

## 01014 Builder's Use of the Premises

### PART 1 – GENERAL

#### 1.1 RELATED SECTIONS

- A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.
- B. Refer to section 01016 for information regarding utility outages and dig permits.
- C. Refer to section 01310 for requirements regarding the coordination of work with the University of Florida Schedule.
- D. Refer to section 01500 for requirements related to Temporary Facilities & Controls.

#### 1.2 DESCRIPTION OF WORK INCLUDED

This Section applies to situations in which the Builder or his representatives including, but not necessarily limited to, suppliers, subcontractors, employees, and field engineers, enter upon the Owner's property.

#### 1.3 QUALITY ASSURANCE

- A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.
- B. Require that all personnel who will enter upon the University's property certify their awareness of and familiarity with the requirements of this Section.
- C. Builder shall strictly enforce the University's **Tobacco Free** policy.

#### 1.4 TRANSPORTATION FACILITIES

- A. See section 01500 for information on the maintenance of safe and accessible paths of travel in and around the job site.
- B. Builder's Vehicles:
  - 1. Builder's vehicles, vehicles belonging to employees or subcontractors of the Builder, and all other vehicles entering the Owner's property in performance of the Work shall only use agreed-upon access route(s).
  - 2. All vehicles parked on campus (including construction sites) must have a valid parking permit issued through Transportation and Parking Services in accordance with University of Florida Police Department (UFPD) requirements. Permits –

for remote/offsite worker parking, onsite staff parking, and remote/offsite storage containers – shall be requested through the University Project Manager.

- (a) Remote/offsite worker parking is provided at a paved lot near the Hilton on SW 34<sup>th</sup> Street. See map on the “Forms & Standards” page of the Planning Design & Construction website ([www.facilities.ufl.edu](http://www.facilities.ufl.edu)).
  - (b) Trailer/storage containers parked in an assigned/approved remote/offsite by permit shall be clearly marked with the following information: Project Number, Project Name, Company Name, and Phone Number.
  - (c) Remote parking and trailer/storage container area must be kept clean and free of debris at all times. All trailers/storage containers must be removed prior to completion of the projects.
  - (d) See part 1.10 of this Specification regarding home football game weekends.
  - (e) Vehicles not following this policy may be ticketed or towed.
3. Within the University approved fenced-in construction site area, the Builder shall manage all site use, including parking by construction staff and employees (if approved). Do not permit vehicles to park on any street or other area of the Owner's property except in areas designated by the University.
  - (a) Within the approved fenced area, the number of vehicles will be limited and be a function of the size of the project. The number of vehicles allowed will be discussed as part of the site utilization plan with the UF Project Manager and in consultation with the University Transportation & Parking Services and Facilities Services Grounds Department.
4. Absolutely no parking is permitted outside the designated construction site area and all University regulations regarding parking and accommodations for pedestrian use shall be strictly enforced.
5. Exceptions for temporary parking for construction delivery and construction access on curb side, walkways, vehicular parking, roadways and service drives that restricts or impedes normal traffic flow or use must be obtained from UF Transportation & Parking Services through the University Project Manager. This exception is granted only for construction vehicles, not for private passenger vehicles. Any temporary use of pedestrian pathways that exceeds 24 hours duration will require provision for equal alternate pathways around the impediments and UFPD review. In addition, any temporary use of the site (exceeding 24 hours duration) that impedes building occupant egress must be reviewed by UF Environmental Health & Safety (EH&S) prior to implementation.
6. The University Project Managers shall not seek waivers of any sort for ticketed and towed vehicles in violation of the University parking regulations. Knowledge of the University Parking Regulations is the personal responsibility every individual who commutes to and works on campus.

7. Provide adequate protection for curbs, sidewalks, pavers and landscape over which trucks and equipment must pass to reach the job site.

## 1.5 INSPECTIONS and TESTS

- A. Facilities Services inspections shall be requested by **7 am** the day of inspection through Facilities Services Operations Engineering. The inspection request form and supporting checklists can be found on the “Forms & Standards” page of the Planning Design & Construction website ([www.facilities.ufl.edu](http://www.facilities.ufl.edu)). Inspection checklists shall be tailored by the Owner and Builder to the specific requirements of the project.
- B. Environmental Health & Safety (EH&S) inspections shall be requested 24 hours in advance. Also see section 01060.
- C. Office of Information Technology (OIT): Contact Telecommunications and Infrastructure (TNI) 24-48 hours in advance to request inspections for all telecom, cabling, and network infrastructure work. The inspection checklist – with notification timeframes and contact information – can be found on the “Forms & Standards” page of the Planning Design & Construction website ([www.facilities.ufl.edu](http://www.facilities.ufl.edu)).
- D. HealthNet: For Health Science Center projects only, contact HealthNet 24-48 hours in advance to request inspections for all telecom, cabling, and network infrastructure work. The inspection checklist – with notification timeframes and contact information – can be found on the “Forms & Standards” page of the Planning Design & Construction website ([www.facilities.ufl.edu](http://www.facilities.ufl.edu)).
- E. Office of Academic Technology (OAT): Where applicable, contact OAT 48 hours or more in advance to request inspections for all work related to classroom audio/visual systems. The inspection checklist – with notification timeframes and contact information – can be found on the “Forms & Standards” page of the
- F. University of Florida Police Department (UFPD): UFPD must verify construction fencing, exterior lighting, landscaping, and other items during construction and closeout.
- G. State Elevator Inspector inspections – see technical specification ([insert 14xxx section number](#)). The State inspector will report to the construction manager.
- H. Architect / Engineer inspections – ([to be completed by A/E](#))
- I. Tests
  1. The Builder shall notify Facilities Services and EH&S of all scheduled tests at least **24** hours in advance.
  2. Properly completed test reports shall be provided at the conclusion of each test. It is the responsibility of the Builder to maintain such reports through

Final Completion, at which point they shall be submitted with other closeout materials, such as Operation & Maintenance manuals.

## 1.6 SECURITY

- A. Construction sites located on the University of Florida campus fall under the jurisdiction of the UFPD. Any incident requiring police service should be immediately reported to the UFPD at (352) 392-1111.
- B. Builders and employees are to obey all laws and rules of the State of Florida and the University of Florida when on University property.
- C. Students, faculty, and staff shall not be harassed, disturbed, or in any way disrupted in their lawful pursuits. Sexual harassment shall be reported to the University's Title IX Coordinator and Deputy Title IX Coordinator for Students as per the following policy: <https://titleix.ufl.edu/>
- D. Restrict the access of all persons entering upon the Owner's property in connection with the Work to the access route and to the actual site of the Work. Employees are not permitted to enter University buildings unless such entry is directly related to their job duties.
- E. Restrict activities of employees to authorized areas. Employees shall not be allowed to mingle in student or public areas.
- F. Builders and employees shall secure all property to reduce theft or damage to equipment or property. Builders shall work with the UFPD as necessary and participate in crime prevention efforts.
- G. The Builder shall at all times guard against damage or loss to the property of the University or other vendors or contractors and shall be held responsible for replacing or repairing any such loss or damage. The University may withhold payment or make such deductions as deemed necessary to insure reimbursement or replacement for loss or damaged property through negligence of the successful bidder or his agents

- H. The Builder shall provide identification badges for all personnel working on the site and shall require continuous use (wearing) of same at all times. Badge shall display photograph, name of employee, and company for which employee works.
- I. The Builder shall keep a daily log of all employees, visitors, and other personnel that enter the Project site. Said log shall be accessible to UFPD upon request.
- J. Items that could be used as projectiles, rocks, bricks, other masonry, should be stored in a secure location.

## 1.7 PERSONNEL SCREENING

The following requirements are to be met by Builders and their subcontractors and vendors while engaged in construction projects at the University of Florida:

- A. A criminal history check shall be performed on all jobsite personnel, including subcontractors and temporary day laborers, at least once every two years. Prior to personnel entering the Project site, an initial criminal history background check shall be submitted to and performed by a private company trained to perform employment screening. The results of each criminal history check shall be reported to the Builder, which shall screen the results for the following disqualifying offenses to determine a person's eligibility to work on the University of Florida campus.
  - 1. Drug distribution activity or felony drug possession
  - 2. Sexual offenses, including, but not limited to, indecent exposure and voyeurism
  - 3. Crimes of violence involving physical injury to another person
  - 4. Murder
  - 5. Kidnapping
  - 6. Felony theft
- B. The following searches shall be performed to document types of convictions listed above that will render an individual ineligible to perform work on campus unless a waiver is granted:
  - 1. SSN Trace plus address history
  - 2. Sexual Offender database check
  - 3. National Criminal Database search
  - 4. 7-year County Court Check in the employee's County of residence
- C. Entities seeking to use an employee with one or more revealed convictions must apply for a written waiver from the UFPD Chief at (352) 392-1111 or [updinfo@admin.ufl.edu](mailto:updinfo@admin.ufl.edu).
- D. The UFPD Chief will consider the following factors when determining whether or not a waiver will be granted:

