

Louisiana State University Design Standards

DIVISION 01 - GENERAL REQUIREMENTS

1 BARRICADES, TEMPORARY FACILITIES AND CONTROL

- 1.1 The contractor shall install fences and/or barricades as necessary for the protection and safety of pedestrian and vehicular traffic and for protection of trees and shrubbery (see Division 2). Fences shall be detailed and shown on the contract documents. Unless otherwise stated on the construction drawings, construction fences shall be 6' chain link fencing with a lockable access gate for (see Division 2).
- 1.2 If the construction period exceeds 90 days, then 4' chain link fencing shall be installed at the drip-line of each tree as an additional protective barrier. These barriers shall be maintained by the Contractor for the duration of the project.
- 1.3 In the case that a designated crossing or any portion of a designated pedestrian route cannot be maintained, Contractor shall be responsible to provide necessary signage to redirect pedestrian travel, as necessary, to ensure an alternate safe route. See Traffic Control Plan.
- 1.4 Construction access route in/out of the project site and location of a staging area are to be shown in the construction drawings. Contractor's work zone, equipment and material storage will be restricted to the specific areas indicated on the plans. It is the responsibility of the Contractor to keep the project site and staging area secured. Proposed location of dumpsters, portable toilets, field operation trailer, lay down areas, storage containers, perimeter construction fence, etc. are to be shown in the staging plan.
- 1.5 Contractor is to maintain pedestrian access to the building's main entrance during construction. If the building's main entry is to be affected by construction, Contractor is to provide temporary access through an alternate entry and make any necessary accommodations to meet ADA requirements.
- 1.6 Unless otherwise stated on the construction documents, the construction fence is to have a fence screen wrap with pre-approved LSU Graphics. Production proof from vendor needs to be pre-approved by LSU before going into production.
- 1.7 Unless otherwise stated on the construction documents, a project identification sign on a 2x frame is not required. Instead, a 4 ft. x 4 ft. project identification banner installed over the construction fence screen is acceptable. Project identification banner is to be located near staging area access gate and include project name, project rendering (if available), Designer and General Contractor's company logos, LSU Planning Design & Construction and Facility Planning and Control logos, as applicable. Production proof from vendor needs to be pre- approved by LSU before going into production.

2 ACCESS, DAMAGE TO EXISTING STRUCTURES AND TRAFFIC RESTRICTIONS

- 2.1 The Contractor shall be permitted access to the site at the University's convenience. The Contractor shall be responsible for any repair and/or replacement of existing lawns, ditches, concrete sidewalks or gutters, fencing or any other structures, including utilities damaged by the Contractor's operations. The Contractor shall conduct a pre-construction site survey to document the existing conditions of the project site, access routes, and/or any adjacent areas that could be affected during construction and to report any damage that had not been previously identified. If no such damage is recorded, then any structures over which the Contractor has crossed during construction which are later found to be damaged shall be considered to have been damaged by the Contractor and shall be repaired and/or replaced by the Contractor at no cost to the University. The structure(s) must be returned to their original condition to the satisfaction of LSU.
- 2.2 The University shall designate areas for parking. The construction operations of the Contractor may not cause any obstruction to the free flow of traffic on the streets of the campus without the prior authority of the University.
- 2.3 Any work performed by LSU Facility Services to repair any damage done to LSU property and/or to address any traffic control matters not addressed by the Contractor will be charged to the Contractor's MOT Account. See Temporary Utilities for information on Contractor's MOT Account.
- 2.4 Traffic Control Plan

- 2.4.1 Contractor is to provide a Traffic Control Plan (TCP) prior to mobilizing into the project site. All construction activity impacting roadways (vehicular access) or sidewalks (pedestrian access) shall have a written Traffic Control Plan (TCP) and access plan. The TCP and access plan is to be submitted at the preconstruction conference (or Prior) for review and comment by the Office of Parking and Transportation Services.
- 2.4.2 The responsibility and implementation costs for any TCP required before, during, or after the project construction activity, shall be the responsibility of the Contractor. These costs shall include all labor and equipment necessary to meet the requirements of the TCP, including all reimbursement costs to the Office of Parking and Transportation Services for special traffic direction, construction parking enforcement, or other personnel utilized to provide and assure the safety of LSU during the construction.
- 2.4.3 The TCP shall follow the standards found in the Uniform Manual for Traffic Control Devices issued by the State Department of Transportation (DOTD), except as modified by the Office of Parking and Transportation Services.
- 2.4.4 Cost and convenience should always be subordinated to the safety of the students, faculty, employees, and visitors on the LSU campus.
- 2.4.5 Provide flagmen and police escorts and traffic control when required by authorities having jurisdiction and as needed to provide public safety during construction operations.

3 TOILETS

- 3.1 The Contractor shall provide and maintain temporary toilets as necessary for use of workmen, unless otherwise noted. Locate toilets within staging area or where directed by LSU, and keep toilets in sanitary condition.

