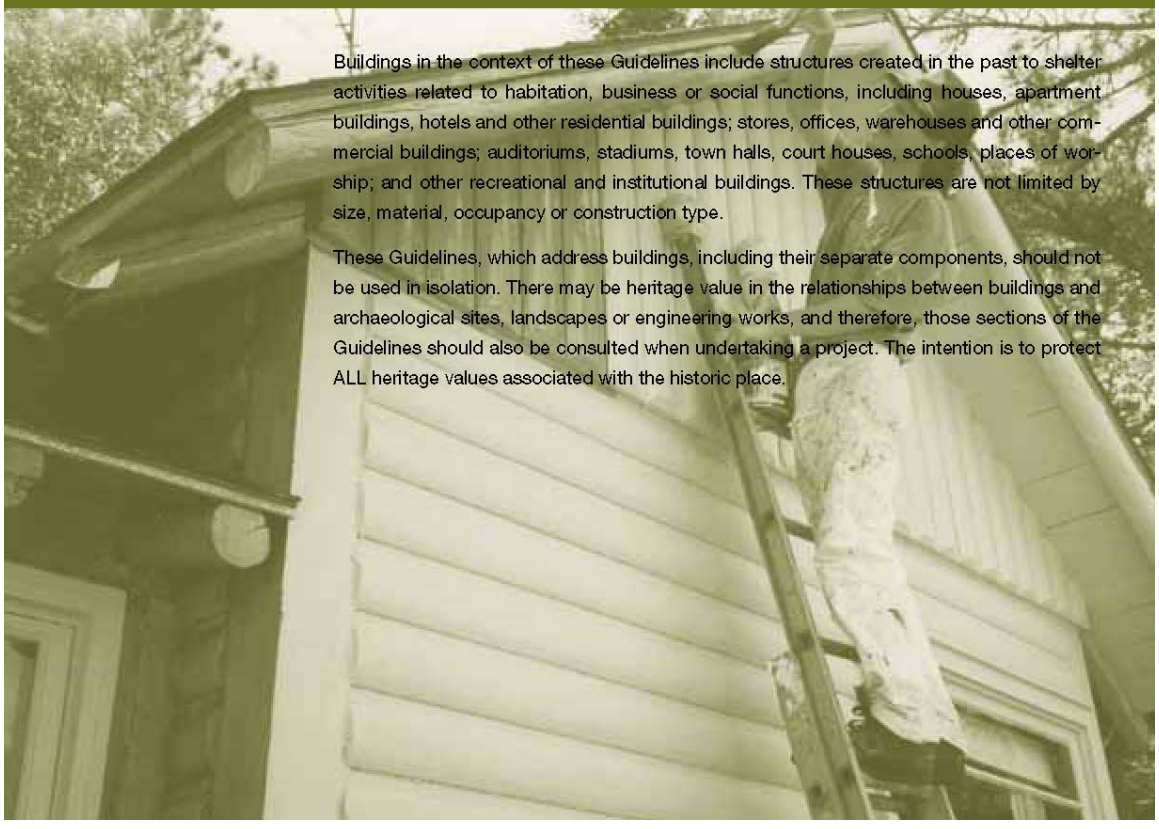
Guidelines for Buildings



Buildings in the context of these Guidelines include structures created in the past to shelter activities related to habitation, business or social functions, including houses, apartment buildings, hotels and other residential buildings; stores, offices, warehouses and other commercial buildings; auditoriums, stadiums, town halls, court houses, schools, places of worship; and other recreational and institutional buildings. These structures are not limited by size, material, occupancy or construction type.

These Guidelines, which address buildings, including their separate components, should not be used in isolation. There may be heritage value in the relationships between buildings and archaeological sites, landscapes or engineering works, and therefore, those sections of the Guidelines should also be consulted when undertaking a project. The intention is to protect ALL heritage values associated with the historic place.

1- Aberdeen Pavilion, Ottawa, Ontario, © Monique Trépanier, Parks Canada, 1995
2- Vancouver, British Columbia, © Guy Masson, PWGSC, 2000
3- Port Edward, British Columbia, © Jean-Pierre Jérôme, Parks Canada, 1997
4- Manitoulin Island, Ontario, © Gordon Fulton, 1998

Exterior Wood

Clapboard, weatherboard, shingles, logs and other wooden elements

Recommended	Not Recommended
Preserving exterior wood features — such as siding, corner boards, brackets, columns, window and door surrounds or architraves, cornices, pediments and balustrades; and their paints, finishes and colours — that are important in defining the overall heritage value of the building.	Removing or radically changing exterior wood elements that are important in defining the overall heritage value of the building.
Documenting the form, type and colour of coatings such as paint; and the condition of exterior wood features prior to beginning project work.	Undertaking project work that will have an impact on character-defining exterior wood elements without first documenting their existing character and condition.
Protecting and maintaining exterior wood elements by preventing water penetration and by maintaining proper drainage so that water or organic matter is not allowed to stand on flat, horizontal surfaces or accumulate in decorative features.	Failing to identify, evaluate and treat the causes of exterior 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 fungus infestation.
Inspecting painted exterior wood surfaces to determine whether repainting is necessary or if cleaning is all that is required.	Removing paint that is firmly adhering to and thus protecting exterior wood surfaces.
Retaining coatings such as paint that help protect the exterior wood from moisture and ultraviolet light. Paint removal should be considered only where there is paint surface deterioration and as part of an overall maintenance program that involves repainting or applying other protective coatings in kind.	Stripping paint or other coatings to reveal bare wood, thus exposing historically coated surfaces to the effects of accelerated weathering.
Removing damaged or deteriorated paint to the next sound layer using the gentlest method possible (scraping and sanding by hand), then repainting in kind.	Using destructive paint removal methods such as propane or butane torches, sandblasting or water-blasting. These methods can irreversibly damage exterior woodwork or cause catastrophic fires.

Maximizing the retention of character-defining materials and features is the primary goal of *Preservation*, as demonstrated in this photograph. Work on this wooden warehouse consisted primarily of minor repairs to the foundation skirting and limited replacement of deteriorated material. The new wood will be left to weather to the same appearance as the old.

Recommended	Not Recommended
Using electric hot-air guns carefully on decorative wood elements and electric heat plates on flat wood surfaces when paint is so deteriorated or so thick that total removal is necessary prior to repainting.	Using thermal devices improperly so that the woodwork is scorched.
	Failing to have a fire extinguisher nearby when using thermal devices.
Using chemical strippers primarily to supplement other methods such as hand scraping, hand sanding and the thermal devices recommended above. Detachable wooden elements such as shutters, doors and columns may be chemically dip-stripped if proper safeguards are taken.	Failing to neutralize the wood thoroughly after using chemicals so that new paint does not adhere.
	Allowing detachable wood elements to soak too long in a caustic solution so that the wood grain is raised and the surface roughened.
	Stripping character-defining painted exterior wood surfaces to bare wood, then applying clear finishes or stains in order to create a "natural" look.
	Stripping paint or varnish to bare wood rather than repairing or reapplying the same finish (e.g., a grained finish) to an exterior wood element such as a front door.
Creating conditions that are unfavourable to the growth of fungus, such as eliminating unintentional entry points for water, drying out the structure by opening vents, removing piled up earth resting against the building and applying a chemical preservative treatment using recognized preservation methods.	
Applying compatible paint coating systems following proper surface preparation, such as washing with trisodium phosphate.	Failing to follow the manufacturer's product and application instructions when repainting exterior woodwork.
Repainting with colours that are appropriate to the building and district.	Using new colours that are inappropriate to the building or district.
Applying chemical preservatives to exterior wood elements such as beam ends or outriggers that are exposed to decay hazards and are traditionally unpainted.	Using chemical preservatives such as creosote or copper naphthanate, because if they have not been used historically, they can change the appearance of exterior wood elements.
Inspecting buildings to determine the reason(s) for any damage or degradation, such as abrasion, animal gnawing (e.g., rodents), fungal decay or insect infestation (e.g., beetles, horntails, wood borers, carpenter ants, carpenter bees, wasps, termites and weevils).	Undertaking remedial project work on log buildings without first identifying the actual cause(s) of damage or degradation.
Treating the deterioration of log buildings from abrasion or animals by isolating, insofar as possible, the building from the source of deterioration, such as blocking wind-borne sand and grit with a windbreak, or putting a wire mesh screen over floor joists in a crawlspace to thwart rodents.	Neglecting to treat known conditions that threaten buildings, such as abrasion, animal gnawing, fungal decay or insect infestation, thus putting them at risk of further deterioration.
Treating active infestations of insects by first identifying the type of insect and then implementing a program of elimination appropriate to that insect. If using pesticides, confirm that the chemical is registered for the intended purpose with Agriculture and Agri-Food Canada and follow the manufacturer's product and application instructions. Fumigation should be done only by a licensed applicator.	

