

Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings

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Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Standards for Rehabilitation

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Guidelines for Rehabilitating Historic Buildings

Introduction

In **Rehabilitation**, historic building materials and character-defining features are protected and maintained as they are in the treatment Preservation. However, greater latitude is given in the **Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings** to replace extensively deteriorated, damaged, or missing features using either traditional or substitute materials. Of the four treatments, only Rehabilitation allows alterations and the construction of a new addition, if necessary for a continuing use or a new use for the historic building.

Identify, Retain, and Preserve Historic Materials and Features

Like Preservation, guidance for the treatment **Rehabilitation** begins with recommendations to identify the form and detailing of those architectural materials and features that are important in defining the building's historic character and which must be retained in order to preserve that character. Thus, guidance on *identifying, retaining, and preserving* character-defining features is always given first.

Protect and Maintain Historic Materials and Features

After identifying those materials and features that are important and must be retained in the process of **Rehabilitation** work, then *protecting and maintaining* them are addressed. Protection generally involves the least degree of intervention and is preparatory to other work. Protection includes the maintenance of historic materials and features; or installation of fencing, alarm systems, and other temporary protective measures. A historic building undergoing

rehabilitation will usually require more extensive work. Thus, an overall evaluation of its physical condition should always begin at this level.

Repair Historic Materials and Features

Next, when the physical condition of character-defining materials and features warrants additional work, *repairing* is recommended. **Rehabilitation** guidance for the repair of historic materials, such as masonry, again begins with the least degree of intervention possible. In rehabilitation, repairing also includes the limited replacement in kind—or with compatible substitute material—of extensively deteriorated or missing components of features when there are surviving prototypes or can be substantiated by physical or documentary evidence. Although using the same kind of material is always the preferred option, substitute material is an acceptable alternative if the form and design, as well as the substitute material itself can effectively replicate the appearance of the remaining features.

Replace Deteriorated Historic Materials and Features

Following repair in the hierarchy, **Rehabilitation** guidance is provided for *replacing* an entire character-defining feature with new materials because the level of deterioration or damage of materials precludes repair. If the missing feature is character defining or if it is critical to the survival of the building, e.g., a roof, it should be reestablished based on physical or historic documentation of its form and detailing. As with repair, the preferred option is always replacement of the entire feature in kind, i.e., the same material. However, when this is not technically or economically feasible, substitute materials that can reproduce the overall appearance of the historic

material may be considered.

It should be noted that, while the National Park Service guidelines recommend the replacement of an entire character-defining feature that is extensively deteriorated, the guidelines never recommend removal and replacement with new material of a feature that could reasonably be repaired and, thus, preserved.

Design for the Replacement of Missing Historic Features

When an entire interior or exterior feature is missing, such as a porch, it no longer plays a role in physically defining the historic character of the building unless it can be accurately recovered in form and detailing through the process of carefully documenting the historical appearance. If the feature is not critical to the survival of the building, allowing the building to remain without the feature is one option. But if the missing feature is important to the historic character of the building, its replacement is always recommended in the **Rehabilitation** guidelines as the first, or preferred, course of action. If adequate physical or historic documentation exists the feature may be accurately reproduced. A second option for replacing a missing feature, particularly when the available information about the feature is inadequate to permit an accurate reconstruction, is to design a new feature that is compatible with the overall historic character of the building. The new design should always take into account the size, scale, and material of the building itself and should be clearly differentiated from the authentic historic features. For properties that have changed over time and where those changes have acquired significance, reestablishing missing historic features generally should not be undertaken if the missing features

did not coexist with the features currently on the building. Juxtaposing historic features that did not exist concurrently will result in a false sense of the building's history.

Alterations/Additions or New Construction for a New Use

Alterations

Some exterior and interior alterations to a historic building are generally needed to ensure its continued use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes. Alterations may also include the selective removal of buildings or other features of the building site that are intrusive, not character defining, or outside the building's period of significance.

New Additions

Rehabilitation is the only treatment that allows expanding a historic building by adding on to it. However, the **Rehabilitation** guidelines emphasize that new additions should be considered only after it is determined that meeting specific new needs cannot be achieved by altering non-character-defining interior spaces. If the use cannot be accommodated in this way, then an attached exterior addition may be considered. New additions should be designed and constructed so that the character-defining features of the historic building are not negatively impacted. Generally, a new addition should be subordinate to the historic building. A new addition should be compatible, but differentiated enough so that it is not confused as historic or original to the building. The same guidance applies to new construction so that it does not negatively impact the historic building or site.

Code-Required Work**Accessibility and Life Safety**

Sensitive solutions to meeting code requirements in a **Rehabilitation** project are an important part of protecting the historic character of the building. Thus, work that must be done to meet accessibility and life-safety requirements must also be assessed for its potential impact on the historic building.

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***Rehabilitation as a Treatment.** When repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular time is not appropriate, Rehabilitation may be considered as a treatment. Prior to undertaking work, a documentation plan for Rehabilitation should be developed.*

Masonry*Recommended*

Identifying, retaining and preserving masonry features that are important in defining the overall historic character of the building such as walls, brackets, railings, cornices, window and door surrounds, steps, and columns; and decorative ornament and other details such as tooling and bonding patterns, coatings, and color.

Protecting and maintaining masonry by ensuring that historic features, such as roof overhangs, gutters, and downspouts, that divert rainwater from masonry surfaces are intact and functioning properly.

Cleaning masonry only when necessary to halt deterioration or remove heavy soiling.

Not Recommended

Removing or substantially changing masonry features which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Replacing or rebuilding a major portion of exterior masonry walls that could be repaired, thus destroying the historic integrity of the building.

Applying paint or other coatings, such as stucco, to masonry that has been historically unpainted or uncoated to create a new appearance.

Removing paint from historically-painted masonry.

Failing to evaluate and treat the various causes of masonry deterioration such as leaking roofs or gutters, or rising damp.

Cleaning masonry surfaces when they are not heavily soiled, thus, needlessly introducing chemicals or moisture into historic materials.

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Carrying out masonry cleaning tests when it has been determined that cleaning is appropriate. Test areas should be examined to ensure that no damage has resulted and, ideally, monitored over a sufficient period of time to allow long-range effects to be predicted.

Cleaning soiled masonry surfaces with the gentlest method possible, such as low-pressure water and detergent, using natural bristle or other soft-bristle brushes.

Cleaning masonry surfaces without testing or without sufficient time for the testing results to be studied.

Cleaning or removing paint from masonry using most abrasive methods, including high-pressure water which can damage the surface of the masonry.

Using a cleaning or paint-removal method that involves water or liquid chemical solutions when there is any possibility of freezing temperatures.

Cleaning or removing paint with chemical products that will damage some types of masonry, such as using acid on limestone or marble; or failing to neutralize or rinse off chemical cleaners from masonry surfaces.

Using biodegradable or environmentally-safe cleaning or paint-removal products.

Using paint-removal methods that employ a poultice to which paint adheres, when possible, to neatly and safely remove old lead paint.

Using coatings that encapsulate lead paint, when possible, so that it does not have to be removed to meet life-safety code requirements.

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Allowing only trained conservators to use abrasive or laser cleaning methods when necessary to clean hard-to-reach, highly-carved or detailed, decorative stone features.

Removing damaged or deteriorated paint only to the next sound layer using the gentlest method possible (e.g., hand scraping) prior to re-painting.

Applying compatible paint coating systems to historically-painted masonry following proper surface preparation.

Protecting adjacent materials when cleaning or removing paint from masonry.

Evaluating the existing condition of the masonry to determine whether more than protection and maintenance are required, such as repairs to masonry features, will be necessary.

Repairing masonry features by patching, splicing, or consolidating the masonry using recognized preservation methods. Repair may also include the limited replacement in kind—or with compatible substitute material—of those extensively deteriorated or missing parts of masonry features when there are surviving prototypes such as terracotta brackets or stone balusters.

Removing paint that is firmly adhering to masonry surfaces unless the building was unpainted historically, and if the paint can be removed without damaging the surface.

Failing to protect adjacent materials when cleaning or removing paint from masonry.

Replacing an entire masonry feature, such as a cornice or balustrade, when repair of the masonry and limited replacement of deteriorated or missing components are feasible.

Using a substitute material for the replacement that does not match the surviving components of the masonry feature or that is physically or chemically incompatible.

