The Commissioning Process for Delivering Quality Constructed Projects

Daily Agenda: In-person Courses

MONDAY

7:30  Registration / Check-in
8:00  Welcome and Introductions
8:30  Overview of the Commissioning Process (CxP)
      •  What is the ASHRAE Guideline 0 commissioning process?
      •  Current best practice
      •  What is a quality delivery process?
      •  Benefits of the commissioning process
      •  What occurs in each phase of project delivery?
11:15 Pre-Design Phase Commissioning Tasks (Part 1)
      •  Developing the owner’s project requirements (OPR)
      •  Owner’s workshop: preparation and participants, Nominal Group Technique (NGT), procedures and results
12:00 Lunch
1:00  The Owner’s Project Requirements Workshop
      •  Executing an OPR workshop
      •  Determining which questions to ask – project success criteria
      •  Class activity: workshop in action
3:00  Developing the OPR Document
      •  Review of key OPR concepts
      •  Typical information required
      •  Steps in document creation
      •  Review of example document
4:00  Pre-Design Phase Commissioning Tasks
      •  Planning the CxP effort
      •  Commissioning plan fundamentals, key milestones, structure
      •  Evaluating the benefits of pre-design phase involvement
      •  The CxP as a strategic quality plan
5:00  Daily Adjournment
**TUESDAY**

8:00  Workshop: Defining CxP Needs

9:15  CxP Activities in the Design Phase
   •  Pre-design meetings
   •  Design checklists
   •  Basis of design development
   •  CxP design review process
   •  CxPlan update

10:20  Design Review Workshop
   •  Group workshop using the four steps of a CxP design review procedure

12:00  *Lunch*

1:00  Design Review Workshop continues

1:30  Commissioning Specifications
   •  Format options
   •  Types of requirements: contractor participation; maintainability; checklist implementation; shop drawings, training, and systems manual; testing and verification

3:00  Systems Manual and Training
   •  Systems manual (role in all phases)
   •  Training (role in all phases)

3:45  Commissioning Process Checklists
   •  Purpose, goals
   •  Use in all project phases
   •  Construction checklists: development, tracking methods, verification, statistical sampling, checklist work session

4:55  *Daily Adjournment*

5:00  University of Wisconsin CxP Certification Exam Review (part 1, for 1 hour)

**WEDNESDAY**

8:00  Construction Phase CxP Tasks
   •  Pre-construction activities (pre-bid, workshops, partnering)
   •  Cx meetings and coordination, role of the CxA
   •  Tracking commissioning activities
   •  Cx schedule
   •  Testing
   •  Commissioning reports
   •  Benefits/Issues log
9:30  Commissioning Process Tests
• Developing test protocols
• Confirmation of readiness
• Implementation steps
• Documentation

10:30  Test Development Workshop

11:20  Integrating CxP with Contractor Efforts
• Quality processes
• Overlaps and gaps

12:00  Lunch

1:00   Electronic and Web-Based Commissioning Tools
• Computer tools for site tracking
• Electronic systems manuals

1:30   Acceptance Phase, First Year of Operation, and Beyond
• Training
• Systems manual
• Project CxP report(s)
• Warranty review and seasonal testing
• On-going commissioning

2:00   Analyzing the Benefits of Commissioning: Case Studies
• Scope of commissioning
• Detailed cost analysis
• Benefits and lessons learned

2:45   Special Topics in the CxP
• Review of LEED Cx process
• Review of existing building Cx process

4:00   Course Adjourns