010000 General Requirements

Sections Included In This Standard:

1.1 CODE CONFLICT

Where conflict arises between these standards and acceptable building codes the more stringent shall apply.

1.2 ACCESS FOR PERSONS WITH DISABILITIES

All new construction and major renovations shall meet or exceed the needs of community members with disabilities. All new construction and renovation projects shall comply with the Florida Building Code (Chapter 11, Florida Accessibility Code for Building Construction). For convenience, Appendix B of these Standards highlights successful standards experienced by the University of Florida in past construction projects.

1.3 BUILDING AND SITE STANDARDS

Guidance for Buildings and site standards can be found in The Campus Master Plan; Urban Design Conservation, and Future Land Use Sections, The UF Campus Design Guidelines and The Landscape Master Plan. The University has a National Register Historic District with 21 buildings and one open space (Plaza of the Americas) either individually listed or contributing structures in the National Register of Historic Places. Among the design and site policies of the Campus Master Plan are policies in the Capital Improvements Element regarding definition and placement of temporary buildings.

The universities policy for temporary buildings is located The Campus Master Plan, Capital Improvements Elements, Policies 1.1.19 and 1.1.20. https://facilities.ufl.edu/wp-content/uploads/plan/2020-2030/elements/CIP%20Element%20FINAL%202020.pdf

B. ARRANGEMENT OF ANCILLARY USES ON THE SITE

In order to minimize storm damages and also emphasize the design characteristics of buildings, open spaces & full tree canopies, electrical and telecommunication lines should be located underground. The location of transformers or meters of any type on any power pole or hung on the outside of any building is not recommended. These utilities should be placed at grade within the building or in an exterior location screened from public view. Any above-grade utility equipment such as electrical transformers that cannot be reasonably located underground, should be screened from view.

Service areas and loading docks must be sensitive to pedestrian movements and safety, and shall be screened from public view. Within the historic district, examine the archway entrance road into Leigh Hall on Buckman Drive and the service area located inside the north elevation of Emerson Hall. Any required loading docks should be recessed entirely within the building and closed off with rolling overhead doors or other appropriate screens compatible with the building exterior.

C. LAYOUT OF EXTERNAL CIRCULATION

Parking accommodations are not always required for a project. When parking is provided service vehicles must have access and disabled parking and visitor drop off areas shall be provided. When parking is provided off-site, the project site design must include well developed pedestrian and bicycle amenities linked to the larger non-vehicular circulation network. Bicycle facilities are to be provided on site in accordance with the standards presented in these construction standards.

At least one accessible route complying with Chapter 4 of the FBC, Accessibility shall be provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones if provided, and public streets or sidewalks, to an accessible building entrance. The ADA Office will meet with the design team and UF project manager to determine the boundary for each project.

Pedestrian access to buildings must be coordinated with the established network and the location of existing and proposed pedestrian crossings and roadway speed tables. This information should be obtained through the Facilities Services Division and Planning Design & Construction.

Whenever a major parking facility is either part of a building project or is an independent project, the Campus Master Plan requires that a traffic impact analysis be performed. Coordinate this with the office of Planning Design & Construction.

The Landscape Master Plan (LMP) provides guidelines and standards for integrating campus projects into the campus fabric. Specifically, the LMP requires the following:

Project limits for new building projects should ensure that new projects are fully integrated into all existing conditions:
The varied terrain of the UF campus presents challenges to integrating buildings within built campus spaces. Building finish floor elevations need to be established to ensure universal access at the building's entry points without creating uncomfortable relationships with adjacent buildings, spaces, and walkways. The impact of a proposed project should be understood early in the design process, and where necessary, the project limit should be expanded as needed to ensure that the new construction does not create unsatisfactory relationships at the edge of the site such as large retaining walls and guardrails, steep slopes, confined pedestrian corridors, intrusive service areas, and ramps in lieu of sloping walkways.

New building projects should enhance existing corridors and existing campus spaces:
Secondary walkways between buildings are used extensively by the UF community when quickly navigating the campus. It is important that new building projects enhance these corridors—improving accessibility, simplifying connections, enhancing views, enriching and shading the corridor with planting, and incorporating LID practices. New projects should consider the value of these connections when locating service areas for the building, ensuring that a new service area does not undermine the experience of a corridor. New building projects should support existing connections and campus spaces, enhancing and activating them with building entries and adjacent interior common spaces.

