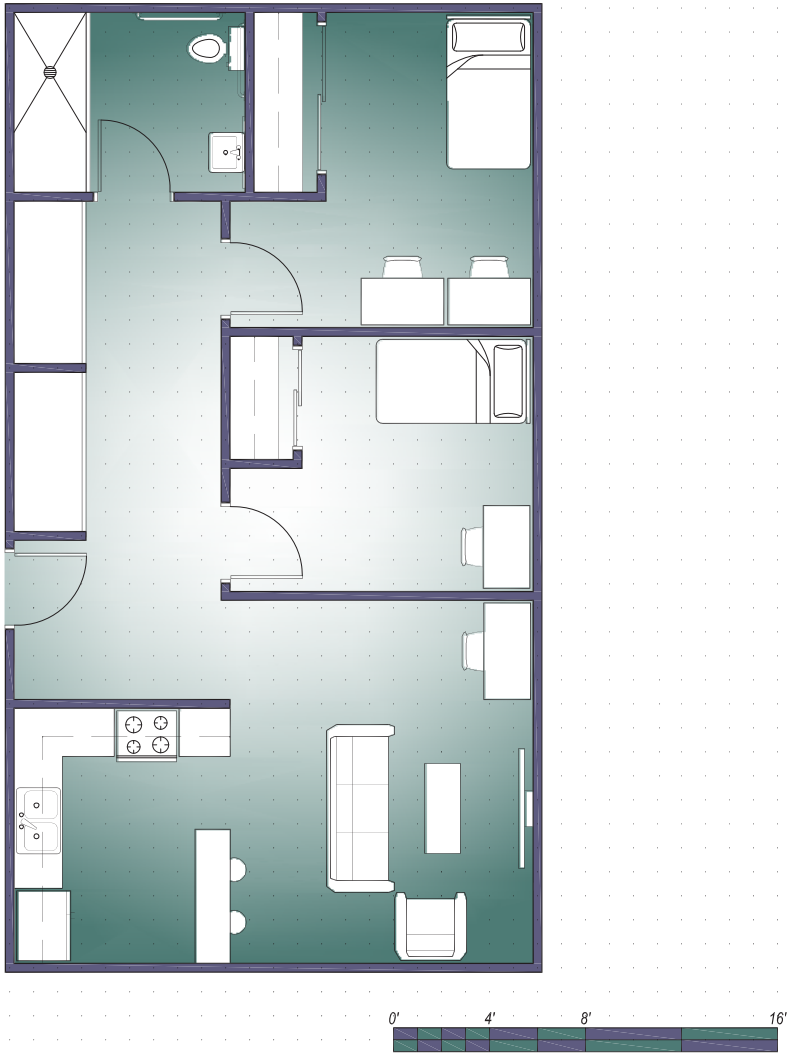
Equipment (NIC)

- Blow dryer, curling iron, electric razor.

INDIVIDUAL SPACE DIAGRAMS



FIRST FLOOR RELATIONSHIP DIAGRAM



RA APARTMENT HALLWAY

SNOW COLLEGE

General Requirements

Suite Space Summary

- Space Type: Married RA Apartment
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 857 SF
- Total Area: 857 SF

Individual Space Summary

- Space Type: Circulation
- Assigned Occupants: 2+
- Number Required: 1
- Area (each): 118 SF
- Total Area: 118 SF

Function / Tasks

- Provide circulation & storage within the married RA apartment

Relationships

- Location: First floor
- Adjacency: Main building entry
- Proximity: Centrally located on floor
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Painted, suspended gypsum board
- Sound: Full sound construction for perimeter walls of apartment

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- None required

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Hdwd. veneer wardrobes: (2) 72″x36″x84″ w/ doors & adj. shelves

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Zone with apartment
- Sound Criteria: RC (N) ≦ 45
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: (1) Duplex recepticle
- Data: None required
- Phone: None required
- Video: None required
- Intercom: None required

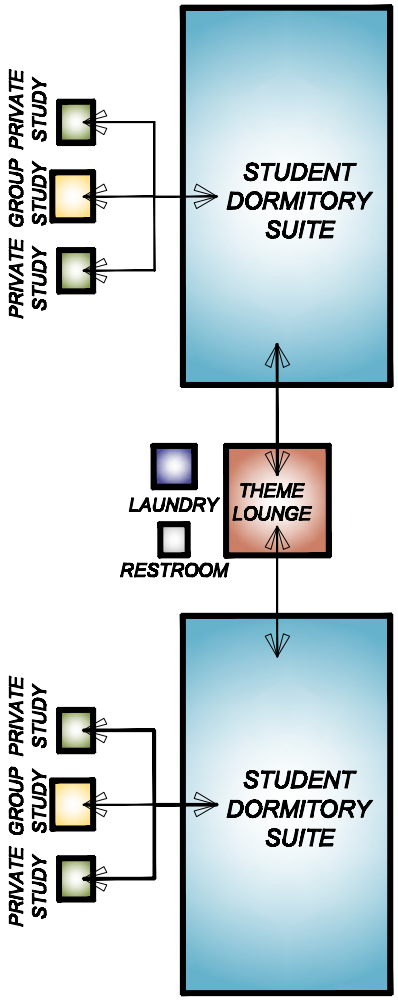
Lighting

- Fixture Type: Compact fluorescent downlight
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

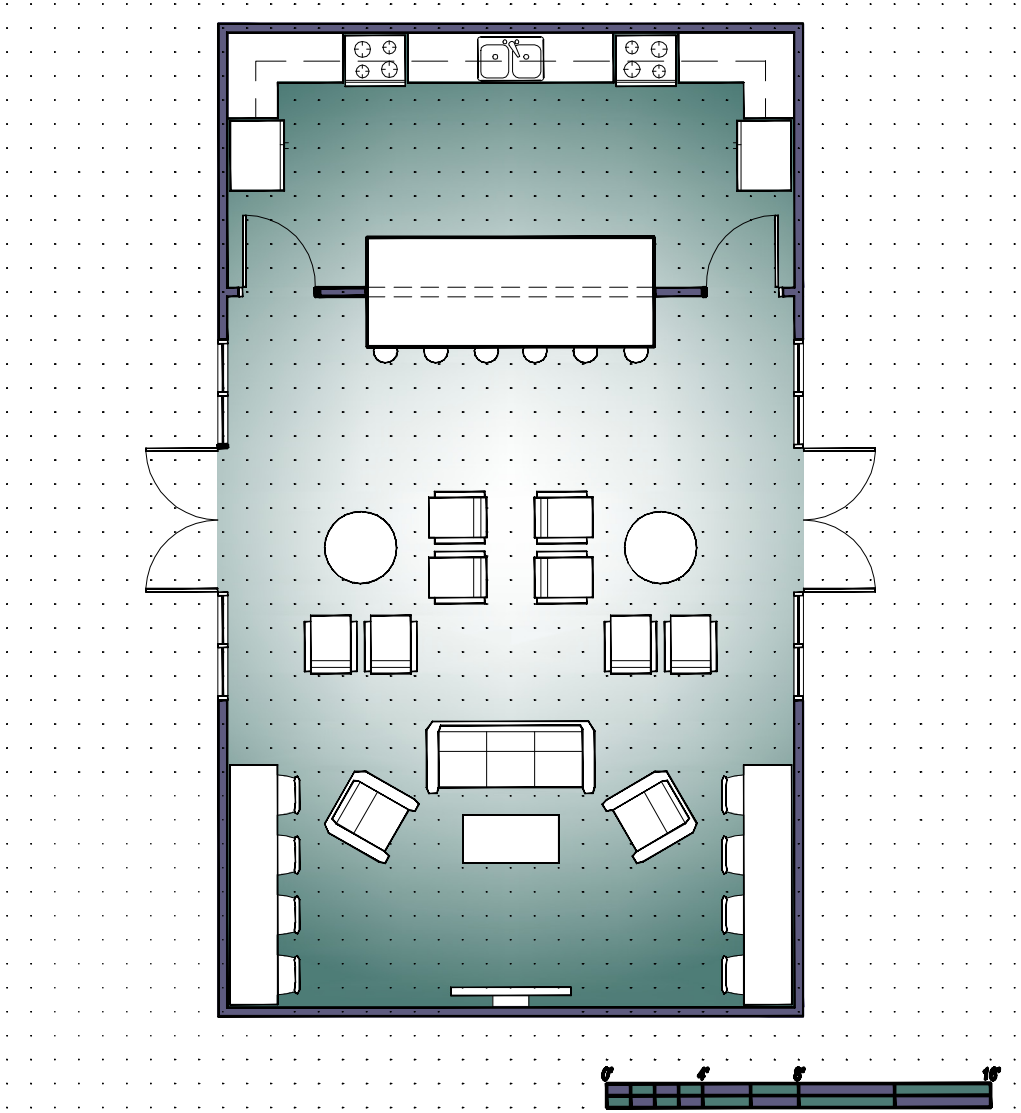
Equipment (NIC)