Recommended	Not Recommended
Taking into account the settlement rate of a building when augmenting or reinforcing its structural components, so that the new components settle at the same rate.	Structurally augmenting or reinforcing a building with components that do not have a similar rate of settlement.
Retaining sound exterior wood or deteriorated exterior wood that can be repaired.	Replacing wood elements that can be repaired.
Repairing and stabilizing deteriorated exterior wood elements by structural reinforcement, weather protection, or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.	Removing deteriorated exterior wood elements that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.
Replacing in kind extensively deteriorated or missing parts of exterior wood elements where there are surviving prototypes. The new work should match the old in form and detailing.	Replacing an entire wood element such as a cornice when limited replacement of deteriorated and missing components is appropriate. Using replacement material that does not match the historic wood element.
Evaluating the overall condition of the exterior wood to determine whether more than protection, maintenance and limited repair or replacement in kind are required; in other words, if more extensive repairs to wood elements will be necessary.	Failing to undertake adequate measures to protect exterior wood elements.

Additional Guidelines for Rehabilitation Projects

Recommended	Not Recommended
Rehabilitating an exterior wood element, if an evaluation of its overall condition determines that more than preservation is required.	Failing to evaluate the overall condition of an exterior wood element in order to determine the appropriate method of conservation.
Repairing exterior wood elements by patching, piecing-in, consolidating or otherwise reinforcing the wood using recognized preservation methods. Repair may also include the limited replacement in kind — or with a compatible substitute material — of those extensively deteriorated or missing parts of elements where there are surviving prototypes such as brackets, moulding or sections of siding.	Replacing an entire wood element such as a cornice or wall when repair of the wood and limited replacement of deteriorated or missing parts are appropriate. Using a substitute material for the replacement part that neither conveys the same appearance as the surviving parts of the wood element nor is physically or chemically compatible.
Replacing in kind an entire exterior wood element 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 element. Examples of wood elements include a cornice, entablature, or balustrade. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.	Removing an entire exterior wood element that is irreparable and not replacing it; or replacing it with a new element that does not convey the same appearance.

It is important to identify the cause of any damage to a wooden building element before beginning a *Preservation* treatment. In the case of the former machine shop of the North Pacific Cannery, exposure to marine conditions led to deterioration of the exterior wood cladding.

The following REHABILITATION work has been highlighted to indicate that it involves a particularly complex technical or design aspect and should only be considered after the *Preservation* and *Rehabilitation* concerns listed above have been addressed.

Recommended	Not Recommended
Designing for the Replacement of Missing Historic Features	
Designing and installing a new exterior wood feature such as a cornice or doorway when the historic feature is completely missing. It may be a new design that is compatible with the style, era and character of the historic place; or a replica based on physical and documentary evidence.	Introducing a new exterior wood feature that is incompatible in size, scale, material, style and colour. Creating a false historical appearance because the replaced wood feature is based on insufficient physical and documentary evidence.

Additional Guidelines for Restoration Projects

Recommended	Not Recommended
RESTORING an exterior wood element, if an evaluation of its overall condition determines that more than preservation is required; in other words, if repairs to wood features from the restoration period will be necessary.	Failing to evaluate the overall condition of an exterior wood element in order to determine the appropriate method of conservation.
Repairing, stabilizing and conserving fragile wood from the restoration period using well-tested consolidants, when appropriate. Repairs should be physically and visually compatible and identifiable upon close inspection for future research.	Removing wood from the restoration period that could be stabilized and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile historic materials.
Repairing exterior wood elements from the restoration period by patching, piecing-in or otherwise reinforcing the wood using recognized preservation methods. Repair may also include the limited replacement — preferably in kind — of those extensively deteriorated or missing parts of elements from the restoration period where there are surviving prototypes such as brackets, moulding or sections of siding. The new work should be unobtrusively dated to guide future research and treatment.	Replacing an entire exterior wood element from the restoration period such as a cornice or wall when repair of the wood and limited replacement of deteriorated or missing parts are appropriate. Using substitute material for the replacement part, which neither conveys the same appearance as the surviving parts of the wood element, nor is physically or chemically compatible.
Replacing in kind an entire exterior wood element from the restoration period 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 element. Examples of exterior wood elements include a cornice, entablature or balustrade. The new work should be unobtrusively dated to guide future research and treatment.	Removing an entire exterior wood element from the restoration period that is irreparable and not replacing it.

The extensively deteriorated wood siding on the exposed side of this building was replaced in kind. The new wood siding matches the surviving siding in form and detailing.

The following RESTORATION work has been highlighted to indicate that it involves the removal or alteration of existing wood features from periods other than the accepted restoration period; and the replacement of missing wood features from the restoration period with all new materials. This work should only be considered after the *Preservation* and *Restoration* concerns listed above have been addressed.

Recommended	Not Recommended
Removing Existing Features from Other Periods	
Removing or altering wood features, such as a later doorway, porch or steps, dating from other periods.	Failing to remove a wood feature from another period, thus confusing the depiction of the building's significance.
Documenting materials and features dating from other periods prior to their alteration or removal. If possible, selected examples of these features or materials should be stored to facilitate future research.	Failing to document wood features from other periods (which results in the loss of a valuable portion of the historic record) prior to removing them from the building.
Recreating Missing Features from the Restoration Period	
Recreating a missing wood feature that existed during the restoration period based on physical or documentary evidence; for example, duplicating a roof dormer or porch.	Constructing a wood feature that was part of the original design of the building, but was never actually built; or constructing a feature that was thought to have existed during the restoration period, but for which there is insufficient documentation.

Exterior Masonry

Brick, stone, terra cotta, concrete, stucco and mortar

Recommended	Not Recommended
Preserving masonry elements such as walls, brackets, railings, steps, columns, window and door surrounds or architraves, cornices, pediments, balustrades; and details such as jointing, tooling and bonding patterns, coatings and colour that are important in defining the overall heritage value of the building.	Removing or radically changing masonry elements that are important in defining the overall heritage value of the building.
Documenting the form, materials and condition of masonry elements prior to beginning project work.	Undertaking project work that will have an impact on character-defining masonry elements without first documenting their existing character and condition.
Protecting and maintaining masonry by preventing water penetration and by maintaining proper drainage so that water or organic matter does not stand on flat, horizontal surfaces or accumulate in curved decorative features.	Failing to evaluate and treat the various causes of mortar joint deterioration such as leaking roofs or gutters, differential settlement of the building, capillary action, failed flashings or extreme weather exposure. Applying water-repellent coatings to stop moisture penetration when the problem could be solved by repairing failed flashings, deteriorated mortar joints or other mechanical defects.

Preserving the exterior of the British Columbia Legislative Building (its rear façade is shown here), including its masonry walls, steps, columns, pilasters, window surrounds, decorative details and cornices, began with documenting the material, form, jointing, tooling, bonding patterns, coatings, colour, and conditions of these elements prior to beginning project work.

Recommended	Not Recommended
Cleaning masonry using recognized preservation methods and only when necessary to halt deterioration or remove heavy soiling or graffiti.	Cleaning masonry surfaces when they are not heavily soiled in order to create a new appearance, thus needlessly introducing chemicals or moisture into the materials.
Carrying out masonry surface cleaning tests after it has been determined that such cleaning is appropriate. If acceptable, carrying out cleaning tests which should be observed over a sufficient period of time so that both the immediate and the long-range effects are known, the gentlest method possible is selected and appropriate level of cleanliness achieved.	Cleaning masonry surfaces without testing or without sufficient time for the testing results to be of value.
Cleaning masonry surfaces using the gentlest method possible, such as low-pressure water and detergents, using natural bristle brushes.	Blasting brick or stone surfaces using dry or wet grit sand or other abrasives that permanently erode the surface of the material and accelerate deterioration.
	Using a cleaning method that involves water or liquid chemical solutions when there is any possibility of freezing temperatures.
	Cleaning with chemical products that will damage masonry or mortar such as using acid on limestone or marble; or leaving chemicals on masonry surfaces.
	Applying high-pressure water cleaning methods that will damage the masonry and the mortar joints.
Protecting adjacent materials during cleaning to avoid damage by abrasion or water infiltration.	
Inspecting painted masonry surfaces to determine whether repainting is necessary.	
Removing damaged or deteriorated paint only to the next sound layer using the gentlest method possible (e.g., hand scraping) prior to repainting.	Removing paint that is firmly adhering to, and thus protecting, masonry surfaces.
	Using methods of removing paint that are destructive to masonry, such as sandblasting, application of caustic solutions or high-pressure water-blasting.
Applying compatible paint or stucco following proper surface preparation.	Failing to follow manufacturers' product and application instructions when repainting masonry.
	Applying paint or stucco to masonry that has been historically unpainted or uncoated.
	Removing paint from historically painted masonry, unless it is causing damage to the underlying masonry.
	Removing stucco from masonry that was historically never exposed.
	Radically changing the type of paint or coating or its colour.