1. The nature and gravity of any criminal offense(s);
2. The individual's age at the time of the offense(s);

3. The number and type of offense (felony, misdemeanor, traffic violations, etc.);
  4. The sentence or sanction for the offense and compliance with the sanction(s);
  5. The amount of time that has passed since the offense and/or completion of the sentence(s);
  6. Whether there is a pattern of offenses;
  7. Whether the offense arose in connection with the individual's prior employment or volunteer activities;
  8. Information supplied by the individual about the offense(s);
  9. Work record and references after the offense(s);
  10. Subsequent criminal activity; and
  11. Truthfulness of the individual in disclosing the offense(s).
- E. Builders shall certify that all personnel have been subject to a criminal background check and shall continuously track, monitor, and re-certify throughout construction as new trades and personnel begin work.
- F. The cost of the criminal background check shall be borne by the Builder, but is compensable as a General Conditions expense for CMs and D/Bs.
- G. The Builder shall maintain copies of background checks at their home office, with background checks electronically accessible at the Project site. The names and pertinent information of all screened and approved employees shall be posted to the PD&C Sharepoint site at: <https://uflorida.sharepoint.com/sites/pdc/prj/Lists/Background%20Checks/AllItems.aspx>

## 1.8 WORK HOURS

- A. Regular work hours shall be between 7:00 AM and 5:00 PM, Monday through Friday, excluding holidays.
- B. Work outside these hours must be requested in writing and approved by the Owner.
- C. [other project-specific direction on work hours](#)

## 1.9 UNMANNED AIRCRAFT

- A. The use of unmanned aircraft systems (e.g., drones or model aircraft) over University property is prohibited without the written approval of UF EH&S.
- B. For a complete explanation of the policy, procedures, and requirements, see <http://www.ehs.ufl.edu/?s=unmanned+aircraft+systems&sa.x=0&sa.y=0>

## 1.10 HOME FOOTBALL GAME WEEKENDS

- A. Approximately 100,000 people converge upon the campus on each of 6-7 Fall weekends for Gator football games. To safeguard both the public and the Work,

jobsites on campus shall be secured, left clean, and free of safety hazards by 4:00 PM Friday on such weekends, with no work taking place on or around the site until Monday morning.

- B. Likewise, remove all vehicles parked at the paved remote lot near the 34<sup>th</sup> Street Hilton by 4:00 PM Friday on such weekends and do not permit parking there again until Monday morning.
- C. See [www.gatorzone.com](http://www.gatorzone.com) for the football game schedule and incorporate these dates into the construction schedule.
- D. The Builder may request special exceptions to this policy with written justification at least one week in advance, but the Owner is under no obligation to approve such requests.

#### 1.11 PRE-CONSTRUCTION MEETING

- A. Prior to commencing Work at the site, the Builder shall attend a pre-construction conference with the University Project Manager, the Design Professional(s), other UF officials, and external agency representatives, if applicable (such the District Engineer on a Federally-funded project).
- B. Builder attendees shall include all field staff (project manager, superintendent(s), project engineer(s), and clerical assistants), plus major trade subcontractors as directed by the University Project Manager.
- C. The parties will discuss the administrative, logistic, fiscal, and procedural requirements for the Work, and for work in general at the University of Florida.
- D. The template agenda for the meeting shall be provided by the University Project Manager, who shall also arrange for attendance by other UF officials and outside agencies, if any. The Builder shall record and distribute minutes.

**END OF SECTION**



## 01016 Utility Outages and Dig Permits

### PART 1 – GENERAL

#### 1.1 RELATED SECTIONS

- A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.
- B. Refer to Section 01310, Construction Schedule for related requirements regarding the coordination of utility outages with the University of Florida Schedule.

#### 1.2 UTILITIES OUTAGES

- A. Planned utility outages are occasionally required for repairs, maintenance or construction. In order to avoid unexpected inconveniences, property damage, safety hazards, or loss of information or research, the Facilities Services Division has instituted a utility outage notification system.
- B. When the Work requires an outage, the Builder shall submit – at least ten (10) business days for major project outages and five (5) business days for minor project outages. – a written request to Facilities Services via the University Project Manager on an Owner-furnished form. Outages shall not proceed until authorized by Facilities Services.
- C. Utility outages will be performed by Facilities Services Systems personnel. The project will pay the applicable costs. However, the costs associated with an outage that becomes necessary to correct deficient work performed during a previous outage will be back-charged to the Builder. Contact Facilities Services Operations Engineering as necessary to determine these costs.
- D. Unplanned utility outages occur on occasion as the unwelcome result of repair, maintenance, or construction activities. Report all unplanned utility outages immediately to the Facilities Services Work Management Center (Telephone: 392-1121) and to the University Project Manager.
- E. For any projects within the Health Science Center, IFAS, Housing Divisions, the construction manager shall coordinate well in advance of 10 days prior to any outage request with the project manager and the appropriate divisions and coordinate those planned outages.

***For off-campus projects involving GRU, replace A-E above with the following:***

- A. ***Planned utility outages are occasionally required for repairs, maintenance or construction. In order to avoid unexpected inconveniences, property damage, safety hazards, or loss of information or research, the Builder shall plan, coordinate, and***

request/communicate utility outages with both the Owner and Gainesville Regional Utilities (GRU).

- B. Demolition of utilities or utility outages during construction must be coordinated with GRU, contact GRU New Services, Jeanice Morris, at (352) 393-1414. Utility outages shall not affect other GRU customers.

### 1.3 DIG PERMITS

- A. All trenching, excavation, digging operations, or other penetration of the ground within the confines of the University campus or in any area for which the University has responsibility, requires the Builder to obtain a Dig Permit, Facilities Services Form 611, which can be retrieved from the Facilities Services website at [www.facilitiesservices.ufl.edu](http://www.facilitiesservices.ufl.edu) .
- B. The person, Builder, agency, or organization that will be performing the trenching, excavation, digging, or other ground-penetrating activity is responsible for requesting and obtaining permission to perform that activity.
- C. All Dig Permits shall be applied for 72 hours prior to the start of any work that penetrates the ground. Contact the Dig Permit Office at (352) 392-5781 located at Utilities and Energy Services 902 Magnolia Drive, Building 702, Rm 130G in the Utilities Department, Gainesville, Florida 32611- 7700. The CM Representative will need to meet with a Line Locate Technician to discuss the exact request and to present a sketch or picture what is being requested to determine if a permit will be required or what other steps may be needed.

If a permit is required, the construction manager will need to call the Sunshine State One-Call (811) with the dig information. Sunshine State One-Call (811) will coordinate with the Dig Permit Office to locate utilities not under control of the Dig Permit Office and they will notify the Dig Permit Office of their utilities information.

The Dig Permit Office will have 2-3 business days to respond to this request. Once notification has been received from Sunshine State One-Call (811), the Dig Permit Office will send an email notification with application and requirement information to the construction manager. The construction manager shall read the Dig Permit Procedures for complete definitions and procedures.

To complete the Dig Permit application, the construction manager shall have the sunshine state ticket number that was provided when called available for this application in order to complete the Dig Permit application form. This form is available electronically and the form will need to be signed and submitted electronically with a valid digital signature. Facilities Services is no longer accepting handwritten applications. Please note that the application is not a valid permit until it is signed by the Dig Permit Office. The Line Locate

Technician will mark the location and will complete the application form and email it to the contact information provided. Construction manager will need to call the Dig Permit office to meet at the jobsite prior to the work beginning. The Dig Permit must be visible at all times at the work site.

- D. Sunshine State One-Call (800-432-4770) shall be utilized for utilities owned by others, including Cox Cable, and Gainesville Regional Utilities (GRU) and others communications firms.

***For off-campus projects involving GRU, re-title 1.3 as “PERMITS” and replace A-D above with the following:***

- A. A GRU Utility Construction Permit (UCP) is required for all utility work associated with the project.
- B. The Builder shall contact the GRU Water/Wastewater Inspector prior to beginning any utility work to schedule a pre-construction meeting.

**END OF SECTION**

## 01060 Regulatory Requirements

### PART 1 – GENERAL

#### 1.1 RELATED SECTIONS

- A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.

#### 1.2 BUILDING CODE ENFORCEMENT PROGRAM

- A. TITLE XLVIII (Florida K-20 Education Code) and Chapter 553.80(6) F.S. assign responsibility to the State University System for the enforcement of the Florida Building Code and the Florida Fire Prevention Code during building construction and renovation at State universities. At the University of Florida, the Environmental Health and Safety Division (EH&S) has been assigned the responsibility to implement and administer the Building Code Permit and Inspection Program. Program compliance requires that construction plans/specifications and permit application documents be submitted to the UF Building Code Administrator (EH&S) for review. Construction shall not begin on the project until a building permit has been issued by EH&S and the permit posted at the construction site.
- B. A more complete description of the University of Florida's Building Code Enforcement Program may be obtained from the University's Building Code Administrator.

##### EH&S Building Code Enforcement

Building 179, 916 Newell Drive, P.O. Box 112190, Gainesville, FL, 32611-2200

Phone: (352) 392-1591; Fax (352) 392-3647

Internet: [www.ehs.ufl.edu](http://www.ehs.ufl.edu)

#### C. RESPONSIBILITIES

1. The duly licensed State of Florida contractor shall apply to the UF Division of Environmental Health & Safety for a building permit. At the time of application for a permit, the Builder shall provide two sets of signed and sealed construction documents and specifications, a list of all subcontractors with appropriate license numbers and proof of Worker's Compensation insurance, and the "letter of code compliance" indicating the plans have been reviewed by EH&S and all outstanding code and safety-related items have been resolved. If a "letter of code compliance" has not been issued by EH&S, two copies of the final construction (bid) documents and specifications must

accompany the application. A building permit will be issued after the documents have been reviewed for code compliance by the Building Code Administrator/staff. One of the submitted sets of plans and specifications will be returned with the building permit placard and shall be stamped by EH&S stating "Reviewed for Code Compliance." This set of documents shall be protected and kept on site by the contractor for use by EH&S code enforcement.

