

(This annex is not a mandatory part of the referring ASHRAE SSPC 300 standard or guideline. It is merely informative and does not contain requirements necessary for conformance to the standard or guideline.)

(The following informative annex is provided to illustrate, explain, or support the ASHRAE SSPC 300 commissioning process. The information presented herein represents consensus good practice but does not contain mandatory commissioning process provisions. This informative annex supports more than one ASHRAE SSPC 300 commissioning standard or guideline and is not intended to serve as a standalone document. See the referring ASHRAE SSPC 300 standard or guideline for mandatory commissioning process requirements and guidance.)

ASHRAE SSPC 300 INFORMATIVE ANNEX 09—SUBMITTAL REVIEW

This informative annex provides an example of how to implement a Commissioning Process (Cx) submittal review if directed to do so by the Owner. It is not intended to be a comprehensive representation or a best practice example.

09.1 Design Submissions

A critical step in a Cx is the review of submittals from the Construction Team. It is important to remember that the role of the Cx Provider (CxP) is to verify that the Owner's Project Requirements are met, and that the system is designed in a quality manner.

The focus of the Cx submittal review should be defined in the Owner's Project Requirements (OPR). The Cx Plan can also add requirements and information to the Cx Submittal Review process and procedures.

09.2 Submittal Purpose

The purpose of the submittal review by the CxP is to look at the design from the perspective of whether the design satisfies the OPR and if the completed systems can be adequately commissioned.

It is best to keep the design review comments list simple, clear, and concise. Gratuitous comments are not productive, nor are they typically responded to by the Design Team. It is important that the comments add value to the project; if the comment does not add value, it is best left to those who are creating the design documents to find the issues and correct them.

Items that the CxP should be looking for in their design reviews should revolve around the parts of the building that move and use energy, such as the HVAC system, lighting, and domestic hot water heating, or other systems/equipment that have been identified as being within the scope of the commissioning project.

09.3 Submittal Review Process

- a. Based on the focus of the submittal review as defined in the OPR and approved by the Owner, develop a procedure by commissioned system or CSI Division included in the Cx scope. This submittal review is sent to the Owner and the design professional for further actions, since the CxP typically has no authority to direct contractors.
- b. Accomplish a quick general review:
 1. The general review is intended to familiarize the reviewer with the submission.
 2. If during this review significant items are identified as missing (relative to the submission content requirements), then the review process should be stopped, the Owner should be contacted to confirm whether or not the Cx submittal review should continue, and the submitting contractor should be contacted to discuss the submission concerns.
 3. If the Owner directs the review to proceed, move on to the submittal review.
- c. Areas of concern should:
 1. Identify locations in the submittal documents where concern was identified.
 2. Ask questions to gain clarity or to provide a narrative regarding the concern.
 3. Suggest a recommendation, if appropriate, for the submitting contractor to consider.
 4. Identify the area of the OPR affected.
- d. Determine the review sampling procedure as defined in the project OPR and Cx Plan. The sampling and

depth of the submittal review should be based on complexity and criticality of the facility being commissioned; a mission critical facility would warrant a more detailed submittal review than a typical office building. The level of detail in the submittal review should be established as part of the CxP contracting process.

- e. During the review of the submittal documents, keep detailed notes found or concerns with certain items. At the end of the review, a general summary of the quality of the submittals should be developed. A letter detailing the quality of the submittals should then be sent to the design professionals and the Owner with specific recommendations and directions given.
- f. Findings of deficiencies in submittal documents are typically system specific, so an Owner would be unlikely to know how to list them in the OPR, even if the Owner wanted to put emphasis on the review of a particular project.

09.4 Review Criteria

09.4.1 Items to Check for:

- a. That the submitted components of systems meet the project specifications and drawings (which were previously judged to meet the OPR in design review steps).
- b. If “or equal” alternates were submitted, are they equivalent to the components shown in the drawings and specifications.
- c. If submitted components meet drawings and specifications in terms of:
 - 1. Performance (i.e., power, output, speed, pressure, sound levels)
 - 2. Size, weight, connection to other construction elements
 - 3. Accessibility (required clearances, locations of access)
 - 4. Redundancy, spare capacity
 - 5. Choice of materials, chemical resistance to environmental factors
 - 6. Color
 - 7. Control logic (either unit-mounted or for dedicated systems controlling building automation, lighting, fire alarm, security, public address systems and similar systems requiring logic)

09.4.2 Big-Picture Items to Review:

- a. Overall delivery method of submittals (typically via electronic cloud-based exchange mechanisms or email)
- b. Overall formats of submittals: Are these being provided in conformance with OPR and general Cx specifications in terms of format (electronic or physical); searchability; file type; are they marked up correctly where multiple options exist for execution such that the actual execution for the project is clear?
- c. Overall scope of expected submittals for review and actually received submittals (are any submittals missing?)

09.5 Design Professional Actions

Comments provided by the CxP are reviewed by the design professional. The Owner and design professional decide whether to pass the CxP submittal review comments on to the contractor with instructions to follow the CxP-recommended actions. The CxP does not have authority to direct contractors in most typical project configurations (The OPR and Cx Plan can define alternate responsibilities if desired).

If systemic issues are identified during the CxP's review, the review process should be resolved.