17.1 **Introduction**

Along with the other sections of this Facilities Program, this Owner’s Project Requirements (OPR) document outlines functional requirements of the project and expectations of how the facility and its systems will be used and operated. The OPR is required for LEED certification of the project, but also serves three broader vital purposes:

1. Provides the design team with information necessary to develop the Basis of Design (BOD) during program verification and/or schematic design, which serves as a “road map” for development of the design and construction documents.

2. Provides the commissioning (Cx) team with tangible benchmarks to measure success & quality and confirm that the building and systems constructed align with the University’s expectations and requirements.

3. Serves, along with the BOD and contractor deliverables such as “as-built” documents, as the foundation for the Systems Manual outlined below.

The Owner will develop and update the OPR through program verification and schematic design, or until the Cx consultant is selected. The Cx consultant will then assume responsibility for refining and augmenting the OPR throughout design, construction, and the post-occupancy period of one year following Substantial Completion of construction. As decisions are made during the life of the project, this document shall be updated to reflect the current requirements of the University.

The Owner is the University of Florida Board of Trustees (UF). Primary users are UF students, staff and researchers. The chief stakeholder and organization primarily responsible for operation of the new facility is College of Medicine. The entity responsible for project management and delivery is UF.
Planning Design & Construction (PDC). The organization responsible for operation and maintenance of the facility is University's Physical Plant Division (PPD).

17.2 OWNER REQUIREMENTS COVERED ELSEWHERE

Many components of, or related to, the OPR are covered elsewhere in the Facilities Program, including:

- Detailed project history, background, and justification – Section IV
- General planning and design objectives – Section IV
- Relationship to Campus Master Plan – Section VII
- Existing site conditions & constraints – Section VIII
- Project space types, sizes, and adjacencies – Section IX
- Finishes, M/E/P, telecomm and A/V, and acoustic requirements by space or space type – Section IX
- Distributed and site underground utilities – Section X
- Applicable codes – Section XII
- Project schedule and budget – Sections XIII and XV

Additional requirements, expectations, and standards for UF projects are detailed in the following:

- UF Design & Construction Standards – [www.facilities.ufl.edu](http://www.facilities.ufl.edu)
- UF Telecommunications Standards – [http://net-services.ufl.edu/infrastructure/](http://net-services.ufl.edu/infrastructure/)
- Design and Commissioning Services Guide – [www.facilities.ufl.edu](http://www.facilities.ufl.edu)
- UF Environmental Health & Safety – [www.ehs.ufl.edu](http://www.ehs.ufl.edu)

17.3 PROJECT-SPECIFIC DESIGN GOALS

1. Flexibility and Future Expansion

   - The lab area and lab casework shall be designed to provide as much flexibility as possible. Utility connections to be provided to the casework from the top to allow the end user to reconfigure the lab as needed.
   - The renovated Ground Floor will be occupied by 10 additional researchers. The renovation is to provide offices for each one of them in the Ground Floor.
   - The necessary lab equipment and the ground floor life safety equipment to be electrically connected to an existing power generator.

2. Quality and Context

   - The Ground Floor of the Basic Science Building is the “entry door” for the building. It is imperative that the renovation of this floor establishes its own identity.
   - The College of Medicine seeks a design that represents their level of professionalism and reputation in the Cancer Research area.
   - Interior spaces must provide a superior indoor environment to facilitate occupants’ comfort and productivity with high indoor air quality, and no moisture intrusion.

17.4 OCCUPANCY & USE

As a research lab this is likely to be a 24/7 facility. The total occupancy is yet to be determine but not less than 30 people including staff and researchers is anticipated.
17.5 SUSTAINABILITY and ENERGY EFFICIENCY

As part of an overall commitment to sustainability and a goal of achieving “carbon neutrality” by the year 2025, the University of Florida builds its facilities to last and promotes environmental quality and resource conservation through sustainable design and construction. See www.sustainable.ufl.edu.

As part of that commitment and to demonstrate that the facility was designed and constructed to be energy-efficient and environmentally sustainable, University projects must be certified by the U.S. Green Building Council (USGBC) through its Leadership in Energy and Environmental Design (LEED) process. See www.usgbc.org and www.facilities.ufl.edu/sustain.

