The Local Landmarker

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On the Cover: A Victorian-era front porch in the Village of Orchard Park, Erie County, is an excellent example of how historic features add to the character of a building and also the streetscape. Decorative elements are everywhere on the porch, from just under the porch roof to under the porch floor. Since porches are constantly exposed to the elements, they typically need constant maintenance and repair. If any of the materials here were deteriorated and needed replacement, the question then is how and with what?

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From the Coordinator

This issue: Substitute Materials

Substitute materials (those either purporting to mimic or actually almost perfectly replicating traditional building materials) are now widely available in the marketplace. You may have already seen them in some Certificate of Appropriateness applications: rubber "slate" shingles in every color and shape; closed-cell PVC trim boards with traditional ogee curves; fiber-cement based siding in traditional widths; molded urethane porch spindles that might fool a woodworker (well, maybe from a distance). These features are all available either at your local "big-box" building supply store or with a few clicks online. Part of the popularity of these materials in new construction is the desire to have a "traditional" looking building with less-than-traditional maintenance and upkeep, as well as the ease and speed in how they are installed. Then there is also the reality of finding the craftsmen to make an appropriately profiled molding, turned porch spindle, stave-constructed column, or carefully scrolled bracket in traditional materials.. Even if a person was available, sometimes the cost of their services can be intimidating, or their location not convenient to the project. Also, for wooden elements there is strong evidence that modern genetically engineered and plantation grown wood does not perform as well as the old-growth lumber originally used in historic buildings.

Although many of the substitute materials are manufactured for new construction, they are also being used in repair projects at historic buildings. If you haven't seen the new wave of substitute materials in your applications to date, you will soon. How will your commission/board respond when you do? This issue of the Landmarker will discuss times when substitute materials might actually be an appropriate choice, and conversely, where they are never appropriate. I'm not promising that every situation you might face at the table will be made simple, but I do hope to provide a thought process for you and your fellow commissioners to go through when faced with the use of a substitute material. As always, this is an ongoing dialogue, so I look forward to hearing from the community on this subject.

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Using Substitute Building Materials at Historic Buildings

"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."
The Secretary of the Interior's Standards for Rehabilitation, #6.

Standard #6 of the **Secretary's Standards** seems pretty straightforward at first read. One could say that it is a "linchpin" for all the other standards, since the retention and appropriate treatment of historic features is what every Standard essentially guides when applied to a project. The first sentence is clear, calling for the repair of deteriorated features as a first approach, thereby keeping historic materials, design, and character intact. However, the second sentence acknowledges that there may be times when historic materials and features are beyond repair, and must be replaced; however, it sets this test high. "*Where the severity of deterioration…*" is the test here, requiring that replacement cannot be based upon anything other than a determination that the material or feature is "severely" deteriorated, and cannot be repaired. However, what does "severe" deterioration leading to an inability to repair mean in this context?

The wide range of building materials and what can happen to them over a period of years, decades or even centuries can make it difficult to establish a hard and fast definition of severe deterioration that all can agree upon. After all, based on experience, expertise, methods at hand, and even attitude, one person can see a material or feature as totally "gone" while another may consider it still a candidate for repair regardless of condition. How I like to approach the concept is to consider the condition of the feature and the possibility that it can be made whole and serviceable again while retaining a large majority of its original "fabric". It may be possible to "repair" a porch column using "dutchmen" (small wooden patches), large scale material replacement, and/or epoxy consolidation and have the end result be 20 percent original and 80 percent new, but that is not the intent here. The goal is to retain the historic feature, not only a small portion of it; that would be extremely close to wholesale material replacement.