Repairing masonry walls and other masonry features by repointing the mortar joints where there is evidence of deterioration such as disintegrating mortar, cracks in mortar joints, loose bricks, or damaged plaster on the interior.

Removing masonry that could be stabilized, repaired, and conserved; or using untested consolidants and unskilled personnel, thus risking further damage to historic materials.

Removing non-deteriorated mortar from sound joints, then repointing the entire building to achieve a uniform appearance.

Removing deteriorated lime mortar carefully by hand raking the joints to avoid damaging the masonry.

Using power tools in conjunction with hand chiseling to remove hard mortar that is deteriorated or is a non-historic material that is causing damage to the masonry units. Power cutting tools should generally not be used on short, vertical joints in brick masonry.

Allowing unskilled workers to use masonry saws or mechanical tools to remove deteriorated mortar from joints prior to repointing.

Duplicating historic mortar in strength, composition, color, and texture.

Repointing masonry units, other than concrete, with a synthetic caulking compound instead of mortar.

Duplicating historic mortar joints in width and joint profile.

Using “surface grouting” or a “scrub” coating technique, such as a “sack rub,” or “mortar washing,” to repoint exterior masonry units instead of traditional repointing methods.

Changing the width or joint profile when repointing.

Repairing stucco by removing the damaged material and patching with new stucco that duplicates the old in strength, composition, color, and texture.

Removing sound stucco; or repairing with new stucco that is different in composition from the historic stucco.

Patching stucco or concrete without removing the source of deterioration.

Replacing deteriorated stucco with synthetic stucco, an exterior insulating system, or other non-traditional materials.

Using mud plaster as a surface coating or to repair unfired, unstabilized adobe.

Applying cement stucco to unfired, unstabilized adobe.

Sealing joints in concrete with appropriate flexible sealants and backer rods, when necessary.

Repointing masonry units, other than concrete, with a synthetic caulking compound instead of mortar.

Cutting damaged concrete back to remove the source of deterioration, such as corrosion on metal reinforcement bars. The new patch must be applied carefully so that it will bond satisfactorily with, and match, the historic concrete.

Patching damaged concrete without first removing the source of deterioration.

Using a non-corrosive, stainless-steel anchoring system when replacing damaged terra-cotta units that have failed.

Applying non-historic surface treatments, such as water-repellent coatings, to masonry only after repointing and only if masonry repairs have failed to arrest water penetration problems.

Applying waterproof, water-repellent, or non-original historic coatings, such as stucco, to masonry as a substitute for repointing and masonry repairs.

Applying water-repellent or graffiti-resistant coatings that change the historic appearance of the masonry, or that may trap moisture if the coating is not sufficiently permeable.

Replacing in kind an entire masonry feature that is too deteriorated to repair—if the overall form and detailing are still evident—using the physical evidence as a model to reproduce the feature. Examples can include large sections of a wall, a cornice, balustrade, column, or stairway. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered as long as it has the same finish and appearance.

Removing a masonry feature that is unrepairable and not replacing it; or replacing it with a new feature that does not convey the same appearance.

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Recommended

Not Recommended

Design for the Replacement of Missing Historic Features

Designing and installing a new masonry feature, such as a step or door pediment, when the historic feature is completely missing. It may be an accurate restoration based on physical or historic documentation, but only when the historic feature to be replaced coexisted with the features that currently exist on the building. Or, it may be a new design that is compatible with the size, scale, material, and color of the historic building.

Creating a false historic appearance because the replacement for the missing masonry feature is not based on physical or historic documentation; or because the feature did not coexist with the features currently on the building; or it is not a compatible contemporary design.

Introducing a new masonry feature that is incompatible in size, scale, material, or color.

Wood*Recommended*

Identifying, retaining, and preserving wood features that are important in defining the overall historic character of the building such as siding, cornices, brackets, window and door surrounds, and steps; and their paints, finishes, and colors.

Not Recommended

Removing or substantially changing wood features which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Removing a major portion of the historic wood from a façade instead of repairing or replacing only the deteriorated wood, then reconstructing the façade with new material in order to achieve a uniform or “improved” appearance.

Radically changing the type of finish so that the historic character of the exterior is diminished.

Failing to renew failing paint or other coatings that are historic finishes.

Stripping historically-painted surfaces to bare wood, and applying a clear finish rather than repainting.

Stripping paint or other coatings to reveal bare wood, thus exposing historically-coated surfaces to the effects of accelerated weathering.

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Protecting and maintaining wood features by ensuring that historic features, such as roof overhangs, gutters, and downspouts which divert rainwater from wood surfaces, are intact and functioning properly.

Applying chemical preservatives to wood features, such as beam ends or rafter tails, which are subject to weathering and are traditionally unpainted.

Undertaking preventive measures to guard against insect damage, such as installing termite guards, fumigating, and treating with chemicals.

Retaining coatings, such as paint, that protect the wood from moisture and ultraviolet light. Paint removal should be considered only when paint is deteriorated as part of an overall maintenance program which involves repainting or applying other protective coatings.

Removing damaged or deteriorated paint to the next sound layer using the gentlest method possible (hand scraping and hand sanding), then repainting.

Removing wood siding (clapboards) or other covering from log structures that were covered historically, which changes their historic character and exposes the logs to accelerated deterioration.

Failing to identify, evaluate, and treat the causes of wood deterioration, including faulty flashing, leaking gutters, cracks and holes in siding, deteriorated caulking in joints and seams, plant material growing too close to wood surfaces, or insect or fungal infestation.

Stripping paint or other coatings from wood features without recoating, thus exposing historically-coated surfaces to the effects of accelerated weathering.

Using potentially damaging paint-removal methods such as open-flame torches, abrasive methods, or caustic paint removers.

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Using thermal devices, such as infrared heaters, carefully to remove paint from wood surfaces when paint is so deteriorated that total removal is necessary prior to repainting.

Using any thermal method to remove paint from wood features that may have flammable debris behind them without first inspecting them and removing any debris.

Using thermal devices without limiting the amount of time the wood feature is exposed to heat.

Using paint removal methods that employ a poultice to which paint adheres, when possible, to neatly and safely remove lead paint.

Using coatings that encapsulate lead paint, when possible, so that it does not have to be removed to meet life-safety code requirements.

Using biodegradable or environmentally-safe paint removers.

Using chemical strippers primarily to supplement other methods such as hand scraping, hand sanding, and thermal devices.

Failing to neutralize the wood thoroughly after using chemical paint removers so that new paint does not adhere.

Removing paint from detachable wood features by soaking them in a caustic solution which may roughen the surface, split the wood, or result in staining later, caused by residual acids leaching out of the wood.

Applying compatible paint coating systems following proper surface preparation.

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Protecting wood features when working on other features of the building.

Evaluating the condition of the wood to determine whether more than protection and maintenance are required, such as repairs to wood features, will be necessary.

Repairing wood features by patching, splicing, consolidating, or otherwise reinforcing the wood using recognized conservation methods. Repairs may also include the limited replacement in kind—or with compatible substitute material—of those extensively deteriorated parts of features where there are surviving prototypes such as brackets, molding, or sections of siding.

Replacing in kind an entire wood feature that is too deteriorated to repair—if the overall form and detailing are still evident—using physical evidence as a model to reproduce the feature. Examples of such wood features include a cornice, entablature, or a balustrade. If using wood is not technically or economically feasible, then a compatible substitute material may be considered as long as it has the same finish and appearance, e.g., painted.

Replacing a deteriorated wood feature or wood siding on a primary or other highly-visible elevation with a new matching wood feature.

Failing to protect wood features when working on other features of the building.

Replacing an entire wood feature, such as a cornice or wall, when repair of the wood and limited replacement of deteriorated or missing components are appropriate.

Using substitute material for the replacement portion that does not convey the appearance of the surviving components of the wood feature or does not have the same rates of expansion and contraction.

Removing an entire wood feature that is unrepairable and not replacing it; or replacing it with a new feature that does not match the appearance of the original.

Replacing a deteriorated wood feature or wood siding on a primary or other highly-visible elevation with a composite substitute material that does not convey the same appearance.

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Recommended

Design for the Replacement of Missing Features

Designing and installing a new wood feature, such as a cornice or door surround, when the historic feature is completely missing. It may be an accurate restoration based on physical or historic documentation, but only when the historic feature to be replaced coexisted with the features currently on the building. Or, it may be a new design that is compatible with the size, scale, material, and color of the historic building.

