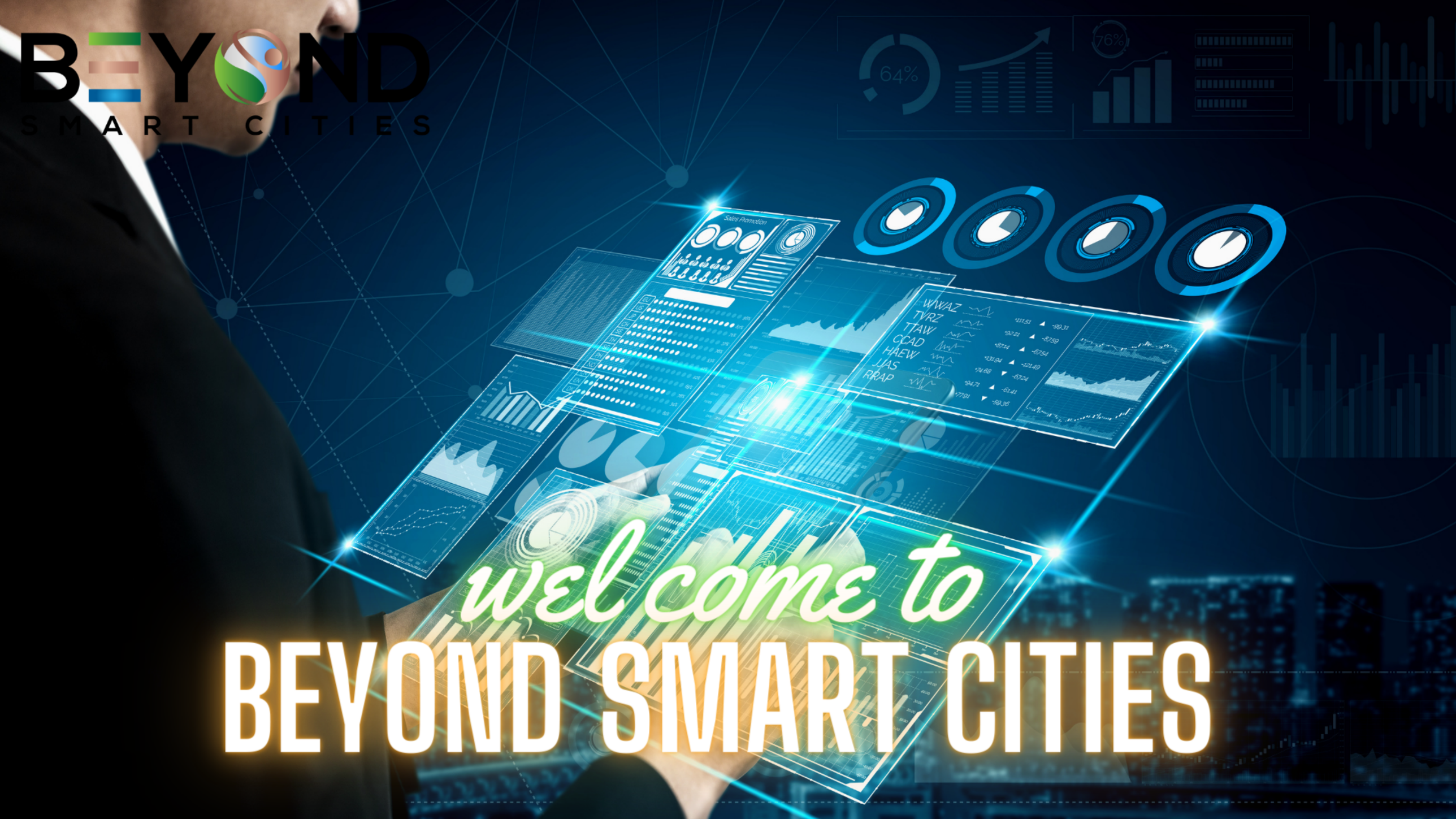

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MODULE 05

Procuring CxA Services and Preparing CxA Documents



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CERTIFIED COMMISSIONING AUTHORITY CXA EXAM PREP OVERVIEW

Owners or their representatives can buy building systems commissioning services from the Commissioning Provider (CxP) using best practices. The owner hires a CxP to commission building systems independently. CxP selection is a key commissioning decision for the owner. An experienced CxP who advocates for the owner improves project success.