So, for discussion, assume that everyone has agreed that replacement is warranted for a contributing historic feature, in this case a pair of elaborately turned and/or built-up porch columns supporting a one-bay porch at the front of a contributing house in an historic district. Maybe a tree fell on the porch and crushed the columns beyond repair; maybe they suffered from years of deferred maintenance and have severe material deterioration. In any case, in this scenario it is not possible to repair them while retaining a majority of their physical integrity. What would Standard #6 guide you to do? Looking back the language of the Standard's second sentence, you should require the new feature to match the historic in "*design, color, texture, and other visual qualities and, where possible, materials."* If the sentence is parsed out, first is **design**, ensuring that the form and details of the old and new part match. Then there is **color**, important for materials such as stone and brick, but maybe not as important in the case of a feature that is traditionally painted, as it can be whatever color you want it to be; the original probably changed colors several times in its existence. **Texture** is next, meaning that the overall appearance and "feel" of the new matches the historic. "**Other visual qualities**" is as it seems, essentially a catch-all for everything else that the other criteria might not address. And there is the last part, "**where possible, materials.**" Where possible? That is a

somewhat interesting choice of words. It would seem to open the door for substitute materials, and there it is, right in the Secretary's Standards! If your Board or Commission uses the Standards verbatim (through adoption of rules and regulations) this is a statement you must certainly deal with. Even if the commission doesn't use the Standards exactly, but uses the review criteria in the New York State Model Law, or the commission has adopted its own set of guidelines tailored for the community, I can state that you are probably using a document based in the Secretary's Standards for Rehabilitation. So, what does it mean for you in your decision making role as a Commissioner, given the "open door" for substitute materials provided in Standard #6? The question is exacerbated by the plethora of new building materials that have come on the market over the past 10-15 years billing themselves as replacements for traditional building materials.

To begin to understand the intent of the phrase and how it is interpreted by the National Park Service (which developed the Standards and governs their application) we can look in two locations. First, in 1988 the Technical Preservation Services Unit of the National Park Service published Preservation Brief 16, "The Use of Substitute Materials on Historic Building Exteriors". The publication starts with an historical overview, making the case that the use of "substitute" materials, mainly the use of cheaper or more readily available materials to imitate rarer or more costly ones, has a long history in the United States. Such "imitation" materials were usually mass produced and widely used at the exterior of buildings throughout the 19th and into the 20th centuries. In most cases these were not used to repair deteriorated materials at existing buildings, but in new construction for their lower cost and speed of installation while providing a "traditional" appearance. Take a look at your own historic districts and you will find cast iron, terra cotta, stucco, even sand-painted wood "standing in" for stone at window lintels, quoins, columns, even entire facades. You can also find stamped metal shingles used to imitate clay roof tiles, sheet metal stamped to look like brick, or formed and built-up metal cornices and balustrades used to imitate ones "traditionally" built of wood or carved stone.

What is different about the use of substitute materials historically and their proposed use as part of a Certificate of Appropriateness application is that the work of a Preservation Commission is usually less about reviewing and approving the use of "imitation" materials for new construction (but this can happen), but more about reviewing and approving them for the repair and replacement of missing or damaged features on existing historic buildings. To guide this situation, Preservation Brief 16 introduces four major issues as possible reasons to consider the use of substitute materials:

1. The unavailability of the historic materials
2. The unavailability of historic craft techniques and/or lack of skilled artisans
3. Poor/substandard original building materials that should not be replaced in kind
4. Modern code requirements not permitting the use of the historic materials

The publication has many good points to make about the use of substitute materials, and has an excellent "run-down" of several types of materials, with pros and cons of each (You can find the link to the Preservation Brief series on the "Further Reading" page in this issue). As I noted earlier however, having been written in 1988 and not updated since then, this Brief does not begin to address the myriad of substitute materials that have come on the market in the last 20+ years.

In addition to being published over two decades ago, Brief 16 was also written before a comprehensive revision of the Secretary's Standards was undertaken in 1992. This revision changed several parts of all ten Standards, and in #6 it changed what had read before as "*the new material should match the material being replaced in composition, design, color, texture, and other visual properties*" to the version we have today: ***the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials.*** The 1992 addition of "where possible" opened the door to the use of substitute materials, a change that at the time was a bit controversial, and caused a great deal of conversation throughout the preservation community.

