

DIVISION 15 - MECHANICAL

Section 15000 - General Requirements

Introduction

The work shall be in accordance with all rules, regulations, by-laws and requirements of all authorities having jurisdiction.

Refer any questions, clarifications regarding Division 15 to UA Planning Design & Construction.

Part 1 - General

- Codes

The project shall comply with the following codes (as adopted by the University Deputy State Fire Marshall):

- Arizona State Fire Code
- Building International Code
- National Electrical Code
- Building International Code
- International Mechanical Code
- International Plumbing Code
- N.F.P.A. (as referenced in the adopted codes)

- Working in Confined Spaces

- Whenever work is required within a confined space, e.g., utility vaults, utility tunnels, sumps, pits, sewers, etc., contact U of A Environmental Health & Safety for details and procedures on UA Confined Space Entry Program.

- HVAC System Types

- The preferred system type (e.g. single deck, dual deck, chilled beam) shall be handled on a case-by-case basis and determined prior to the completion of the Schematic Design phase. Consult with UFS PM, Mechanical Engineering, and Commissioning team. For new buildings and renovations affecting central systems, provide alternatives with life cycle cost analyses to facilitate the discussions.

- Existing HVAC System Verification

- Where a project seeks to reuse existing HVAC systems, the current performance of those systems must be verified prior to completing Design Development documents. Discuss with UFS Mechanical Engineer and Commissioning Team for prior plan approval.

- Laboratory Design Criteria

- Refer to UA DSS Tab C-3.
- Discuss fume hood selection and HVAC system criteria with UFS.

- Record Drawings

- Provide a set of prints and clearly mark, as the job progresses, all changes and deviations from that shown on Contract Drawings. Drawings shall be kept up-to-date during construction and in addition to field measurements shall include; change orders, field instructions and all other changes.
- Reference Division 01300 for further details.

- Buried Services

- After inspection and approval of service lines in trenches, provide a continuous trace wire and attach to service line directly. The Mechanical Contractor shall take 'as-built' measurements, including all depths, prior to commencement of backfilling operations. It will not be sufficient to check offline locations. Definite measurements shall be taken for each service line. The location of buried piping shall be shown on the drawings and dimensioned from fixed points.

- Temporary Use of Equipment

- Permission must be obtained from Architect/U of A prior to operating any mechanical systems during construction.
- Where the mechanical systems are operated during construction, the Mechanical Contractor shall maintain the system and equipment in proper operating condition. (Note that the warranty period starts at substantial completion)
- Before any area of the building is turned over to the U of A for acceptance and for beginning of the guarantee/warranty period, the systems and equipment shall be returned to the initial new condition e.g., by replacing used air filters with new air filters, cleaning the air side of all coils in the air handling systems, lubricating all bearings according to manufacturer's factory standards and adjusting control systems according to specifications and/or to suit the U of A.

- Provision for Future Expansion and/or Installations

- Where piping, ductwork and equipment is indicated for use in future expansion of the building and/or for future installations within the building, the Contractor shall leave sufficient clear space and install the piping, ductwork and equipment in such manner that connections to the future building expansion and/or future installations within the building can be made without removing existing floors, walls, ceilings. The Contractor shall consult with the Architect/U of A whenever necessary for this purpose.
- Any piping stub-outs provided for future connections to domestic hot and cold water piping systems shall be arranged so that "dead legs" (i.e., pipe sections where there is not water circulation) are prevented. The termination point of any piping stub-out shall be as close to the main piping flow as physically possible. Where future branch lines must extend a distance greater than six (6) branch line pipe diameters or more than 18" from the main piping flow, a valved drain port or blind flange with a valved drain shall be provided at the end of the branch piping to allow periodic flushing.
- Abandonment of Domestic Water Piping
- Verify routing of existing domestic hot and cold water piping systems prior to their being abandoned. Cap abandoned branch lines as close as physically possible to the main piping flow to eliminate "dead legs". Elimination of "dead legs" shall not hinder the proper operation of any existing hot water return, i.e., recirculation, systems.

Part 2 – Products

- No discussion.

Part 2 - Execution

- No discussion.

End of Section 15000