PARKVIEW II - HOUSING PROJECT

BT- 892

Florida International University
Modesto A. Maidique Campus

August 11, 2017
## II. TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIGNATURE SHEET</td>
<td>III</td>
</tr>
<tr>
<td>Facility Program Committee</td>
<td></td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>IV</td>
</tr>
<tr>
<td>ACADEMIC PLAN</td>
<td>V</td>
</tr>
<tr>
<td>SPACE NEEDS ASSESSMENT</td>
<td>VI</td>
</tr>
<tr>
<td>ANALYSIS OF IMPACT ON MASTER PLAN</td>
<td>VII</td>
</tr>
<tr>
<td>SITE ANALYSIS</td>
<td>VIII</td>
</tr>
<tr>
<td>PROGRAM AREA</td>
<td>IX</td>
</tr>
<tr>
<td>Functional Description of Space Details</td>
<td></td>
</tr>
<tr>
<td>UTILITIES IMPACT ANALYSIS</td>
<td>X</td>
</tr>
<tr>
<td>INFORMATION/COMMUNICATION RESOURCE REQUIREMENTS</td>
<td>XI</td>
</tr>
<tr>
<td>FIU Building Standards: Appendix “C” - Telecommunications Wiring Standards</td>
<td></td>
</tr>
<tr>
<td>CODES AND STANDARDS</td>
<td>XII</td>
</tr>
<tr>
<td>Building Standards</td>
<td></td>
</tr>
<tr>
<td>Architectural Parameters</td>
<td></td>
</tr>
<tr>
<td>Barrier Free Design</td>
<td></td>
</tr>
<tr>
<td>Site Development and Campus Integration</td>
<td></td>
</tr>
<tr>
<td>Environmental Systems</td>
<td></td>
</tr>
<tr>
<td>Furniture Standards and Equipment</td>
<td></td>
</tr>
<tr>
<td>PROJECT SCHEDULE</td>
<td>XIII</td>
</tr>
<tr>
<td>PROGRAM FUNDS</td>
<td>XIV</td>
</tr>
<tr>
<td>PROJECT BUDGET SUMMARY</td>
<td>XV</td>
</tr>
</tbody>
</table>
III. SIGNATURE SHEET

1. Educational Specifications contained in this document have been developed in accordance with the requirements of the State University System of Florida as outlined in FIU Standard Operating Procedure #FIU-15-001:

   ROBERT W. GRIFFITH, R.A., A.A.A., DIRECTOR OF PLANNING FACILITIES MANAGEMENT

   Date: 8/15/2017

2. This document is recommended by the appointed University Building Program Committee:

   JOE PAULICK (CO-CHAIR)  JAMES WASENAAR (CO-CHAIR)
   DIRECTOR OF HOUSING    STUDENT AFFAIRS

   Date: 8/15/2017

3. This document is recommended for approval:

   JOHN CAL, ASSOCIATE VICE PRESIDENT FACILITIES MANAGEMENT

   Date: 8/30/17

4. Information Technology and Communications Resource Specifications contained in this document have been developed in conformance with the requirements of Chapter 282, Florida Statues, and University standard practices:

   ROBERT GRILLO, VICE PRESIDENT & CIO
   INFORMATION TECHNOLOGY

   Date: 8/24/17

5. This document is recommended for approval:

   LARRY LUNSFORD, VICE PRESIDENT STUDENT AFFAIRS

   Date: 9/1/17

7. This document is recommended for approval:

   KENNETH JESSELL, CFO & SENIOR VICE PRESIDENT
   FINANCE AND ADMINISTRATION

   Date: 9/15/17

8. This document is hereby approved and recommended by the University.

   KENNETH FURTON, PROVOST
   AND EXECUTIVE VICE PRESIDENT

   Date: 9/27/17

   MARK B. ROSENBERG, PRESIDENT
   FLORIDA INTERNATIONAL UNIVERSITY

   Date: 9/27/17
III. FACILITY PROGRAM COMMITTEE

This facility program represents the University's requirements for the development of the Parkview Housing Phase II Project. This represents a comprehensive effort of the members of the Facility Program Committee who have each contributed, by drawing from their expertise and respective responsibilities, the essential information required by the architects and engineers to conceptualize and develop the project. This committee will monitor the development of the design and assist the design Architects/Engineers and Landscape Architects by refining details and clarifying any ambiguities herein in a manner consistent with this program. Coordination of program requirements (compatibility, standards, finishes, utility connections, equipment, etc.) and scheduling throughout the duration of the project will be maintained by the assigned Project Manager from the University's Office of Facilities Development.

The members of the Program Committee are:

Joint-Chairpersons: Jim Wassenaar and Joe Paulick

Members: Jim Wassenaar, Student Affairs Facilities
Joe Paulick, Housing
Lynn Hendricks, Residential Life
Charles Judkins, Wellness and Recreation
Felicia Townsend, Business Services
Mike Holness, Housing Facilities
Roberto Rovira, Faculty
Curtis Litwiller, Student
Trevor Holden, Student

Ex Officio: Associate Vice President, Administration and Institutional Development
Associate Vice President, Facilities Management
Executive Director, Facilities Management/Operations
Director, University Information Technology
Director, Environmental Health & Safety
Chairperson, Faculty Senate
Chairperson, Building and Environment Committee
Director, Physical Plant
Director, Auxiliary Services
Director, Purchasing
Director, Academic Space Management
Director, Facilities Management/Construction
Director, Facilities Management/Planning
Senior Project Manager/Facilities Management

Program prepared by: Facilities Management / Housing & Residential Life
IV. INTRODUCTION

Florida International University (FIU) is a growing research institution located in a major urban area which serves the diverse academic needs of student recruits from throughout the United States and worldwide. Increasing numbers of these students will require and seek on campus housing that is convenient, safe, and affordable.

Florida International University Housing and Residential Life support the mission of the University and the Division of Student Affairs by providing a living environment that fosters the educational pursuits of a diverse student population. The campus residential community provides unique opportunities for personal growth and development, leadership experiences through student participation in programming and activities, and developing an appreciation of and sensitivity to differences. The facilities and services are designed to provide a supportive and safe environment, accommodating the needs of undergraduate and graduate students.

The FIU Housing system has 3,302 beds available on the Modesto Maidique Campus (MMC).

<table>
<thead>
<tr>
<th>Community</th>
<th>Opened</th>
<th>Beds</th>
<th>Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Apartments</td>
<td>1986</td>
<td>593</td>
<td>Shared and single bedrooms, kitchens</td>
</tr>
<tr>
<td>Panther Hall</td>
<td>1996</td>
<td>402</td>
<td>Shared bedrooms, suite style</td>
</tr>
<tr>
<td>University Towers</td>
<td>2000</td>
<td>493</td>
<td>Single bedrooms, kitchens</td>
</tr>
<tr>
<td>Everglades Hall</td>
<td>2002</td>
<td>384</td>
<td>Single bedrooms, kitchens</td>
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<tr>
<td>Lakeview South</td>
<td>2006</td>
<td>451</td>
<td>Shared and single bedrooms, suite style</td>
</tr>
<tr>
<td>Lakeview North</td>
<td>2006</td>
<td>369</td>
<td>Shared and single bedrooms, suite style</td>
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<tr>
<td>Parkview Hall</td>
<td>2013</td>
<td>610</td>
<td>Single bedrooms, kitchens</td>
</tr>
</tbody>
</table>

The Parkview Housing II project is expected to open in fall 2020 and consist of 656 beds, 300 parking spaces, and ancillary spaces. The Project will consist of 640 rentable beds and 16 beds for student resident assistants. This program envisions a building or buildings that will use the ground floor space to provide services needed in the residential area of MMC. These services include a mail package center, dining, retail, and academic support. The possibility of providing housing-related warehouse/storage space to replace the existing warehouse facility at University Apartments should also be explored.

Parkview II envisions the 640 residents housed in groups of 40 students with one resident assistant assigned to each group on all floors of the building except the ground floor. The goal of the building is to create a sense of community between the residents and their resident assistant. Each floor of the building should have gathering space for socializing and a dedicated group study room. In the building there should be a dedicated lounge for playing games (video games, pool table, ping pong, etc.) and a larger gathering space with a small kitchen for food preparation. Consider locating the large gathering space on a top floor to take advantage of views.

There will be seven types of units located in the building:

**Type A: four bedroom / two-bathroom unit**
148 units, four single bedrooms, two bathrooms, common area with living room and kitchen
Type B: Four bedroom / two-bathroom unit - ADA
8 units, four single bedrooms, two bathrooms, common are with living room and kitchen. One bedroom, one bathroom and common area should meet ADA standards.

Type C: Studio unit – ADA
16 units, designed for one person that has a common area and a bathroom and kitchen that meet ADA standards.

Type D: Studio unit – RA
15 units, designed for one person that has a common area that includes bathroom and kitchen. The Resident Assistant living unit must be located in such a way that allows the staff member to monitor and be accessible to the residential community.

Type E: Studio unit – RA ADA
1 unit, designed for one person that has a common area that includes bathroom and kitchen that meets ADA standards. The Resident Assistant living unit must be located in such a way that allows the staff member to monitor and be accessible to the residential community.

Type F: One bedroom / one bathroom unit - Graduate Assistant
2 units, designed for one single person or a married couple located preferably on the ground or top floor that has one bedroom, one bathroom, living room, and kitchen. Minimum size is 600 square feet.

Type G: Two bedroom / two-bathroom unit – Residence Life Coordinator
1 unit, designed for a single person, married couple, or family that must be located on the ground floor with a separate entrance and private courtyard. The unit should have two bedrooms, two bathrooms, living room, laundry and kitchen. Minimum size is 1,000 square feet.

The building should include space for support services to run the facility including lobby entrance, public restrooms, vending, offices, maintenance, and custodial space. It is important for this building to be secure with only one staffed main entrance where students and guests will enter and exit the building. The building program will include building-wide security cameras to be installed on all entrances, exits, stairways, and hallways. The building should be designed to take advantage of stairways to lessen the use of elevators.

This complex should have the character of a high quality residential facility that blends with existing campus architecture and other students housing in the area. FIU prefers a minimum of 100 feet separation between housing facilities with a building height not to exceed 10 stories. The complex should include outdoor green spaces that complement the campus and connect this facility with the housing quad.

The durability of finishes, building materials, and mechanical equipment is a prime concern. The University is committed to producing buildings that comply with current energy conservation strategies and standards (minimum LEED Silver Certification). The containment and reduction of sound transmission from the parking garage, stadium and the street are of a high priority as is the limiting of sound transmission between living units and bedrooms.

This program prescribes a space allocation plan, construction budget and schedule, and room-by-room
specifications for the Architect / Engineer’s application in the design of the facilities. Any amendment to this Official Program Statement shall be written and duly approved. Supplementary information (consistent with this program) will be provided during the course of design reviews.

Parking:

Construction of Parkview II is expected to eliminate some parking lot spaces. Historically, the goal has been to provide one new “local” parking space for each 2 new beds constructed. Overall campus parking needs are met most efficiently by constructing large multi-level garages having 1,000 to 2,000 parking spaces. Construction of the PG6 and PG5 garages was intended to compensate for expected loss of spaces at various surface parking lots as new buildings are constructed. For the Parkview II a basic project directive is that 300 new parking spaces be created to serve residents.

Project Delivery:

This project is proposed to be delivered using the Construction Management - At Risk Method. Criteria as stated in paragraph 6c-14-005 (2), F.C.C. includes justification due to (1) the significant need to reduce normal delivery time, requiring an overlap of design and construction phase and (2) size of the project sufficiently large and complex to require major emphasis on the qualification of the contractor with continuity of the construction management through both the design and construction of multiple phases.

Once the bonds are sold to begin construction, interest costs will begin to accrue. The project schedule must be closely monitored to meet tenant contract deadlines. Failure to deliver on time could result in significant revenue losses as well as loan interest costs. This should justify the first criteria stated above.

This housing project will consist of 656 beds and must be delivered to FIU and fully operational by June 1, 2020 to be fully operational for the fall 2020 semester.

Sustainability and Life Cycle Cost Analysis:

In recognition of the University’s commitment to sustainability practices, this project will be designed and built with the goal of meeting the USGBC's LEED-NC “Silver” certification rating level. The Project shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

In accordance with Florida Administrative Code 60D-4.006 Life Cycle Cost Analysis Requirements, careful consideration must be given to alternatives which reduce the operating and maintenance costs for this Project.
V. ACADEMIC PLAN

Florida International University is a multi-campus public research university offering a broad array of undergraduate, graduate, and professional programs. The university has two main campuses, the 344-acre Modesto A. Maidique campus in western Miami-Dade County, and the 200-acre Biscayne Bay Campus in northeast Miami-Dade County. FIU offers more than 175 baccalaureate, master's professional, and doctoral degree programs and conducts basic and applied research. Interdisciplinary centers and institutes conduct collaborative research to seek innovative solutions to economic, technological, and social problems.

Florida International University has 12 colleges and schools: College of Communication, Architecture and The Arts; College of Arts and Sciences; College of Business Administration; College of Education; College of Engineering and Computing; College of Nursing and Health Sciences; Honors College; Robert Stempel College of Public Health and Social Work; School of Journalism and Mass Communication; School of Hospitality and Tourism Management; College of Law and The Herbert Wertheim College of Medicine. With more than 54,000 students, 1275 full-time instructional faculty, and over 13,000 degrees awarded annually, FIU is the largest university in South Florida.

Committed to both high quality and access, FIU meets the educational needs of full-time and part-time undergraduate and graduate students, and lifelong learners. Reflecting the vibrant ethnic diversity of South Florida, 85 percent of FIU students are Hispanic, black, or other minorities. We take pride in the impact our graduates make upon the nation and the world.

Chartered by the Florida Legislature in 1965, Florida International University opened its doors in 1972 to the largest opening-day enrollment in the history of American higher education. Initially a two-year, upper-division school with limited graduate programs. FIU added lower-division classes in 1981 and received authority to begin offering degree programs at the doctoral level in 1984. Currently, ninety-seven percent of our full-time tenured or tenure-track instructional faculty hold doctorates or the highest degree attainable in their fields. FIU is the only urban public university in the state to be a member of Phi Beta Kappa, the nation's oldest scholarly honorary society. The Carnegie Foundation for the Advancement of Teaching classifies FIU as a Research University/High Research Activity. And in January 2011, the Carnegie Foundation awarded FIU the Community Engagement Classification. The Community Engagement Classification is awarded to institutions that demonstrate collaboration with their larger communities for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.

Research is a major component of FIU mission. FIU is one of the nation’s major research universities and we expend approximately $100 million annually on research. Our research is funded by more than 200 public and private organizations and 41 different Federal agencies. The University has many specialized research facilities including a nano-scale research and fabrication laboratory. FIU researchers conduct many studies “off site” throughout the United States and the world. Undergraduate and graduate students participate actively in research endeavors. FIU exports its discoveries for public benefit through publications, formal technology transfer agreements, public testimony and evidence-based advocacy, and the development of the next generation of scholars.

Florida International University's infrastructure includes physical facilities; a technological infrastructure; and a diverse set of programs, services, and activities that support teaching and learning, student life, and interactions between the university and the South Florida community. As of 2017, FIU operates and
maintains 157 permanent buildings encompassing almost 10 million gross square feet on five sites in Miami-Dade County.

Modesto Maidique Campus is a 344-acre site on the western edge of Miami, the center of a metropolitan area of almost four million people. Apartment-style residence halls, a nationally certified environmental preserve, and athletic facilities all contribute to a pleasant collegiate atmosphere on Modesto Maidique Campus. Modesto Maidique Campus boasts world-renowned campus architecture, lush tropical landscaping, a sculpture park, and a state-of-the-art museum. The sculpture park, an extraordinary assortment of outdoor artwork, attracts school children, university students, tour groups and individuals from South Florida and beyond. There is also a performing arts center, a fitness center, an expanded university center, a 4,500 seat arena and a football stadium. Modesto Maidique Campus also has laboratories, auditoriums, music and art studios, an experimental theater, and an eight-story library. Many student organizations promote an active student life, including the prestigious Phi Beta Kappa Honor Society. There is a wide variety of clubs on campus to meet the professional, service, athletic, social, and cultural needs of the FIU community.