As I understand it (and I was involved in reviewing the 1992 revisions) the changes to the Standards were undertaken as a response to some interpretations (some of them by local preservation boards) being a bit too literal. In some cases property owners were being required to exactly match wood species for clapboards, have missing iron pieces traditionally cast, or damaged or missing stone ornament hand carved. Some of these requirements put many building owners and applicants before preservation boards and commissions in an impossible situation, leaving them unable to undertake an exact replacement owing to labor and material cost, material unavailability, or the fact that no one within a reasonable distance knew how to undertake the work. These were, and continue to be circumstances beyond their control. The change in Standard #6 was specifically made to recognize that requiring the material to exactly match the historic was not always possible or appropriate, and to give some needed flexibility within bounds.

To help you better understand the four points noted above, here are some actual projects where they have been applicable.

The unavailability of the historic materials

During the rehabilitation of the landmark Metropolitan Life Insurance tower in New York City, the project was subject to review by the New York City Landmarks Preservation Commission, so a Certificate of Appropriateness application was filed. The majority of the tower was originally clad in a type of stone known as "Tuckahoe marble". This stone is chemically and visually quite different from what most people typically think of as marble quarried throughout the world, and is found only in and around Westchester County, north of New York City. The "classic" appearance of the stone, its durability, and its ready availability to New York City made it a popular material for many buildings in the area during the 19th and early 20th centuries. When more the decorative and varied Vermont marble became cost competitive and more easily available with industrial quarrying and improved transportation, the Tuckahoe quarries in Westchester County were closed. Today there are no active quarries for the stone, and the historic ones have been overrun by 20th century suburban development. The Metropolitan Life needed new Tuckahoe marble to make façade repairs where impact damage and spalling had taken place, but there was no ready source for the material. After much discussion about the options available to the project given that the original stone was no longer available, a cast stone, in essence a synthetic stone composed to look like Tuckahoe marble was proposed. Incredibly, the project's material conservators were able to find a boulder of Tuckahoe marble behind a gas station in Westchester County, and used this source to provide stone for repairs. While this project had a happy ending through luck (and the very deep pockets of the owners who spared no expense in locating a source), there are materials such as Tuckahoe marble that are simply not available, difficult to find, or prohibitively expensive to acquire for the average property owner. If such a situation were to arise in a local project, would it be reasonable to require an applicant to search as high and low as the Met Life team? Or would your commission agree that the material was simply unavailable in an acceptable time frame and/or cost and move towards the next step, finding an acceptable substitute?

A situation closer to what you may see, also dealing with material availability in a more subtle way occurred in the Village of Roxbury in the Catskills. A homeowner reached out to me about the wooden skirt around the character defining porch at their historic house (ca. 1875). Due to constant exposure to the elements the original skirt had deteriorated beyond repair, requiring replacement. The skirt was not highly decorative in that it was not cut and/or pierced in a pattern, but its presence along the base of the porch was part of the character of the porch and that of the house. The owner went to the lumber yard, purchased new wood (which he was assured was high quality), painted it and installed it appropriately as a new skirt. Winters in Roxbury are long, and snow can sit against a porch well into spring in the Catskills. The owner found that compared to the original materials that had lasted for 100+ years before giving up, the new wood was showing signs of

distress in a few years. Several replacements later, the owner was frustrated and called the SHPO for help. I discussed the situation with him, and after asking several questions about the type of wood he had been using, the location, installation, etc., we both came to the conclusion that the wood (and paint) readily available to him was simply not up to the task. The owner was up against the fact that most wood in lumber yards today are fast growing "plantation" varieties, genetically engineered for rapid maturation and harvest. These woods are quite different than the "old growth" wood used in many pre 1940 buildings in the United States and in most cases do not perform as well as the older wood, particularly in high exposure locations. Simply put, a wood that could perform as needed in the location was not readily available. The owner could have ordered a "exotic' species at a much higher cost, but again, there was no guarantee that its performance would be any different that the other wood. Under the first of the four replacement guidelines, a substitute material was an appropriate replacement, closely following the language of Standard #6 as to the appearance of the material compared to the historic. In this case, a closed-cell material having the appearance of wood was purchased and installed in place of the original wooden materials, preserving the porch's appearance and providing an appropriate and long-lasting replacement.

