DIVISION 00 – PROCUREMENT AND CONTRACT REQUIREMENTS

00 00 00 – General Conditions

1. Reference Procurement website for Policies and Procedures, https://www.rit.edu/fa/procurement/content/policies-procedures
2. Consultants working at RIT must be pre-qualified and entered into the Approved Vendor List at Facilities Management Services (FMS). Application/information forms are available in hard copy or electronic format and will be sent to interested vendors upon request.
3. This guideline is for both new construction and renovation work.
4. While many parties may be involved in RIT construction projects, RIT FMS is the authoritative client for all projects. Suggestions, directions, needs, etc. which are raised by others during design phase work or construction phase work are not to be acted upon without approval of the designated Project Manager assigned by FMS to the job.
5. RIT recognizes that sustainability is a concept that seeks to provide the best outcomes for human and natural environments by meeting the needs of the present generation without compromising the ability of future generations to meet their needs. Whenever possible the University attempts to foster sustainability. Include sourcing products that can be recycled or are biodegradable and that contain less toxic and hazardous chemicals and additives; source reduction; and solid waste reduction as well as purchasing local goods that are grown in environmentally sound ways or buying products through systems that produce the least amount of environmental pollutants. The University desires that the Provider foster sustainability and partner with the University in the expanding areas of sustainability.
6. RIT new buildings may be capable of LEED certification, but the University shall not pursue on all projects. Verify requirements with Project Manager.
7. We encourage our design consultants to apply a universal and inclusive design approach to ensure that our facilities are accessible to the entire community that RIT serves. In addition to accommodating the general public, RIT's community includes students with a variety of special needs. It is important to our campus that this approach include any accessibility requirements set forth by state building codes; and since we are a 'place of public accommodation', that all ADA requirements be adhered to, as required by the Federal government. **Note that the needs of the diverse RIT community may exceed statutory requirements in some cases.** In addition, for some projects, focus groups may be created to review the design to ensure that we do not install textures and colors that produce visual contrast issues for specific segments of the RIT community.
8. RIT Owner-Consultant Agreements
    a. These requirements do not supersede any requirements put forth in the standard contract language or general conditions.
    b. Firms are responsible to review this document in detail and discuss any concerns with FMS.
    c. Contractors should raise any questions or concerns before work is bid.
    d. Successful bidders shall confirm that their proposed methods meet these guidelines prior to installation.
    e. For more information, see https://www.rit.edu/procurement/construction-documents
9. Drawings/Specifications
    a. A/E and Contractors are required to follow the CAD Specifications per Division 00 Appendix 1.
    b. A/E are required to follow the DSRs included during the RFP process.

00 65 00 – Instructions for Payment / Lien Release

1. Information can be found at https://www.rit.edu/facilitiesmanagement/sites/rit.edu.facilitiesmanagement/files/Vendor%20Contractor%20Info/Design%20and%20Construction%20Guidelines/instructionsforpayment.pdf

00 73 16 – Insurance Requirements (Plan Review Guidelines)

1. Reference Insurance Plan Review Guidelines for RIT.

00 73 19 – Health and Safety Requirements

1. Reference the RIT Environmental Health and Safety (EHS) website for all requirements at the following link, https://www.rit.edu/ehs/
2. Laboratory Guidelines
    a. Laboratory renovation and construction has a number of OSHA standards to be applied during design. Each of these standards calls for different engineering controls to be considered: ventilation, storage cabinets, interlocks, separation of electrical and water sources, fire system requirements, building material and guarding requirements. Additionally, the ANSI standard for eyewashes and safety showers

must be met for labs where chemicals are to be used. EHS should be involved early in design reviews of labs to ensure that the hazards are being addressed through building and room systems.

