



**PDHonline Course A108 (2 PDH)**

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# **Reconstruction Standards and Guidelines for Historic Buildings**

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Standards for  
Reconstruction  
&  
Guidelines for  
Reconstructing  
Historic Buildings

*Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.*



## Standards for Reconstruction

1. Reconstruction will be used to depict vanished or non-surviving portions of a property when documentary and physical evidence is available to permit accurate reconstruction with minimal conjecture, and such reconstruction is essential to the public understanding of the property.
2. Reconstruction of a landscape, building, structure, or object in its historic location will be preceded by a thorough archeological investigation to identify and evaluate those features and artifacts which are essential to an accurate reconstruction. If such resources must be disturbed, mitigation measures will be undertaken.
3. Reconstruction will include measures to preserve any remaining historic materials, features, and spatial relationships.
4. Reconstruction will be based on the accurate duplication of historic features and elements substantiated by documentary or physical evidence rather than on conjectural designs or the availability of different features from other historic properties. A reconstructed property will re-create the appearance of the non-surviving historic property in materials, design, color, and texture.
5. A reconstruction will be clearly identified as a contemporary re-creation.
6. Designs that were never executed historically will not be constructed.

## Guidelines for Reconstructing Historic Buildings

### Introduction

Whereas the treatment Restoration provides guidance on restoring—or re-creating—building features, the **Standards for Reconstruction and Guidelines for Reconstructing Historic Buildings** address those aspects of treatment necessary to re-create an entire non-surviving building with new material. Much like restoration, the goal is to make the building appear as

it did at a particular—and most significant—time in its history. The difference is, in **Reconstruction**, there is far less extant historic material prior to treatment and, in some cases, nothing visible. Because of the potential for historical error in the absence of sound physical evidence, this treatment can be justified only rarely and, thus, is the least frequently undertaken. Documentation requirements prior to and following work are very stringent. Measures should be taken to preserve extant historic surface and subsurface material. Finally, the reconstructed building must be clearly identified as a contemporary re-creation.



*In the 1930s reconstruction of the 18th century Governor's Palace at Colonial Williamsburg, Virginia, the archeological remains of the brick foundation were carefully preserved in situ, and serve as a base for the reconstructed walls.  
Photo: The Colonial Williamsburg Foundation.*

## Research and Document Historical Significance

Guidance for the treatment **Reconstruction** begins with *researching and documenting* the building's historical significance to ascertain that its re-creation is essential to the public understanding of the property. Often, another extant historic building on the site or in a setting can adequately explain the property, together with other interpretive aids. Justifying a reconstruction requires detailed physical and documentary evidence to minimize or eliminate conjecture and ensure that the reconstruction is as accurate as possible. Only one period of significance is generally identified; a building, as it evolved, is rarely re-created. During this important fact-finding stage, if research does not provide adequate documentation for an accurate reconstruction, other interpretive methods should be considered, such as an explanatory marker.

## Investigate Archeological Resources

*Investigating* archeological resources is the next area of guidance in the treatment **Reconstruction**. The goal of physical research is to identify features of the building and site which are essential to an accurate re-creation and must be reconstructed, while leaving those archeological resources that are not essential, undisturbed. Information that is not relevant to the project should be preserved in place for future research. The archeological findings, together with archival documentation, are then used to replicate the plan of the building, together with the relationship and size of rooms, corridors, and other spaces, and spatial relationships.

## Identify, Protect and Preserve Extant Historic Features

Closely aligned with archeological research, recom-

mendations are given for *identifying, protecting, and preserving* extant features of the historic building. It is never appropriate to base a **Reconstruction** upon conjectural designs or the availability of different features from other buildings. Thus, any remaining historic materials and features, such as remnants of a foundation or chimney and site features such as a walkway or path, should be retained, when practicable, and incorporated into the reconstruction. The historic as well as new material should be carefully documented to guide future research and treatment.