New building projects should advance the campus vision, expanding the network of corridors and campus spaces:
Campuses are enriched by a thriving network of campus spaces and pedestrian connections. New building projects should be designed to shape new campus spaces where they can be activated by both new and existing buildings. The creation of open space for the unification of related buildings, coupled with paved gathering spaces, is a valuable addition to the campus. New buildings should create spaces that contribute to the network of open space and extend the network of pedestrian ways and shared-use paths to promote multi-modal travel on campus.

D. OPEN SPACES

Campus Master Plan Figures 1-3 Conservation, Green Space Buffers and Urban Parks, 1-4 Open Space Connections and 1-5 Open Space Enhancement Priorities identify existing and future significant open spaces in relation to future building sites and transportation facilities on the University campus. When siting a new facility adjacent to any of these areas, the orientation and location shall contribute to the definition and establishment of the open space.

The Landscape Master Plan (LMP) provides guidelines and standards for open design including the following guiding principles.

The design of the campus landscapes should be understood as being more than individual beautification projects:
Planting designs for individual campus projects should contribute to the visual clarity of the campus landscape as a whole. Rather than making a unique statement for the project, plantings in front of buildings should be integrated with adjacent roadways, pedestrian ways and buildings. The landscape treatment should create a visually unified landscape that reflects UF’s setting instead of one that differs from adjacent buildings or creates a changing landscape experience along roadway corridors.

E. STORMWATER MANAGEMENT

Stormwater retention and detention facilities for stormwater runoff make take different forms depending upon their context. In general, these facilities are expected to be natural and curvilinear in outline with variable side slopes, and smooth transitions. Other facilities may be designed in densely developed aeras to be a structured part of the pedestrian hardscape features. The University maintains standards for these facilities, including Low-Impact Development (LID) principles, in the Landscape Master Plan.

More specific requirements for stormwater management and permitting procedures are presented in the "Utilities Design" paragraph of this section and in Appendix C. More specific requirements relating to the stormwater drainage system are presented in Section 334000.

F. RETENTION OF NATURAL FEATURES

The location and description of existing conservation areas is presented in the Conservation Element of the Campus Master Plan. Similarly, the location and composition of Urban Park open space on campus is presented in the Urban Design Element. Development occurring adjacent to conservation areas shall be carefully designed to minimize impacts and encroachment into the area, and shall consider the use of buffers, landscaping, walls and berms to promote visual, noise and physical separation of these uses.

Any construction or other disturbance of natural open spaces shall include a census of flora/fauna in the affected area to identify and protect species regulated by applicable state, regional or local authorities. When listed endangered species are encountered, appropriate agencies as identified in the Florida Game and Fresh Water Commission Guidelines shall be consulted for guidance.

State jurisdictional wetlands shall be maintained and buffered in accordance with provisions of the St. Johns River Water Management District (SJRWMD) and the Conservation Element of the Campus Master Plan. Permitting is handled through the University's Facilities Services Division.

The Landscape Master Plan (LMP) provides guidelines and standards for integrating natural features into campus landscapes. Section 329000 and Appendix G outline requirements regarding the protection of trees and other vegetation during construction.

H. TOPOGRAPHIC AND SOIL CONSTRAINTS

There is a topographic balance to achieve on any given project site.

Sites with slopes greater than 5% generally require more earthwork and a greater effort shall be made to balance cut and fill on the site. Designs that call for large amounts of unnecessary grading are discouraged. Sites with slopes of 8% or greater are generally not buildable except in special circumstances where retaining walls or pile footers are used. New construction shall be designed to fit the topography and blend the structure into the site. Finish grading shall reflect smooth transitions between grades and constructed forms. Contours that slope from one parcel across another shall be graded to minimize runoff directly onto lower parcels. All cut slopes shall be rounded at the top to present a softer transition line between constructed and existing slopes. Where slopes are greater than 3:1, retaining walls or special erosion control measures such as groundcover planting beds shall be used.

Site grading shall recognize existing drainage patterns while solving drainage problems that may exist or result from ground plane alterations during construction. Site grading shall be sympathetic to existing land forms while providing appropriate transition of architectural elements to grade. Site grading shall provide for an uninterrupted flow of vehicular and pedestrian traffic through the campus.

There are several areas on campus with soil types that are unsuitable for buildings with “standard foundations”. These include (but are not limited to) poorly drained soils and clays which require careful engineering or replacement altogether. The Campus Master Plan soil inventory documents along with maps at the Facilities Services Division contain general soil information, which shall be consulted for preliminary screening. Project planners and designers shall be aware that there are closed landfill sites on campus, some which predate current soil mapping and inventory information. The results of subsurface investigations may disqualify a site for project consideration. Remedial actions may be warranted when a particular site is

required to be located adjacent to existing uses. This has proven to be the case in instances of karst geology near the Health Science Center.