b. This link - https://www.osha.gov/sites/default/files/publications/OSHA3404laboratory-safety-guidance.pdf - provides a comprehensive guide to hazards and standards that should be taken into account, including:
    i. The Air Contaminants standard (1910.1000) provides rules for protecting workers from exposure to over 400 chemicals.
    ii. The Ethylene Oxide standard (29 CFR 1910.1047) requires employers to provide workers with protection from occupational exposure to ethylene oxide (EtO).
    iii. The Formaldehyde standard (29 CFR 1910.1048) requires employers to provide workers with protection from occupational exposure to formaldehyde.
    iv. The Hazard Communication standard (29 CFR 1910.1200) is designed to protect against chemical source illnesses and injuries by ensuring that employers and employees are provided with sufficient information to recognize, evaluate and control chemical hazards and take appropriate protective measures.
    v. The Occupational Exposure to Hazardous Chemicals in Laboratories standard (29 CFR1910.1450), commonly referred to as the Laboratory standard, requires that the employer designate a Chemical Hygiene Officer and have a written Chemical Hygiene Plan (CHP), and actively verify that it remains effective.
    vi. The Bloodborne Pathogens standard (29 CFR 1910.1030), including changes mandated by the Needlestick Safety and Prevention Act of 2001, requires employers to protect workers from infection from human blood borne pathogens in the workplace. The standard covers all workers with “reasonably anticipated” exposure to blood or other potentially infectious materials (OPIM).
    vii. Ionizing Radiation standard (29 CFR 1910.1096). Ionizing radiation sources may be found in a wide range of occupational settings, including, but not limited to, healthcare facilities, research institutions, nuclear reactors and their support facilities, nuclear weapons production facilities, and other various manufacturing settings. These radiation sources pose considerable health risks to affected workers if not properly controlled. This standard requires employers to conduct a survey of the types of radiation used in the facility, including x-rays, to designate restricted areas to limit worker exposure and to require those working in designated areas to wear personal radiation monitors. In addition, radiation areas and equipment must be labeled and equipped with caution signs.
    viii. Occupational Noise Exposure standard (29 CFR 1910.95).This standard requires employers to have a hearing conservation program in place if workers are exposed to a time-weighted average of 85 decibels (dB) over an 8-hour work shift.
    ix. The Control of Hazardous Energy standard (29 CFR 1910.147), often called the “Lockout/Tagout” standard, establishes basic requirements for locking and/or tagging out equipment while installation, maintenance, testing, repair, or construction operations are in progress. The primary purpose of the standard is to protect workers from the unexpected energization or start-up of machines or equipment, or release of stored energy.
    x. Electrical Hazards standards (29 CFR 1910 Subpart S).Wiring deficiencies are one of the hazards most frequently cited by OSHA. OSHA’s electrical standards include design requirements for electrical systems and safety-related work practices. If flammable gases are used, special wiring and equipment installation may be required.

c. Laboratory ventilation rates are determined by EHS based on occupancy and hazards present. Consult with EHS to verify rates are appropriate for the research being conducted and/or if the initial use of the room changes. The following exchange rates are required:
    i. Ten-eight (10-8) ACH while a room is occupied
    ii. Eight-six (8-6) ACH while a room is unoccupied

d. Additional information can be found at the following links:
    i. http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDSandp_id=10106
    ii. https://www.osha.gov/SLTC/laboratories/otherresources.html

3. In addition to contractors’ respective policies and OSHA Fall Protection standards, contractors will adhere to the following,
    a. Safety railings and/or tie-off points for compliance with OSHA Fall Protection shall be provided for rooftop inspections and service of mechanical equipment, electrical equipment, roof drains, and the roof membrane.
    b. Where possible, avoid the construction of Confined Spaces (i.e. pump in manhole for water feature).

   c. Provide OSHA 29CFR-1910 compliant Fall Protection both inside and outside the building (parapet height of 42 inches, railing, or anchor points), and provide testing of anchor points. Submit testing certificates to Owner at close out. Guards to be galvanized powder-coated finish.
4. Hot Work Permits
   a. Anytime work requires brazing, cutting or welding, that utilizes open flame and/or could produce sparks that could accidentally start a fire, the contractor or employee doing the work is required to obtain a Hot Work Permit (https://www.rit.edu/fa/grms/ehs/sites/rit.edu.fa.grms.ehs/files/docs/hotworkpermit.pdf). Submit permit online and pick up from the EHS Office in the Facilities Management Building, room 1280. Permits should be requested at least 24 hours in advance of the start of the hot work.
   b. See https://www.rit.edu/fa/grms/ehs/fire/hotworks.html for detailed requirements.
5. Lockout/Tagout
   a. RIT's Lock Out Tag Out (LOTO) program outlines practices and procedures to be used by authorized employees that affix the appropriate types of locks and tags to disable machinery/equipment prior to maintenance or service work.
   b. See https://www.rit.edu/fa/grms/ehs/content/lockouttagout for detailed requirements.