The harsh climate in many parts of Canada can seriously damage masonry elements. This wall in Quebec City has suffered irreversible damage from water penetrating the brick façade and freezing, causing the faces of many bricks to pop off. To avoid damage such as this, it is recommended that moisture penetration be stopped by repairing failed flashings, deteriorated mortar joints or other mechanical defects, not by applying water-repellent coatings, which can trap moisture inside the masonry.

Recommended	Not Recommended
Repainting or re-stuccoing with colours that are historically appropriate to the building and district.	Using new paint or stucco colours that are inappropriate to the building and district.
Retaining sound exterior masonry or deteriorated exterior masonry that can be repaired.	Replacing or rebuilding masonry that can be repaired.
Repairing and stabilizing deteriorated masonry elements by structural reinforcement, weather protection, or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.	Removing deteriorated masonry elements that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.
Replacing in kind extensively deteriorated or missing parts of masonry elements where there are surviving prototypes. The new work should match the old in form and detailing.	Replacing an entire masonry element such as a column when limited replacement of deteriorated and missing components is appropriate. Using replacement material that does not match the historic masonry element.

Recommended	Not Recommended
Repairing masonry walls and other masonry elements by repointing the mortar joints where there is evidence of deterioration such as disintegrating mortar, cracks in mortar joints, loose bricks, damp walls or damaged plaster work.	Removing non-deteriorated or acceptable mortar from sound joints, then repointing the entire building to achieve a uniform appearance.
Removing deteriorated or inappropriate mortar by carefully raking the joints using hand tools or appropriate mechanical means to avoid damaging the masonry.	Using rotary grinders on thin joints or vertical joints, or electric saws to remove mortar from joints prior to repointing.
Using mortars that will ensure the long-term preservation of the masonry assembly. Mortar should be compatible in strength, porosity, absorption and vapor permeability with the existing masonry units. Bedding and pointing mortars should be less durable than the masonry units. Bedding mortars should meet structural requirements. Colour, texture, width and joint profile should be physically and visually compatible with the masonry.	Repointing with mortar of high Portland cement content (unless it is the content of character-defining mortar). This can often create a bond that is stronger than the historic material (brick or stone) and can cause damage as a result of the differing coefficients of expansion and the differing porosity of the materials.
	Repointing with a synthetic caulking compound.
	Using a "scrub" coating technique to repoint instead of traditional repointing methods.
Duplicating original mortar joints in colour, texture, width and joint profile, if the mortar joints are a character-defining element.	
Evaluating the overall condition of the exterior masonry to determine whether more than protection, maintenance and limited repair or replacement in kind are required; i.e., if more extensive repairs to masonry elements will be necessary.	Failing to evaluate the overall condition of an exterior masonry element in order to determine the appropriate method of conservation.
	Failing to undertake adequate measures to protect masonry elements.

Deteriorated mortar joints in masonry walls should be repaired by repointing. The deteriorated mortar should be removed by carefully hand-raking the joints to avoid damaging the masonry, and the new mortar should duplicate the period mortar in strength, composition, colour, texture, width and joint profile. Repointing with mortar of high Portland cement content is not recommended, unless this was the historic mortar.

Additional Guidelines for Rehabilitation Projects

Recommended	Not Recommended
REHABILITATING an exterior masonry element, if an evaluation of its overall condition determines that more than preservation is required.	Failing to evaluate the overall condition of an exterior masonry element in order to determine the appropriate method of conservation.
Repairing stucco by removing the damaged material and patching with new stucco that duplicates the old in strength, composition, colour, porosity and texture.	Removing sound stucco or repairing with new stucco that is stronger than the character-defining material or does not convey the same appearance.
Cutting damaged character-defining concrete back to remove and correct the source of deterioration (often corrosion on metal reinforcement bars). The new patch must be applied carefully so it will bond satisfactorily with and match the character-defining concrete.	Patching concrete without removing the source of deterioration, or patching with a concrete that is incompatible with the existing.
Repairing character-defining masonry elements by patching, piecing-in or consolidating the masonry using appropriate conservation methods. Repair may also include the limited replacement in kind — or with a compatible substitute material — of those extensively deteriorated or missing parts of masonry elements such as terra cotta brackets or stone balusters when there are surviving prototypes.	Replacing an entire character-defining masonry element such as a cornice when repair of the masonry and limited replacement of deteriorated or missing parts are feasible. Using a substitute material (in place of the replacement part) which neither conveys the appearance of the surviving parts of the masonry element, nor is physically or chemically compatible.
Applying new or non-historic surface treatments such as proven water-repellent coatings to masonry only after repointing and only if masonry repairs, alternative design solutions or flashings have failed to arrest water penetration problems.	Applying waterproof, water repellent or non-historic coatings such as stucco to masonry as a substitute for repointing and masonry repairs. Coatings are frequently unnecessary and expensive and may change the appearance of character-defining masonry as well as accelerate its deterioration.
Replacing in kind an entire character-defining masonry element 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 element. 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.	Removing a character-defining masonry element that is irreparable and not replacing it; or replacing it with a new element that does not convey the same appearance.

The following REHABILITATION work has been highlighted to indicate that it involves a particularly complex technical or design aspect and should only be considered after the *Preservation* and *Rehabilitation* concerns listed above have been addressed.

Recommended	Not Recommended
Designing for the Replacement of Missing Historic Features	
Designing and installing a new masonry feature such as steps or a door pediment when the historic feature is completely missing. It may be a new design that is compatible with the style, era and character of the historic place; or a replica based on physical and documentary evidence.	Introducing a new masonry feature that is incompatible in size, scale, material, style and colour. Creating a false historical appearance because the replaced masonry feature is based on insufficient physical and documentary evidence.

Cleaning masonry should be undertaken only when necessary to halt deterioration or remove heavy soiling. If surface cleaning is appropriate, tests using recognized preservation methods should be first be made in order to select the gentlest cleaning method possible, and be observed over time to determine the immediate and the long-term effects. The test-cleaning of the left portion of this brick and stone wall (using low pressure water and detergents, when there was no chance of freezing) created an acceptably clean wall.

Additional Guidelines for Restoration Projects

Recommended	Not Recommended
RESTORING an exterior masonry element, if an evaluation of its overall condition determines that more than preservation is required; i.e., if repairs to masonry features from the restoration period will be necessary.	Failing to evaluate the overall condition of an exterior masonry element in order to determine the appropriate method of conservation.
Repairing, stabilizing and conserving fragile masonry from the restoration period by well-tested consolidants, when appropriate. Repairs should be physically and visually compatible and identifiable upon close inspection for future research.	Removing masonry from the restoration period that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile historic materials.
Repairing stucco by removing the damaged material and patching with new stucco that duplicates stucco of the restoration period in strength, composition, colour and texture.	Removing sound stucco; or repairing with new stucco that is stronger than the historic material or does not convey the same appearance.
Cutting damaged concrete back to remove the source of deterioration (often corrosion on metal reinforcement bars). The new patch must be applied carefully so it will bond satisfactorily with and match the historic concrete.	Patching concrete without removing the source of deterioration, or patching with a concrete that is incompatible with the existing.
Repairing masonry features from the restoration period by patching, piecing-in or otherwise reinforcing the masonry using recognized preservation methods. Repair may also include the limited replacement — preferably in kind — of those extensively deteriorated or missing parts of masonry features from the restoration period when there are surviving prototypes such as terra cotta brackets or stone balusters. The new work should be unobtrusively dated to guide future research and treatment.	Replacing an entire masonry feature from the restoration period such as a cornice or balustrade when repair of the masonry and limited replacement of deteriorated or missing parts are appropriate. Using a substitute material for the replacement part that neither conveys the appearance of the surviving parts of the masonry feature, nor is physically or chemically compatible.
Applying new or non-historic surface treatments such as proven 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-historic coatings such as stucco to masonry as a substitute for repointing and masonry repairs. Coatings are frequently unnecessary and expensive, and may change the appearance of historic masonry as well as accelerate its deterioration.
Replacing in kind an entire masonry feature from the restoration period 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. The new work should be unobtrusively dated to guide future research and treatment.	Removing a masonry feature from the restoration period that is irreparable and not replacing it.

