*For over 20 years, **Chris Skelly** provided assistance and guidance to about 450 local preservation commissions as the Director of Local Government Programs at the State Historic Preservation Office for Massachusetts. As a historic preservation planning consultant, he very much continues to enjoy working with local preservation commissions, large and small. He also enjoys being an NAPC CAMP Trainer.*

Would You, Could You Use an Alternative Material?

By Chris Skelly, Skelly Preservation Services, Consultant

Would you, could you use an alternative material on a door? Would you, could you use an alternative material on the floor? Would you use them for a gutter? Would you use them for a shutter? Would you use them as a filler? Would you use them as a pillar? "Applicants, I do not like alternatives! I do not like these relatives!" Oh, the places we could go – if it was just that simple to say no to alternative materials!

Credit: Chris Skelly

In preparation for its vinyl siding installation, the pilaster on this building has already been removed and discarded.

Ten years ago, I was leading a regional training session for local preservation commissions. In the audience were several local contractors. When they asked about the use of alternative materials, I dismissed their use outright on historic properties. Now, many years later, I recognize that alternative materials have a necessary place in our local historic districts. Where and when, well it all depends. Our reality is that we have little choice but to consider the use of alternative materials, albeit, in specific situations. In short, when proposed by an applicant, each alternative material must be carefully considered by a preservation commission on a case-by-case basis.

History of Alternative Materials

The use of alternative materials has a long history. Early examples often attempted to evoke a natural, more expensive material on the original construction rather than the replacement alternative materials we frequently see today that were added on well after construction. Flush board wood siding was used at Mount Vernon to simulate the look of stone. In the 19th and 20th centuries,

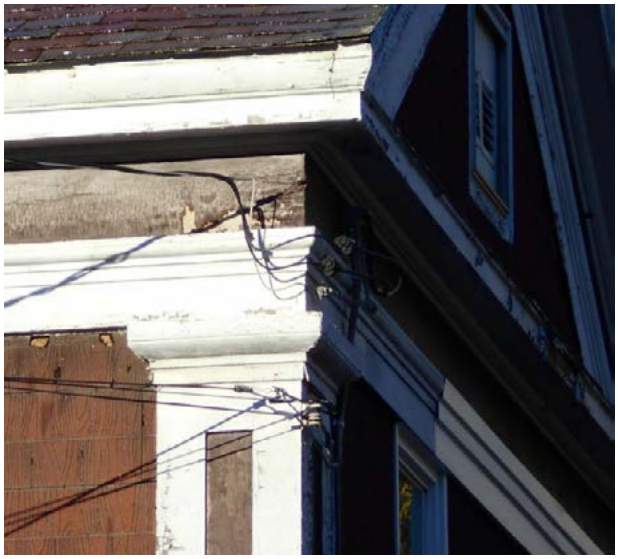
terra cotta, stucco, cast iron, sheet metal and rusticated concrete blocks were all installed to conjure the look of a grander material, usually stone.

As the 20th century continued, new alternative materials, such as aluminum, asbestos and asphalt were used to simulate wood shingles and clapboards. Rather than part of the original design and construction, these materials were often applied on top of the original material. Sometimes, this was because the original material had reached the end of its life span and sometimes because a more updated, modern or grander look was desired. Some alternative materials over the years have come and gone. Some were considered miracle products, but their track record fell short as they deteriorated in wet conditions, the hot sun or temperature swings. Some were downright dangerous to public health. These important lessons remain with us today as we must look with deep caution at every new product that arrives at a commission hearing.

Following World War II, Lustron houses, with their baked enamel metal sheets, made no effort to simulate wood or stone. They were new, modern and a glimpse of the future. Yet, they never caught on for the mass market. Interestingly, it is those materials that attempt to imitate a natural, historic material that became the most popular across our urban and suburban landscapes and remain with us today. Chief among them was aluminum siding and then vinyl siding, with their attempt to convey the look of wood clapboards. I haven't met a historic preservation commissioner yet that was a fan of vinyl siding and for good reason. Its impact on our historic neighborhoods has been devastating. Whenever I look back at historic photos, I am amazed by the trim, brackets and pilasters that were present on the historic buildings, hence removed, tossed and now lost forever. I look at the walls and think about those distinctive shingles and clapboards now hidden under a poor plastic imitation. It is no wonder we don't want alternative materials in our historic districts. We see the impact of alternative materials every day.