The Biscayne Bay Campus (BBC) is a branch campus with a student body of more than 7,000. It is the largest branch campus in Florida's State University System, encompassing nearly 200 acres. The scenic campus offers direct access to the Bay, a library, an aquatic center, and a conference center.
VI. SPACE NEEDS ASSESSMENT

As a part of the Student Housing Master Plan Update (Spring 2016), the University underwent an analysis of its existing housing capacity, growth and operational considerations. As a result, the findings revealed that in an effort to achieve the University’s strategic objectives, the University must improve the ratio of students living on campus. Currently, the University’s student body exceeds 54,000 headcount (Fall 2016), with only 3,254 students or 6.8% living on-campus, the lowest percentage in the State University System (the “SUS”). However, with the completion of this Project the percentage of all students living on campus increases to 7.6%. The University goal is to house 20% of the total full-time student population on-campus by 2020, which requires an additional 3,156 beds.

The purpose of this Project is to further accommodate the University’s demand for housing. Currently, the University has 3,223 rentable beds in its housing inventory and a 400-bed residence hall on its Biscayne Bay campus that is operated under a public-private partnership and not a part of the housing system. The University’s housing system has operated at 100% occupancy for the past two years. Even though Parkview Housing Phase I opened in fall 2014 with the addition of 620 beds, the University had 957 students on the on-campus housing interest list in need of housing, with 545 students remaining on the waiting list as of the first day of classes. Additionally, growing enrollment, expected to increase by 12% over the next five years, is anticipated to exacerbate the problem of increased student demand for on-campus housing.

Assessment of student’s future needs indicate an equal desire for privacy and the opportunity to share a common living space with other students. A design of this nature provides the undergraduate an opportunity for privacy for sleeping, and studying in his/her bedroom, while still providing space for social interaction. Other important design criteria include computer access to wireless Internet services, personal storage space, and the capacity to prepare and store quick meals / snacks, adequate study space, minimal noise transmission between living spaces, ample security measures, and provisions for indoor / outdoor recreational activities.

The University has sent overflow from its housing system to two apartment complexes adjacent to the MMC. Although off-campus housing is an acceptable alternative for some students, rising costs and limited availability are prohibitive factors. Off-campus apartment rental rates have increased consistently over the past several years and this trend is expected to continue. In addition, off-campus housing tend to lack student driven amenities, direct student support and flexible lease terms.

Evidence that the lack of on-campus housing discourages some quality students from attending FIU comes when applicants learn they will not be assigned to on-campus housing, withdraw their application and go elsewhere. In some cases, parents will not allow them to come to Miami and live off-campus, and others cannot afford the additional expense.

The resident student is freer to explore, develop, and fully participate in the college experience. Students who live on-campus are more likely to graduate, know a faculty member, attend university events, and complete their degree within four years. It is this group of students that gives a specific character and sense of campus life to an institution.

In conclusion, there is a demonstrated need for additional on-campus student housing. FIU, with a present
total bed capacity of 3,303 does not have sufficient housing capacity to meet its growing student enrollment. The University will increasingly depend upon the availability of on-campus housing in order to attract high quality students with greater diversity. The construction of additional undergraduate housing is a critical to the achievement of the University’s goal to become a top public urban research university.
VII. ANALYSIS OF IMPACT ON MASTER PLAN

This project will be a supporting factor to the enrollment projections, academic mission, and physical development of Modesto A. Maidique Campus as documented in the **2010-2020 Campus Master Plan Update** BOT acknowledged and adopted on March 27, 2014, and any subsequent amendments.

This project may displace existing surface parking areas. The master plan provides for the displaced parking and additional required residential student parking in new garages and surface lots.

The initial phase building program of the project included a mixed use 620 bed student housing complex with undergraduate housing and space for retail infill. Development of this phase of the project will continue to include new urbanism concepts including mixed use and a “main street village” that reconfigures streets to accommodate some on-street parking and retail and other mixed use facilities. This phase of the project will provide additional housing approximately equal in size to the initial phase program.

**Current Master Plan**

This project will use the site envisioned for Honors Housing (H4) in the Master Plan. Honors has agreed to locate in first phase Parkview I Housing Project. The site originally shown for Parkview II is no longer available due to the construction of Multi-Purpose Practice Fields adjacent to the Recreation Center and Arena.
VIII. SITE ANALYSIS

The planned site for these facilities is generally located south of the Everglades and Panther Halls and east of the Football stadium shown as H4 on the Master Plan. It includes a portion of the SW 17th Street (Stadium Dr.) and the surface Parking Lot #6 on the north boundary of the Tamiami Park grounds. The planned site allows for some future westward expansion of the Frost Art Museum. Future student housing expansion may occur north of University Towers and include parking lot #13 or may occupy additional space on Parking Lot #6.

The site preparation work for this project will consist of the following:

Prepare the site for the construction of a mixed use residential complex. The site work includes the demolition of the surface Parking Lot #6 as required. It shall address existing catch basins, relocate trees, remove parking lot light poles, wheel stops, emergency call boxes, etc. The existing vehicular and pedestrian Campus accesway (Stadium Dr.) may be rerouted or realigned during construction.

The Project Budget includes all site development associated with all utility relocations, extensions and hookups, grading, walkways, service yard, landscape drainage system, plant materials, screen walls, outdoor work areas, lighting, and landscape furnishings (benches, trash containers, etc.) It also includes the development of a “town” street with on street parking, pedestrian walkways, and plazas and possible retail run-off which will be suitable for social interaction as well as retail experiences.

Particular attention is to be given to the layout of the building footprint so as to achieve the following:

- Develop a building site plan that establishes a clear linkage with existing housing facilities allowing for easy pedestrian access between buildings.
- Minimize impact upon the living experience (privacy) of those students residing in adjacent housing facilities.
- Maintain vehicular access to existing buildings for student drop-off, check-in and check-out processes.
- Maximize the space allotted to provide for outdoor recreation and social gatherings.
- Develop “Town” street philosophy including “vehicular” service.
- Adequate parking must be addressed in relation to the build out of the total project.
- Future access of support service vehicles, trash removal service, deliveries and emergency vehicles.
- Consideration of the close proximity of the project to football stadium and County Park in terms of safety and security, facilitate game day events and activities.

Site Topography and Soil Conditions:

The site is basically flat with a grade elevation of approximately 6.0 feet NGVD with some areas as low as 5.0 feet. During the construction of other projects in the vicinity, preparations included removal of a subsurface layer of muck approximately 2-feet thick. Soil conditions in the area are mixed sand and limestone and the soil in some areas was improved to create a runway and taxiways for the airport that formerly occupied the campus site. Geotechnical Analysis will be conducted during the Design Phase.
Site Water Table, Flood Hazard and Storm Water Drainage Requirements:

The water table of the site varies in the wet and dry seasons and the level can be observed directly in nearby ponds. Generally, the average water level is about 3 feet below the surface. According to the September 2009 FEMA Flood Insurance Rate Map 12086C0288L the primary area of the site is Flood Zone “AH” with a base flood elevation of 8.0. The FIU Campus Master Plan requires a minimum building floor elevation of 10.0 NGVD at Modesto Maidique Campus.

Vehicular and Pedestrian Circulation:

Pedestrian and vehicular circulation near the site is entirely along the north side as Tamiami Park is located directly south, separated by a tall metal fence. Pedestrian traffic is primarily students, faculty and staff who are using the parking areas.

Southwest 17th Street/Stadium Drive is a major campus road that connects to SW 107th and 117th Avenues. The SW 17th roadway in the vicinity of this project must be improved to include bike lanes, curb and gutter, sidewalks, cross-walks, street trees, street lights, signage and some delivery and drop off parallel parking.

Site Vegetation:

Virtually the entire area planned for the project is covered by surface parking lots and roadways. Landscaping adjacent to the parking areas are Oaks about 6 to 12-inch caliper. There are also landscape islands with sod and a 3-foot Silver Buttonwood Hedge.

Archaeological History:

The FIU Modesto Maidique Campus is not believed to contain any archaeological artifacts as the site was unpopulated Sawgrass wetland with a few small tree islands until early 20th century drainage improvements and the construction of the Tamiami Trail across the Florida Everglades made the area accessible. The natural site was disturbed by the construction of the original Tamiami Airport during the late 1940’s.

Location of Utilities and Proximity of Utilities to the Site:

See Section X. “Utilities Impact Analysis.”

Architectural Significance of any Structure on the Site and the proximity and significance of structures on adjacent sites which will have an impact on the project:

There are no buildings on the proposed site, however impacts on the Frost Art Museum, Lakeview Housing and the Wertheim Performing Arts Center and circulation to those buildings must be considered.

Any unusual site condition which may impact the cost or design of the project:

The design of the project must consider locations of major underground utilities. Buildings, light poles, fencing, landscaping and other improvements should be placed to avoid the utilities and allow future repairs to the utilities.
Direction of Prevailing Winds:

The prevailing winds at the FIU MMC Campus are out of the East and range from North East to South East with occasional north-westerly winds lasting for 1 to 2 days after passage of a cold front.

Particular attention must be given to the layout of the building footprint to achieve the following:

- Develop a building site plan that establishes a clear linkage with neighborhood facilities allowing for easy pedestrian access between buildings.
- Enhance the pedestrian experience by use of landscaping, connected walkways and site lighting.
- Maintain vehicular access to existing buildings for drop-off, deliveries and unloading/loading for concessions venue, trash removal, service and emergency vehicles. Maintain emergency fire-fighting, fire-rescue and police and service access.
- Building should reflect the look and feel of surrounding FIU buildings in this neighborhood.
IX. PROGRAM AREA SUMMARY

### IX. PROGRAM AREA SUMMARY (656 total Beds)

#### SUMMARY OF SPACE REQUIREMENTS:

<table>
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<tr>
<th></th>
<th># of Units</th>
<th># of Occupants</th>
<th>NSF per Occupant</th>
<th>NASF*</th>
<th>NASF</th>
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<td><strong>RESIDENTIAL COMPLEX</strong></td>
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<tr>
<td>Unit Type “A” (4 Bedroom/Two Bath Suite)</td>
<td>148</td>
<td>4</td>
<td>230</td>
<td>136,160</td>
<td>158,930</td>
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<tr>
<td>Unit Type “B” (4 Bedroom/Two Bath Suite, ADA)</td>
<td>8</td>
<td>4</td>
<td>240</td>
<td>7,680</td>
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</tr>
<tr>
<td>Unit Type “C” (Studio Units, ADA)</td>
<td>16</td>
<td>1</td>
<td>420</td>
<td>6,720</td>
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<tr>
<td>Unit Type “D” (RA Studio Units)</td>
<td>15</td>
<td>1</td>
<td>370</td>
<td>5,550</td>
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<td>Unit Type “E” (RA Studio Unit, ADA)</td>
<td>1</td>
<td>1</td>
<td>420</td>
<td>420</td>
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<tr>
<td>Unit Type “F” (One Bedroom/One Bath, Grad. Asst.)</td>
<td>2</td>
<td>2</td>
<td>350</td>
<td>1,400</td>
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<tr>
<td>Unit Type “G” (Two Bedroom/Two Bath, Res. Life Coord.)</td>
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<td>4</td>
<td>250</td>
<td>1,000</td>
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<tr>
<td><strong>RESIDENTIAL SUPPORT SERVICES</strong></td>
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<td>4,720</td>
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<td><strong>OFFICE</strong></td>
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<td>Entrance Lobby with Public Restrooms</td>
<td>1</td>
<td>200</td>
<td>10</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Clerical Area/Front Desk</td>
<td>1</td>
<td>2</td>
<td>100</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Secretarial</td>
<td>1</td>
<td>2</td>
<td>100</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Mail and Package Center With Office</td>
<td>1</td>
<td>1</td>
<td>1,000</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Assistant Coordinator Office (ARLC)</td>
<td>2</td>
<td>1</td>
<td>160</td>
<td>320</td>
<td></td>
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<tr>
<td>Coordinator Office (RLC)</td>
<td>1</td>
<td>1</td>
<td>200</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Satellite Police/Interview Room</td>
<td>1</td>
<td>1</td>
<td>200</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Conference Room</td>
<td>1</td>
<td>25</td>
<td>16</td>
<td>400</td>
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</tr>
<tr>
<td>Residential Life Work Room &amp; Storage</td>
<td>1</td>
<td>1</td>
<td>200</td>
<td>200</td>
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<tr>
<td><strong>STUDENT ACADEMIC SERVICES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17,025</td>
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<tr>
<td>Multi-Purpose Room/Main Lounge</td>
<td>1</td>
<td>140</td>
<td>20</td>
<td>2,800</td>
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<tr>
<td>Multi-Purpose Room/Main Lounge Restrooms</td>
<td>2</td>
<td>4</td>
<td>80</td>
<td>640</td>
<td></td>
</tr>
<tr>
<td>Multi-Purpose Room/Main Lounge Furniture Storage</td>
<td>1</td>
<td>1</td>
<td>280</td>
<td>280</td>
<td></td>
</tr>
<tr>
<td>Community and Catering Kitchen</td>
<td>1</td>
<td>1</td>
<td>300</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Multi-Purpose TV Game Room (with Storage)</td>
<td>1</td>
<td>40</td>
<td>40</td>
<td>1,600</td>
<td></td>
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<tr>
<td>Academic Resource Center</td>
<td>1</td>
<td>25</td>
<td>45</td>
<td>1,125</td>
<td></td>
</tr>
<tr>
<td>Group Study Room</td>
<td>8</td>
<td>8</td>
<td>30</td>
<td>1,920</td>
<td></td>
</tr>
<tr>
<td>Classroom</td>
<td>2</td>
<td>30</td>
<td>30</td>
<td>1,800</td>
<td></td>
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<tr>
<td>Student Lounge (Floor/Wing Lounge)</td>
<td>8</td>
<td>41</td>
<td>20</td>
<td>6,560</td>
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<tr>
<td><strong>RESIDENTIAL SUPPORT SERVICES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9,433</td>
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<tr>
<td>Laundry / Vending</td>
<td>2</td>
<td>1</td>
<td>1,000</td>
<td>2,000</td>
<td></td>
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<tr>
<td>Trash/Recycling Room</td>
<td>24</td>
<td>1</td>
<td>120</td>
<td>2,880</td>
<td></td>
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<tr>
<td>Trash/Recycling Collection Room</td>
<td>2</td>
<td>1</td>
<td>300</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Custodial Closets</td>
<td>12</td>
<td>1</td>
<td>60</td>
<td>720</td>
<td></td>
</tr>
<tr>
<td>Maintenance Storage/Work Area</td>
<td>1</td>
<td>1</td>
<td>1,000</td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>Telecommunications Intermediate Cross-Connect (IC)</td>
<td>1</td>
<td>1</td>
<td>205</td>
<td>205</td>
<td></td>
</tr>
<tr>
<td>Telecommunications Room (TC)</td>
<td>24</td>
<td>1</td>
<td>70</td>
<td>1,680</td>
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<tr>
<td>Storage</td>
<td>1</td>
<td>1</td>
<td>348</td>
<td>348</td>
<td></td>
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<tr>
<td>Housing Warehouse Replacement - ADDITIVE ALTERNATE</td>
<td>1</td>
<td></td>
<td></td>
<td>[5000]</td>
<td>&lt;Not Counted</td>
</tr>
<tr>
<td><strong>MECHANICAL / ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3,860</td>
</tr>
<tr>
<td>Fire Pump Room</td>
<td>2</td>
<td>1</td>
<td>141</td>
<td>282</td>
<td></td>
</tr>
<tr>
<td>Chilled Water Room</td>
<td>2</td>
<td>1</td>
<td>240</td>
<td>480</td>
<td></td>
</tr>
<tr>
<td>Emergency Generator Room</td>
<td>2</td>
<td>1</td>
<td>400</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>Mechanical Room (Water Heater Room)</td>
<td>2</td>
<td>1</td>
<td>328</td>
<td>656</td>
<td></td>
</tr>
<tr>
<td>Electrical Room (Main Room)</td>
<td>2</td>
<td>1</td>
<td>150</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Electrical Rooms</td>
<td>22</td>
<td>1</td>
<td>61</td>
<td>1,342</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL PROGRAM AREA COMPLEX (NSF)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>193,968</td>
</tr>
</tbody>
</table>

* Net areas to be calculated using “inside to inside” surface Measurements, (do not use center line dimensions)

Telecommunications Room area was calculated based on total net square footage that Telecommunications shall support based on “Appendix C, page C-7”. This is an approximate figure for budget purposes, and it will be defined once the actual configuration and geometry of the building has been determined.
**SPACE PLANNING**

This is a four bedroom apartment unit with (4) single occupancy bedrooms each with their own closet with overhead storage and clothes rod. All bedrooms are to have a window that does not open. Two complete bathrooms, 1 common living area, and 1 kitchen will serve the unit.

Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between bedrooms and units. Bedrooms and study areas to be floored with luxury vinyl plank tile and baseboards. Walls to be primed and painted with 2 coats of premium grade flat.

Exterior unit entry will have a solid core door that has card access, a peephole, and institutional/premium grade hardware. Interior bedroom doors will be solid core and be key lockable. Bathroom doors will be solid core with privacy lock. All doors to have lever handle locks.

Bathrooms should be equipped with solid surface full height walls in shower unit, molded shower pan, power flush toilet (bowl and tank) and linen storage with (4) shelves. All bathroom floors shall be unglazed slip-resistant ceramic tiles. Wall tiles & bases shall be glazed commercial grade ceramic tile. All Typical Units shall be provided with two single piece composite vanity top and sink with mirror that is separate from the shower/toilet area. Egg shell mold resistant paint will be used in all wet areas.

Millwork will be made of premium grade plywood and laminate. 18” x 18” single compartment stainless steel sink with gooseneck faucet & sold surface counter top with top & bottom cabinets for storage. Space for a full-size refrigerator, range, and microwave will be allotted.

**ENVIRONMENTAL SYSTEMS**

Wireless Data communications in each apartment unit. One Cable TV outlet in each bedroom. One emergency call button located in common area in each unit next to main unit entry door.

Overhead LED lighting in all rooms sufficient to read and write.

HVAC system with fixed vents and limited temperature range. Provide sound baffles in duct work.

125V 20 AMPS duplex outlets for general power needs including refrigerator and resident provided microwave and 240V 30 AMPS outlet for range.

All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.

Bedrooms:
- 4 full-size beds
- 8 two drawer dressers on casters
- 4 desks with separate pedestal with two drawers on casters
- 4 desk chairs on casters
- Blinds

Common Area:
- 1 table
- 4 chairs
- 1 couch
- 1 coffee table
- 1 end table
- 1 TV stand

Refrigerator (full size 18 cu. ft.)
- Range with cook top (full size)
- Space for microwave

**FURNITURE/EQUIPMENT**

<table>
<thead>
<tr>
<th>Bedroom:</th>
<th>Common Area:</th>
<th>Furniture/Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 full-size beds</td>
<td>1 table</td>
<td></td>
</tr>
<tr>
<td>8 two drawer dressers on casters</td>
<td>4 chairs</td>
<td></td>
</tr>
<tr>
<td>4 desks with separate pedestal</td>
<td>1 couch</td>
<td></td>
</tr>
<tr>
<td>with two drawers on casters</td>
<td>1 coffee table</td>
<td></td>
</tr>
<tr>
<td>4 desk chairs on casters</td>
<td>1 end table</td>
<td></td>
</tr>
<tr>
<td>Blinds</td>
<td>1 TV stand</td>
<td>Refrigerator (full size 18 cu. ft.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Range with cook top (full size)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Space for microwave</td>
</tr>
</tbody>
</table>

**Student Residence Unit Type A – 4 bedroom / 2 bathroom**

AREA: 136,160 SQ FT. (148 units at 920 SQ FT.)
This is a four bedroom apartment unit with (4) single occupancy bedrooms each with their own closet with overhead storage and clothes rod. One bedroom, one bathroom, and all common spaces must meet Florida Accessibility Code. All bedrooms are to have a window that does not open. Two complete bathrooms, 1 common living area, and 1 kitchen will serve the unit.

Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between bedrooms and units. Bedrooms and study areas to be floored with luxury vinyl plank tile and baseboards. Walls to be primed and painted with 2 coats of premium grade flat.

Exterior unit entry will have a solid core door that has card access, a peephole, and institutional/premium grade hardware. Interior bedroom doors will be solid core and be key lockable. Bathroom doors will be solid core with privacy lock. All doors to have lever handle locks.

Bathrooms should be equipped with solid surface full height walls in shower unit, molded shower pan, power flush toilet (bowl and tank) and linen storage with (4) shelves. All bathroom floors shall be unglazed slip-resistant ceramic tiles. Wall tiles & bases shall be glazed commercial grade ceramic tile. In this Accessible Unit, one bathroom design shall comply with Florida Accessibility Code, which include clearances, grab bars, shower w/ seat, etc. All Typical Units shall be provided with two single piece composite vanity top and sink with mirror that is separate from the shower/toilet area. Egg shell mold resistant paint will be used in all wet areas.

Millwork will be made of premium grade plywood and laminate. 18” x 18” single compartment stainless steel sink with gooseneck faucet & sold surface counter top with top & bottom cabinets for storage. Space for a full-size refrigerator, range, and microwave will be allotted.

**Student Residence Unit Type B – 4 bedroom / 2 bathroom - ADA**

**AREA:** 7,680 SQ FT. (8 units at 960 SQ FT.)

<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wireless Data communications in each apartment unit. One Cable TV outlet in each bedroom. One emergency call button located in common area in each unit next to main unit entry door.</td>
<td>Bedroom: 4 full-size beds 8 two drawer dressers on casters 4 desks with separate pedestal with two drawers on casters 4 desk chairs on casters Blinds</td>
</tr>
<tr>
<td></td>
<td>Overhead LED lighting in all rooms sufficient to read and write. HVAC system with fixed vents and limited temperature range. Provide sound baffles in duct work.</td>
<td>Common Area: 1 kitchen table 4 kitchen chairs 1 couch 1 coffee table 1 end table 1 TV stand</td>
</tr>
<tr>
<td></td>
<td>125V 20 AMPS duplex outlets for general power needs including refrigerator and resident provided microwave and 240V 30 AMPS outlet for range. All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td>Refrigerator (full size 18 cu. ft.) Range with cook top (full size) Space for microwave</td>
</tr>
<tr>
<td></td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable. All windows must comply with Florida Building Code product approval for wind impact and will not open.</td>
<td></td>
</tr>
</tbody>
</table>

| Bedroom: 4 full-size beds 8 two drawer dressers on casters 4 desks with separate pedestal with two drawers on casters 4 desk chairs on casters Blinds |

| Common Area: 1 kitchen table 4 kitchen chairs 1 couch 1 coffee table 1 end table 1 TV stand |

| Refrigerator (full size 18 cu. ft.) Range with cook top (full size) Space for microwave |
This is studio unit with an open floor plan. The unit should meet Florida Accessibility Code. Each unit should include a closet with overhead storage and clothes rod, a private bathroom and window that does not open.

Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between bedrooms and units. Bedrooms and study areas to be floored with luxury vinyl plank tile and baseboards. Walls to be primed and painted with 2 coats of premium grade flat.

Exterior unit entry will have a solid core door that has card access, a peephole, and institutional/premium grade hardware. Bathroom door will be solid core with privacy lock. All doors to have lever handle locks.

Bathroom should be equipped with solid surface full height walls in shower unit, molded shower pan, power flush toilet (bowl and tank) and linen storage. The bathroom floor shall be unglazed slip-resistant ceramic tiles. Wall tiles & bases shall be glazed commercial grade ceramic tile. In this Accessible Unit, the bathroom design shall comply with Florida Accessibility Code, which include clearances, grab bars, shower w/ seat, etc. The bathroom should include a two single piece composite vanity top and sink with mirror. Egg shell mold resistant paint will be used in all wet areas.

Millwork will be made of premium grade plywood and laminate. 18” x 18” single compartment stainless steel sink with gooseneck faucet & sold surface counter top with top & bottom cabinets for storage. Space for a full-size refrigerator, range, and microwave will be allotted.

### Student Residence Unit Type C – Studio ADA
**AREA: 6,720 SQ. FT. (16 UNITS at 420 SQ. FT.)**

**SPACE PLANNING**

<table>
<thead>
<tr>
<th><strong>ENVIRONMENTAL SYSTEMS</strong></th>
<th><strong>FURNITURE/EQUIPMENT</strong></th>
</tr>
</thead>
</table>
| Wireless Data communications in each apartment unit. One Cable TV outlet in each bedroom. One emergency call button located in common area in each unit next to main unit entry door. Overhead LED lighting in all rooms sufficient to read and write. HVAC system with fixed vents and limited temperature range. Provide sound baffles in duct work. 125V 20 AMPS duplex outlets for general power needs including refrigerator and resident provided microwave and 240V 30 AMPS outlet for range. All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area. All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable. All windows must comply with Florida Building Code product approval for wind impact and will not open. | **Bedroom:**
1 full-size bed 2 two drawer dressers on casters 1 TV stand 1 desk 1 desk chair on casters 1 kitchen table 2 kitchen chairs Blinds Refrigerator (full size 18 cu. ft.) Range with cook top (full size) Space for microwave |
**SPACE PLANNING**

This is studio unit with an open floor plan. The unit should meet Florida Accessibility Code. Each unit should include a closet with overhead storage and clothes rod, a private bathroom and window that does not open.

Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between bedrooms and units. Bedrooms and study areas to be floored with luxury vinyl plank tile and baseboards. Walls to be primed and painted with 2 coats of premium grade flat.

Exterior unit entry will have a solid core door that has card access, a peephole, and institutional/premium grade hardware. Bathroom door will be solid core with privacy lock. All doors to have lever handle locks.

Bathroom should be equipped with bath tub/shower unit that has solid surface full height walls, power flush toilet (bowl and tank) and linen storage. The bathroom floor shall be unglazed slip-resistant ceramic tiles. Wall tiles & bases shall be glazed commercial grade ceramic tile. The bathroom should include a two single piece composite vanity top and sink with mirror. Egg shell mold resistant paint will be used in all wet areas.

Millwork will be made of premium grade plywood and laminate. 18” x 18” single compartment stainless steel sink with gooseneck faucet & solid surface counter top with top & bottom cabinets for storage. Space for a full-size refrigerator, range, and microwave will be allotted.

---

**ENVIRONMENTAL SYSTEMS**

Wireless Data communications in each apartment unit. One Cable TV outlet in each bedroom. One emergency call button located in common area in each unit next to main unit entry door.

Overhead LED lighting in all rooms sufficient to read and write.

HVAC system with fixed vents and limited temperature range. Provide sound baffles in duct work.

125V 20 AMPS duplex outlets for general power needs including refrigerator and resident provided microwave and 240V 30 AMPS outlet for range.

All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.

All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.

All windows must comply with Florida Building Code product approval for wind impact and will not open.

---

**FURNITURE/EQUIPMENT**

**Bedroom:**
1 full-size bed
2 two drawer dressers on casters
1 TV stand
1 desk
1 desk chair on casters
1 kitchen table
2 kitchen chairs
1 love seat
Blinds

Refrigerator (full size 18 cu. ft.)
Range with cook top (full size)
Space for microwave

---

**Student Residence Unit Type D – Studio RA**
**AREA: 5,550 SQ. FT. (15 UNITS at 370 SQ. FT.)**
### SPACE PLANNING

This is studio unit with an open floor plan. Each unit should include a closet with overhead storage and clothes rod, a private bathroom and window that does not open.

Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between bedrooms and units. Bedrooms and study areas to be floored with luxury vinyl plank tile and baseboards. Walls to be primed and painted with 2 coats of premium grade flat.

Exterior unit entry will have a solid core door that has card access, a peephole, and institutional/premium grade hardware. Bathroom door will be solid core with privacy lock. All doors to have lever handle locks.

Bathroom should be equipped with solid surface full height walls in shower unit, molded shower pan, power flush toilet (bowl and tank) and linen storage. The bathroom floor shall be unglazed slip-resistant ceramic tiles. Wall tiles & bases shall be glazed commercial grade ceramic tile. In this Accessible Unit, the bathroom design shall comply with Florida Accessibility Code, which include clearances, grab bars, shower w/ seat, etc. The bathroom should include a two single piece composite vanity top and sink with mirror. Egg shell mold resistant paint will be used in all wet areas.

Millwork will be made of premium grade plywood and laminate. 18” x 18” single compartment stainless steel sink with gooseneck faucet & sold surface counter top with top & bottom cabinets for storage. Space for a full-size refrigerator, range, and microwave will be allotted.

### ENVIRONMENTAL SYSTEMS

Wireless Data communications in each apartment unit. One Cable TV outlet in each bedroom. One emergency call button located in common area in each unit next to main unit entry door.

Overhead LED lighting in all rooms sufficient to read and write.

HVAC system with fixed vents and limited temperature range. Provide sound baffles in duct work.

125V 20 AMPS duplex outlets for general power needs including refrigerator and resident provided microwave and 240V 30 AMPS outlet for range.

All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.

All windows must comply with Florida Building Code product approval for wind impact and will not open.

### FURNITURE/EQUIPMENT

**Bedroom:**
- 1 full-size bed
- 2 two drawer dressers on casters
- 1 TV stand
- 1 desk
- 1 desk chair on casters
- 1 kitchen table
- 2 kitchen chairs
- 1 love seat
- Blinds

Refrigerator (full size 18 cu. ft.)
Range with cook top (full size)
Space for microwave

---

**Student Residence Unit Type E – Studio RA - ADA**

**AREA: 420 SQ. FT. (1 UNIT at 420 SQ. FT.)**
### Space Planning

Two bedroom residential apartment to house 2 to 4 occupants with 2 bedrooms, 2 bathrooms, living room, dining room, kitchen, storage and laundry closet. Closets for clothing as well as pantry, linen and storage. One of the bedrooms must have walk-in closet. All living spaces to have windows.

Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between bedrooms and units. The entire unit should be floored with luxury vinyl tile. Walls to be primed and painted with 2 coats of premium grade flat.

Apartment shall provide privacy with a private secured entrance away from student traffic. The entrance should be near parking.

All doors in the unit will be solid core. The entry door will have a peep hole and have card reader access. Bathroom bedroom doors will have a privacy locks. All doors to have lever handle locks.

Minimum Standards: One bathroom should be equipped with solid surface full height walls in shower unit, molded shower pan, power flush toilet (bowl and tank), and linen storage. The second bathroom will be equipped with full height solid surface walls in tub unit, power flush toilet and linen storage. All bathroom floors shall be unglazed slip-resistant ceramic tiles. Wall tiles and bases shall be glazed commercial grade ceramic tile. Single piece composite vanity top and sink with mirror shall be provided in both bathrooms. Vanity cabinet millwork will be made of premium grade plywood and laminate.

Millwork will be made of premium grade plywood and laminate. Double compartment stainless steel sinks with gooseneck faucet and solid surface counter top with top and bottom cabinets for storage. Space for full-size appliances and pantry should be included. The goal is for this apartment to function and feel like an off-campus residential apartment.

### Environmental Systems

Wireless Data in apartment. Cable TV outlet in all rooms. One Valcom emergency call button located next to main unit entry door.

Ceiling fans in bedrooms/living area.

Overhead recessed lighting in all rooms sufficient to read and write.

HVAC system with adjustable vents and thermostat. Provide sound baffles in duct work.

125V 20 AMPS duplex outlets for general power needs including refrigerator and other appliances.

All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common area.

All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.

All windows must comply with Florida Building Code product approval for wind impact.