4 PROTECTION AND SECURITY

- 4.1 The Contractor shall at all times be responsible for ensuring the safety of all occupants and users of the building from injury or damage resulting from any contact with the work, workmen, or equipment. The Contractor shall at all times be responsible for protecting building, property and contents during construction.
- 4.2 Contractor is to coordinate in advance any operations that may result in high levels of noise, vibration, odors, or any other activity that may cause disturbance or nuisance to occupants of the building or to anyone in close proximity to the project site. Contractor is to notify User Agency's representative and the Architect at least (3) working days in advance of proposed disruptive operations.
- 4.3 Contractor is to adequately seal work zones and take necessary measures to ventilate areas directly to the outside to minimize disturbance or discomfort caused by odors emitted by certain products during their installation and/or schedule the work outside of normal working hours, to the extent possible.
- 4.4 The use of products that create harmful fumes, vapors, gases, or mists are prohibited. If Contractor has any questions regarding a product, Contractor is to notify Architect and LSU PM prior to use. LSU PM will consult with LSU Environmental Health and Safety for their evaluation.
- 4.5 Contractor is to provide laminated identification badges for all Contractor personnel working on the project site and require all personnel to wear a uniform shirt identifying plainly the company name.

5 DEMOLITION AND WORK RESTRICTIONS

- 5.1 The Contractor shall perform all demolition necessary or required to complete the work shown on the drawings or described in the specifications. Take special precautions to protect existing work which is to remain in place or to replace or repair any damage to such work.
- 5.2 The Contractor shall establish construction waste management plan to ensure 50% (by volume) is diverted from the waste stream (salvaged, recycled, or reused). Separate containers shall be provided onsite by the contractor for source separation by all job-site personnel.
- 5.3 Quantities shall be tracked and final documentation and verification of landfill diversion records should be provided to LSU with final application for payment. Final report of construction debris tonnage (and volume)

shall be submitted to LSU Recycling. This department can also provide contacts for recycling materials. Designer shall add a spec outlining the expectation of the management plan.

5.4 Environmental Health and Safety

5.4.1 Contractors are notified that Louisiana State University buildings may have existing asbestos containing material (ACM). Prior to the commencement of any work on a project, to determine which requirements of LAC 33:111.5151 (Emission Standard for Asbestos) apply, the owner or operator of a demolition or renovation shall thoroughly inspect the affected building or part of the building where the activity will occur for the presence of asbestos. The inspection shall be performed by an inspector accredited by the Louisiana Department of Environmental Quality. The inspection will identify all asbestos containing material, and all suspect (for asbestos) material involved in the scope of work. All suspect (for asbestos) material is assumed to be asbestos containing, and shall be handled as asbestos containing unless sampling proves otherwise. Once the inspection is complete, a copy of the inspection report shall be provided to LSU PDC and LSU EHS.

5.4.2 Caution shall be taken during all phases of the renovation, demolition, and construction process to prevent any contact or disturbance of suspect ACM that was not previously identified. If suspect ACM is discovered by a contractor which was not previously identified (all pipe insulation within enclosed walls is expected to contain asbestos), the contractor shall: stop work, assume the material contains asbestos, and notify LSU EHS by telephone at 225-578-0534 or 225-578-5146 and also via e-mail at mcobb9@lsu.edu.

5.4.3 If the material is asbestos containing, two notifications to the Louisiana Department of Environmental Quality (LDEQ) are required in accordance with LAC 33:III.5151.F.2.d.xvi & e. The notification to LDEQ shall be provided as soon as possible. The notification shall include the date and hour the unexpected suspect asbestos material was discovered.

5.4.4 Notifications

5.4.4.1 LDEQ Office of Environmental Services: DEQ.AsbestosNotifications@la.gov

5.4.4.2 LDEQ Regional Office responsible for inspecting the project: CROasbestos_admin@la.gov

5.4.5 At the completion of any renovation of a space or new construction, the architect shall provide a signed statement that no asbestos containing building material (ACBM) was specified as a building material in any construction documents, or to the best of his or her knowledge, no ACBM was used as a building material in the space or building. This is in accordance with LAC 33:III.2735.A.7 – Exclusions, and a copy shall be submitted to LSU EHS for filing in the asbestos management plan.

5.4.6 Contractors are notified that Louisiana State University buildings may have hazardous material. Hazardous materials include but are not limited to light bulbs, PCB light ballast, paint, solutions, and any unknown material in a container. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify LSU EHS by telephone at 225-578-5146 or 225-578-5640 and also via e-mail at lpepitone@lsu.edu.

5.4.7 It is the general contractor's responsibility to make sure their subcontractors are aware of the possible presence of asbestos containing and hazardous materials.

5.4.8 LSU EHS will need equipment information on all projects that affect the LSU Title V Air Permit. EHS will need data on new equipment, and data on modification or replacement of existing equipment. Equipment included in the request includes: boilers or water heaters operated by natural gas, generators operated by diesel or natural gas, fuel or chemical storage tanks, cooling towers, and any equipment with an exhaust stack. This information shall be reported to Lisa Pepitone at 225-578-5146 or lpepitone@lsu.edu

5.5 In addition to calling Louisiana One Call, Contractor is to submit a Utility Locate Request Form to obtain an Excavation Permit from LSU Facility Services prior to any digging at project site. Form is to be submitted at least 48 hours in advance.

