I – PRELIMINARY OUTLINE PROGRAM

FIU Stadium Expansion & Master Plan

BT- 842

Florida International University
Modesto A. Maidique Campus
August 29, 2011
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III. SIGNATURE SHEET

1. Educational Specifications contained in this document have been developed in accordance with the statutory requirements of the State University System of Florida as outlined in paragraph 4 of Standard Practice 00-0000-3-04-13:


   Date: 8/29/11

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

   Julie Berg, Senior Associate Athletic Director Intercollegiate Athletics Committee Chairperson

   Date: 8/29/11

3. 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 Resource Management

   Date: 8/29/11

4. This document is hereby recommended for approval:

   John Cal, Associate Vice President Facilities Management

   Date: 8/29/11

5. This document is hereby recommended for approval:

   Pedro Garcia, Executive Director Sports and Entertainment Intercollegiate Athletics

   Date: 8/27/11

6. This document is hereby recommended for approval:

   Kenneth Jesell, CFO & Senior Vice President Finance & Administration

   Date: 8/30/11

7. This document is hereby approved:

   Mark B. Rosenberg, President Florida International University

   Date: 9/1/11
FACILITY PROGRAM COMMITTEE

This outline program represents preliminary requirements for the short term expansion and long term build out of the FIU Football Stadium. This document has been prepared by the members of the Building Program Committee who have each contributed, by drawing from their expertise and respective responsibilities, the essential information required by the architects and engineers to plan, program, conceptualize and develop the project. This committee will monitor the development of the design and assist the design Architects/Engineers by refining details and clarifying any ambiguities herein with the expert assistance of the design team. Coordination of the program requirements (compatibility, standards, finishes, utility connections, equipment, etc.) and scheduling throughout the duration of the project will be maintained by the University’s office of Facilities Management, Planning, and Construction sections.

The members of the Program Committee are:

Chairperson:   Julie Berg, Senior Associate Athletic Director, Intercollegiate Athletics
Members:   Wesley Harden, Coordinator, Stadium Manager, Intercollegiate Athletics
Ex-Officio:   Associate Vice President, Facilities Management
Associate Vice President, Information Technology
Associate Vice President, Environmental Health & Safety
Chairperson, Faculty Senate
Chairperson, Ad Hoc Building and Environment Committee
Associate Director, Facilities Management/Utilities
Director, Auxiliary Services
Director, Purchasing
Director, Academic Space Management
Director, Facilities Management/Minor Projects & Construction
Director, Facilities Management/Planning
Senior Project Manager/Facilities Management
IV. INTRODUCTION

The scope of work for this project includes development of a comprehensive plan for the short term and long term development of the existing FIU Football Stadium. The immediate short term goal is to complete construction of the lower level seating and concourse to essentially match the existing lower level south side seating and concourse. The long term goal is to add a second tier of seating to increase the stadium capacity to hold 40,000 to 45,000 fans with other features and amenities as described in Section VI, “Space Needs Assessment” within this document.

The following deliverables and phases may be included in the scope of this project:

1. Planning Study/Programming
2. Conceptual stadium master plan with phasing framework & construction cost estimates for each phase
3. Construction Documents for north side bleachers
4. Construction Administration for north side bleachers
5. 35% Design & Renderings for overall master plan (fundamentally to facilitate fund raising)
6. Full design (conceptual & advanced schematics)
7. Construction Documents for each phase contingent on funding & owner’s desire to proceed
8. Construction Administration for each phase as it is built

Project Delivery:

The project is proposed to be delivered using the Construction Management - At Risk Method. Refer to both regulation 14.0055 (2) (a) and (e) for project delivery justification.

The design team selected for this commission may be responsible for the development of the design and development of contract documents, bidding and construction administration services.
V. ACADEMIC PLAN

Florida International University is an urban, multi campus, doctoral-granting institution in Miami, Florida's largest population center, with campuses at University Park and North Miami, selected programs offered in Davie and Fort Lauderdale, and off-campus continuing education programs. The mission of this state University is to serve the people of Southeast Florida, the state, the nation and the international community by imparting knowledge through excellent teaching, creating new knowledge through research, and fostering creativity and its expression.

