Consulting Services

Building Commissioning
and Retro Commissioning

REQUIREMENTS

REPORTING
Effective commissioning requires a true third party reporting directly to the owner. In our experience this always yields the best outcome for all parties including the design team, contractors, and the owner.

BE SPECIFIC
We create specifications that are clear and enforceable to protect the owner and ensure a competitive bid.

YOUR PRIVACY
We generate repair reports to be executed entirely at the owner's discretion.

CONSULTATION
We provide Certified Building Commissioning services through strategic partnerships with established firms.

Building Automation System
Temperature Control Systems
Systems Integration
Test, Adjust and Balancing Procedures
Fire Alarm Systems
System Monitoring

An automation system should be just that: automatic.
With proper design and commissioning, we can minimize construction delays, excessive maintenance and constant tending that plague so many “automatic” systems today.
BUILDING COMMISSIONING

Our Focus
Commissioning is the focus of our business. IBS is not a controls contractor, test-adjust and balance (TAB) contractor or mechanical contractor. This is an important factor when building owners select a commissioning agent for their project. We work directly for the owner and have no financial dependence on the contractors or HVAC industry manufacturers whose work we are tasked with evaluating. Since we do not install control systems or perform TAB efforts, we can report our findings without bias to best represent the owner’s interests.

Tasks of Commissioning

1. Review Contract Documents
Contract documents need to reflect compatibility between the equipment and controls to ensure a seamless interface. A thorough examination of the contract documents will reveal potential impediments so that they can be corrected before the bidding process.

To avoid RFIs (request for information), change orders and interpretation errors that result in added construction costs, the contract documents should have clear descriptions of the interfaces between the mechanical equipment and the control system. In addition, the control sequence of operation should include all aspects of unit operation including operating modes such as unoccupied, pre-occupied, occupied and post occupied; basic operating setpoints need to be clearly defined such as temperature setpoints, CFM targets, etc.; energy conservation modes such as load shedding or demand limiting; indoor air quality modes such as CO2 ventilation; emergency modes such as Fire Alarm shut down, smoke evacuation or safety trips; scheduling functions that will allow the owner flexibility; alarming functions such as fan failures and high/low temperatures and how these are displayed or reported to the building owner.

These issues and more are considered as part of the review and report we provide.

2. Detailed Submittal Reviews
During the construction phase, the contractors and vendors submit shop drawings for the engineer’s review and approval. A review of these documents performed by a commissioning agent looks beyond the unit’s sizing, weight, materials and capacity. The CA looks for compatibility with the controls that are to be applied.
Can the unit function as specified in all modes of operation? Is the controls contractor able to gain access in the field to properly locate and mount all the sensors, safeties and other devices that need to be installed? Can the unit be serviced and maintained by the owner after contractors install the unit and enclosed it in a mechanical room?

The engineer and owner receive a written report documenting potential problems while there is time to correct them – before they become costly mistakes that must be corrected in the field.

3. Site Visits

An “eyes and hands on” approach when construction is underway effectively uncovers hidden physical, electrical, and mechanical issues that often go undetected otherwise. Owners receive detailed, and very specific, documentation of these observations not only to be apprised of how the job is going, but to determine appropriate progress payments to their contractors.

4. Functional Testing

Once the project is completed, or nearly complete, we coordinate with the contractors and setup testing procedures that are executed with the intent of exercising the mechanical equipment and control system in all modes of operation. By simulating various outdoor and indoor conditions, triggering various schedules and generally putting the equipment in all modes of operation, we document any deficiencies so they can be addressed and corrected.

5. Owner Training

For the mechanical equipment to continue efficient operation, the owner must first understand what the equipment is supposed to do, how to recognize when the equipment is not doing what it’s supposed to and how to fix it, and how to maintain it. We work with the owner and contractors to establish training criteria, schedules and materials.

RETRO-COMMISSIONING

Building Improvement

Using many of the steps outlined above, retro-commissioning is a process that targets existing buildings. Retro-commissioning gives building owners a true bill of health and operating expense outlook as well as a listing of problems or deficiencies that could be addressed to improve comfort and reduce operating costs.
SYSTEM MONITORING

Repair Reports

Whether over a modem, internet connection, or on-site, we can quickly review most automation systems on a scheduled basis and generate repair recommendation reports that owners can execute at their discretion.

DESIGN & SPECIFICATION OF:

Building Automation System
Temperature Control Systems
Systems Integration
Test, Adjust and Balancing Procedures
Fire Alarm Systems
System Monitoring

Clear, enforceable specifications protect the owner and ensure a competitive bid. IBS works closely with building owners and the design engineer to generate detailed and precise specifications that suit the owner’s needs. We coordinate the function of the mechanical equipment with the engineer’s design to meet the requirements of the building and its systems.

With our thorough understanding of control systems from manufacturers such as Honeywell, Siemens, Automatic Logic, Tridium, and Andover, our design services utilize the best features of high-tech systems.

The specifications we assemble include requirements for detailed submittals, as-built drawings, operating manuals and owner training. The documentation and training ensures the owner has the resources and means for operating and maintaining the systems at peak performance for the life of the building.