The following RESTORATION work has been highlighted to indicate that it involves the removal or alteration of existing masonry features from periods other than the accepted restoration period; and the replacement of missing masonry features from the restoration period with all new materials. This work should only be considered after the *Preservation* and *Restoration* concerns listed above have been addressed.

Recommended	Not Recommended
Removing Existing Features from Other Periods	
Removing or altering masonry features, such as a later doorway, porch or steps, dating from other periods.	Failing to remove a masonry feature from another period, thus confusing the depiction of the building's significance.
Documenting materials and features dating from other periods prior to their alteration or removal. If possible, selected examples of these features or materials should be stored to facilitate future research.	Failing to document masonry features from other periods (which results in the loss of a valuable portion of the historic record) prior to removing them from the building.
Recreating Missing Features from the Restoration Period	
Recreating a missing masonry feature that existed during the restoration period based on physical or documentary evidence; for example, duplicating a terra cotta bracket or stone balustrade.	Constructing a masonry feature that was part of the original design of the building but was never actually built; or constructing a feature that was thought to have existed during the restoration period, but for which there is insufficient documentation.

One of the primary causes of deterioration of glazed architectural terra cotta is water. Water-related damage to the glazed units, mortar, metal anchors or masonry backfill can be repaired only when the sources of that water have been eliminated. This typically means repairing flashing, repointing deteriorated mortar with a mortar that has a compressive strength lower than the adjacent masonry unit, and coating or sealing blistered spots to prevent further entry of water. Repointing with waterproof caulking compounds or the wholesale coating of the wall with waterproof materials will impede the normal outward migration of moisture through the masonry joints and likely cause spalling of the glaze or mortar.

Architectural Metals

Cast iron, steel, pressed metal, copper, aluminum and zinc elements

Recommended	Not Recommended
PRESERVING architectural metal elements — such as cladding, columns, capitals, brackets, window hoods, cornices, balustrades or stairways; and their finishes and colours — that are important in defining the overall heritage value of the building. (See also ROOFS for gutters and downspouts.)	Removing or radically changing architectural metal elements that are important in defining the overall heritage value of the building.
Documenting the form, materials and condition of architectural metal elements prior to beginning project work. It is critical to differentiate between metals prior to project work, since each metal has unique properties and thus requires a different treatment.	Undertaking project work that will have an impact on character-defining architectural metal elements without undertaking a survey of existing conditions.
Protecting and maintaining architectural metals from corrosion by preventing water penetration and by maintaining proper drainage so that water or organic matter does not stand on flat, horizontal surfaces or accumulate in curved, decorative features.	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.

The first step in *Preserving* architectural metals is to identify the type of metal. Before cleaning, determine that cleaning is appropriate for the particular metal: removing the patina from the bronze door shown above would not be appropriate if the patina is a character-defining finish of the metal, or if it provides a protective coating. If cleaning is appropriate, testing is recommended to ensure that the gentlest cleaning method possible is used.

A regular programme of cleaning and re-applying appropriate paint has preserved to a remarkable degree the metal entrance canopy of Winnipeg's Union Station, which was completed in 1911. Protection from corrosion should be considered the first line of defence in preserving architectural metals.

Recommended	Not Recommended
Identifying the particular type of metal prior to any cleaning procedure and then testing to ensure that the gentlest cleaning method possible and the appropriate level of cleanliness are selected, or determining that cleaning is inappropriate for the particular metal.	Using cleaning methods that alter or damage the character-defining colour, texture and finish of the metal; or cleaning when it is inappropriate for the metal. Removing the character-defining patina of metal. The patina may be a protective coating on some metals, such as bronze or copper, as well as a significant character-defining finish.
Cleaning architectural metals, when appropriate, to remove corrosion prior to repainting or applying other appropriate protective coatings.	Exposing metals that were intended to be protected from the environment. Applying paint or other coatings to metals such as copper, bronze or stainless steel that were meant to be exposed.
Cleaning soft metals such as lead, tin, copper, terneplate and zinc with appropriate chemical methods because their finishes can be easily abraded by blasting methods.	Cleaning soft metals such as lead, tin, copper, terneplate and zinc with grit blasting or other abrasive methods or tools such as wire brushing, which will abrade the surface of the metal.
Using the gentlest cleaning methods for cast iron, wrought iron and steel — hard metals — in order to remove excessive paint build-up and corrosion. If hand scraping and wire brushing prove ineffective, low-pressure grit blasting may be used as long as it does not abrade or damage the surface.	Failing to employ gentler methods prior to abrasively cleaning cast iron, wrought iron or steel; or using high pressure grit blasting.
Protecting adjacent materials during cleaning so as to avoid damage by abrasion or chemical reaction.	Failing to mask or otherwise protect adjacent masonry, wood or glass surfaces.
Applying an appropriate protective coating such as lacquer or wax to an architectural metal element such as a bronze door that is subject to heavy pedestrian use.	Failing to assess pedestrian use or new access patterns so that architectural metal elements are subject to damage by use or inappropriate maintenance such as salting adjacent sidewalks.
Re-applying appropriate paint or other coating systems after cleaning in order to decrease the corrosion rate of metals or alloys.	Failing to re-apply protective coating systems to metals or alloys that require them after cleaning so that accelerated corrosion occurs.
Repainting, if warranted, with colours that are appropriate to the building or district.	Using new colours that are inappropriate to the building or district. Radically changing a character-defining type of finish or character-defining colour or accent scheme, which detracts from the character of the building.
Retaining sound architectural metal elements or deteriorated architectural metal elements that can be repaired.	Replacing architectural metal elements that can be repaired.
Repairing and stabilizing deteriorated architectural metal elements by structural reinforcement, weather protection or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.	Removing deteriorated architectural metal elements that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.

Recommended	Not Recommended
Replacing in kind extensively deteriorated or missing parts of architectural metal elements where there are surviving prototypes. The new work should match the old in form and detailing.	Replacing an entire architectural metal element such as a pressed metal ceiling when limited replacement of deteriorated and missing components is appropriate. Using replacement material that does not match the historic architectural metal elements in appearance or in physical or chemical properties.
Evaluating the overall condition of architectural metals to determine whether more than protection, maintenance and limited repair or replacement in kind are required; i.e., if more extensive repairs to architectural metal elements will be necessary.	Failing to undertake adequate measures to protect architectural metal elements.

Additional Guidelines for Rehabilitation Projects

Recommended	Not Recommended
REHABILITATING an architectural metal element, if an evaluation of its overall condition determines that more than preservation is required.	Failing to evaluate the overall condition of an architectural metal element in order to determine the appropriate method of conservation.
Repairing an architectural metal element by welding, soldering, patching, splicing, or otherwise reinforcing the metal following recognized conservation methods. Repairs may also include the limited replacement in kind — or with a compatible substitute material — of those extensively deteriorated or missing parts of elements when there are surviving prototypes such as porch balusters, column capitals or bases; or roof cresting.	Replacing an entire architectural metal element such as a column or a balustrade when repair of the metal and limited replacement of deteriorated or missing parts are feasible. Using a substitute material for the replacement part that neither conveys the appearance of the surviving parts of the architectural metal element, nor is physically or chemically compatible.
Replacing in kind an entire architectural metal element 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 element. Examples 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.	Removing an architectural metal element that is irreparable and not replacing it; or replacing it with a new architectural metal element that does not convey the same appearance.

The following REHABILITATION work has been highlighted to indicate that it involves a particularly complex technical or design aspect and should only be considered after the *Preservation* and *Rehabilitation* concerns listed above have been addressed.

Recommended	Not Recommended
Designing for the Replacement of Missing Historic Features	
Designing and installing a new architectural metal feature such as a metal cornice or cast iron capital when the historic feature is completely missing. It may be a new design that is compatible with the style, era and character of the historic place; or a replica based on physical and documentary evidence.	Introducing a new architectural metal feature that is incompatible in size, scale, material, style and colour. Creating a false historical appearance because the replaced architectural metal feature is based on insufficient physical and documentary evidence.