## Reconstruct Non-Surviving Building and Site

After the research and documentation phases, guidance is given for **Reconstruction** work itself. Exterior and interior features are addressed in general, always emphasizing the need for an accurate *depiction*, i.e., careful duplication of the appearance of historic interior paints, and finishes such as stencilling, marbling, and graining. In the absence of extant historic materials, the objective in reconstruction is to re-create the appearance of the historic building for interpretive purposes. Thus, while the use of traditional materials and finishes is always preferred, in some instances, substitute materials may be used if they are able to convey the same visual appearance.

Where non-visible features of the building are concerned—such as interior structural systems or mechanical systems—it is expected that contemporary materials and technology will be employed.

Re-creating the building site should be an integral aspect of project work. The initial archeological inventory of subsurface and aboveground remains is used as documentation to reconstruct landscape features such as walks and roads, fences, benches, and fountains.

## Energy Efficiency/Accessibility/Health and Safety Code Considerations

Code requirements must also be met in Reconstruction projects. For code purposes, a reconstructed building may be considered as essentially new construction. Guidance for these sections is thus abbreviated, and focuses on achieving design solutions that do not destroy extant historic features and materials or obscure reconstructed features.

*Reconstruction as a Treatment. When a contemporary depiction is required to understand and interpret a property's historic value (including the re-creation of missing components in a historic district or site); when no other property with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction, Reconstruction may be considered as a treatment. Prior to undertaking work, a documentation plan for Reconstruction should be developed.*



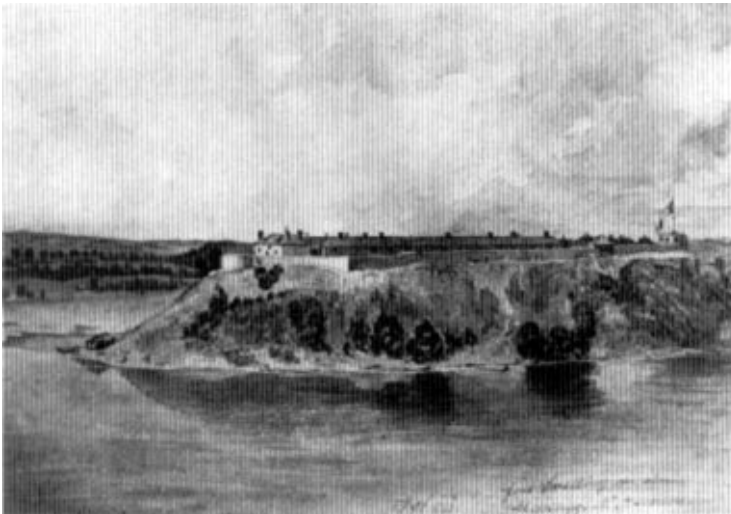
*Reconstruction should generally be based on an extensive archeological investigation, as was done here to re-create a non-surviving commissary building at Fort Snelling.*

## Reconstruction

### *Recommended*

*Researching and documenting* the property's historical significance, focusing on the availability of documentary and physical evidence needed to justify reconstruction of the non-surviving building.

*Investigating* archeological resources to identify and evaluate those features and artifacts which are essential to the design and plan of the building.



### *Not Recommended*

Undertaking a reconstruction based on insufficient research, so that, as a result, an historically inaccurate building is created.

Reconstructing a building unnecessarily when an existing building adequately reflects or explains the history of the property, the historical event, or has the same associative value.

Executing a design for the building that was never constructed historically.

Failing to identify and evaluate archeological information prior to reconstruction, or destroying extant historical information not relevant to the reconstruction but which should be preserved in place.

*Jean Baptiste Wengler's watercolor rendering of Fort Snelling, Minnesota, in 1857, is aesthetically pleasing, but the overall view does not constitute adequate documentary evidence for a Reconstruction. Oral histories are also unreliable sources of documentation for treatment.*

*Recommended*

Minimizing disturbance of terrain to reduce the possibility of destroying archeological resources.