Appropriate methods of controlling erosion and sedimentation to minimize destruction of soil resources shall be used during site development such as: phasing and limiting the removal of vegetation; minimizing the amount of land area that is cleared; limiting the amount of time bare land is exposed to rainfall; use of temporary ground cover on cleared areas if construction is not imminent; and special consideration for maintaining vegetative cover on areas of high soil erosion potential (stream banks, steep or long slopes, stormwater conveyances, etc.).

I. CAMPUS SAFETY AND SECURITY

Safety and security shall be considered. Facility project proposals shall be reviewed by the office of Environmental Health & Safety, University Police Department and the Physical Security Division, at a minimum. Other expert input is available through various University review committees depending upon the nature of the project.

The following Crime Prevention Through Environmental Design (CPTED) strategies shall be taken into consideration in building projects and safety upgrades:

1. Natural Surveillance: A design concept directed primarily at keeping intruders easily observable. Promoted by features that maximize visibility of people, parking areas and building entrances: doors and windows that look out onto streets and parking areas; pedestrian-friendly sidewalks and streets; front porches; and adequate nighttime lighting.

2. Territorial Reinforcement: Physical design can create or extend a sphere of influence. Users then develop a sense of territorial control while potential offenders, perceiving this control, are discouraged. Promoted by features that define property lines and distinguish private spaces from public spaces using landscape plantings, pavement designs, gateway treatments and fences.

3. Natural Access Control: A design concept directed primarily at decreasing crime opportunity by denying access to crime targets and creating in offenders a perception of risk. Gained by designing streets, sidewalks, building entrances and neighborhoods gateways to clearly indicate public routes and discouraging access to private areas with structural elements.

4. Target Hardening: Accomplished by features that prohibit entry or access: window locks, dead bolts for doors, interior door hinges.

1.4 PERIMETER ARCHITECTURAL TREATMENTS

The Campus Master Plan Urban Design Elements provides guidance for building heights, floor area ratios (FAR) and ground area coverage (GAC).

Perimeter and roadway landscape treatments and setbacks shall be developed in accordance with standards and guidelines of the Landscape Master Plan.

The building setback and height guidelines are not fixed standards for all situations. In developed sectors like the campus historic district, compatibility with existing structural massing, heights and setback patterns shall be considered. There are also considerations relative to existing buildings off-campus, which may face a proposed University facility and affect its architectural treatment.

1.5 HISTORIC BUILDINGS

A. GENERAL

The University of Florida main campus contains significant historic resources (archeological sites, historic structures and features) that are listed in the National Register of Historical Places. The designation as a historical building or historical site affords these properties special considerations when interior or exterior maintenance, construction, development and landscaping activities are required.

B. POLICY

In order to fulfill its historic preservation responsibilities under Section 267.061(2), Florida Statutes, the University of Florida has entered into a Programmatic Memorandum of Agreement (PMOA) with the State of Florida Division of Historical Resources (DHR) – see Appendix D. All University maintenance, construction, and development activities shall adhere to the stipulations contained in the PMOA and with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings (*current edition as amended and annotated*) for any work performed in or on the following historic buildings and sites:

Anderson Hall	Mallory/Yulee/Reid
Broward Hall	Matherly Hall
Bryan Hall	Murphree Hall
Carleton Auditorium	Newell Hall
Century Tower	Norman Hall
Dairy Science Building	Peabody Hall
Dauer Hall	Plaza of the Americas
Fletcher Hall	Rolfs Hall
Florida Gym	Sledd Hall
Griffin-Floyd Hall	Thomas Hall
Hub	Tigert Hall
Infirmary	University Auditorium
Keene-Flint Hall	Ustler Hall / Women’s Gym
Leigh Hall	Walker Hall
Library East	Weil Hall

Repairs and alterations shall not damage or destroy the materials and features, including their finishes that are important in defining the building's historic character. Alterations or demolition of any campus buildings that are at least 50-years old should be reviewed by the Planning Design and Construction Division to determine whether they are potentially eligible for listing in the National Register and thereby afforded protection under Chapter 267.061, Florida Statutes.