### Furniture/Equipment

<table>
<thead>
<tr>
<th>Bedroom 1</th>
<th>Bedroom 2</th>
<th>Living/Dining Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 queen bed</td>
<td>1 queen bed</td>
<td>1 couch</td>
</tr>
<tr>
<td>1 dresser w/ mirror</td>
<td>1 dresser w/mirror</td>
<td>1 TV stand</td>
</tr>
<tr>
<td>2 night tables</td>
<td>1 night table</td>
<td>2 end tables</td>
</tr>
<tr>
<td></td>
<td>1 desk</td>
<td>1 coffee table</td>
</tr>
<tr>
<td></td>
<td>1 desk chair on casters</td>
<td>1 table and 4 Chairs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Blinds (upgraded)</th>
<th>Microwave-Range Hood</th>
<th>Refrigerator (full size)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range (full size, glass cook top)</td>
<td>Washer and dryer</td>
</tr>
<tr>
<td>Dishwasher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 compartment stainless steel sink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garbage disposal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Residence Unit G - 2 bedroom apartment - RLC

AREA: **1,000 SQ. FT. (1 APART. @ 1,000 SQ. FT.)**
### SPACE PLANNING

| One bedroom residential apartment to house 1 to 2 occupants with 1 bedrooms, 1 bathrooms, living room, dining room, kitchen, and storage. Closets for clothing as well as pantry, linen and storage. One of the bedrooms must have walk-in closet. All living spaces to have windows. |
| Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between bedrooms and units. The entire unit should be floored with luxury vinyl tile. Walls to be primed and painted with 2 coats of premium grade flat. |
| Apartment shall provide privacy with a private secured entrance away from student traffic. The entrance should be near parking. |
| All doors in the unit will be solid core. The entry door will have a peep hole and have card reader access. Bathroom and bedroom doors will have a privacy locks. All doors to have lever handle locks. |
| Minimum Standards: Bathroom will be equipped with full height solid surface walls in tub unit, power flush toilet and linen storage. All bathroom floors shall be unglazed slip-resistant ceramic tiles. Wall tiles and bases shall be glazed commercial grade ceramic tile. Single piece composite vanity top and sink with mirror shall be provided in bathroom. Vanity cabinet millwork will be made of premium grade plywood and laminate. |
| Millwork will be made of premium grade plywood and laminate. Double compartment stainless steel sinks with gooseneck faucet and solid surface counter top with top and bottom cabinets for storage. Space for full-size appliances and pantry should be included. The goal is for this apartment to function and feel like an off-campus residential apartment. |

### ENVIRONMENTAL SYSTEMS

| Wireless Data in apartment. Cable TV outlet in all rooms. One Valcom emergency call button located next to main unit entry door. |
| Ceiling fans in bedrooms/living area. |
| Overhead recessed lighting in all rooms sufficient to read and write. |
| HVAC system with adjustable vents and thermostat. Provide sound baffles in duct work. |
| 125V 20 AMPS duplex outlets for general power needs including refrigerator and other appliances. |

### FURNITURE/EQUIPMENT

| Bedroom |
| 1 queen bed |
| 1 dresser w/ mirror |
| 2 night tables |
| 1 desk |
| 1 desk chair on casters |
| Living/Dining Area |
| 1 couch |
| 1 TV stand |
| 1 end tables |
| 1 coffee table |
| 1 table and 4 Chairs |
| Blinds (upgraded) |
| Microwave-Range Hood |
| Refrigerator (full size) |
| Range (full size, glass cook top) |
| Dishwasher |
| 2 compartment stainless steel sink |
| Garbage disposal |

**Student Residence Unit F - 1 bedroom apartment - ARLC**

**AREA: 1,400 SQ. FT. (2 APART. @ 700 SQ. FT.)**
**SPACE PLANNING**

Serves as main entrance, reception lobby, common sitting area for offices and gathering place.

Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.

Terrazzo/Stone floor (decorative design) with baseboard.

Walls to be primed and painted with 2 coats of premium grade flat.

Entry doors to be “store-front” type with transparent glass and heavy duty panic hardware. Door will be equipped with electronic card reader access. This building is considered to be “limited access” for residents and guest only. All guests are required to check-in at front desk.

Visual access of all entrances. Security cameras installed at entrances and elevators. Students should have to walk by front desk to gain access to elevators and stairs. Stairs should be part of the design to lessen the load on the elevators. The front desk should be able to be locked and secured.

Elevators to be furnished with vandal resistant materials & equipment. High volume ceilings (10 ft.), stainless steel interior cab, high traffic flooring. Card access required to call elevators.

---

**ENVIRONMENTAL SYSTEMS**

Acoustical ceiling with flush fluorescent lights.

125V 20 AMPS duplex outlet on each wall for general power needs.

Sufficient data, phone and outlets for:

- University Information Kiosk.

Wireless Data and Cable TV outlet(s)

Security cameras and monitoring system.

HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.

All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.

All windows must comply with Florida Building Code product approval for wind impact.

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**FURNITURE/EQUIPMENT**

Seating for 10 in lobby style chairs

Call box phones located on outside entrance

2 large LCD TVs

Security cameras

---

**Student Residence - Lobby**

**AREA: 2,000 SQ. FT.**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves as reception counter and clerical work station for offices</td>
<td>Wireless Data &amp; Valcom Emergency Call Box.</td>
<td>Built in work stations (2) at counter height</td>
</tr>
<tr>
<td>Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.</td>
<td>Acoustical ceiling with parabolic lights. 125V 20 AMPS duplex outlet on each wall for general power needs.</td>
<td>2 office chairs</td>
</tr>
<tr>
<td>Terrazzo/Stone floor (decorative design) with baseboard.</td>
<td>Sufficient data, phone and power outlets for Front Desk operations.</td>
<td>1 reception counter with ADA access.</td>
</tr>
<tr>
<td>Walls to be primed and painted with 2 coats of premium grade flat.</td>
<td>Security monitoring system.</td>
<td>Built in lockable storage cabinets</td>
</tr>
<tr>
<td>Doors to be solid core with card access.</td>
<td>HVAC system with adjustable vents variable speed controls and limited temperature range.</td>
<td>Security monitor system / Camera’s</td>
</tr>
<tr>
<td>Connected to lobby area by service counter.</td>
<td>Provide sound baffles in duct work.</td>
<td>Panic button - linked to Public Safety</td>
</tr>
<tr>
<td>Service counter to act as storage for front desk and work space. Fabricated out of high grade plywood and plastic laminate with oak trim. Solid surface counter tops.</td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td>Electronic key cabinet / storage for entire inventory of building keys</td>
</tr>
<tr>
<td>Visual access (supervision, monitoring?) of all entrances.</td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td></td>
</tr>
<tr>
<td>24 Hour security system with monitoring from the front desk area.</td>
<td>All windows must comply with Florida Building Code product approval for wind impact.</td>
<td></td>
</tr>
<tr>
<td>Panic Button / Emergency call box</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire Alarm Control panel to be in close proximity and behind front desk area.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Residence – Reception/Clerical Area/Front Desk**

**AREA: 200 SQ. FT.**
This will be the mail and package center for all on-campus housing. Design should allow for ease of drop off of mail and packages by carriers. This facility will sort and process mail and packages. It will be the pick-up point for mail and packages.

Flooring - TBD

All doors will be solid core with card swipe locks. The student pick up point will have store front doors that are on card swipe locks. Delivery door will have a peep hole and be easily accessible to a loading zone. Doors to have lever handle locks.

Walls to be primed and painted with 2 coats of premium grade flat.

Mail and package sorting table will be of premium grade plywood and solid surface top.

Office needed for mail supervisor. This office should be 100 sq. ft.

Data & Voice communications outlets.

LED overhead lighting. 125V 20 AMPS duplex outlet on each wall for general power needs

Security monitoring system.

HVAC system with adjustable vents variable speed controls and limited temperature range.

All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.

All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.

Mail Box Equipment.

Extra Heavy Duty adjustable metal shelving for package center.

Full-Size Refrigerator will be needed to hold received items that require refrigerator such as medicine.

---

**Student Residence – Mail and Package Center (With Office)**

**AREA: 1,000 SQ. FT.**
### SPACE PLANNING

Serves as an office for the Assistant Residential Life Coordinator.

Access from the front desk is desirable but should not be visible from said area. Adjacent reception area.

Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.

Carpeted floor with vinyl baseboard.

Walls to be primed and painted with 2 coats of premium grade flat.

Entry door is to be lockable. Doors to be solid core. Unit entry door to have institutional/premium grade hardware that uses card access.

### ENVIRONMENTAL SYSTEMS

- Wireless Data & Voice communications outlets.
- Acoustical ceiling with parabolic lights. 125V 20 AMPS duplex outlet on each wall for general power needs.
- HVAC system with adjustable vents variable speed controls and limited temperature range.
- Provide sound baffles in duct work.
- All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.
- All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.
- All windows must comply with Florida Building Code product approval for wind impact.

### FURNITURE/EQUIPMENT

1 Desk with built-in filing
1 Chair on casters
2 Side Chairs
1 Bookcase
Blinds
Conf. Table with seating for 6.

---

**Student Residence – ARLC Office**

**AREA: 160 SQ. FT.**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIP.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves as an office for the Residential Life Coordinator</td>
<td>Wireless Data &amp; Voice communications outlets.</td>
<td>1 desk with built in filing</td>
</tr>
<tr>
<td>Access from the front desk is desirable but should not be visible from said area. Adjacent to reception area.</td>
<td>Acoustical ceiling with parabolic lights. 125V 20 AMPS duplex outlet on each wall for general power needs.</td>
<td>1 chair on casters</td>
</tr>
<tr>
<td>Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.</td>
<td>HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.</td>
<td>2 Side Chairs</td>
</tr>
<tr>
<td>Carpeted floor with vinyl baseboard.</td>
<td>All mechanical, electrical, and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td>Conf. Table with seating for 6.</td>
</tr>
<tr>
<td>Walls to be primed and painted with 2 coats of premium grade flat.</td>
<td>All windows must comply with Florida Building Code product approval for wind impact.</td>
<td>1 bookcase</td>
</tr>
<tr>
<td>Entry door is to be lockable. Doors to be solid core. Entry door to have institutional/premium grade hardware that uses card access.</td>
<td></td>
<td>1 lockable lateral file</td>
</tr>
</tbody>
</table>

Blinds

Student Residence – RLC Office

AREA: 200 SQ. FT.
### SPACE PLANNING

- Serves as a field-office and Interview room for FIU Police.
- Access from the front desk is desirable but should not be visible from said area. Adjacent to reception area.
- Drywall partition systems shall be sound retartant above and below ceiling. STC 55 rating minimum to occur between rooms in area.
- Carpeted floor with vinyl baseboard.
- Walls to be primed and painted with 2 coats of premium grade flat.
- Entry door is to be lockable. Doors to be solid core. Entry door to have institutional/premium grade hardware that uses card access.

### ENVIRONMENTAL SYSTEMS

- Wireless Data & Voice communications outlets.
- Acoustical ceiling with parabolic lights. 125V 20 AMPS duplex outlet on each wall for general power needs.
- HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.
- All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.
- All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.
- All windows must comply with Florida Building Code product approval for wind impact.

### FURNITURE/EQUIP.

- 1 desk with built in filing
- 1 chair on casters
- 2 Side Chairs
- Conf. Table with seating for 6.
- 1 bookcase
- 1 lockable lateral file
- Blinds

---

**Student Residence – Satellite Police / Interview Room**

**AREA: 200 SQ. FT.**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIP.</th>
</tr>
</thead>
</table>
| Serves as a meeting/conference room for the housing staff. Adjacent to complex office area. | **Wireless Data & Voice communications outlets.**  
**One Cable TV outlet.** | 1 Conference Table for 18  
18 Conference Chairs  
7 Side Chairs.  
1 Multimedia Board  
1 Flat Panel LCD TV/DVD Blinds |
| Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area. | **Acoustical ceiling with parabolic lights with dimmer switch. 125V 20 AMPS duplex outlet on each wall for general power needs.** | |
| Carpeted floor with vinyl baseboard. | **HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.** | |
| Walls to be primed and painted with 2 coats of premium grade flat. | **All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.** | |
| Entry door is to be lockable and not easily accessible to residential traffic. Door to be solid core. Door to have institutional/premium grade hardware using card access. Door to have lever handle lock. | **All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.** | |
| Ideally also adjacent to Large Multi-Purpose Room / Main Lounge. | **All windows must comply with Florida Building Code product approval for wind impact.** | |

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**Student Residence – Conference Room**  
**AREA: 400 SQ. FT.**
### SPACE PLANNING

- Resident Assistants will use the space to design bulletin boards, door tags, marketing materials. The space will be used to store supplies, computer equipment, etc. Adjacent to complex office area.
- Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.
- Luxury vinyl tiled floor and baseboards.
- Walls to be primed and painted with 2 coats of premium grade flat.
- Entry door is to be lockable and not easily accessible to residential traffic. Door to be solid core. Hardware to be institutional/premium grade with card access. Door to have lever handle lock.

### ENVIRONMENTAL SYSTEMS

- Data communications outlets.
- LED overhead lighting. 125V 20 AMPS duplex outlets for general power needs including refrigerator.
- HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.
- All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.
- All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.

### FURNITURE/EQUIP.

- 2 lockable storage cabinets
- 1 refrigerator (full size)
- 1 work table
- 1 desk
- 3 chairs on casters
- Open shelving for supplies

---

**Student Residence – RA Work Room and Storage**

**AREA: 200 SQ. FT.**
**SPACE PLANNING**

- General purpose room/lounge for student meetings, small forums, lectures. Located near lobby and public restrooms or on the top floor to take advantage of the building height.
- Drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.
- Carpet with vinyl baseboards.
- Walls to be primed and painted with 2 coats of premium grade flat.
- Entry doors with visual panel.
- Storage closet for A/V equipment.
- Adjacent to Furniture Storage Room.

**ENVIRONMENTAL SYSTEMS**

- Wireless Data & Voice Communications outlet. Cable TV outlets.
- Acoustical ceiling with flush fluorescent lights. 125V 20 AMPS duplex outlet on each wall for general power needs.
- HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.
- All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.
- Lighting controls and zones to allow for A/V presentations.
- All windows must comply with Florida Building Code product approval for wind impact.

**FURNITURE/EQUIPMENT**

- TBD – depending on location
- Ability to be darkened for audio-visual presentations.

---

**Student Residence – Multi-Purpose Room/Main Lounge/Sky Lounge**

**AREA: 2,800 SQ.FT**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sealed concrete floor with vinyl base.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Double doors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drywall partition system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walls to be primed and painted with 2 coats of premium grade flat.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjacent to Multi-Purpose Room/Main Lounge/Sky Lounge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Student Residence – Multi-Purpose Room/Main Lounge/Sky Lounge – Furniture Storage Room

**AREA:** 280 SQ. FT
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves as primary recreation lounge for students to socialize, play pool, ping pong, video games and watch TV. Location on the second floor or top floor to take advantage of the view.</td>
<td>Wireless Data &amp; Voice Communications outlet. Cable TV outlets. Acoustical ceiling with flush fluorescent lights. 125V 20 AMPS multiple duplex outlets on each wall for general power needs. HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work. All mechanical, electrical and plumbing systems are to be accessible by removable panels and located in a common public area. <strong>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</strong> All windows must comply with Florida Building Code product approval for wind impact.</td>
<td>1 pool table 1 ping pong table 2 Flat Panel LCD TV’s Booth seating High top seating Low top seating</td>
</tr>
<tr>
<td>Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.</td>
<td>Flooring will be carpet with baseboard. Walls to be primed and painted with 2 coats of premium grade flat. Entry doors to be “store-front” type with transparent glass and heavy duty panic hardware with card access.</td>
<td></td>
</tr>
<tr>
<td>Wireless Data &amp; Voice Communications outlet. Cable TV outlets. Acoustical ceiling with flush fluorescent lights. 125V 20 AMPS multiple duplex outlets on each wall for general power needs. HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work. All mechanical, electrical and plumbing systems are to be accessible by removable panels and located in a common public area. <strong>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</strong> All windows must comply with Florida Building Code product approval for wind impact.</td>
<td>1 pool table 1 ping pong table 2 Flat Panel LCD TV’s Booth seating High top seating Low top seating</td>
<td></td>
</tr>
</tbody>
</table>

**Student Residence – Multi-Purpose TV Game**  
**AREA: 1,600 SQ. FT.**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be located near lounges and recreation space.</td>
<td>Wireless Data &amp; Voice communications outlets.</td>
<td>Refrigerator</td>
</tr>
<tr>
<td>Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.</td>
<td>Acoustical ceiling with flush LED lights. 125V 20 AMPS duplex outlets for general power needs. 220V power for kitchen equipment.</td>
<td>Ice maker</td>
</tr>
<tr>
<td>Ceramic tile and baseboard.</td>
<td>HVAC system with adjustable vents and thermostat. Provide sound baffles in duct work.</td>
<td>Range with microwave</td>
</tr>
<tr>
<td>Walls to be primed and painted with 2 coats of premium grade egg shell &amp; vision panels.</td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td>4 chairs or stools depending on counter height</td>
</tr>
<tr>
<td>Entry door is to be lockable. Door to be solid core. Hardware to be institutional/premium grade hardware with card access. Door to have lever handle lock.</td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td></td>
</tr>
<tr>
<td>Kitchen will be designed to have one full size refrigerator, full size range with glass top burners, ice maker, food prep area, garbage disposal, double stainless steel sink with gooseneck faucet, solid surface counter tops, cabinet storage.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Residence – Community and Catering Kitchen**
**AREA: 300 SQ. FT.**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rooms designed for quiet study located on each floor of the building.</td>
<td>Wireless Data &amp; Voice Communications outlet.</td>
<td>2 – tables</td>
</tr>
<tr>
<td>Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.</td>
<td>Cable TV outlet.</td>
<td>8 – chairs</td>
</tr>
<tr>
<td>Carpet with vinyl baseboard</td>
<td>Acoustical ceiling with flush fluorescent lights.</td>
<td></td>
</tr>
<tr>
<td>Walls to be primed and painted with 2 coats of premium grade flat.</td>
<td>125V 20 AMPS duplex outlet on each wall for general power needs.</td>
<td></td>
</tr>
<tr>
<td>Entry doors with visual panel on card access.</td>
<td>HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.</td>
<td></td>
</tr>
<tr>
<td>Two square tables that can be pushed together to create on large table.</td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All windows must comply with Florida Building Code product approval for wind impact.</td>
<td></td>
</tr>
</tbody>
</table>

**Student Residence – Group Study Rooms**  
**AREA: 1920 SQ.FT (8 @ 240 Sq. Ft.)**
**SPACE PLANNING**

Serves as the student lounge on each floor. This lounge will be used for floor meeting which will between residents and the RA. That means each lounge must hold 41 students.

Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.

Carpeted floor with vinyl baseboard.

Walls to be primed and painted with 2 coats of premium grade flat & vision panels.

Entry door is to be lockable. Door to be solid core with vision panel. Hardware to be institutional/premium grade hardware using card access. Door to have lever handle lock.

---

**ENVIRONMENTAL SYSTEMS**

Wireless Data & Voice communications outlets. Cable TV Outlet.

Acoustical ceiling with flush fluorescent lights with dimmer switch. 125V 20 AMPS duplex outlets for general power needs. 220V power for electric range.

HVAC system with adjustable vents variable speed controls and limited temperature range. Provide sound baffles in duct work.

All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.

**FURNITURE/EQUIPMENT**

Lounge furniture per design to hold 41 students.

**Student Residence – Student Lounges**

**AREA: 4,920 SQ. FT. (8 SPACES @ 615 SQ. FT.)**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves as student Laundry Room. There should be a laundry room in each student housing tower centrally located.</td>
<td>Wireless Data &amp; Cable TV outlet. Data lines for card reader hook-ups.</td>
<td>1 Double wash sink for hand washing</td>
</tr>
<tr>
<td>Fiberglass reinforced drywall partition systems shall be sound retardant above and below ceiling. STC 55 rating minimum to occur between rooms in area.</td>
<td>Acoustical ceiling with flush LED lights. Provide duplex outlets as appropriate for washers, dryers and support equipment. Gas dryers hook up. (LPG)</td>
<td>Washers (commercial grade)</td>
</tr>
<tr>
<td>Flooring should be ceramic slip resistant tile.</td>
<td>Video security system.</td>
<td>Dryers (commercial grade) / gas</td>
</tr>
<tr>
<td>Walls to be primed and painted with 2 coats of premium grade flat.</td>
<td>House bib.</td>
<td>Seating</td>
</tr>
<tr>
<td>Lock on door, electronic card reader access.</td>
<td>Proper ventilation and exhaust fans on exterior walls.</td>
<td>Card Reader for machines</td>
</tr>
<tr>
<td>Floor drains.</td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td>Table for folding clothes</td>
</tr>
<tr>
<td>Card reader access for machine usage.</td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td>Ice Machine</td>
</tr>
<tr>
<td>Seating area.</td>
<td>All windows must comply with Florida Building Code product approval for wind impact.</td>
<td>Change Machine</td>
</tr>
<tr>
<td>Ice and change machine.</td>
<td></td>
<td>Security Camera(s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Flat Panel LCD TV</td>
</tr>
</tbody>
</table>

Student Residence - Laundry  
**AREA: 2,000 SQ. FT. (2 Laundry Rooms @ 1,000 SQ. FT.)**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serves as area for trash disposal and recycling.</td>
<td>Proper ventilation and exhaust fans on walls.</td>
<td>Recycling bins</td>
</tr>
<tr>
<td>Provide exposed concrete floor with surface hardener.</td>
<td>Flush fluorescent lights to be turned on by sensor.</td>
<td></td>
</tr>
<tr>
<td>Sealed concrete floors.</td>
<td>Duplex outlets.</td>
<td></td>
</tr>
<tr>
<td>Floor Drains.</td>
<td>Hose bib</td>
<td></td>
</tr>
<tr>
<td>Room should be designed to be washed down with hose. Room should be</td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable</td>
<td></td>
</tr>
<tr>
<td>large enough to hold recycling and trash chutes.</td>
<td>panels and located in a common public area.</td>
<td></td>
</tr>
<tr>
<td>Rooms should be located centrally on each floor near the elevators.</td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be</td>
<td></td>
</tr>
<tr>
<td></td>
<td>energy efficient and institutional grade where applicable.</td>
<td></td>
</tr>
</tbody>
</table>

**Student Residence = Trash/Recycling Rooms**

**AREA: 2,880 SQ. FT. (24 SPACES @ 120 SQ. FT.)**
Meant as a replacement for the University Apartments housing warehouse that is master-planned to be demolished in the future.

<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper ventilation and exhaust fans on walls.</td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td>TBD</td>
</tr>
<tr>
<td>LED lights.</td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td></td>
</tr>
</tbody>
</table>

---

**Student Residence – Housing Warehouse**

**Area:** 5,000 SQ. FT. – ADDITIVE ALTERNATE

**NOT INCLUDED IN AREA OR BUDGET**
<table>
<thead>
<tr>
<th>SPACE PLANNING</th>
<th>ENVIRONMENTAL SYSTEMS</th>
<th>FURNITURE/EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room to store Custodial supplies and equipments.</td>
<td>LED overhead lighting.</td>
<td>Walls to be primed and painted with 2 coats of premium grade semi-gloss.</td>
</tr>
<tr>
<td></td>
<td>Minimum of 125V 20 AMPS duplex outlet on one wall for general power needs.</td>
<td>Provide 24” height stainless steel backsplash at Mop Sink area.</td>
</tr>
<tr>
<td></td>
<td>Hose bib.</td>
<td>Open shelving for storage of supplies and materials.</td>
</tr>
<tr>
<td></td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td>Mop sink.</td>
</tr>
<tr>
<td></td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td>Floor drain.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lock on doors with card access.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-closing hinges on doors.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide exposed concrete floor with surface hardener.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sealed concrete floors.</td>
</tr>
</tbody>
</table>

**Student Residence – Custodial Closet**

**AREA: 720 SQ. FT. (12 SPACES @ 60 SQ. FT.)**
<table>
<thead>
<tr>
<th><strong>SPACE PLANNING</strong></th>
<th><strong>ENVIRONMENTAL SYSTEMS</strong></th>
<th><strong>FURNITURE/EQUIPMENT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Room to store Custodial supplies and Maintenance equipments.</td>
<td>Data &amp; Voice communications outlet.</td>
<td>4 - Wet vacuum equipment</td>
</tr>
<tr>
<td>Locate near building service entrance with loading area.</td>
<td>LED overhead lighting. 125V 20 AMPS duplex outlet on each wall for general power needs. Additional outlets along work bench</td>
<td>2 - Vacuum Cleaners</td>
</tr>
<tr>
<td>Provide exposed concrete floor with surface hardener.</td>
<td>HVAC system with adjustable vents and thermostat. Provide sound baffles in duct work.</td>
<td>6 - Blowers</td>
</tr>
<tr>
<td>Walls to be primed and painted with 2 coats of premium grade semi-gloss.</td>
<td>Hand &amp; mop sink.</td>
<td>1 – work bench</td>
</tr>
<tr>
<td>Access to room from both interior and exterior of building.</td>
<td>All mechanical, electrical, and plumbing systems are to be accessible by removable panels and located in a common public area.</td>
<td>4 - lockable storage cabinets</td>
</tr>
<tr>
<td>Lock on doors with card access. Self closing hinges on doors.</td>
<td>All mechanical, electrical and plumbing systems and their fixtures are to be energy efficient and institutional grade where applicable.</td>
<td>1 – Flammable material storage cabinet</td>
</tr>
<tr>
<td>Double doors for ease of access.</td>
<td></td>
<td>Open shelving for storage of supplies and materials.</td>
</tr>
<tr>
<td>Hand &amp; Mop sink.</td>
<td></td>
<td>Security Camera</td>
</tr>
<tr>
<td>Floor drains.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Residence – Maintenance Storage / Work Area**

**AREA: 1,000 SQ. FT.**
X. UTILITIES IMPACT ANALYSIS

In addition, this project includes campus infrastructures as follows:

**Water:** Demolition of approximately 215-feet of 12-inch water main and installation of approximately 450 feet of water main and a 1,100-foot loop of 12-inch water line are required. Fire sprinklers and fire hydrants are required to serve this project.

**Sanitary Sewer System:** Demolish approximately 230-feet of gravity sewer line and install 250-feet of new sewer line and sanitary manholes. Lift stations are not believed to be necessary.

**Storm Water System:** Approximately 20 catch basins with 1,130 feet of exfiltration trenches are estimated. Final design will determine requirements based on storm drainage engineering analysis for the residential building, the parking garage and surface parking, roadways and driveways. Demolition of approximately 75 feet of exfiltration trench and 2 drainage structures will be required.

**Electrical Service:** Approximately 765-feet of main electrical duct bank will need to be demolished and relocated and 550 feet of new electrical duct bank, and 3 manholes are anticipated. FPL to extend the high voltage service to a new FPL transformer.

**Chilled Water System:** Availability of central plant chilled water capacity and distribution subject to assessment of existing conditions by FIU Facilities Management. If capacity is available, extension of the existing 18-inch insulated black iron chilled water supply and return lines by approximately 1,050 feet, along with one or more valve boxes is required.

**Natural Gas Line:** Demolish approximately 335-feet of existing natural gas line and install approximately 395-feet of 1-1/4-inch HDPE gas line to serve the residential buildings and rework the campus gas network.

**Communications:**

**Outside Plant:**

1. University Technology Services (UTS) will require 6-4” conduits from an existing hand hole to the main equipment room of the new residential and garage facility.
2. UTS will require 4-4” conduits from the main Equipment Room in to first floor Telecom Room in the opposite wing.
3. UTS will require 2-4” conduits from main Equipment Room in to Telecom Room in Garage.

**Inside Cabling:**

1. Entry doors to first floor Main Equipment Room and Telecom Room in opposite wing need to open to the inside of the building.
2. All Telecom Rooms and Main Equipment room must be located in the center of the buildings, and stacked, so not to exceed cabling distance 298 ft. to the furthest room.
3. 4-4” sleeves will be required between each floor serving Telecom Room and to Main Equipment Room.
4. 4-4” sleeves will be required from each floor serving Telecom Room to the cable tray on hallway.
5. A ¾” conduit on a 1900 box with single gang mud ring will be required for outdoor speakers (horns) that will be used for emergency notification messages. The locations and quantity of speakers will be determined when drawings become available.
6. A ¾” conduit on a 1900 box with single gang mud ring will be required for outdoor wireless antennas that will be used to provide wireless network coverage in open spaces around the building. The locations and quantity of antennas will be determined when drawings become available.
7. A ¾” conduit on a deep double gang box will be required for outdoor wireless antennas that will be used for emergency call buttons by the entrance to each apartment.
8. All conduits must go back to cable tray as specified in the Appendix C cabling standards.
9. A ¾” conduit to cable tray will be required for every 2 laundry room machines in Laundry Room.
10. Wireless access point placement map will be generated once drawings become available for each of the buildings.

**Note:**
1. Please refer to Appendix “C” of program document for details on cabling standards used on all FIU buildings. UTS Planning and Design Services will coordinate with contractor, architects and engineers to provide design, consultation and installation of all telecommunications infrastructure for the buildings.

**New Road Work:** The new “main street” development with off street parking and connection to the new Parking Structure access road will be included in this project. Appropriate street lighting, landscaping irrigation, and drainage structures must be provided.

Projected Demand:

- Power = TBD
- Water = TBD

Projected Consumption / Year: TBD

- Power = TBD
- Water = TBD

Total estimated infrastructure construction costs associated with this building project not including normal building service connection to the existing networks is itemized in section XV.
XI. INFORMATION/COMMUNICATION RESOURCE REQUIREMENTS

Refer to Telecommunications Wiring Standards in “Appendix C”. General equipment/furniture requirements are noted in section IX - Program Area Summary, Functional Description of Space Details. Detailed computer hardwire requirements and network linkage relationships will be established in the Furniture/Equipment expenditure plan which should be developed following completion of design development. The FIU Telecommunications wiring standards are designed to accommodate a maximum degree of flexibility in the arrangement of data and voice communications systems. Wiring and cabling as well as data/voice outlets are specified by space type and should accommodate all normal operations as identified in this program.
APPENDIX "C"   STANDARDS FOR TELECOMMUNICATIONS FACILITIES FOR NON-RESIDENTIAL RESIDENTIAL LIFE BUILDINGS (REVISED FEBRUARY 2012)

The purpose of this standard is to provide for the planning and installation of telecommunications facilities in new buildings and major renovations. This standard has been developed with little knowledge of the telecommunications equipment that subsequently will be installed. Therefore, the definitions included herewith are for generic telecommunications facilities that will support a multitude of rapidly changing telecommunications technologies in a multivendor and variable end user environment.

This standard recognizes three fundamental concepts related to telecommunications and buildings:

1. Buildings are dynamic. Renovation, remodeling and upgrading are more the rule than exception. This standard takes into account that change will occur.

2. Building telecommunications systems and media are dynamic. As time passes both telecommunications equipment and media change considerably. This standard recognizes this fact and the facilities prescribed herein are capable of supporting a vast array of telecommunications systems and media.

3. Telecommunications is more than telephones. Telecommunications is inclusive of a variety of building systems including data systems, environmental control, security, audio, television, sensing, alarms, emergency communications and much more.

Above all, this standard recognizes a fact of fundamental importance: if a building is to be properly designed, built and provisioned for telecommunications systems, it is imperative that the telecommunications design be incorporated during the architectural design phase.

The FIU/UTS Infrastructure Department developed this document in accordance with industry specifications. It is the standard by which the University defines the physical facilities required for the provisioning of telecommunications systems for new buildings and major renovations to existing buildings. These specifications take into account the physical facilities such as the size and provisioning of telecommunications rooms, cable distance limitations, vertical and horizontal cabling considerations, number and size of conduits and numbers and types of information outlets. The general cabling requirements are not addressed, because FIU/UTS is solely responsible for the installation of all the telecommunications wiring in all FIU buildings and campuses.
APPENDIX “C” TABLE OF CONTENTS

1.0 GENERAL ..................................................................................................................... C - 3

2.0 CABLE PATHWAYS ....................................................................................................... C - 3
   2.1 INFORMATION OUTLETS ......................................................................................... C - 3
   2.2 CONDUIT .................................................................................................................... C - 5
   2.3 CABLE TRAYS ............................................................................................................ C - 6

3.0 TELECOMMUNICATIONS ROOMS ............................................................................... C - 7
   3.1 DESCRIPTION/DEFINITION .................................................................................... C - 7

4.0 OUTSIDE PLANT .......................................................................................................... C - 10
   4.1 DEFINITION DESCRIPTION .................................................................................. C - 10
   4.2 MANHOLES ................................................................................................................ C - 11

DRAWINGS .......................................................................................................................... C - 13
1.0 GENERAL

1.1 RESPONSIBILITY - It is the responsibility of the project architect/engineer to ensure the inclusion of the standards for building telecommunications facilities into the design and construction documents for new and major renovation projects.

