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COMMISSIONING SPECIALIST
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CONSTRUCTION PHASE
COMMISSIONING PROCESS
ONLINE PROFESSIONAL COURSES LED BY THE WORLD'S TOP SPECIALISTS
ONLINE TRAINING BY KRISHNAJI PAWAR
LEED AP(BD+C), GSAS CGP, GCP, ISO 14001
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MODULE 1

Introduction and Course Outline

KRISHNAJI PAWAR - CEO & FOUNDER

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BRIEF ABOUT ME

Krishnaji PAWAR

CEO & FOUNDER



Krishnaji Pawar is founder and CEO of Beyond Smart Cities. Before being named CEO in January 2020, Krishnaji held leadership roles at Beyond Smart Cities in both Sustainability ,Energy & Environmental Consultancy.

Specialized in developing sustainable design strategies for Green Building Certification Systems (LEED, GSAS, etc.), Energy & Water Conservation, Commissioning, Environmental Impact Assessment & Environmental Management Systems.

Currently responsible for 3,787 million square feet Green Building /Energy modeling Consulting since January 2008 in UAE, India and Qatar.



WELCOME TO BEYOND SMART CITIES

Beyond Smart Cities is the world's 1st Green Technology Marketplace, connecting millions of Sustainability Specialists, Green Building Specialists, Energy Specialists, Commissioning Specialists, Environment Specialists, Health & Safety Specialists, Fire Safety Specialists, Climate Change Specialists & Green Products/Technology Manufacturers with independent talent around the globe.

Our mission is to build and support a global community of experts with the highest professional standards in sustainability, green building, energy, commissioning, environment, health & safety, fire safety, climate change, GHG accounting, carbon auditing, and GHG emissions management.



CONSTRUCTION PHASE COMMISSIONING PROCESS OVERVIEW

During the predesign and design stages of a large construction project, the commissioning team has done a lot of work. A lot of the success of the construction phase depends on following the rules of the commissioning process. Standard activities continue, but there is more focus on the details.

Learning Objectives

- Introduction and Construction Phase Overview
- Construction Phase CxA Objectives
- Construction Phase CxA Team
- Pre-construction Commissioning Conference
- Conference & Kickoff Meeting
- Site Observation
- Commissioning Progress Meetings
- Testing Contractor
- Commissioning Schedule
- Update CxA Plan , Schedule & Review Submittals
- Commissioning Test Procedures
- Construction Phase CxA Activities
- Resolution Tracking Forms (RTF's)

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- During the construction phase, the preceding work will be realized for its value.
- As with the preceding phases, the success of the construction phase is highly dependent on adherence to the commissioning process's disciplines.
- During the construction period, there are a number of activities that are fairly standard, and they will continue as usual, albeit with a greater emphasis on many of the details.
- in addition to compliance with the process reconstruction commissioning conference.
- The construction phase is the third of the four phases of the building systems commissioning process identified by us.
- The Commissioning Plan (Cx Plan), which was updated by the Commissioning Provider (CxP) during the Design Phase, is implemented during the Construction Phase.
- Consistent interaction between the CxP and the construction team and frequent communication between the CxP and the design team are critical to a successful construction phase.