Not Recommended

Creating a false historic appearance because the replaced wood feature is based on insufficient physical or historic documentation; or because the feature did not coexist with the features that currently exist on the building.

Introducing a new wood feature that is incompatible in size, scale, material, and color.

Metals

Recommended

Identifying, retaining, and preserving metal features, such as columns, pilasters, spandrel panels, or stairways, that are important in defining the overall historic character of the building; and their finishes and colors. Identification is also critical to differentiate between metals prior to work. Each metal has unique properties and, thus, requires different treatments.

Protecting and maintaining metals from corrosion by providing proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in curved decorative features.

Cleaning metals when necessary to remove corrosion prior to repainting or applying other appropriate protective coatings.

Not Recommended

Removing or substantially changing metal features which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Removing a major portion of the historic metal from a façade instead of repairing or replacing only the deteriorated metal, then reconstructing the façade with new material in order to achieve a uniform or “improved” appearance.

Failing to identify, evaluate, and treat the causes of corrosion, such as moisture from leaking roofs or gutters.

Placing incompatible metals together without providing a reliable separation material. Such incompatibility can result in galvanic corrosion of the less noble metal, e.g., copper will corrode cast iron, steel, tin, and aluminum.

Leaving metals that must be protected from the environment uncoated after cleaning.

Applying paint or other coatings to metals, such as copper, bronze, or stainless steel, if they were not coated historically, unless a coating is necessary for maintenance.

Identifying the particular type of metal prior to any cleaning procedure and then testing to ensure that the gentlest cleaning method possible is selected; or determining that cleaning is inappropriate for the particular metal.

Using non-corrosive chemical methods to clean soft metals, such as lead, tinplate, terneplate, copper, and zinc, whose finishes can be easily damaged by abrasive methods.

Using the least abrasive cleaning method for hard metals, such as cast iron, wrought iron, and steel, in order to remove paint buildup and corrosion. If hand scraping and wire brushing have proven ineffective, low-pressure abrasive methods may be used as long as they do not abrade or damage the surface.

Applying appropriate paint or other coating systems after cleaning metals to protect them from corrosion.

Applying an appropriate protective coating, such as lacquer or wax, to a metal feature, such as a bronze door which is subject to heavy use.

Protecting metal features when working on other features of the building.

Using cleaning methods which alter or damage the historic color, texture, and finish of the metal; or cleaning when it is inappropriate for the particular metal.

Removing the patina from historic metal. The patina may be a protective layer on some metals, such as bronze or copper, as well as a distinctive finish.

Cleaning soft metals, such as lead, tin, copper, terneplate, and zinc, with abrasive methods which will damage the surface of the metal.

Using high-pressure abrasive techniques without first trying gentler cleaning methods prior to cleaning cast iron, wrought iron, or steel.

Failing to reapply coating systems after cleaning metals or alloys that require protection from corrosion.

Failing to protect metal features when working on other features of the building.

Evaluating the existing condition of metals to determine whether more than protection and maintenance are required, such as repairs to metal features, will be necessary.

Repairing metal features by patching, splicing, or otherwise reinforcing the metal using recognized preservation methods. Repairs may also include the limited replacement in kind—or with a compatible substitute material—of those extensively deteriorated or missing parts of features when there are surviving prototypes such as column capitals or bases, storefronts, railings and steps, or window hoods.

Replacing in kind an entire metal feature that is too deteriorated to repair—if the overall form and detailing are still evident—using the physical evidence as a model to reproduce the feature. Examples of such a feature could include cast-iron porch steps or steel-sash windows. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Replacing an entire metal feature, such as a column or balustrade, when it can be repaired or only a few deteriorated or missing parts need to be replaced.

Using a substitute material for the replacement that does not convey the same appearance of the surviving components of the metal feature or that is otherwise incompatible.

Removing a metal feature that is unrepairable and not replacing it; or replacing it with a new metal feature that does not convey the same appearance.

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Recommended

Design for the Replacement of Missing Historic Features

Designing and installing a new metal feature, such as a metal cornice or cast-iron column, when the historic feature is completely missing. It may be an accurate restoration based on physical or historic documentation, but only when the historic feature to be replaced coexisted with the features currently on the building. Or, it may be a new design that is compatible with the size, scale, material, and color of the historic building.

Not Recommended

Creating a false historic appearance because the replaced metal feature is based on insufficient physical or historic documentation; it is not a compatible contemporary design; or because the feature to be replaced did not coexist with the features currently on the building.

Introducing a new metal feature that is incompatible in size, scale, material, or color.

Roofs*Recommended*

Identifying, retaining, and preserving roofs—and their functional and decorative features—that are important in defining the overall historic character of the building. The shape of the roof—gable, hipped, gambrel, flat, or mansard—is significant, as are its decorative and functional features such as cupolas, cresting, parapets, monitors, chimneys, weather vanes, dormers, ridge tiles, and snow guards; and roofing material such as slate, wood, clay tile, or metal; and its size, color, and patterning.

Protecting and maintaining a roof by cleaning gutters and downspouts and replacing deteriorated flashing. Roof sheathing should also be checked for indications of moisture due to leaks or condensation.

Not Recommended

Changing, damaging, or destroying roofs which are important in defining the overall historic character of the building.

Removing a major portion of the historic roof or roofing material that is repairable, then rebuilding it with all new material in order to create a uniform or “improved” appearance.

Changing the configuration or shape of a roof by adding highly visible new features, such as dormer windows, vents, or skylights, or a penthouse that alters the historic character of the building.

Stripping the roof of sound historic material, such as slate, clay tile, wood, or metal.

Applying paint or other coatings to roofing material which has been historically uncoated.

Failing to clean and maintain gutters and downspouts properly so that water and debris collect and cause damage to roof features, sheathing, and the underlying roof structure.

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Providing adequate anchorage for roofing material to guard against wind damage and moisture penetration.

Protecting a leaking roof with a temporary waterproof membrane with a synthetic underlayment, roll roofing, plywood, or a tarpaulin until it can be repaired.

Repainting a roofing material that requires a protective coating and was painted historically, such as a terneplate metal roof or gutters, as part of regularly-scheduled maintenance.

Protecting a roof covering when working on other roof features.

Evaluating the existing condition of the roof and roof features to determine whether more than protection and maintenance are required, such as repairs, will be necessary.

Repairing a roof by ensuring that the existing historic or historically-compatible roof covering is sound and waterproof. Repairs generally also include limited replacement in kind—or with compatible substitute material—of missing shingles, slates or tiles. Repairs also include replacing those extensively deteriorated or missing parts of roof features where there are surviving prototypes such as ridge tiles, dormer roofing, or roof monitors; or slates, tiles, or wood shingles on a main roof.

Allowing flashing, caps, and exposed fasteners to corrode which accelerates deterioration of the roof.

Leaving a leaking roof unprotected so that accelerated deterioration of historic building materials—masonry, wood, plaster, paint, and structural members—occurs.

Failing to repaint a roofing material, such as a terneplate metal roof, that requires a protective coating as part of regularly-scheduled

Failing to protect roof coverings when working on other roof features.

Using a substitute material for the replacement of a single element of a roof, such as a tile or slate, or an entire feature that does not match the surviving components of the historic roof or that is chemically incompatible with them.

Failing to reuse intact slates or tiles in good condition when only the roofing substrate or fasteners need replacement.

Using corrosion-resistant roof fasteners, e.g., nails and clips, to repair a roof to help extend its longevity.

Replacing in kind the entire roof covering when it is too deteriorated to repair.

Using a compatible substitute material to replace a deteriorated roof covering that replicates the visual qualities of the historic roof when the historic roofing material is unavailable, or not technically or economically feasible to use.

Replacing an incompatible roof covering or any deteriorated non-historic roof covering with historically-accurate roofing material if known, or another material that is compatible with the historic character of the building.

Replacing only missing or damaged roofing tiles or slates rather than replacing the entire roof covering.

Replacing damaged roof features in kind or with compatible substitute materials if the overall form and detailing are still evident—using the physical evidence as a model to reproduce the feature. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Failing to reuse intact slates or tiles in good condition when repairing the roof.

Using a substitute material for the replacement of a single element of a roof, such as a tile or slate, or an entire feature that does not match the surviving components of the historic roof or that is chemically incompatible with them.

Removing a feature of the roof that is unrepairable, such as a chimney or dormer, and not replacing it; or replacing it with a new feature that does not convey the same appearance.

