

# 2

## Chapter 2

# Guidelines for Preserving & Altering Historic Buildings

|   |           |
|---|-----------|
| <b>2.1 Introduction</b>   | <b>17</b> |
| <b>2.2 Treatment of Historic Materials</b>                        | <b>20</b> |
| Guidelines for the Treatment of Historic Materials                | 20        |
| Guidelines for Masonry, Wood, & Metal                             | 21        |
| <b>2.3 Treatment of Architectural Features</b>                    | <b>23</b> |
| Guidelines for Architectural Features                             | 23        |
| <b>2.4 Treatment of Windows &amp; Doors</b>                       | <b>24</b> |
| Guidelines for Window & Door Openings                             | 24        |
| Guidelines for Character Windows & Front Facade Doors             | 27        |
| Guidelines for Common Windows & Doors                             | 29        |
| Guidelines for Egress Windows                                     | 30        |
| <b>2.5 Treatment of Historic Roofs</b>                            | <b>32</b> |
| Guidelines for Roofs  | 32        |
| Guidelines for Rooftop Alterations                                | 34        |
| <b>2.6 Treatment of Historic Foundations</b>                      | <b>35</b> |
| Guidelines for Historic Foundations                               | 35        |
| <b>2.7 Treatment of Historic Additions</b>                        | <b>36</b> |
| Guidelines for Historic Additions                                 | 36        |
| <b>2.8 Environmental Sustainability &amp; Historic Properties</b> | <b>37</b> |
| Guidelines for Environmental Sustainability                       | 37        |
| Guidelines for Solar Panels                                       | 38        |
| <b>2.9 Treatment of Residential Buildings</b>                     | <b>41</b> |
| Guidelines for Porches, & Decks                                   | 41        |
| Guidelines for Garages & Secondary Structures                     | 44        |
| <b>2.10 Treatment of Commercial &amp; Mixed-Use Buildings</b>     | <b>46</b> |
| Guidelines for Historic Commercial Facades                        | 46        |
| Guidelines for Historic Warehouses                                | 47        |
| Guidelines for Patios & Loading Docks                             | 48        |
| Guidelines for Awnings & Canopies                                 | 49        |
| <b>2.11 Treatment of Civic &amp; Institutional Buildings</b>      | <b>50</b> |
| Guidelines for Civic & Institutional Buildings                    | 50        |
| <b>2.12 Treatment of Vacant Buildings</b>                         | <b>51</b> |
| Guidelines for Vacant Buildings                                   | 51        |
| <b>2.13 Demolition of Historic Buildings</b>                      | <b>52</b> |
| Guidelines for Demolition   | 52        |
| <b>2.14 Adaptive Reuse of Historic Buildings</b>                  | <b>53</b> |
| Guidelines for Adaptive Reuse                                     | 53        |
| <b>2.15 Mechanical, Utility &amp; Security Equipment</b>          | <b>54</b> |
| Guidelines For Mechanical & Utility Equipment                     | 54        |
| Guidelines for Security Equipment                                 | 55        |
| <b>2.16 Accessibility for Historic Buildings</b>                  | <b>56</b> |
| Guidelines for Accessibility                                      | 56        |

## 2.1 Introduction

This chapter provides guidelines for the treatment of historic structures, including individually designated Denver landmarks and contributing structures in historic districts. The following core preservation values provide the basis for the guidelines:

- **Protection.** Keeping historic individual landmarks and districts in use and protecting them from deterioration
- **Rehabilitation.** Updating historic structures to accommodate modern living and repair deteriorated features
- **Authenticity.** Retaining historic character, features, and materials
- **Sustainability.** Reuse of historic buildings and materials
- **Continuity.** Keeping significant places that convey the community's history over time
- **Vitality.** Activating historic buildings, places, and neighborhoods
- **Community Identity.** Providing Denver with a unique sense of place
- **Stewardship.** Caring for distinguished historic structures and passing them on to future generations

Preservation practice is based on making the least invasive repairs, modifications and other changes necessary for preservation and reuse of a historic structure and its character-defining features. Introductory diagrams and concepts on the following pages summarize key preservation topics, including:

- Typical Character-defining features (page 18)
- Preferred treatment options for character-defining features (page 19)

These sections are followed by specific design guidelines for the treatment of historic structures.