Chartered by the Florida Legislature in 1965, the University opened its doors in 1972 to the largest entering class in United States collegiate history. With strong undergraduate programs involved a rigorous liberal arts core curriculum, FIU now offers more than 200 baccalaureates, master's and doctoral degree programs through its many Colleges and Schools: Arts and Sciences, Business Administration, Education, Engineering and Design, Health, Hospitality Management, Journalism and Mass Communication, Nursing, and Urban and Public Affairs. The University continues to balance its programs for full and part-time degree-seeking students and to address the special needs of lifelong learners, traditionally and through distant learning. Campus life fosters a sense of community which provides for the intellectual, aesthetic, social, emotional, physical and moral development of students while providing opportunities for leadership training, awareness of cultural diversity, and a sensitivity to social issues and concerns.

Southeast Florida and FIU are alike in their explosive growth, rich ethnic and cultural diversity, and quest for excellence. FIU is a leading institution in one of the most dynamic, artistically expressive, and cosmopolitan cities in the United States, the gateway for Latin America and the Caribbean. The continued globalization of the world's economic, social and political systems adds to the importance of FIU's mission, and combines with our subtropical environment, and our strategic location to strengthen Southeast Florida's role as an information and transportation center.

From this unique setting we have derived four key strategic themes that guide the University's development: International, Environmental, Urban, and Transportation and Information Systems. We focus on these themes with a commitment to quality management and cultural diversity. To summarize the University priorities, first, to graduate a well educated, ethnically diverse student body by continuing to enhance our teaching and by broadening our graduate and professional programs; second, to promote research and creative activities by nurturing strategically selected disciplines which contribute to the social, artistic, cultural, economic, environmental and technological foundations for the 21st century; third, to solve critical health, social, educational, and environmental problems through applied research and service. These strategic themes and priorities guide our pursuit of recognition as one of America's top 25 urban public research universities by the end of this century.
VI. SPACE NEEDS ASSESSMENT

The planning and programming efforts must proceed on a “fast track” schedule leading to preparation of construction documents for demolition of the existing north seating section and completion of the new north side seating and concourse proceeds as quickly as possible. The goal is to begin demolition as soon as possible following the 2011 football season in order to have new seating in place by August 2012. This will require concurrent efforts on the long term planning of the stadium build out while preparing construction documents for the north side seating and concourse.

Included below are specific requirements/elements for consideration during programming & master planning:

1. Completion of north side bleachers/seating including concourse
2. Ground level stadium club vs. concourse level stadium club
3. Structures underneath bleachers
4. Central structure
   • Press box
   • Additional suites
   • Coaches’ game boxes
   • President’s Suite
   • Concourse level stadium club
   • Athletic Dept Offices
   • Restrooms
   • Concessions
5. Upper level bowl and associated amenities
6. Storage space at ground level for athletic & stadium equipment
7. Other facilities as required and appropriate
VII. ANALYSIS OF IMPACT ON MASTER PLAN

This project is consistent with the enrollment projections, academic mission, and physical development of Modesto A. Maidique Campus as documented in the BOT approved Campus Master Plan Update, adopted in September 2010.

On the street side north of the stadium, consideration must be given to the possibility of accommodating a future pedestrian plaza and outdoor space for game day activities and concessions.
VIII. SITE ANALYSIS

The existing seating on the north side of the stadium is to be completely demolished and removed. Existing support buildings, (restrooms, concessions and ticket booth space) are to remain for the initial seating replacement phase.
VIII. SITE ANALYSIS (continued)

The new seating will match the slope and setback from the exiting field with additional setback as need to accommodate FIFA soccer standards.

Support buildings to remain

North Seating to be demolished and replaced
(new setback to accommodate soccer)

Existing Seating Layout
IX. PROGRAM AREA

Detailed Space Requirements to be determined in the programming phase of design.
X. UTILITIES IMPACT ANALYSIS

The Project Budget includes all site development associated with required utility extensions and hookups, grading, walkways, landscape irrigation, drainage systems, plant materials, screen walls, lighting, and landscape furnishings (benches, trash containers, etc.).
In addition, this project budget includes campus infrastructures as follows:

Water – Fire and domestic water for hose bibs and restrooms are required for this building. Amount and projected consumption is TBD.

Sanitary Sewer System – Connect restrooms to existing site sanitary sewer system. Coordinate with Facilities Management.