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Recommended

Not Recommended

Design for the Replacement of Missing Features

Designing and constructing a new roof covering for a missing roof, or a new feature for one that is completely missing, such as a dormer or a monitor. It may be an accurate restoration based on physical or historic documentation; but only when the historic feature to be replaced coexisted with the features currently on the building. Or, it may be a new design that is compatible with the size, scale, material, and color of the historic building.

Creating a false historic appearance because the replaced roof feature is based on insufficient physical or historic documentation, or did not coexist with the features currently on the building.

Introducing a new roof feature that is incompatible in size, scale, material, or color.

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Alterations/Additions for a New Use

Installing mechanical and service equipment on the roof, such as heating and air-conditioning units, elevator housing, or solar panels, when required for a new use so that they are inconspicuous from the public right of way and do not damage or obscure character-defining historic features.

Designing rooftop additions for residential use; elevator or stair towers, and decks or terraces; or dormers or skylights when required by a new or continuing use so that they are inconspicuous from the public right of way and do not damage or obscure character-defining historic features.

Installing mechanical or service equipment so that it damages or obscures character-defining roof features; or is conspicuous from the public right of way.

Changing a character-defining roof shape or damaging or destroying character-defining roofing material as a result of an incompatible rooftop addition or improperly-installed or highly-visible mechanical equipment.

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Windows

Recommended

Identifying, retaining, and preserving historic and historically-compatible windows—and their functional and decorative features—that are important to the overall character of the building. The window material—wood or metal—is important, and how the window operates; as well as its components, including sash, muntins, ogee lugs, glazing, pane configuration, sills, mullions, casings, or brick molds; and related features, such as shutters.

Evaluating the overall condition of the windows to determine whether protection and maintenance are adequate to sustain the windows or whether repair, upgrading, or even replacement will be needed.

Not Recommended

Removing or substantially changing windows which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Changing the appearance of windows that contribute to the historic character of the building. This could include installing replacement windows made from different materials with a different finish from the original if this would result in a noticeable change in the appearance of the window.

Changing the number, location, size, or glazing pattern of windows on elevations that contribute to the historic character of the building; cutting new openings on character-defining elevations; or installing a replacement window that does not fit in the historic window opening.

Obscuring historic wood window trim with metal or other material.

Replacing windows solely because of peeling paint, broken glass, stuck sash, or high air infiltration. These conditions, in themselves, do not indicate that windows are beyond repair.

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Protecting and maintaining the wood or metal which comprises the window jamb, sash, and trim through appropriate surface treatments such as cleaning, rust removal, paint removal, and reapplication of protective coating systems.

Failing to provide adequate protection of materials, such as painting the sash or reputtying the glazing, on a cyclical basis so that deterioration of the window results.

Failing to protect the historic glazing when making repairs.

Replacing historic windows that are repairable.

Making windows weather tight by recaulking gaps in fixed joints and replacing or installing weatherstripping.

Protecting windows from chemical cleaners, paint, or abrasion during work on the exterior of the building.

Failing to protect historic windows when work is being done on other features of the building.

Protecting and retaining historic glass when replacing putty or repairing other components of the window.

Sustaining the historic operability of windows by lubricating friction points and replacing broken components of the operating system such as hinges, latches, and sash chains or cords.

Adding storm windows with a simple, one-over-one pane configuration that will not obscure the historic characteristics of the windows. Storm windows are especially beneficial when installed over wood windows as they also protect them from accelerated deterioration.

Modifying historic single-glazed sash to accommodate insulated glass when it will jeopardize the soundness of the sash or significantly alter its appearance.

Repairing window frames and sash by patching, splicing, consolidating, or otherwise reinforcing them using recognized preservation methods. Such repair may also include replacement in kind of individual components that are either severely deteriorated, broken, or

Replacing an entire window when only replacement of individual components is needed.

Failing to repair and reuse window hardware such as sash lifts, latches, and locks.

Using substitute material for the replacement that does not convey the same appearance of the surviving components of the window or that is physically incompatible.

Removing glazing putty that has failed and applying new putty or, if glass is broken, carefully removing all putty, replacing the glass, and reputtying.

Installing new glass to replace broken glass which has the same visual characteristics as the historic glass.

Replacing in kind an entire window that is too deteriorated to repair using the same sash and pane configuration and other design details. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered in some instances.

Removing a character-defining window that is unrepairable or is not needed for the new use and blocking up the opening; or replacing it with a new window that does not convey the same appearance.

Modifying historic single-glazed sash to accommodate insulated glass when it will jeopardize the soundness of the sash or significantly alter its appearance.

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Replacing all of the components in a glazing system, such as in a curtain wall, which have failed because of faulty design or materials that have failed, with new material that will improve the window performance without noticeably changing the historic appearance.

Replacing incompatible, non-historic windows, or reinstating windows in openings that have been filled in, with new windows that are compatible with the historic character of the building.

*The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of **Rehabilitation** projects and should only be considered after the preservation concerns listed above have been addressed.*

Recommended

Design for the Replacement of Missing Features

Designing and installing new windows when the historic windows (frames, sash, and glazing) are completely missing. The replacement windows may be an accurate restoration based on physical or historic documentation; but only when the historic feature to be replaced co-existed with the features currently on the building; or be a new design that is compatible with the window openings and the historic character of the building.

Not recommended

Creating a false historic appearance because the replacement for the missing window is inconsistent with physical or historic documentation.

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Alterations/Additions for a New Use

Adding new window openings on rear or other secondary, non-character-defining elevations if required by a new use. The new openings and the windows in them should be compatible with the overall design of the building, but not duplicate the historic fenestration.

Replacing windows that are too deteriorated to repair using the same sash and pane configuration, but with new windows that operate differently to accommodate a new use. Any change must have minimal visual impact. Examples could include replacing hopper or awning windows with casement windows; or adding a realigned and enlarged operable portion of industrial steel windows to meet life-safety codes.

Changing the number, size, location, or details of windows on primary and character-defining elevations.

Cutting new openings that damage or destroy significant features, or installing new windows in existing openings that are incompatible with the historic character of the building.

Replacing a window that contributes to the historic character of the building with a new window that is different in design (glass divisions, profiles, or operation), dimensions, materials (wood, metal, or glass), finish or color; or placement that will have a noticeably different appearance from the historic windows which may negatively impact the character of the building.

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Entrances and Porches*Recommended*

Identifying, retaining, and preserving entrances and porches—and their functional and decorative features—that are important in defining the overall historic character of the building. The materials themselves are important, including masonry, wood and metals, as well as their features such as doors, transoms, pilasters, projecting canopies, entablatures, columns, balustrades, stairs, roofs, and projecting canopies.

Retaining a historic entrance or porch even though it will no longer be used because of a change in the building's function.

Protecting and maintaining the masonry, wood, and metals that comprise entrances and porches through appropriate surface treatments such as cleaning, rust removal, paint removal, and reapplication of protective coating systems.

Protecting entrance and porch features when working on other features of the building.

Not Recommended

Removing or substantially changing entrances and porches which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Cutting new entrances on a primary façade.

Altering utilitarian or service entrances so they compete visually with the historic primary entrance or appear significantly more important by increasing their size, or adding decorative details that cannot be documented to the building, or are incompatible with the building's historic character.

Removing a historic entrance or porch which will no longer be required for the building's new use.

Failing to provide adequate protection of materials on a cyclical basis so that deterioration of entrances and porches results.

Failing to protect entrance and porch features when working on other features of the building.

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Evaluating the existing condition of materials to determine whether more than protection and maintenance, such as repairs to entrance and porch features, will be necessary.

Repairing entrances and porches by consolidating, patching and splicing the historic materials. Repair will also generally include the limited replacement in kind—or with compatible substitute material—of those extensively deteriorated features or missing units of repeated features where there are surviving prototypes such as balustrades, columns, and stairs.

Replacing in kind an entire entrance or porch that is too deteriorated to repair—if the form and detailing are still evident—using the physical evidence as a model to reproduce the feature. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Replacing an entire entrance or porch when the repair of materials and limited replacement of parts are feasible.

Using a substitute material for the replacement that does not convey the same appearance of the surviving components of entrance or porch features or that is physically incompatible.

Removing an entrance or porch that is unrepairable and not replacing it; or replacing it with a new entrance or porch that does not convey the same appearance.