Note that design guidelines throughout this document that refer to “commercial” buildings will also be applied to civic and institutional buildings. Design guidelines for site design, landscaping, and lighting are provided in Chapter 5.

### Illustrations Used in this Document

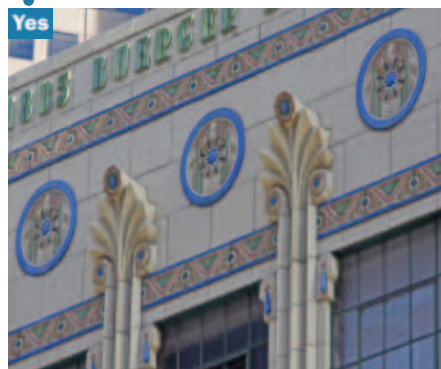
The design guidelines include many photographs and diagrams to illustrate acceptable or unacceptable approaches. The illustrations are provided as examples and are not intended to indicate the only options.

If there appears to be a conflict between the text of the design guidelines and a related illustration, the text shall prevail.



**Top Right:** View of the William McPhee house at 637 E 8th Ave, DPL Digital Collections, call no. MCC-3433 **Bottom Right:** c.1900 view of the William Church house at 10th & Corona, DPL Digital Collections, call no. C-44.

A **YES** indicates an approach that is generally appropriate.



A **NO** indicates an approach that is generally inappropriate.



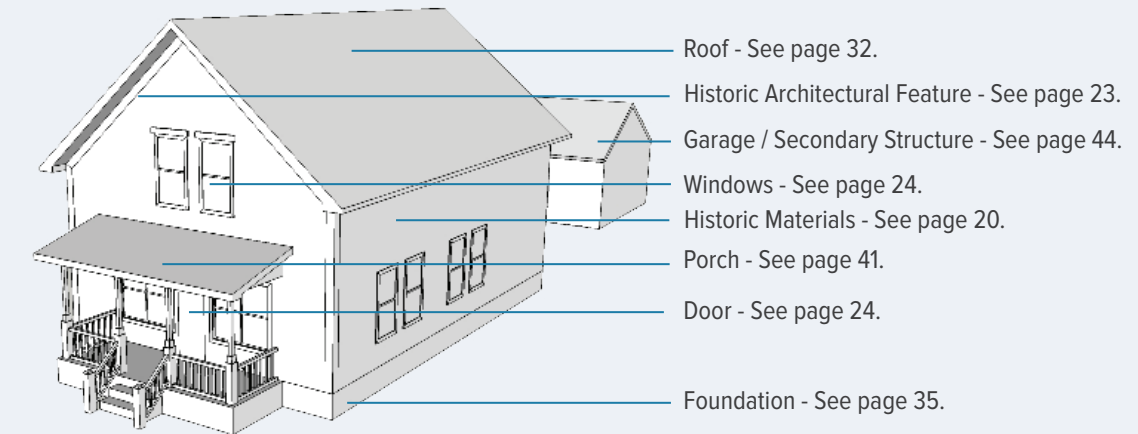
A **MAYBE** indicates an approach that may be acceptable in some contexts or situations.