The use of substitute materials in place of wooden elements will be an ongoing issue, as we have to accept that not all wood is created equal and that modern wood supplies may not have the same performance as that from old growth forests. Also, modern materials such as urethanes and other cast wood substitutes are being made in classical forms and profiles, and in some cases may be an appropriate and acceptable replacement for wooden elements that have reached the end of their life span. I have seen some porch columns that fooled my eye and my hand until I asked about their material. One such project was at a porch at an historic building at Langley Air Force Base. Langley is located on the Chesapeake Bay, where wind driven rain and moisture is always an issue. The building, the oldest on base, sat directly on the bay shore and the original porch columns had severely deteriorated after several years of valiant but failing repair efforts. The project team had decided that the extremely wet location would probably cause any new wooden columns to fail in a relatively short period of time, and chose the new columns, matching the historic in scale and detail, but having them cast in a synthetic resin.

A material that was historically crucial to the protection of wooden building materials and not available anymore is lead-based paint. While the deleterious health effects of lead-based paint are now widely known and it is accepted that it is not a safe building material, it did provide an excellent coating for exterior wooden features and materials. Flexible yet strong, resistant to mildew and mold, and extremely long lasting, in combination with old-growth wood it virtually armored exterior materials against the weather. The fact that it can no longer be used in paint formulation has left paint manufacturers scrambling to find an exterior coating that can perform as well; so far none has yet been deemed up to the job. You may wish to take this into consideration when reviewing proposals for replacement materials at highly exposed locations such as the porch noted above, and be open to the use of materials that will avoid creating a rapid replacement cycle for the homeowner. However, this is not a one-size-fits all answer. Each project must be examined for material condition, location, and the available options.

The unavailability of historic craft techniques and/or lack of skilled artisans

As noted above Preservation Brief #16 was written in 1988, and time has made a difference in the availability of historic craft techniques, but not necessarily in the direction you might think, When Brief 16 was first published, many building crafts were passing away rapidly or already lost. The popularity and general "mainstreaming" of historic preservation in the past 22 years has done much to revive some building crafts by creating a need for craftsmen and a general interest in building crafts. During this period excellent "traditional" building crafts training centers such as the National Center for Preservation Technology and Training in Natchitoches, LA, Don Carpentier's Eastfield Village in Nassau, NY, and the North Bennet Street School in Boston, MA, were either

established or grew. National conferences and trade shows such as the Traditional Building Exhibition and Conference, and national publications like Clem Labine's **Traditional Building** magazine have created a market and provided visibility for craftsmen and purveyors of traditional building materials. Even with the rise in craft visibility, a local, small scale project may still run into problems finding a craftsman or artisan who is nearby and affordable.

Many historic buildings have materials that while still available in their "raw" form, might not have craftsman readily available to work them into the necessary form. Take the example of porch columns in the section above and the porch supports mentioned in the earlier part of the article. While it may be possible to undertake simple patching of rotten areas at the base of a column, one that has been destroyed or severely deteriorated is not such an open and shut case. In the case of round porch columns, it may be difficult to find a craftsman familiar with constructing a new one in the traditional way, using staves (think of building a barrel with individual pieces of wood held together in a circle). In that situation, and with the potential problems of plantation grown wood, the best and most readily available solution could be to find a supplier of a cast, synthetic column in the appropriate style and size, matching the historic in "design, color, texture and other visual qualities", the first four criteria in Standard #6.

Carved stone elements at buildings can be subject to deterioration from weather, or in a worse case scenario, breakage from impacts or inappropriate treatments such as sandblasting. During "slipcovering", a fashionable façade treatment in the1950's and 1960's where the entire façade was covered by metal or plastic panels, projecting stone or terra cotta decorative features were sometime cut or hammered flat so that the new façade could fit flush over the building. I have reviewed projects where the covering is removed as part of a rehabilitation project and the impacts (literally) of the workman that installed it is extremely evident. If your commission was faced with this situation, and such damaged features were exposed and hopefully proposed for repair, would your commission require stone for stone or terra cotta for terra cotta replacement if a lower cost, more readily sourced and appropriately appearing material was available?