5.6 Contractor is to submit a Utility Shutdown Request Form to LSU Facility Services two weeks in advance to any utility shutdown. Any required shutdown are preferred when school is out of session. Any shutdowns shall be coordinated with LSU PM through the Architect.

- 5.7 LSU Facility Service forms can be found at www.lsu.edu/fs by selecting “Forms” under “About” dropdown menu.
- 5.8 Any work performed by LSU Facility Services related to Utility Locate Requests/Excavation Permits and/or Utility Shutdown Requests may be charged to the Contractor’s MOT Account. See Temporary Utilities for information on Contractor’s MOT Account.
- 5.9 Unless otherwise stated in the Construction Documents, Contractor is to limit work to normal business hours (7:00 a.m. to 5:00 p.m.), 7 days a week except Fridays afternoon and Saturdays of Home Football games, unless specifically granted otherwise by the Owner in writing. Any and all requests for changes in work hours or work days must be presented to the Architect at least (3) working days prior to the requested change. In addition, Contractor is required to start cleaning the project site on Noon of the Friday before a home football game. Residential Life projects may have different restrictions to accommodate the needs of residential students. Such as limiting working hours from 8:00 a.m. – 7:00 p.m. Monday through Friday and weekend hours from 9:00 a.m. to 6:00 p.m., unless otherwise indicated.
- 5.10 Contractor is to review academic calendar and limit work during Dead and Exam week to quiet work.
- 5.11 Contractor is to comply with any limitations on the use of public streets or any other restrictions imposed by the authorities having jurisdiction.
- 5.12 Contractor is to provide advanced notice for any activity that could create dust, noise, or strong odors. See Protection section.
- 5.13 Smoking, E-cigarettes, or the use of tobacco products are not allowed on LSU Campus.

6 TRASH AND DEBRIS REMOVAL

- 6.1 The Contractor shall not permit trash and debris to accumulate in the building or on the ground in the vicinity of the building. They shall establish and maintain a regular daily routine for removing trash and debris and hauling it away from the premises. The University shall have first salvage rights to any material or equipment removed from campus buildings. Any ornamental iron work, decorative light fixtures or hardware of historic nature shall be turned over to Facility Services
- 6.2 The Contractor shall be responsible for the removal and offsite disposal of all trash and debris from the campus originating from his project.
- 6.3 The use of LSU dumpsters is prohibited.

7 CUTTING AND PATCHING

- 7.1 Cutting and patching for all work in the project shall be the responsibility of the Contractor. They shall make neat and substantial joints between existing and new work, including patching, painting, finishing, etc. Patching shall be done to match existing construction as closely as possible. All work shall be left in a complete and finished condition, including existing surfaces affected by work in this contract.

8 WARRANTY PERIOD

- 8.1 All workmanship, materials, and equipment shall be guaranteed for a period of one year from the date of the official acceptance of the Contract, unless a longer period is stated in the specifications or in manufacturer's literature.
- 8.2 When items of equipment or material fail to perform or to give satisfactory service during this warranty period, the Owner may require that corrections be made even to the extent of installing new equipment or materials. When this becomes necessary, the warranty period shall extend for a period of one year from the date of acceptance of the new installation. The extended warranty period shall apply only to those items which have not performed satisfactorily.

9 ELECTRONIC SUBMITTALS

- 9.1 For purpose of clarity, Contract Documents include
 - 9.1.1 Paper and Digital Construction Drawings
 - 9.1.2 Paper and Digital Text Documents that include Construction Specifications (Specs), and Operation’s Manual (O&M)

- 9.2 These guidelines are exclusively for electronic deliverables. Guidelines for submittals other than electronic media are specified elsewhere in the Contract Documents
- 9.3 Unless specified otherwise in the Contract Documents, the Consultant shall submit electronic deliverables at the following stages of the project
 - 9.3.1 Programming
 - 9.3.2 Schematic Design
 - 9.3.3 Design Development
 - 9.3.4 Construction Documents
 - 9.3.5 Project Closeout
- 9.4 Electronic deliverables for Programming, Schematic Design, Design Development, Construction Documents and Project Closeout must be in Adobe Acrobat (pdf) and/or dwf formats. "CAD files larger than 10 megabytes shall be in dwf format. DWG files are required for Project Closeout.
- 9.5 Electronic submittal shall include pdf and/or dwf files of all CAD layouts. This assures that paper prints match digital files. Each respective CAD file will be named to relate to its sheet number within the plan set. For example, the pdf file for the sheet numbered A1-1.dwg shall be named "A1- 1.pdf and/or "A1-1.dwf.
- 9.6 All electronic deliverables shall be identical to the paper copies. That is, electronic deliverables are digital versions of paper documents and include:
 - 9.6.1 Construction Drawings
 - 9.6.2 Project Specifications
 - 9.6.3 Operations Manuals