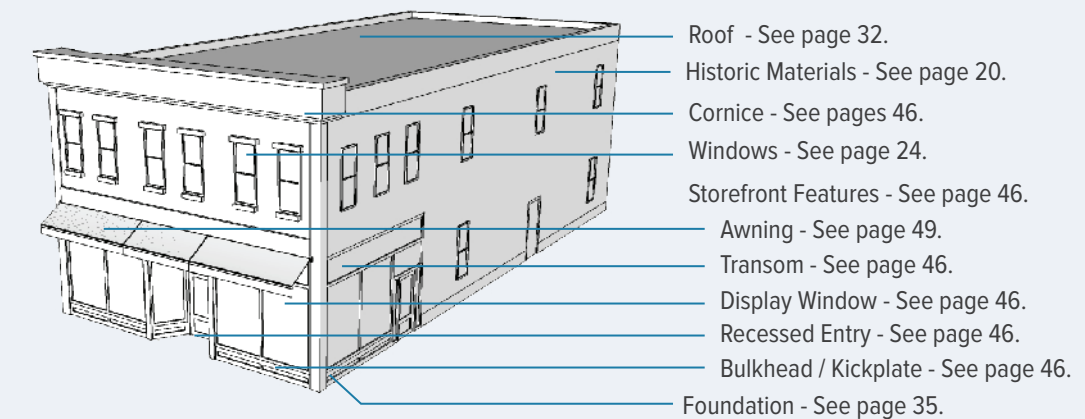
## Typical Character-Defining Features

The typical character-defining features of a historic residential, commercial and civic/institutional building are illustrated below. Where applicable, page number references are provided to guidelines that address the particular feature (note that guidelines on other pages may also apply).

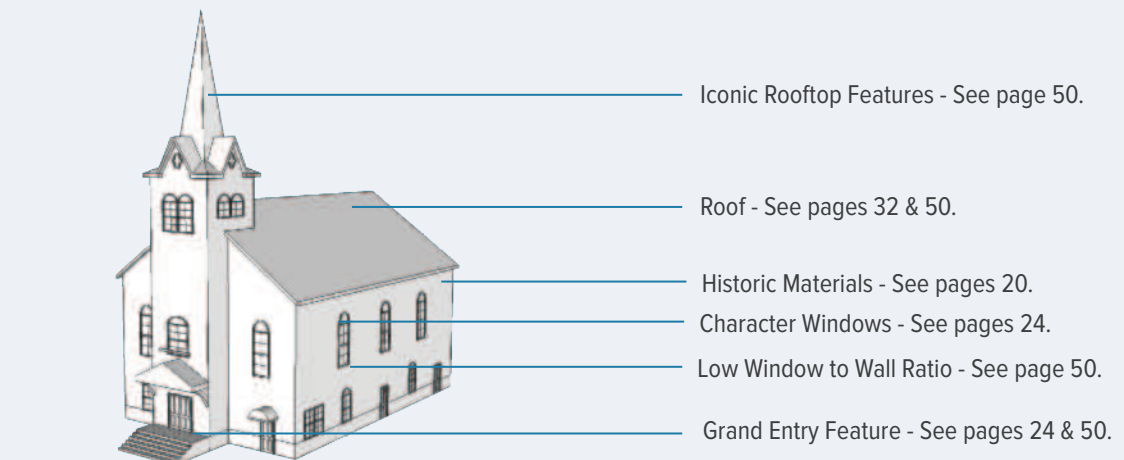
### Historic House or Small-Scale Residential Building



### Historic Commercial Building



### Historic Civic or Institutional Building



## Preferred Sequence of Treatment Options for Character-defining Features

The design guidelines in this chapter follow the preferred sequence of improvements in The Secretary of the Interior's Standards for the Treatment of Historic Properties. When selecting a treatment for the character-defining features of a historic structure, the option that requires the least intervention is always preferred to best maintain integrity (refer to page 6 for more information). The treatment options below are listed in order of preference, followed by information on treatments that are generally not appropriate for historic structures.

Note: Greater flexibility may be available for features in a location that is not visible as described on page 9.

### 1. Preserve

If a historic feature is intact and in good condition, preserve it with regular maintenance to sustain the integrity of the structure.

### 2. Repair

If a historic feature is deteriorated or damaged, repair it to its original condition.

### 3. Replace

If it is not feasible to repair a historic feature, then replace it in kind (i.e. materials, detail, and finish). Replace only that portion which is beyond repair.

### 4. Reconstruct

If all or part of a historic feature is missing, reconstruct it from appropriate evidence, such as historical photographs or features on similar adjacent properties.