Storm Water System – Catch basins with ex-filtration trenches will be required based on storm drainage engineering analysis.

Electrical – Existing stadium service 277/480V, three phase. Coordinate electrical service connection with Facilities Management. Existing electrical service for existing concessions and restrooms impacted by demolition work will need to be supplied from other existing service points on the site.

Chilled Water System – There is no chilled water available near the site. The need for chilled water is not anticipated.

Communications – Service connection points are available on the site. Coordination with Facilities Management and University Technology Services for specific telephone and data requirements is required.

Road Work. Future requirements 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

APPENDIX "C" - STANDARDS FOR TELECOMMUNICATIONS FACILITIES

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 herein are for generic telecommunications facilities that will support a multitude of rapidly changing telecommunications technologies in a multi-vendor 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, 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; however, the "Telecommunications Wiring Specifications" which are produced after consultation with the building occupants include the detailed procedures and specifications for the wiring and installation of telecommunications systems for campus buildings. The "Telecommunications Wiring Specifications" are provided to FIU Facilities Management 90 days after completion of the project design phase.
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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.
- 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 mudring 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 erase 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&quot;</td>
</tr>
<tr>
<td>50,001 ft² to 100,000 ft²</td>
<td>4</td>
<td>4&quot;</td>
</tr>
<tr>
<td>100,001 ft² to 300,001 ft²</td>
<td>5-8</td>
<td>4&quot;</td>
</tr>
<tr>
<td>300,001 ft² to 500,000 ft²</td>
<td>9-12</td>
<td>4&quot;</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 telecommunications 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 ft², 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. ft²)</th>
<th>Room Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000 ft²</td>
<td>10 ft. X 11 ft.</td>
</tr>
<tr>
<td>8,000 ft²</td>
<td>10 ft. X 9 ft.</td>
</tr>
<tr>
<td>5,000 ft² - 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.</td>
</tr>
<tr>
<td></td>
<td>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. Handholes 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.
WALL STUB-UP DETAIL

FIGURE 2.2.1 - A

Wall Stub-Up Detail
### 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).

1. a. Building code will be the Florida Building Code, 2004 edition as follows:
   Florida Building Code (Latest Revision)
   Florida Building Code-Test Protocols for High Velocity Hurricane Zone
   (Latest Revision)
   Florida Building Code-Mechanical (Latest Edition)
   Florida Building Code-Gas and Plumbing (Latest Editions)
   National Electric Code (As referenced in Chapter 27 of the Florida Building Code)
   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 law 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 Xeriscape 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 University also is requesting that a Leadership in Energy and Environmental Design (LEED) be considered to obtain certification for this project based on New Construction Green Building Rating system by the US Green Building Council. The rating is Silver level, or 34 points minimum.

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. In order to affect maximum flexibility, the building should be designed around a public circulation core which includes all required public access areas and all building services. This core would provide the vertical circulation, and contain all non-residential functions in a sound-isolated envelope which would aid in maintaining acoustical levels in the residential and non-residential areas.
XII. CODES AND STANDARDS - ARCHITECTURAL PARAMETERS (continued)

7. 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.

8. 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.

9. 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 product approval.

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

11. 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 airways. Each work room should be at least 80 net square feet with an 8” 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.

12. 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.

13. Roofing construction details will be designed in accordance with the 2006 National Roofing Contractors Association Construction Details publication. A reference copy is available in the University Facilities Development Department. Slope roofs for positive directional drainage.

14. At construction completion inspection, provide the following to the University:
   a. Complete set of reproducible “As Built” 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.
XII. CODES AND STANDARDS - ARCHITECTURAL PARAMETERS (continued)

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.

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 should 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 of not less that 4’x8’ with a door not less than 3’ wide for equipment access, and a 125 Volt 20 Amp electrical power outlet.

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

19. Provisions should be made for one air-conditioned voice/data communication (telephone) equipment room on each building floor level, each with area of not less than 10’ x 10’ with a door not less than 3’ wide for equipment access, and a 125 Volt 20 Amp electrical power outlet.