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Recommended

Not Recommended

Design for the Replacement of Missing Historic Features

Designing and constructing a new entrance or porch when the historic entrance or porch is completely missing or has previously been replaced by one that is incompatible. It may be a restoration based on physical or historic documentation, but only when the historic porch to be replaced coexisted with the features currently on the building; or be a new design that is compatible with the historic character of the building.

Creating a false historic appearance because the replacement for the missing entrance or porch is not based on physical or historic documentation; or because the feature did not coexist with the features that currently exist on the building; or it is not a compatible contemporary design

Introducing a new entrance or porch that is incompatible in size, scale, material, or color.

Alterations/Additions for a New Use

Designing an enclosure for historic porches on secondary elevations only, when required by a new use in a manner that preserves the historic character of the building. This can include using large sheets of glass and recessing the enclosure wall behind existing posts and balustrades.

Enclosing porches in a manner that results in a diminution or loss of historic character by using solid materials rather than clear glazing; or by placing the enclosure in front of, rather than behind, the historic features.

Designing and constructing additional entrances or porches on secondary elevations when required for the new use in a manner that preserves the historic character of the building, i.e., ensuring that the new entrance or porch is clearly subordinate to historic primary entrances or porches.

Constructing secondary or service entrances and porches that are incompatible in size and scale or detailing with the historic building; or obscure, damage, or destroy character-defining features.

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Storefronts

Recommended

Identifying, retaining, and preserving storefronts—and their functional and decorative features—that are important in defining the overall historic character of the building. The storefront materials, including masonry, wood, metals, glass, pigmented structural glass and the configuration of the storefront are important; and features such as display windows, base panels, signs, doors, transoms, kick plates, piers, and entablatures. The removal of inappropriate, non-historic cladding, false mansard roofs, and other later, non-significant alterations can help reveal the historic character of the storefront.

Retaining later, non-original features that have acquired significance over time.

Protecting and maintaining masonry, wood, glass, and metals which comprise storefronts through appropriate treatments such as cleaning, rust removal, paint removal, and reapplication of protective coating systems.

Protecting storefronts against arson and vandalism before work begins by boarding up windows and doors and installing alarm systems that are keyed into local protection agencies.

Protecting storefronts when working on other features of the building.

Not Recommended

Removing or altering storefronts—and their features—which are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Changing the storefront so that it has a residential rather than commercial appearance.

Introducing features from an earlier period that are not compatible with the historic character of the storefront.

Changing the location of the storefront's historic main entrance.

Removing later features that may have acquired significance.

Failing to provide adequate protection of materials on a cyclical basis so that deterioration of storefront features results.

Leaving the building unsecured with broken windows and doors so that interior features and finishes can be damaged by exposure to weather or vandalism.

Failing to protect the storefront when working on other features of the building.

Evaluating the existing condition of storefront materials to determine whether more than protection and maintenance are required, such as repairs or replacement of entire features, will be necessary.

Repairing storefronts by consolidating, patching, or splicing the historic materials. Repairs will also generally include the limited replacement in kind—or with compatible substitute materials—of those extensively deteriorated or missing parts of storefronts where there are surviving prototypes such as transoms, base panels, kick plates, piers, or signs.

Replacing in kind an entire storefront that is too deteriorated to repair—if the overall form and detailing are still evident—using the physical evidence as a model. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Replacing an entire historic storefront when repair of materials and limited replacement of its components are feasible.

Using substitute material for the replacement that does not convey the same visual appearance as the surviving components of the storefront or that is physically or chemically incompatible.

Removing a storefront that is unrepairable and not replacing it; or replacing it with a new storefront that does not convey the same appearance.

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Recommended

Not Recommended

Design for the Replacement of Missing Historic Features

Designing and constructing a new storefront when the historic storefront is completely missing. It may be an accurate restoration using physical or historic documentation, but only when the replacement storefront coexisted with the features currently on the building; or be a new design that is compatible with historic character of the building.

Creating a false historical appearance because the replaced storefront is not based on physical or historic documentation.

Introducing a new design that is incompatible in size, scale, material, or color.

Using new, over-scaled or internally-lit signs or signs that project out from the building unless there is a historic precedent for them on the building; or other types of signs that obscure, damage, or destroy remaining character-defining features of the building.

Replacing missing awnings or canopies that can be historically documented to the building; or adding new signage, awnings, or canopies that are compatible with the historic character of the building.

Adding vinyl awnings or awnings that are inappropriately sized or shaped which are incompatible with the historic character of the building; awnings that do not extend over the entire length of the storefront; or large canopies supported by posts that project out over the sidewalk unless their existence can be historically documented.

Alterations/Additions for a New Use

Retaining the glazing and sense of openness looking into the interior that is part of the character of a historic storefront when the building is being converted for residential use. It is especially important that permanent window treatments be installed—necessary for occupants' privacy—that are uniform and compatible with the commercial appearance of the building, such as wood blinds or shutters. When display cases still exist behind the storefront the blinds or shutters should be set at the back of the display case.

Retaining decorative or other character-defining features or finishes that typify the showroom or interior of a store, such as a pressed-metal ceiling, or a beaded-board ceiling or wainscoting.

Replacing storefront glazing with solid material for occupant privacy when the building is being converted for residential use.

Installing curtains with a residential appearance in storefront windows which are incompatible with the commercial character of the building.

Installing window treatments that are not uniform in a series of repetitive storefronts.

Removing decorative or other character-defining features or finishes that typify the showroom or interior of a store, such as a pressed-metal ceiling, or a beaded-board ceiling or wainscoting.

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Structural Systems

Recommended

Identifying, retaining, and preserving structural systems—and individual features of systems—that are important in defining the overall historic character of the building. This includes the materials that comprise the structural system, including wood, metal and masonry; the type of structural system; as well as its features such as posts and beams, trusses, summer beams, vigas, cast-iron or masonry columns, above-grade stone foundation walls, or load-bearing masonry walls.

Protecting and maintaining the structural system by keeping gutters and downspouts clear and roofing in good repair.

Inspecting wood structural members for insect infestation and treating when needed.

Not Recommended

Removing, covering, or substantially changing visible features of historic structural systems which are important in defining the overall historic character of the building.

Rehabilitating the building for an inappropriate new use which could overload the existing structural system; or installing equipment or mechanical systems which could damage the structure.

Leaving known structural problems untreated such as deflected beams, cracked and bowed walls, or racked structural members.

Installing seismic reinforcement, when necessary, in a manner that negatively impacts the historic fabric and character of the building.

Using treatments or products that can accelerate the deterioration of structural members.

Failing to provide proper building maintenance which can prevent deterioration of the structural system.

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Examining and evaluating the existing condition of the structural system and its individual features using non-destructive techniques.

Repairing the structural system by augmenting individual components, such as adding reinforcing elements or replacing a limited number of individual damaged or deteriorated components with new ones, matching them when they are visible.

Installing seismic or any other reinforcement, when necessary, in a manner that is minimally invasive and has limited visibility, so that it does not negatively impact the building's historic character.

Replacing in kind—or with substitute material—large portions or entire features of the structural system that are either extensively damaged, deteriorated, or are missing when there are surviving prototypes such as cast-iron columns, trusses, or masonry walls. Substitute material must be structurally sufficient, physically compatible with the rest of the system and, where visible, must have the same form, design, and appearance as the historic material.

Replacing to match—and reusing salvageable material—any interior features or finishes that may have to be removed to gain access to make structural repairs.

Using destructive probing techniques that will damage or destroy structural material.

Compensating for structural deficiencies in a manner that damages historic features or diminishes the historic character of the building.

Replacing a historic structural feature in its entirety or in part when it could be repaired or augmented and retained.

Installing a visible or exposed structural replacement feature that does not convey the same appearance.

Using substitute material that does not equal the load-bearing capabilities of the historic material; does not match the appearance of the historic material, if it is visible; or is physically incompatible.

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Recommended

Alterations/Additions for a New Use

Limiting any new excavations that will be next to historic foundations to avoid undermining the structural stability of the building or adjacent historic buildings. Studies should be done to first ascertain potential damage to archeological resources.

Correcting structural deficiencies needed to accommodate a new use in a manner that preserves the structural system and individual character-defining features.

Designing and installing new mechanical or electrical equipment, when necessary, in a manner that minimizes the number of cuts or holes in structural members.

Creating an atrium or lightwell to provide natural light when required for a new use only when it can be done in a manner that preserves the structural system.

Not Recommended

Carrying out excavations or regrading land adjacent to a historic building which could cause the historic foundation to settle, shift, or fail; or could destroy significant archeological resources.