1.2 REFERENCES - In addition to the specifications included herewith the architect/engineer is encouraged to refer to the following publications for guidance during the design of the communications infrastructure:


Electronic Industries Association, Telecommunications Industry Association (EIA/TIA) Building Telecommunications Wiring Standards.

NFPA's National Electric Code (NEC).

FIU/UTS Infrastructure Department.

1.3 COORDINATION - Prior to the start of any telecommunications related work, the contractor shall contact the UTS/Infrastructure Department to coordinate the installation.

2.0 CABLE PATHWAYS

2.1 INFORMATION OUTLETS

2.1.1 REQUIREMENTS - Specific requirements for information outlets for each room and each project must be coordinated with the building occupants at the onset of the design phase of major renovations and new construction projects. The architect/engineer for major renovation and new construction projects is cautioned that the Building Program for the project includes requirements, but may not be all-inclusive regarding communication facilities. Therefore, the project architect/engineer must work closely with the building occupant and the FIU/UTS Infrastructure Department to minimize the need for revisions and changes after the completion of the design phase.

2.1.2 FLOOR MOUNTED - The use of floor mounted information outlets is strongly discouraged as it does not allow for flexibility in furniture layout and inhibits future changes to the telecommunications system.

2.1.3 ELECTRICAL BOXES - Locations for information outlets must be equipped with a 4 in. X 4 in. X 2.5-in. electrical box equipped with a mud ring sized for the installation of a standard duplex outlet.

2.1.4 MOUNTING HEIGHT - Electrical boxes installed for information outlets must be placed at the same level as the adjacent duplex electrical receptacles or at least fifteen (15) inches above the finished floor.
2.1.4.1 Electrical boxes installed for information outlets located above counters equipped with a splash back must be placed at 6 in. above the top of the counter. (Measure to the center of the outlet.)

2.1.4.2 Electrical boxes installed for information outlets located above counters not equipped with a splash back must be placed at 12 in. above the top of the counter. (Measure to the center of the outlet.)

2.1.5 FACULTY/ADMINISTRATIVE OFFICES must have a minimum of one (1) information outlet per designated occupant, however two (2) are recommended for furniture relocation of additional staff.

2.1.6 CLERICAL/STAFF OFFICES shall have a minimum of one (1) information outlet per designated occupant plus one (1) information outlet for every two (2) additional occupants.

2.1.7 SECRETARY/ADMINISTRATIVE ASSISTANT OFFICES shall have a minimum of one information outlet per designated occupant plus two (2) outlets per office or two (2) extra outlets per five (5) people.

2.1.8 CLASSROOM/LECTURE HALLS/Auditoriums shall have a minimum of one (1) to four (4) information outlets depending on occupancy size:

<table>
<thead>
<tr>
<th>Classroom Size (Student Occupancy)</th>
<th>Minimum Number of Outlets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-50</td>
<td>1</td>
</tr>
<tr>
<td>51-100</td>
<td>2</td>
</tr>
<tr>
<td>101-200</td>
<td>3</td>
</tr>
<tr>
<td>201 or more</td>
<td>4</td>
</tr>
</tbody>
</table>

2.1.8.1 The recommended location priority relationship for the information outlets must be: chalkboard/dry eraser board, lectern, projection booth/rear wall and remaining sides.

2.1.9 GRADUATE STUDENT OFFICES shall have a minimum of one (1) information outlets per designated occupant.

2.1.10 LABORATORIES shall have a minimum of one (1) information outlet per room; actual number may be more depending on function and occupant requirements.

2.1.11 CONFERENCE ROOMS shall have a minimum of one (1) information outlet per room. Rooms with more than 500 ft² shall have a minimum of two (2) information outlets installed.

2.1.12 STORAGE AREAS shall have a minimum of one (1) information outlet for rooms over 500 ft² and one (1) additional outlet for each additional 2000 ft².
2.2 CONDUITS

2.2.1 A 1 inch EMT conduit must be installed from each information outlet electrical box and "stubbed" up above the ceiling level to cable tray. (Please see attached drawing, Fig. 2.2.1-A)

2.2.2 If fixed ceilings are installed cable trays cannot be used and conduit from information outlets must be "homerun" to the telecommunications room or cable tray.

2.2.3 The open ends of conduits and/or sleeves must be equipped with bushings to avoid damage to cable sheaths and must be readily accessible and not concealed within walls.

2.2.4 Telecommunications rooms contain the vertical cable riser space. Conduits and/or sleeves must be used to interconnect telecommunications rooms. The open ends of conduits and/or sleeves must be located a maximum of 3 in. from the wall and extend a minimum of 1 in. above the finished floor.

2.2.5 REQUIRED NUMBER - The minimum number of conduits, and/or sleeves interconnecting the telecommunications rooms must be determined as follows:

<table>
<thead>
<tr>
<th>Building Total (Square Footage)</th>
<th>Quantity of Conduits</th>
<th>Size of Conduit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 50,000 ft²</td>
<td>3</td>
<td>4”</td>
</tr>
<tr>
<td>50,001 ft² to 100,000 ft²</td>
<td>4</td>
<td>4”</td>
</tr>
<tr>
<td>100,001 ft² to 300,001 ft²</td>
<td>5-8</td>
<td>4”</td>
</tr>
<tr>
<td>300,001 ft² to 500,000 ft²</td>
<td>9-12</td>
<td>4”</td>
</tr>
</tbody>
</table>

2.2.6 PULL BOXES - A pull box must be installed in sections of conduit longer than 100 ft. or containing more than two 90-degree bends or if there is a reverse bend in the run.

2.2.7 Minimum requirements for installed conduit, such as support, end protection, and continuity, are found in appropriate electrical codes.

2.2.8 The inside radius of a bend in conduit must be at least 6 times the internal diameter. When the conduit size is greater than 2 in. the inside radius must be at least 10 times the internal diameter of the conduit.

2.2.9 PULL CORDS - All conduits must have a fish tape or pull cord, rated for 200 lbs. of pull force, and installed end-to-end.

2.2.10 ELEVATOR – A ¾” conduit must be installed from each elevator equipment room to the nearest telecommunication room or cable tray.

2.2.11 EMS – A ¾” conduit must be installed from each mechanical room “homerun” back to the nearest telecommunication room or cable tray.

2.2.12 FIREALARM - A ¾” conduit must be installed from the fire alarm panel to the nearest telecommunication room or cable tray.
Note:  
(1) Under no circumstances will flexible metallic conduit be used for any telecommunication wiring.  
(2) Under no circumstances will any conduits be “daisy-chained” together.

2.3 CABLE TRAYS

2.3.1 Cable trays are rigid structures for the containment of telecommunications cables.

2.3.2 GROUNDING - Cable trays must be installed and grounded in accordance with the National Electric Code (NEC) and local requirements. (Please see attached drawing, Fig. 2.3.2-A)

2.3.3 TYPE - Cable trays must be of the 12-in. ladder type, equivalent to Wiremold, Part No. A060612, unless otherwise specified by the UTS Project Manager.

2.3.4 Cable trays must be installed above false ceilings and run down hallways and corridors providing a pathway for telecommunications cable from the information outlets to the respective telecommunications closet.

2.3.5 Cable tray installation must be coordinated with all work of other trades to avoid any interference. Cable trays must be installed such that they are not obstructed by other trades equipment, i.e. air conditioning ducts, electrical conduit etc. Cable trays must be easily accessible for the installation of cables and, future changes to telecommunications systems.

2.3.6 A minimum of 3-in. clear vertical space must be available between the top of the ceiling tiles and the bottom of the cable tray. A minimum of 12 in of clear horizontal space on each side of the cable tray must be available. Also, minimum of 6 in of clearance must be available between the top of the cable tray and any other utilities.

2.3.7 Under no circumstances, shall any other utilities pass within the distances specified in 2.3.6.

2.3.8 To avoid electromagnetic interference, all cable pathways must provide clearances of at least:

- 4 ft. from large motors or transformers.
- 1 ft from conduit and cables used for electrical power distribution.
- 5 in. from fluorescent lighting. Pathways should cross perpendicular to fluorescent lighting and electrical power cables or conduits.

3.0 TELECOMMUNICATIONS ROOMS

3.1 DESCRIPTION/DEFINITION

3.1.1 Telecommunications rooms must be dedicated to the telecommunications function and related support facilities. Telecommunications rooms must not be shared with janitorial
facilities or other trades especially with electrical installations other than those required for telecommunications systems.

3.1.2 Telecommunications room refers to any room where telecommunications facilities terminate and telecommunications system equipment is housed.

3.1.3 The term building Intermediate Cross Connect (IC) is used to indicate the telecommunications room where the campus backbone facilities enter the building.

3.1.4 The term Telecommunications Rooms (TR) is used to designate the telecommunications room required for the distribution of facilities to adjoining floors and areas exceeding distance limitations.

3.1.5 NUMBER OF ROOMS. There must be a minimum of one telecommunications room per floor and centrally located in the building, unless otherwise specified by the UTS Project Manager. Additional telecommunications rooms must be provided when:

1. The floor area to be served exceeds 10,000 ft\(^2\), or
2. The horizontal distribution distance to the workstation exceeds 295 ft.

3.1.6 SIZING OF ROOMS. Telecommunications rooms must be sized as follows:

<table>
<thead>
<tr>
<th>Serving Area (Net bldg. ft(^2))</th>
<th>Room Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000 ft(^2)</td>
<td>10 ft. X 11 ft.</td>
</tr>
<tr>
<td>8,000 ft(^2)</td>
<td>10 ft. X 9 ft.</td>
</tr>
<tr>
<td>5,000 ft(^2) - less</td>
<td>10 ft. X 7 ft.</td>
</tr>
</tbody>
</table>

10 ft. X 7 ft. is the minimum size for telecommunications rooms.

3.1.7 Telecommunications rooms must be stacked vertically to provide for the installation of telecommunications facilities between floors. Telecommunications rooms must be interconnected as specified in section 2.2.5.

3.1.8 BACKBOARDS – All four walls must be covered with rigidly fixed 3/4 in. x 4 ft. X 8 ft. A-C plywood, preferably void free, capable of supporting attached equipment and painted with black fire retardant paint.

3.1.9 LIGHTING - Lighting must be a minimum of 50-ft. candles measured 3 ft. above the finished floor, mounted 8.5 ft. minimum above finished floor.

3.1.10 CEILINGS - False ceilings are not allowed in any Telecommunication Room.

3.1.11 DOORS - The door must be a minimum of 36 in. wide and 80 in. high, without doorsill, hinged to open outward and fitted with a lock.

3.1.12 KEYING - Access to all telecommunication rooms will be through one uniform master key system. Facilities Management will establish the lock type to be used.
3.1.13 TREATMENT - Floors, walls, and ceiling must be treated to eliminate dust. Floors must be covered with VCT tiles.

3.1.14 ELECTRICAL REQUIREMENTS - Two dedicated 30 A, 110 or 208 V AC electrical outlets (L5-30R/120, L6-30R/208), each on separate circuits, must be provided for equipment power, unless otherwise specified by UTS Project Manager. In addition, a third 20A, 110 V AC circuit shall feed duplex outlets, which must be placed at 6 ft. intervals around the perimeter wall, at a height of 18 in above the floor. If emergency power (generator) is available, dedicated outlets must be connected to the emergency power system. Dedicated circuit outlets must be readily identifiable by using a different color outlet.

3.1.15 GROUNDING - Each telecommunications room must have direct attachment to the closest point in the building's electrical service grounding electrode system. A Number 6 AWG solid conductor cable must be placed between the ground source and a bus bar of the type: Chatsworth Products, Inc. part number 13622-010 or equivalent.

3.1.16 SLEEVES/CONDUIT - Sleeves or conduit passing through the telecommunications room floor should be adjacent to the door with a minimum of 1 in. exposed above the finished floor. Sleeves and conduit must be no more than 3 in. away from the wall. Sleeves and conduit shall not be left open except during cable installation and must be properly fire stopped per the applicable codes.

3.1.17 FIRE PROTECTION - Fire protection of the telecommunications rooms, if required, must be provided as per applicable code. All conduits and cable trays penetrating any Telecommunications Rooms must be properly sealed with the appropriate fire stopping material, as per NEC and local fire codes.

If used, fire sprinklers shall not be water based. An optional gaseous system must be used.

3.1.18 AIR CONDITIONING - HVAC must be provided on a 24 hours per-day, 365-days-per-year basis. If the building system cannot assure continuous operation for large equipment applications, a stand-alone unit must be provided for the equipment room.

3.1.19 TEMPERATURE - The temperature and humidity must be controlled to provide continuous operating ranges of 64 degrees F to 75 degrees F with 30% to 55% relative humidity.

3.1.20 COLLOCATION OF OTHER TRADES - No water, sewer etc. pipes must be placed within or pass through the telecommunications rooms.

3.1.21 PLENUM AIR SPACE - All Telecommunications Rooms must be completely separated from Plenum air space in accordance with NEC and BICSI standards. (Please see 1.2 reference)

3.1.22 LOCATION OF ROOM - All Telecommunications rooms must be accessible at all times. The IC (building main telecommunications room) must be designed to be adjacent to an outside wall in order to facilitate the addition of entrance conduits if needed, unless specified by UTS Project Manager.
4.0 OUTSIDE PLANT

4.1 DEFINITION DESCRIPTION

4.1.1 All new building construction planning must provide for connection of the building to the campus communications infrastructure.

4.1.2 CONDUIT SIZE - All direct buried conduits used to connect to the University Telecommunications infrastructure must be 4” PVC, Schedule 40.

4.1.3 NUMBER REQUIRED - The minimum number of conduits connecting the building IC to the campus MC must be at least four four-inch (4 - 4”) conduits. Note: More entrance conduits might be needed depending on the size and utilization of the building.

4.1.4 DEPTH - The top of the conduit bank must be buried at least 30 inches below the ground surface and separated from other service structures as required for fiber optical cable under EIA/TIA specifications.

Separation of telecommunications conduits from other utilities shall meet the following guidelines:

<table>
<thead>
<tr>
<th>Structure</th>
<th>Minimum Separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power or other conduit</td>
<td>3 inches in concrete</td>
</tr>
<tr>
<td></td>
<td>4 inches in masonry</td>
</tr>
<tr>
<td></td>
<td>12 inches in earth</td>
</tr>
<tr>
<td>Pipes (gas, oil, water)</td>
<td>6 inches when crossing pipe</td>
</tr>
<tr>
<td></td>
<td>12 inches when parallel to pipe</td>
</tr>
<tr>
<td>Power conduit terminated on poles</td>
<td>Separate poles, if possible.</td>
</tr>
<tr>
<td></td>
<td>If on same pole, 180 degree separation</td>
</tr>
<tr>
<td></td>
<td>Preferable, but not less than 90 degrees.</td>
</tr>
<tr>
<td>Railroads</td>
<td>At a crossing: 5 feet below top of the rail.</td>
</tr>
<tr>
<td></td>
<td>Terminating on poles: 12 feet from the nearest rail, except 7 feet at sidings.</td>
</tr>
</tbody>
</table>

The conduits must be placed in accordance with the requirements specified in the FIU building manual. In particular, bidders must pay special attention to the Telecommunications requirements specified in Appendix C.

4.1.5 DUCT BANK PROTECTION - Conduit must be encased in concrete when:

1. Minimum conduit depth of 30 inches cannot be attained.
2. Conduits pass under roads, driveways, or railroad tracks.
3. Bend points are subject to movement.
Note: A detectable warning tape must be placed 18 inches above all duct banks (detectable: containing metallic tracings).

4.1.6 SLOPE - Underground conduit must be installed such that a slope exits at all points of the run to allow drainage and prevent the accumulation of water. A drain slope of no less than .125 in. per foot is desirable.

4.2 MANHOLES (MAINTENANCE HOLES)

4.2.1 DESCRIPTION - A manhole (maintenance hole) is used to pull in and splice cables in an underground, concealed manner. Manholes must be equipped with a sump, corrosion resistant pulling iron, cable racks, and manhole ladders. Concrete used for manholes must be of at least 3500 lb./in² strength. All manholes must be properly grounded as required by BICSI. (Please refer to 1.2)

4.2.2 SIZE - Manholes must be sized at 6-ft. width X 12-ft. length X 7-ft. height, unless specified by the UTS Project Manager. All manholes must be equipped with a round ring and cover, clearly labeled "TELECOM" or "TELEPHONE". (Please see attached drawing, Fig. 4.2.2-A)

4.2.3 WHERE REQUIRED - Manholes must be placed when the conduit section length exceeds 500 ft, whenever a cable splice will be required, when bends exceed a total of 180 degrees or two bends, or the section length of conduit requires the pulling in of cable in two segments.