2. When the contractor has completed the project per the permit documents and submitted all required tests and reports, their authorized representative shall request in writing a certificate of completion or certificate of occupancy from the UF/EH&S Building Code Administrator as required by the Florida Building Code.

### 1.3 LIFE SAFETY & FIRE SAFETY PLAN REVIEW

- A. In conjunction with review of plans for Building Code Compliance EH&S has been assigned the duty of life safety & fire safety plan review and inspection of UF construction projects.
- B. Plan review shall be conducted as each project is submitted for building code compliance review. A separate submission will not be required for this review phase as it will be conducted simultaneously with the building code compliance review.
- C. Inspections of life safety items shall be scheduled through EH&S's normal inspection process.
- D. Prior to issuance of the certificate of occupancy or completion EH&S's fire plans reviewer and inspector shall certify that the project meets or exceeds all life and fire safety minimum codes and standards.

### 1.4 FLORIDA PRODUCT APPROVAL

As required by Florida Statutes, the Builder shall provide information on certain structural and building envelope products and components. See "Florida Product Approval Info Sheet" on the "Forms" page of the EH&S Building Code Enforcement website ([www.ehs.ufl.edu/buildcode](http://www.ehs.ufl.edu/buildcode)).

**END OF SECTION**

## 01310 Construction Schedules

### PART 1 – GENERAL

#### 1.1 RELATED SECTIONS

- A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.
- B. Refer to Section 01016, Utility Outages, for related requirements regarding the pre-planning of utility outages.
- C. Comply with pertinent provisions of Section (insert Submittals spec section#).

#### 1.2 QUALITY ASSURANCE

- A. Employ, if necessary, a scheduler who is thoroughly trained and experienced in compiling construction schedules, and in preparing and issuing periodic reports as required.

### PART 2 – PRODUCTS

#### 2.1 CONSTRUCTION ANALYSIS

- A. Graphically show by bar chart the order and interdependence of all activities necessary to complete the Work, and the sequence in which each activity is to be accomplished, as planned by the Builder in coordination with all subcontractors whose work is shown on the diagram.
- B. Highlight the “critical path” through the schedule to illustrate those inter-dependent activities that cannot be delayed without impacting the overall completion time.
- C. Builder shall coordinate the Work with the University of Florida schedule. The Work shall be scheduled and carried out such that the normal operations of the University are given first priority. This applies particularly to outages of utilities and restrictions of access. The University may require such construction operations to be executed outside of normal working hours and by overtime, weekend, and holiday working. It shall be the Builder's responsibility to provide for this in the Cost of Work.
- D. See Section 01014 for information on home football game restrictions, and account for same in the construction schedule.

- E. Incorporate commissioning requirements and milestones.
- F. Provide amplifying information as needed, such as reports on “float,” or as requested by the Owner or Professional.
- G. Project-specific schedule requirements: (insert as needed or state NONE)

**END OF SECTION**

## **01352 Requirements for Sustainability Certification**

### **PART 1 – GENERAL**

#### **1.1 RELATED SECTIONS**

A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.

#### **1.2 SUMMARY**

A. Seeking high performance, energy-efficient, and sustainable buildings, and in compliance with State law (F.S. 255.252), the University of Florida requires new construction and certain addition or renovation projects to be designed and constructed to achieve certification by one of (3) “green” rating systems:

1. Leadership in Energy and Environmental Design (LEED) by the United States Green Building Council (USGBC)
2. Green Globes by the Green Building Initiative
3. Florida Green Building Coalition (FGBC)

B. Each of these rating systems provide 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 specifications and procurement, and indoor environmental quality.

C. This section includes general requirements and procedures for compliance with certain prerequisites and credits needed to obtain certification under any of the (3) rating systems listed above.

1. Certain prerequisites and/or credits needed to obtain certification depend upon material selection and procurement. Compliance with requirements needed to obtain certification prerequisites and/or credits should be considered in the evaluation of substitution requests or comparable product requests.

2. Certain other prerequisites and/or credits needed to obtain certification depend upon the design professionals’ design; established systems and protocols at the University of Florida; and other aspects that are not part of the Work.

3. Owner shall register the project with, apply for certification to, and pay all registration and certification fees owed to, the certifying entity.

4. Owner will administer the certification process.



5. Builder shall assign a representative – preferably someone with sustainability certification experience and/or accreditation – to serve as the primary point of contact, “champion,” and coordinator of all construction-phase certification efforts by the builder and its subs.
6. Builder shall participate in sustainability certification-related meetings with the Owner and design professional(s) monthly during construction, or as needed.
7. Builder shall communicate all certification-related requirements to potential subcontractors and bidders as part of the pre-qualification, selection, and procurement process.
8. Builder shall review certification requirements, milestones, and action items with its sub-contractors during weekly sub-contractor meetings.
9. Failure to provide timely submittals related to certification may result in additional retainage being withheld.
10. Builder shall compile, document, calculate, and otherwise complete all construction-related certification documentation prior to Owner’s determination of project Final Completion. This includes providing electronic copies of certification-related submittals, reports, and other documents via Sharepoint and other online platforms such as LEED Online as needed to quantify and illustrate construction-phase credits.
11. Owner will provide certification-related training for the Builder and its subs as needed and requested.

### 1.3 DEFINITIONS

- A. Chain-of-Custody Certificates: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-accredited certification body.
- B. Environmental Product Declaration (EPD): A transparent and objective report that communicates what a product is made of and how it impacts the environment across its entire life cycle. EPDs are required to meet one of the following standards ISO 14021-1999, ISO 14025-2006, or ISO 21930-2007.
- C. Extended Producer Responsibility: Measures undertaken by the maker of a product to accept its own and sometimes other manufacturers products as

postconsumer waste at the end of the products useful life. Producers recover and recycle the materials for use in new products of the same type.

D. Forest Stewardship Council (FSC – [www.fscus.org](http://www.fscus.org)): Non-profit organization devoted to encouraging the responsible management of the world's forests.

E. Health Product Declaration: The end use product has a published and complete and full disclosure of known hazards in compliance with the Health Product Declaration open Standard.

F. Lifecycle Assessment (LCA): A cradle to grave or cradle to cradle analysis technique to assess environmental impacts associated with all states of a project's life, which is from raw materials extraction through materials processing, manufacture, distribution, and use. LCA provide global impact results including potentials in acidification, eutrophication, global warming, ozone depletion, smog formation, etc. Consider use of software such as Athena or Tally (REVIT plug-in) to conduct an LCA.

G. Rapidly Renewable Materials: Materials made from plants that are typically harvested within a 10-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.

H. Regional Materials: Materials that have been extracted, harvested, or recovered, as well as manufactured, within a certain distance from the project site (distance varies depending on the rating system). If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value. Mechanical, electrical, plumbing, and specialty items shall be excluded from this calculation.

I. Recycled Content: The percentage by weight of constituents that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).

1. "Post-consumer" material is defined as waste material generated by households or by commercial, industrial, and institutional facilities in their role as end users of the product, which can no longer be used for its intended purpose.

2. "Pre-consumer" material is defined as material diverted from the waste stream during the manufacturing process. Specifically, discarded materials from one manufacturing process that are used as constituents in another manufacturing process. Excluded is reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it.

3. Recycled content value is determined by multiplying the recycled fraction of the assembly (by weight) by the cost of assembly.

J. Red List Building Materials: Organized through the International Living Future Institute (ILFI), the Red List contain chemicals that have been designated as harmful to living creatures, including humans, or the environment. These products are expected to be phased out of production due to health concerns. Consider utilizing the [Declare Product Database](#) to identify if a product contains any red list materials.

## 1.4 SUBMITTALS

A. General: Provide additional submittals as required by other sections, highlighting or annotating as needed to illustrate the sustainability-related information.  
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B. Certification-related submittals may be in addition to other submittals. Reference and comply with guides published for the particular certification being pursued (LEED, Green Globes, or FGBC).

C. Project Materials Cost Data: Provide a statement indicating the total cost for materials used (excluding labor, overhead, and profit). Include breakout of costs for the following categories of items:

1. Fixed/permanent furnishings
2. Plumbing
3. Mechanical
4. Electrical
5. Specialty items such as elevators and equipment
6. Wood construction materials

D. Environmental Product Declarations (EPD): Provide at least 20 EPDs for the building assembly and interiors to include any of the following options

- a. Industry wide (Generic) EPDs: 3<sup>rd</sup> party verified Type III EPDs
- b. Product Specific Declaration: 3<sup>rd</sup> party verified Type III EPDs
- c. 3<sup>rd</sup> party certified life cycle product assessment based upon ISO 14040 and 14044, including a cradle to gate scope
- d. 3<sup>rd</sup> party certifications based upon a multiple attribute standard developed by a consensus based process from an approved standard development organization (i.e. NSF sustainability assessment standards, UL Environment sustainability standards, sustainable forestry certifications, etc.)

