

Preserving History:

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HISTORICAL ROOF RENOVATIONS

The Flatiron Building was built in 1902 on a wedge-shaped property at the intersections of Fifth Avenue and Broadway in New York City. Photo by Alex Jagendorf.

Apppearance and performance are often two of the most critical considerations when reviewing the needs of a historical building. The roof system helps define the building's aesthetics. However, no matter how aesthetically pleasing the roof is, all buildings, including historical ones, will experience roof issues—some beyond simple repair.

Historical buildings are protected by federal, state, and local regulations and strict standards to ensure that the character and aesthetics of the building are preserved as renovations are carried out. For roof consultants who have not been a part of a historical renovation or who have little experience with these projects, the process of renovating the roof system on a historical building is one that requires acute attention, care, and cooperation with the appropriate government entities.

HISTORICAL RENOVATION AND REHABILITATION STANDARDS

From the federal level down to the state and local levels, there is a nationwide system in place to preserve and protect historical buildings. Understanding these codes and standards and contacting the appropriate authorities early in the renovation project can help ensure a smooth process in the renovation of a historical roof system.

Building Codes and Commissions

Knowing which authoritative agencies are applicable is a crucial step in getting started. The International Existing Building Code's section about historical buildings provides directives for repair or alteration of historical

buildings.¹ Consult with city and state historical building codes and commissions before any renovation work begins.

U.S. General Services Administration (GSA)

Under the GSA's Office of the Chief Architect, the Center for Historic Buildings, provides leadership and guidance for compliance with the National Historic Preservation Act. The GSA's technical and strategic expertise applies to promoting the viability, reuse, and integrity of historical buildings that the GSA owns, leases, or may acquire. To accomplish this, the GSA develops prototype solutions and tools and promotes best-practice exchange to help GSA managers, project planners, and field operations staff maintain and upgrade historical properties.²

National Register of Historic Places

At the federal level, The National Park Service's National Register of Historic

Places is the official list of historical places deemed worthy of preservation. As part of the National Historic Preservation Act, the National Register is included in the national program to coordinate and support public and private efforts to identify, evaluate, and protect the country's historical and archaeological resources.

Under the National Historic Preservation Act, a state government function called the State Historic Preservation Officer (SHPO) was developed. The responsibilities of the SHPO include surveying and recognizing historical properties, reviewing nominations of properties for inclusion in the National Register, reviewing renovation or rehabilitation plans for the impact on the properties, as well as supporting federal organizations, state and local governments, and the private sector.³

Each state is responsible for setting up its own SHPO, and the rules and regulations may vary from state to state. With the cooperation of local and state governments, the SHPO



Indiana World War Memorial in Indianapolis, Indiana, constructed between 1926 and 1965.



The various wings of the U.S. Treasury Building in Washington, DC, were built between 1836-42, 1855-61, 1862-84, and 1867-69. It was declared a National Historic Landmark in 1971.

supports the Federal Historic Preservation Program. With historical roof renovation, the SHPO can provide technical assistance and consultation to ensure that the aesthetic appearance is in accordance with the original roof design and construction.

Secretary of the Interior's Standards for Rehabilitation

The Secretary of the Interior's Standards for Rehabilitation were originally developed to help determine the appropriateness of proposed work on registered historical prop-

erties. These standards assist in the long-term preservation of the properties' historical materials and features. When using the term "rehabilitation," the secretary's standards assume that some repair or alteration of the historical building is required in order

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to be used today, but these repairs and alterations cannot damage or destroy materials, features, or finishes that are important to the building's aesthetic. The standards include ten points, all in reference to respecting the historical appearance and character-defining features of the property.⁴

Qualified professionals with experience working on historical buildings will understand these codes and guidelines and will reference and apply them as necessary. All of these guidelines recommend that any historical renovation begin with a thorough investigation and assessment of the existing roof system.

ROOF RENOVATION CONSIDERATIONS

When a problem occurs, there are few roofing professionals who specialize in historical renovation. When conducting a thorough physical investigation of the roof and its structure, understanding the construction history and the following areas is crucial:

- Deck type and condition, as some historical decks may no longer be structurally sound
- Deck load capacity to ensure a new roof and any insulation does not exceed load capacity
- Deck uplift resistance, since older decks may rely on gravity for uplift resistance and are not always adequately attached for current uplift resistance
- Rooftop equipment supports that may be deteriorated and not adequately attached for uplift or seismic requirements
- Wall substrate condition and roof drainage characteristics

Although a physical investigation is often the most important part of the project, there may be documentation available for review, such as original building plans or prior specifications. However, even with these documents, it can be hard to match criteria that may no longer be used or meet modern-day code requirements. During the physical investigation, determine any changes to the roof's slope, configuration, or materials that may be different from the original construction. Once the investigation is completed and a full picture of the roof system's condition is understood, selection of materials can begin.