C. RESPONSIBILITIES

Planning Design & Construction (PD&C) is responsible for ensuring University compliance with the PMOA. Prior to commencing any work affecting the above described buildings, University entities responsible for rehabilitation, maintenance, new construction, demolition, and/or landscaping projects affecting these buildings shall review the PMOA and confer with PD&C

regarding the need for DHR review. Routine maintenance activities, as defined within the PMOA, are excluded from DHR review.

1.6 ARCHAEOLOGICALLY SENSITIVE AREAS

There are certain areas on the University of Florida Campus that have been determined to be of archeological significance and areas that have a high potential for containing archaeologically significant items. A map showing the locations of these areas is available for inspection at PD&C or Facilities Services (and is included in Appendix D of these Standards), and PD&C shall be consulted as the need arises. Prior to commencing any work in these areas, including building construction, landscaping, and utility infrastructure, ~~It is~~ the Architect/Engineer is responsible ~~to~~ for consulting this map to ensure that construction documents address any concerns that could arise and instruct the Builder in the appropriate University and State-mandated procedures (refer to Appendix D for relevant procedures) and notifications for protecting archaeologically significant items. Conflicts and/or special requirements shall be resolved during the design phase of a project.

1.7 UTILITY DESIGN

Facilities Services has on file master plans for the various utility systems on campus (fire flow, chilled water plants & distribution, steam, sanitary, irrigation, electrical, storm drainage, energy management & fire alarm network). These plans were developed to assist in planning campus utility expansion & renovation for future facilities as well as upgrading the existing utility systems. Designers of new facilities may consult these studies for information on potential utility impact of new facilities; however, the approval of Facilities Services Utilities Department must be obtained before design is finalized.

When planning projects on the University of Florida campus, designers shall use a strap-on flow meter to check water flow rates for chilled water, potable water and heating hot water. The design must take into account and incorporate the effect of addition/reduction (changes) in load at least two levels up (e.g.: two pipe sizes, two circuit breakers, etc.) demonstrating overall system functionality and capacity before and after project changes.

A. FIRE WATER MAINS, CHILLED WATER, SANITARY SEWER, ELECTRICAL, NATURAL GAS, IRRIGATION, STORM DRAINAGE, STEAM: Contact Facilities Services for additional information. For larger projects, see the Utilities Impact Analysis in the Facilities Program.

B. STORMWATER MANAGEMENT

All stormwater management on the University of Florida Campus, Gainesville shall be in accordance with the University's current stormwater permits from the St. Johns River Water Management District (SJRWMD) and the State of Florida Department of Environmental Protection (FDEP). Consequently, all construction performed on campus shall be in accordance with the University's NPDES Phase II MS4 Generic Permit (FDEP Permit No. FLR045067), the University's Conceptual Stormwater Permit (SJRWMD Permit No. 4-0010040GC), and, as applicable, either the University's General (Construction) Permit (SJRWMD Permit No. 4-001-15570-19) or one of the University's other SJRWMD stormwater permits that authorize construction within specific areas of the campus. (Copies of these permits are available upon request from Facilities Services or by visiting the St. Johns River Water Management District website.)

To ensure implementation of permit requirements in University construction, the Project A/E shall review the above-mentioned permits, as applicable, and incorporate the stormwater

management requirements contained therein into project construction documents. These requirements shall include, but are not limited to, the following items:

1. Turbidity barriers shall be installed at all locations where the possibility of transferring suspended solids into the receiving water body exists due to the proposed work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter, the Builder will be responsible for the removal of barriers.

2. The Builder shall implement, and operate all erosion and sediment control measures required to retain sediment on-site and to prevent violations of water quality standards as specified in Chapters 62-301, 62-302, and 62-4, Florida Administrative Code.

3. The Builder shall construct and maintain a permanent protective vegetative and/or artificial cover for erosion and sediment control on all land surfaces exposed or disturbed by construction. This protective cover shall be installed within fourteen (14) days after final grading of affected land surfaces. A permanent vegetative cover shall be established within 60 days after planting or installation.

The Project A/E shall provide language within the construction documents that establishes the Builder as being responsible for the removal of any sediment, trash, or debris entering the University's stormwater drainage system from the project site.

On the UF Campus, Facilities Services is responsible for maintaining the stormwater drainage system and administering the stormwater permit(s) by ensuring University compliance with permit conditions. Facilities Services shall be contacted in all matters affecting stormwater management on the UF Campus and for guidance with the University's stormwater management requirements and permitting procedures. A copy of the University's stormwater permitting procedures for complying with the requirements of the St. Johns River Water Management District is included in Appendix C.