- None required

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



GREAT ROOM LOUNGE

SNOW COLLEGE

General Requirements

Suite Space Summary

- Space Type: Shared Lounge
- Assigned Occupants: 0
- Number Required: 1
- Area (each): 957 SF
- Total Area: 957 SF

Individual Space Summary

- Space Type: Lounge
- Visitors: 48
- Number Required: 1
- Area (each): 697 SF
- Total Area: 697 SF

Function / Tasks

- Provide space for social gatherings & events

Relationships

- Location: Second floor
- Adjacency: Unisex restroom
- Proximity: Centrally located on floor
- Separation: None required

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted, impact-resistant gypsum board w/ travertine wainscot & oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 10′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal w/ glazed sidelite
- Special: None required

Windows

- Natural Light: Required
- Type: Aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: Painted hollow metal w/1/4″ glazing

Casework / Fixed Equipment

- Engineered quartz, pass-thru bar: (14 LF) 24″

Furnishings (NIC)

- Couch: (1)
- Easy chairs: (2)
- Coffee table: (1)
- Side chairs: (8)
- Occassional tables: (2)
- Computer tables: (2)
- Task chairs: (8)
- Bar stools: (6)
-

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor may be zoned with surrounding areas
- Sound Criteria: RC (N) ≦ 45
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: Duplex recepticles for equipment listed also at computer tables, (2) cleaning, & floor box
- Data: (4) Outlets at computer tables & wireless access
- Phone: None required
- Video: CCTV camera, TV outlet
- Intercom: None required
- Clock: Required

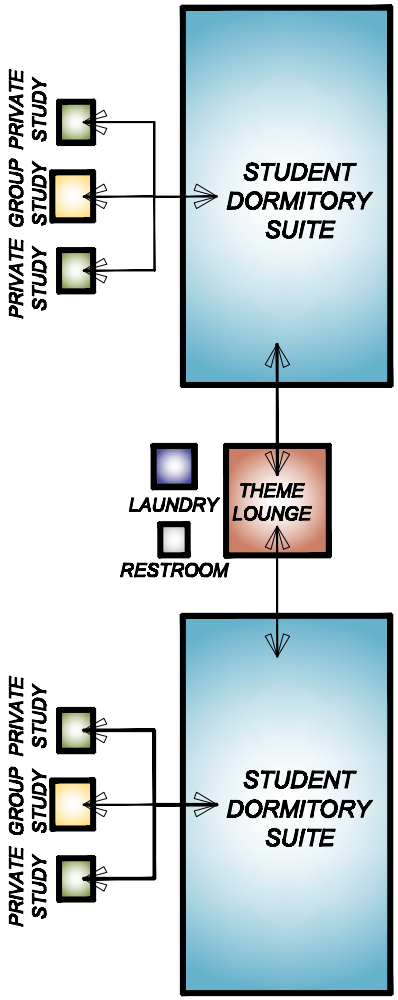
Lighting

- Fixture Type: T8 Fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Relay control

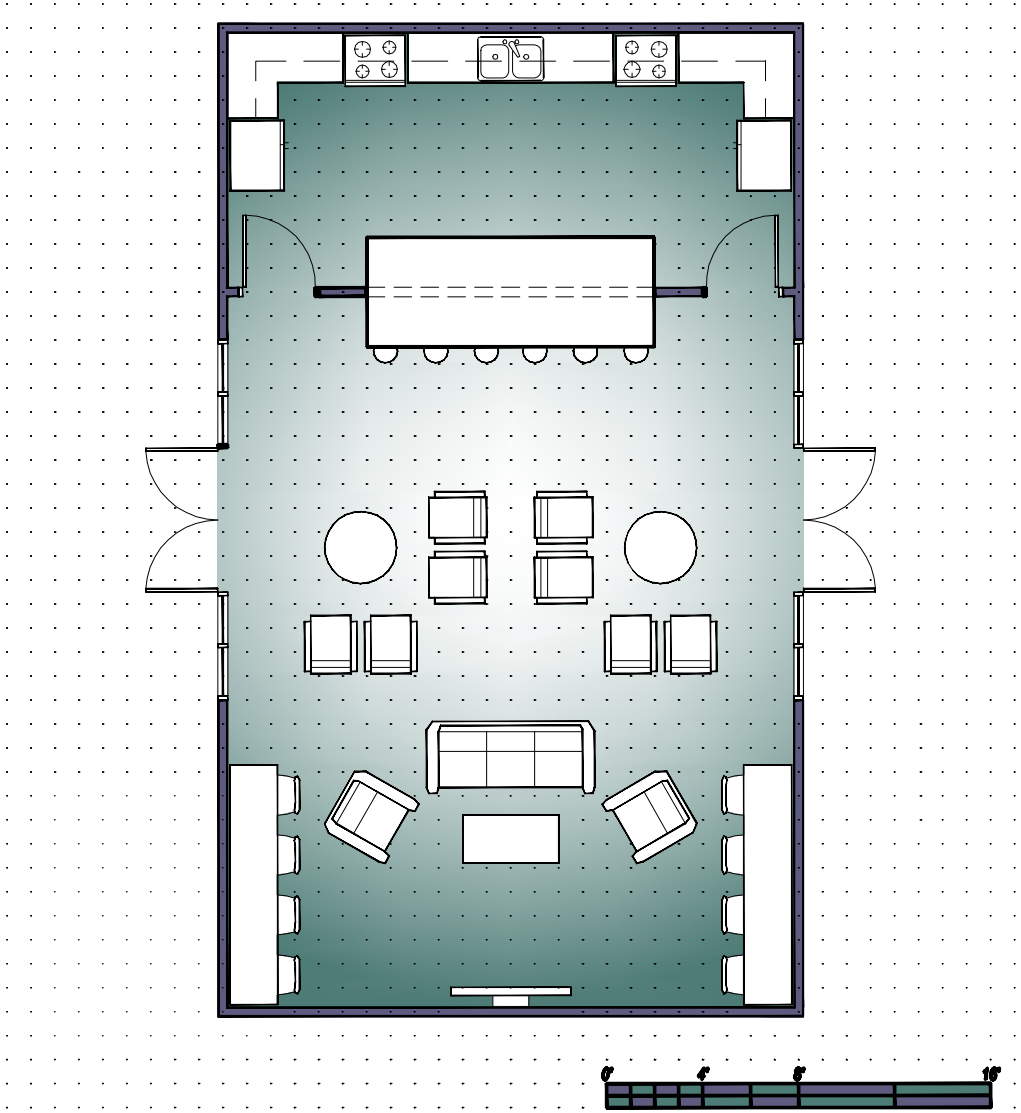
Equipment (NIC)