4.2.4 HANDHOLES are not an acceptable alternative to manholes described in section 4.2.1, 4.2.2. Hand holes can only be used in place of manholes after consultation with and receipt of written approval from the UTS/Infrastructure Department. (Please see attached drawing, Fig. 4.2.4-A)

4.2.5 PULL POINTS - Wherever distances between manholes exceeds 200 feet or there are more than two 90 degree bends in the conduit run, a 4’ x 4’ x 4’ pull box must be placed. The number of conduits going in and out of the pull box shall not exceed six. Under no circumstances shall a pull box replace a manhole. (Please see attached drawing, Fig. 4.2.5-A)

4.2.6 POSITIONING OF CONDUITS IN MANHOLE - Conduits entering a manhole shall do so only through the manhole walls designed for conduit penetration. Under no circumstances shall the structural integrity of the manhole be compromised.

Note: Conduits being added to a manhole must be placed as deep as possible in order to accommodate future expansion of duct banks and guarantee maximum utilization of the manhole.
CEILING AREA AND RUN TO CABLE TRAY

FINISHED CEILING

3/4" CONDUIT STUB UP WITH BUSHINGS UDIN

BOX AND MOUNTING HIAS SHOWN

FINISHED FLOOR

WALL STUB-UP DETAIL

FIGURE 2.2.1 - A

Wall Stub-Up Detail
CONDUIT BUSHING W/GROUNDING LUG

#4 COPPER GROUND STRAP

B-LINE 9ZN-1158-CONDUIT SIZE

CENTER SPINE CABLE TRAY

DETAIL A

DETAIL B

PERSPECTIVE VIEW OF CABLE TRAY

FIGURE 2.3.2 - A

Cable Tray Conduit Grounding Detail
XII. CODES AND STANDARDS - BUILDING STANDARDS

A. This building will conform to the following applicable building standards: In case of conflict, the strictest requirements will govern. Written approvals will be obtained when required from the State of Florida Fire Marshall, Miami-Dade Water and Sewer Department, Florida Power and Light Company, and Florida Department of Environmental Protection (NPDES). Refer to FIU Building Code Administration Webpage here: http://facilities.fiu.edu/Management/Administration/buildingofficial.htm

1. a. Building code will be the Florida Building Code, 6th Edition (2017) with Supplements and as follows:

   Florida Building Code: Building
   Florida Building Code: Test Protocols for High Velocity Hurricane Zones
   Florida Building Code: Mechanical
   Florida Building Code: Fuel Gas
   Florida Building Code: Plumbing
   Florida Building Code: Energy Conservation
   Florida Building Code: Accessibility

   In all cases the date of Building Permit Application determines applicable code(s).

   b. All proposed landscape shall conform to the current FIU landscape design guidelines (Element 16 of Campus Master Plan).

2. Statewide Impact Codes.
   b. HRS (Health and Rehabilitative Services Codes) Water Management District Standards
   e. Department of Transportation
   f. SMACMA
   g. Corps of Engineers
   h. South Florida Water Management District
   i. Department of Natural Resources
   k. Florida Department of Environmental Protection
   l. Phase I and Phase II NPDES Storm water Program
   m. Miami-Dade County Water and Sewer Department
XII. CODES AND STANDARDS - BUILDING STANDARDS (continued)

3. Structural Materials Design Codes:
   a. All provisions of the High Velocity Hurricane Zone of the Florida Building Code.
   c. Referenced standards in Section 423.25 Public Shelter Design Criteria, State Requirements for Educational Facilities.

4. New or Revised Legislation
   a. Threshold laws s.553.77, F.S.
   b. Building Code and reinforcement s.553.71, F.S.
   c. High hazard occupancy new definition s.633.021, F.S.
   d. Fire Marshall Inspection s.633.085, F.S.
   e. Fire Marshall Authority to order vacating of building s. 633.121, F.S.
   f. Master Planning (Comprehensive Capital Facilities Planning and Budget Process) amending s.255.25 and 255.29.
   g. Trench Safety Act CS/SB 2626 which adopts OSHA excavation safety standards.
   h. Compliance with Florida Statutes on Xeri and native plant usage.
   i. Americans with Disabilities Act (ADA) - Public accommodations regulations and accessibility guidelines for buildings and facilities.

5. Compliance with applicable local ordinances as required.
   A. The design of the facilities shall meet all requirements of the State University System Energy Efficiency Analysis criteria. The Project shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4). In recognition of the University's commitment to sustainability practices, to the extent practical, this project will be designed and built with the goal of meeting the USGBC's LEED-NC "Silver" certification rating level.
   B. It is the express intent of this program to acknowledge this building as a continuum relating the existing and future developments on this campus, as outlined in the University Campus Master Plan, through the selection of design, materials, and systems utilized. Comprehensive systematizing of the campus complex provides energy and construction cost efficiencies and maintenance and repair savings by reducing replacement parts inventories and simplifying service needs, aesthetic cohesiveness, and overall life cycle cost savings based on existing plant experience.
   C. Design of this building and infrastructure must be closely coordinated with plans of the existing structures, systems development, campus utilities development, and University Campus Master Plan for building development and landscape development.
   D. The Architect/Engineer is responsible, as part of the basic services requirements, for the compliance of the construction documents with all codes until the date the project is released for bidding.
XII. CODES AND STANDARDS - ARCHITECTURAL PARAMETERS

It is the intent of this program to define building standards and specifications which will ensure environmental sensitivity, construction materials quality, construction system efficiency, adherence to building codes and standards, and awareness of university requirements to ensure functionality, ease of maintenance, energy efficiency, and cohesiveness to the existing campus mega structure.

Planning of this building will include review and updating of the University's Building Standards. Review of this document will be coordinated with the University's Facilities Development staff. This document sets forth standards for construction materials, interior and exterior finishes, paving surfaces, common building elements, accent materials, utilities, environmental and building systems, landscaping, and other design guidelines which are appropriate for this campus. The current FIU Building standards are to be followed unless specific deviations are coordinated with and agreed to, in advance, by the Facilities Development Department.

In the development of conceptual design, careful consideration must be given to the following items:

1. Building design should be functional and take advantage of prevailing breezes and the subtropical climate. Natural ventilation should be developed wherever practical and desirable based on initial costs, operating costs, energy conservation, and the degree of environmental control required in various functional areas. Building design should eliminate the need for excessive mechanical controls through the use of such design parameters as building orientation, sun control, breezeways, operable windows, insulating exterior materials, etc.

2. Careful consideration must be given to alternative means of accommodating level changes. The nature of the functions housed in this facility requires that most of them be directly and conveniently accessible. Design should attempt to maximize vertical accessibility to all floors in this building. Concepts to be explored include ramped walkways, exterior multi-level design and terracing. Where stairs are used, they must be prominent, inviting, and readily accessible.

3. The building will be designed for functional flexibility and expansion. It must be acknowledged from the outset that this building should be designed to allow for future addition.

4. The A/E’s documented monitoring of overall project costs, as well as costs of specific design elements will be reviewed with the Facilities Development Department. Construction cost control is understood to be a major developmental objective.

5. Together with planning for user convenience, organize and arrange departments into building/floor zones and provide accessibility for changes in mechanical and electrical services and for maintenance access requirements Consider future economies in special revisions, and plan to affect economies in operations of mechanical systems.

6. Interior finishes should be responsive to the traffic levels to which they will be subjected with recognition of the permanence of the facility and a desire for low maintenance. Hard or resilient floor surfaces will be specified for high volume, public traffic areas. Specific room areas should be carpeted with strong, tight weave fibers, and easily replaceable colors, easy cleaning and/or repair. Wall surfaces in public traffic areas should anticipate wear and abuse due to student traffic volumes; use washable latex paints.

7. Furnishings and equipment, interior finishes, and color selections will be coordinated with University...
Facilities Development personnel in design stages of project development prior to implementation. Materials samples and color will require university approval prior to design development.

8. Large glass areas which may cause sun and weather problems peculiar to South Florida should be avoided, but daylight illumination should be present, if possible, on all floors for psychological reasons. Uses of shaded or screened glass windows to permit views of the campus are encouraged. All exposed glazing must have Miami-Dade or Florida Product Approval for High Velocity Hurricane Zones as evidenced by current Notice of Acceptance.

9. All utility services (electrical, plumbing, floor drains, etc.) will be provided in conditioned spaces.

10. There should be one custodial work room for each 18,000 square feet or less of floor space. All space within the building should be reachable from one of these work rooms without negotiating any stairways. Each work room should be at least 80 net square feet with an 8-ft. minimum dimension and a 36” minimum out-swinging door. Each room shall include a floor base utility sink, with floor drain. It shall be of cast iron exterior and porcelain interior with a metal spillage. No telephone panels, electrical panels, alarm system panels, or pipe chases are to be included in these rooms.

11. The A/E will include in the project design, fabrication, and installation of an informational graphics and signage system in accordance with University standards to be coordinated through the Facilities Development Department.

12. Roofing construction details will be designed in accordance with current National Roofing Contractors Association Manuals for Steep-slope, Metal Panel and SPF, Membrane Roof and Architectural Metal Flashing, Moisture Control and Reroofing. Slope roofs for positive directional drainage so that a slope of not less than ¼-inch per foot is maintained over time.

13. At construction completion inspection, provide the following to the University:

   a. Complete set of reproducible “As-Builts” drawings.

   b. Operating manuals on all types of equipment used in the building.

   c. List of all Contractors, Subcontractors, and their suppliers of materials and equipment.

   d. Three copies of cut sheets on all door hardware, window hardware, keying schedule, and all interior and exterior mechanical, electrical, fixed equipment, and plumbing installed in the building, will be provided in loose leaf binders.

   e. One copy of all “as-built” construction drawings (site and floor plans) in electronic medium, compatible with AutoCAD systems located in University Facilities Planning & Construction offices. Building Information Model in accordance with the FIU “Building Information Modeling (BIM) Standard & Guide.”

   f. 10% of each type and color of: ceiling tile, carpet, vinyl tile, and ceramic tile.

   g. One gallon of each color paint and five gallons of primary color paint.
15  All fluorescent lighting shall have an electronic ballast and energy efficient bulbs.

16  Acoustical ceiling tile system should be easily removable for maintenance access.

17.  Provisions should be made for one air-conditioned voice/data communication (telephone) equipment room on each building floor level, each with area not less than indicated in “Appendix C” with a door not less than 3’ wide for equipment access, and a 125 Volt 20 Amp electrical power outlet.

18.  The first floor elevation shall meet a minimum of +10.0 feet NGVD.

19.  Asbestos and lead-based Paint Survey, operations & Maintenance, and Abatement:
   a.  Rules of the Florida Department of Labor and Employment Security
   b.  Requirements of Sections 255.551-565 and Chapter 469, Florida Statutes
   c.  Rules of the Florida Department of Environmental protection.
   d.  Regulations of OSHA and the Environmental Protection Agency
   e.  Licensing regulations of Asbestos Consultants, the Florida Department of Business and professional Regulation.
   f.  Lead-based paint minimum abatement standards of the Department of Housing and Urban Development and current state of the art procedures to protect university personnel, students and visitors
   g.  All asbestos abatement contractors are to be pre-qualified under the SUS owner Provided Insurance Program.

It is intended that this program will generate an overall building facility that will be attractive, dignified, easy to maintain, economically staffed and operated, and functionally and aesthetically satisfying to the majority of people who see and use it. These ends can probably be best achieved through a plan that is devoted to flexible use of space with appropriate materials, light, and color, as opposed to a plan centered upon a particular architectural style, symmetry, or other non-functional planning considerations.
XII. CODES AND STANDARDS - BARRIER FREE DESIGN

It is the policy of Florida International University to provide all architectural features to permit accessibility for the physically disabled. The University has adopted ANSI 117.1-1986 and the Florida Accessibility Code for Building Construction and current revisions for standard disabled design materials, for compliance, as a part of the University Building Standards and should be used in conjunction with the State of Florida Handicap requirements and Americans with Disabilities Act (ADA) accessibility guidelines identified under "Statewide Impact Codes" in the Codes and Standards - Building Standards section of this program.

Of particular interest in these regulations will be provisions for physically disabled students and staff in the following areas:

1. Wheelchair, crutches, and braces restrictions to mobility.

2. Building access: entrance door thresholds, closers and handles, interior and exterior multi-level transitions by means of ramps, stairs, elevators, or escalators, emergency exits from all levels for the physically disabled, and hallway and corridor clearances.

3. Design criteria for public service areas, such as, restrooms (with doors), drinking fountains, telephones, etc.
   a. Visual fire alarm signals in all public toilet rooms.
   b. Door levers approved for handicap use in all major rooms. Coordinate locations with Facilities Development.
   c. Handicap drinking fountains.
   e. Handicap water closets, urinals, lavatories and mirrors in all public restrooms.
   f. Handicap parking stalls minimum 12' x 20' plus 5' x 20'.
   g. Braille numbers on elevator doors, cabs, and public room identification plaques.

4. Increase ANSI standards of 32" for closet doors to 36".

5. Design criteria for residential facilities. Five percent (5%) of all units shall be designed to provide the additional special accessibility features.
   a. Accessible route.
   b. Clear width maneuvering space (s).
   c. Doors and doorways designed to allow passage into and within all sleeping rooms, suites and units.
   d. All controls shall comply with accessibility requirements.
   e. Accessibility of all spaces within the unit.
   f. Clear floor space(s) for approach to cabinets, counters, sinks and appliances.
   g. Visual Alarms, Notification Devices, and Telephones shall be provided and shall comply with referenced code requirements.
XII. CODES AND STANDARDS - SITE DEVELOPMENT AND CAMPUS INTEGRATION

Site and building planning and design will conform to the Board of Trustees-acknowledged Campus Master Plan Update, adopted March 27, 2014 as amended by the Board of Trustees. In the development of the conceptual designs, careful consideration must be given to the following items:

1. Site design will be coordinated with all physical facilities existing and/or currently planned for the campus. The Campus Master Plan outlines all facilities, existing or planned. Site boundaries for this project are outlined in this building program.

2. Pedestrian circulation systems between the proposed buildings must be integrated into the design which will preferably provide weather-protected connections. Perimeter walkways, exterior courtyards, and plaza areas should be designed to visually relate to the other campus adjacent buildings.

3. Service roads and/or yards will be constructed according to the Miami-Dade County standards for vehicular asphalt-paved surfaces; additional road and service yard requirements include planting, landscaping, irrigation system, lighting, signage, and graphics.

4. In engineering design and construction, particular care must be exercised for positive storm water drainage and disposal. This requirement will be strictly enforced by the University.

5. In design planning and construction staging, consideration should be given to minimizing disruption of existing entrance roads to ensure orderly traffic flow.

6. Energy efficient exterior lighting is required for service roads and/or yards, site, and building. Because of the heavy use of the facility at night, particular care should be taken in the design of exterior lighting for vandal resistance, security, and aesthetics. Lighting of the service yards should be controlled by clock timers with electric photo cells. Investigate use of lighting color differences to differentiate exterior functions, i.e., service road and/or yard vs. pedestrian walkway.

7. All site utilities will be provided underground from the nearest existing primary services (power, telephone, and sanitary sewer and water distribution systems). Communications and control systems will be provided as extensions of the campus underground network to and/or from existing and future adjacent buildings to engage with central terminal (control) equipment.

8. Site design should be developed to take full advantage of South Florida's subtropical climate including the use of Xeriphytic concepts. “Florida Friendly” landscaping should be used to articulate exterior areas, provide shade for outdoor use, and provide natural buffer between zones of conflicting use and future development.

