



WISCONSIN
HISTORICAL
SOCIETY

Contractor Standards for Typical Tax Credit Projects

HISTORIC HOMEOWNERS INCOME TAX CREDIT PROGRAM

All work, including work that may not qualify for tax credits, must meet the Secretary of the Interior's Standards for Rehabilitation (or, simply, the Standards). The following describes common tax credit projects with recommendations on appropriate ways in which to carry out the work. Please refer to the Application Instructions for additional information on project eligibility.

REPAIR OF ORIGINAL FEATURES

The Standards state: *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. Sound, original materials are part of the history of the house and should be left in-place while the deteriorated sections are repaired or replicated.

EXTERIOR



A primary facade is one that is visible from public rights-of-way and, in most cases, has significant architectural detailing. A secondary facade is one that is generally visible from public rights-of-way, but may not contain as many distinguishing architectural features. A rear facade is one that is usually not seen by the public and contains little architectural detailing. As a rule, primary facades should be left intact, while rear facades may sometimes be altered more substantially.

REPLACEMENT SIDING

Removal of the original siding and replacing the material with new siding on a historic house is not appropriate. Examples of replacement include aluminum, vinyl, cement board and steel siding, and may also include synthetic stucco (EIFS). Repair and partial replacement of damaged siding is the proper treatment.

EXTERIOR PAINTING

Painting the building's exterior is appropriate when the building was historically painted. Painting unpainted brick or masonry does not meet the Standards. Usually the proposed color or colors is not a factor in determining the appropriateness as paint is looked upon as temporary. Several paint removal methods are usually acceptable, including wet or dry scraping, chemical paint removal, and use of a high pressure water spray, if the water pressure is carefully controlled so that it does not damage the wood. Sandblasting and similar abrasive blasting techniques, wet or dry, are not acceptable. Please note that, because premature paint failure is usually the result of poor preparation or use of improper paint, we suggest that you hire experienced contractors or consult with a paint dealer or specialist before undertaking the job.



ROOF REPLACEMENT



If a roof was originally wood shingled (typical if constructed prior to 1920), the shingles may be replaced with wood shingles,

standard 3-tab shingles or architectural shingles in a shade of gray or brown that resembles weathered wood. Architectural shingles with heavy, fake shadow lines or un-even bottom edges are not appropriate. Wood shakes are usually not appropriate due to their thick, irregular appearance.



Above, left is a good example of an architectural shingle. Above middle and right are examples of shingles that would not be approved. Slate or tile roofs should be repaired, if possible rather than replaced. If the slate or tile roofs are deteriorated beyond repair, ideally these roofs be replaced in-kind; however, because of the economic feasibility, architectural shingles may be an appropriate substitute. In finding a suitable match, it is important to find shingles that convey the original shape, dimensions and color. If you propose to use substitute materials, you should discuss your plans with Society staff before placing any order.

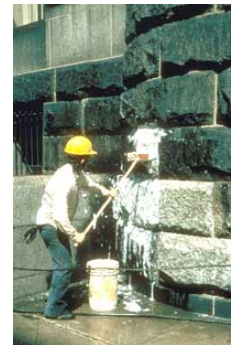
Using shingle-over ridge vents is an appropriate way to vent the roof as long as the ridge vent continues all the way to the roof edge. Soffit vents are another appropriate means of venting the roof. Mushroom vents can be used if installed to portions of the roof not visible from public rights-of-way. These vents should be painted to match the roof color.

EXTERIOR MASONRY CLEANING

Removal of dirt or paint from exterior brick or stone is appropriate as long as it does not harm the building materials. (Because every method of exterior cleaning carries with it some risk of damage to masonry materials, you should consider carefully whether to clean the building at all.) In most cases, removal of dirt or paint is unnecessary in order to preserve a building; in fact, the dirt may serve as a protective layer that shields the surfaces of a building from the elements.

The Standards specifically prohibit sandblasting in any form (except to clean cast iron, as discussed below). Other forms of blasting are equally damaging and therefore also prohibited such as soda blasting, corn cob blasting and nut shell blasting. Equally damaging is high-pressure water blasting. Water pressures above 1000 psi can be damaging to most building materials. Water pressure can be used safely at 1,000 psi with the spray wand a minimum of 12" away from the surface.