Additional Guidelines for Restoration Projects

Recommended	Not Recommended
RESTORING an architectural metal element, if an evaluation of its overall condition determines that more than preservation is required; i.e., if repairs to metal features from the restoration period will be necessary.	Failing to evaluate the overall condition of an architectural metal element in order to determine the appropriate method of conservation.
Repairing, stabilizing and conserving fragile architectural metal from the restoration period using well-tested consolidants, when appropriate. Repairs should be physically and visually compatible and identifiable upon close inspection for future research.	Removing architectural metal from the restoration period that could be stabilized and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile historic materials.

In *Rehabilitation*, replacing in kind an entire architectural metal element that is too deteriorated to repair is recommended, if the overall form and detailing are still evident. Missing metal roof cresting on the Shaughnessy House in Montreal was replaced by using existing physical evidence as a model to reproduce the element.

Recommended	Not Recommended
Repairing architectural metal features from the restoration period by patching, splicing or otherwise reinforcing the metal using recognized preservation methods. Repairs may also include the limited replacement — preferably in kind — of those extensively deteriorated or missing parts of features from the restoration period when there are surviving prototypes such as porch balusters, column capitals or bases; or porch cresting. The new work should be unobtrusively dated to guide future research and treatment.	Replacing an entire architectural metal feature from the restoration period such as a column or a balustrade when repair of the metal and limited replacement of deteriorated or missing parts are appropriate. Using a substitute material for the replacement part that neither conveys the appearance of the surviving parts of the architectural metal feature, nor is physically or chemically compatible.
Replacing in kind an entire architectural metal feature from the restoration period 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 could include cast iron porch steps or roof cresting. The new work should be unobtrusively dated to guide future research and treatment.	Removing an architectural metal feature from the restoration period that is irreparable and not replacing it.

The following RESTORATION work has been highlighted to indicate that it involves the removal or alteration of existing architectural metal features from periods other than the accepted restoration period; and the replacement of missing architectural metal features from the restoration period with all new materials. This work should only be considered after the *Preservation* and *Restoration* concerns listed above have been addressed.

Recommended	Not Recommended
Removing Existing Features from Other Periods	
Removing or altering architectural metal features, such as a later cast iron porch railing, or aluminum windows, dating from other periods.	Failing to remove an architectural metal feature from another period, thus confusing the depiction of the building's significance.
Documenting materials and features dating from other periods prior to their alteration or removal. If possible, selected examples of these features or materials should be stored to facilitate future research.	Failing to document architectural metal features from other periods (which results in the loss of a valuable portion of the historic record) prior to removing them from the building.
Recreating Missing Features from the Restoration Period	
Recreating a missing architectural metal feature that existed during the restoration period based on physical or documentary evidence; for example, duplicating a cast iron storefront or porch.	Constructing an architectural metal feature that was part of the original design of the building but was never actually built; or constructing a feature that was thought to have existed during the restoration period, but for which there is insufficient documentation.

Roofs

Recommended	Not Recommended
Preserving roofs — and their functional and decorative elements — that are important in defining the overall heritage value of the building.	Damaging or destroying roofs that are important in defining the overall heritage value of the building so that, as a result, the heritage value is diminished. Changing the configuration of a roof by adding new elements such as dormer windows, vents or skylights so that the character is diminished.
Documenting the form, materials and condition of roofs and roof elements prior to beginning project work. This includes the roof's pitch; shape, such as hipped, gambrel and mansard; decorative elements such as cupolas, cresting, chimneys and weathervanes; and roofing material such as slate, wood, clay tile and metal, as well as its size, colour and patterning.	Undertaking project work that will have an impact on character-defining roofs and roof elements without first documenting their existing character and condition.
Stabilizing and protecting a leaking roof with plywood and building paper until it can be properly repaired.	Permitting a leaking roof to remain unprotected so that accelerated deterioration of its building materials (such as masonry, wood, plaster, paint and structural members) occurs.
Protecting and maintaining a roof by cleaning and maintaining the gutters and downspouts and replacing deteriorated flashing in kind. Roof sheathing should also be checked for proper venting to prevent moisture condensation and water penetration; and to ensure that materials are free from insect infestation.	Failing to replace deteriorated flashing or to clean and maintain gutters and downspouts properly so that water and debris collect and cause damage to roof fasteners, sheathing and the underlying structure.
Providing adequate anchorage for roofing material to guard against wind damage and moisture penetration.	Allowing roof fasteners such as nails and clips to corrode so that roofing material is subject to accelerated deterioration.
Retaining sound roofs or roof elements, or deteriorated roofs or roof elements that can be repaired.	Replacing or rebuilding roofs that can be repaired. Stripping the roof of sound character-defining material such as slate, clay tile, wood and architectural metal. Applying paint, stain or other coatings to roofing material that historically has been uncoated.
Repairing and stabilizing deteriorated roofs and roof elements by structural reinforcement, weather protection, or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.	Removing deteriorated roof elements that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.
Replacing in kind extensively deteriorated or missing parts of roofs where there are surviving prototypes. The new work should match the existing elements in form and detailing.	Replacing an entire roof element such as a dormer when limited replacement of deteriorated and missing components is appropriate. Using replacement material that does not match the historic roof or roof element.

Recommended	Not Recommended
Evaluating the overall condition of roofs and roof elements to determine whether more than protection, maintenance and limited repair or replacement in kind are required; i.e., if more extensive repairs to roofs will be necessary.	Failing to undertake adequate measures to protect roofs.

Additional Guidelines for Rehabilitation Projects

Recommended	Not Recommended
REHABILITATING a roof, if an evaluation of its overall condition determines that more than preservation is required.	Failing to evaluate the overall condition of a roof in order to determine the appropriate method of conservation.
Repairing a roof by reinforcing the character-defining materials that comprise roof elements. Repairs will also generally include the limited replacement in kind — or with a compatible substitute material — of those extensively deteriorated or missing parts of elements when there are surviving prototypes such as cupola louvers, dentils, dormer roofing; or slates, tiles or wood shingles on a main roof.	Replacing an entire roof element such as a cupola, dormer or lightning protection when repair of the character-defining materials and limited replacement of deteriorated or missing parts is feasible. Failing to reuse intact slate or tile when only the roofing substrate needs replacement. Using a substitute material for the replacement part that neither conveys the appearance of the surviving parts of the roof, nor is physically or chemically compatible.
Replacing in kind an entire element of the roof 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 element. Examples can include a large section of roofing or a dormer or chimney. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.	Removing an element of the roof that is irreparable, such as a chimney or dormer and not replacing it; or replacing it with a new element that does not convey the same appearance.

The *Rehabilitation* of the Truro Federal Building, in Truro, Nova Scotia included restoring its distinctive slate roof. In *Rehabilitation*, the replacement of missing historic features with a replica based on physical and documentary evidence, as in this project, is acceptable, as is a new design that is compatible with the character of the historic place.

The following REHABILITATION work has been highlighted to indicate that it involves a particularly complex technical or design aspect and should only be considered after the *Preservation* and *Rehabilitation* concerns listed above have been addressed.

Recommended	Not Recommended
Designing for the Replacement of Missing Historic Features	
Designing and constructing a new feature when the historic feature is completely missing, such as chimney or cupola. It may be a new design that is compatible with the style, era and character of the historic place; or a replica based on physical and documentary evidence.	Introducing a new roof feature that is incompatible in size, scale, material, style and colour. Creating a false historical appearance because the replaced feature is based on insufficient physical and documentary evidence.
Alterations/Additions for the New Use	
Installing mechanical and service equipment on the roof such as air conditioning, transformers or solar collectors when required for the new use so that they are inconspicuous from the public right-of-way and do not damage or obscure character-defining elements, or undermine the heritage value.	Installing mechanical or service equipment which damages or obscures character-defining elements; or is conspicuous from the public right-of-way.
Designing additions to roofs such as residential, office or storage spaces; elevator housing; decks and terraces; or dormers or skylights when required by the new use so that they are inconspicuous from the public right-of-way and do not damage or obscure character-defining elements, or undermine the heritage value.	Radically changing a character-defining roof shape or damaging or destroying character-defining roofing material as a result of incompatible design or improper installation techniques.

