Office of University Architects
for Facilities Planning
UNIVERSITY OF GEORGIA

UGA DESIGN & CONSTRUCTION
SUPPLEMENTAL GENERAL REQUIREMENTS & STANDARDS
CHANGES FROM JULY 29, 2022 VERSION TO MAY, 2023 VERSION

Table of Contents

- Added: "01 41 26.07 – Chemical Storage Rooms"
- Added: "28 20 00 – Video Surveillance System"
- Added: "Appendix A – Detail and Section Drawings"

00 00 07 – Design Professional Design Process Requirements

- 1.D. Edited: "Results of preliminary testing and validation shall be reviewed with UGA PM and Engineering personnel"
- 1.E. Added: "For all drawing sets (Sd, DD, etc.)"
- 1.E.v. Added: "1. Indicate any space(s) where Demand Controlled Ventilation (DVC) are intended to be used and how the strategy will be implemented."
- 1. Added: "L. Design Professional shall ensure that ADA minimum clearances are slightly exceeded to take into account tolerances for work in the field so as to ensure ultimate compliance with ADA guidelines."
- 1. Added: "M. The minimum office corridor width shall be 5'-0" to allow for adequate passing space in office corridors."

00 00 08 – Design Professional Documentation Requirements & Deliverables

- 1.D.vi.a. Added new subpoint in its entirety: "FMD Projects Only: Basis of Design documents shall be submitted to FMD's Commissioning Team for review with each submission"

00 00 10 – BIM Requirements

- 4.4.6. Edited: "Information shall include life cycle cost (LCC) and return on investment (ROI)" to "Information shall include life cycle cost (LCC), return on investment (ROI), and Energy Use Intensity (EUI)"
- 4.4.6. Added "Design Professional shall coordinate with UGA PM to incorporate the latest utility and energy rates from the UGA Office of Utility and Energy Management"

01 31 23 – Project Website

- 1.A.i. Edited: "File Transfer Protocol (FTP)" to "web-based file upload/download system"

01 41 26.01 – Right of Way Encroachment / Roadway Ownership

- Updated: "UGA Owned Roads" Map to Spring 2023 Version

01 41 26.05 – Rock Removal – Rock Blasting

- Checklist Item 10. Added: "*" with following footnote, "*Post- blast information will be updated after the event."

01 75 00 – Starting & Adjusting

- 1.B. Added: "startup certification"

01 81 00 – Facility Performance Requirements

- Facility Performance Requirements Checklist: Energy Performance Added: “Design Professional provided the Energy Use Intensity (EUI)”
- Facility Performance Requirements Checklist: Energy Performance Added: “Design Professional coordinated with UGA PM to obtain updated energy and utility rates to use in LCC calculations”

01 91 13 – General Commissioning Requirements

- 1.E.iv.b. Added: “UGA/Cx closeout meeting:” and “Coordinate with controls personnel to also attend this meeting”

02 40 00 – Demolition

- 1. Added: “F. In buildings/spaces with pneumatic controls, the pneumatic tubing needs to be plugged and protected to prevent uncontrolled release of compressed air”

Architectural Campus Planning Principles

- Edited: “Below are some examples of Vernacular/Georgian/Neo-Classical building styles found on the UGA campus and a brief indication of their characteristics” to “Below are examples of Georgian, Federal and Greek Revival building styles found on the UGA campus and a brief indication of their characteristics”

07 00 00 – General Thermal & Moisture Protection

- 1.B.i. Added: “j. Leak detection system(s) shall be installed in roofing systems beneath plazas which as located above occupied building spaces”

08 10 00 – Doors and Frames

- 2. Added: “F. Prior to issuance of GMP or CD-level documents, Design Professional shall coordinate all openings and glazing in doors with regard to applicable codes, and further coordinate so that the openings are visually consistent (i.e. instead of having three different sizes of door lites down a corridor, the DP shall size the door lites to the most restrictive dimensions allowable by the applicable codes between the three door conditions).”