*Identifying, retaining, and preserving* extant historic features of the building and site, such as remnants of a foundation, chimney, or walkway.

*Not Recommended*

Introducing heavy machinery or equipment into areas where it may disturb archeological resources.

Beginning reconstruction work without first conducting a detailed site investigation to physically substantiate the documentary evidence.

Basing a reconstruction on conjectural designs or the availability of different features from other historic buildings.



*(a) and (b). Two photos illustrate the use of contemporary construction materials and techniques within the treatment, Reconstruction. Because Reconstruction is employed to portray a significant earlier time, usually for interpretive purposes, substitute materials may be appropriate if they are able to convey the historic appearance.*



### *Recommended*

#### **Building Exterior**

*Reconstructing* a non-surviving building to depict the documented historic appearance. Although traditional building materials such as masonry, wood, and architectural metals are preferable, substitute materials may be used as long as they re-create the historical appearance.

Re-creating the documented design of exterior features such as the roof shape and coverings; architectural detailing; windows; entrances and porches; steps and doors; and their historic spatial relationships and proportions.

Reproducing the appearance of historic paint colors and finishes based on physical and documentary evidence.

Using signs to identify the building as a contemporary re-creation.

#### **Building Interior**

Re-creating the appearance of *visible* features of the historical structural system, such as post and beam systems, trusses, summer beams, vigas, cast iron columns, above-grade stone foundations, or loadbearing brick or stone walls. Substitute materials may be used for unexposed structural features if they were not important to the historic significance of the building.

Re-creating a historic floor plan or interior spaces, including the size, configuration, proportion, and relationship of rooms and corridors; the relationship of features to spaces; and the spaces themselves.

### *Not Recommended*

Reconstructing features that cannot be documented historically or for which inadequate documentation exists.

Using substitute materials that do not convey the appearance of the historic building.

Omitting a documented exterior feature; or re-building a feature, but altering its historic design.

Using inappropriate designs or materials that do not convey the historic appearance, such as aluminum storm and screen window combinations.

Using paint colors that cannot be documented through research and investigation to be appropriate to the building or using other undocumented finishes.

Failing to explain that the building is a reconstruction, thus confusing the public understanding.

Changing the documented appearance of visible features of the structural system.

Altering the documented historic floor plan or relocating an important interior feature such as a staircase so that the historic relationship between the feature and space is inaccurately depicted.

*Recommended*

Duplicating the documented historic appearance of the building's interior features and finishes, including columns, cornices, baseboards, fireplaces and mantels, panelling, light fixtures, hardware, and flooring; and wallpaper, plaster, paint and finishes such as stencilling, marbling and graining; and other decorative materials that accented interior features and provided color, texture, and patterning to walls, floors and ceilings.

Installing modern mechanical systems in the least obtrusive way possible, while meeting user need.

Installing the vertical runs of ducts, pipes, and cables in closets, service rooms, and wall cavities.

Installing exterior electrical and telephone cables underground, or in the least obtrusive way possible.

*Not Recommended*

Altering the documented appearance of interior features and finishes so that, as a result, an inaccurate depiction of the historic building is created. For example, moving a feature from one area of a room to another; or changing the type or color of the finish.

Altering the historic plan or the re-created appearance unnecessarily when installing modern mechanical systems.

Installing vertical runs in ducts, pipes, and cables in places where they will intrude upon the historic depiction of the building.

Attaching exterior electrical and telephone cables to the principal elevations of the reconstructed building, unless their existence and visibility can be documented.



*The spacious grounds at Middleton Place, near Charleston, South Carolina, constitute the first landscaped garden in America. The molded terraces, originally constructed in the 18th century, were largely reconstructed in the early 20th century based on extant remains and other documentary evidence. Photo: Middleton Place.*

### **Building Site**

#### *Recommended*

Basing decisions for reconstructing building site features on the availability of documentary and physical evidence.