10 MEDIA AND DATA TYPE

- 10.1 All electronic deliverables must be submitted on Compact Disks (CDs) and/or DVDs formatted for the PC. Each media disk must be labeled with the project's name, project's number (State ID number), date, and consultant's name.
- 10.2 Compressed files are allowed only if accompanied by a non-proprietary, "self- extracting" file. E-mail submittals are not allowed.
- 10.3 Electronic Text and Graphic Documents shall be in Adobe Acrobat (pdf) and/or AutoCAD dwf formats. PDF files shall be in Version 6 or higher.
- 10.4 CAD drawings shall be in AutoCAD Release 2000 or greater. If a program other than AutoCAD is used to generate the project drawings, the Consultant shall be responsible for all conversion procedures necessary to generate the AutoCAD files. The Consultant shall also be responsible for maintaining the accuracy and inclusion of all items within the drawings during any translation process. DXF format is not allowed.
- 10.5 Data Structure
 - 10.5.1 Store all files in a master folder. The master folder must be titled with the name of the project, date, and its corresponding project number.
 - 10.5.2 The master folder shall contain the following subfolders
 - 10.5.2.1 Specifications
 - 10.5.2.2 Operations
 - 10.5.2.3 Manual
 - 10.5.2.4 XREF's
 - 10.5.2.5 Raster
 - 10.5.2.6 CAD
 - 10.5.3 The RASTER folder shall contain images, logos, graphics, etc.
 - 10.5.4 The CAD folder shall contain subfolders for each discipline, including
 - 10.5.4.1 Civil
 - 10.5.4.2 Landscaping
 - 10.5.4.3 Architecture

- 10.5.4.4 Structural
- 10.5.4.5 Mechanical
- 10.5.4.6 Electrical

10.6 CAD File Names:

- 10.6.1 File name should use format: PROJECTNUMBER_YEAR_SHEETNUMBER PROJECTCODE.EXTENSION (e.g., Architectural Floor Plan Sheet 9 shall be named: 1960191B6_05_A09FP.DWG)
- 10.6.2 Individual files shall be placed in their corresponding subfolder (e.g., "A" sheets in the ARCHITECTURE subfolder)

11 CAD FORMAT

- 11.1 CAD drawings shall be developed in conformance with the "CAD Layering Guidelines" (CLG) published by the American Institute of Architects (AIA), Second Edition. Each drawing file shall include only those layers that are used in the specific file. Unused or empty layers shall be "purged." Layers that are not listed in the CLG shall follow the same format as the CLG.
- 11.2 CAD drawings shall use standard AutoCAD menus, fonts, hatch patterns and line types. Copyrighted or non-Autodesk standard entities are not allowed.
- 11.3 CTB, PCP, PC3 or other files defining layouts, pen table, colors, widths and line styles shall be provided. All unused entities such as layers, line-types, and blocks shall be "purged."
- 11.4 All drawings will be developed in full-scale format (e.g., one foot = one foot) in Model Space, and will be maintained as an integrated whole with individual drawings plotted using Layout/Paperspace.
- 11.5 Layouts: Sheet layouts will have borders developed as "layouts" in Paperspace. Layouts must include project name, project number, name of structure, structure's physical address, state site-code, and state ID number (The site code and state ID can be obtained from Louisiana's Department of Facility Planning and Control). Viewports in Layouts must be "locked" so that they retain their scale factors.
- 11.6 Nominal dimensions are not allowed in the generation of electronic drawings.
- 11.7 Title page shall contain a Vicinity Map, a project summary that includes square footage and an outline of applicable codes.
- 11.8 Sample Title Block

SHEET NO	DRAWING DESCRIPTION	AUTOCAD FILES
TS1	Title Sheet, Notes, Abbreviations, Symbols	1960191B6_05_TS1.DWG
SP-2	Site Plan	1960191B6_05_SP02.DWG
A-3	Demolition of Second Floor Plan	1960191B6_05_A03DFP2.DWG
A-4	Admin Office Enlarged Floor Plan	1960191B6_05_A04EFP.DWG
A-5	Interior Elevation	1960191B6_05_A05IE.DWG
A-6	Building Section	1960191B6_05_A06BS.DWG

12 PRE-CONSTRUCTION CONFERENCE

- 12.1 After notification that the Contract has been executed, the Architect shall arrange and conduct with the Owner and Contractor a pre-construction conference to be held at the project site. The Contractor shall be responsible for ensuring that their subcontractors are in attendance and shall furnish to the Architect and Owner (1) the Schedule of Values, (2) list of subcontractors, including low voltage subcontractor, and material suppliers, (3) the Construction Schedule. (4) Submittal Schedule, and (5) the following per Article 7 for the Supplementary Conditions
 - 12.1.1 Fixed job site overhead cost itemized with documentation to support daily rates.
 - 12.1.2 Bond Premium Rate with supporting information from the General Contractor's carrier.
 - 12.1.3 Labor Burden by trade for both Subcontractors and General Contractor.
 - 12.1.4 Internal Rate Charges for all significant company owned equipment

13 PUNCH LIST ITEMS

- 13.1 At the time of the final inspection, a punch list with assigned monetary values will be compiled by the design professional in charge. If these items are not completed within the 45 day lien period, the monetary value of the item will be withheld and the item will be completed by the University.