- LCD television, DVD, laptop computers & video game systems

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



GREAT ROOM KITCHEN

General Requirements

Suite Space Summary

- Space Type: Shared Lounge
- Assigned Occupants: 0
- Number Required: 1
- Area (each): 957 SF
- Total Area: 957 SF

Individual Space Summary

- Space Type: Kitchen
- Visitors: 10
- Number Required: 1
- Area (each): 260 SF
- Total Area: 260 SF

Function / Tasks

- Provide space for preparing meals for social gatherings & events

Relationships

- Location: Second floor
- Adjacency: Unisex restroom
- Proximity: Centrally located on floor
- Separation: None required

Architectural Requirements

Finishes

- Floor: Quarry tile w/ 4″ quarry tile base
- Walls: Painted gypsum board
- Ceiling: Suspended 2x2 grid w/ vinyl-faced acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 10′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: Aluminum overhead coiling door

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Hdwd. veneer base cabinets: (20 LF) 24″x34″ w/ doors, drawers, adj. shelves & engineered quartz countertop w/ 4″ quartz blacksplash
- Hdwd. veneer wall cabinets: (20 LF) 14″x26″ w/ doors & adj. shelves
- Hdwd. veneer island: (1) 168″x24″x34″ w/ doors, drawers, adj. shelves & engineered quartz countertop

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: Exhaust per ASHRAE 62.1
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor may be zoned with surrounding area
- Sound Criteria: None required
- Special System: Range exhaust hood & general exhaust
- Plumbing: Hot, cold & DWV for sinks & water for refrigerators

Electrical

- Power: Duplex recepticles for equipment listed
  Duplex recepticles above counter, (2) duplex
- Data: None required
- Phone: None required
- Video: CCTV camera
- Intercom: None required

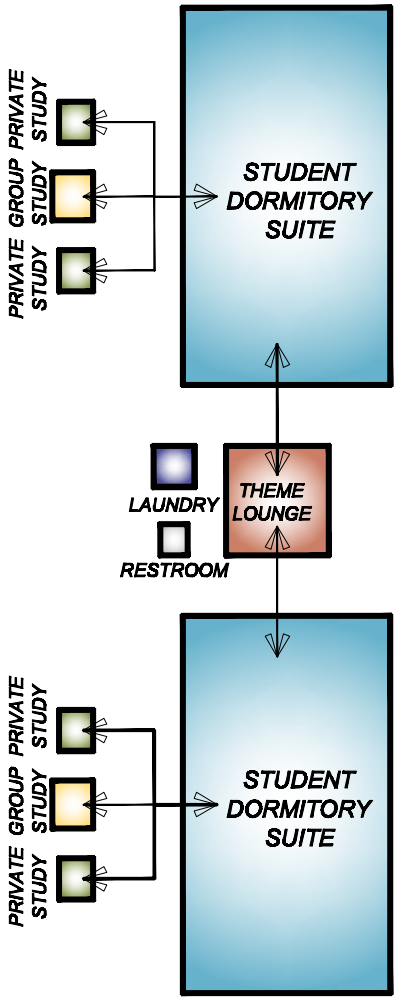
Lighting

- Fixture Type: T8 fluorescent
- Task Light: Under cabinet fluorescent
- Foot Candles: 30 ambient, 40 task
- Controls: Relay control

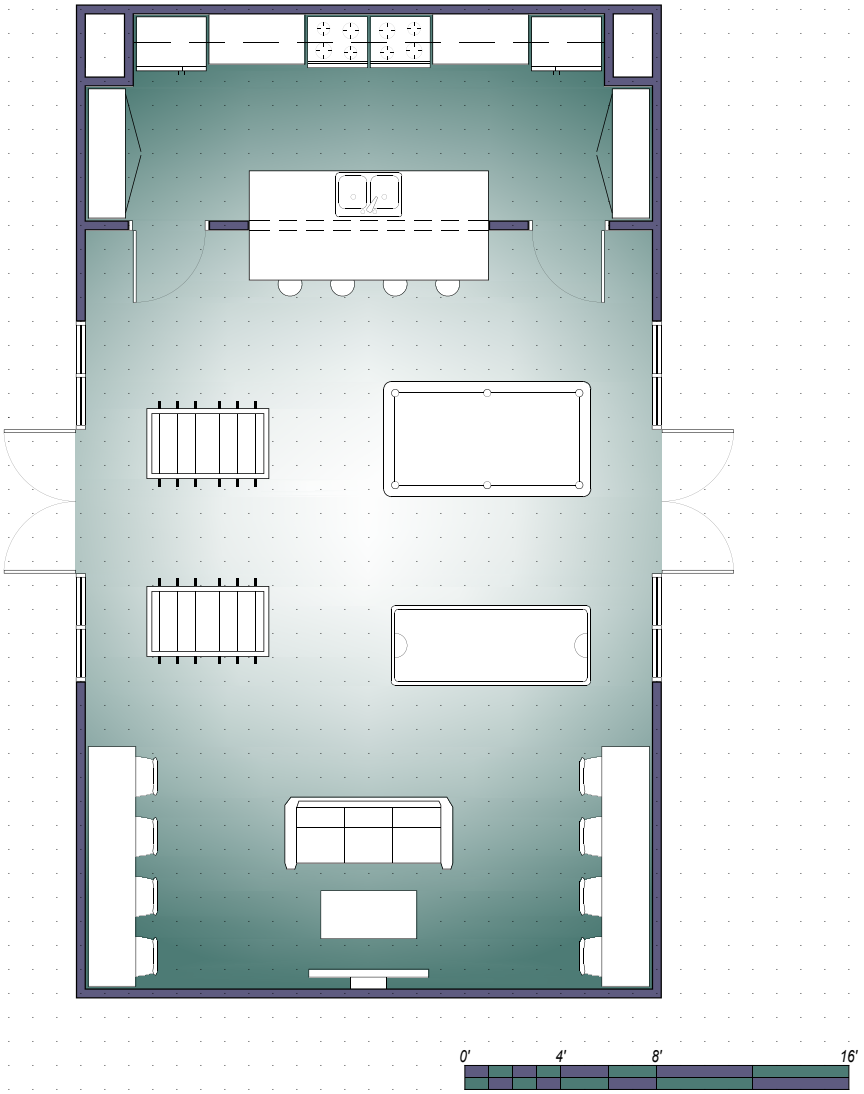
Equipment (NIC)

- Refrigerators, stoves w/ oven, microwaves, coffee maker & toaster

INDIVIDUAL SPACE DIAGRAMS



Typical Relationship Diagram



Game Room Lounge

General Requirements

Suite Space Summary

- Space Type: Shared Lounge
- Assigned Occupants: 0
- Number Required: 1
- Area (each): 957 SF
- Total Area: 957 SF

Individual Space Summary

- Space Type: Lounge
- Visitors: 49
- Number Required: 1
- Area (each): 744 SF
- Total Area: 744 SF

Function / Tasks

- Provide space for social gatherings & recreation

Relationships

- Location: Fourth floor
- Adjacency: Unisex restroom
- Proximity: Centrally located on floor
- Separation: None required

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted, impact-resistant gypsum board w/ travertine wainscot & oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 10′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal w/ glazed sidelite
- Special: None required

Windows

- Natural Light: Required
- Type: Aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: Painted hollow metal w/1/4″ glazing

Casework / Fixed Equipment

- Engineered quartz, pass-thru bar: (10 LF) 24″

Furnishings (NIC)

- Pool table: (1)
- Air hockey table: (1)
- Foosball table: (2)
- Sofa: (1)
- Coffee table: (1)
- Computer tables: (2)
- Task chairs: (8)
- Bar stools: (4)