Building materials vary widely in composition. Chemicals that may be applied safely to one building can result in severe damage to another. It is a requirement that a cleaning test patch be applied to an inconspicuous part of the building prior to cleaning the entire building. The owner should inspect the test patch for possible damage to the building materials, including mortar joints in masonry walls. The test area should be used as a standard by which the rest of the cleaning is evaluated.



In cleaning metal elements, you should determine whether the metals are ferric or non-ferric. If exterior metal elements are ferric (iron-based) it should be determined whether those elements are cast iron or coated metal. Generally, cast iron is used in storefront columns and trim; otherwise, metal trim is likely to be terne or zinc coated steel. Cast iron may be sandblasted to remove dirt or paint but coated steel should be hand-scraped. Sandblasting coated steel will remove the protective coating and will ultimately lead to severe rusting. We recommend strongly that non-ferric metals not be cleaned.

TUCKPOINTING

Tuckpointing (also referred to as "repointing") refers to the replacement of deteriorated mortar in brick and stone walls. Only deteriorated mortar joints should be repointed. If done properly, the repointed joints will closely match the existing joints.



To remove deteriorated mortar properly, hand chiseling is the method least likely to cause damage to the

brick or stone. Removing mortar with saws, grinders, or power chisels must be done carefully and by an experienced mason. It is important when using mechanical removal methods that the bricks or stones not be cut into or corners chipped away.

The composition of the new mortar must match the existing mortar. New mortar should contain enough hydrated lime to make it softer than the bricks. Unless examination reveals that the original mortar is unusually hard, the building should be repointed using mortar that is no harder than ASTM, Type N, which consists of 1 part Portland cement, 1 part hydrated lime and 6 parts sand. ASTM, Type O, is a slightly softer mortar consisting of 1 part Portland cement, 2 parts hydrated lime and 9 parts sand.

The appearance of the new joints should match those of the rest of



the building. Mismatched mortar joints can result in the building taking on a "patchwork quilt" appearance. (Above is an example of unacceptable tuckpointing.) The primary concerns are the color of the replacement mortar and the tooling. With respect to color, white Portland cement can be used along with appropriate coloring agents. (Using standard, gray Portland cement usually results in joints that do not match the original color.) In addition, if the tooling of the new mortar joints does not match the original, they may appear to be wider than the rest.

We recommend that the mason complete a test patch (a sample area of repointed joints). Once the test patch is inspected to determine that the masonry has

not been damaged and the mortar matches the appearance of the existing; the remainder of the house can be repointed. The repointing contract should specify that all of the repointed joints will match the appearance of the approved test patch.

STORM WINDOWS

Exterior storm windows can be made of wood or metal. Aluminum combination windows are acceptable as long as the window tracks are mounted so as not to protrude from the face of window openings and the proportions of the storm windows match those of the original windows. As in the case of aluminum windows, the finishes should be painted or baked-on, rather than anodized. Storm window glass should be clear with a Visual Light Transmittance of 72 or higher.

SKYLIGHTS

The addition of a skylight is viewed as a new addition to the historic house. For this reason, skylights should be installed on parts of a roof not visible from the public right-of-way. Skylights should always be kept to a minimum and should be flat, rather than domed. Their curbs should also be low.

CLOSING WINDOW OPENINGS

Original window patterns should not be changed on primary facades. On secondary facades, minor changes may be made, but these must be in keeping with the overall window patterns of those sides of the building. On rear facades with limited public visibility, more significant changes can usually be made; however, they must be in character with the rest of the building.

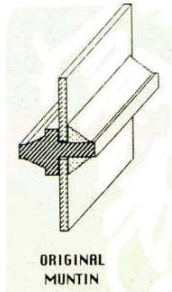
On masonry buildings, when original windows are closed-in, the infill material should match those of the wall and should be inset from the face of the wall



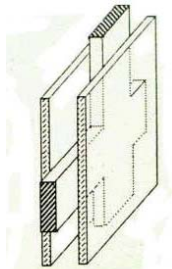
at least two inches. Non-original windows can usually be closed flush to the wall surfaces with matching materials.

