

SECTION 23 08 00 COMMISSIONING

PART 1 - GENERAL

1.1 SCOPE

- A. The purpose of commissioning is to ensure that the mechanical and plumbing systems along with their associated controls and power connections are installed as specified and in accordance with good practice, and are performing in a manner to provide satisfactory results throughout the entire installation.

PART 2 - PRODUCTS

2.1 SCHEDULE AND REPORT SHEETS

- A. The Contractor shall submit a schedule to the Construction Manager or other designated representative of the Owner responsible for all of the systems to be commissioned including gas furnaces, DX cooling systems, energy recovery units and domestic hot water re-circulation systems.
- B. Commissioning, testing and reporting shall not commence until the systems are completely installed, permanent power is connected, the systems are tested complete.
- C. The Contractor shall retain an authorized commissioning agent at the beginning of construction to oversee and coordinate the entire commissioning process. Acceptable candidates for the commissioning agent shall be a licensed mechanical engineer, a qualified independent mechanical contractor with knowledge of the type of systems installed or an independent quality control contractor. All candidates must have a minimum of five (5) years experience of commissioning the types of mechanical systems included in this project.
 - 1. The Commissioning Agent shall hold a meeting prior to starting the commissioning process. He shall arrange with the General Contractor to ensure the attendance of affected trades, particularly Building Automation and Balancing.
- D. Commissioning shall be a three part enterprise.
 - 1. The systems installation shall be reviewed by the authorized commissioning agent to ensure the equipment and systems are installed in accordance with the drawings and specifications. This includes, but not limited to, verifying equipment model numbers, critical dimensions, piping and valve arrangements, duct sizes and configurations, installation of supports, vibration isolation devices, controls, power wiring, etc.
 - 2. Start-up of major equipment, (ie: furnaces, condensing units, etc.), by factory authorized personnel. The authorized commissioning agent shall use the forms published by the American Air Balance Council (AABC) for commissioning or similar forms. These forms must be completed and signed by the authorized agent and the installing contractor. The authorized agent shall attach to forms, any factory check lists which are used as part of the start-up procedure.
 - 3. Actual review and explanation of the operation of all systems in the presence of the Owner's Representatives and maintenance staff. This part shall not be performed until items 1 and 2 above are completed and the authorized commissioning agent is satisfied that the systems are installed and operating according to the specifications. The systems shall be operated through their full range and the operation of all control and safety devices shall be demonstrated. A copy of the commissioning report, including all checklists completed in item 2 above, shall be available. Periodic tests shall be performed to confirm the systems are operating properly.

PART 3 - EXECUTION

3.1 MISCELLANEOUS

- A. Commissioning shall consist of a team concept that includes periodic commissioning meetings with the involved trades for each system and the authorized agent. A checklist shall be completed for each piece of equipment along with any pertinent comments regarding the installation or performance. Any piece of equipment found to be installed or operating incorrectly shall be repaired by the Contractor and re-commissioned. A copy of the start-up checklists completed by factory authorized personnel shall be attached to the commissioning checklist.
- B. The final commissioning shall consist of a witnessing of the operation of each system in the presence of the Authorized Agent, the Contractor, the Construction Manager and an authorized Owner's Representative. The purpose of this final commissioning is to ensure that all parties are satisfied with the operation of the system and have a full understanding of the systems operation. The authorized agent shall compile all of the commissioning checklist in a three ring binder organized by type of equipment and tag number. A summary of the commissioning process shall be included, which shall list the personnel involved, issues that were handled during the process and any other pertinent comments or documentation. Once the commissioning is complete, this binder shall then be turned over to the Owner for his records.

3.2 GUARANTEE

- A. Guarantees referred to in other sections of this specification, begin only after the final commissioning report is signed by the Owner's representative.

END OF SECTION