9. Particular care should be taken to provide attractive site boundaries, and building vistas from surrounding campus areas. Native landscape materials which are capable of withstanding the sun and wind conditions found in South Florida should be used. Irrigation systems for all landscaped areas are required, except where the Xeriphytic concepts are used.
XII. CODES AND STANDARDS - SITE DEVELOPMENT AND CAMPUS INTEGRATION (continued)

10. The A/E will exercise particular care in designing storm drainage for the site and walkways. Topographic site plans must specifically illustrate existing and established grades for drainage. Site construction must comply with contract documents. "As-Builts" of the drainage system will be reviewed in the field at Substantial Completion of the project. All components of the construction exposed to weather will have positive drainage to a storm-water drainage system or equivalent (planters, grassed areas, etc.). Scuppers or roof runoffs will not occur over pedestrian walks or terraces. Primary circulation paths will require trench drains to ensure against storm-water accumulation during heavy rainstorms. The A/E will provide a comprehensive storm-water drainage plan for the building, connecting walkways, all weather-exposed stairways, and site, as a part of the Design Development stage.

11. Exterior handrails will be of a non-corrosive material and will not overheat when exposed to the sun.

12. Roadway and walkway post lights should be located at least 4 feet from the edge of roadway/walkway. All roadway, walkway, and exterior building lights should be controlled by photo-cell.
XII. CODES AND STANDARDS - ENVIRONMENTAL SYSTEMS

(Note: Items 1-8 May Not Apply Depending on Final Extent and Configuration of Building. To be verified by A/E with concurrence of FIU Facilities Maintenance)

Mechanical and electrical systems should be designed to afford maximum energy efficiency and operating economy. Mechanical systems should be designed in as efficient a manner as possible in order that these systems not preclude vital space essential to the building's main purpose. Particular attention should be paid to the following:

1. Zone controls of air-conditioning to permit emphasis to selected areas; alleviating total operation when necessary, particularly as relates to exhaust hoods when applicable. Design systems which maintain air movements for humidity control. Control equipment will be coupled to an electronic energy management system compatible with existing EMS at the Central Utility Plant.

2. Zoned lighting controls to allow for selective control of all overhead lighting. Lower ambient light levels and increase task lighting. Flexibility to adjust lighting levels as needed for particular functions. Specifically as they deal with light quality, aesthetic illumination, intensity for general and task lighting, and energy efficiency for cost savings. Consult with the department of Facilities Development.

3. The building mechanical and electrical system should be designed to allow incremental expansion as future needs require additions and alterations and should follow guidelines indicated in the Master Plan Update. Mechanical and Electrical systems are to be designed for excess capacity of 10%.

4. All HVAC Systems must be designed and specified with special consideration for sound transmission and quiet operation. Appropriate air duct velocity and vibration isolation must be designed and field verified during construction. Air handlers should be remote from office space and enclosed by sound resistant partitions. Air handlers servicing units to be accessible for maintenance/repairs from common areas (corridors) without access through private offices or classrooms.

This building should be designed to function for short time periods with limited power consumption and without the use of air-conditioning. Features listed above - such as natural ventilation, sun control, zoned environmental controls - should be coupled with overall building design considerations such as sitting to take advantage of prevailing winds, window design to accommodate breezes, and minimize heat build-up, etc. In order to service the building economically and preserve the architectural plans for flexibility, the following mechanical systems for the building should be incorporated:

a. Central utility core with minimum distribution distances.
b. Accessible vertical and horizontal chases where flexibility is required.
c. Provisions for changing power and telephone distribution.
d. Accessible mechanical rooms housing no other functions.
e. Maintenance staff should not have to enter student spaces. Provide access to utilities from common areas. Provide space to remove coils and filters for HVAC.
XII. CODES AND STANDARDS - ENVIRONMENTAL SYSTEMS (continued)

5. Basic systems:
   a. Heat/air-conditioning distribution and control. Design criteria to be 76 degrees Fahrenheit with 50% relative humidity.
   b. Lighting fixtures with local controls and central monitoring and disconnect control panel.
   c. Automatically-starting battery-powered emergency lighting and U.P.S. system back-up for communications/computers.
   d. Smoke detection and fire alarm with central annunciator panel at or near the front desk/main entrance. The fire alarm system should be an addressable system, not a zone system.
   e. For specific criteria for systems standards, refer to Florida International University Building Standards.
   f. Electric power reserve will be 150% greater than initial demand. The electrical distribution system will also be designed and constructed to accommodate this reserve.
   g. Water – natural-gas-fired central hot water and cold water with sufficient shut-off valves as required by residential and programs and/or maintenance functions. Hose bibs inside and outside of the building as required.
   h. Sanitary waste system - as required by applicable codes.
   i. Storm drainage - positive drainage from room entrances and all exterior areas.
   j. Gas lines, properly tested, with shut-off valves as required; add 30% reserve over initial building demand.
   k. Hydraulic elevator - combination service and passenger-type with electrical eye equipped doors; self-lowering and automatic open doors in accordance with fire codes. It must also comply with applicable ADA requirements. (May not be required for this Project).
   l. Clocks - battery emergency powered.
   m. Inter-campus and public telephone system. Two phone service source.
   n. Irrigation - Central.
   o. Exterior building lighting - Energy efficient and vandal resistant.
   p. Exterior door card security system.
   q. Energy management systems in compliance with the Master Plan Update guidelines (Control in Central Utility Plant).
   r. Security alarm system connected to the campus Public Safety Department, including Closed Circuit High-Definition Video Monitoring.
   s. Fire alarm system connected to the campus Public Safety Department.
   t. Provide automatic fire sprinkler system as required by code.
   u. Smoke Exhaust System with emergency power, if required by building occupancy, type and size.

6. Central controls for this facility connected to the Central Utility Plant should be provided for the following:
   a. Exterior lighting
   b. Environmental systems (HVAC)

7. Reserve utilities capacity for power and gas, water and sewer, and communications are to be provided.

8. Provisions should be made for one telephone equipment room (air-conditioned if it is to be used in conjunction with electronic equipment) on each building level each with area and other requirements as indicated in “Appendix C.”
XII. CODES AND STANDARDS - FURNITURE STANDARDS AND EQUIPMENT

In order to facilitate the design of the specific functional areas, lists have been compiled indicating the anticipated equipment needs of each. These lists have been included in the detailed description of each area. These lists may not be complete, and include items which will not be purchased under the projects Capital Outlay Furniture and Equipment budget; however, their inclusion in the design is required for efficient space planning by the Architect and Engineers.

It is also important to recognize that some of the office equipment presently utilized in other buildings on campus may be re-utilized if, after inventory, they are deemed to be in satisfactory condition for relocation.

Installation for all fixed equipment, built-in shelving, counters, and any equipment requiring hookup other than electrical convenience outlet will be included in the construction cost and bid documents. Institutional quality equipment and premium grade casework shall be provided.

All movable equipment and furnishings will only be included in the equipment and furniture design layouts, but should be indicated as "not-in-contract". All movable equipment will be furnished by the University and funded from the Furniture and Equipment budget; see Project Budget.

All special equipment will be specified to be on contract for servicing. A complete set of "as-built" drawings from manufacturers and installers is required. The A/E and contractor will field demonstrate and discuss maintenance procedures with appropriate personnel from the department of Facilities Operations upon Substantial Completion of the construction.

Inventory of equipment, other than in this construction program, will be provided by the Office of Facilities Development.
### XIII. PROJECT SCHEDULE

Milestone dates for this project are planned as follows:

<table>
<thead>
<tr>
<th>Task No.</th>
<th>Description of Task</th>
<th>Date Completed</th>
<th>No. of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Program Final Draft</td>
<td>Friday, August 11, 2017</td>
<td></td>
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<tr>
<td>2</td>
<td>Approve Program</td>
<td>Monday, September 11, 2017</td>
<td>31</td>
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<tr>
<td>3</td>
<td>A/E- Submit Legal Adv't in FAR</td>
<td>Friday, September 15, 2017</td>
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<td>Tuesday, September 19, 2017</td>
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<td>Tuesday, October 17, 2017</td>
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<td>A/E- Shortlist Meeting</td>
<td>Tuesday, October 31, 2017</td>
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<td>7</td>
<td>A/E- Presentations &amp; Interviews</td>
<td>Wednesday, November 22, 2017</td>
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<td>A/E- Selection Notice</td>
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<td>A/E- Negotiations &amp; Contract Award</td>
<td>Tuesday, January 02, 2018</td>
<td>32</td>
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<td>10</td>
<td>AE- Notice to Proceed (latest start date)</td>
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<td>Program Verification</td>
<td>Thursday, January 25, 2018</td>
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<td>12</td>
<td>Housing - Conceptual Schematics</td>
<td>Tuesday, February 06, 2018</td>
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<td>FIU review</td>
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<td>Housing/Utilities &amp; Site- Adv. Schematics</td>
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<td>Tuesday, June 12, 2018</td>
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<td>Tuesday, October 02, 2018</td>
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<td>29</td>
<td>CM/FIU Review</td>
<td>Monday, October 29, 2018</td>
<td>27</td>
</tr>
<tr>
<td>30</td>
<td>Housing- Bid Date/Issuance of GMP</td>
<td>Thursday, December 13, 2018</td>
<td>45</td>
</tr>
<tr>
<td>31</td>
<td>Housing- Award Date/Notice to Proceed</td>
<td>Thursday, January 10, 2019</td>
<td>28</td>
</tr>
<tr>
<td>32</td>
<td>Housing- Building Permit</td>
<td>Thursday, January 17, 2019</td>
<td>7</td>
</tr>
<tr>
<td>33</td>
<td>Housing- Construction Start</td>
<td>Monday, January 28, 2019</td>
<td>11</td>
</tr>
<tr>
<td>34</td>
<td>Housing- Substantial Completion</td>
<td>Thursday, April 23, 2020</td>
<td>469</td>
</tr>
<tr>
<td>35</td>
<td>Housing- Final Completion</td>
<td>Monday, May 25, 2020</td>
<td>32</td>
</tr>
<tr>
<td>36</td>
<td>Housing- Occupancy/ F &amp; E Installation</td>
<td>Monday, May 25, 2020</td>
<td>0</td>
</tr>
<tr>
<td>37</td>
<td>Closeout Documentation (after Subs.Comp)</td>
<td>Monday, June 08, 2020</td>
<td>46</td>
</tr>
</tbody>
</table>
XIII. PROJECT SCHEDULE (Continued)

Mutual coordination between the A/E and the University will be required to resolve questions of scheduling, compatibility, finishes, environmental systems, connections, etc. Scheduling of these meetings and establishment of dates for this coordination will be the task of the University's Office of Facilities Planning. Among those items which will require coordination are the following: Pre-design Informational conferences, Design Submissions and Presentations, Project Reviews, Evaluations and Approvals by the Board of Trustees, Final Document Approvals, Bidding Dates and Procedures, Award of Contracts and Construction Start, Pre-construction and Periodic Construction Conferences, Construction Interfacing with University Operations, Disruption of Services for Utility Connections, Substantial and Final Completion Inspections, and Guarantee Expiration Inspection.

- Pre-design Informational conferences
- Design Submissions and Presentations
- Project Reviews, Evaluations and Approvals by the University
- Final Document Approvals
- Bidding Dates and Procedures
- Award of Contracts and Construction Start
- Pre-construction and Periodic Construction Conferences
- Construction Interfacing with University Operations
- Disruption of Services for Utility Connections
- Substantial and Final Completion Inspections
- Guarantee Expiration Inspection
XIV. PROGRAM FUNDS

Project fund sources are anticipated to be auxiliary issued tax exempt bonds and revenue funds:

TOTAL AUXILIARY REVENUE FUNDS: $69,831,781

Commencing in the 2016-2017 Fiscal Year:

- Change in Program Costs; add $ *
- Change in Facility Maintenance Costs; add $ *
- Change in Utility Costs; add $ *
- Change in Other Costs (Support Staff); add $ *

* Under Evaluation.
## XV. PROJECT BUDGET SUMMARY

### MMC Housing 2017 - Program Budget Summary - INTERNAL USE 8/11/2017

<table>
<thead>
<tr>
<th>Facility/Space Type</th>
<th>Net Area (NASF)</th>
<th>Net to Gross Conversion</th>
<th>Gross Area (GSF)</th>
<th>Unit Cost (Cost/GSF)</th>
<th>12/31/2019 Construction Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructional Spaces</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom</td>
<td>1,800</td>
<td>1.3</td>
<td>2,340</td>
<td>$337.05</td>
<td>$788,701</td>
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<tr>
<td>Teaching Laboratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Academic Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Space/Student Academic Support</td>
<td>6,765</td>
<td>1.3</td>
<td>8,795</td>
<td>$328.64</td>
<td>$2,890,204</td>
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<tr>
<td>Instructional Media</td>
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<tr>
<td><strong>Institutional Support</strong></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Office/Computer</td>
<td>4,720</td>
<td>1.3</td>
<td>6,136</td>
<td>$364.97</td>
<td>$2,239,461</td>
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<tr>
<td>Campus Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Residential</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dormitory Rooms</td>
<td>158,930</td>
<td>1.3</td>
<td>206,609</td>
<td>$177.75</td>
<td>$36,725,534</td>
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<tr>
<td>Recreation/Activity Rooms</td>
<td>5,320</td>
<td>1.3</td>
<td>6,916</td>
<td>$177.75</td>
<td>$1,229,345</td>
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<tr>
<td>Laundry Rooms</td>
<td>2,000</td>
<td>1.3</td>
<td>2,600</td>
<td>$177.75</td>
<td>$462,160</td>
</tr>
<tr>
<td>Student Lounges</td>
<td>6,560</td>
<td>1.3</td>
<td>8,528</td>
<td>$177.75</td>
<td>$1,515,884</td>
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<tr>
<td>Other Residential Support Areas</td>
<td>7,873</td>
<td>1.3</td>
<td>10,235</td>
<td>$177.75</td>
<td>$1,819,292</td>
</tr>
<tr>
<td>Warehouse Replacement</td>
<td>[5000]</td>
<td>1.2</td>
<td>[6000]</td>
<td>$144.55</td>
<td>$0</td>
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<tr>
<td><strong>Totals</strong></td>
<td>193,968</td>
<td>-</td>
<td>252,158</td>
<td>-</td>
<td>$47,670,581</td>
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<tr>
<td><strong>Parking Garage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300 Cars</td>
<td></td>
<td></td>
<td></td>
<td>$22,500</td>
<td>$6,750,000</td>
</tr>
<tr>
<td><strong>Total Construction - New</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$54,420,581</td>
</tr>
</tbody>
</table>

**SCHEDULE OF PROJECT COMPONENTS**

**ESTIMATED COSTS**

1. **Construction Cost (from above)**

   Add'l/Extraordinary Const. Costs **

   | b. Environmental Impacts/Mitigation | $0 |
   | c. Site Preparation                 | $300,000 |
   | d. Landscape/Irrigation             | $200,000 |
   | e. Plaza/Walks                      | $200,000 |
   | f. Roadway and Parking Improvements | $50,000 |
   | h. Telecommunication and Security    | $2,000,000 |
   | i. Electrical Service               | $30,000 |
   | j. Water Service                    | $215,000 |
   | k. Sanitary Sewer                   | $32,000 |
   | l. Chilled Water System             | $100,000 |
   | m. Storm Water System               | $275,000 |
   | n. Natural Gas Service              | $7,000 |

**Total Construction Costs**

   | $57,829,581 |

2. **Other Project Costs**

   | a. Land/existing facility acquisition | $0 |
   | b1. Professional Fees - A/E, Landscape DMS Fee Curve Average Complexity (D) | 5.69% |
   | b2. Sustainability Certification Fees, Special/Add'l. Professional Services | 0.25% |
   | b3. CM Fees - Pre-Construction       | 1.00% |
   | c. Fire Marshall Fees                | 0.25% |
   | d. Inspection Services - total       | $581,376 |
   | * On-site representation 66 weeks    | $231,000 |
   | * Code inspections (Incl. Plan Review, Threshold, Bldg. Code) | $350,376 |
   | e. Insurance Consultant              | 0.10% |
   | f. Surveys & Tests                   | $180,000 |
   | g. Permit/Impact/Environmental Fees  | $23,000 |
   | h. Artwork                           | $2,847,845 |
   | i. Moveable Furnishings & Equipment  | $2,094,953 |
   | j. Project Contingency 3%            | $2,094,953 |
   | k. Construction Service Reimbursement| $2,094,953 |

**Total - Other Project Costs**

   | $12,002,200 |

**ALL COSTS 1+2**

   | $69,831,781 |

*Road Work, Utility Relocation and Extension of Utilities are Not Included **