

# How to Best Design/Install/Commission a Building Automation System- Owners Perspective

## What the owner wants?

As the Owner there are a few things that is expected when a Building Automation System is being Designed, Installed, and Commissioned.

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# How to Best Design/Install/Commission a Building Automation System- Owners Perspective

## Design

- **Financial/Design Team Selection**
  - Establishing a Budget for Project.
  - Selection of a Design Consultant and General Contractor.
- **Document Review**
  - Verify that Design Documents are complete and meet the Owners expectations.
- **Equipment Submittal Review**
  - Verify that the equipment selected meets the design specifications.
- **Review Sequence of Operation**
  - Review the sequence of operation provided by the design team to ensure that the sequence meets the intent of the project.

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## Installation

- Unit Identification

- Field verify that end devices have been properly labeled and equipment labels reflect the correct nomenclature.

- Inspect Device Installation

- Field verify that end devices have been installed per manufactures recommendation.

- Network identification

- Verify that all new BacNet instance numbers are unique and that no duplicate numbers have been added.

- Verify that all network and communication lines have been installed correctly.

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## Commissioning

### •Verification

- Conduct point-to-point verification, as well as program functionality testing.
- Verify that graphics have been created and information is correct.
- Verify that alarms and trends have been attached to the appropriate points.
- Test and Balance(TAB) Verification.
- Develop a base line for operational parameters.
- Re-commission major components annually.

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# How to Best Design / Install / Cx BAS - The Construction Phase

## MEP Coordination and BAS

### Budget-Quality-Communication-Schedule

- Subcontractors
- Design Team
- Owner

# How to Best Design / Install / Cx BAS - The Construction Phase

## Understanding System Operation and Design Intent

- Sequence of Operation
- Piping and Instrumentation
- Plan Views
- Equipment Schedules

# How to Best Design / Install / Cx BAS - The Construction Phase

## Process

Periodic coordination meetings with Subcontractors, Design team, Owner, and Commissioning agent.

- Design
- Submittal review process
- On-going construction
- Start up/Commissioning

# How to Best Design / Install / Cx BAS - The Construction Phase

## Benefits

- Enhanced equipment start up/commissioning process
- Opportunities to improve schedule
- Efficiency- All members have up to date schedule information and understand scope
- Minimize warranty issues
- Solutions that maximize both design and construction expertise
- Forum for owner input- Allows owner to become familiar with systems before owner training begins
- Fosters a teamwork environment