14 TEMPORARY UTILITIES

- 14.1 Utilities during construction of new facilities or major modifications are the responsibility of the contractor. They may be purchased from the University, if available. Contractor is responsible for connection, metering and payment.
- 14.2 Contractor is to contact LSU Office of Bursar Operations to establish a construction account for billing purposes (MOT Account) prior to commencement of construction. Contact information: Laurie Meyer at (225) 578-3847 or email at lzalfe1@lsu.edu.
- 14.3 Contractor is responsible for providing temporary meter information to LSU for billing purposes.

15 ACCEPTANCE AND FINAL INSPECTION

- 15.1 No project will be accepted for occupancy and no final inspection will be scheduled until the HVAC system is completely commissioned, including being fully integrated into the Campus Building Automation System, and balanced.
- 15.2 A Technical Air Balance report (TAB) must be prepared and delivered to the University. The TAB is to be reviewed and approved by the designer and their consultant prior to final inspection. The TAB will be utilized by Facility Services at the time of final inspection to determine if the HVAC system is operating properly and the project can be accepted and occupied. A Registered Professional Engineer, employed by Facility Services, will be the determinant of the acceptability of the HVAC system.

16 INTERIOR PLANNING PARAMETERS

- 16.1 We recognize that space planning must remain flexible to accommodate the wide range of needs across campus. These planning parameters are not intended to create entitlements or impose inflexible requirements.
- 16.2 New Construction
 - 16.2.1 These parameters continue to serve as a reference for sizing key building components, including offices, classrooms, and laboratory or research spaces. While they reflect typical expectations, adjustments may be warranted and will be evaluated on a case-by-case basis.
- 16.3 Existing Space
 - 16.3.1 Space planning within existing facilities is often influenced by structural constraints, aging infrastructure, architectural characteristics, and considerations related to historic preservation. Many older buildings were not originally designed for today's academic or administrative functions. As a result, some programs align more efficiently with certain buildings than others, and program placement cannot always be determined solely by space efficiency. Managing academic and administrative space involves multiple complex factors and campus-wide priorities.
 - 16.3.2 For renovation projects, space reallocations, or major relocations, these planning parameters are intended to serve as a reference point to support decisions that enhance the efficiency, adaptability, and long-term usability of University space.
- 16.4 Accessibility Requirements
 - 16.4.1 All space planning and design must comply with the Americans with Disabilities Act of 1990 (ADA), including the 2010 ADA Standards for Accessible Design. These standards establish minimum scoping and technical requirements to ensure that newly constructed or altered university facilities are accessible and usable by individuals with disabilities.
- 16.5 Space Planning Standard
 - 16.5.1 Refer to D12 Furnishings

17 NEW BUILDINGS NAMED AFTER AN INDIVIDUAL

- 17.1 New buildings named after an individual: A bronze plaque with bibliographical information, including the Individual's relationship with LSU, may be displayed.
- 17.2 The History Commission can be contacted for assistance on wording of the plaque and this requirement is in addition to any required by the State.

18 SUSTAINABLE DESIGN REQUIREMENTS

18.1 Recycling Construction & Demolition Waste

- 18.1.1 Recycle at least 50% or more of all construction and demolition waste (e.g. concrete, wood, asphalt, scrap metal). Records must be kept of total weights (in tons) recycled, and reported to LSU staff periodically/as available.

18.2 Plumbing

- 18.2.1 Install the most efficient appliances/fixtures possible
- 18.2.2 Install WaterSense-labeled appliances and equipment
- 18.2.3 If not WaterSense-labeled, appliances and equipment must meet these requirements
 - 18.2.3.1 Low-flow faucets (1.5 gallons per minute, or lower)
 - 18.2.3.2 Sensor-operated faucets (recommended: 0.5 gpm faucets and 15-second shut-off time).
 - 18.2.3.3 Low-flow toilets (1.28 gallons per flush, or lower)
 - 18.2.3.4 Low-flow urinals (0.5 gallons per flush, or lower)
 - 18.2.3.5 Low-flow showerheads (2.0 gallons per minute, or less)

18.3 Lighting

- 18.3.1 Install the most energy-efficient lighting available for the lighting task
 - 18.3.1.1 Install LED lighting wherever possible
 - 18.3.1.2 Install occupancy sensors, timer controls, manual dimming, bi-level switching or automatic daylight dimming for more efficient indoor lighting controls
 - 18.3.1.3 Outdoor lighting - consider motion / photo sensor lighting, dimming controls, or timed lighting that turns off for places like electrical yards

18.4 Appliances & Equipment

- 18.4.1 Use the following types of appliances
 - 18.4.1.1 Residential clothes washers – ENERGY STAR labeled
 - 18.4.1.2 Residential dish washers – ENERGY STAR labeled
 - 18.4.1.3 Pre-rinse spray valves - < 1.3gpm
 - 18.4.1.4 Ice machines – ENERGY STAR labeled

18.5 Refrigerant Management

- 18.5.1 Meet the following (small units of 0.5 pounds or less refrigerant are exempt)
 - 18.5.1.1 No CFC-based refrigerants used in new HVAC&R systems
 - 18.5.1.2 If reusing equipment, complete a CFC phase-out plan