WINDOW REPLACEMENT

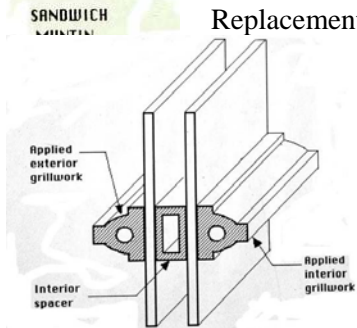
The Standards state that historic features (such as windows) must be repaired when possible. Where the feature is deteriorated beyond repair it must be replaced to match the original in design and material. You must obtain pre-approval before proceeding with window replacement.



If windows require replacement, the replacements must duplicate the appearance of the original windows, including the muntins (dividing bars), the proportions of the original windows, the thickness of the sash elements, the window material and finishes.



Accurately recreating the muntins (window dividers) is an important detail with replacement windows. Muntins that are sandwiched between the glass; placed on just one side or the other or that don't match the historic profile are unacceptable.



Replacement windows that incorporate true muntins (that actually divide the panes of glass) are acceptable if the appearances of the new muntins substantially replicate those of

the original windows. The new muntins must accurately replicate the originals and must be permanent parts of the windows.

The use of tinted and reflective glass is not allowed. Low-E glass is allowable as long as the Visual Light Transmittance or VLT is 72 or higher.

It is acceptable to have wood replacement windows with metal clad at the exterior as long as the metal conforms in shape to the existing window moldings. The metal clad cannot have an anodized finish but rather a powder coated paint or a baked on finish.

NEW ADDITIONS

New additions should be designed and constructed so that the character-defining features of the historic building are not changed, obscured, damaged, or destroyed. The appropriateness of a new addition to a historic building is determined largely by its size and location. An addition should be constructed on the least visible side, such that the historic building remains the most prominent element from the public right-of-way.

New design should always be clearly differentiated so that the addition does not appear to be part of the historic



building. New additions should be sympathetic to the historic house but not mimic the original design. The addition may incorporate existing materials and detailing for example, but the new design should also stand as a contemporary design.

The physical connection between the historic building and the addition should be made as small and least physically disruptive as possible. This creates a visual break between the historic building and the addition. The original massing of the historic house should be retained; meaning any addition should be offset at the corner. Both the link and offsetting the addition makes the process reversible. If, at some point, a future owner wanted to remove the addition, it would allow them to do so with minimal damage to the historic building.

BUILDING DEMOLITION

Buildings attached, or adjacent to a historic building may be demolished if they do not contribute to the significance of the historic building or its context. On the other hand if a building or addition is not original to a property doesn't mean that it can be removed; it may still be historically significant. You must contact Society staff for a determination of significance of any feature proposed for removal.

INTERIOR FEATURES & FINISHES



Significant interior features should be respected and preserved. This is especially true in primary spaces. Those spaces are important to the character of a building and should always be preserved. Generally, walls should not be inserted in, or removed from, primary spaces. Secondary spaces may usually be altered. In single family houses, primary spaces usually include living rooms, dining rooms, foyers, main stairways, corridors, and parlors. Secondary spaces may include bathrooms, bedrooms, kitchens, rear stairways, basements, and other spaces normally used only by family members. The Standards do not allow total gutting of a building unless the interior has been completely altered in the past and possesses no significant features or spaces.

Whether interior trim or features can be removed depends on the significance of those features. The Standards consider both highly-decorated features (such as grand staircases) and characteristic



features (such as original window trim) to be significant and these should remain intact. If original features have to be replaced during construction, they should be re-installed (or, if this is impossible, reproduced) in their original locations. Avoid moving original decorative elements to new locations. Creating a new, "historic" interior -- that is, an interior that looks to be original, but is actually a collection of building artifacts applied in non-original locations over new construction is not appropriate. Likewise, interior trim for new walls

should generally be the same type and proportion as the original trim, but should not duplicate it exactly, unless the original trim is relatively plain.

Most types of wall treatments are acceptable. In primary spaces it is not appropriate to cover original painted decoration (such as stenciling), remove plaster or decorative features (such as cornices or wainscoting), install wood paneling, or apply texture wall paints on original plaster. Avoid removing or permanently damaging decorative flooring or hardwood floors in good condition. Suspended ceilings are unacceptable.