E. Health Product Declarations (HPD): Provide at least 20 HPDs for the building assembly and interiors to include any of the following options

- a. HPD Open Standard documentation
- b. Cradle to Cradle certification
- c. Declare product label as either Red List Free or Declared
- d. ANSI/BIFMA e3 Furniture Sustainability Standard
- e. NSF/ANSI 336: Sustainability Assessment for Commercial Furnishings Fabric

F. Progress Reports: Concurrent with each application for payment, submit a report explaining the status of certification-related efforts and documents.

## PART 2 – PRODUCTS

A. To reduce a building's carbon footprint, regionally extracted, assembled and manufactured building materials are expected to have a precedent over other non-regional building materials.

### 2.1 RECYCLED CONTENT OF MATERIALS

A. Provide building materials with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 25 percent of cost of materials used for the Work.

1. Cost of post-consumer recycled content of an item shall be determined by dividing weight of post-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.

2. Cost of pre-consumer recycled content of an item shall be determined by dividing weight of pre-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
3. Do not include furniture, plumbing, mechanical and electrical components, and specialty items such as elevators and equipment in the calculation.

## 2.2 CERTIFIED WOOD (may or may not be applicable)

A. If applicable, provide a minimum of 50 percent (by cost) of wood-based materials that are produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

1. Wood-based materials include, but are not limited to, the following materials when made from wood, engineered wood products, or wood-based panel products:

- (a) Rough carpentry
- (b) Miscellaneous carpentry
- (c) Heavy timber construction
- (d) Wood decking
- (e) Metal-plate-connected wood trusses
- (f) Structural glued-laminated lumber
- (g) Finish carpentry
- (h) Architectural woodwork
- (i) Wood paneling
- (j) Wood veneer wall covering
- (k) Wood flooring
- (l) Wood lockers
- (m) Wood cabinets

## 2.3 LOW-EMITTING MATERIALS

A. Internal and external building materials are expected to minimize materials off gassing of chemicals that cause harm to both building occupants and construction tradespeople.

1. PERFORMANCE: Volatile organic chemical (VOC) limits, measured in grams/liter (g/l), have been established based on the product use type:

1. Adhesives and Sealants – Reduce VOC limits below SCAQMD Rule 1168, Adhesive and Sealant Applications emission requirements.
2. Carpet, Carpet adhesives, Flooring, and Floor Coverings - VOC not more than 50 g/L.
3. Interior Paints and Coatings – Reduce VOC content below California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113,
4. Do not use composite wood (including structural wood) or agrifiber products or adhesives that meet California Air Resources Board ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF)
5. Use building insulation materials that are formaldehyde free

2. PRESCRIPTION Alternatively, products can obtain 3<sup>rd</sup> party certification showing compliance to predetermined indoor air quality standards including the following;

i. EcoLogoM (Paints & Adhesives) – Environmental Choice

1. EcoLogo Standard for Adhesives – CCD-046
2. EcoLogo Standard for Paints – Architectural Surface Coatings CCD-047
3. EcoLogo Standard for Recycled Paints – Architectural Surface Coatings – Recycled Water-bourne CCD-048

ii. Green Seal ® (Paints & Adhesives)

1. Green Seal Environmental Standard for Paints and Coatings, GS-11
2. Green Seal Environmental Standard for Commercial Adhesives, GS-36

iii. GREENGUARD Environmental Institute

1. “Program Manual for GREENGUARD product Certification Programs” GG.PM.01.2009
2. GREENGUARD Environmental Institute: Standard Method for Measuring and Evaluating Chemical Emissions From Building Materials, Finishes and Furnishings Using Dynamic Environmental Chambers (GGTM.P066.R8 10-29-2008)

iv. Indoor Advantage Gold™ - Scientific Certification systems.

1. California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions Sources Using Small Scale Environmental Chambers (CA/DHS/EHLB/R-174, July 15,2004 with Addendum 2004-01)
2. SCS-EC10.2-2007, Environmental Certification Program – Indoor Air Quality Performance, May, 2007

v. Carpet & Rug Institute’s “Green Label Plus” program for floor coverings

vi. Floorscore Certification for hard flooring surfaces

## PART 3 – EXECUTION

### 3.1 CONSTRUCTION WASTE MANAGEMENT

A. All construction projects are to develop a project specific construction waste management plan. Include at least 5 different waste streams to divert from our local landfills. This plan is to highlight either an onsite separation or commingled collection approach. The plan ought to include opportunities for source reduction such as prefabrication, modular construction or incorporate standard material lengths or sizes into project’s design to eliminate waste.

B. If project scope includes demolition, conduct a walkthrough with project manager and include a list of materials to be salvaged for

1. Reuse – either through UF’s Property Surplus services or shared with other UF department
2. Repurpose – collected and be donated to local non-profit or governmental entity
3. Recycled – large amounts of single type material to be shipped back to company for recycling (approximately 30,000sf of used carpet squares, approximate 16,000sf of acoustic ceiling tile)

C. Recycle and/or salvage at least 75% of construction, demolition, and land-clearing waste. Track and record waste streams by weight, and otherwise comply with Section 01505. A waste-to-energy incineration is not considered a viable approach.

### 3.2 SITE DISTURBANCE

A. Implement the erosion & sedimentation control plan required by the drawings and/or specification section 01500 and provide photos of in-place measures.

B. Limit site disturbance – including earthwork and clearing of vegetation – to 40 feet beyond the building perimeter, 5 feet beyond primary roadway curbs, walkways and main utility branch trenches, and 25 feet beyond constructed areas with permeable surfaces.

### 3.3 INDOOR-AIR-QUALITY MANAGEMENT DURING CONSTRUCTION

A. Develop and implement an Indoor Air Quality (IAQ) Management Plan to protect the HVAC system, control pollutant sources, and interrupt contamination pathways for the construction and pre-occupancy phases of the building.

01352-8

1. Meet or exceed the recommended approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings under Construction, 1995, Chapter 3.

2. Sequence the installation of materials to avoid contamination of absorptive materials such as insulation, carpeting, ceiling tile and gypsum wall board.

3. Protect stored on-site or installed absorptive materials from moisture damage.

4. Control and remove contaminants on the work site, including dust, dirt, spills, and other accumulated moisture.

5. If air handlers must be used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 shall be used at each return air grill, as determined by ASHRAE 52.2-1999. The use of this filtration will be inspected during Facilities Services inspections.

6. Replace all AHU filtration media immediately prior to occupancy. Filtration media shall be the same as used in the AHU's by Facilities Services.

a) . If the equipment has been contaminated with dust, moisture or other contaminants, all HVAC equipment must be steam cleaned and soft surfaces, such as duct work, must be brushed, dusted and vacuumed.

7. Provide 18 photographs (six photographs taken on three different occasions during construction), along with identification of the SMACNA approach featured by each photograph, in order to show consistent adherence to the protection requirements.

### 3.4 INDOOR-ENVIRONMENTAL-QUALITY TESTING

A. For new projects, major renovations, or remodel projects involving modifications to the HVAC system, projects are expected to meet [EH&S Indoor Environmental Quality Policy](#) OR comply with building flush-out requirements.

1. Indoor Air Quality Testing - Allocate enough time in construction schedule for indoor air quality testing and testing results to be presented prior to obtaining either a certificate of occupancy or temporary certificate of occupancy. Area testing may include multiple test per project size.

2. Building Flush-out - Specific requirements for building flush-out can be found in 3<sup>rd</sup> party sustainable building certification. To prove adequate flush out has occurred, ensure building automated system is trending points for outdoor air temperature, outdoor air humidity, outside air damper position, outdoor air flow rate, supply air temperature, and supply air humidity.

**END OF SECTION**

## **01500 Temporary Facilities and Controls**

### **PART 1 – GENERAL**

#### **1.1 RELATED SECTIONS**

- A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.
- B. Utility outages and dig permits are covered in Section 01016. Permanent installation and hookup of the utility lines are described in the University of Florida Design and Construction Standards.

#### **1.2 DESCRIPTION**

##### **A. WORK INCLUDED**

Provide temporary facilities and controls needed for the Work, including, but not necessarily limited to:

1. Temporary utilities such as water, electricity, and telephone;
2. Field offices and sanitary facilities for the Builder's personnel;
3. Enclosures such as tarpaulins, barricades, and canopies; traffic control and pedestrian control devices;
4. Erosion control measures; and
5. Directional and informational signage.

##### **B. WORK NOT INCLUDED**

1. Except for the requirement that equipment furnished by subcontractors shall comply with pertinent safety regulations, such equipment as normally furnished by the individual trades in execution of their own portions of the Work, is not part of this Section.
2. The permanent installation and hookup of utility lines are described in other sections and are not part of this Section except as related to the metered cost of such utilities once established.