18.6 HVAC / Air Filtration

- 18.6.1 For new construction, consider conducting a comprehensive commissioning process for mechanical, electrical, plumbing and renewable energy systems in accordance with ASHRAE 0-2005 and 1.1-2007
- 18.6.2 Consider demand-response program (system for capability with real-time, fully-automated DR)
- 18.6.3 Consider installation of renewable energy systems (solar PV, solar thermal)
- 18.6.4 Consider green power, carbon offsets, or renewable energy certificates (RECs) for project
- 18.6.5 Systems for filtering outdoor air to occupied spaces must have particle filters or air-cleaning devices that meet one of the following
 - 18.6.5.1 Minimum Efficiency Reporting Value (MERV) of 13 or higher
 - 18.6.5.2 Class F7 or higher (CEN standard EN 779-2002)

- 18.7 Paints, Sealers & Adhesives – Consider using the following for all projects
 - 18.7.1 Interior paints & coatings – Meet Green Seal Standard GS-11 (for 90% by volume for VOC emissions, and 100% for VOC content)
 - 18.7.2 Adhesives, sealants and sealant primers - comply with SCAQMD Rule 1168
 - 18.7.3 Aerosol adhesives – comply with Green Seal Standard GS-36
 - 18.7.4 Anti-corrosive and anti-rust paints – comply with Green Seal Standard C-03
 - 18.7.5 Clear wood finishes, floor coatings, stains, primers, sealers applied to interior elements – SCAQMD Rule 1113
- 18.8 Furniture & Materials
 - 18.8.1 Generally furniture comes from state-contracted materials. In the event that we are procuring furniture outside of the state contract, consider the following specifications
 - 18.8.1.1 Composite Wood - Must be documented to have low formaldehyde emissions that meet the California Air Resources Board ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEE) resins or no added formaldehyde resins.
 - 18.8.1.2 Furniture - Must comply with ANSI/BIFMA e3-2011 Furniture Sustainability Standard, Sections 7.6.1 and 7.6.2, using either the concentration modeling approach or the emissions factor approach
 - 18.8.1.3 Carpet Systems - Must meet testing and requirements of Green Label Plus program (VOC limit of 50 g/L)
- 18.9 Roofing Materials
 - 18.9.1 For roofs that will not use the standard terracotta tiles, use materials having a Solar Reflectance Index (SRI) equal to or greater than 78 for low-sloped roofs or 29 for steep sloped roofs for a minimum of 75% of the roof surface
 - 18.9.2 Consider green or vegetated roofing
- 18.10 Parking Lots / Paving Materials
 - 18.10.1 Consider using porous or semi-pervious pavement (e.g. porous asphalt, pervious concrete, interlocking concrete blocks, and gravel/grass pavers, brick pavers) to help manage stormwater
 - 18.10.2 Consider pervious pavement for either entire parking surface, or parking stalls, crosswalks and overflow lots
 - 18.10.3 Consider using paving materials with Solar Reflectance Index of at least 29
 - 18.10.4 Consider installation of swales, retention basins, vegetated buffer strips, infiltration systems, constructed wetlands and/or rain gardens (bio-retention areas) to help manage stormwater
 - 18.10.5 Materials - Consider use of recycled asphalt, recycled rubberized asphalt
- 18.11 Site Selection / Landscape
 - 18.11.1 Minimize runoff and erosion on steep slopes (maximum slope of 3:1 for grassy slopes, or 2:1 slopes without turf or ground cover)
 - 18.11.2 As much as possible, avoid removing any mature live oaks or other trees
 - 18.11.3 Reuse trees and shrubs where possible
 - 18.11.4 Recycle/compost all cleared vegetation
 - 18.11.5 Retain as much of the existing native landscaping as possible
 - 18.11.6 Use native plant species
 - 18.11.7 Use irrigation techniques that are water-efficient: consider low-flow sprinkler systems, soaker hose, drip or subsurface irrigation
 - 18.11.8 Incorporate large trees into the landscape plan
 - 18.11.9 Incorporate clusters of trees into the landscape plan
 - 18.11.10 Incorporate undergrowth into the landscape plan
 - 18.11.11 Install root protection to protect tree roots from compaction during construction
 - 18.11.12 Provide sediment control barriers where fill or excavate will be temporarily located

19 SINGLE USE RESTROOMS AND LACTATION ROOMS

- 19.1 All major new buildings and major renovations, generally those renovating entire buildings or large portions of buildings, are to include at least one single use restroom and at least one lactation room, possible more than one in larger buildings. Review requirements with LSU/PDC

20 SPECIAL PROCEDURES

20.1 Parking and Staging

- 20.1.1 Parking on the LSU Campus is strictly limited. Parking permits are required by anyone parking on campus, regardless of the amount of time on campus or the location.

- 20.1.2 If the Work requires contractors or subcontractors to stage and/or park on the LSU campus, the Contractor is subject to the following

20.1.2.1 Staging Areas

- 20.1.2.1.1 As defined by the plans. Any variation from the proposed staging area must be submitted to PDC for review. Contractor is responsible for final approval of staging area from LSU Parking and Transportation Services.