Most communities have at least one building clad or ornamented with terra cotta. Literally "baked earth", terra cotta is a very durable material and its use was highest in the late 19th and early part of the 20th century. Terra cotta can deteriorate for several reasons, including spalling of the exterior finish from poor original glaze application and firing, or breaking from the rusting and expansion of the original steel "hangers" within the unit. Terra cotta units were typically "hung" from the building by a metal armature. If water infiltrates into the wall, the hanger can rust, and the expansion of the rusting metal can create pressures inside the unit, causing it to shatter or crack.

Finding a person who can adequately cut and carve stone, or more difficult, finding a company to make a single unit of terra cotta can lead a property owner into a frustrating and dead end search. What can be more readily possible and has been gained a wide acceptance in the preservation community is making a latex or other material mold of the piece (if the original is too damaged, using an intact example elsewhere on the building, or having a model made), and then recasting it in a lightweight yet durable material. Cast stone has been used, as has fiberglass. Whatever material is chosen, key in making this a successful substitute is finding a material that has a similar finished appearance as the original, or using a material that can accept a durable exterior finish matching the original.

Poor/substandard original building materials that should not be replaced in kind

The third issue: the use of poor or substandard original building material(s). Not everything old is "better" than new, and people made mistakes as much "then" as they do now. Also, some materials simply did not perform as expected, or were simply the "best" that was available at the time, but not the best for the job.

An exterior rehabilitation project at the National Historic Landmark designated Troy Saving Bank Music Hall in Troy, NY (ca. 1870-75) included a full refurbishment of the highly visible and character defining "bell cast" red slate roof. A prominent decorative feature of the roof was a large scaled iron cresting that was visibly suffering from breakage and deterioration after 125+ years of wind, ice, water and general exposure. While it had some areas of loss, a majority of the original iron was still extant. The initial proposal was to remove the cresting, repair it and reinstall it, which would have been the most logical course following the Secretary's Standards. After the cresting's removal, it was examined and found to be made of an iron with an extremely high carbon content; this high carbon content made it extremely brittle and prone to deterioration and failure. Most importantly for the project, it prevented the iron from being welded or brazed. The iron was simply too fragile, and the high heat required for the work could actually destroy the materials rather than joining them. The decision was made to replicate the entire cresting by casting it in a modern metal lightweight metal, using the historic as a model, exactly replicating the details of the original cresting. From the ground, the appearance of the new material is exactly as the historic, and it is expected that it will have a longer life span than the original.

Another, much more modern example of original materials being found inadequate for reuse was at Lever House, a National Register listed icon of modern design on Madison Avenue in New York City (1951-52). The building was radical for its time, one of the first glass "curtain-wall" skyscrapers in the United State. It rose along the traditionally stone and classically detailed Madison Avenue streetscape in the first years of the 1950s, making a bold statement about the future of architecture. Its sleek glass walls were sealed against the dirt of New York City, using "high-tech" sealants and gaskets designed to last indefinitely. Unfortunately, the technology required for the design was fairly new and experimental, and "indefinitely" proved to be about 45 years. By 1990, the building was leaking water to the interior and heat and air conditioning to the exterior. Water infiltration was so bad that interior steel supports were rusting away and sections of the glass skin were actually falling off. During an extensive rehabilitation, the exterior materials were removed and rebuilt using systems and materials that would perform better than the original, given what has been learned about glass curtain walls since 1952. The appearance of the new exterior is extremely close to the original, but did not replicate each detail as originally built; to do so would have been inviting a new cycle of infiltration and deterioration. The main thought in any situation like this is "don't repeat the mistakes of the past".

The historic Thirty Mile Point lighthouse and keeper's house at Golden Hill State Park, along Lake Ontario in Barker, NY (ca, 1875) is a popular local landmark and overnight lodging facility. The combined lighthouse and keeper's house has an extremely complex roof form, as the light tower rises through the roof of the house, creating a number of intersecting ridges and valleys. There has been a tendency for serious roof leaks in one area of the house, causing interior material damage, and no amount of repair has been able to slow it down for very long. An inspection of the roof found that the intersection of the tower and the lower roof over the residence creates an area where several roof valleys drain into one location that is fairly flat, The design relied on the roofing material to perform flawlessly, which being simple sheet metal with seams and joints in a very windy and wet location was very optimistic. When a roofing project is designed for this building, it will be unlikely that the troublesome part of the roof will be repaired or replaced in-kind. Rather, the region (working with agency historic preservation staff to prevent any treatment that will change the overall character of the lighthouse) will most likely redesign the intersection(s) to alleviate the problem, using more modern roofing materials in the location to better seal the interior from leaks. While roofing materials and forms can be highly character defining, it is important to ascertain during a project development if some aspect of the roof or another building part is actually causing problems due to flawed design or installation, or if materials are being expected to perform beyond their capability.