#### **1.3 PRODUCT HANDLING**



Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

#### 1.4 SUBMITTALS

- A. The Builder shall present a jobsite management plan in the form of a scaled, marked-up site plan for the Owner's review at or prior to the Pre-Construction Conference. This drawing shall identify, at a minimum:
1. Temporary fencing with gated point(s) of access
  2. Materials delivery & storage areas
  3. Field office or storage trailers
  4. Temporary accessibility features including paved or unpaved roads, sidewalks, bicycle paths, ramps, curb cuts, canopies, barricades, or other means of maintaining safe and ADA-accessible routes through or around the site
  5. Waste collection (dumpsters)
  6. Signage and striping
  7. Paths for emergency egress
  8. Onsite staff parking
  9. Tree protection
  10. Restricted access routes for vehicles and equipment belonging to the Builder and its subcontractors, vendors, and employees entering upon the UF Campus
- B. As construction progresses, the Builder shall identify any required disruptions or restrictions of roads, sidewalks, bicycle lanes, or other means of access. Approval for such disruptions shall be secured prior to scheduling related work by submitting a written request to the University project manager. This request shall be accompanied by a site sketch, start and end dates, an explanation of the reasons(s) for the request, and an illustration or description of the temporary controls to be used to maintain safe access. The full closing of vehicular roads (i.e., all lanes) on the UF campus shall be planned several weeks in advance of planned scheduled restrictions and has gone through the approval process by the University project manager.
- C. A formal traffic control plan – including credentials of plan developer – shall be submitted for review when lane closures are anticipated. See paragraph 3.1 of this section.

### PART 2 – PRODUCTS

#### 2.1 TEMPORARY UTILITIES

- A. USAGE, ESTABLISHMENT, and COST
1. The Builder shall include in the Cost of Work both the installation of any temporary utilities and the (monthly) usage fees for same. This includes, but

is not limited to: potable water for drinking and/or construction trailers; water for cleaning, construction, flushing, commissioning, and testing of plumbing and mechanical systems; convenience power for tools, lighting, and/or construction trailers; temporary power for construction and testing; telecommunications lines for phone, fax, or Internet service. Current Facilities Services utility rates can be viewed at <https://www.facilitieservices.ufl.edu/information/rates.shtml>.

2. For use of University-owned utilities, the Builder shall establish an account with Facilities Services by contacting Facilities Services Billing at (352) 294-0628 to learn the process for creating the account.
3. Prior to beginning work that involves connections to the University's utilities systems, the Builder shall submit – at least 48 hours in advance – a work request to Facilities Services Work Management (392-1121) for installation of temporary meter(s) by Facilities Services Utility Services.

#### B. WATER

1. The point(s) of connection shall be designated by Facilities Services.
2. A temporary potable water meter will be furnished and installed by Facilities Services Water Distribution group when water connection is to a Fire Hydrant.
3. All other water connections will be billed off existing meters.
4. Builder shall furnish and install all necessary temporary piping and water supply and, upon completion of the Work, remove same.

#### C. ELECTRICITY

1. The point(s) of connection shall be designated by Facilities Services.
  - (a) **PLEASE NOTE:** Any remodeling/renovation or project that requires Temporary Power for contractor's trailers onsite it is Mandatory that Facilities Services Utilities Department shall be contacted for requirements for metering, no other entity shall decide or grant if meter is required!
2. A temporary electric meter will be furnished by Facilities Services Utility Services, which shall also energize service, but installed by the Builder. Allow 14 days lead time for the Owner-furnished meter. The Builder shall furnish and install all necessary related accessories (CTs, compatible meter socket/can, etc.).
  - (a) All Accessories (CT's, Compatible meter socket/can) to be designated exclusively any Facilities Services Meter Department prior to installation of any electric metering equipment.

3. Builder shall furnish and install all necessary temporary wiring and, upon completion of the Work, remove same.
  - (a) Facilities Services Meter Department shall be notified prior to temp Electric meter being removed from service and once removed shall be returned to Facilities Services Meter Department
  - (b) All temporary wiring provided by the Builder must conform to the requirements of the National Electric Code (NEC), the Industrial Safety Commission, and local requirements. In addition, all wire used shall be fused to adequately protect that wire according to the NEC.
  - (c) The Builder shall have an adequate number of outlets and each outlet shall be properly and clearly labeled with the maximum voltage and fuse protection.
  - (d) Where temporary lighting is used, outlets shall consist of a weatherproof socket properly insulated and provided with a locking type wire guard.
  - (e) All devices shall be properly grounded.
4. Provide area distribution boxes located such that the individual trades may furnish and use extension cords 100 feet in length (maximum) to obtain power and lighting at points where needed for work, inspection, and safety.
5. Temporary electric facilities shall be inspected and approved by Facilities Services and EH&S prior to energizing by Facilities Services Utility Services.
6. In keeping with UF sustainability policies, and to minimize the cost of utility services, the Builder shall minimize the use of temporary or permanent lighting, particularly when the jobsite is inactive. The use of energy efficient lamps is encouraged if the energy savings justifies any additional expense.

D. TELEPHONE and INTERNET

1. The Builder shall make arrangements with UF Information Technology (UF IT) or HealthNet – as applicable – or the local utility for temporary phone, fax, and/or Internet service lines.

E. SANITARY FACILITIES

1. Furnish and install temporary sanitary facilities for use by all construction personnel.
2. The Builder shall provide and maintain in a neat and sanitary condition such accommodations for the use of employees and subcontractors as may be necessary to comply with the regulations of the State Board of Health.

3. Unless expressly allowed by the Owner, existing sanitary facilities may not be used by construction personnel, subcontractors, or vendors.

***For off-campus projects involving GRU, replace A-E above with the following:***

**A. USAGE, ESTABLISHMENT, and COST**

1. The Builder shall include in the Cost of Work both the installation of any temporary utilities and the (monthly) usage fees for same. This includes, but is not limited to: potable water for drinking and/or construction trailers; water for cleaning, construction, flushing, commissioning, and testing of plumbing and mechanical systems; convenience power for tools, lighting, and/or construction trailers; temporary power for construction and testing; telecommunications lines for phone, fax, or Internet service.
2. For establishment of a billing account, contact GRU New Services, Jeanice Morris, (352) 393-1414.

**B. WATER**

1. The existing meter may be used for temporary water during construction. Temporary water service needs must be coordinated through GRU New Services, Jeanice Morris, (352) 393-1414.

**C. ELECTRICITY**

1. For temporary electric service, contact GRU New Service, Jeanice Morris, (352) 393-1414. EH&S Electrical Inspector must provide written proof of inspection and release from liability to GRU.

**D. TELEPHONE and INTERNET**

1. The Builder shall make arrangements with a local service provider such as AT&T or Cox for temporary phone, fax, and/or Internet service lines. Contractor to utilize contacts provided by Sunshine One Call to establish temporary services.

**E. SANITARY FACILITIES**

1. The existing sewer connection/clean-out may be used for temporary sewer service. Temporary sewer service needs must be coordinated through GRU New Services, Jeanice Morris, (352) 393-1414.

**2.2 PERMANENT (BUILDING) UTILITIES**

Once permanent power, chilled water, and other permanent metered utilities are established, the cost of such utilities shall be borne by the Builder as a cost of the Work.

Utility services will not be provided until new meters are installed and certified to be operating properly by Facilities Services Utility Services.

*For off-campus projects involving GRU, delete second sentence above.*

2.3 FIELD OFFICES AND SHEDS

A. TRAILERS – Office and Storage

1. Provide stairs and railings as required by OSHA.

2.4 ENCLOSURES

- A. GENERAL: Provide and maintain for the duration of construction all scaffolds, tarpaulins, canopies, steps, platforms, bridges, and other temporary construction necessary for proper completion of the Work in compliance with pertinent safety and other regulations.
- B. DUMPSTER ENCLOSURES: For all projects requiring dumpsters, where the dumpster is located within the geographical area of campus bounded by SW 13th Street, West University Avenue, Gale Lemerand Drive, and Stadium Road, the dumpster shall be enclosed by a solid wooden fence installed around the entire perimeter. This fence shall be a minimum of 6' high and shall be constructed of vertical 1 x 6's on a 2 x 4 frame. Pre-fabricated sections are acceptable.
  - 1. Protection of all hardscape and landscape must be provided for the storage and removal of all dumpsters.
- C. TREE PROTECTION: See tree protection guidelines, Appendix I, University of Florida Construction Standards, Volume 1. Tree protection applies for all trees, weather they are inside or outside any fenced areas.

## 2.5 TEMPORARY FENCING

- A. Provide and maintain for the duration of construction a temporary fence to prevent entry of the public into the jobsite. Fencing shall be six-foot high chain link fencing with dark green-colored inlaid fabric mounted on fixed posts of metal for temporary parking and work area. Open trenches and other hazards shall be enclosed in a fixed wire fence with flashing lights.
- B. Maintain the security, lighting and appearance of fencing throughout construction.

## 2.6 EROSION and SEDIMENTATION CONTROL

- A. The Builder shall develop a "Sedimentation and Erosion Control Plan" per the UF Design & Construction Standards (Appendix C).
- B. This plan shall be submitted for review and approval prior to beginning any onsite work or applying for dig permits.
- C. The Builder shall erect and maintain control measures as outlined in the plan throughout construction. Such measures may include gravel "wash-down stations" at jobsite entry and exit points, silt fencing, and temporary grass seeding.
- D. See Section [\(insert applicable Div. 2 spec section #\)](#) for more information.

## 2.7 SIGNAGE

- A. Install and maintain the appearance of the standard University of Florida Board of Trustees Project Sign in a location directed by the University Project Manager.

- B. Florida Statutes 812.014 and 810.09 require that construction fences be adorned with the following sign: "**WARNING** (*red on white*) - **This area is a designated construction site. Anyone trespassing on this property shall, upon conviction, be guilty of a felony.**" (*black on white*) Signs shall be approximately 14" x 18".
- C. Post the following notice on each leg of construction fencing:  
**"Immediately report sexual harassment from anyone at this construction site. Students contact the Deputy Title IX Coordinator for Students (352.392.1261). All others contact the Title IX Coordinator (352) 273-1094."**
- D. Provide way-finding, directional, and other informational signage as needed to safely accommodate the public's need to pass around or through the Work. This shall include, as needed, directional assistance for ADA-compliant paths of travel throughout the duration of construction.
- E. No other signs or advertisements are permitted.