Likewise, a copy of the University's procedures for complying with the construction site stormwater runoff control requirements under the University's NPDES Phase II MS4 Generic General Permit is included in Appendix C. The Environmental Health & Safety Division (EH&S) is responsible for enforcing compliance with these requirements.

Stormwater management within the drainage basins of Tumblin' Creek, Hogtown Creek, Tumblin Creek/Bivens Arm Lake, and several depression basins located in the southwest area of the campus is not covered by the University's General (Construction) Permit from the SJRWMD. Instead, stormwater management provisions in these areas generally require separate permitting by the SJRWMD. New development in these areas generally requires either a new permit or modification of an existing permit.

For projects within the Hogtown Creek and Tumlin' Creek / Bivens Arm Lake basins, the City of Gainesville-Public Works Department shall be provided the opportunity to review and make comment on the proposed development. The University shall ensure that any potential adverse impacts to the Hogtown Creek Drainage Basin are identified and that stormwater runoff for a 72-hour storm event shall be accommodated in the site design for the development.

Stormwater management and permitting issues concerning University parcels off of the Main Campus shall be coordinated with the University facility maintenance entity responsible for the parcel and the appropriate water management district.

C. INCORPORATE LOW IMPACT DEVELOPMENT WHERE PRACTICABLE

In order to improve water quality and prevent additional erosion in the University's streams, all projects which impact soil must incorporate the use of Low Impact Development (LID) stormwater techniques where physically, economically, and practically possible. Projects shall include in their presentation before the Lakes, Vegetation and Landscaping Committee a discussion of how LID techniques were/were not incorporated.

These techniques include, but are not limited to:

- Mini-retention / detention,
- Bio-retention / rain gardens.
- Porous soil amendments,
- Lowered landscaping beds,
- Pervious pavement –hardscape storage,
- Curb openings (i.e. brick and other hardscape removal in edging and seat wall footings) that allow water to enter vegetated areas,
- Use of lawn areas for incorporating slight depressions that retain rainfall,
- Elevating storm drains where water detention is acceptable so that they are not at the lowest elevation in the landscape.

Reference: Data and Analysis section of University of Florida Campus Master Plan – General Infrastructure, Stormwater sub-element and the Landscape Master Plan.

1.8 UTILITY CONNECTIONS

A. All connections to utility systems require submission of an "Application for Utilities Service" to Facilities Services Work Management Center. Facilities Services Utilities Department shall approve the application prior to connection.

B. The Project shall request temporary utilities by submitting an "Application for Utilities Service" to the Facilities Services Division's Work Management Center. No connection shall be made until the application has been approved by Facilities Services Utilities Department. For more information or for the Utility Turnover Form, contact Facilities Services Utilities Department.

1.9 UTILITY OUTAGES

A. "EXTERIOR" UTILITY OUTAGES

"Exterior" utility outages (outages where the means of disconnecting or valving-off the utility service is exterior to the building, or entire buildings being affected) shall be handled in accordance with the Facilities Services ŧ Division's Outage Procedure. The University of Florida Project Manager is responsible for contacting the Facilities Services Work Management Center ŧ prior to any necessary outages.

"Exterior" utility outages are performed by Facilities Services personnel and are charged to the project. Contact Facilities Services as needed to determine costs.

B. "INTERIOR" UTILITY OUTAGES

"Interior" utility outages (outages where the means of disconnecting or valving-off the utility service is within the building being affected) shall be handled in accordance with any outage procedure established by the University entity responsible for maintaining the affected building. The UF Project Manager shall be consulted prior to performing any interior utility outages.

1.10 INDOOR ENVIRONMENTAL QUALITY (IEQ) COMMISSIONING POLICY

The University of Florida's IEQ Commissioning Policy is contained within the Environmental Health & Safety Division document Indoor Environmental Quality Policy (see Appendix F). This document is also available at www.ehs.ufl.edu. Should there be any conflicts between this document and the requirements contained within these Standards, consult the UF Project Manager for resolution.

1.11 ENERGY CONSERVATION, SUSTAINABILITY, and LEED

A. GENERAL

All construction and renovation shall adhere to the requirements of the Florida Building Code – Energy Conservation.

B. SPACE LAYOUT

The simplest and most effective method of energy conservation is to turn things off when not in use. Spaces with similar occupancy schedules shall be grouped together on the same HVAC system, to accommodate unoccupied shutdown.