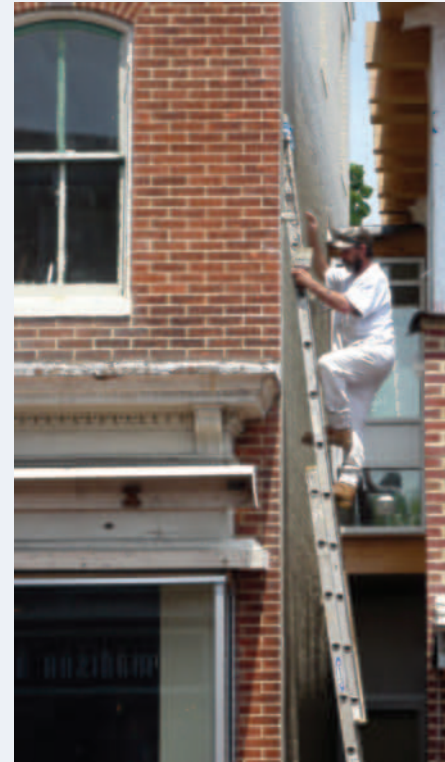
### 5. Add Compatible Features

If a new feature (one that did not exist previously) or an addition is necessary, its design should minimize the impact on a historic structure. It is also important to distinguish new features on a historic structure from original historic elements, and avoid adding features to primary building facades.

### Treatments That Are Generally Not Appropriate

The following treatment approaches are generally inappropriate for historic structures:

- **Exterior Remodeling.** The process of changing the historic design of a building. The appearance is altered by removing original details or adding new features that are out of character with the original, or adding conjectural historical details.
- **Deconstruction.** The process of dismantling a building such that the individual material components and architectural details remain intact for reuse or relocation. Although it is more environmentally friendly than demolition, it is usually inappropriate for a historic property.
- **Demolition.** As defined in the Landmark Preservation Ordinance, is to be avoided.



**Top Right:** Repair work underway to damaged and deteriorated features. **Middle Right:** A damaged limestone sill. **Bottom Right:** The repaired limestone.

## 2.2 Treatment of Historic Materials

### Intent Statements

- 2A To convey the character of Denver's landmarks and historic districts by preserving, maintaining and uncovering historic building materials**
- 2B To keep the integrity of historic buildings by retaining historic building materials**
- 2C To reduce the environmental impacts of new material production by only replacing those materials that are deteriorated beyond repair**

### Guidelines for the Treatment of Historic Materials

#### 2.2.1 Preserve original building materials.

- a. Protect original building materials from deterioration.
- b. Do not remove original materials in good condition or which can be repaired.

#### 2.2.2 Use gentle methods when cleaning and refinishing historic materials.

- a. Use low pressure water wash if cleaning is necessary.
- b. Perform test patch before cleaning and refinishing to ensure that the procedure will not have an unanticipated negative effect on the material.
- c. Avoid using harsh cleaning methods, such as sandblasting, which can damage historic materials and cause future deterioration.

#### 2.2.3 Repair original building materials, when needed.

- a. Repair deteriorated building materials by patching, piecing-in, consolidating or otherwise reinforcing the material.
- b. If disassembly of an original element is necessary for its repair or restoration, replace the disassembled components in their original configuration.

#### 2.2.4 Replace original building materials in kind, if repair is not feasible.

- a. Replace only those materials necessary to facilitate a necessary repair.
- b. Use materials, historic sizes, and original installation method to replace damaged building materials on a primary facade whenever possible.
- c. If use of original materials is not feasible, use only replacement materials that have proven durability and are similar in scale, finish and character to the original material.
- d. Use of alternative materials may sometimes be acceptable for replacement of damaged building materials for rear facades.
- e. Avoid covering historic materials with new ones or using veneers.

#### 2.2.5 Remove later covering materials that have not achieved historical significance.

- a. Repair original materials after they are uncovered.
- b. Test the removal of covering materials such as stucco or permastone to assure that original underlying materials will not be damaged.

### Preservation Briefs

The National Park Service Preservation Briefs provide information on preserving, rehabilitating, and restoring historic structures. They are especially useful for Historic Preservation Tax Credit projects.

### Historic Building Research and Historic Photographs

The Special Collection and Archives of the Denver Public Library offers an excellent Denver Building History Tutorial and rich repository of historic photographs, making it an ideal starting point for researching a structure.



**Right:** 1929 construction photo of the Denver City and County Building, DPL Digital Collections, call no. X-27518

## Guidelines for Masonry, Wood, & Metal

### 2.2.6 Maintain original protective layers on masonry.

- Maintain the natural water-protective layer, or fire skin, to protect masonry from the elements.
- Consider removing paint if the procedure will not damage the original finish.