## 2.8 CLEANLINESS

The Builder shall keep the premises free from accumulation of waste material and rubbish, and shall remove from the premises all rubbish, implements, surplus materials, and temporary facilities provided during the course of the Work, leaving spaces broom clean.

## 2.9 OTHER

- A. (add project-specific requirements as needed)
- B. (add project-specific requirements as needed)

## PART 3 – EXECUTION

### 3.1 INSTALLATION

- A. The Builder shall not mobilize and/or erect temporary facilities until the jobsite management plan has been reviewed and approved by the Owner.
- B. Prior to erection of fencing, the Builder shall review the proposed fencing plan onsite with the University Project Manager and representatives of EH&S, UFPD, Facilities Services and the Americans with Disabilities Act Office.
- C. Directional signage shall be installed simultaneously with fencing and/or temporary roads or paths.

- D. Traffic maintenance devices and procedures (signage, barricades and cones, flagmen, etc.) shall be per Florida Department of Transportation (FDOT) standards (2003 Edition, Manual on Uniform Traffic Control Devices (MUTCD), with Revision No. 1 Incorporated, dated November 2004). Work zone traffic control schemes and devices shall only be implemented or installed in the field by or under the direct supervision of a person who has satisfactorily completed the training requirements prescribed by FDOT Topic No: 625-010-010-f, “MAINTENANCE OF TRAFFIC TRAINING,” Work Zone Traffic Control and Maintenance of Traffic Intermediate or Advanced Level as appropriate for the project. All flagmen shall have successfully completed the Work Zone Traffic Control and Maintenance of Traffic - Basic Level.

### 3.2 WEATHER PROTECTION

- A. Take necessary precautions to ensure that roof openings and other critical openings in the building are secured. Take immediate actions required to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.
- B. When a warning of gale force (or higher) winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Owner property. Precautions shall include, but are not limited to, closing openings; removing loose materials, tools, and equipment from exposed locations; removing or securing scaffolding and other temporary work; and arranging for all dumpsters to be emptied.

### 3.3 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe, compliant, and proper completion of the Work.
- B. Remove temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Owner.
- C. Replace any trees, shrubs, lawns, or plantings damaged by Builder or its subcontractors or vendors during work of this project within two (2) weeks of occurrence.
- D. Grassed areas generally have irrigation systems below grade; verify location of these systems and all underground utilities in work or staging areas prior to start of construction.
- E. Repair utilities damaged by work of this project.

**END OF SECTION**



## 01505 Construction Waste Management

### PART 1 – GENERAL

#### 1.1 RELATED SECTIONS:

- A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.
- B. Comply with LEED requirements, if applicable. See specification section 01352.

#### 1.2 HAZARDOUS SUBSTANCES

- A. The builder is responsible for proper management of hazardous substances used, stored, handled, generated, or disposed of by his own construction activities (e.g., excess or unwanted hazardous construction-related materials, including, but not limited to: equipment lubricants, used oil filters, aerosols, paints, activators, adhesives, caulks, and other hazardous wastes). In no case shall such construction hazardous waste be commingled with demolition hazardous waste. In no case shall such construction hazardous waste be commingled with non-hazardous construction or demolition waste.
- B. For renovation or demolition projects, 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 thermostats, and batteries. See [www.ehs.ufl.edu/programs/chemrad\\_waste](http://www.ehs.ufl.edu/programs/chemrad_waste).
- C. Evaluation, on-site storage, transportation, disposal and other aspects of Hazardous Waste Management shall comply with applicable Federal, State, and local laws.
- D. Refer to the General Terms & Conditions for requirements related to the discovery of environmental contamination, including, but not limited to, Hazardous Substances.

#### 1.3 CONSTRUCTION WASTE MANAGEMENT

*NOTE: This section only applies to projects with a construction cost of \$500,000 or more.*

In support of Florida Statute 403.7032 and the University's Zero-Waste Goal, the University of Florida requires that its builders maximize the diversion of construction and

demolition (C&D) material from landfills. Faculty and students from the UF School of Building Construction and the College of Design, Construction, and Planning may interact with the Builder to facilitate, coordinate, and document such efforts and/or to conduct research.

- A. Beyond the provisions for such work in either the basic scope of work or bid alternates, the builder shall salvage materials for reuse, resale, or recycling to the maximum extent possible. Typical designated waste streams include land clearing debris, concrete and masonry, metals and appliances, dimensional wood & lumber, wooden pallets, gypsum wallboard (unpainted), paper and cardboard, packaging, and asphalt roofing shingles. Depending on the project, other large volume wastes may be included (e.g., bricks, asphalt, carpeting and pad, plastic, glass, beverage containers).
- B. For projects seeking a 3<sup>rd</sup>-party sustainable building certification, the Builder shall establish and adhere to program-specific waste diversion and recycling goals.
- C. Prior to mobilization, the Builder shall submit a project-specific Solid Waste Management Plan to the University Project Manager for review by the University Solid Waste Coordinator and Sustainable Building Coordinator. This plan shall include the following elements:
  - 1. An explanation of how C&D waste will be recycled or reused – by source separation, time-based separation, or commingled for delivery to an offsite separation facility.
  - 2. A list of materials targeted for recycling and reuse, their estimated quantities, and the predicted end use of the recycled materials, along with a separate list of recyclable or otherwise recoverable materials that must be landfilled.
  - 3. The overall diversion goal (percentage of waste to be diverted from land-filling or incineration).
  - 4. The facilities to be used, both landfills and recycling facilities, indicating which of the targeted wastes are to be received, projected quantities, facility addresses and phone numbers, and documentation of the facilities' permit status.
- D. Builder shall designate an onsite representative to distribute and implement the approved plan, instruct workers, and provide instruction and supervision on separation, handling, and recovery methods. The onsite representative shall also ensure proper labeling of waste collection receptacles and otherwise monitor compliance with the project-specific Solid Waste Management Plan.

E. Reporting

1. Submit monthly progress reports using Owner's form (see sample Waste Reporting Log at the end of this specification) to quantify the total amount of collected waste and the percentage recycled.
2. Maintain accurate records of the final destination of all waste, including manifests, weight tickets, and receipts. Manifests shall be from recycling and disposal site operators who can legally accept the materials for the purpose of reuse, recycling, or disposal. Submit all such records at the end of construction or upon request.

1.4 RECYCLING INITIATIVES

For renovation and demolition projects, the builder and its subcontractors shall cooperate with, and participate in, materials-specific recycling initiatives hosted or supported by the University as required by the UF Design & Construction Standards. See plans and/or technical specifications for more information.

**END OF SECTION**

## UF Waste Reporting Log

Project Name:												Date:				
MONTH	Landfilled Waste (tons)	RECYCLED WASTE														
		Paper and Cardboard (tons)	Metals (tons)	Concrete, Asphalt, Masonry (tons)	Comingled Cans & Bottles (tons)	Land Clearing Debris (tons)	Pallets (tons)	Wood (tons)	E-Waste (tons)	MISC. (tons)						
		white and craft	metal and wire	asphalt, concrete, brick, CMU, etc.		trees, limbs, landscape, sod, rocks etc		recyclable products	controls, panels, machinery	shingles, drywall, ceiling tile, plastics etc						
January	0.00	0.00														
February	0.00	0.00														
March	0.00	0.00														
April	0.00	0.00														
May	0.00	0.00														
June	0.00	0.00														
July	0.00	0.00														
August	0.00	0.00														
September	0.00	0.00														
October	0.00	0.00														
November	0.00	0.00														
December	0.00	0.00														
												Total Recycled Tons	Total Waste Tons	Percent Recycled		
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>#DIV/0!</b>	
Minimum 75% required per F.S. 403.7032																
Builder shall submit this form on or around the 15th of each month to PPD Grounds ( <a href="mailto:damorris@ufl.edu">damorris@ufl.edu</a> and <a href="mailto:amasters@ufl.edu">amasters@ufl.edu</a> ), with a copy to the UF PM.																

## **01700 Project Closeout**

### **PART 1 – GENERAL**

#### **1.1 RELATED SECTIONS:**

Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the technical plans and specifications.

#### **1.2 CERTIFICATE OF OCCUPANCY**

Prior to occupancy of a new building, the Division of Environmental Health & Safety (EH&S) shall issue a Certificate of Occupancy (CO). The CO will state the building is complete, constructed in accordance with the plans and specifications, and meets the minimum code requirements at the time of issuance of the building permit. Project must achieve at least a temporary CO in order to achieve this requirement for the Substantial Completion.

#### **1.3 SUBSTANTIAL COMPLETION**

Separate and distinct from completion requirements related to life safety and building codes is the contractual obligation to achieve Substantial Completion on or before the specified date. Refer to the “Construction Inspection and Closeout” link under “Forms & Standards” on the Planning Design & Construction website ([www.facilities.ufl.edu](http://www.facilities.ufl.edu)). Checklists and forms related to closeout shall be tailored by the Owner and design professional (A/E) to the specific needs of the project.