Additional Guidelines for Restoration Projects

Recommended	Not Recommended
Restoring a roof, if an evaluation of its overall condition determines that more than preservation is required; i.e., if repairs to a roof from the restoration period will be necessary.	Failing to evaluate the overall condition of a roof in order to determine the appropriate method of conservation.
Repairing a roof from the restoration period by reinforcing the materials that comprise roof features. Repairs will also generally include the limited replacement — preferably in kind — of those extensively deteriorated or missing parts of features such as cupola louvers, dentils, dormer roofs or slates, tiles or wood shingles when there are surviving prototypes. The new work should be unobtrusively dated to guide future research and treatment.	Replacing an entire roof feature from the restoration period such as a cupola or dormer when the repair of materials and limited replacement of deteriorated or missing parts are appropriate. Failing to reuse intact slate or tile when only the roofing substrate needs replacement. Using a substitute material for the replacement part that neither conveys the appearance of the surviving parts of the roof, nor is physically or chemically compatible.

During the *Restoration* of the former post office in Dawson, Yukon, the metal roofing surface, which was too deteriorated to repair, was replaced "in kind" (using the same form, materials, and detailing). Physical evidence from the *Restoration* period was used as a model to reproduce the characteristic standing seam detail.

Recommended

Replacing in kind an entire roof feature from the restoration period 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. The new work should be unobtrusively dated to guide future research and treatment.

Not Recommended

Removing a roof feature from the restoration period that is irreparable and not replacing it; or failing to document the new work.

A surviving pressed metal shingle was used as a prototype for manufacturing replacement shingles for the *Restoration* of the main house at the Motherwell Homestead near Abernathy, Saskatchewan. As a rule, in *Restoration*, repairs or replacements of extensively deteriorated or missing parts of features are done in kind, and are based on physical, documentary and oral evidence.

The following RESTORATION work has been highlighted to indicate that it involves the removal or alteration of existing roofs and roof features from periods other than the accepted restoration period; and the replacement of missing roof features from the restoration period with all new materials. This work should only be considered after the *Preservation* and *Restoration* concerns listed above have been addressed.

Recommended	Not Recommended
Removing Existing Features from Other Periods	
Removing or altering roofs or roof features, such as a later dormer or asphalt roofing, dating from other periods.	Failing to remove a roof feature from another period, thus confusing the depiction of the building's significance.
Documenting materials and features dating from other periods prior to their alteration or removal. If possible, selected examples of these features or materials should be stored to facilitate future research.	Failing to document roofing materials and roof features from other periods (which results in the loss of a valuable portion of the historic record) prior to removing them from the building.
Recreating Missing Features from the Restoration Period	
Recreating missing roofing material or a roof feature that existed during the restoration period based on physical or documentary evidence; for example, duplicating a dormer or cupola.	Constructing a roof feature that was part of the original design of the building, but was never actually built; or constructing a feature that was thought to have existed during the restoration period, but for which there is insufficient documentation.

Windows

Recommended

PRESERVING windows and their functional and decorative components — such as frames, sashes, muntins, glazing, sills, heads, hoodmoulds, panelled or decorated jambs and mouldings, interior and exterior shutters and blinds — that are important in defining the overall heritage value of the building.

Documenting the location, form, style, materials and method of operation of windows and their elements prior to beginning project work.

Not Recommended

Removing or radically changing windows that are important in defining the heritage value of the building.

Changing the number, location, size or glazing pattern of windows by cutting new openings, blocking in windows and installing replacement sashes that do not fit the character-defining window opening.

Changing the character-defining appearance of windows through the use of inappropriate designs, materials, finishes or colours that noticeably change the sash, depth of reveal and muntin configuration; the reflectivity and colour of the glazing; or the appearance of the frame.

Obscuring character-defining window trim with metal or other materials.

Preserving a building's character-defining windows generally involves scraping, sanding, re-puttying and repainting. While some limited repair and replacement work was undertaken within the scope of work on the Aberdeen Pavilion in Ottawa (photo on left: before, photo below: after), almost all of the windows were retained, including the glass. Wholesale replacement of window units is not an appropriate *Preservation* treatment.

Recommended	Not Recommended
Conducting an in-depth survey of the condition of windows early in the planning process so that repair and upgrading methods and possible replacement options can be fully explored.	Undertaking project work that will have an impact on character-defining windows without first documenting their existing character and condition.
Protecting and maintaining the wood and architectural metals that comprise the window frames, sashes, muntins and surrounds through appropriate surface treatments such as cleaning, rust removal, limited paint removal and re-application of protective coating systems in kind.	Failing to provide adequate protection of materials on a cyclical basis, which results in deterioration of the window.
Making windows weathertight by re-puttying and replacing or installing weatherstripping. These actions also improve thermal efficiency (see also section 4 Energy Efficiency Considerations, Buildings: Windows).	Retrofitting or replacing windows rather than maintaining the sash, frame and glazing.
Retaining sound windows and window elements or deteriorated windows and window elements that can be repaired.	Replacing windows that can be repaired. Peeling paint, broken glass, stuck sashes or high air infiltration are NOT, in themselves, indications that windows are beyond repair.
Repairing and stabilizing deteriorated windows and window elements by structural reinforcement, weather protection, or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.	Removing deteriorated materials such as wood, cast iron or bronze from windows that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.
Replacing in kind extensively deteriorated or missing parts of windows where there are surviving prototypes. The new work should match the old in form and detailing.	Replacing an entire window element such as a shutter when limited replacement of deteriorated and missing components is appropriate. Using replacement material that does not match the historic window or window element.
Evaluating the overall condition of windows and window elements to determine whether more than protection, maintenance and limited repair or replacement in kind are required; i.e., if more extensive repairs to windows will be necessary.	Failing to undertake adequate measures such as cyclical maintenance to protect windows.

The replacement of an entire character-defining element is recommended in *Rehabilitation* if the element is extensively deteriorated and cannot reasonably be repaired. The replacement should accurately replicate the original, as shown in the project on the left, or be compatible with the character of the historic place.

Additional Guidelines for Rehabilitation Projects

Recommended	Not Recommended
Rehabilitating a window, if an evaluation of its overall condition determines that more than preservation is required.	Failing to evaluate the overall condition of a window, in order to determine the appropriate method of conservation.
Repairing window frames and sashes by patching, splicing, consolidating or otherwise reinforcing. Such repair may also include replacement in kind — or with a compatible substitute material — of those parts that are either extensively deteriorated or are missing, when there are surviving prototypes such as architraves, hoodmolds, sashes, sills and interior or exterior shutters and blinds.	Replacing an entire window when repair of materials and limited replacement of deteriorated or missing parts is feasible. Failing to reuse serviceable window hardware such as sash lifts and sash locks. Using substitute material for the replacement part, that neither conveys the same appearance as the surviving parts of the window, nor is physically or chemically compatible.
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 when replacing windows deteriorated beyond repair, then a compatible substitute material may be considered.	Removing a character-defining window that is irreparable and blocking it in; or replacing it with a new window that does not convey the same appearance.

The following REHABILITATION work has been highlighted to indicate that it involves a particularly complex technical or design aspect and should only be considered after the *Preservation* and *Rehabilitation* concerns listed above have been addressed.

Recommended	Not Recommended
Designing for the Replacement of Missing Historic Features	
Designing and installing new windows when the historic windows (frames, sashes and glazing) are completely missing. It may be a new design that is compatible with the style, era and character of the historic place; or a replica based on physical and documentary evidence.	Introducing a new design that is inconsistent with the style, era and overall historic character of the building. Creating a false historical appearance because the replaced window is based on insufficient physical and documentary evidence.
Alterations/Additions for the New Use	
Designing and installing additional windows on non-character-defining elevations if required by the new use. Such designs should be compatible with the overall style, era and character of the building, but not necessarily duplicate the fenestration pattern and detailing of a character-defining elevation.	Installing new windows, including frames, sashes and muntins, that are incompatible with the building's historic appearance or obscure, damage or destroy character-defining elements.
Providing a setback in the design of dropped ceilings when they are required for the new use to allow for the full height of the window openings.	Inserting new floors or furred-down ceilings that cut across the glazed areas of windows so that the exterior form and appearance of the windows are changed.

Additional Guidelines for Restoration Projects

Recommended	Not Recommended
RESTORING a window, if an evaluation of its overall condition determines that more than preservation is required; i.e., if repairs to wood features from the restoration period will be necessary.	Failing to evaluate the overall condition of a window in order to determine the appropriate method of conservation.
Repairing window frames and sashes from the restoration period by patching, splicing, consolidating or otherwise reinforcing. Such repair may also include limited replacement — preferably in kind — of extensively deteriorated or missing parts such as architraves, hoodmoulds, sash, sills and interior or exterior shutters and blinds when there are surviving prototypes. The new work should be unobtrusively dated to guide future research and treatment.	Replacing an entire window from the restoration period when repair of materials and limited replacement of deteriorated or missing parts are appropriate. Failing to reuse serviceable window hardware such as brass sash lifts and sash locks. Using a substitute material for the replacement part that neither conveys the appearance of the surviving parts of the window, nor is physically or chemically compatible.