It may at times be appropriate to go in a direction that does not exactly replicate material, installation, or some problematic aspects of design. However, the language of Standard #6 must be adhered to: color, design, texture, and other visual qualities. The cresting at the Troy Music Hall replicates the appearance of the original in a material that performs better for the location. The skin of Lever House was reinstalled addressing original design and materials flaws while preserving its appearance, and the Thirty Mile Lighthouse roof will be reworked to shed water more successfully while not radically altering its appearance. The common thread in all these projects is that the historic character of the building was or will be retained during the necessary work.

Modern code requirements not permitting the use of the historic materials

Code requirements for building materials have been around for some time and have influenced the choice of materials more than you might expect. Some of the earliest dealt with fire prevention, requiring buildings in urban areas to be constructed of brick rather than wood. When sheet metal roofs became readily available, some cities required wooden shingles to be replaced with metal roofing. These requirements were reactions to devastating fires that periodically wiped out entire urban cores, fed by the abundance of fuel in the form of dry wooden clapboards and shingles.

Building codes continue to impact building materials and therefore building appearances today, both at new construction and historic buildings. Under building code an existing condition can remain, unless a proposed project "trips" the code requirements, typically done when a project is large enough to be considered equivalent to new construction. This threshold is usually determined by cost of the work, but a change in the building's use can also trigger code application, as the new use may have a higher "threat" level in terms of life safety (think of a house turning into a restaurant with the requisite larger crowds inside the building, and commercial cooking equipment). When a building material is deteriorated and must be replaced in its entirely, this can also trigger building code for new materials, again as if it were new construction.

A frame, woodedn clapboard sided building in an historic business district can add a great deal of character to the area, but clearly is made of a combustible material. Therefore, a code officer might rightly see it as a risk either from a fire starting there and spreading, or by being potential fuel should the building immediately next to it were to catch fire. If a project at the building "tripped" the code, and it applied to this hypothetical building, it may be that the code would require the building's lot line elevations to be of non-combustible materials. Given that requirement, what is the solution? The first approach should always be to work with a code officer to find an "equivalent" level of safety that would provide the necessary prevention and/or protection while allowing the original material to remain. It might require some creative thinking, such as sprinklering the outside wall, or using a fire-rated intumescent coating or paint (one that expands when exposes to heat, creating a layer of fire protection) that would provide a level of fire rating. However if these aren't feasible, or allowed, then a substitute material would be the direction in which you might guide the applicant and/or the codes officer. For clapboard, there are several materials on the market that have the appearance of clapboard but are fire rated, such as cement and fiber based boards. Using these would provide the required fire resistance while retaining the building's overall historic character. The key to using such materials is to use them at the affected areas only, not as a wholesale treatment for the overall building. Clapboard in good or repairable condition at areas not affected by code requirements should always remain in place.

Summing it up

As you can see, applying the four issues in Preservation Brief 16 to a project can have a domino effect wherein more than one point can be brought into the discussion. So, say you have a project wherein some aspect of the proposal meets one or more of the four "tests" listed above. What

guidance is there for choosing the "right" substitute material? Looking back at Preservation Brief #16, there are several important points to consider about their use:

1. The appearance of the historic material must be matched; this includes material wear and color fade testing to ensure that the color and texture match today will still be a match tomorrow.
2. The physical properties of the historic material vs. the new must be accounted for to prevent actions such as galvanic corrosion (in the case of metals), or expansion and contraction (to prevent gaps or build-up of damaging internal pressures).
3. Understanding the performance expectations of any new materials, ensuring that they have been tested and have performed well over a number of years. That "miracle" material just on the market may not perform as promised over the long term. An example of this was the original gaskets at Lever House, which failed much earlier than expected.