C. SUSTAINABLE BUILDING CERTIFICATION

Seeking high performance, energy-efficient, and sustainable buildings, the University of Florida utilizes Leadership in Energy and Environmental Design (LEED) criteria as developed by the U.S. Green Building Council (USGBC) for the design and construction of all major construction and renovation projects. The LEED program provides a complete framework for assessing building performance and meeting sustainability goals, with a specific focus on strategies for site development, water savings, energy efficiency, material selections, and indoor environmental quality.

1. To view the entire UF policy on LEED Certification, go to www.facilities.ufl.edu.

1.12 SPACE PLANNING

A. IT ROOMS

See UF Telecommunications Standards (section 1.16 of this document)

B. CUSTODIAL CLOSETS

Each floor requires a dedicated custodial closet, with a mop sink, a mop hanger over the sink, and four shelves on one wall. In addition, each building requires a closet for storage of custodial supplies and equipment, to be located on the ground floor, adjacent to the custodial closet. The size of both types of closet shall be approximately 6' X 8'. These closets shall have self-closing doors, which open directly onto the corridor, and shall not be provided with conditioned air. If gross floor size is over 20,000 sq. ft., then a second closet is required on that floor.

C. WASTE HANDLING AND RECYCLING

Refer to Section 118000 for the space planning requirements relating to facilities and equipment necessary for collecting and handling waste and recyclable materials.

D. MECHANICAL EQUIPMENT ROOMS

1. Scaled drawings that show the space required by all equipment shall be required. The space required for servicing, maintaining, operating, and replacing parts shall be clearly shown.

2. Sufficient floor space shall be provided to allow for the complete assembly of a portable, OSHA approved, A-frame step ladder to access and maintain all suspended or elevated equipment, valves, dampers, lights, main junction boxes, and other devices requiring service. The floor space required to assemble the ladder is a function of ladder height, and the ladder height shall be determined based on the highest piece of equipment or device in the space requiring access or service. If additional room area is required for ladder assembly, then the Architect/Engineer shall prepare and submit to the UF PM a drawing or sketch and cost estimate for the increased floor area.

E. ATTIC STOCK STORAGE ROOMS

For new construction or large additions and renovations, give consideration to space for onsite storage of spare parts, accessories, and attic stock.

F. OFFICE SPACE CHANGE OF OCCUPANCY AND/OR USE

When renovating a space to accommodate a change in use or occupancy, give consideration to the new HVAC and electrical requirements during the planning stage.

G. GENDER-INCLUSIVE RESTROOMS

1. New buildings shall have at least one unisex (gender-inclusive) restroom that complies with Chapter 6 of the Florida Accessibility Code.

2. Renovation projects shall provide such restrooms when possible, with the intent that each building will eventually have at least one. Design professionals shall discuss this with UF EH&S early in the planning and design process.

3. See section 101400 of these Standards for guidance on signage.

H. TIME CLOCKS

Buildings that will have 2 or more full time Building Services employees (1 employee supports approximately 20,000 sq feet, however the number of employees is also a function of the buildings complexity) will need a location dedicated for IT and power supplied for a time clock installation that is approved by Facilities Services.

1.13 EQUIPMENT PROTECTION, LOCATION, and ACCESSIBILITY

A. All exterior and rooftop equipment must be provided with adequate physical protection in the form of fencing, guardrails or bollards, as necessary. Locate so as to be visually unobtrusive; coordinate with Architect and UF Project Manager. Roof overhangs shall be protected from vehicle traffic or have a free clearance of at least 14'-6".

B. Plumbing booster pumps shall only be located in basements or on ground floors.

C. Equipment supporting a building and requiring periodic service (e.g., air compressors, vacuum pumps, HVAC equipment) may be installed in penthouses, basements, or on mezzanines only if there is elevator access and a clear walkway to the equipment from the elevator. The size of the walkway shall be a function of the size of the equipment. For example, equipment that is 48” in its shortest dimension needs an access path at least 48” wide to allow for removal and replacement.

D. If equipment that will need servicing is located on roofs, platforms or above ceiling there needs to be a safe means of access to this equipment.

E. For equipment that is located on roofs and platforms and is heavier than can be reasonably and safely carried via the means of access a means of moving this equipment to and from these spaces is required. This could be an elevator landing at these locations or the use of a crane system. Facilities Services has a preferred portable davit crane system that if used could only require the project to add base(s) for the crane. Contact Facilities Services Operations Engineering for details.

