Level of Documentation

Although it would be desirable to measure and record the configuration of every component and its condition to such an extent that the building could be reconstructed from these documents exactly as it exists, an endeavor of this magnitude would not be practical for any existing structure. The degree to which a building is documented should be commensurate with its accessibility (the access available to document extant conditions). The extent of documentation should also be in keeping with the scope of work that must be designed and described in the construction documents. At an interior plaster wall, for example, if only cosmetic repairs are to be performed, then the extent of cracking and other damage, along with the plaster's composition, are the only conditions that must be documented. If, on the other hand, the wall must be partially demolished in an effort to conceal new electrical wiring, then the wall assembly and substrate conditions would require documentation. When the scope of work is not completely developed, it is best to document existing conditions in greater rather than lesser detail. The extra time spent on such documentation will more than pay for itself when compared with the additional time required for further site visits or the cost of potential inaccuracies in the construction documents due to incomplete information.

Figure 2.13
Failure to determine that existing structural steel pipe columns were filled solid with tar required complete redesign of structural reinforcement during construction.
Photo credit: Robert Vail Cole

Documentation Search[5]

A thorough search for historical documentation (such as the original plans, specifications, and construction photographs) should take place prior to the field inspection of the Construction Phase. Resources discovered in this search can provide valuable information on the original architectural assemblies, materials, and their compositions. Records documenting the building's history are also useful in describing modifications that have occurred over time and recurrent building deficiencies. It is important to note that the original construction drawings and specifications may not reflect the actual construction due to unrecorded field changes or substitutions. The documents serve as the basis for the visual inspection that will confirm, refute, or augment the recorded information.

Chapter Six

Upgrading Building Systems

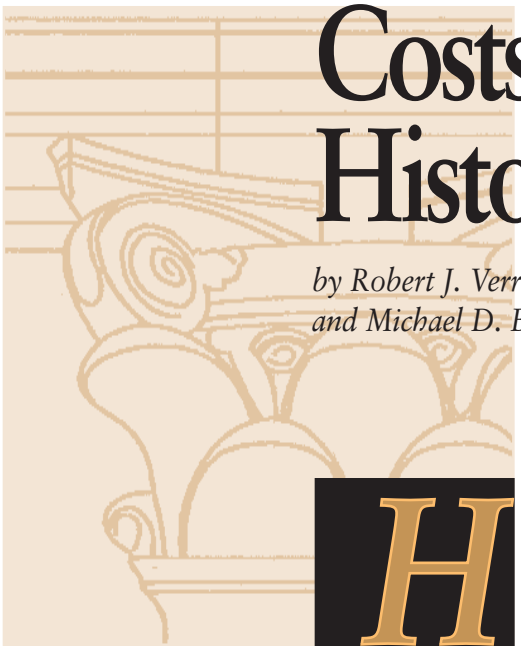
Upgrading existing building systems and integrating new ones into historic structures require careful investigation, planning, design creativity, and coordination. *Building Systems* are assemblies constructed from various materials and components that allow a building to function for its occupants. In a historic building project, it is necessary to address both the functional requirements of building systems and the repair of their component materials. This section covers only the general rehabilitation and upgrade of whole building systems. Refer to Part II, "Historic Building Materials: Assessment & Repair Methods" for more information on the conservation and repair of individual materials. The building systems discussed in this chapter include:

- Structural Assemblies
- Mechanical, Plumbing, Electrical, and Data Systems

(Note: Chapter 8 addresses key issues for the planning and execution of mechanical, plumbing, and electrical work in historic preservation projects.)

- Fire Protection and Alarm Systems
- Security Systems
- Elevators
- Windows
- Curtain Walls
- Doors
- Door Hardware
- Bird Control

Chapter Twenty-One



Costs Unique to Historic Projects

by Robert J. Verrier, AIA, NCARB
and Michael D. Binette, AIA

Historic preservation projects have many special requirements beyond those of new construction or non-historic remodeling work. This chapter highlights the areas that project team members need to focus on in order to avoid unexpected costs, and to ensure that key items are covered. The first part of the chapter addresses tasks and events, such as research, historic agency meetings, and site investigation, that occur in the early stages of project planning. The second part of the chapter is a review of General Requirements items and the unusual measures that some of them entail for historic preservation or rehabilitation projects.

Requirements in the Project Planning Phase

Estimating the costs of a historic project is an evolutionary process. Early and continuous interaction among the various team members is a crucial component in identifying and controlling project costs, while achieving the goals of the owner.

In a historic rehabilitation project, many of the development costs are incurred during the early stages of initial planning. Once an owner decides to rehabilitate a building and/or determines the future use of a property, he or she may employ an architect to conduct an initial analysis and make recommendations regarding the property's suitability for preservation or adaptive reuse. The owner may also retain a historical consultant to work with the architect. This arrangement is particularly useful in adaptive reuse projects for determining whether the project is feasible, in terms of design requirements and cost.

Chapter Twenty-Five

Commercial Rehabiliation of a Historic Building

This chapter provides an overview of a historic building rehabilitation project—including the assessment of building conditions, review of applicable tax incentive programs, and comments on some notable features of the work. Rehabilitation, as defined in the Introduction of this book and in Chapter 4, is one of the treatment options for historic buildings, and may be applied to buildings that are not, for a variety of reasons, candidates for restoration or conservation. Properties suited to this treatment may, as is the case with the Candler Building, have lost many of their original features, while still retaining significant historical elements. Successful rehabilitation projects may combine restoration of these elements with non-historic space to allow for contemporary use. A large measure of the building's historic character is returned, while its components are made sound, and it becomes, once again, a vital space within a community.

Case Study:	**The Candler Building**
Architect:	Swanke Hayden Connell Architects
Preservation Consultant:	Theodore Prudon, Ph.D., AIA
Structural Engineer:	Severud Associates
MEP Engineers:	Jaros Baum & Bolles
Owner:	Massachusetts Mutual Life Insurance Company
General Contractor:	Lehrer McGovern Bovis
Masonry Restoration:	Diamond Waterproofing
Masonry Cleaning:	Aztec
Cast Stone Manufacturer:	David Kucera
Brick Manufacturer:	Glen Gery
Roofing Manufacturer:	Tuckahoe Roofing (Sarnafil™ Adhered Roofing System)
Window Manufacturer:	Skyline