Learning Objectives

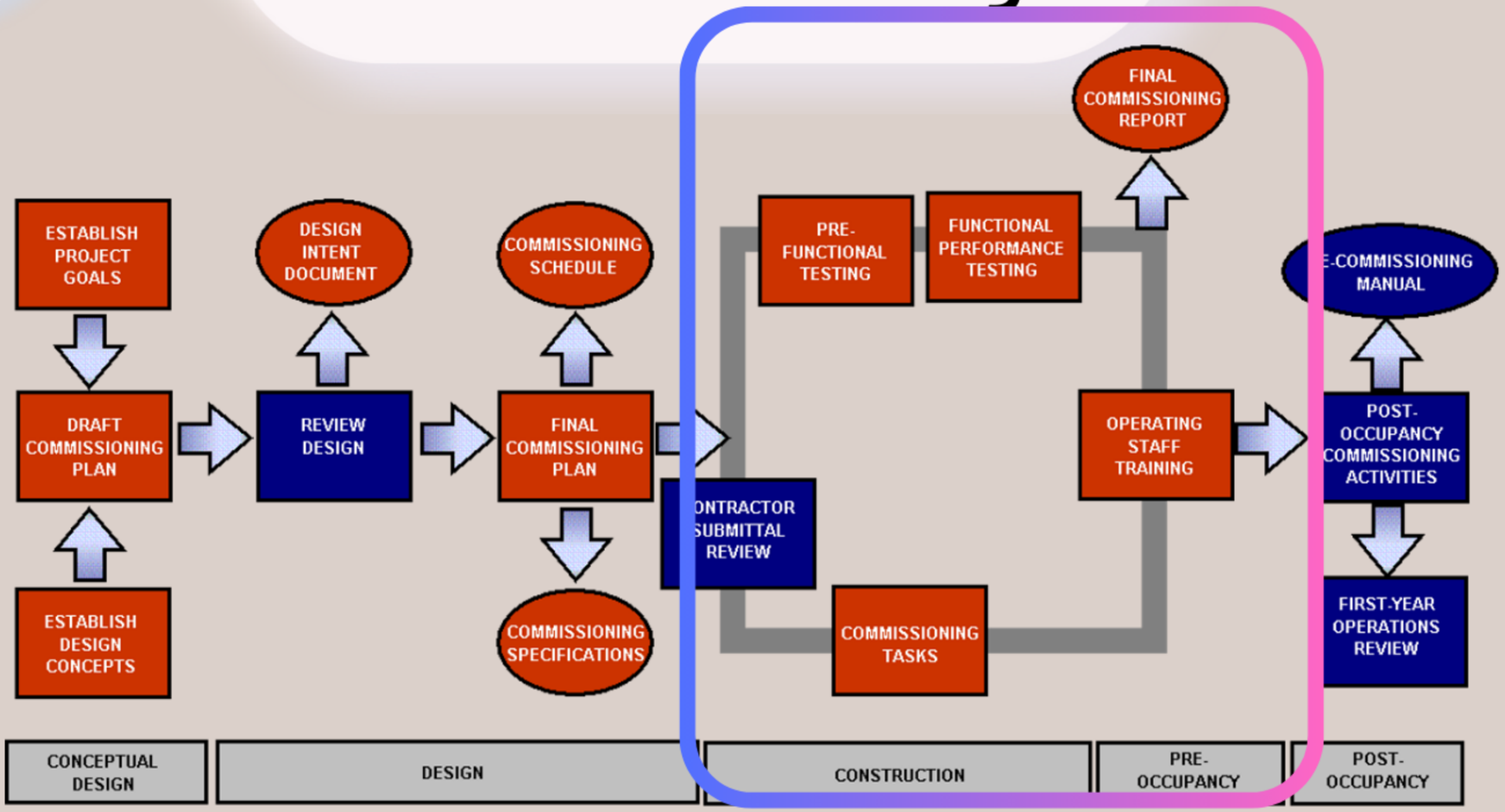
- System Verification Checklists (SVC's)
- TAB HVAC Systems:
- Building Automation System (BAS):
- Lighting Controls:
- Emergency Power Systems:
- Developing Functional Performance Tests (FPT's)
- Training
- Performing Tests
- ntegrated Systems Testing
- Operational Sustainability Reporting
- Commissioning Test Procedures

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INTRODUCTION +

- The CxP leads the larger Commissioning Team (Cx Team) to complete commissioning activities correctly and efficiently as scheduled, and the smaller Commissioning Provider Group (CxP Group) to assist and prepare commissioning deliverables.
- During construction, the CxP updates the commissioning plan, assists with revising the owner's project requirements (OPR) or current facility requirements (CFR), reviews construction submittals for compliance, distributes checklists for contractors to complete, observes building equipment and system installations, and develops and manages various tests.
- After equipment and system start-up, including installation and acceptance tests and testing, adjusting, and balancing (TAB), the CxP coordinates and schedules FPT and IST with the Cx Team.
- The Issues and Resolution Log and Systems Manual, started during design, are maintained by the CxP during construction.
- Verifying building system compliance with the OPR or CFR is a top CxP priority during construction.
- The CxP and CxP Group draft many deliverables during this phase.
- Daily reports, occasional commissioning progress reports, and the preliminary commissioning report that forms the basis for the final commissioning report are CxP deliverables.

Phases of Commissioning





DEFINITION AND PURPOSES OF COMMISSIONING



Commissioning is a process - a systematic process of ensuring that a building performs in accordance with the design intent, contract documents, and the owner's operational needs.

Commissioning Review. The commissioning review is a collaborative review of the design professionals design documents for items pertaining to the following: owner's project requirements; basis of design; operability and maintainability (O&M) including documentation; functionality; training; energy efficiency, control systems' sequence of operations including building automation system features; commissioning specifications and the ability to functionally test the systems. This review is not a holistic "peer" review.

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Basis of Design (BOD): The documentation by the design team of the primary thought processes and assumptions behind design decisions that are made to meet the Owner's Project Requirements. The BOD describes the assumptions used for sizing and selection of systems (i.e. codes, standards, operating conditions, design conditions, weather data, interior environmental criteria, other pertinent design assumptions, etc.).

Owner’s Project Requirements (OPR). A written document that details the requirements of a project and the expectations of how it will function. These include project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information.

Adjusting: The varying of system flows by partial- ly closing balancing devices, such as dampers and valves, and varying fan speeds to achieve optimum system operating conditions within design and in- stallation limitations.

Balancing: The methodical proportioning of air and hydronic flows through the system mains, branches, and terminal devices using acceptable procedures to achieve the specified airflow or hydronic flow within installation, testing and design limitations.

Testing: The use of specialized and calibrated instru- ments to measure parameters such as temperature, pressure, vapor flow, airflow, fluid flow, fluid quan- tities, rotational speed, electrical characteristics, velocity, sound and vibration level, air and hydronic quantities, and other data in order to determine per- formance, operation, or function.

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