- 20.1.2.1.2 A cost will be applied for staging areas' impact to existing parking. The Contractor is responsible for this cost. Refer to the LSU Parking and Transportation Service's website at www.lsu.edu/parking for Contractor Parking and Staging Rates.

- 20.1.2.1.3 Contractor Parking & Staging Request form must be completed online and can be found on LSU Parking and Transportation Service's website at www.lsu.edu/parking

20.1.2.2 Parking

- 20.1.2.2.1 Contractor parking is as determined by LSU Parking and Transportation Services, on a project-by-project basis.

- 20.1.2.2.2 The Contractor is responsible to obtain a permit for each vehicle parking on campus.

- 20.1.2.2.3 Contractor Parking & Staging Request form must be completed online and can be found on LSU Parking and Transportation Service's website at www.lsu.edu/parking

- 20.1.2.3 Contractor to review LSU Parking and Transportation Services Contractor Parking & Permit Policy which can be found on LSU Parking and Transportation Service's website at www.lsu.edu/parking

20.2 Keys

- 20.2.1 The Contractor is responsible for obtaining keys via LSU Lock Shop.

- 20.2.2 The Contractor Key Request form can be found at www.lsu.edu/fs. This form is to be completed by the Contractor, signed and returned to LSU Project Manager.

20.3 Security and Protection

- 20.3.1 Site Security - Maintain security of site and building at all times. Coordinate with the Owner. Contractors shall erect and maintain appropriate access restricting barriers and warning signs to prohibit entry into construction work sites by unauthorized personnel. All pedestrian areas must be protected from activity that might result in debris, tools, or other materials falling onto pedestrian-trafficked areas, by means of well-constructed temporary protective barriers or restrictions, warning signs and reasonable detours.

- 20.3.2 All work is to be done in compliance with OSHA regulations. Hard hats, proper work clothes and shoes are required. Safety glasses must be worn during any operation where flying particles may occur. T-shirts and tennis or running type shoes are not allowed.

- 20.3.3 The Contractor shall be permitted access to the site at the Owner's convenience. The Contractor shall be responsible for any repair and/or replacement of existing lawns, ditches, concrete sidewalks

or gutters, fencing or any other materials or structures existing in the area which is damaged during construction operations. The Contractor shall conduct a preconstruction site survey with the Owner to verify any such elements that need repair or which is already damaged in any manner and properly identify, describe, and record with the Owner. If no such damage is recorded (photographs), then any materials or structures over which the Contractor has crossed during construction and/or are later found to be damaged shall be considered to have been damaged by him and shall be repaired and/or replaced by the Contractor as necessary to return them to the original condition to the satisfaction of the Owner at no cost to the Owner. The Owner shall designate areas for material storage and parking within 200 feet of the site. The construction operations of the Contractor may not cause any obstruction to the free flow of traffic on the site without the prior authority of the Owner.

- 20.3.4 Owner intends to continue to occupy adjacent portions of the existing building site during the entire construction period. Cooperate with Owner to minimize conflict and to facilitate Owner's operations. Schedule the Work to accommodate owner occupancy of adjacent structures. All Work must be conducted so as to cause absolute minimum of interference with and inconvenience to Owner's continuing operations.
- 20.3.5 Provide adequate safeguards for control of dust and moisture during construction. Close coordination with Owner for these environmental controls is mandatory.
- 20.3.6 All construction operations must be conducted as required to insure complete safety to all persons (Owner's personnel, Contractor's personnel and others) who may be on site or adjacent to work.

20.4 LSU is a Tobacco-free campus

20.4.1 General Policy - Smoking and the use of all tobacco products on the LSU Campus is prohibited. This prohibition applies to all individuals while on the LSU Campus, including faculty, staff, students, administrators, contractors, and visitors. The use of tobacco products is harmful to health and imposes costs on LSU and all members of the LSU community. State law RS 40:1300.263 requires LSU to adopt a smoke-free policy and authorizes LSU to adopt a smoke-free policy.

20.4.2 Definitions

- 20.4.2.1 LSU Campus - all land, property, buildings, and other facilities owned, leased, occupied, or otherwise controlled by LSU. This includes any land, property, buildings, and other facilities that may be leased by LSU third parties, such as fraternities, sororities, affiliated foundations, or others.
- 20.4.2.2 Smoking - inhaling, exhaling, burning, carrying, or possessing any lighted tobacco product, including cigarettes, cigars, pipe tobacco, and any other lighted combustible plant material; it also means the use of electronic cigarettes and any other product that is used to deliver nicotine by means of smoke or vapor.
- 20.4.2.3 Tobacco Products - any and all forms of tobacco, including but not limited to cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, smokeless tobacco, snuff, and chewing tobacco, as well as electronic cigarettes and any other product which is used to deliver nicotine by means of smoke or vapor. This does not include any FDA approved product or device intended to assist the user to stop smoking or using tobacco products.