#### **1.4 AS-BUILT DOCUMENTS**

See the General Terms & Conditions and certain technical specifications for more information regarding as-built / record documents.

#### **1.5 O&M MANUALS**

- A. Builder shall provide draft operation and maintenance (O&M) manuals and other documents for review by UF (Facilities Services), the A/E, and the CxA prior to manufacturer startups, Cx Functional Performance Testing, and Owner training.
- B. Builder shall tailor the O&M documents to the project, excluding or striking through models/types not installed and otherwise including only information pertinent to the products, materials, equipment, or components actually installed. Builder shall clearly identify each item, with references to the construction documents as needed.

- C. Builder shall augment O&M documents with the final approved versions of any submittals, shop drawings, or other system/product data not already included.
- D. Builder shall finalize turnover/closeout documents (including O&Ms) by addressing review comments and incorporating missing or finalized documents, test reports, and other relevant information.
- E. See 1.9 below for content and format requirements.
- F. Asset Tagging – Builder shall identify and work with UF to ensure all assets are in Owner CMMS prior to Substantial Completion.

## 1.6 UTILITY VIDEOS

When required by the technical specifications, television camera videos of underground utility lines shall be provided to the engineer of record and the Owner in MPEG or AVI format.

## 1.7 OWNER TRAINING

- A. Training on building systems, equipment, and materials, the specific requirements for which are outlined in the technical specifications, shall be completed prior to Substantial Completion, at which point the Owner assumes the responsibility for operation and maintenance of the facility.
- B. Builder shall coordinate the schedule for training with UF and provide a comprehensive schedule for all training sessions at least 30 calendar days prior to the first scheduled session.
- C. Builder shall provide – at least two weeks in advance of each scheduled session – a syllabus, outline, or agenda for each training session for review by UF, the A/E, and (for commissioned systems) the CxA.
- D. Training shall be conducted with the (draft) O&M manuals in hand – preferably in conjunction with commissioning activities – and shall be videotaped and turned over to the Owner in MPEG format.

## 1.8 ATTIC STOCK

Coordination of the physical storage location of “attic stock” items shall be made with [the building operation & maintenance entity](#) prior to Substantial Completion, and the items and quantities of same (as outlined in the technical specifications) shall be on hand as a requirement of Substantial Completion. The Builder shall develop a spreadsheet itemization of attic stock and other items to be turned over to the Owner, tracking the type and quantity of material, date(s) of turnover, and other relevant information.

- A. If attic stock is used during the closeout or warranty period. The Builder must replace

these materials prior to the 12 month warranty sign off.

## 1.9 ENERGY REBATE PROGRAM

Builder shall gather product data and other information as needed to assist Owner with its application for energy rebates based on the materials and products installed in the facility.

#### 1.10 PRE-CONCEALMENT PHOTOS

- A. For all new construction and for renovation major projects involving utility/systems infrastructure that will ultimately be concealed behind walls, above removable or hard ceilings, or beneath raised flooring – digital photographs of the infrastructure shall be taken prior to concealment as part of the completion / closeout documents. This will be determined in a project by project basis, but by default, it shall be included unless told otherwise.
  - 1. Images shall be captured after all infrastructure work for the area being photographed is complete and inspected, prior to concealment
- B. Images shall be captured for each room constructed or renovated, including common & support spaces, corridors, stairwells, etc.
  - 1. For areas that cannot be captured with a single image, multiple images or panoramic views shall be provided.
- C. Images shall be named, organized, and correlated with floor plans as needed to make clear what each image is actually depicting. Alternatively, images may be linked from to the as built design model or 2D (PDF) floor plan(s).

#### 1.11 CLOSEOUT DOCUMENTS and OTHER DELIVERABLES

- A. The final version of all O&M manuals and other turnover/closeout documents shall be provided in electronic (searchable PDF) form prior to Final Completion, including a Table of Contents for each discreet manual. Provide these to UF, the A/E, and the CxA on CD-ROM or through a file-sharing platform (e.g., Sharepoint), assembled and organized in electronic folders as follows:

010000 – General Requirements (*with subfolders for pre-concealment photos and other general information such as a complete list of subcontractors with contact information, a list/inventory of attic stock, and a final list/inventory of all colors & finishes*)

030000 – Concrete

040000 – Masonry

050000 – Metals

060000 – Wood and Plastics

070000 – Thermal and Moisture Protection (*including roofing*)

080000 – Doors and Windows

090000 – Finishes

100000 – Specialties (*e.g., lockers, window treatment, acoustic wall panels, operable partitions, toilet accessories, fire extinguisher cabinets, mobile storage systems, etc.*)

110000 – Equipment

120000 – Furnishings (*e.g., fixed tables/seating, lab casework, marker boards, foot grilles, etc.*)

130000 – Special Construction

140000 – Conveying Systems



- 210000 – Fire Protection
- 220000 – Plumbing
- 230000 – HVAC
- 250000 – BAS and Controls
- 260000 – Electrical
- 270000 – Telecommunications
- 274000 – Audio-Visual Systems
- 280000 – Security & Access Control
- 283000 – Fire Detection & Alarm
- 310000 – Earthwork
- 320000 – Exterior Improvements
- 330000 – Utilities

- B. Other than 010000, each e-folder listed above, where applicable, shall include the following sub-folders to consistently organize the documents and material:

1. IOM Documents and Product Data  
*{NOTE: IOM = Installation Operations & Maintenance}*
2. Shop Drawings
3. Training *(including training agendas, sign-in sheets, and videos)*
4. Warranty Documents
5. Other *(e.g., test reports, underground utility videos, Master UL labels, meter data sheets, 3<sup>rd</sup> party certifications or inspections)*

## 2.0 PROJECT-SPECIFIC CLOSEOUT REQUIREMENTS

*(insert project-specific closeout requirements or write NONE)*

**END OF SECTION**

## 01800 General Commissioning Requirements

*Notes to PM, Professional, and Cx Consultant:*

- 1. This template shall be tailored by the Commissioning Consultant as needed for the specific project, particularly those passages written in blue font.*
- 2. Delete this "text box" and any other prompts or notes-to-author prior to finalization of this specification.*

### PART 1 – GENERAL

#### 1.1 RELATED SECTIONS and DOCUMENTS

- A. Documents affecting the work of this Section include other elements of the Contract for Construction, including the Owner/Builder Agreement or Owner/Design-Builder Agreement, the General Terms & Conditions, other sections of the Division 0 and Division 1 non-technical specifications, and the following technical plans and specifications:

- (1) Division 3 – Concrete
- (2) Division 4 – Masonry
- (3) Division 7 – Thermal and Moisture Protection
- (4) Division 8 – Doors and Windows
- (5) Division 9 – Finishes
- (6) Division 22 – Plumbing
- (7) Division 23 – HVAC
- (8) Division 25 – BAS / Controls
- (9) Division 26 – Electrical
- (10) Division 28 – Security and Access Control

- B. A project-specific Commissioning Plan is typically developed upon completion of the submittal and shop drawing process, but a template/example Commissioning Plan may be made available to bidders upon request.

#### 1.2 DEFINITIONS

- A. **Acceptance Phase:** Phase of construction after startup and initial checkout when FPT, O&M documentation review, and facility and user training occurs.
- B. **Basis of Design (BOD):** Documentation of the primary assumptions and rationale behind design decisions that are made to meet the Owner's intent and project requirements. The BOD describes the assumptions used for sizing and selecting systems and components; site and environmental conditions or constraints; and other factors that led to decisions (e.g., codes, standards, operating conditions, functional goals, interior environmental criteria).
- C. **Building Envelope:** The assembly of floor, wall/skin, and roof system components that are designed and intended to reduce the transfer of thermal energy and water vapor and to help eliminate water intrusion.

- D. **Commissioning (Cx):** *(per the National Conference on Building Commissioning)* A systematic process of assuring by verification and documentation, from the design stage to a minimum of one year after construction, that facility systems perform interactively in accordance with the design documentation and intent, and in accordance with the owner's operational needs, including preparation of operation personnel.
- E. **Commissioning Consultant (CC):** The professional consultant responsible to UF for facilitating the Cx program, directing/coordinating day-to-day Cx activities, and verifying that the design intent of the facility is satisfactorily achieved.
- F. **Commissioning Plan (CP):** The project-specific document prepared by the CC that describes all aspects of the commissioning process including roles & responsibilities, documentation requirements, and communication structures. At least two CPs shall be developed – one for building envelope systems and one for MEP systems.
- G. **Deferred FPT:** FPT performed after Substantial Completion due to conditions that preclude the test from being performed in normal sequential order of project delivery.
- H. **Design Professional (A/E):** The team of design professionals responsible to the Owner for creating the Basis of Design and translating it into Construction Documents.
- I. **Functional Performance Test (FPT):** System-level test to verify integration, functionality, and/or operation using direct observation or other monitoring methods to assess system performance in comparison with the Basis of Design. The CC develops FPT procedures and coordinates, witnesses, and documents the testing, which is typically performed by the installing subcontractor or vendor after pre-functional checklists and start-ups are complete. *NOTE: FPTs are tailored to the actual equipment and products to be installed, so their development is contingent upon completion of the submittal review process.*
- J. **Construction Checklist (CL):** List of tasks and elementary component tests that must be completed to ensure proper installation of products and equipment. CLs – which are prepared by the CC, completed by the installing subcontractor or vendor, verified by the Builder, and reviewed by the CC – are primarily static inspections and procedures to prepare equipment or systems for initial operation, coordinated to represent the efforts of the Builder and all subcontractors. CLs shall include manufacturer startup checklists where applicable.
- K. **Systems Manual:** The Systems Manual provides operating staff information needed to understand and optimally operate commissioned MEPF (Mechanical,

Electrical, Plumbing, Fire Protection) systems. The Systems Manual focuses on operation, rather than maintenance, at a systems level – particularly the interactions between equipment.