09 00 00.01 – Custodial Storage

- B.i. Added: “Provide one janitorial closet per floor.
- 1.B.iv.a. Added:
  vi. Washing Machine
    1. Basis of Design for space planning purposes: Maytag Model # MVP575Gw or equal
    2. Provide 110V outlet to serve washer

  vii. Drying Machine
    1. Basis of Design for space planning purposes: Maytag Model # MEDP575GW or equal
    2. Provide 220V outlet to serve dryer

  viii. 4” duct venting for dyer through outside wall.
  ix. floor/mop sink.
  x. Verify electrical requirements for charging of equipment.
- 1.B.v.a. Added:
  vi. Washing Machine

1. Basis of Design for space planning purposes: Maytag Model # MVP575Gw or equal
2. Provide 110V outlet to serve washer

vii. Drying Machine

1. Basis of Design for space planning purposes: Maytag Model # MVP575GW or equal
2. Provide 220V outlet to serve dryer

viii. 4" duct venting for dryer through the outside wall.

ix. Floor/mop sink.

x. Verify electrical requirements for charging of equipment.

11 53 13 – Laboratory Fume Hood

- 1.A. Added: "ii. Appendix A"
- 2.H. Added: "Control valve turrets shall be needle valve type to allow for precise control."
- 2.O. Added: "viii. Configure fume hood base cabinets to maximize storage height. The bottom tray should easily accommodate 4L bottles and the top shelves simultaneously store 1L bottles. Orient outlets and pump switches horizontally above base cabinet doors, if necessary."
- Removed: "ROOF CURB FOR EXHAUST FAN TYPICAL DETAIL", "FLEXIBLE CONNECTION DETAIL – TYPICAL FOR ALL FUME HOOD EXHAUST FANS" to Appendix A – Table of Contents as "11 53 13-A – Fume Hood Replacement"
- Relocated: "EXPLODED VIEW OF FLANGED CONNECTION – TYPICAL FOR ALL EXHAUST DUCTS" to Appendix A as "11 53 13-B – Exhaust Duct Flanged Connection"

11 71 00 – Autoclaves

- Added new section in its entirety:

1. General

A. Design Professional shall coordinate for autoclaves and glasswashers to slide into walls including designing a mechanical space on the other side of the wall to facilitate maintenance access to DI tanks, steam generators, detergent, etc.

2. Products

A. Autoclaves shall be in-wall or thru-wall type, not in room type with cabinet enclosures."

12 93 13 – Bicycle Racks

- 2.B. Added: "ii. If vertical/wall-mount is necessary, obtain approval through UGA PM for CycLoops Model 2174 or approved equal."

22 00 00 – General Plumbing Requirements

- 1.A. Added: "xii. Appendix A"
- Relocated: "DE-IONIZED WATER INSTALLATION DETAIL" to Appendix A as "22 00 00-A – De-ionized Water Installation"

22 15 13 – Compressed Air Piping

- 3.A. Added: "at 40 psi or minimum required by code (whichever is greater)."

23 00 00 – General Mechanical Requirements (HVAC)

- 1. Added: “C. Design Team shall collaborate with all disciplines and UGA PM to determine proper sizing of mechanical rooms”
- 1. Edited: C. to D., made new bullet labeled C.
- 1.D.xxx. Added: “i. Design Professional shall account for reduced load on any existing systems if an existing space will be conditioned by new/different systems. Coordinate with UGA PM, as needed.”
- 1.F.v. Removed: “not” after “Ensure that thermostats are”

23 05 14 – Variable Frequency Drive

- 2.L. Added: “For applications with redundant VSDs, review with UGA PM if manual bypass switch is needed.”
- 2.Q. Added: “New 20 HP motors and greater shall have front and back ceramic bearings, in lieu of an SGR.”

23 05 19 – Meters & Gauges

- 2.A. Edited: “Flexim FLUXUS 5000 series or GE Panametrics” to “Flexim F501, Onicon F-4300, or equal”
- 2.B. Edited: “Steam flowmeters shall have a 100:1 turn down; basis of design shall be Gilfo ILVA or Veris Accelabar” to “Steam flowmeters shall have a 50:1 turn down; basis of design shall be Veris Accelabar”
- 2.E. Added: “iii. Ranges shall be appropriate for the duty specified.
  Temperature Ranges:
  1. Chilled water: 0-100° F
  2. Condenser water: 0-160° F

  Pressure Ranges:
  1. Chilled water: 0-160 PSIG
  2. Condenser water suction: 30” HG to 30 PSIG
  3. Condenser water discharge: 0-60 PSIG

23 07 13 – Duct Insulation

- 1.A. Added: “iii. Appendix A”
- Relocated: “TRAPEZE HANGER INSULATION DETAIL” to Appendix A as “23 07 13-A – Trapeze Hanger Insulation”

