



Peer Reviews

Peer reviews, which are outside the normal quality control process, are a means of eliminating fatal flaws by adhering to a focused process with a specific purpose and scope. Peer reviews involve an independent expert, who evaluates specific aspects of the design and construction to determine the potential for moisture and mold related building problems to develop later. Although peer reviews are standard for structural designs to address safety issues, they have not been widely applied to address moisture and mold issues. The use of peer reviews for problem avoidance is not a new concept, and published guidelines (Figure 1-14) are available (American Consulting Engineers Council [ACEC] and ASCE, 1990).

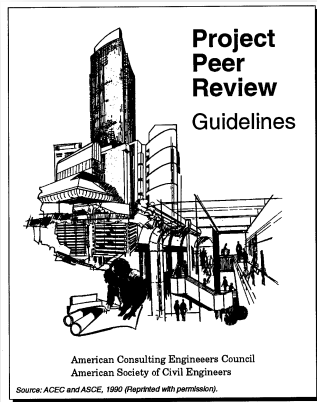


Figure 1-14. Following established peer review guidelines helps avoid mistakes during design and construction that could lead to costly moisture and mold related building problems later.

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Peer reviews can occur once during the project, but they are most effective when they are iterative, occurring at various milestones throughout the design process. These milestones include schematic design, the 60 percent construction-drawing phase, and the 90 percent construction-drawing phase.

Implementing peer reviews is a low-cost way of monitoring results and avoiding mistakes that could lead to severe building problems later. Cost data from peer reviews of facilities totaling more than \$500 million indicate that peer reviews rarely exceed 5 percent of the total cost of design and 0.3 percent of the cost of construction. Clearly, this investment in peer review is worthwhile, considering that, historically, these reviews reveal cost-saving measures that more than compensate for the cost of the review.

Early design and construction phases, particularly schematic design, present the best opportunities to prevent problems and control project costs. As shown in Figure 1-13, the relationship between level of influence and time is indirect, but a direct relationship exists between time and cost. Thus, the farther a project moves into the process, the more costly changes become and the less influence the design team members have over the final outcome.

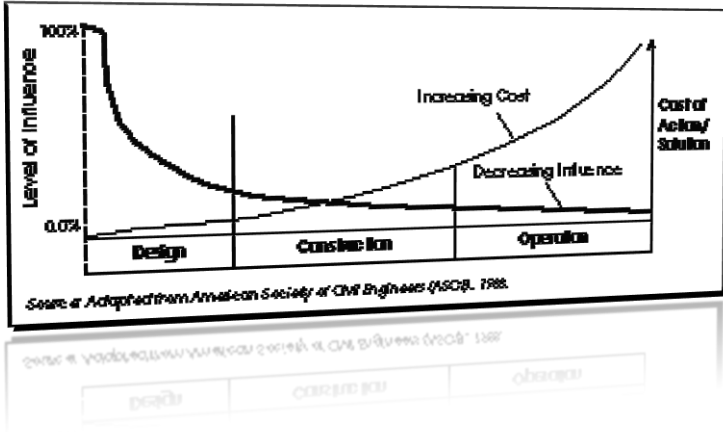


Figure 1-15 - The best opportunities to prevent moisture and mold related building problems and control project costs occur in the early design and construction phases.

Beginning the process with a set of prescriptive guidelines that address both the architectural and mechanical considerations affecting IAQ, like those presented in this manual will maximize quality without adding cost to the final result.