Learning Objectives

- Introduction and CXA Proposal
- Fee Structure Development
- Selecting the Commissioning Authority
- Professional Services Agreements versus Public Works Contracts
- Preparing for the Commissioning Process

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INTRODUCTION

- Best practices for procuring building systems commissioning services are useful to the owner or owner's representative buying services and the Commissioning Provider (CxP) selling services.
- The owner initiates the independent third-party building systems commissioning process by deciding to retain a CxP. The selection of a CxP is one of the owner's most important commissioning-related decisions.
- An experienced CxP who advocates for the owner increases the likelihood of a successful project.
- Regardless of the approach, the Beyond smart cities recommends that owners provide as much detail as possible in the RFQ and/or RFP.
- The CxP, in turn, should respond with a detailed summary of qualifications or a detailed project proposal that answers the owner's questions.

THE DEFINITION OF COMMISSIONING

- “The Commissioning Process is a quality-oriented process for achieving, verifying, and documenting that the performance of facilities, systems, and assemblies meets defined objectives and criteria.” ASHRAE Guideline 0
- “…a systematic, documented, and collaborative process including inspection, testing, and training.”
- “…conducted to confirm that a building and its component system meet the requirements of the occupants and conform to the design intent.”
- “…a quality assurance procedure applied to building construction throughout the entire project…”



COMMISSIONING PROPOSAL

The CxP's proposal should at a minimum include the following:

- During the commissioning process, the equipment and systems will be inspected and evaluated.
- Location-specific building codes or regulations that apply to the project.
- Proposed sampling rates for use by the CxP during testing
- Information about members of the Commissioning Provider Group (CxP Group) that will perform commissioning activities
- The comprehensive scope of commissioning services for the to-be-commissioned building systems
- The commissioning process roles and responsibilities for the CxP, CxP Group, Cx Team, owner, and other members of the project team.
- The pricing structure for commissioning services
- Provisions for compensating the CxP for work outside the scope of the engagement.



FEE STRUCTURE DEVELOPMENT

- Fee Structure Development addresses the challenge of aligning CxP fees with the scope of commissioning services, particularly if the owner's budget is especially limited.
- Beyond smart cities also discusses ways to restrict the scope to reduce the cost, if necessary, and the importance of managing work to help keep the project on track with respect to budget, even though the CxP is not responsible for the construction cost or construction schedule.
- Most projects appear to follow an approximate cost guideline of 2.5% of mechanical and 1.5% of electrical construction costs, within a range of plus or minus one-third.
- Most projects appear to have commissioning costs in the range of $0.50 to $1.50/ft2, with classroom and office buildings in the lower one-third of the range, labs and correctional facilities in the middle third, and hospitals and research labs in the upper third.





SELECTING THE COMMISSIONING AUTHORITY



The majority of commissioning authority considerations relate to the facility's successful operation for all occupant types and modes of operation. These considerations are based on the CA's many years of experience as an operating engineer and commissioning authority and include the following areas:

- Access for operation and maintenance
- Site-related issues involving adjacent facilities
- Operational costs versus first costs
- problems often encountered during the construction process, and
- Available support from local utilities and support service vendors.

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SELECTING THE COMMISSIONING AUTHORITY +

Consequently, as with all building commissioning activities, the process of selecting the proper commissioning authority for a project is crucial to the success of the building commissioning program as a whole. The selection process includes:

- using a Request for Qualifications to solicit commissioning services
- applicants for the project,
- screening the applicants to select finalists to be interviewed
- interviewing the selected finalists,
- selecting the project best suited to the task at hand





PROFESSIONAL SERVICES AGREEMENTS VERSUS PUBLIC WORKS CONTRACTS



Professional Services Agreements versus Public Works Contracts

There are two types of contracts in the building design and construction industry:
(1) public works contracts and
(2) professional service agreements.

Public works contracts for construction or materials acquisition can specify the full scope of work and be bid by appropriate firms. Professional services agreements are negotiated with firms that respond to RFQ ads and are chosen to provide the requested services. A commissioning authority provides professional services.

They are performed by a range of professionals who are skilled in the specific services to be provided. At the outset, the full scope of the work may not be known; it evolves as the project progresses. Professional commissioning services essentially have four phases: (1) predesign(2) design, (3) construction, and (4) occupancy.