STRUCTURAL

If features of the structural system were historically visible, such as loadbearing brick walls, cast iron columns, roof trusses, posts and beams, or stone foundation walls, they may be important in defining the building's overall historic character. Any repairs, sistering or partial replacements must be planned carefully on



these exposed structural members so that there is no adverse effect. Unexposed structural features that are not character-defining may be altered.

INSULATION

Blowing insulation into cavity walls is discouraged because it can lead to moisture damage (in the absence of a vapor barrier). Insulation applied to the inside surfaces of exterior walls is not appropriate as any significant interior trim, plaster and finish would be lost. Application of insulation over exterior wall surfaces does not meet the Standards except in cases such as installation below ground. Installing insulation on flat roofs is acceptable if it does not substantially change the dimensions of the cornice. Typically, rigid roof-top insulation is tapered at the cornice to avoid any changes in dimensions. Roof-top insulation on sloped roofs is also acceptable as long as it does not increase the dimensions of the cornice, particularly at the roof gable ends.

MECHANICAL, ELECTRICAL & PLUMBING



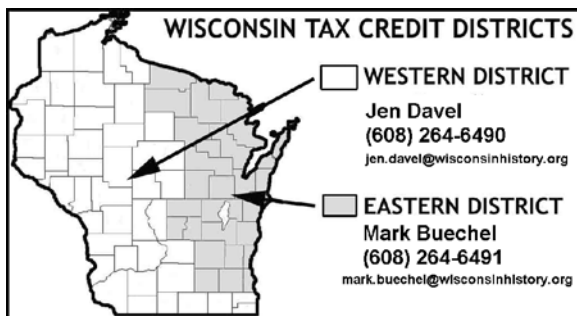
The visible features of historic heating, lighting, air conditioning and plumbing systems may sometimes help define the overall historic character of the building and

should be retained and repaired whenever possible. The systems themselves (the compressors, boilers, generators and their ductwork, wiring and pipes) will generally either need to be upgraded, augmented, or entirely replaced in order to accommodate the new use and to meet code requirements. In most cases furnace or boiler replacement will have no adverse effect on the historic integrity. However, if for example, the house is switching from radiant heat to a forced air system – duct work will be needed. When this is the case care must be taken to integrate the ductwork within existing walls or chases without disrupting primary spaces and historic detailing and finishes.

Any new exterior equipment (such as a condenser or vent piping) must not be visible from the public right-of-way. Locating these new additions at the rear of the house is preferred. If a side elevation is required, the equipment or venting must be screened with landscaping or another element.

The Standards do not allow sleeve holes to be cut into walls for unit air conditioners. Similarly, windows on visible facades may not be blocked in to receive air conditioner sleeves.

If the mechanical, plumbing or electrical work involves removal of finish materials, such as plaster, drywall, or wood trim, this material should be repaired and reinstalled after the work is completed.



SITE WORK

The relationship between a historic building or buildings and landscape features within a property's boundaries – or the building site – helps to define the historic character and should be considered when planning for rehabilitation project work. Drastically changing the ground level near your house (except smaller changes to promote better drainage) is inappropriate. Regrading away from the house is usually allowed unless it: 1) changes the historic character of the site; or 2) creates chronic water drainage problems that may affect other buildings.

Removal of plantings is not a problem unless the historic character of the site will be affected. (e.g., clear-cutting a historically wooded site.)

New parking areas are usually acceptable if they are located at the rear of the site and out of public view. In most cases, parking areas should not abut historic buildings, for reasons of historical integrity and to prevent potential water drainage problems. Where driveways exist and are important site features, they should be maintained in their original locations.

Sidewalks and walkways in visible locations, such as the front of a house, should maintain traditional shapes and paving materials. For example, a curving, brick-paved front walkway would likely not be appropriate for a Prairie-style house. A greater variety of non-traditional paving materials and designs can usually be used at the rear of a property.

FOR FURTHER INFORMATION...

For additional information regarding the appropriate treatments for historic materials, the National Park Service has published a series called Preservation Briefs. Each of these briefs is available at the following website:

<http://www.nps.gov/tps/how-to-preserve/briefs.htm>

You can also obtain free, printed copies by contacting Mark Buechel or Jen Davel (see district map), or by writing to the address below:

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