Why are Alternative Materials Needed Today?

We have little choice but to consider the use of



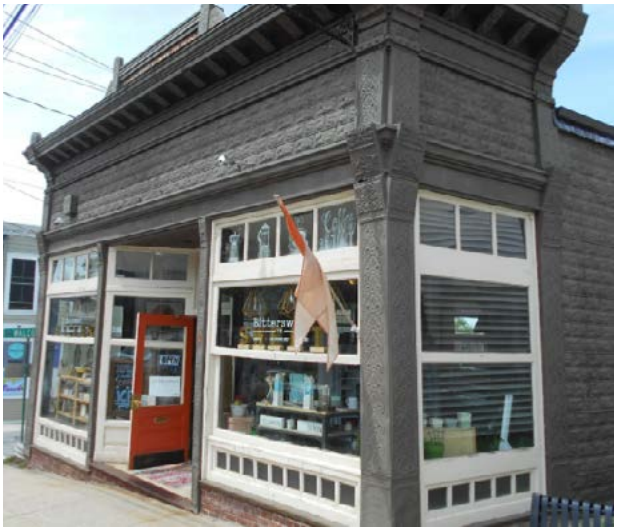
Credit: Chris Skelly

The pilaster on the opposite corner remains but not for long as the vinyl siding installation progresses around the building.

contemporary alternative materials in specific, carefully considered, situations. Why? A primary reason is simply that wood isn't what it used to be. Need to replace a rotted piece of architectural trim, a baluster or a pilaster? What you will find at most lumber yards might be wood, but it will be entirely unlike the old growth wood it is replacing. Whereas the wood of a dark forest is slow growing, dense and very long lasting, the wood of today largely comes from tree plantations, open areas with lots of sunlight, perfect for fast growing trees and quickly getting those logs to a mill. However, that means much of the wood we find at the lumber yard today has few growth rings and is simply far more susceptible to decay. If replacing wood in-kind, there are some options for more durable species of wood that can be found at specialized lumber yards. However, the use of these woods is complicated as they may come from dwindling rainforests and not sustainably harvested.

National Park Service Preservation Brief 16

That brings us to what is out there today for alternative materials. The National Park Service *Preservation Brief 16 - The Use of Substitute Materials on Historic Building* Exteriors offers excellent guidance for local preservation commissions. If you aren't familiar with Preservation Briefs, they cover a variety of very useful topics. This preservation brief on substitute materials was completely revised in 2023 and it recognizes the many changes, opportunities and challenges with alternative materials



Credit: Chris Skelly

The pressed metal exterior of this 1906 storefront emulates grander building materials.

today. While it points out that new alternative materials will always be developed, it gives a helpful overview of the common alternative materials in use today and where their application may or may not be suitable.

Potential Substitute Materials Described in Preservation Brief 16

Aluminum
Fiber Reinforced Concretes (GFRC, CFRC)
Glass Fiber Reinforced Polymers (FRP, Fiberglass)
Fiber Cement
Mineral / Polymer Composite
Cellulose Fiber / Polymer Composite
Non-composite Polymers
Cellular Polyvinyl Chloride (PVC)

The Where and When of Alternative Materials

After reviewing Preservation Brief 16, be sure to become familiar with the *Secretary of the Interior Standards for Rehabilitation*. These national preservation standards, whether required on a project or only advisory, offer a well-established national framework and guidance for decision-making about work or changes to a historic property that includes the use of alternative materials. Consider Rehabilitation Standard 6 which states the following: "Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence."

This standard makes it clear that if replacement of material is necessary, it is important to replace with the same material, for example, wood. While offering this guidance, it also suggests some flexibility is warranted with its language regarding "where possible, materials." With that flexibility there are plenty of questions to consider before a decision can be made on approving an alternative material.

Questions to Ask when Evaluating the Use of Alternative Materials

Repair - Can the damaged historic feature be repaired? If so, it is best to prioritize repair of the historic material over replacement.

Availability - If replacement is needed, is the historic material available? If the historic material is available, then its use should be prioritized over an alternative material. If a claim is made that the historic material is not available, ask for more information on the efforts that were made to locate the historic material.

Character Defining Features - What are the character defining features of the building or the district? Will the alternative material impact an essential character defining feature of the district or the building?

Match - How close is the match of the alternative material in color, texture, dimensions and profile? If the original material was painted, can the alternative material be painted according to manufacturer specifications?