20. The first floor elevation shall meet a minimum of +9 feet.

21. Asbestos and lead-based Paint Survey, operations & Maintenance, and Abatement:

   1. Rules of the Florida Department of Labor and Employment Security
   2. Requirements of Sections 255.551-565 and Chapter 469, Florida Statutes
   3. Rules of the Florida Department of Environmental protection.
   4. Regulations of OSHA and the Environmental Protection Agency
   5. Licensing regulations of Asbestos Consultants, the Florida Department of Business and professional Regulation.
   6. 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
   7. 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 persons 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 Department of Community Affairs Accessibility Requirements Manual 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.
   d. Handicap water closets, urinals, lavatories and mirrors in all public restrooms.
   e. Handicap parking stalls minimum 12' x 20' plus 5' x 20'.
   f. 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 BT acknowledged Campus Master Plan Update, dated February 2005. 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. The service road and/or yard will be constructed according to the Dade County standards for vehicular blacktop 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 disruption of the existing entrance road to ensure orderly traffic flow.

6. Energy efficient exterior lighting is required for service road and/or yard, 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 yard 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. 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

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 pneumatic coupled to an electronic energy management system compatible with existing EMS at the Central Utility Plant. Each student room should have a 2-speed fan control.

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 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).

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 head 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:

- Central utility core with minimum distribution distances.
- Accessible vertical and horizontal chases where flexibility is required.
- Provisions for changing power and telephone distribution.
- Accessible mechanical rooms housing no other functions.
- 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 - gas fire 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.
   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.
   s. Fire alarm system connected to the campus Public Safety Department.
   t. Provide automatic fire sprinkler system as required by code.

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 computer terminals) on each building level each with area of not less that 4’ x 8’ with a door not less than 3’ wide for equipment access, and a 125 Volt 20 Amp electrical power outlet.
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>Wednesday, August 31, 2011</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Program Approved by President</td>
<td>Wednesday, August 31, 2011</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>A/E- Submit Legal Adv’t in FAW</td>
<td>Wednesday, August 31, 2011</td>
<td>0</td>
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<td>4</td>
<td>A/E- FAW Adv’t Posted</td>
<td>Friday, September 09, 2011</td>
<td>9</td>
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<tr>
<td>5</td>
<td>A/E- Qualifications Deadline</td>
<td>Friday, October 07, 2011</td>
<td>28</td>
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<td>6</td>
<td>A/E- Shortlist Meeting</td>
<td>Monday, October 17, 2011</td>
<td>10</td>
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<tr>
<td>7</td>
<td>A/E- Presentations &amp; Interviews</td>
<td>Thursday, November 03, 2011</td>
<td>17</td>
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<td>8</td>
<td>A/E- Selection Notice</td>
<td>Tuesday, November 08, 2011</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>A/E- Negotiations &amp; Contract Award</td>
<td>Monday, November 28, 2011</td>
<td>20</td>
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<tr>
<td>10</td>
<td>CM- Submit Legal Adv’t in FAW</td>
<td>Wednesday, September 21, 2011</td>
<td>-</td>
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<tr>
<td>11</td>
<td>CM- FAW Adv’t Posted</td>
<td>Friday, September 30, 2011</td>
<td>9</td>
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<td>12</td>
<td>CM- Qualifications Deadline</td>
<td>Friday, October 28, 2011</td>
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<td>13</td>
<td>CM- Shortlist Meeting</td>
<td>Monday, November 07, 2011</td>
<td>10</td>
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<tr>
<td>14</td>
<td>CM- Presentations &amp; Interviews</td>
<td>Monday, November 21, 2011</td>
<td>14</td>
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<tr>
<td>15</td>
<td>CM- Selection Notice</td>
<td>Monday, November 28, 2011</td>
<td>7</td>
</tr>
<tr>
<td>16</td>
<td>CM- Negotiations &amp; Contract Award</td>
<td>Monday, December 19, 2011</td>
<td>21</td>
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<td>17</td>
<td>AE- Notice to Proceed</td>
<td>Monday, December 05, 2011</td>
<td>7</td>
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<td>18</td>
<td>A/E - Planning Study &amp; North Seating Schematics</td>
<td>Monday, January 02, 2012</td>
<td>28</td>
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<td>19</td>
<td>FIU Review</td>
<td>Monday, January 09, 2012</td>
<td>7</td>
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<tr>
<td>20</td>
<td>CM- Notice to Proceed - Demolition</td>
<td>Thursday, December 29, 2011</td>
<td>10</td>
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<td>A/E - Utilities, Site &amp; North Seating 100% CD</td>
<td>Monday, January 30, 2012</td>
<td>21</td>
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<td>22</td>
<td>A/E - Conceptual Master Plan &amp; Renderings</td>
<td>Friday, February 03, 2012</td>
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<td>23</td>
<td>FIU Review</td>
<td>Monday, February 06, 2012</td>
<td>7</td>
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<td>24</td>
<td>CM-Utillities, Site &amp; North Seating Issuance of GMP</td>
<td>Monday, February 06, 2012</td>
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<tr>
<td>25</td>
<td>A/E - Approval of GMP</td>
<td>Monday, February 13, 2012</td>
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<td>26</td>
<td>Utilities, Site &amp; North Seating Notice to Proceed</td>
<td>Monday, February 20, 2012</td>
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<td>27</td>
<td>Utilities, Site &amp; North Seating Building Permit</td>
<td>Monday, February 27, 2012</td>
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<td>28</td>
<td>A/E - Building Program - 45,000 Seats &amp; Amenities</td>
<td>Tuesday, April 03, 2012</td>
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<td>29</td>
<td>Utilities, Site &amp; North Seating Substantial Completion</td>
<td>Monday, August 27, 2012</td>
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</table>
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 Management. 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 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