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor may be zoned with surrounding areas
- Sound Criteria: RC (N) ≦ 45
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: Duplex recepticles for equipment listed also at computer tables, (2) cleaning, & floor box
- Data: (4) Outlets at computer tables & wireless access
- Phone: None required
- Video: CCTV camera, TV outlet
- Intercom: None required
- Clock: Required

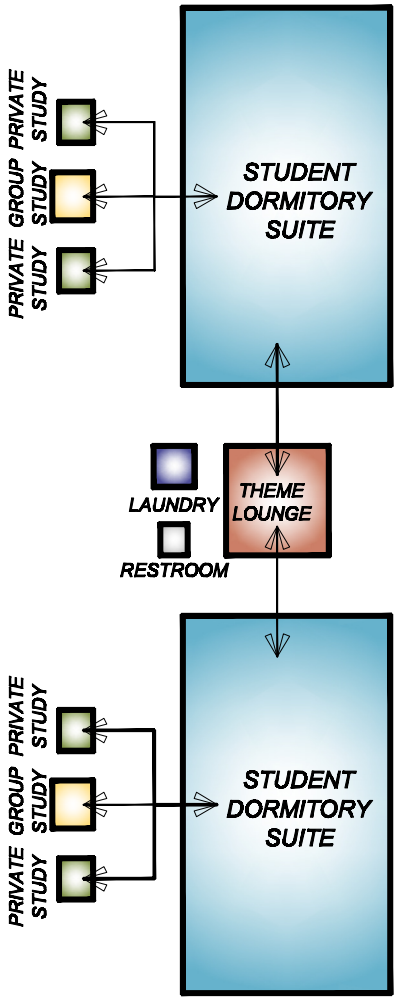
Lighting

- Fixture Type: T8 Fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Relay control

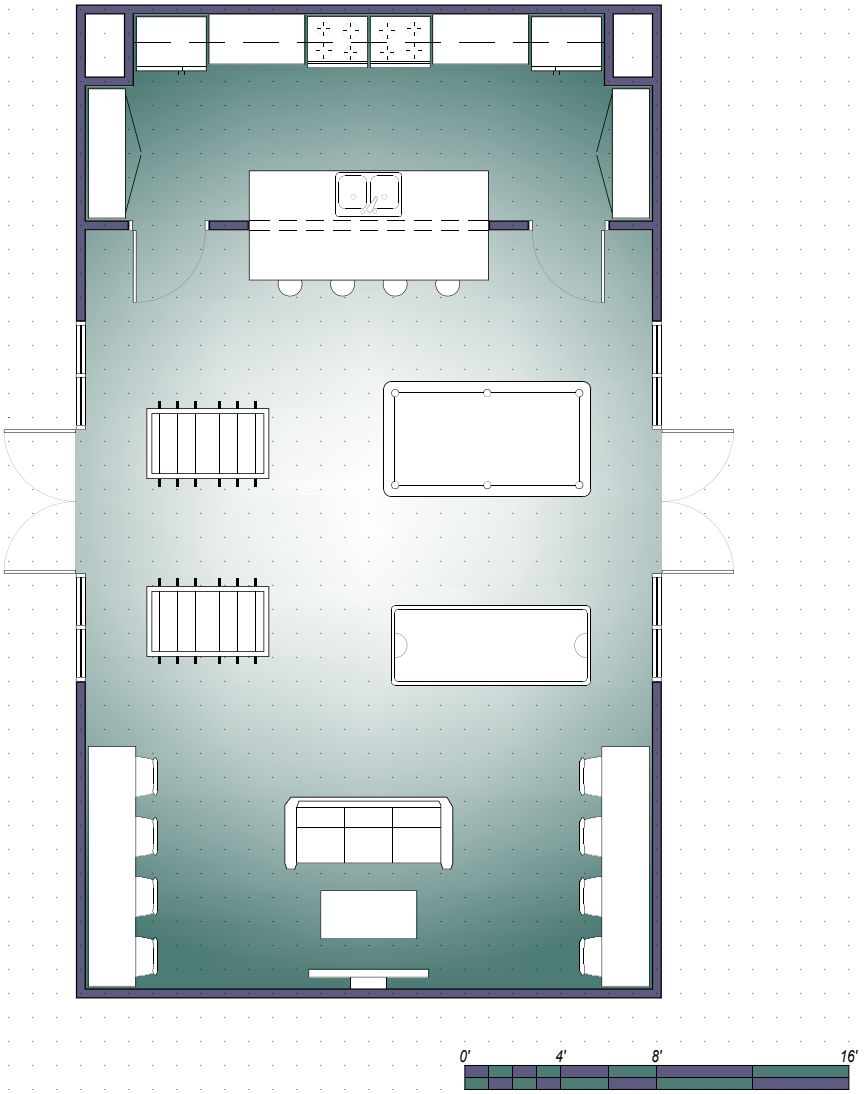
Equipment (NIC)

- LCD television, DVD, laptop computers & video game systems

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



GAME ROOM KITCHEN

SNOW COLLEGE

General Requirements

Suite Space Summary

- Space Type: Shared Lounge
- Assigned Occupants: 0
- Number Required: 1
- Area (each): 957 SF
- Total Area: 957 SF

Individual Space Summary

- Space Type: Kitchen
- Visitors: 10
- Number Required: 1
- Area (each): 214 SF
- Total Area: 214 SF

Function / Tasks

- Provide space for preparing meals for social gatherings & events

Relationships

- Location: Fourth floor
- Adjacency: Unisex restroom
- Proximity: Centrally located on floor
- Separation: None required

Architectural Requirements

Finishes

- Floor: Quarry tile w/ 4″ quarry tile base
- Walls: Painted gypsum board
- Ceiling: Suspended 2x2 grid w/ vinyl-faced acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 10′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: Aluminum overhead coiling door

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Hdwd. veneer base cabinets: (8 LF) 24″x34″ w/ doors, drawers, adj. shelves & engineered quartz countertop w/ 4″ quartz blacksplash
- Hdwd. veneer wall cabinets: (14 LF) 14″x26″ w/ doors & adj. shelves
- Hdwd. veneer island: (1) 120″x24″x34″ w/ doors, drawers, adj. shelves & engineered quartz countertop
- Hdwd. veneer pantry cabinet: (2) 68″x28″x84″ w/ adj. shelves

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: Exhaust per ASHRAE 62.1
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor may be zoned with surrounding area
- Sound Criteria: None required
- Special System: Range exhaust hood & general exhaust
- Plumbing: Hot, cold & DWV for sinks & water for refrigerators

Electrical

- Power: Duplex recepticles for equipment listed Duplex recepticles above counter, (2) duplex
- Data: None required
- Phone: None required
- Video: CCTV camera
- Intercom: None required

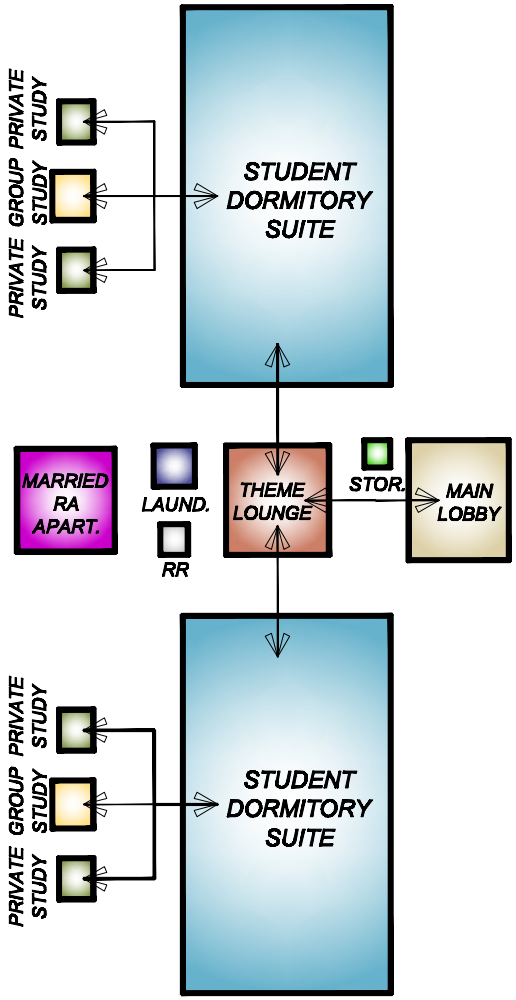
Lighting

- Fixture Type: T8 fluorescent
- Task Light: Under cabinet fluorescent
- Foot Candles: 30 ambient, 40 task
- Controls: Relay control