00 73 43 – Prevailing Wages

1. Certain projects performed for RIT may be funded with Federal or State monies and therefore subject to Davis Bacon Prevailing Wage requirements. When specified in the Supplementary Instructions to Bidders, these RIT construction contracts will be bound by these prevailing wage requirements. Such contracts will be subject to the following provisions:
   a. The Prevailing Wage Schedule in force at the time of the award of Contract, will become part of the Contract.
   b. Each employee engaged in work on the project shall be paid not less than the current rate of prevailing wage, including supplemental benefit payments listed for his/her occupation.
   c. If the prevailing rate changes after the Contract has been let, the Contractor is required to pay not less than the new rate that is prevailing at the time the work is performed at no change in contract price.
   d. Certified payrolls, documenting compliance with the Prevailing Wage Rates shall be submitted with each application for payment.
2. Current prevailing wage schedules may be obtained at https://sam.gov/content/wage-determinations.

Appendix 1 – CAD Specifications

1. General
    a. CAD files are required on all alteration, addition, and new construction projects.
    b. The CAD Specifications shall apply to all CAD programs, specifically Revit and AutoCAD.
    c. This document outlines content and formatting requirements within the project CAD files.
    d. Reference DSR 5 for submission / file transfer requirements.
2. Space Data
    a. Room Numbers
        i. All room numbers and names will be assigned by the Planning & Design department during the Design Development phase. Any changes to the wall layouts or door locations after the initial room numbering assignments have been issued shall require a review by the Planning & Design department. It is the Architect's responsibility to notify RIT of the changes and obtain updated room numbers, if any.
        ii. For each space with an assigned room number, include the room number, room name, and square footage in the room identity information.
        iii. Room number shall be written using the "TEXT" command on the layer named "EC1 Space Numbers"; color 7-White. Do not use the "MTEXT" command.
    b. Architect shall draft Area Polylines in all AutoCAD file submissions for new buildings or building additions.
        i. Used to define total building gross square footage, indicative of the gross footprint of the building / floor.
        ii. Draw on the layer named "EC1 Area Polygons"; color 6-Magenta.
        iii. Use the "close" command to complete polygon.
        iv. Two polylines shall be included: one for the outside face of the exterior wall perimeter; one for the inside face of the exterior wall perimeter.
    c. Architect shall draft Space Polylines in all AutoCAD file submissions for each individual room / space in which the layout was altered.
        i. Used to define room / space square footage.
        ii. Draw on the layer named "EC1 Space Polygons"; color 3-Green.
        iii. Use the "close" command to complete polygon.
        iv. Draw on the dominant interior face of the exterior wall and party walls, regardless of thickness or material type. For small enclosures built against the exterior wall, place line on the interior face of the exterior wall.
        v. If an enclosed space is located between a room and a corridor (such as a pipe chase), it is not included in any room SF. It does still require a space polygon.
        vi. Mechanical equipment and related piping and ductwork located inside walls will not be considered when locating polylines.
3. Drawing Content
    a. Revit files shall be a modeled version of the physically-built environment. AutoCAD files shall be a line drawing representation of the physically-built environment. Files used during the design phases shall be maintained throughout the life of the project, concluding at Record Documents. The files shall be updated through Construction and shall include all addenda, bulletins, sketches, etc.
    b. Revit file requirements include the following:
        i. Accurate layout of building elements including walls, doors, windows, mullions, ramps, stairs, and MEP equipment, fixtures, piping, conduit, ductwork, structural steel, etc.
        ii. Optional: actual materials, textures, and colors used on all building element surfaces (walls, floors, doors, windows). Ensure associated material reference folders are included with submission of Revit files.
    c. AutoCAD file requirements include the following:
        i. Accurate layout of building elements including walls, doors, windows, mullions, ramps, stairs, and MEP equipment, fixtures, piping, conduit, ductwork, structural steel, etc.
        ii. Each floor shall have its own file.
        iii. Terms and Abbreviations: Refer to UDS Module 5.
        iv. Layers: Drawings shall use the NCS Standard (AIA CAD Layer Standard). No drawing objects will be stored on layer '0' (zero) or layer 'Defpoints'.
        v. Lineweights, Linetypes, Colors: Plot using the **RIT Standard BW.ctb** file as the basis for your own plotter configurations to provide proper colors and lineweights per the RIT Specifications. Do not change the file in any way. Contact the Design Manager for .ctb file.

