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Historical Hospital Buildings: Should They Be Reused?

Abstract | **Article**

Healthcare architects and administrators are faced with the question of whether an existing older building on a hospital campus can be reused. Frequently, the building in question is an original hospital building that may feature a historically significant façade, or it may be a building completely embedded in prior additions and expansions to the point that the original building is no longer recognizable.

As the preservation of historic structures, sustainability, and adaptive reuse become broader public concerns, the question of demolition versus rehabilitation can become a heartfelt topic within the local community and hospital staff.

By investigating the various ways in which existing structures can be reused, this article discusses first steps such as approaching the project, ensuring the building can accommodate the intended functions, and addressing structural issues. Additional topics include determining appropriate space needs, façade enhancement or replacement, and the importance of long-range facility master planning.

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Healthcare architects often face the question of whether an existing older building on a hospital campus can be reused. Frequently, the building in question is an original hospital building that was constructed in a bygone era. This type of building may be freestanding with impressive detailing on a historically significant façade, or it may be a building that has become completely embedded in prior additions and expansions to the point that the original building is no longer recognizable.

As the preservation of historic structures, sustainability, and adaptive reuse become broader public concerns, the question of demolition versus rehabilitation can become a heartfelt topic within the local community and hospital staff. Sorting through the pros and cons of such issues is a complex process that involves both critical thinking and sensitivity to sentiments and emotions of those involved. Working without preconceived notions and remaining impartial and objective are of paramount importance to the design professional. The scope of this subject is so broad that this paper can only touch on a few important points.

The architect, planner, or facility manager must raise the following questions:

What approach should be taken to reusing an historic hospital building?

The Secretary of the Interior has established standards for evaluating historic resources located in historic districts. These standards and a detailed explanation for their use are available online at the Web site for [The Secretary of the Interior's Standards for the Treatment of Historic Properties](#). While most hospital structures are outside historic districts and, therefore, outside the purview of historic district regulations, the same general concepts can be voluntarily applied when asked to evaluate such a building.

The Secretary of the Interior divides work on historic structures into four categories: preservation, rehabilitation, restoration, and reconstruction. Rehabilitation is the preferred approach because more latitude is given in repairing or replacing the existing historic fabric. Also, only rehabilitation includes an opportunity to "make possible an efficient contemporary use through alterations or additions."

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A common misunderstanding is that additions to historic buildings should match or attempt to closely resemble the original structure. Actually, the Secretary of Interior's standards for rehabilitation indicate that a false historic appearance should not be created and that additions, if absolutely necessary, should be clearly differentiated from the historic building.

Can this building dimensionally accommodate the intended functions?

Many older institutional buildings were constructed prior to modern air conditioning and ventilation requirements. This fact alone created several generations of buildings with low vertical floor-to-floor heights because little or no overhead ductwork was required when the building was originally constructed.

The dimensional requirements for overhead mechanical systems must be carefully analyzed when assessing the possible reuse of an existing building. Similarly, the use of modern communication and other low-voltage systems have expanded exponentially in the last few decades, placing additional demands on the available interstitial space.

Does the building in question have an automatic fire suppression system? In most cases, significantly altered or renovated hospital buildings are now required by code to be fully sprinklered, which may require additional space above the ceiling. To thoroughly understand whether vertical dimensional criteria can be met requires a comprehensive code analysis, engineering studies that yield enough specific information to determine depths for overhead components and systems, and a strong understanding of vertical requirements for medical equipment and clinical uses.

In addition to vertical dimensional requirements, the building must also be weighed against other criteria:

- Is the existing building code-compliant or can it be readily made code-compliant?***
- Are the existing stairs adequate in width and in number?***
- Is the level of exit discharge compliant? Will the building superstructure need to be fireproofed to meet the two-hour requirement for I-2 occupancies?***
- Does the existing column spacing work for the intended clinical spaces? Many buildings constructed in the late-19th or early-20th centuries have closely spaced or irregularly spaced columns that may impose additional constraints on medical planning efforts.***
- Can the existing superstructure carry the anticipated structural loading?***

Obviously, any significant alteration to an historic building should include analysis by a registered structural engineer. The

availability of original structural design drawings is critical to this effort. If no such drawings are available, alternative means of analyzing the existing structure may need to be pursued.