This project shall achieve LEED certification at no lower than Gold V3 level. Specific, high-priority goals for this project include:

- Maximization of the HVAC credits under the Energy and Atmosphere section of the LEED rating system as a first priority. The facility shall operate at a minimum of 28% higher efficiency than ASHRAE Standard 90.1-2007.
- Incorporation of strategies, measures, and systems to conserve energy, such as heat/enthalpy wheels, energy recovery units, “setback” modes, etc.
- Utilization of the Building Automation System and other controls to efficiently maintain and track performance of key building systems, particularly HVAC and lighting. See UF Design & Construction Standard 15950.
- Optimization of variable-flow chilled water systems for maximum building and plant efficiency

The Basis of Design (BOD) shall establish specific plans and strategies for achieving these goals, and the construction documents shall include requirements for LEED submittals and sustainable construction practices and techniques, including:

- Segregated collection and recycling of construction waste
- Procurement and use of low-VOC, regionally-available, and high recycled content materials

Duke Energy – the University’s primary electric and steam provider – has established a rebate program for certain components of new construction that meet energy efficiency requirements, including:

- lighting
- motors
- energy recovery ventilation
- solar, green, or cool roofs
- demand control ventilation
- compressed air system
- high efficient chillers
- occupancy sensors
- thermal energy storage

To verify compliance and confirm which rebates apply to this project, Duke Energy will review the 100% Construction Documents and final energy model and will inspect the building at completion. Specific portions of the final MEP drawings/schedules, energy model, and other information will be used by Duke Energy to perform calculations necessary to determine the rebate for each project. The University expects all components of this project/building to be the most efficient and highest quality systems in order to qualify for these rebates.

17.6 BUILDING SITE

See Sections VIII of this Facilities Program for more information on the site. Also see section 11170 of the UF Design & Construction Standards regarding waste and recycling facilities.
17.7 TRANSPORTATION & PARKING (N/A)

17.8 BUILDING ENVELOPE
A total restoration of the building envelope is outside the scope of work for this project. The actual scope of work requires the selection of materials and detailing of the HVAC system shall be consistent with the Florida Building Code and UF Design & Construction Standards; performance-based to allow the building to withstand weather conditions typical of North Central Florida; and esthetically consistent with the rest of the building.

Prevention of moisture intrusion is a high-priority goal applicable to all project team disciplines.

17.9 INDOOR ENVIRONMENTAL QUALITY
1. Indoor Lighting and Lighting Controls
   UF Construction Standards to be followed on the selection of Indoor Lighting and Lighting Controls.

2. Thermal Comfort
   Building temperature set points should be established as 74°F – 76°F for Summer and ~70 for Winter.

3. Heating, Ventilation, Air Conditioning, and Air Quality
   A Chilled Water 100% Outside Air System is to be designed with a VAV system. Redundancy to be included as part of the Laboratory Central Fume Exhaust Fan System.

4. Acoustics
   Sound and vibration isolation of large mechanical equipment like air handlers and variable-speed drives, and ductwork sound attenuation may be necessary

5. Electrical
   Upgrade the facility as needed to make it 100% compliant with the FL Building Code, NEC, NFPA, and the UF Design & Construction Standards in terms of electrical systems, wiring, lightning protection, grounding, and the fire alarm system.

6. Other Owner Requirements
   - Biosafety level (BSL2)
   - Vibration criteria
   - Electromagnetic Interference (EMI) or Radio Frequency Interference (RFI) stipulations (TBD)
   - Radiation shielding (TBD)

17.10 EMERGENCY, BACKUP, or ‘CLEAN’ POWER
Life Safety Equipment and other related equipment to be connected to Emergency Power.
17.11  TELECOMMUNICATIONS and AUDIO/VISUAL SYSTEMS
See section XI of this facilities program.

17.12  SECURITY
Lenel Security Door System to be installed on the doors that give access to the lab area Room BG-003.

17.13  HAZARDOUS MATERIALS
1. Existing
   A Hazardous Material survey has been completed. The hazardous material abatement is outside the scope of the D/B Contract. Minimal coordination might be required in between the abatement contractor and the D/B contractor.

2. Functional
   Hazardous Materials and chemicals to be used in the lab area is yet to be determined.

17.14  FURNISHINGS & EQUIPMENT
Lab Casework to be provided as part of the project.

AEDs: One or more Automatic Electronic Defibrillators (AED) shall be installed in all new buildings and major renovations/expansions, along with signage indicating the presence of same. Project shall bear the cost of the devices, cases, cabinets, and accessories. Coordinate location(s) with UF EH&S.