### 1.3 SUMMARY and DESCRIPTION OF WORK INCLUDED

- A. The University of Florida’s use of commissioning recognizes the integrated nature of building systems and the importance of a waterproof building envelope in today’s complex facilities. The performance of these systems impacts operating cost, efficiency and sustainability, indoor air quality, comfort and productivity in the workplace or classroom/lab, and security. The goal of commissioning is to help deliver facilities that meet or exceed expectations for these factors. Strategies include periodic direct observation of envelope system construction and operation of dynamic building systems through their full range of intended and failure-mode operation.
- B. The specific building systems to be commissioned on this project are:
- (1) BUILDING ENVELOPE (including masonry, curtainwall/storefront and glazing, exterior walls & cladding, flashings & sealants, exterior drainage systems, and roofing)
  - (2) PLUMBING (including domestic water, drainage systems, specialty gases)
  - (3) HVAC (including building entrance of distributed utilities, air handling units, terminal devices, general and hazardous exhaust systems, laboratory fume hoods, return air system, chillers, pumps, VFDs, cooling towers, boilers, heat exchangers, associated or supporting equipment, and TAB)
  - (4) ELECTRICAL (including motors, grounding, lighting controls, emergency power supply system, lighting protection system)
  - (5) LOW VOLTAGE (including DDC Building Automation System, security and access control, audio/visual)
  - (6) (other system to be commissioned, such as process utilities or house gases)
  - (7) (other system to be commissioned)

### 1.4 SUBMITTALS

- A. The CC shall be provided with one copy of all submittals, shop drawings, operation and maintenance (O&M) manuals, Test Adjust & Balance (TAB) reports, other tests conducted outside of the Cx process, and Owner training plans related to the systems being commissioned for review concurrent with the design professionals (A/E).
- B. The Builder shall provide documentation required for Cx activities to CC at least two work days in advance of scheduled Cx activity and include same in O&M manuals. Such project-specific documentation shall include manufacturer and model number of all equipment and components, manufacturer’s printed installation and detailed start-up procedures, full sequences of operation, O&M data, performance data, any performance test procedures, control drawings,

startup plan(s), installation & checkout materials shipped inside equipment, and checkout forms used by factory or field technicians.

- C. See specification [01300](#) and the technical specifications for other submittal requirements.

## PART 2 – PRODUCTS

### 2.1 TEST EQUIPMENT

- A. The Builder or its subcontractors shall provide all specialized tools, test equipment, and instruments required to execute startup, checkout, and FPT of systems and equipment.
- B. Test equipment shall be of sufficient quality and accuracy to test and/or measure system performance according to specified tolerances.
  - (1) Test instruments shall bear a valid NIST-traceable calibration stamp.
  - (2) Frequency of calibration shall be in accordance with applicable NEBB or AABC requirements.
  - (3) See the technical specifications for amplifying information.

### 2.2 [\(other Part 2 Cx requirements\)](#)

## PART 3 – EXECUTION

### 3.1 ROLES and RESPONSIBILITIES

- A. The CC shall:
  - (1) develop the CP(s);
  - (2) develop a spreadsheet-form itemized list of all products and equipment comprising the systems to be commissioned;
  - (3) review and respond to Cx-related Requests For Information concurrently with the A/E design professionals;
  - (4) review completed CLs, perform random verification of checklist items, and make recommendation to Owner to proceed with FPT;
  - (5) write, oversee execution of, and document FPTs;
  - (6) recommend acceptance of performance and functionality or remedial action and retesting;
  - (7) maintain and distribute lists of deficiencies and/or action items related to Cx activities;
  - (8) review, along with the design engineer(s), Owner training plan(s) provided by the Builder;
  - (9) produce draft and final Cx reports;

- (10) plan, coordinate, and oversee periodic post-construction Cx testing, inspection, and troubleshooting – typically on a quarterly basis – during the 12-month “warranty” period following Substantial Completion; and
- (11) produce the Systems Manual.

B. The Builder and its subcontractors shall:

- (1) provide submittals and other documents as outlined below;
- (2) provide samples and/or mockups as required by the technical specifications;
- (3) verify installation, documenting via CLs as construction progresses;
- (4) perform equipment start-up;
- (5) verify the functional readiness of systems to be tested prior to scheduling FPTs;
- (6) schedule FPTs by submitting completed CLs;
- (7) conduct FPT in the presence of the CC;
- (8) troubleshoot and correct deficiencies;
- (9) perform FPT retests as needed (note: the costs for such retests, including those incurred by the CC, design A/E, and Owner, shall be borne by the Builder and not charged to the Owner);
- (10) coordinate Cx activities with Building Automation System work and/or other tests related to the systems being commissioned, such as HVAC Test & Balance, tests by factory representatives, or envelope-related tests;
- (11) finalize the products/equipment list drafted by the CC, augmenting the spreadsheet to indicate each component’s manufacturer and model/type, dates for submittal approval and startup, and other relevant information;
- (12) prepare an Owner training plan to include the time & date, duration, content, and proposed instructors for each session;
- (13) conduct Owner training; and
- (14) participate in the post-construction Cx activities outlined above and perform corrective measures as required.

### 3.2 MEETINGS

- A. At least **(two)** onsite Cx kickoff meetings – **one for building envelope systems and one for MEP systems** – shall be conducted by the CC and Builder for the purpose of reviewing the purpose, extent, and procedures for commissioning with the Builder, its subcontractors, the design professionals (A/E), and the Owner. These kickoff meetings shall be held upon completion of the submittal review process.
- B. Other Cx meetings for coordination, clarification of requirements & procedures, or problem resolution shall be chaired by the CC and held periodically as determined by the CC. Attendance by the Builder and its subcontractors is mandatory.
- C. **(insert other meeting requirements as needed)**

### 3.3 SCHEDULE

- A. The Builder and its subcontractors shall account for startup, Cx activities, testing, and training in the schedule.
- B. As per the UF General Terms & Conditions, satisfactory completion of commissioning and training activities is a pre-requisite for overall project Substantial Completion.
- C. (insert other schedule notes or requirements as needed)

### 3.4 CONSTRUCTION CHECKLISTS (CLs)

- A. Pre-functional checklists provide a means to confirm that equipment and systems are completely installed, integrated with other building components and systems, and operational. They ensure that functional performance testing may proceed without unnecessary delays. Pre-functional testing for a given system must be successfully completed prior to functional performance testing of the equipment or subsystems of that given system.
- B. CC-specific or project-specific requirements or procedures
- C. CC-specific or project-specific requirements or procedures

### 3.5 FUNCTIONAL PERFORMANCE TESTS (FPTs)

- A. CC-specific or project-specific requirements or procedures
- B. CC-specific or project-specific requirements or procedures
- C. CC-specific or project-specific requirements or procedures

### 3.6 O&M MANUALS

- A. CC Review and Approval: Prior to Owner training and Substantial Completion, the CC will review the Operation and Maintenance (O&M) manuals, documentation, “redline” as-builts, and warranty information for all commissioned systems. Deficiencies will be communicated to UF and the A/E for consolidation with other review comments and resolution/correction by the Builder.
- B. CC-specific or project-specific requirements or procedures
- C. CC-specific or project-specific requirements or procedures

### 3.7 SYSTEMS MANUAL

- A. The CC facilitates and coordinates the development of the Systems Manual and its contents, but the A/E, Owner, Builder, and subcontractors shall actively participate in the development of this manual. Specific Builder and subcontractor deliverables and responsibilities include, but are not limited to:



- (1) Equipment start-up, shutdown, and restarting instructions (*mechanical, BAS, and electrical subcontractors*).
- (2) As-built single-line diagrams for all commissioned systems (*mechanical, BAS, and electrical subcontractors*).
- (3) Record documents of Building Automation System, including Sequences of Operation, a list of as-built set points, descriptions of set point purpose(s), recommended adjustable ranges, and reset schedules (*BAS subcontractor*)
- (4) Building automation logic flow diagram or code flow diagram (*BAS subcontractor*).
- (5) Trending checklist with a list of all points trended, including sample rates (*BAS subcontractor*).
- (6) Recommended re-commissioning interval, including set-points assessment, operational schedule assessments, and testing schedules (*BAS subcontractor*).
- (7) Equipment manufacturer's recommended schedule and instructions for recalibration of sensors, transmitters, and actuators (*mechanical, BAS, and electrical subcontractors*).
- (8) List of diagnostic tools for systems commissioned to maintain efficient operation of the equipment and system (*mechanical, BAS, and electrical subcontractors*).

B. [CC-specific or project-specific requirements or procedures](#)

C. [CC-specific or project-specific requirements or procedures](#)

3.8 (other Part 3 Cx requirements ... if any)

A. [CC-specific or project-specific requirements or procedures](#)

B. [CC-specific or project-specific requirements or procedures](#)

C. [CC-specific or project-specific requirements or procedures](#)

**END OF SECTION**