Making substantial changes to significant interior spaces or damaging or destroying features or finishes that are character defining in order to correct structural deficiencies.

Installing new mechanical or electrical equipment in a manner which reduces the load-bearing capacity of historic structural members.

Removing structural features in order to create an atrium or lightwell.

Interior Spaces, Features, and Finishes

Recommended

Identifying, retaining, and preserving a floor plan or interior spaces, features, and finishes that are important in defining the overall historic character of the building. Significant spatial characteristics include the size, configuration, proportion, and relationship of rooms and corridors; the relationship of features to spaces; and the spaces themselves such as lobbies, lodge halls, entrance halls, parlors, theaters, auditoriums, gymnasiums, and industrial and commercial interiors. Color, texture, and pattern are important characteristics of features and finishes, which can include such elements as columns, plaster walls and ceilings, flooring, fireplaces and mantels, paneling, stairs, light fixtures, hardware, ornamental grilles and registers, windows, doors and transoms; plaster, paint, and special finishes such as graining; and utilitarian, painted or unpainted, features and finishes, including concrete, metal, or wood exposed columns, beams and trusses, and load-bearing brick, concrete, and wood walls.

Not Recommended

Making substantial changes to a floor plan or interior spaces that are important in defining the overall historic character of the building so that, as a result, the character is diminished.

Altering the floor plan by demolishing principal walls and partitions for a new use.

Altering or destroying significant interior spaces by inserting additional floors or lofts, or cutting through floors to create lightwells or atriums; lowering ceilings, or adding or removing historic walls.

Relocating an interior feature, such as a staircase, so that the circulation pattern and historic relationship between features and spaces are altered.

Removing or substantially changing features and finishes that are important in defining the overall character of the building, such as removing plaster to expose brick or stripping the interior of historic door and window casing.

Installing new material that obscures or damages character-defining interior features or finishes.

Protecting and maintaining historic materials, including plaster, masonry, wood, and metals that comprise interior spaces, features, and finishes through appropriate surface treatments such as cleaning, paint removal, and reapplication of coating systems.

Protecting interior features and finishes against arson and vandalism before project work begins by erecting protective fencing, covering broken windows and boarding up open doorways, and installing fire alarm systems that are keyed into local protection agencies.

Protecting interior features, such as a staircase, mantel, flooring, or decorative wall finishes against damage during work by covering them with plywood, heavy canvas, or plastic sheeting.

Removing damaged or deteriorated paint and finishes to the next sound layer using the gentlest method possible, then repainting or re-finishing using compatible paint or other coating systems.

Applying paint, plaster, or other finishes to surfaces that have been historically unfinished and, thus, changing their character.

Changing the type of finish or its color, such as painting a historically-varnished wood feature, or removing paint from a historically-painted feature to varnish or stain it.

Failing to provide adequate protection to materials on a cyclical basis so that deterioration of interior features results.

Leaving the building unsecured and open to the weather without covering broken windows or boarding up open doorways so that the interior features and finishes can be damaged by exposure to weather or vandalism.

Failing to protect interior features and finishes during work so that they can be damaged.

Using potentially damaging methods such as open-flame torches or abrasive techniques to remove paint or other coatings.

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Limiting abrasive cleaning methods to industrial or warehouse buildings with utilitarian, unplastered masonry walls; and where wood features are not finished, molded, beaded, or worked by hand. Abrasive cleaning should only be considered if test patches show no surface damage, and after other, gentler methods have proven ineffective.

Evaluating the existing condition of historic materials to determine whether more than protection and maintenance are required, such as repairs to interior features and finishes, will be necessary.

Repairing historic interior features and finishes by patching, consolidating or reattaching the materials. Repair will also generally include the limited replacement in kind—or with compatible substitute material—of those extensively deteriorated or missing components of features where there are surviving prototypes such as stairs, balustrades, wood paneling, columns; or decorative wall finishes or ornamental pressed-metal or plaster ceilings.

Replacing in kind an entire interior feature that is too deteriorated to repair using physical evidence as a model to reproduce the feature. Examples could include wainscoting, window and door surrounds, or interior stairs. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Using abrasive methods anywhere but utilitarian and industrial spaces or when there are other methods that are less likely to alter the surface of the material.

Replacing an entire interior feature, such as a staircase, mantel, or door surround; or finish such as a plaster or a pressed-metal ceiling, when repair of materials and limited replacement of such components are feasible.

Using a substitute material for the replacement that does not convey the same appearance of the surviving components of the interior feature or finish or that is otherwise incompatible.

Removing a character-defining feature or finish that is not repairable and not replacing it; or replacing it with a new feature or finish that does not convey the same appearance.

*The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of **Rehabilitation** projects and should only be considered after the preservation concerns listed above have been addressed.*

Recommended

Design for the Replacement of Missing Historic Features

Designing and installing a new interior feature or finish if the historic feature or finish is completely missing. This could include missing walls, stairs, mantels, wood trim, and plaster; or even entire rooms if all historic spaces, features, and finishes are missing or have been destroyed by inappropriate alterations. The design may be a restoration based on physical or historic documentation, but only when the feature or finish coexisted with those that currently exist in the building; or a new design that is compatible with the historic character of the building.

Alterations/Additions for a New Use

Locating new or additional services, such as bathrooms and mechanical equipment, in secondary spaces.

Not Recommended

Creating a false historic appearance because the replacement feature is inconsistent with physical or historic documentation, or based on information derived from another building.

Introducing a new interior feature or finish that is incompatible with the scale, design, materials, color, and texture of the surviving interior features and finishes.

Sub-dividing primary spaces, lowering ceilings, and damaging or obscuring character-defining features, such as fireplaces, windows, or stairways, to accommodate a new use for the building.

Retaining the configuration of corridors, particularly in buildings with multiple floors with repetitive plans, such as office and apartment buildings or hotels, where not only the floor plan is character-defining, but also the width and the length of the corridor, doorways, transoms, trim, and other features such as wainscoting and glazing.

Reusing decorative material or features that had to be removed as part of the rehabilitation work, including baseboards, door casing, paneled doors, and wainscoting; and reusing them in areas where these features are missing or too deteriorated to repair.

Installing permanent partitions in secondary spaces whenever feasible. Removable partitions or partial-height walls that do not destroy the sense of space should be installed in large character-defining spaces when required by a new use.

Enclosing a character-defining interior stairway, when required by code, with fire-rated glass walls or large, hold-open doors so that the stairway remains visible and its historic character is retained.

Locating new, code-required stairways or elevators in secondary and service areas of the historic building.

Making extensive changes to the character of significant historic corridors by narrowing or radically shortening them, or removing their character-defining features.

Discarding historic material when it can be reused to replace missing or damaged features elsewhere in the building; or reusing material in a manner that may convey a false sense of history.

Installing partitions that abut windows and glazing; or damage or obscure character-defining spaces, features, or finishes.

Enclosing a character-defining interior stairway for safety or functional reasons in a manner that conceals it or destroys its character.

Making radical changes, damaging, or destroying character-defining spaces, features, or finishes when adding new code-required stairways and elevators.

Creating an atrium or lightwell to provide necessary natural light, when appropriate for the size of the building and compatible with the building type; and only when it can be done without negatively impacting significant interior spaces, features, and finishes, or important exterior elevations.

Inserting a new floor if required for a new use only in a secondary space and only when significant features and finishes can be preserved and fenestration on any highly-visible elevation is not negatively impacted.

Leaving ductwork exposed when it cannot be hidden within existing cavities or when creating a soffit to conceal it would obscure portions of an existing historic ceiling, such as a decorative plaster or pressed-metal ceiling. The ductwork should be as minimal as possible and painted to blend in with its background, e.g., usually the ceiling.

Destroying or damaging character-defining interior spaces, features, or finishes; or damaging the structural system to create an atrium or lightwell.

Inserting a mezzanine or loft to subdivide a large character-defining space in a manner that negatively impacts the space.

Inserting an additional floor that abuts windows or other glazing which is visible on the exterior, and, as a result, negatively impacts the historic character of the exterior of the building.

Installing ductwork for mechanical systems in front of windows that is visible from outside and, as a result, negatively impacts the historic character of the exterior of the building.

Installing ductwork or any mechanical equipment in a significant space in a manner that negatively impacts the historic character of the space.