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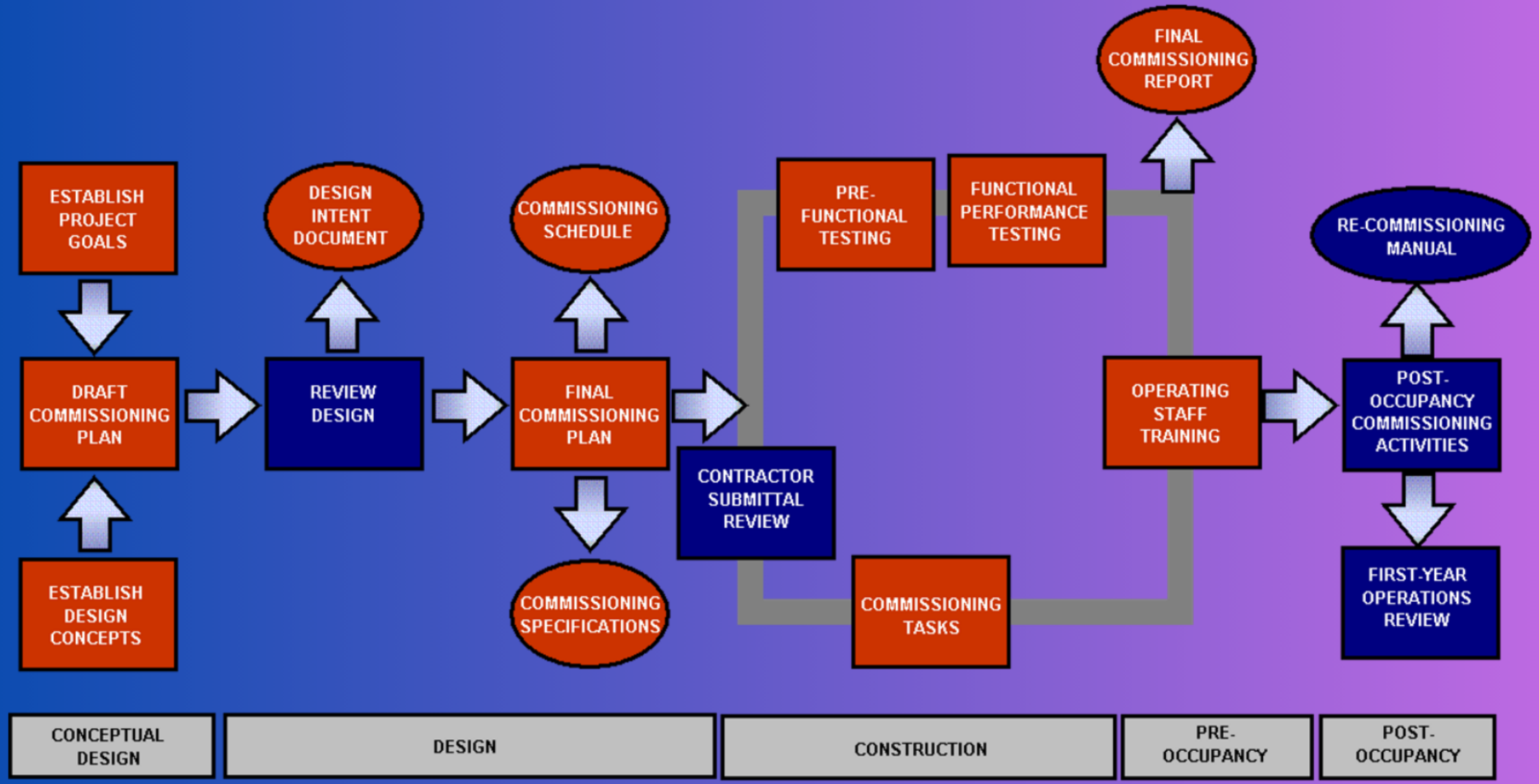
PREPARING FOR THE COMMISSIONING PROCESS



- The CxA is brought on before the design team to give owners unbiased feedback during evaluation.
- The CxA helps the owner's staff create the Owner's Project Requirements (OPR) before choosing a design team.
- This "living" document contains all the owner's desired information and requirements for the project.
- The CxA will also work with the design team to create commissioning specifications that outline contractors' construction duties.
- Construction: The CxA visits the site to observe equipment installation, ensure design documents are followed, and report issues to the design team.
- These visits focus on project commissioning and do not replace the design team's construction administration duties.
- In addition to helping the design team, the CxA can help contractors resolve field issues that could delay construction.
- The owner should include building O&M staff on the commissioning team.

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COMMISSIONING AND THE BUILDING DEVELOPMENT PROCESS



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