Recommended	Not Recommended
Replacing in kind a window feature from the restoration period that is too deteriorated to repair using the same sash and pane configuration and other design details. The new work should be unobtrusively dated to guide future research and treatment.	Removing a window feature from the restoration period that is irreparable and not replacing it; or failing to document the new work.

The following RESTORATION work has been highlighted to indicate that it involves the removal or alteration of existing windows and window features from periods other than the accepted restoration period; and the replacement of missing window features from the restoration period with all new materials. This work should only be considered after the *Preservation* and *Restoration* concerns listed above have been addressed.

Recommended	Not Recommended
Removing Existing Features from Other Periods	
Removing or altering windows or window features, such as later single-pane glazing or inappropriate shutters, dating from other periods.	Failing to remove a window feature from another period, thus confusing the depiction of the building's significance.
Documenting materials and features dating from other periods prior to their alteration or removal. If possible, selected examples of these features or materials should be stored to facilitate future research.	Failing to document window features from other periods (which results in the loss of a valuable portion of the historic record) prior to removing them from the building.
Recreating Missing Features from the Restoration Period	
Recreating a missing window or window feature that existed during the restoration period based on physical or documentary evidence; for example, duplicating a hoodmould or shutter.	Constructing a window feature that was part of the original design of the building, but was never actually built; or constructing a feature that was thought to have existed during the restoration period, but for which there is insufficient documentation.

Entrances and Porches

Recommended	Not Recommended
Preserving entrances and porches — and their functional and decorative features such as doors, fanlights, sidelights, pilasters, entablatures, columns, balustrades and stairs — which are important in defining the overall heritage value of the building.	Removing or radically changing entrances and porches that are important in defining the overall heritage value of the building so that, as a result, the heritage value is diminished.
Documenting the form, materials and condition of entrances and porches prior to beginning project work.	Undertaking project work that will have an impact on character-defining entrances and porches without first documenting their existing character and condition.
Protecting and maintaining the masonry, wood and architectural metals that comprise entrances and porches through appropriate surface treatments such as cleaning, rust removal, limited paint removal and reapplication of protective coating systems in kind.	Failing to provide adequate protection of materials on a cyclical basis, which results in deterioration of entrances and porches.
Retaining sound entrance and porch elements or deteriorated entrance and porch elements that can be repaired (see also section 4: Accessibility Considerations).	Removing sound or repairable material such as wood, cast iron, terra cotta tile and brick from entrances and porches. Removing an entrance or porch because the building has been reoriented to accommodate a new use. Creating new entrances on a character-defining elevation. Altering utilitarian or service entrances so they appear to be formal entrances by adding panelled doors, fanlights and sidelights.
Repairing and stabilizing deteriorated entrance and porch elements by structural reinforcement, weather protection; or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.	Removing deteriorated entrance and porch elements that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.
Replacing in kind extensively deteriorated or missing parts of entrance and porch elements where there are surviving prototypes. The new work should match the existing elements in form and detailing.	Replacing an entire entrance or porch element when limited replacement of deteriorated and missing components is appropriate. Using a replacement material that does not match the historic entrance or porch element.
Evaluating the overall condition of materials to determine whether more than protection, maintenance and limited repair or replacement in kind are required; i.e., if more extensive repairs to entrance and porch elements will be necessary.	Failing to undertake adequate measures to protect entrances and porches.

Additional Guidelines for Rehabilitation Projects

Recommended	Not Recommended
Rehabilitating an entrance or a porch, if an evaluation of its overall condition determines that more than preservation is required.	Failing to evaluate the overall condition of an entrance or a porch in order to determine the appropriate method of conservation.
Repairing an entrance or porch by reinforcing the character-defining materials. Repair will also generally include the limited replacement in kind — or with a compatible substitute material — of those extensively deteriorated or missing parts of repeated elements where there are surviving prototypes such as balustrades, cornices, entablatures, columns, sidelights and stairs, or where there is clear evidence such as old paint traces on adjacent surfaces.	Replacing an entire entrance or porch when the repair of materials and limited replacement of parts are feasible. Using a substitute material for replacement parts that neither conveys the appearance of the surviving parts of the entrance and porch, nor is physically or chemically compatible.
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 element. If using the same kind of material is not technically or economically feasible, then compatible substitute materials may be considered.	Removing an entrance or porch that is irreparable and not replacing it; or replacing it with a new entrance or porch that does not convey the same appearance.

Porches, such as this portico on the old Bonsecours Market in Montreal (built 1844-47) with its striking Greek Doric cast iron columns, can play a very significant role in defining the character of a building. Maximizing the retention of character-defining elements, including the portico, was the primary conservation objective when the building was Rehabilitated for use as a Municipal office.

The following REHABILITATION work has been highlighted to indicate that it involves a particularly complex technical or design aspect and should only be considered after the *Preservation* and *Rehabilitation* concerns listed above have been addressed.

Recommended	Not Recommended
Designing for the Replacement of Missing Historic Features	
Designing and constructing a new entrance or porch when the historic entrance or porch is completely missing. It may be a new design that is compatible with the style, era and character of the historic place; or a replica based on physical and documentary evidence.	Introducing a new entrance or porch that is incompatible in size, scale, material, style or colour. Creating a false historical appearance because the replaced entrance or porch is based on insufficient physical and documentary evidence.
Alterations/Additions for the New Use	
Designing enclosures or screening for character-defining porches on secondary elevations when required by the new use in a manner that preserves the character of the building. This can include using large sheets of glass and recessing the enclosure wall behind existing scrollwork, posts or balustrades.	Enclosing porches in a manner that detracts from or results in a loss of character by using materials such as wood, stucco or masonry.
Designing and installing additional entrances or porches on non-character-defining elevations when required for the new use in a manner that preserves the character of the building, i.e., limiting such alteration to non-character-defining elevations.	Installing secondary entrances and porches on non-character-defining elevations that are incompatible in size or scale with the historic building or obscure, damage or destroy character-defining elements.

In *Rehabilitation*, deteriorated features should be repaired, whenever possible, and replaced when the severity of the damage makes it necessary. Here, the character-defining stone steps of the entrance to a house in Saint John, New Brunswick were cracked. Appropriate work on the entrance included repairs to the stone steps and walls, and the installation of a metal handrail to meet building code requirements.

Additional Guidelines for Restoration Projects

Recommended	Not Recommended
RESTORING an entrance or a porch, if an evaluation of its overall condition determines that more than preservation is required; i.e., if repairs to features from the restoration period will be necessary.	Failing to evaluate the overall condition of an entrance or a porch in order to determine the appropriate method of conservation.
Repairing entrances and porches from the restoration period by reinforcing the historic materials. Repairs will also generally include the limited replacement — preferably in kind — of those extensively deteriorated or missing parts of repeated features such as balustrades, cornices, entablatures, columns, sidelights and stairs where there are surviving prototypes, or where there is clear evidence such as old paint traces on adjacent surfaces. The new work should be unobtrusively dated to guide future research and treatment.	Replacing an entire entrance or porch feature from the restoration period when the repair of materials and limited replacement of parts are appropriate. Using a substitute material for the replacement part that neither conveys the appearance of the surviving parts of the entrance and porch, nor is physically or chemically compatible.
Replacing in kind an entire entrance or porch from the restoration period 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. The new work should be unobtrusively dated to guide future research and treatment.	Removing an entrance or porch feature from the restoration period that is irreparable and not replacing it; or failing to document the new work.

In *Restoration*, reinstating the historic paint colours from the restoration period should be based on physical or documentary evidence, such as on-site paint analysis and colour photographs.

The following Restoration work has been highlighted to indicate that it involves the removal or alteration of existing entrance and porch features from periods other than the accepted restoration period; and the replacement of missing entrance and porch features from the restoration period with all new materials. This work should only be considered after the *Preservation* and *Restoration* concerns listed above have been addressed.

Recommended	Not Recommended
Removing Existing Features from Other Periods	
Removing or altering entrances and porches and their features, such as a later porch railing or balustrade, dating from other periods.	Failing to remove an entrance or porch feature from another period, thus confusing the depiction of the building's significance.
Documenting materials and features dating from other periods prior to their alteration or removal. If possible, selected examples of these features or materials should be stored to facilitate future research.	Failing to document entrance or porch features from other periods (which results in the loss of a valuable portion of the historic record) prior to removing them from the building.
Recreating Missing Features from the Restoration Period	
Recreating a missing entrance or porch or its features that existed during the restoration period based on physical or documentary evidence; for example, duplicating a fanlight or porch column.	Constructing an entrance or porch feature that was part of the original design of the building but was never actually built; or constructing a feature that was thought to have existed during the restoration period, but for which there is insufficient documentation.