As an exercise, let's pull apart the decision process that made the substitute material at the porch on Chesapeake Bay an appropriate option:

1. The originals were severely deteriorated and actually non repairable as the majority of their original material. Would not have been retained
2. The location of the porch, near water and wind driven rain, is a very hostile environment to wooden elements
3. New wooden columns (not made of dense, old-growth lumber) in the harsh location would most likely fail much sooner than the originals did.
4. The new synthetic replacements matched the historic column exactly in scale, detail, and texture.

Given that the project had met these conditions, I was comfortable with their installation. Of course, the longevity of the new materials is still being understood, so it may be best to look at this project several times in the coming years to determine if it was an appropriate long term solution.

Overall, decisions regarding substitute materials will always be a case by case situation. Each , proposal should be carefully reviewed for its merits. It will also be helpful if you (individually, or as a commission) did some exploration into new materials on the market by reading about them in journals and trade magazines such as Traditional Building, or by asking materials representatives to present their product to the commission. Of course the latter should always be done with a somewhat skeptical eye, realizing that the reps are attempting to "sell" their product. However, we at the State Historic Preservation Office have found that presentation are an excellent way to learn about substitute materials or features, allowing us to ask questions that might not be appropriate to ask an applicant (such as "why was that detail done that way," or "why doesn't that match the historic examples better?"). Also, the representative can learn about your market and your needs and take that feedback to the company.

As more and more substitute products come on the market, the issue of using them in historic preservation projects will most likely be seen more commonly in Certificate of Appropriateness applications. Using the points above might help make your way through this "brave new world", bearing in mind that your first responsibility is to the historic material and historic character of the house, building, or object in front of you, allowing the use of substitute materials only as absolutely necessary and appropriate.

Featured Websites

After all that information about substitute materials, I thought I'd wrap up with some resources for traditional building crafts and craftsmen. Not all building crafts have been lost, and these site can help you learn about who is still doing them, as well as teaching about them. Perhaps you can find a course you are interested in and become a local expert in a traditional building craft or material!

The North Bennet Street School is located in Boston, Massachusetts, and offers intensive, hands-on training in traditional trades and fine craftsmanship, helping students to achieve meaningful lives and livelihoods. For more than a century, their exceptional programs, master faculty, and inspiring community has encouraged individual growth, curiosity, technical mastery, and commitment to excellence. Today, the school's reputation for excellence and value attracts students from around the world.

The North Bennet Street School has an excellent website at http://www.nbss.org/

Don Carpentier in Nassau, Rensselaer County, NY has an amazing collection of historic buildings, tools, artifacts, technology and a head full of information about traditional crafts. Luckily, he holds an annual series of workshops at his site, **Eastfield Village**. Past sessions have include slate working, tinsmithing, traditional plastering, paint mixing, stone cutting, and wood working.

Information about Eastfield Village and the training sessions (held each summer) can be found at http://www.greatamericancraftsmen.org/eastfield/eastfield.htm

The Preservation Trades Network (PTN) is a 501(c)3 non-profit membership organization founded to provide education, networking and outreach for the traditional building trades. Their stated mission is "To empower the traditional building trades through network, good works, community, fellowship and education."

Their website has information about the organization, their events, and members.
http://www.iptw.org/index.htm

And as always, don't forget to post questions about substitute materials or your experiences with them on the CLG Listserv.

http://groups.yahoo.com/group/NYSCLGS

The Back Page…Further Reading

Preservation Brief #16 and all 46 others (as of this date) in the series can be found at the following website.

http://www.nps.gov/history/hps/tps/briefs/presbhom.htm

These are all available for printing from this site, or printed copies can be ordered. It is helpful to have them for your own education, and to hand out to property owners who might have questions about historic building materials and treatments

Lever House in New York City: A landmark of a modern architecture. The failure of the original sealant materials at the glass curtain walls proved that not all modern replacement materials perform as promised, and sometime must be replaced themselves.