The planning, construction, and equipment funding source is projected as follows:

Intercollegiate Athletics Private funding $6,000,000
### XV. PROJECT BUDGET SUMMARY

#### SCHEDULE OF PROJECT COMPONENTS

<table>
<thead>
<tr>
<th>Facility/Space</th>
<th>Net Area (NASF)</th>
<th>Conversion (GSF)</th>
<th>Gross Area (GSF)</th>
<th>Unit Cost</th>
<th>Construction Assumed Occupancy Cost</th>
<th>Bid Date</th>
<th>Date</th>
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<tbody>
<tr>
<td>Demo North Bleachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$135,000</td>
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<tr>
<td>North Bleachers</td>
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<td></td>
<td>$3,430,000</td>
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<tr>
<td>Support / Storage</td>
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<td>1.2</td>
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<td>Restrooms</td>
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<td>1.2</td>
<td>3,420</td>
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<td><strong>$1,037.46</strong></td>
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<tr>
<td><strong>SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS</strong></td>
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#### Basic Construction Cost

<table>
<thead>
<tr>
<th>Item</th>
<th>Funded to Date</th>
<th>2011-12</th>
<th>2012-2013</th>
<th>2013-2014</th>
<th>2010-11</th>
<th>2011-12 Funded &amp; In CIP</th>
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<tbody>
<tr>
<td>a. Construction Cost (from above)</td>
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<td>Add/Extraordinary Const. Costs</td>
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<tr>
<td>Environmental Impacts/Mitigation</td>
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<td>Site Preparation</td>
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<td>Plaza/Walks</td>
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<td>Roadway Improvements</td>
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<td>Parking Lot Modifications</td>
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<td>Energy Efficient Equipment</td>
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#### 2. Other Project Costs

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<th>2012-2013</th>
<th>2013-2014</th>
<th>2010-11</th>
<th>2011-12 Funded &amp; In CIP</th>
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<tbody>
<tr>
<td>a. Land/Existing facility acquisition</td>
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<td>b. Professional Fees</td>
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<td>Programming</td>
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<tr>
<td>Media/Technology Consultant</td>
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<tr>
<td>CM Fees</td>
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<td>c. Fire Marshall Fees</td>
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<td>d. Inspection Services</td>
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<td>Resident Project Representative</td>
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<td>Code Compliance Inspections</td>
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<td>Threshold Inspections</td>
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<td>f. Surveys &amp; Tests</td>
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<td>Topographical Survey</td>
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<td>Geotechnical Tests</td>
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<td>Density &amp; Concrete Testing</td>
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<td>HVAC Test &amp; Balance</td>
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<td>g. Permit/Impact/Environmental Fees</td>
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<td>h. Artwork</td>
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<tr>
<td>i. Moveable Furnishings &amp; Equipment</td>
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<td>Signage</td>
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<td>Telecom (Building)</td>
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**ALL COSTS 1+2**

$0 $5,998,131 $0 $0 $0 $0 $5,998,131