23 07 19 – HVAC Piping Insulation

- 1.A. Added: “iii. Appendix A”
- Relocated: “A.H.U. Coil Piping Detail – Single Coil” to Appendix A as “23 20 00-A – AHU Coil – Single Coil”
- Relocated: “A.H.U. Coil Piping Detail – Multiple Coils” to Appendix A as “23 20 00-B – AHU Coil – Multiple Coils”
- Relocated: “A.H.U. Coil Piping Detail – Hot Water Coil With Loop Pump” to Appendix A as “23 20 00-C – AHU Coil – HW Coil with Loop Pump”
- Relocated: “Fan Coil Unit & Terminal Unit Coil Piping Detail” to Appendix A as “23 20 00-D – FCU & Terminal Unit Piping”

- Relocated: “Pump and Gauge Manifold Piping Detail” to Appendix A as “23 20 00-E – Pump & Gauge Manifold Piping: End Section Pump”
- Removed: “Fan Coil Unit & Terminal Unit Coil Piping Mockup”

23 13 00 – Security and Access Control

- 2.B.ii.a. Edited: “HID Dorado WP644B model or equal” to “Wavelynx Ethos readers with UGA Custom Security Keys”
- 2.G.ii. Edited: “EP1502” to “LP1502”
- 2.K.i.a. Added: “GRI equivalent”
- 2.K.ii.a Added: “GRI equivalent”
- 2.K.ii.b. Added: “GRI equivalent”

23 20 00 – HVAC Piping Schematics

- 1.A. Added: “iii. Appendix A – UGA Standards Details”
- Relocated: “A.H.U. Coil Piping Detail – Single Coil” to Appendix A as “23 20 00-A – AHU Coil – Single Coil”
- Relocated: “A.H.U. Coil Piping Detail – Multiple Coils” to Appendix A as “23 20 00-B – AHU Coil – Multiple Coils”
- Relocated: “A.H.U. Coil Piping Detail – Hot Water Coil With Loop Pump” to Appendix A as “23 20 00-C – AHU Coil – HW Coil with Loop Pump”
- Relocated: “Fan Coil Unit & Terminal Unit Coil Piping Detail” to Appendix A as “23 20 00-D – FCU & Terminal Unit Piping”
- Relocated: “Pump and Gauge Manifold Piping Detail” to Appendix A as “23 20 00-E – Pump & Gauge Manifold Piping: End Section Pump”
- Removed: “Fan Coil Unit & Terminal Unit Coil Piping Mockup”

23 21 13 – Hydronic Piping

- 1.A. Added: “v. Appendix A”
- 2.B. Added: “Underground condenser (cooling tower) water piping shall be heat-fusion joined polypropylene. Aboveground condenser water piping may be welded steel or polypropylene.”
- Relocated: “AUTOMATIC AIR VENT DETAIL” to Appendix A as “23 21 13-A – Automatic Air Vent”
- Relocated: “MANUAL AIR VENT DETAIL” to Appendix A as “23 21 13-B – Manual Air Vent”
- Relocated: “INSULATION TIE-DOWN DETAIL” to Appendix A as “23 21 13-C – Insulation Tie-Down”

23 22 13 – Steam & Condensate Heating Piping

- 2.B. Removed: “iv. Underground piping shall contain leak detection wire wired to a monitoring panel. The manufacturer’s representative shall check the leak detection wiring, for continuity, prior to back filling”

23 22 16 – Steam & Condensate Heating Piping Specialties

- 1.E. Added: “within buildings”
- 2.B. Added: “or Shannon Insultech”

23 36 01 – VAV Terminal Units

- Edited: “F. Insulation, where needed to prevent condensation or achieve design noise levels, shall be 1”-thick, closed-cell foam insulation with a minimum of R=4. Insulation shall meet state and local code requirements applicable to air terminal unit insulation and shall meet the current edition of the following standards – ASTM C1071, UL 181, NFPA 90A, ASTM E81 (or UL 723 or NFPA 255). Raw edges shall be coated with an approved sealant. Alternatively, terminal units may be double wall with fiberglass insulation in which case internal walls must be solid, not perforated. Discuss with Project Manager” to
“F. Terminal unit insulation, where needed to prevent condensation or achieve design noise levels shall be either closed-cell foam or fiberglass insulation as follows:
i. Closed-cell foam (not for use in lab buildings): 1”-thick minimum, minimum of R-4, raw edges shall be coated with an approved sealant, and shall meet requirements applicable to air terminal units for the current edition of the ASTM C1071, UL 181, NFPA 90A, and ASTM E81 (or UL 723 or NFPA 255).
ii. Fiberglass: only for use with double wall terminal units with solid, non-perforated internal walls.”