Building Site*Recommended*

Identifying, retaining, and preserving features of the building site that are important in defining its overall historic character. Site features may include walls or fences; circulation systems such as walks, paths or roads; vegetation such as trees, shrubs, grass or other plant materials; landforms such as hills, terracing, or berms; furnishings and fixtures such as light posts or benches; decorative elements such as sculpture, statuary, or monuments; water features including fountains, streams, pools, or lakes; and subsurface archeological features which are also important to the site.

Retaining the historic relationship between buildings and the landscape.

Not Recommended

Removing or substantially changing site features which are important in defining the overall historic character of the property.

Removing or relocating buildings or landscape features, thus destroying the historic relationship between buildings and the landscape.

Removing or relocating buildings on a site or in a complex of related historic structures—such as a mill complex or farm—thus diminishing the historic character of the site or complex.

Moving buildings onto the site, thus creating a false historical appearance.

Changing the grade level of the site. For example, lowering the grade adjacent to a building to develop a basement, which would change the historic appearance of the building and its relation to the site.

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Protecting and maintaining sites by providing proper drainage to ensure that water does not erode foundation walls, drain toward the building; or damage or erode the landscape.

Minimizing disturbance of the terrain around buildings or elsewhere on the site, thus reducing the possibility of destroying or damaging important landscape features or archeological resources.

Surveying and documenting areas where the terrain will be altered to determine the potential impact to important landscape features or archeological resources.

Protecting, e.g., preserving in place, important archeological resources.

Planning and carrying out any necessary investigation using professional archeologists and proper archeological methods when preservation in place is not feasible.

Preserving important landscape features through regularly-scheduled maintenance of historic plant material.

Protecting the building site and landscape features against arson and vandalism before preservation work begins, i.e., erecting temporary fencing and installing alarm systems that are keyed into local protection agencies.

Failing to ensure that site drainage is adequate so that buildings and site features are damaged or destroyed; or alternatively, changing the site grading so that water no longer drains properly.

Using heavy machinery in areas where it may disturb or damage important landscape features or archeological resources.

Failing to survey the building site prior to beginning work which may result in damaging or destroying important landscape features or archeological resources.

Leaving known archeological material unprotected so that it is damaged during preservation work.

Allowing unqualified personnel to perform data recovery on archeological resources which can result in damage or loss of important archeological material.

Allowing important landscape features or archeological resources to be lost or damaged; or to deteriorate due to inadequate protection or lack of regular maintenance.

Leaving the site unprotected before work begins so that the building and landscape features or archeological resources can be damaged or destroyed.

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Providing continued protection of site and landscape features through pruning and vegetation management.

Evaluating the overall condition of materials and features to determine whether more than protection and maintenance are required, that is, if repairs to site features will be necessary.

Repairing existing historic site features which have damaged, deteriorated, or missing components to reestablish the whole feature and ensure retention of the integrity of the historic materials. Repair will generally include limited replacement in kind of features where there are surviving prototypes such as paving, railings, or individual plants within a group, e.g., a hedge.

Replacing in kind an entire feature of the site that is too deteriorated to repair if the overall form and detailing are still evident. Physical evidence from the deteriorated feature should be used as a model to guide the new work. Replacement could include a walkway or a fountain; or a land form or plant material. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Removing or destroying features from the site such as fencing, paths or walkways, masonry balustrades, or plant material.

Failing to protect site features during work.

Replacing an entire feature of the site, such as a fence, walkway, or drive when repair of materials and limited compatible replacement of deteriorated or missing components are appropriate.

Using a substitute material for the replacement component that does not convey the same appearance of the surviving site feature or that is otherwise incompatible.

Removing a feature of the site that cannot be repaired and not replacing it; or replacing it with a new feature that does not convey the same appearance.

Adding conjectural landscape features to the site, such as period reproduction light fixtures, fences, fountains, or vegetation, that are historically inappropriate, thus creating a false sense of historic development.

Replacing an entire feature of the building site when limited replacement of deteriorated or missing components is feasible.

Using replacement material that does not match the historic site features.

*The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of **Rehabilitation** projects and should only be considered after the preservation concerns listed above have been addressed.*

Recommended

Design for the Replacement of Missing Historic Features

Designing and constructing a new feature of a site when the historic feature is completely missing, such as an outbuilding, terrace, or driveway. It may be based on physical or historic documentation; or be a new design that is compatible with the historic character of the building and site.

Not Recommended

Creating a false historic appearance because the replacement is inconsistent with physical or historic documentation; or is incompatible with the existing historic character of the property.

Introducing a new landscape feature, including plant material, that is incompatible with the site, or that alters or destroys the historic site patterns or use.



Alterations/Additions for a New Use

Designing new onsite features such as parking areas, access ramps, or lighting when required by a new use so that they are as unobtrusive as possible; retain the historic relationship between the building or buildings and the landscape; and are compatible with the historic character of the property.

Designing new exterior additions to historic buildings or adjacent new construction that is compatible with the historic character of the site and preserves the historic relationship between the building or buildings and the landscape.

Removing non-significant buildings, additions, or site features which detract from the historic character of the site.

Locating parking areas directly adjacent to historic buildings which negatively impact the historic character of the building site through the removal of landscape features and plant material or the relocation of paths.

Introducing new construction onto the building site which is visually incompatible in terms of size, scale, design, material, or color, which destroys historic relationships on the site; or which damages or destroys important landscape features, such as replacing a lawn with paved parking.

Removing a historic building in a complex of buildings; or removing a building feature, or a landscape feature which is important in defining the historic character of the site.

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Setting (District/Neighborhood)*Recommended*

Identifying, retaining, and preserving building and landscape features which are important in defining the historic character of the setting. Such features can include roads and streets; furnishings and fixtures such as light posts or benches; vegetation, gardens and yards; adjacent open space such as fields, parks, commons, or woodlands; and important views or visual relationships.

Retaining the historic relationship between buildings and landscape features in the setting. For example, preserving the relationship between a town common or urban plaza and the adjacent houses, municipal buildings, roads, and landscape and streetscape features.

Protecting and maintaining building materials and plantings in the setting, through appropriate cleaning or reapplication of protective coatings; and pruning and vegetation management.

Not Recommended

Removing or substantially changing those features of the setting which are important in defining the historic character.

Destroying the relationship between buildings and landscape features in the setting by widening existing streets, changing landscape materials, or constructing inappropriately-located new streets or parking areas.

Removing or relocating historic buildings or landscape features, thus destroying their historic relationship in the setting.

Failing to provide adequate maintenance of materials on a cyclical basis which results in the deterioration of building and landscape features.

Stripping or removing historic features from buildings or the setting such as porches, fencing, walkways, or trees.

Protecting the building and landscape features when working in the setting.

Evaluating the overall condition of materials and features to determine whether more than protection and maintenance are required, that is, if repairs to features in the setting will be necessary.

Repairing features of the setting by reinforcing the historic materials. Repair will also generally include the replacement in kind—or with a compatible substitute material—of those extensively deteriorated or missing components of features when there are surviving prototypes, such as fencing or paving materials.

Replacing in kind an entire building or landscape feature in the setting that is too deteriorated to repair using the physical evidence as a model to guide the new work. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Failing to protect building and landscape features when working in the setting.

Replacing an entire feature of the building or landscape when repair of materials and limited replacement of deteriorated or missing parts are feasible.

Using a substitute material for the replacement component that does not have the same appearance or visual character of surviving building or landscape features in the setting, or that is physically, chemically, or ecologically incompatible.

Removing a feature of the building or landscape in the setting that is unrepairable and not replacing it; or replacing it with a new feature that does not have the same appearance or visual character.

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*The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of **Rehabilitation** projects and should only be considered after the preservation concerns listed above have been addressed.*

Recommended

Not Recommended

Design for the Replacement of Missing Historic Features

Designing and constructing a new feature of the building or landscape when the historic feature is completely missing, such as row house steps, a porch, or a streetlight, or a terrace. It may be a restoration based on physical or historic documentation; or be a new design that is compatible with the existing historic character of the setting.

Creating a false historic appearance because the replacement is inconsistent with physical or historic documentation.

Introducing a new building or landscape feature that is out-of-scale or otherwise incompatible with the setting's historic character, e.g., replacing low iron fencing with a high wood fence.

Alterations/Additions for a New Use

Designing required new parking so that it does not destroy historic features and is as unobtrusive as possible, thus minimizing its effect on the historic character of the setting.

Locating parking areas directly adjacent to historic buildings which negatively impact the historic character of the setting when plant materials are removed or walkways are relocated.