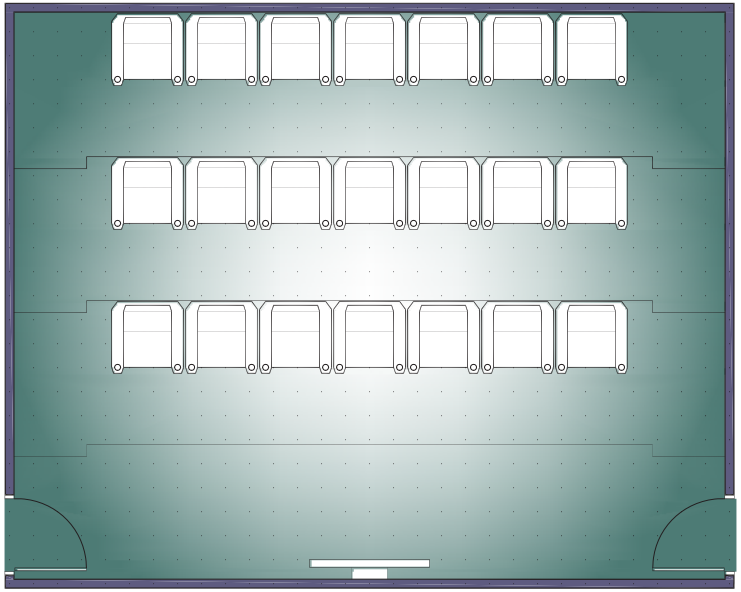
Equipment (NIC)

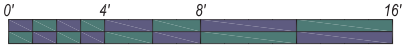
- Refrigerators, stoves w/ oven, microwaves, coffee maker & toaster

INDIVIDUAL SPACE DIAGRAMS



First Floor Relationship Diagram





Theater Room

General Requirements

Suite Space Summary

- Space Type: Shared Tiered Lounge
- Assigned Occupants: 0
- Visitors: 48
- Number Required: 1
- Area (each): 720 SF
- Total Area: 720 SF

Function / Tasks

- Provide space for social gatherings to watch movies together

Relationships

- Location: First floor
- Adjacency: Unisex restroom
- Proximity: Centrally located on floor
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base, tiered floor
- Walls: Painted, impact-resistant gypsum board w/ travertine wainscot & oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustical panels
- Sound: Full sound construction

Ceiling Height

- Above Finish Floor (min.): 10′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: Sound isolation

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- None required

Furnishings (NIC)

- Theater style seating w/ cupholders: (48)

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor
- Sound Criteria: RC (N) ≦ 30
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: (2) Duplex recepticle at TV
  (2) duplex per wall
- Data: Wireless access
- Phone: None required
- Video: CCTV camera, TV outlet
  Provide full surround sound system tied to TV
- Intercom: None required

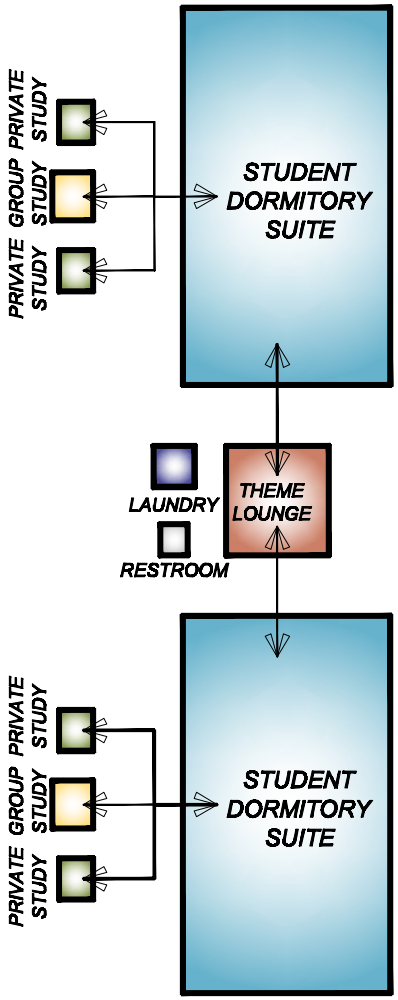
Lighting

- Fixture Type: Dimmable compact fluorescent
- Task Light: None required
- Foot Candles: 25
- Controls: Relay control

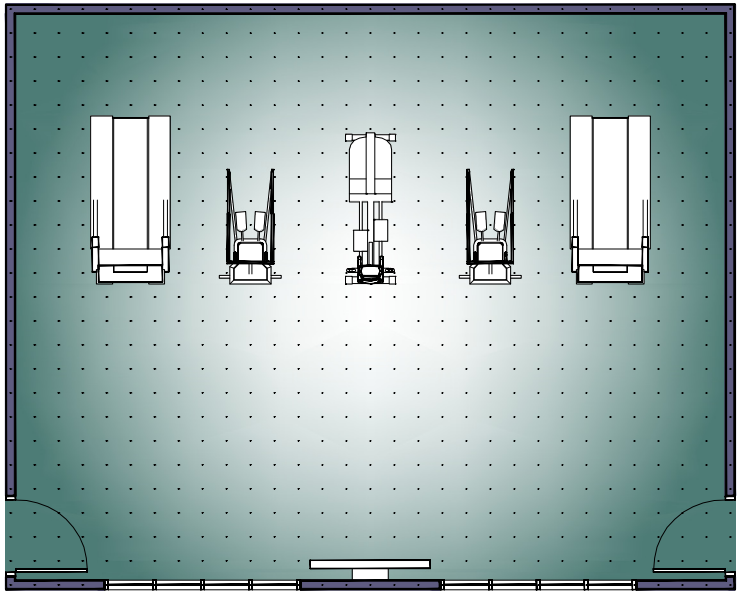
Equipment (NIC)

- LCD television & DVD

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



EXERCISE ROOM / GENERIC LOUNGE

General Requirements

Suite Space Summary

- Space Type: Shared Lounge
- Assigned Occupants: 0
- Visitors: 48
- Number Required: 1
- Area (each): 720 SF
- Total Area: 720 SF

Function / Tasks

- Provide space for social gatherings & exercise

Relationships

- Location: Third floor
- Adjacency: Unisex restroom
- Proximity: Centrally located on floor
- Separation: None required

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted, impact-resistant gypsum board w/ travertine wainscot & oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 10′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: None required

Windows

- Natural Light: Desirable
- Type: Aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: Painted hollow metal w/ 1/4″ glazing

Casework / Fixed Equipment

- None required

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As reqiured by ASHRAE 62.1
- Air Circulation: Exhaust per ASHRAE 62.1
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor
- Sound Criteria: None required
- Special Systems: None required
- Plumbing: Drinking fountain

Electrical

- Power: Duplex recepticles at equipment listed (2) per wall minimum
- Data: Wireless access
- Phone: None required
- Video: CCTV camera, TV outlet
- Intercom: None required
- Clock: Required