23 52 00 – Heating Boilers

- 3.D. Added: “Contractors installing boilers shall be required to have the appropriate Certificate of Authority from The Office of Insurance and Safety Fire”

23 64 16.16 – Water-Cooled Water Chillers

- Edited “Project Manager” to “UGA PM” throughout section.
- 1.B. Edited: “for at least 10 entering separate conditions” to “for at least 10 separate, entering conditions”
- Broke out “Factory test as required…” as a new standalone item (1.F.) for clarity.
- 1.I. Added: “Chilled water system make-up water connections shall be metered and connected to the BAS with an alarm generated when flow is detected.”
- 2.A.ii. Edited “Daiken” to “Daikin”
- 3.D. Edited: “Provide Y-strainers before the chilled water pump and the condenser water pump, as required to protect the chiller and associated pumps” to “Provide Y-strainers before the chilled water pump and the condenser water pump, provide either a Tee style strainer with hinged access doors or a Y-strainer”

23 73 00 – Central AHUs:

- 1.E. Added new item in its entirety.
- 2.A.ix.a. Edited: “…MERV 11…” to “…MERV 13…”

- 2.A.ix.b. Added: “Basis of Design shall be Camfil Hi Flo ES Bag (22”), or approved equal. If existing units cannot accommodate to this, specified sizes…”
- 2.A.xviii.d. Added: “without a variance approval”
- 2.A.xviii.d. Added: “All motors 20HP and greater (note these require a variance approval) shall have front and back ceramic bearings”

23 74 00 – Packaged Outdoor HVAC Equipment

- 1.G. Added new item in its entirety:
  “G. Design Professional shall design sufficient space and proper coordination to allow for single level packaged outdoor unit with filters, coils, fans, etc. on the same plane. A “stacked” configuration requires variance approval by UGA PM, and the Design Professional shall account for the following:
  i. Accommodations for maintenance personnel to access and perform maintenance at the second level (structural platform, permanent ladder, etc.).
  ii. Accommodations for removal/replacement of heavy items (anchor points, chain hoist, etc.).”

26 00 00 – General Electric Requirements

- 1.F.vii. Edited: “… per the NEC…” to “…per NEC recommendations…”

26 56 13 – Lighting Poles and Standards

- 1.B. Edited: “Concrete pole bases shall extend minimum 6 inches above finished grade” to “Concrete pole bases shall extend minimum 2 inches above finished grade in hardscaped areas, and minimum 3 inches above finished grade in landscaped areas”
- 2.C. Edited: “Concrete pole bases shall extend minimum 6 inches above finished grade” to “Concrete pole bases shall extend minimum 2 inches above finished grade in hardscaped areas, and minimum 3 inches above finished grade in landscaped areas”

28 20 00 – Video Surveillance System

- Added new section in its entirety (section too long to include here).
- 1.A.v. Added: “… Security Systems Policy (contact UGA PM or download from the UGA Policy Portal website: policy.uga.edu/policy-library/) and Division 28 …”
- 1.A.iv. Added: “(contact UGA PM or download from the UGA EITS policy website: eits.uga.edu/access_and_security/infosec/pols_regs/policies/)”
- 2.K.i. Edited: “https://www.architects.uga.edu/sites/default/files/documents/standards/division_27.pdf” to “All video surveillance cabling must be in compliance with UGA Division 27 00 00 standards”
- 2.L.i. Edited: “https://www.architects.uga.edu/sites/default/files/documents/standards/division_27.pdf” to “All video surveillance cabling must be in compliance with UGA Division 27 00 00 standards”
- 2.M.i. Edited: “https://www.architects.uga.edu/sites/default/files/documents/standards/division_27.pdf”

to “All video surveillance cabling must be in compliance with UGA Division 27 00 00 standards”

33 60 00 – Hydronic and Steam Energy Utilities

- 2.B. Added: “i. Refer to Appendix A for UGA Steam Vault Standard Detail”

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