Storefronts

Recommended	Not Recommended
Preserving storefronts — and their functional and decorative features such as display windows, doors, transoms, cornices, corner posts, awnings and signs — that are important in defining the overall heritage value of the building.	Removing or radically changing storefronts — and their features — that are important in defining the overall heritage value of the building.
Documenting the form, materials and condition of storefronts prior to beginning project work. The careful removal of non-character-defining cladding, false mansard roofs and other cover-ups may reveal an earlier storefront beneath.	Undertaking project work that will have an impact on character-defining storefronts and storefront elements without first documenting their existing character and condition.
Stabilizing and protecting storefronts against arson and vandalism before work begins by boarding up windows and installing alarm systems that are keyed into local protection agencies.	Permitting entry into the building through unsecured or broken windows and doors so that interior elements and finishes are damaged by exposure to weather or vandalism.
Protecting and maintaining wood, masonry and architectural metals that comprise storefronts through appropriate treatments such as cleaning, rust removal, limited paint removal and re-application of protective coating systems in kind.	Failing to provide adequate protection of materials on a cyclical basis, which results in the deterioration of storefronts.

The character-defining form and features of 1880s storefronts in Vancouver, including their large plate-glass display windows with multi-pane transom windows above and recessed central doorways, have been retained through *Preservation.*

Recommended	Not Recommended
Retaining sound storefronts and storefront elements, or deteriorated storefronts and storefront elements that can be repaired.	Stripping storefronts of character-defining material such as wood, brick, metal, structural glass (e.g., Carrara Glass or Vitrolite), terra cotta and cast iron; or covering over character-defining material.
	Changing the storefront so that it appears residential rather than commercial in character.
	Changing the proportions of display windows.
	Changing the location of a storefront's main entrance.
	Removing material from the storefront to create a recessed arcade.
	Introducing coach lanterns, false mansard roofs, wood shakes, non-operable shutters and small-paned windows if they cannot be documented historically.
Retaining character-defining signs and awnings that are sound or could be repaired.	Replacing sound character-defining signs and awnings, or signs and awnings that could be repaired.
Repairing and stabilizing deteriorated storefront elements by structural reinforcement, weather protection, or correcting unsafe conditions, as required, until any additional work is undertaken. Repairs should be physically and visually compatible.	Removing deteriorated storefront elements that could be stabilized, repaired and conserved; or using untested consolidants and untrained personnel, thus causing further damage to fragile elements.
Replacing in kind extensively deteriorated or missing parts of storefronts where there are surviving prototypes. The new work should match the old in form and detailing.	Replacing an entire storefront element such as a cornice when limited replacement of deteriorated and missing components is appropriate.
	Using replacement material that does not match the historic storefront element.
Evaluating the overall condition of storefronts to determine whether more than protection, maintenance and limited repair or replacement in kind is required; i.e., if more extensive repairs to storefronts will be necessary.	Failing to undertake adequate measures to protect storefronts.

Creating a false sense of history , such as adding features based on 18th century American architecture to a 19th century Canadian building, is not recommended.

Additional Guidelines for Rehabilitation Projects

Recommended	Not Recommended
REHABILITATING a storefront, if an evaluation of its overall condition determines that more than preservation is required.	Failing to evaluate the overall condition of a storefront in order to determine the appropriate method of conservation.
Repairing storefronts by reinforcing the character-defining 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, cornices, pilasters or signs.	Replacing an entire storefront when repair of materials and limited replacement of its parts are feasible. Using a substitute material for replacement parts, which neither conveys the same appearance as the surviving parts of the storefront, nor is physically or chemically compatible.
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 material is not technically or economically feasible, then compatible substitute materials may be considered.	Removing a storefront that is irreparable and not replacing it; or replacing it with a new storefront that does not convey the same appearance.

The *Rehabilitation* of the exterior of this building in Nelson, British Columbia involved carefully removing panels that covered the storefront and stripping the paint from the second storey to reveal the underlying brick and stone façade, and installing traditional-style fabric awnings. Many older commercial buildings were reclad in an attempt to give them a modern face. Beneath these cover-ups may be a well-designed and well-built façade. Removing such cover-ups, if they are not character-defining elements, is recommended.

The following REHABILITATION work has been highlighted to indicate that it involves a particularly complex technical or design aspect and should only be considered after the *Preservation* and *Rehabilitation* concerns listed above have been addressed.

Recommended	Not Recommended
Designing for the Replacement of Missing Historic Features	
Designing and constructing a new storefront when the historic storefront is completely missing. It may be a new design that is compatible with the style, era and character of the historic place; or a replica based on physical and documentary evidence.	Introducing a new design that is incompatible in size, scale, material, style and colour. Creating a false historical appearance because the replaced storefront is based on insufficient physical and documentary evidence. Using inappropriately scaled signs and logos or other types of signs that are incompatible in size, scale, material, style, colour or illumination; or obscure, damage, or destroy character-defining elements of the building, or undermine its heritage value. Using awnings, canopies or marquees that are incompatible in size, scale, material, style, colour or illumination; or obscure, damage, or destroy character-defining elements of the building, or undermine its heritage value.

A new storefront was constructed to replace the extensively altered storefront of this bank in Perth, Ontario when the building was *Rehabilitated*. The new storefront could have been a replica of the historic storefront, if there had been sufficient evidence. An acceptable alternative in *Rehabilitation*, as shown in the photo to the right, is a new design that is compatible in form, material and detailing with the style, era and character of the building.

New signs, as illustrated at right, should be compatible with the building in terms of size, scale, material, style and colour. In addition, they should not obscure, damage, or destroy character-defining elements of the building. In some cases, as in the Rialto Theatre in Montreal at left, signs added later become character-defining elements in their own right.

Additional Guidelines for Restoration Projects

Recommended	Not Recommended
Restoring a storefront, if an evaluation of its overall condition determines that more than preservation is required; i.e., if repairs to storefront features from the restoration period will be necessary.	Failing to evaluate the overall condition of a storefront in order to determine the appropriate method of conservation.
Repairing storefronts from the restoration period by reinforcing the historic materials. Repairs will also generally include the limited replacement — preferably in kind — of those extensively deteriorated or missing parts of storefronts such as transoms, cornices, pilasters or signs where there are surviving prototypes. The new work should be unobtrusively dated to guide future research and treatment.	Replacing an entire storefront feature from the restoration period when repair of materials and limited replacement of its parts are appropriate. Using a substitute material for the replacement part, which neither conveys the same appearance as the surviving parts of the storefront, nor is physically or chemically compatible.
Replacing in kind a storefront from the restoration period that is too deteriorated to repair — if the overall form and detailing are still evident — using the physical evidence as a model. The new work should be unobtrusively dated to guide future research and treatment.	Removing a storefront feature from the restoration period that is irreparable and not replacing it; or failing to document the new work.

The following RESTORATION work has been highlighted to indicate that it involves the removal or alteration of existing storefront features from periods other than the accepted restoration period; and the replacement of missing storefront features from the restoration period with all new materials. This work should only be considered after the *Preservation* and *Restoration* concerns listed above have been addressed.

Recommended	Not Recommended
Removing Existing Features from Other Periods	
Removing or altering storefronts and their features, such as inappropriate cladding or signage, dating from other periods.	Failing to remove a storefront feature from another period, thus confusing the depiction of the building's significance.
Documenting materials and features dating from other periods prior to their alteration or removal. If possible, selected examples of these features or materials should be stored to facilitate future research.	Failing to document storefront features from other periods (which results in the loss of a valuable portion of the historic record) prior to removing them from the building.
Recreating Missing Features from the Restoration Period	
Recreating a missing storefront or storefront feature that existed during the restoration period based on physical or documentary evidence; for example, duplicating a display window or transom.	Constructing a storefront feature that was part of the original design of the building but was never actually built; or constructing a feature that was thought to have existed during the restoration period, but for which there is insufficient documentation. Installing signs, awnings, canopies or marquees for which there is insufficient physical or documentary evidence; or that are inappropriate to the building and the restoration period.

Restoration of a storefront may involve removing inappropriate cladding dating from a later period. Recreating a missing feature, such as the awnings on this storefront in New Brunswick, should be based on physical or documentary evidence.