1.14 RADON MITIGATION

A. In addition to any necessary geotechnical explorations, new building site analysis shall include testing for Radioactive Activity due to Radon Gas Seepage.

B. There are certain areas on Campus with known high levels of Radon. Mitigation procedures are available from several faculty specialists.

C. INDOOR RADON AND RADIATION

1. Construction Principles:

a. Buildings shall be designed and constructed to minimize the entrance of soil gas into the building.

b. Buildings shall be designed and constructed with features that will facilitate post-construction radon removal or further reduction of radon entry if installed prevention techniques prove to be inadequate.

c. HVAC systems shall be designed, installed and operated to avoid depressurization of basements and other areas in contact with the soil under all building operating conditions.

d. Building construction materials shall be selected and installed to minimize the ambient gamma exposure rate in occupied areas of the building.

e. Indoor radon testing shall be performed by individuals and/or companies listed in EPA's Radon Measurement Proficiency Program or the Florida Certification Program.

f. The design and installation of radon control systems shall be performed and supervised by a builder who has satisfactorily completed an EPA-approved or Florida certified radon-training course.

g. Radon mitigation design shall comply with the Florida Building Code that is currently being enforced by the AHJ.

Specifically, Appendix C (Chapter 9B-53 F.A.C., Standard for Mitigation of Radon In Existing Buildings), Appendix B, (Chapter 9B-52, F.A.C, Florida Standard for Passive Radon-Resistant Construction) and Appendix E (Chapter 9B-67 F.A.C., Florida Standard for Radon-Resistant New Construction).

2. Performance Verification:

   a. Indoor radon and radiation levels in newly constructed buildings shall be determined prior to acceptance by the University.

   b. Per FBC, Appendix C, C103 “The Department of Health (DOH) has set an exposure standard for radon decay products in buildings at an annual average of 0.2 working levels....Radon levels in most buildings can be reduced to 4.0 picocuries per liter or below. Testing must be in accordance with DOH Florida Administrative Code Chapter 64E-5 and in accordance with [FBC Appendix C, Chapter C3]."

1.15 HAZARDOUS MATERIALS

An updated asbestos survey of any building or section of a building that is scheduled for renovation or demolition shall be conducted to identify both friable and non-friable asbestos containing materials. A draft copy of the survey must be reviewed by the University Asbestos Coordinator for completeness prior to accepting the final product. A copy of the updated survey must be kept on site until the renovation or demolition activities are completed.

The survey shall be conducted prior to the start of renovation or demolition under the supervision of a Florida-licensed asbestos consultant. Individuals performing asbestos surveys must be certified as EPA asbestos inspectors through a Florida-approved training provider.

Asbestos containing materials may not be used in new construction or in renovation. Existing asbestos containing flooring may not be left in place if new flooring is to be installed as part of the project.

A lead paint survey must be provided for any building constructed prior to 1980 and for any exterior structure (e.g., painted handrails) that may be affected by a construction project, regardless of age. Materials identified as having lead paint must be further characterized to determine if they are subject to hazardous waste disposal restrictions. Lead survey information must be provided to the builder and the builder must comply with applicable training requirements as required by OSHA and the EPA.

For renovations or demolitions, hazardous wastes shall be segregated, collected, labeled, and disposed of via UF Environmental Health & Safety (EH&S). These include light fixture ballasts (PCB and non-PCB), mercury-containing devices (such as thermostats), and batteries.

Construction documents for renovation or demolition projects shall incorporate University hazardous materials policies as needed. See the Hazardous Materials Management page of the EH&S website at www.ehs.ufl.edu/HMM.

1.16 INFORMATION TECHNOLOGY

A. TELECOMMUNICATIONS STANDARDS

See “Telecommunications Standards” issued separately by UF Network Services (https://it.ufl.edu/ict/) , a division of UF Information Technology (www.it.ufl.edu).

B. GENERAL INFORMATION

The design team shall include the resources needed to fully develop a complete scope of work for all telecommunications, I/T, and audio/visual systems and components, including a BICSI certified RCDD. The University will require that all telecommunications, I/T, audio/visual systems and components be designed and annotated on “T” drawings in accordance with the above referenced standards. Construction documents must account for all work (i.e., with notes for work “by others”).

- (BICSI): Building Industry Consulting Service International, Inc.
- (RCDD): Registered Communications Distribution Designer

Exterior plant work and interior voice/data work is typically purchased by the project through UF Network Services or HealthNET. The architect/engineer shall coordinate with UF Network Services to eliminate conflicts, shall include all such work "by others" in the construction documents, and shall ensure that no gaps exist between the builder’s scope of work and the scope(s) of work “by others.”