vi. Text and Font:
1. Notes with leaders shall be one entity. Use multi-leaders at scale in which drawing will be printed. Do not explode or break apart text from leader.
2. Maintain, at minimum, .9 line space factor between text lines. Maintain, at minimum, .75 font width factor between letters.

vii. Blocks and Hatching
1. Refer to Module 6 of the UDS for Standard Reference Symbols.
2. All blocks will be created using “By Layer”.
3. Size blocks in relation to the drawing plot scale.
4. Fill in any attribute fields that are included in the block.
5. Do not mirror blocks.
6. Temporary blocks used in drawing creation should be exploded and purged out of the drawing. This includes entities that are copied/pasted within or between drawing files.
7. RIT follows no hatch standards. Patterns, scales, angles are selected at user’s discretion. However, hatching should occur on the associated service layer with appropriate linetypes, lineweights, scales, and colors.

4. Drawing Sheets
   a. All drawings shall use the RIT Title Border file. Contact the Design Manger for title border file.
   b. Floor plans shall not be less than 1/8” = 1’-0”. All final drawings shall conform to ARCH D (24” x 36”) plot size. ARCH E (36” x 48”) will be accepted with approval from the Design Manger.
   c. Cover sheet shall include, but is not limited to,
      i. RIT Project Number
      ii. Official Project Title
      iii. Location on RIT Campus, including building name, building number, floor, etc.
      iv. Architect and Engineer name and address
      v. Professional seal and signature (include on all drawings)as required by NYS Department of State
      vi. Addendum number and date if applicable
   d. All services shall have dedicated drawing sheets, as outlined per section 5b. Additional requirements may be necessary:
      i. Security and Access systems shall have dedicated drawing sheets, including motion sensors, door sensors/switches, door lock releases, key card readers, central stations, with spaces indicated.
      ii. Any special fire systems shall have dedicated drawing sheets (foam, other); indicate system type, area served, component locations, discharge nozzles, detectors, connections to alarm/power/HVAC.
5. Sheet Organization (reference UDS Module 1)
   a. Format: Discipline Designator and Sequence Number. Example: A101-R1
   b. Discipline Designators (Reference UDS Module 1):

Order Sequence	Designator	Discipline
1	G	General
2	H	Hazardous Materials
3	V	Survey/Mapping
4	B	Geotechnical
5	C	Civil
6	L	Landscape
7	S	Structural
8	A	Architectural
9	I	Interiors
10	Q	Equipment
11	FA	Fire Alarm
12	FP	Fire Protection / Sprinkler
13	P	Plumbing
14	M	Mechanical / HVAC (Ductwork and Piping)
15	E	Electrical (Lighting and Power)
16	T	Telecommunications (A/V, Phone, Data, Systems)
18	R	Resource

c. Sheet Type Designators (Reference UDS Module 1):

Numerical Series	Description
000	General (symbol legend, abbreviations, notes)
100	Plans
200	Elevations
300	Sections
400	Large Scale Drawings, Interior Elevations
500	Details
600	Schedules and Diagrams
900	3D Representations (isometrics, photographs, etc.)

6. Text Styles
    a. All text shall be 1/8” or 3/8” height when plotted.
    b. Create all text in uppercase lettering, except for industry standard recognized unit designators (kHz, Vac, etc.) Sheets that consist mainly of text may use lowercase lettering.
    c. Text shall read from left or bottom of sheet.
    d. Approved fonts include,
        - Georgia – used for titles, headings, etc. (“RIT” font).
        - Arial – used for notes and general information.
7. Dimensions
    a. Specify dimensions of less than one foot in inches and use zero suppression.
    b. Specify dimensions one foot or greater in feet and inches.
    c. Do not stack fractions.
    d. Locate dimension text above dimension line. Text must be read from left or bottom of page.
    e. Arrows, slashes, ticks are all acceptable arrowheads; keep consistent throughout drawing set.

End of Division 00