

Mechanical Systems Project Proposal
December 15, 2006

Breadth 2 - Construction

The implementation of both the mechanical and electrical redesigns will have significant changes to the construction costs. A detailed cost estimate for the differences between the original design and redesign is proposed, along with an assessment of how the schedule would be impacted. When the DOAS system is implemented, smaller air-handling units will cost less but adding energy recovery will certainly add initial costs to the project. Another significant impact on cost will be the addition of radiant panels along with copper piping while reducing the amount of ductwork necessary. All changes to the central plant would be additional first costs. However, the cost of replacing the plant with similar electric chillers can be compared to the redesigned direct-fire absorption chillers.

The change in initial costs can then be compared to any energy savings calculated in the mechanical system redesign to determine what type of payback period the owner could expect.