Material Selection

When the historical roofing material is not available or the cost of specially fabricated materials may be prohibitive, alternative materials can be considered. In doing so, the primary concerns should be preserving the appearance of the roof and protecting the structure from further deterioration.

If needed, a suitable substitution can be selected, but these materials should match the aesthetic of the original materials as required by guidance from the SHPO, as well as meeting all codes and regulations.

Material selection for historical renovations follows the same guidelines as used for non-historical roofing projects with features of durability, redundancy, flashing conditions, material preference, and budget. Additionally, typical roofing considerations such as color, surface texture, and finish should be considered.

Architectural Considerations

In addition to the aesthetics of the building, architectural considerations exist that must be accounted for. Any substitute

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materials will need to be compatible with existing materials. Once the materials are selected and work begins, it is not uncommon to find that the project expands as it progresses. For example, waterproofing may identify wall or other structural issues that will need to be addressed.

For historical buildings, ensuring that the repair materials tie in to existing components can be challenging. You may find when working through projects that liquid-applied systems and other highly flexible membranes are best, as they are versatile enough to detail properly without compromising the integrity of the system or the aesthetic requirements of a project. These products can conform to the shape of the building, adhere to a variety of substrates, and are applicable in a wide range of temperatures, making them versatile for working with historical building designs.

IMPORTANCE OF HISTORICAL ROOF RENOVATION

The roof of any building is an element that will inevitably require attention as time goes on. A poorly constructed, maintained, or renovated historical roof will lead to the deterioration of the historical building itself and the contents inside it that may have historical value. Roof consultants have an extremely important job to protect the

building's integrity. As you work through historical projects, you'll begin to build a base of knowledge and contacts that will help you; however, don't be afraid to ask questions along the way. Roofing manufacturers are often a good source to help navigate the project, as they have likely completed projects of this type before. 

REFERENCES

- 1 "International Existing Building Code," Chapter 12, Historic Buildings,



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Curtis Liscum, RRC, RRO, technical services manager for SOPREMA, has more than 30 years of industry experience in design, evaluation, construction management, and forensic analysis. Prior to joining SOPREMA, Liscum was a senior consultant and partner with a national roof consulting firm for over 20 years. In his current position, Curt is responsible for field technical, warranty evaluations, and warranty claims.



Mark DeFreitas

Mark DeFreitas, vice president and national sales manager for SOPREMA, has more than 25 years of experience working in the commercial roofing and waterproofing industry. Prior to working at SOPREMA, DeFreitas held various sales manager positions in the industry and was a representative for the Single Ply Roofing Industry (SPRI), holding the position of president in 2007. In his current role, DeFreitas is responsible for managing the sales activity and personnel for the United States.

<http://publicecodes.cyberregs.com/icod/iebc/2012/>.

- 2 "Center for Historic Buildings," <http://www.gsa.gov/portal/category/20992>.
- 3 "What Is a State Historic Preservation Officer (SHPO)?" <http://www.ncshpo.org/whatisashpo.shtml>.
- 4 "The Secretary of the Interior's Standards for Rehabilitation," <http://www.nps.gov/tps/standards/rehabilitation/rehab/stand.htm>.

Bill Good to Retire as NRCA CEO; Ribble Set to Succeed at Post



William Good, CEO

William Good, CEO of the National Roofing Contractors Association (NRCA) for 28 years, is planning to retire. Negotiations are underway for current Wisconsin Representative Reid Ribble to succeed Good in 2017 at the end of his congressional term.

Good started his career with the NRCA in 1973 and served in multiple roles before leaving in 1985. He returned in 1987 to lead the staff and has been CEO ever since. He plans to stay on in a part-time capacity for a five-month transition period, officially retiring at the end of May 2017.

Good was named a Fellow of the American Society of Association Executives in 1999 and was awarded the Association Forum of Chicagoland's highest honor, the Samuel Shapiro Award, in 2000. He was granted NRCA's highest honor, the J.A. Piper Award, in 2001. He is an active participant in many community groups, including president of the Chicago Christian Industrial League and board chairman of Rebuilding Together.

Reid Ribble joined Kaukauna, Wisconsin-based The Ribble Group Inc., a family business, in 1975, becoming its president in 1980. He served as NRCA's senior vice president from 2004 to 2005 and was also president of the Roofing Industry Alliance for Progress' Board of Trustees from 2008 to 2010.

In 2010, Ribble was elected to the U.S. Congress as a Republican and has been re-elected twice. His current term expires in January 2017, and he is not seeking re-election.

"I appreciate the possibility to return to the roofing industry in 2017," Ribble says. "Roofing is in my blood."

Ribble was the keynote speaker at RCI's 2014 convention in Anaheim, California.



Reid Ribble