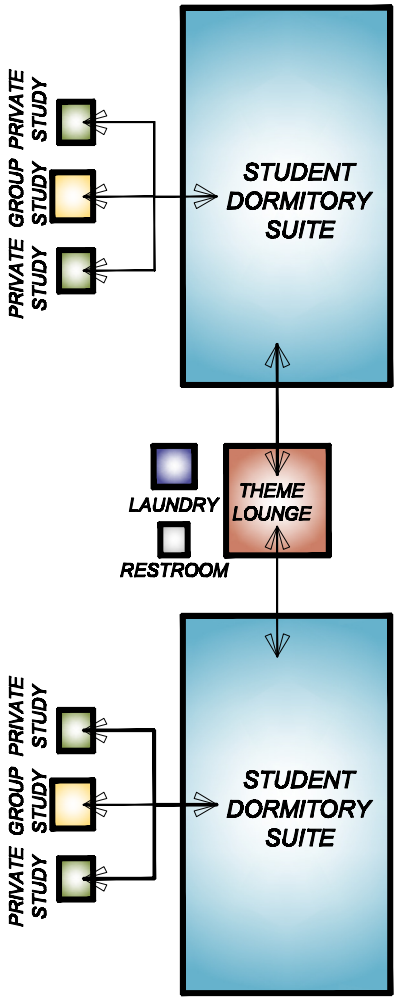
Lighting

- Fixture Type: T8 Fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

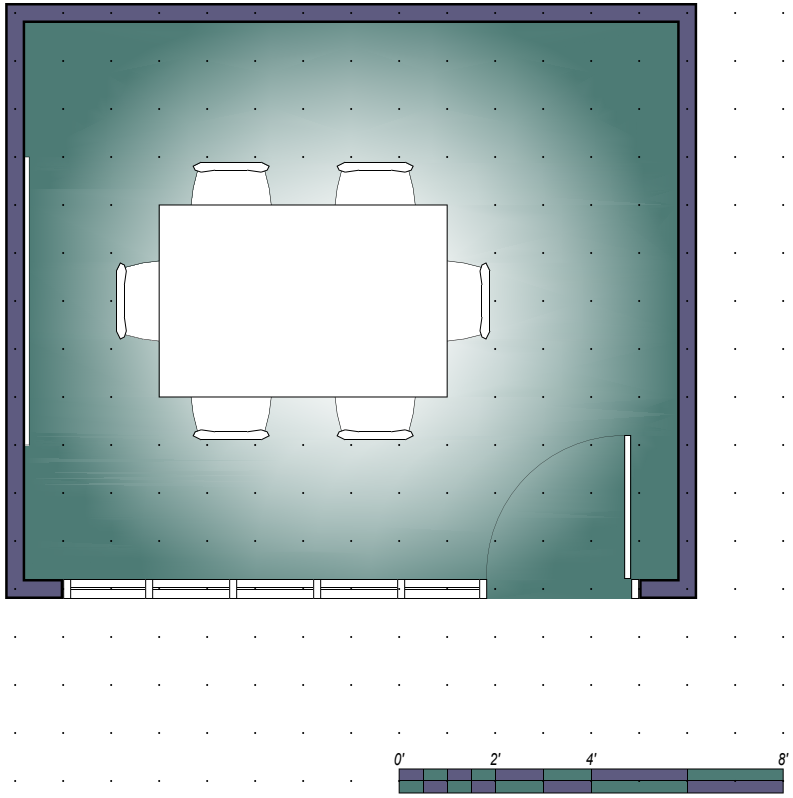
Equipment (NIC)

- LCD television, DVD, treadmill, stationary bikes, elliptical trainers

INDIVIDUAL SPACE DIAGRAMS



Typical Relationship Diagram



Group Study Room

General Requirements

Space Summary

- Space Type: Shared Study Space
- Number Required: 8
- Area (each): 168 SF
- Total Area: 1,344 SF

Occupant Summary

- Assigned Occupants: None
- Visitors: 4-6

Function / Tasks

- Provide private area for group study.

Relationships

- Location: Two each floor
- Adjacency: None
- Proximity: None
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted, impact-resistant gypsum board w/ oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal w/ glazed sidelite
- Special: Sound isolation

Windows

- Natural Light: Required
- Type: Aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: Painted hollow metal w/ 1/4″ glazing

Casework / Fixed Equipment

- Whiteboard: (1)

Furnishings (NIC)

- Small conference table: (1)
- Task chairs: (6-8)

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor
- Sound Criteria: RC (N) ≦ 45
- Special Systems: None reqired
- Plumbing: None required

Electrical

- Power: (1) Duplex recepticle per wall
- Data: Outlest on long wall, wireless access
- Phone: None required
- Video: None required
- Intercom: None required
- Clock: Required

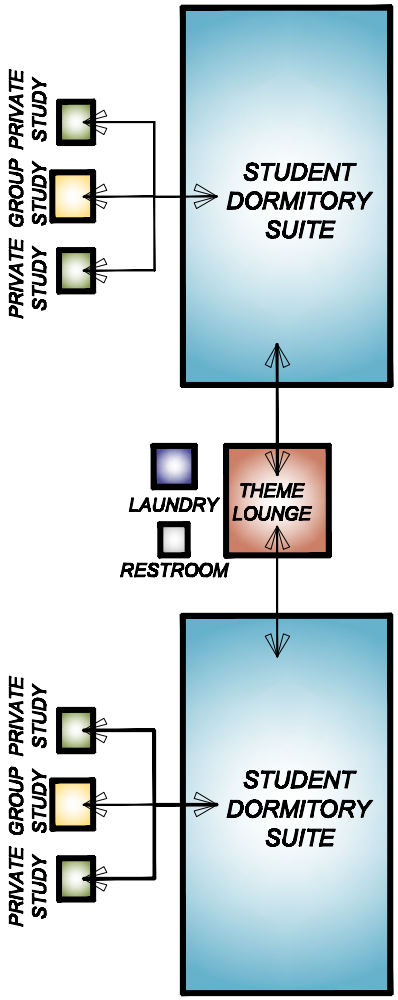
Lighting

- Fixture Type: T8 fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

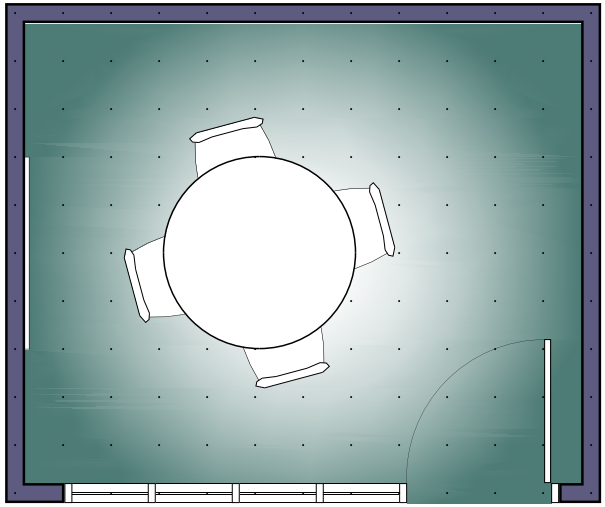
Equipment (NIC)

- None required

INDIVIDUAL SPACE DIAGRAMS



TYPICAL RELATIONSHIP DIAGRAM



PRIVATE STUDY ROOM

SNOW COLLEGE

General Requirements

Space Summary

- Space Type: Shared Study Space
- Number Required: 16
- Area (each): 120 SF
- Total Area: 1,920 SF

Occupant Summary

- Assigned Occupants: None
- Visitors: 1-4

Function / Tasks

- Provide private space for study.