Academic Technology (http://at.ufl.edu), another division of UF Information technology, will participate in the design and specification of classroom/instructional spaces and associated audio/visual and information technology systems.

1.17 DEMOLITION / SALVAGE RIGHTS:

A. All equipment, systems and components that are demolished are the property of the University of Florida. The University has first right of refusal for all items demolished.

B. Prior to issuing 100% construction documents, review with the UF Project Manager and Facilities Services what specific items of demolition shall be turned over to the Owner by the Constructor. Clearly note those items on the drawings.

a. Of particular interest to the Facilities Services shops are
- Any Building Automation equipment and systems
- Any Fire Alarm systems
- Door hardware including locksets
- Roofing tile
- Pavers, especially brick
- Any component that is new and not being reused by the project (Water fountain, AHU, etc)

This list is not all encompassing. Clarification of the exact item that are desired to the be salvaged shall be reviewed with Facilities Services

C. Specify that the items to be retained by the Owner are to be removed and placed in a location adjacent to the project site, to be designated by the UF Project Manager at the pre-construction conference, and that adequate notice be provided to the UF Project Manager for arranging their pick-up.

D. At the completion of Demolition an inspection shall be requested from Facilities Services to ensure all systems are properly demolished, terminated or protected for the construction phase.

1.18 PROJECT COMPLETION DELIVERABLES

A. INSTALLATION, CARE, AND OPERATION & MAINTENANCE DOCUMENTS

As required by the *UF Design & Commissioning Services Guide*, design professionals shall tailor the specifications to require the Builder and its subcontractors to provide instructions and other information necessary for the Owner's long term care, maintenance, repair, and operation of installed products, materials, equipment, and systems.

B. OWNER TRAINING, ATTIC STOCK, SPARE PARTS, AND OTHER CLOSEOUT DOCUMENTS

As required by the *UF Design & Commissioning Services Guide*, design professionals shall tailor the specifications to stipulate requirements for Owner training, attic stock, and lists of recommended spare parts for certain installed products, equipment, and systems.

1.19 OCCUPANT PROTECTION

Substituting less offensive construction materials or implementing basic control procedures can avoid reports of odors, dust, noise, etc., problems.

A. ASBESTOS ABATEMENT PROJECTS: The Asbestos Consultant shall coordinate the scheduling and notification of such projects with the UF Project Manager. Project meetings with the occupants may be required, along with periodic progress updates. Common emissions of concern include: wetting agents, mastic removers, dust, microbial agents, mineral and man-made fibers, foam glass odors, mastic, sealants and coatings. Contact EH&S for further information.

B. MEASURES FOR OCCUPANT PROTECTION: The builder shall consider the following along with the appropriate sections of any applicable "Non-Technical" Specifications. Contact EH&S for further information.

1. Isolate the project area(s) from the occupied area(s) with barricades, plastic sheeting or temporary walls. The Builder shall provide and maintain necessary barriers and protective devices to control public access into work areas and to contain all work and storage areas such that adjoining facilities, including walkways, corridors, stairs and doorways remain accessible for the Owner's use. Orange plastic visual barriers are preferred.

2. Control traffic to/from the work area(s) and occupied area(s) to prevent disturbances.

3. Modify HVAC equipment to pressurize occupied area(s) and prevent migration of offensive materials from work area(s). Blank-off outside air intakes and return diffusers to prevent distribution of offensive materials into occupied area(s).

4. All demolition trash and rubble shall be removed daily from the interior of the building in covered, rubber-tired carts. Carts shall have resilient bumpers or edges to prevent damage to walls, doors, and other building finishes.

5. The use of any "air hammers" or other impact equipment which will cause excessive noise or vibration shall be strictly prohibited during classroom, or working hours.

6. The use of any gasoline-powered equipment inside the building shall be strictly prohibited.

7. Except for special situations where prior approval from the UF Project Manager was granted, the use of power impact tools for demolition is prohibited inside occupied buildings.

8. The Builder shall coordinate its work with the University of Florida class schedule, and shall schedule and carry out his work such that the normal operations of the University, the Health Science Center, and Shands Hospital are given first priority. This applies particularly to utilities outages and restriction of access. Such construction operations shall frequently be carried on outside of normal working hours, and by overtime, weekend, and holiday work. It shall be the Builder's responsibility to provide for this in its bid.

END OF SECTION