Designing and constructing new exterior additions to historic buildings, when required by a new use, that are compatible with the historic character of the setting in terms of size, scale, design, material, color, and texture.

Introducing new construction into historic districts that is visually incompatible or that destroys historic relationships within the setting.

Removing a historic building, building feature or landscape feature that is important in defining the historic character of the setting.

Removing non-significant buildings, additions, or landscape features which detract from the historic character of the setting.

Removing a historic building, or a building or landscape feature that is important in defining the historic character of the setting.

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*Sensitive solutions to meeting code requirements are an important part of protecting the historic character of the building and site. Thus, work that must be done to meet accessibility and life safety requirements in a **Rehabilitation** project must also be assessed for its potential impact on the historic building and site.*

Accessibility

Recommended

Identifying the historic building's character-defining exterior features and interior spaces, features, and finishes which may be affected by accessibility code-required work.

Complying with barrier-free access requirements in such a manner that character-defining spaces, features, and finishes are preserved.

Working with specialists in accessibility and historic preservation to determine the most appropriate solution to comply with access requirements in a historic building.

Providing barrier-free access that promotes independence for the user to the highest degree practicable, while preserving significant historic features.

Designing new or additional means of access that are compatible with the historic building and its setting and will have the least impact.

Not Recommended

Undertaking code-required alterations before identifying those exterior features and interior spaces, features, and finishes which are character defining and, therefore, must be preserved.

Altering, damaging, or destroying character-defining features in order to comply with accessibility requirements.

Making changes to buildings without first consulting with specialists in accessibility and historic preservation to determine the most appropriate solutions to comply with accessibility requirements.

Making access modifications that do not provide a reasonable balance between independent, safe access and preservation of historic features.

Designing new or additional means of access without taking into account the impact on the historic building, its site, and setting.

Finding solutions to meet accessibility requirements that minimize the impact of any necessary alterations on the historic building, its site and setting, such as compatible ramps, paths, and lifts.

Minimizing the visual impact of accessibility ramps by installing them on secondary elevations, when it does not compromise accessibility, or screening them with plantings.

Adding a gradual slope to the sidewalk, if appropriate, to access the entrance of a commercial or retail structure, rather than installing a ramp which would be more intrusive to the historic character of the building and the district.

Adding an exterior stair or elevator tower that is compatible with the historic character of the building in a minimally visible location only when it is not possible to accommodate it on the interior without resulting in the loss of significant historic spaces, features, or finishes.

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Life Safety*Recommended*

Identifying the historic building's character-defining exterior features and interior spaces, features, and finishes which may be affected by life-safety code-required work.

Complying with life-safety codes, including seismic requirements, in such a manner that character-defining exterior features and interior spaces, features, and finishes are preserved.

Removing historic building materials only after testing has been conducted to identify hazardous materials and using only the least damaging abatement methods.

Providing workers with appropriate personal equipment for protection from hazards on the worksite.

Working with code officials and historic preservation specialists to investigate systems, methods, or devices to make the building compliant with life-safety codes to ensure that necessary alterations will be compatible with the historic character of the building.

Not Recommended

Undertaking code-required alterations to a building or site before identifying those exterior features and interior spaces, features, and finishes which are character defining and, therefore, must be preserved.

Altering, damaging, or destroying character-defining spaces, features, and finishes while making modifications to a building, its site, or setting to comply with code requirements.

Removing building materials without testing to identify the hazardous materials; or using potentially damaging methods of abatement methods.

Removing hazardous or toxic materials without regard for workers' health and safety or environmentally-sensitive disposal.

Making life-safety, code-required changes to the building without consulting code officials and historic preservation specialists with the result that alterations negatively impact the historic character of the

Upgrading historic stairways and elevators to meet life-safety codes in a manner that ensures their preservation, i.e., so that they are not damaged or their character is not negatively impacted.

Installing sensitively-designed fire-suppression systems, such as sprinklers that preserve historic features and finishes.

Applying fire-retardant coatings when appropriate, such as intumescent paint which expands when exposed to heat, to add thermal protection to interior features.

Adding a new stairway or elevator to meet safety codes in a manner that preserves adjacent character-defining features and spaces.

Placing a code-required stairway or elevator that cannot be accommodated within the historic building in a new exterior addition located on a secondary or minimally-visible elevation.

Designing a new exterior stairway or elevator tower addition that is compatible with the historic character of the building.

Damaging or making inappropriate alterations to historic stairways or adjacent spaces when doing work to meet code requirements.

Covering character-defining wood features with fire-resistant sheathing which results in altering their visual appearance.

Using fire-retardant coatings if they will damage or obscure character-defining features.

Altering, damaging, or destroying character-defining spaces, features, or finishes when adding a new code-required stairway or elevator.

Constructing a new addition to accommodate code-required stairs, or elevators on character-defining elevations or where it will obscure, damage, or destroy character-defining features.

New Additions to Historic Buildings*Recommended*

Placing functions and services required for a new use, including elevators and stairways, in secondary or non-character-defining interior spaces rather than constructing a new addition.

Constructing a new addition on a secondary or non-character-defining elevation and limiting its size and scale in relation to the building.

Constructing a new addition that results in the least possible loss of historic materials and so that character-defining features are not obscured, damaged, or destroyed.

Designing a new addition to the building in a manner that makes clear what is historic and what is new.

Considering the design for an attached exterior addition in terms of its relationship to the historic building as well as the historic district or neighborhood. The new addition should be subordinate to the historic building and compatible in terms of mass, materials, relationship of solids to voids, and color.

Not Recommended

Expanding the size of the historic building by constructing a new addition when requirements for the new use could be met by altering non-character-defining interior spaces.

Constructing a new addition on, or adjacent to, a primary elevation of the building which would negatively impact the building's historic character.

Attaching a new addition in a manner that obscures, damages, or destroys character-defining features of the historic building.

Duplicating the exact form, material, style, and detailing of the historic building in a new addition so that the new work appears to be original to the historic building.

Constructing new additions that result in the diminution or loss of the historic character of the building, including its design, materials, location, or setting.

Designing a new addition that is as large as, or larger than, the historic building, which visually overwhelms it; or that obscures, damages, or destroys its character-defining features.

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Designing a compatible rooftop addition for a multi-story building when required for a new use, that is set back from the façade and is inconspicuous when viewed from the street.

Limiting a rooftop addition to one story in height to minimize its visibility and its impact on the historic character of the building.

Constructing a rooftop addition that is highly visible and negatively impacts the character of the historic building, its site, or historic setting.

Constructing a multi-story rooftop addition that is incompatible or alters the building's historic character.

Constructing a rooftop addition on low-rise, one- to three-story historic buildings that would be highly visible and overwhelm the building and, when applicable, the historic district in which it is located.

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Climate Change and Natural Hazards

Undertaking preventive treatments related to climate change and natural hazards is an important and integral part of the treatment **Rehabilitation**. Existing features of the historic building that were designed with the potential impact of natural disasters in mind should always be taken into consideration early in the planning stages of a rehabilitation project before proposing any additional treatments. When additional preventive treatments are needed they should be carried out so as to have the least impact on the historic character of the building.

Recommended

Evaluating potential impacts of climate change and natural hazards on character-defining features and undertaking work to avoid or minimize their loss, damage, or destruction in a manner consistent with the building's historic character.

Retaining and preserving significant features and the overall historic character of the building when undertaking any work to address the impacts of climate change and natural hazards.

Maintaining character-defining features in good repair, regularly monitoring the condition of those features, and documenting the features as a record and guide for future work.

Not Recommended

Allowing loss, damage, or destruction to occur to the historic building by failing to take advantage of existing features designed to minimize impacts of climate change and natural hazards, or failing to plan and implement additional, new preventive measures, if necessary.

Carrying out new preventive treatments that will adversely impact the historic character of the building.

Failing to maintain character-defining features in good repair or not undertaking regular monitoring of the condition of the building.

Sustainability

Sustainability is usually a very important and integral part of the treatment **Rehabilitation**. The existing energy-efficient characteristics of the historic building should always be taken into consideration early in the planning stages of a rehabilitation project before proposing any energy improvements. There are numerous treatments that may be used to upgrade a historic building to help it operate more efficiently while retaining its character.

(The topic of sustainability is addressed in detail in **The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings**. Although specifically developed for Rehabilitation, the Sustainability Guidelines can be used to help guide the other treatments.)

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