Relationships

- Location: Four each floor
- Adjacency: None
- Proximity: None
- Separation: Equipment & mechanical rooms
  Noisy public spaces & public gathering areas

Architectural Requirements

Finishes

- Floor: Carpet tile w/ rubber base
- Walls: Painted, impact-resistant gypsum board w/ oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal w/ glazed sidelite
- Special: Sound isolation

Windows

- Natural Light: Required
- Type: Aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: Painted hollow metal w/ 1/4″ glazing

Casework / Fixed Equipment

- Whiteboard: (1)

Furnishings (NIC)

- Small conference table: (1)
- Task chairs: (4)

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor
- Sound Criteria: RC (N) ≦ 45
- Special Systems: None reqired
- Plumbing: None required

Electrical

- Power: (1) Duplex recepticle per wall
- Data: Outlest on long wall, wireless access
- Phone: None required
- Video: None required
- Intercom: None required
- Clock: Required

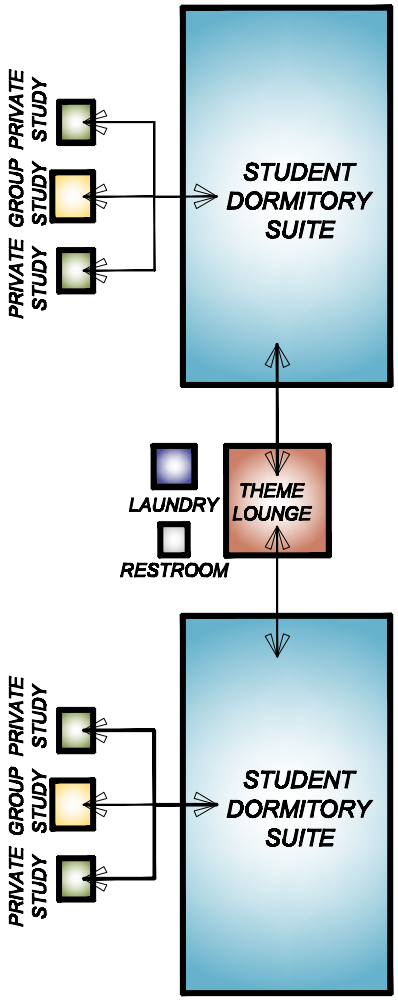
Lighting

- Fixture Type: T8 fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

Equipment (NIC)

- None required

INDIVIDUAL SPACE DIAGRAMS



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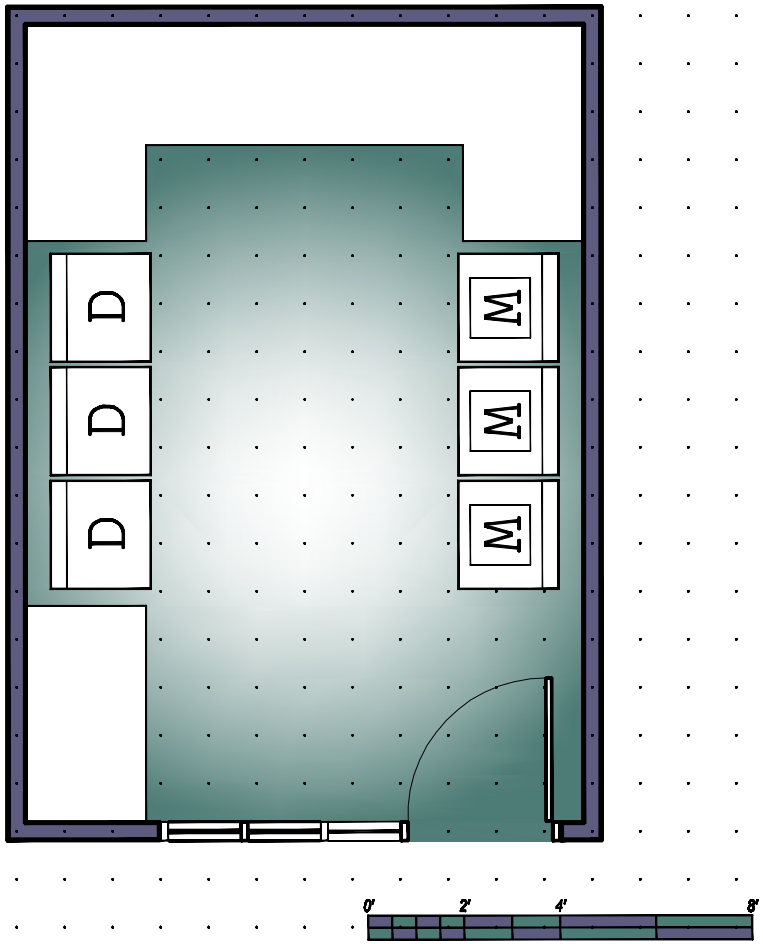


Laundry Room

General Requirements

Space Summary

- Space Type: Dormitory Common Space
- Number Required: 4
- Area (each): 193 SF
- Total Area: 772 SF

Occupant Summary

- Assigned Occupants: None

Function / Tasks

- .Provide area for students to do laundry.

Relationships

- Location: One each floor
- Adjacency: None
- Proximity: Centrally located on floor
- Separation: None

Architectural Requirements

Finishes

- Floor: Vinyl composite tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Susp. 2x2 grid w/ acoustical panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal w/ glazed sidelite
- Special: None required

Windows

- Natural Light: Not required
- Interior: Painted hollow metal w/ 1/4″ glazing

Casework / Fixed Equipment

- None required

Furnishings (NIC)

- 30″ Deep tables for folding: (5)

Technical Requirements

Mechanical

- Outdoor Air: As req'd to makeup dryer exhaust
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor
- Sound Criteria: None required
- Special Systems: Dryer exhaust & make up air
- Plumbing: Dommestic hot, cold, & DWV for washers

Electrical

- Power: Duplex recepticle at door, connections for washers & dryers
- Data: Wireless access
- Phone: None required
- Video: CCTV camera
- Intercom: None required
- Clock: Required

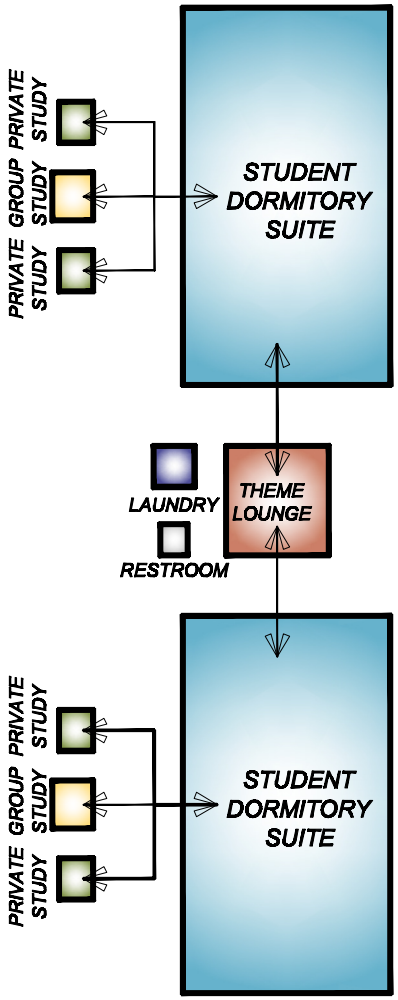
Lighting

- Fixture Type: T8 fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

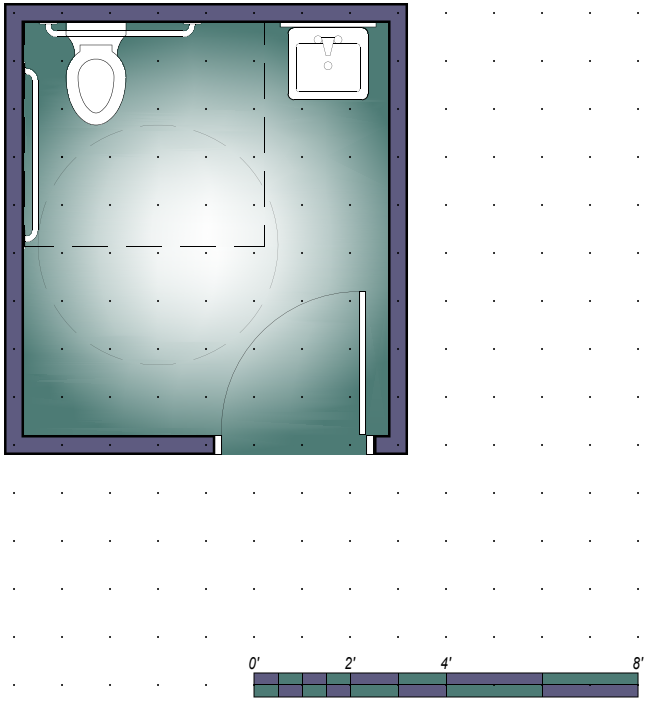
Equipment (NIC)