The outcome of such an assessment or feasibility study, as outlined above, may be clear-cut in favor of either saving the building or removing the building. Examples of both outcomes are located in southeast Michigan.



The original entrance of Henry Ford Hospital is maintained to reflect the historic structure of the institution. Photo courtesy of Hobbs+Black

At the Henry Ford Hospital in Detroit, a successful effort has been made to maintain the original and update the original structure on an ongoing basis.

Conversely, at Mercy Memorial Hospital in Monroe, Mich., the original hospital building was deemed unusable and was recently demolished to make way for a major reconstruction program.



Original entrance of Mercy Memorial Hospital
Photo courtesy of Hobbs+Black



Artist's rendering of the reconstructed entrance of Mercy Memorial Hospital
 Rendering courtesy of Hobbs+Black

Is the structure reusable, but the façade needs to be replaced?

Reskinning of an existing hospital building may be a viable, even desirable, option in some cases. The existing structure may be sound and reusable, but the façade may be thermally inefficient, leaking, or outdated. This situation, combined with budget and schedule constraints, may lead to the logical conclusion to reskin an existing building.

The design options for the type of façade, however, may be limited by the structure itself, which may not be able to withstand significant additional weight. In some cases, this may prohibit the use of heavy skin elements in favor of lighter materials. Reskinning can be an opportunity to update the appearance of an otherwise marginal or outdated façade, improve energy efficiency, improve natural daylighting, and complement an otherwise state-of-the-art medical campus.

From a design perspective, replacing the façade can also be an opportunity to develop a more contextually consistent or complementary theme throughout an existing healthcare facility. Reskinning an existing building, however, would usually not qualify as a rehabilitation effort under the Secretary of the Interior's standards. An example of a recent proposal to reskin an existing healthcare structure was recently developed for the Detroit Medical Center Sinai-Grace Hospital.



Façade improvements at the Detroit Medical Center's Sinai-Grace Hospital
Rendering courtesy of Hobbs+Black

Another successful outcome of reuse and rehabilitation comes from a building in Southfield, Mich. In need of significant renovation, the original Great Lakes Rehabilitation Hospital had slipped into a state of disrepair and had received a number of violations from the State of Michigan. Most systems in the existing building had reached the end of their useful lives and required replacement. Additionally, the exterior of the building needed refurbishing.

The renovation addressed the entire existing facility, from structure to all building systems; issues relating to code; and all building finishes, both interior and exterior. The existing site was improved for paving, lighting, and landscape as well. The result has brought all systems, finishes, and building conditions up to current standards and has made the hospital a marketable entity, able to succeed in today's heavily competitive healthcare market.



Great Lakes Rehabilitation Hospital before renovation
Photo: Contracting Resources



The facility, renamed Oakland Regional Hospital following the massive transformation into a state-of-the-art rehabilitation and surgery center
Photo: Lazslo Regos Photography

Is the façade valuable but the supporting structure unusable?

Conversely, a much more challenging situation may exist when the opposite is true: The façade is a valuable piece of architectural history, but the superstructure is unusable due to dimensional limitations, deterioration, or structural issues. Rarely have such buildings had new superstructures installed behind existing façades.

One option available to the design professional in this situation is to treat components of the original façade as archeological relics, which are incorporated into the design of the new replacement facility. This type of “museum” approach has the potential to satisfy a wide range of otherwise conflicting interests. However, it should also be pointed out that this type of solution in most cases also would not qualify as a rehabilitation effort under the Secretary of the Interior’s standards.

Long-range facility master planning can be a vital tool in developing solutions that allow buildings of historic interest to remain intact. Through the planning process, less demanding clinical functions such as administration, physician office suites, and the like can be located in structures that lack the physical characteristics needed for more intense medical uses. Careful analysis of engineering criteria, building code requirements, and the demands of medical equipment can help yield solutions that are sensitive to healthcare providers, to the community at large, and to the built environment.

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