20.5 Isolation of Work Areas in occupied facilities

20.5.1 Prevent dust, fumes, and odors from entering occupied areas.

- 20.5.1.1 Prior to commencing work, isolate the HVAC system in area where work is to be performed in accordance with approved coordination drawings.
- 20.5.1.2 Disconnect supply and return ductwork in work area from HVAC systems servicing occupied areas.
- 20.5.1.3 Maintain dust partitions during the Work. Use vacuum collection attachments on dust producing equipment. Isolate limited work within occupied areas using portable dust containment devices.

20.5.2 Ventilation and Humidity Control

- 20.5.2.1 Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
 - 20.5.2.2 Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by the Owner from fumes and noise.
- 20.6 Responsibility for Work Force
- 20.6.1 Contractor will ensure and maintain a working environment free of harassment, intimidation and coercion and shall specifically ensure that all foremen, superintendents and other supervisory personnel are aware of and carry out our commitment to maintain such a working environment.
 - 20.6.2 B. Contractor shall enforce strict discipline and good order among the Contractor's employees, Subcontractor's and others carrying out the work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.
 - 20.6.3 C. Contractor shall require workmen to be sensibly attired, courteous, and professional in mannerisms while on the University premises. The Contractor is cautioned that workers are considered to be under the direct control of the Contractor. Inappropriate or socially unacceptable behavior on the part of any worker may affect the ability of the Contractor to bid on any future University projects. The University reserves the right to order the dismissal of any individual worker if that person displays poor behavior. Interaction with students, faculty and staff is discouraged.
- 20.7 Sexual Harassment Policy
- 20.7.1 LSU does not tolerate sexual harassment.
 - 20.7.2 LSU Planning, Design and Construction has zero tolerance for sexual harassment and foul language on the LSU campus. Verbal or physical actions or motions either directed at passersby or between contractors that may be perceived as harassment are not allowed. Even whistling at other contractors to direct them is recommended against, as it may be perceived as harassment.
 - 20.7.3 Any notifications or complaints received will result in individuals identified being immediately removed from the project.
 - 20.7.4 In the event of a complaint, the PDC Project Manager and any other PDC employees made aware will report the incident to the Title IX office and ensure the offender(s) are removed from the campus immediately by the General Contractor.
- 20.8 Specific LSU Safety Requirements
- 20.8.1 LSU students, faculty and staff shall not be exposed to any harmful construction debris or hazardous materials. (i.e., lead-based paint, asbestos, dust, noise, vapors, etc.). Where contaminants generated by construction may enter adjacent occupied building space; the contractor shall erect a containment system sufficient to protect LSU faculty, staff, and students from exposure. The containment system shall also be subject to approval by LSU Planning, Design and Construction and the Office of Environmental Health & Safety (EHS).
 - 20.8.2 Prior to any demolition, renovation or construction; building materials shall be inspected for the presence of Asbestos Containing Materials (ACM). Questions regarding ACM or any other hazardous building materials shall be directed to EHS.
 - 20.8.3 The contractor shall comply with all OSHA regulations on job site.
 - 20.8.4 Contractors must send a copy of the site safety plan (Written documentation of a working and active employee safety program as defined by the OSHA Construction Standard), along with the site safety supervisors name and a 24 hour phone number, to the Office of Environmental Health & Safety (EHS).
 - 20.8.5 The construction site must be restricted to authorized personnel only. High hazard areas involving machinery, hot work, roofing kettles, overhead work, excavations, etc. shall be barricaded and the barricade must be enforced at all times.

- 20.8.6 The contractor shall make available the Material Safety Data Sheet for any hazardous material used or stored on the campus. A copy of the MSDS shall be sent to EHS for review prior to the project start date.
- 20.8.7 Any injury requiring medical attention which occurs on site must be reported to EHS, and the contractor shall conduct an investigation and develop action plan for prevention. This action plan may be reviewed by EHS upon request and/or EHS may be an observer in this investigation.
- 20.8.8 Activities involving electrical utility shall be closely coordinated with Energy Services to avoid outages and accidents. Extreme caution must be taken to assure proper lockout/tagout of circuits to prevent injury and electrical flash/explosion.
- 20.8.9 Contractors shall be responsible for the proper disposal of waste materials. (Solid Waste, Hazardous Waste, etc.) Any Regulated Hazardous Waste shipped off campus by a contractor shall be manifested to that contractor. Any Waste manifested to LSU shall be authorized by EHS only.
- 20.8.10 Contractors shall be responsible for compliance with Water and Air Quality Standards as they relate to unauthorized releases or emissions of regulated substances into the environment. (Storm drains, bayous, etc.).
- 20.8.11 Contaminated water and solvents used for daily equipment cleanup will be stored outside of the building in large containers for off-site disposal. Disposal in any campus drainage system is strictly forbidden. Any violation of this requirement will result in a \$200.00 deduction in the contract amount per occurrence.
- 20.8.12 The Contractor shall be responsible for debris removal from the campus. At no time shall debris be placed outside the building units unless contained in a dumpster, trailer, or a truck.

21 ROOM NUMBERING

- 21.1 Refer to Room Numbering Guidelines