- Washers & dryers

INDIVIDUAL SPACE DIAGRAMS



Typical Relationship Diagram



Unisex Restroom

General Requirements

Space Summary

- Space Type: Unisex Visitor Restroom
- Number Required: 4
- Area (each): 72 SF
- Total Area: 288 SF

Occupant Summary

- Assigned Occupants: None

Function / Tasks

- .Guest restroom facilities.

Relationships

- Location: One each floor
- Adjacency: None
- Proximity: Centrally located on floor
- Separation: None

Architectural Requirements

Finishes

- Floor: Ceramic tile w/ tile base
- Walls: Ceramic tile
- Ceiling: Susp. gypsum board, epoxy painted
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: None required

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Mirror: (1) ea. 24″x48″

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: Exhaust per ASHRAE 62.1
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor may be zoned w/ surrounding area
- Sound Criteria: None required
- Special Systems: None required
- Plumbing: Lavatory, water closet, hot, cold, & DWV piping

Electrical

- Power: GFCI receptacle at sink
- Data: None required
- Phone: None required
- Video: None required
- Intercom: None required

Lighting

- Fixture Type: T8 fluorescent & compact
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

Equipment (NIC)

- None required

INDIVIDUAL SPACE OUTLINE

General Requirements

Space Summary

- Space Type: Lobby
- Number Required: 1
- Area (each): 1,025 SF
- Total Area: 1,025 SF

Occupant Summary

- Assigned Occupants: 0

Function / Tasks

- Provide entry into the building and social gathering space.

Relationships

- Location: First floor
- Adjacency: Main entry into building
- Proximity: Centrally located
- Separation: None required

Architectural Requirements

Finishes

- Floor: Epoxy terrazzo w/ oak base
- Walls: Painted, impact-resistant gypsum board w/ travertine wainscot & oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustic panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 10′-0″

Doors

- None required other than entry doors into the building

Windows

- Natural Light: Required
- Type: Aluminum frame
- Glazing: Insulated w/ low-e coating
- Interior: None required

Casework / Fixed Equipment

- Information/computer kiosk desk: (1) 96″x96″
- Fire place: (1)

Furnishings (NIC)

- Lounge furniture

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor
- Sound Criteria: RC (N) ≦ 45
- Special Systems: Gas for fireplace
- Plumbing: None required

Electrical

- Power: (1) duplex recepticles per wall
- Data: Outlet at kiosk desk, wireless access
- Phone: None required
- Video: CCTV camera
- Intercom: None required
- Clock: Requied

Lighting

- Fixture Type: T8 & compact fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Relay control

Equipment (NIC)

- Computer, printer & scanner

General Requirements

Space Summary

- Space Type: Hall
- Number Required: Varies per design
- Area (each): Varies per design
- Total Area: Varies per design

Occupant Summary

- Assigned Occupants: 0

Function / Tasks

- To connect spaces within the building.

Relationships

- Location: All floors
- Adjacency: Not applicable
- Proximity: Not applicable
- Separation: None required

Architectural Requirements

Finishes

- Floor: Carpet tile w/ oak base
- Walls: Painted, impact-resistant gypsum board w/ oak chair rail
- Ceiling: Susp. 2x2 grid w/ acoustic panels
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- None required

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- None required

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor
- Sound Criteria: RC (N) ≦ 45
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: Duplex recepticles @ 12′-0″ o.c.
- Data: None required
- Phone: None required
- Video: CCTV camera
- Intercom: None required
- Clock: None requied

Lighting

- Fixture Type: T8 & compact fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Relay control

Equipment (NIC)

- None required

INDIVIDUAL SPACE OUTLINE

General Requirements

Space Summary

- Space Type: Storage
- Number Required: 1
- Area (each): 60 SF
- Total Area: 60 SF

Occupant Summary

- Assigned Occupants: 0

Function / Tasks

- Provide storage for game room equipment

Relationships

- Location: First floor
- Adjacency: Information/Computer Kiosk
- Proximity: None required
- Separation: None required

Architectural Requirements

Finishes

- Floor: Vinyl composite tile w/ rubber base
- Walls: Painted gypsum board
- Ceiling: Painted, susp. gypsum board
- Sound: Not required

Ceiling Height

- Above Finish Floor (min.): 9′-0″

Doors

- Type: Solid core wood w/ clear finish
- Frame: Painted hollow metal
- Special: None required

Windows

- Natural Light: Not required

Casework / Fixed Equipment

- Wall mounted shelving

Furnishings (NIC)

- None required

Technical Requirements

Mechanical

- Outdoor Air: As required by ASHRAE 62.1
- Air Circulation: As required by load analysis
- Summer Design Temp.: 76°F
- Winter Design Temp.: 72°F
- Controls: Temperature sensor may be zoned with surrounding area
- Sound Criteria: None required
- Special Systems: None required
- Plumbing: None required

Electrical

- Power: (1) Duplex recepticle each wall
- Data: None required
- Phone: None required
- Video: None required
- Intercom: None required

Lighting

- Fixture Type: T8 fluorescent
- Task Light: None required
- Foot Candles: 30
- Controls: Occupancy sensor

Equipment (NIC)

- None required

PROGRAM AREA SUMMARY			
Space Name	Number Required	Area Each	Total Area
Student Dormitory Suite	64	832 SF	53,248 SF
Married RA Apartment	1	857 SF	857 SF
Great Room Lounge & Kitchen	1	957 SF	957 SF
Game Room Lounge & Kitchen	1	957 SF	957 SF
Theater Lounge	1	720 SF	720 SF
Exercise Lounge	1	720 SF	720 SF
Group Study Rooms (2 per floor)	8	168 SF	1,344 SF
Private Study Rooms (4 per floor)	16	120 SF	1,920 SF
Laundry Rooms (1 per floor)	4	193 SF	772 SF
Unisex Visitor Restroom	4	72 SF	288 SF
Game Equipment Storage	1	60 SF	60 SF
Main Lobby with Information/Computer Kiosk	1	1,025 SF	1,025 SF
		Total Area of Spacess	62,955 NSF
		73% Efficiency	86,000 GSF

Cost Model

Site Construction Cost Summary

Site Costs			$517,740
		Subtotal	***$517,740***
General Conditions	5%		$
Overhead & Profit	5%		$
Bonds	1%		$
		Subtotal	***$***
Site Construction Cost		***Total***	***$***

Building Construction Cost Summary

Architectural Costs			$4,177,460
Structural Costs			$2,142,656
Mechanical Costs			$2,924,000
Electrical Costs			$1,357,000
		Subtotal	***$***
General Conditions	5%		$
Overhead & Profit	5%		$
Bonds	1%		$
		Subtotal	***$***
Building Construction Cost		***Total***	***$***

TOTAL CONSTRUCTION COST = $
CONSTRUCTION COST PER SQUARE FOOT = $