17.15  COMMISSIONING, INSPECTION, and QUALITY ASSURANCE
The Commissioning (Cx) consultant will be independent of the design and will be responsible for maintenance of this OPR; peer review of the design and construction documents; development of the project-specific Cx specification using the University’s template spec; development of the project-specific Cx Plan; construction and acceptance phase commissioning and documentation; development of the facility’s Systems Manual; and post-occupancy commissioning, testing, and documentation.

It is anticipated that the following building systems will be commissioned:
- Mechanical and HVAC systems
- Electrical and lighting systems

The following items of particular interest to the University shall be addressed and verified by the Cx consultant throughout the term of service:
1. Meeting or exceeding “Delta-T” minimums across cooling coils for campus chilled water
2. Accuracy of utilities metering and integration of same with the Building Automation System (BAS)
3. Measurement & Verification of energy usage, performance, and efficiency

Onsite inspection of life safety, code compliance, and ADA-related items will be conducted by the University’s Division of Environmental Health & Safety (EH&S) and the State Fire Marshal. See www.ehs.ufl.edu for more information.
Onsite inspection of systems and components governed by the UF Design & Construction Standards and the UF Telecommunications Standards will be conducted, respectively, by the University's Physical Plant Division (PPD) and Office of Information Technology (OIT). The detailed scope of Cx services shall complement these inspections to eliminate gaps or “double coverage” in field oversight.

The facility is not anticipated to be a “threshold” building as defined by the FL Building Code.

17.16 CONSTRUCTION COMPLETION and TURNOVER

Inspection, testing, and commissioning culminate in a declaration of Substantial Completion by UF. This date establishes both the beginning of the warranty period and commencement of operation and maintenance by UF. Details on the closeout of major projects can be found on the PDC website.

Move-in of occupants and their personal belongings will not take place until all Substantial Completion “punchlist” items are completed.

17.17 OPERATION & MAINTENANCE

The entity responsible for maintenance and operation of the building and its systems, beginning on the date of Substantial Completion, is UF Physical Plant Division (PPD).

In addition to the Cx Plan, field reports, and test reports, the Cx consultant's primary deliverable is a Systems Manual as required for LEED E/A Credit 3 (Enhanced Commissioning). This manual provides the University with a single source of information and instructions for proper operation and maintenance of primary building systems. As opposed to equipment-oriented “O&M manuals,” the Systems Manual is to be systems-oriented to provide operators with easy access to both narrative and technically detailed reference material, descriptions, diagrams, schedules, and other information on stand-alone and, particularly, integrated systems.

Like the OPR and BOD, the Systems Manual should be a living document. Unlike the OPR and BOD, though, the Systems Manual should evolve throughout the life of the systems – compiled by the Cx from documentation developed by the owner, design team, contractors, and the Cx process itself, then turned over for perpetual use and upkeep by building operators and future consultants and contractors throughout the building’s life.

17.18 OWNER TRAINING

Onsite training for the Owner – whether operators/maintainers or users/occupants – shall include a description and overview of systems, not just the components and equipment that comprise each system.

Training – which is ideally held in conjunction with commissioning – should include general orientation and reviews of the written O&M instructions, relevant health and safety issues or concerns, operation in all possible modes, preventive maintenance, and common troubleshooting problems & solutions.

Building systems that the maintenance entity shall be trained on include:
- HVAC systems
- BAS/controls
- Electrical systems
- Lighting controls

Building systems that the *occupants/users* shall be trained on include:
- Lighting controls
- Security Systems

Most training shall be completed prior to Substantial Completion, and all sessions shall be videotaped and converted to DVD format for the Owner’s use.

17.19 POST-OCCUPANCY and WARRANTY

The Cx consultant, CM/GC, and all subcontractors whose systems were commissioned shall meet with the Owner’s O&M staff quarterly during the first year after Substantial Completion to off-season test, optimize, and otherwise troubleshoot all commissioned systems.

Also, an onsite meeting will be conducted 10-11 months after Substantial Completion to review performance and quality of the facility with all affected parties – UF occupants & users, O&M staff, the design team, and the contractor and its subcontractors.