Inventorying the building site to determine the existence of aboveground remains and subsurface archeological materials, then using this evidence as corroborating documentation for the reconstruction of related site features. These may include walks, paths, roads, and parking; trees, shrubs, fields or herbaceous plant material; terracing, berms, or grading; lights, fences, or benches; sculpture, statuary, or monuments; fountains, streams, pools, or lakes.

Re-establishing the historic relationship between the building or buildings and historic site features, whenever possible.

#### *Not Recommended*

Reconstructing building site features without first conducting a detailed investigation to physically substantiate the documentary evidence.

Giving the building's site a false appearance by basing the reconstruction or conjectural designs on the availability of features from other nearby sites.

Changing the historic spatial relationship between the building and historic site features, or reconstructing some site features, but not others, thus creating a false appearance.

*Recommended***Setting (District or Neighborhood)**

Basing decisions for reconstructing features of the building's setting on the availability of documentary and physical evidence.

Inventorizing the setting to determine the existence of above-ground remains and subsurface archeological materials, using this evidence as corroborating documentation for the reconstruction of missing features of the setting. Such features could include roads and streets; furnishings such as lights or benches; vegetation, gardens and yards; adjacent open space such as fields, parks, commons or woodlands; and important views or visual relationships.

Re-establishing the historic spatial relationship between buildings and landscape features of the setting.

*Not Recommended*

Reconstructing features of the setting without first conducting a detailed investigation to physically substantiate the documentary evidence.

Giving the building's setting a false appearance by basing the reconstruction on conjectural designs or the availability of features from other nearby districts or neighborhoods.

Confusing the historic spatial relationship between buildings and landscape features within the setting by reconstructing some missing elements, but not others.



*(a) and (b). Two views of the Officers' Quarters at Fort Snelling (ca. 1885 to 1900) not only provide information on the materials and form of the historic block, they document the wooden walkways and other landscape features such as stairs, railings, and tree placement. Historical and pictorial evidence would need to be combined with specific physical evidence in order to make the case for Reconstruction as a treatment.*



*The 1778 Kershaw House, which served as British Headquarters during the Revolutionary War, was burned by Union troops in 1865. In the early 1970s, the house was reconstructed as part of Camden Battlefield, Camden, South Carolina. Built expressly for interpretive purposes, it serves as an illustrative reminder of a past event of national significance. The Standards for Reconstruction call for any re-created building to be clearly identified as a contemporary depiction. This is most often done by means of an exterior sign or plaque, or through an explanatory brochure or exhibit. A guide may inform visitors as well. Photo: Richard Frear.*

*Whereas preservation, rehabilitation, and restoration treatments usually necessitate retrofitting to meet code and energy requirements, in this treatment it is assumed that the reconstructed building will be essentially new construction. Thus, only minimal guidance is provided in the following section, although the work must still be assessed for its potential negative impact on the reconstructed*

#### *Recommended*

#### **Energy Efficiency**

Installing thermal insulation, where appropriate, as part of the reconstruction.

Utilizing the inherent energy conserving features of windows and blinds, porches and double vestibule entrances in a reconstruction project.

Utilizing plant materials, trees, and landscape features, especially those which perform passive solar energy functions such as sun shading and wind breaks, when appropriate to the reconstruction.

#### **Accessibility Considerations**

Taking accessibility requirements into consideration early in the planning stage so that barrier-free access can be provided in a way that is compatible with the reconstruction.

#### **Health and Safety Considerations**

Considering health and safety code requirements, such as the installation of fire suppression systems, early in the planning stage of the project so that the work is compatible with the reconstruction.

#### *Not Recommended*

Installing thermal insulation with a high moisture content.

Using windows and shading devices that are inappropriate to the reconstruction.

Installing new thermal sash with false muntins instead of using sash that is appropriate to the reconstruction.

Removing plant materials and landscape features which perform passive energy functions if they are appropriate to the reconstruction.

Obscuring or damaging the appearance of the reconstructed building in the process of providing barrier-free access.

Meeting health and safety requirements without considering their visual impact on the reconstruction.