Visibility - How visible is the proposed location of the alternative material? How obvious will the alternative material be in this location? Is it on a primary façade or is it minimally visible from the public way? If it is on a primary façade, is it small enough to be minimally visible with an unaided eye?

Vulnerability - Have historic materials deteriorated at this location previously perhaps due to moisture, dry rot, ultraviolet light degradation, wind weathering or other conditions? If so, could an alternative material perform better in such a location?

Cost - Is the cost of the historic material prohibitively expensive? If that claim is made, ask for written quotes for both historic and alternative materials that prove the

historic material is cost prohibitive. If the historic material is more expensive, how will its use change the total cost of the entire project once all materials and labor are factored into the project.

Durability - Is the alternative material more durable in wet conditions, the hot sun or temperature swings than the historic material? What evidence is available that this is the case? Has the material only been tested in a research lab?

Damage - Could an alternative material damage adjacent parts of the historic building through removal of historic material, by fastening on the new material or through different expansion and contraction properties between adjacent materials and the new alternative material?

Performance Record - How long has the alternative material been on the market? Where and when has this material been used?

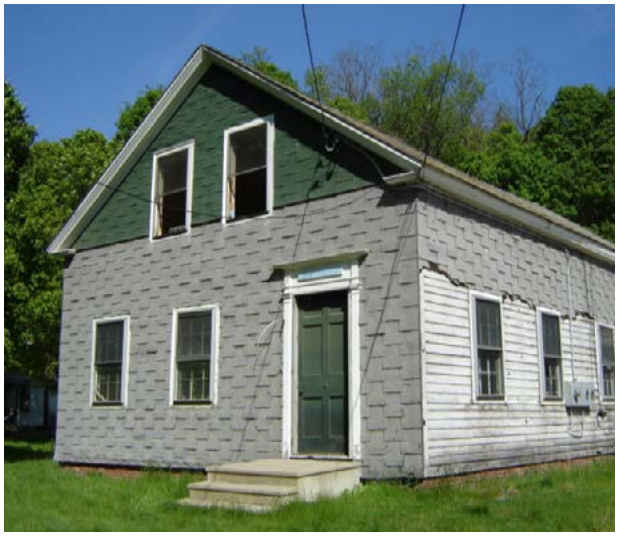
Best Practices for Considering Alternative Materials in Your Historic District

Your Design Guidelines and Alternative Materials

A key part of your decision-making process is the language included within your local historic district design guidelines. It is your design guidelines, crafted specifically for your community, that will set your community standard on what is acceptable for alterations such as the use of alternative materials. Each community may respond differently to alternative materials. The important thing is to make sure that your design guidelines clearly and plainly cover alternative materials. When it comes to your design guidelines, alternative materials may need a nimbler approach for inclusion. If, say, your design guidelines are updated once every decade, they may not be able to keep up with new manufacturers, products and materials. For that reason, it is a good idea to have a policy spelled out in your design guidelines that interim, supplemental guidance on alternative materials will be developed as needed and will still be considered a part of the guidelines. Include supplemental guidance on alternative materials on your commission's website and with the distribution of your guidelines.

Question the Applicant, Contractor, Designer or Architect

When you hear that a historic material can't be repaired or that an alternative material is the only available option, question that conclusion. If you feel you need more proof from an applicant that the historic material can't be used due to cost, availability or some other reason, ask for what you need before making a decision. Request detailed written quotes, estimates and efforts. Remember that contractors and architects may want to work with alternative materials because they are most familiar with them, not because they are the best treatment approach to a historic building.



Credit: Chris Skelly

Asphalt shingles for siding did not catch on but as a roofing material did.

Ask Your Colleagues Around the Country for Guidance

If a contractor or architect explains that this is an amazing brand-new product perfect for replacing a historic feature on a building and you've never heard of it, be sure to find out what you can about its longevity, durability and compatibility with historic properties. The National Alliance of Preservation Commission has an amazing network of preservation commission members through its NAPC-L listserv. Ask an online question about a new product on NAPC-L and you'll likely hear from someone with knowledge and experience about that product.

Lastly, Look for a Balance that is Right for Your Community

"Step with great care and great tact and remember life is a great balancing act." Yes, it is all about finding the right balance for your community. Such words of wisdom sum it up well when it comes to alternative materials in our historic districts. And so, with that, preservation commissions, you're off to great places!