

SECTION 220800

PLUMBING COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes the plumbing requirements that apply to the implementation of the commissioning process for this project. The commissioning process will document that each system is operating according to the owner's project requirements as well as Contract Documents.
- B. Related Sections
 - 1. Division 22 – Plumbing.

1.2 REFERENCE

- A. ASHRAE Guideline 0 2005.
- B. LEED v2009 – Leadership in Environmental Engineering and Design version v2009.

1.3 DESCRIPTION

- A. The commissioning process is based on ASHRAE Guideline 0 and LEED v2009.
- B. Installations are inspected at various stages of construction and systems are functionally tested under normal and abnormal modes, such as component failures, pressure loss, power failure, etc.
- C. Components are verified and documented to be installed and responding to in accordance with Owner requirements and contract documents.
- D. Functional test are executed after installation verification checklists and start-ups are complete.
- E. Systems included in Cx scope:
 - 1. Water heaters.
 - 2. Hot water re-circulation pumps.
 - 3. Domestic hot water distribution.
 - 4. Water Closets.

1.4 SUBMITTALS

- A. Furnish CxA a copy of submittals for systems to be commissioned.
- B. In addition to standard submittal requirements, submit to the CxA a copy of the following items, for the systems to be commissioned:
 - 1. Startup documentation.
 - 2. Pressure Test Results.
 - 3. Applicable certifications.

1.5 QUALITY ASSURANCE

- A. Support the commissioning process to ensure quality installation, operation, and maintenance.
- B. Assist with optimizing systems for maximum efficiency.

- C. Promptly make corrections to deficiencies identified during the commissioning process. Notify Cx Team upon completion of deficient items.

PART 2 - PRODUCTS

2.1 NOT USED

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Review commissioning documentation including Cx Plan, Pre-functional Checks, and Functional Performance Test.
- B. Promptly request clarification and instruction or report any conflicts, inadequate conditions or missing information that might prevent or delay the commissioning process. Report unacceptable conditions immediately.
- C. Prior to start of demonstrating functionality of systems (Functional Performance Test), complete CxA provided pre-functional checklist.
- D. Respond, in writing, to CxA punchlist, action items, field reports, etc. during installation phase of project.
- E. Provide additional manufacturer's recommended installation documentation as requested.
- F. Functional test systems and correct any deficiencies prior to demonstration to CxA.

3.2 DEMONSTATION

- A. Demonstrate operation (Functional Performance Test) of systems to CxA.
- B. Coordinate commissioning activities with Cx Team.
- C. Provide competent personnel, knowledgeable of all project-specific systems.
- D. Provide equipment, including, but not limited to, tools, instruments, ladders, lifts, computers, software, cables, etc.

END OF SECTION