### 2.2.7 Repoint deteriorated masonry mortar joints.

- Duplicate original mortar in strength, composition, color, and texture.
- Duplicate mortar joints in width and profile.
- Avoid using caulk, silicone sealant, or mortar with a high Portland cement content, which will be substantially harder than the original.

### 2.2.8 Protect wood features from deterioration.

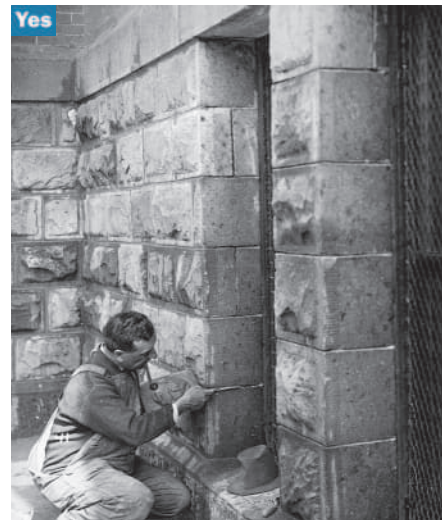
- Maintain paint on wood surfaces. Original wood features have a long lifespan when properly maintained.
- Provide proper drainage and ventilation to minimize decay.
- Maintain protective coatings to retard deterioration and ultraviolet damage.
- Use wood consolidants to preserve as many original materials as possible.
- Repair wood siding and features, replacing elements beyond repair in-kind.
- Avoid covering wood with stucco or similar finishes.

### 2.2.9 Preserve and repair significant architectural metal features.

- Preserve historic cast iron, steel, copper and other original materials used in columns, roofs, fences, and decorative features.
- Provide proper drainage on metal surfaces to minimize water retention.
- Maintain protective coatings, such as paint, on exposed metals.
- Repair metal features by patching, splicing, or otherwise reinforcing the original metal whenever possible.

### Seek Professional Assistance For Severe Deterioration

Buildings with evidence of more severe deterioration may benefit from assistance from professionals experienced in historic preservation. For example, evidence of structural issues such as cracked masonry may require a structural engineer or eroded stone may require a masonry specialist.



**Left:** Preserve significant architectural features such as columns, cornices, spandrel panels and windows. **Top Right:** Mason repointing mortar at the Gilpin School at 29th and Stout, DPL Digital Collections, call no. X-23972 **Bottom Right:** Maintain original protective layers on masonry and do not paint unpainted masonry. Re-point deteriorated masonry

## Masonry in Denver

Denver is notable for its high prevalence of historic masonry building materials, including brick, stone, and terra cotta. Although many of Denver's earliest buildings were built from wood, they were mostly rebuilt in masonry after a fire started at 15th and Blake in 1863.<sup>1</sup> The difficulty of obtaining lumber for wood construction, new fire codes, and cold winters, made masonry an ideal material for the City's construction. In addition to building facades, architects and craftsman used masonry to construct a variety of building details, including sandstone parapets, window sills and architectural details.<sup>2</sup>

It is important to preserve and repair brick, stone, terra cotta, stucco, concrete and other masonry materials used in building walls, site walls, steps, and walkways. Additional information regarding the proper treatment of historic masonry materials in Denver is provided below.

### Historic Building Materials



#### Brick

Rich local clay deposits and fireproof construction requirements favored brick as the most common historic masonry material in Denver. It was used to build most of the City's historic houses, as well as barns, garages, streets and sewers. Brickyards offered a variety of products, and the prevalence of brick in Denver ensured the availability of expert bricklayers and craftsmen.<sup>2</sup>



#### Stone

Five main rocks were quarried locally - granite, sandstone, marble, travertine and rhyolite tuff. These rock types were used alone or in combination in commercial buildings and mansions.<sup>3</sup>



#### Terra Cotta

Terra cotta became popular building material after 1900 when technological improvements to production allowed a greater range of colors and glazes. It was primarily used for commercial buildings and for some foundations. The Denver Terra Cotta Company was one of the largest producers in the country.<sup>4</sup>

### For More Information

The National Park Service provides several preservation briefs related to historic masonry materials, including:

- [Preservation Brief #1: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings](#)
- [Preservation Brief #2: Re-pointing Mortar Joints in Historic Masonry Buildings](#)
- [Preservation Brief #7: The Preservation of Historic Architectural Glazed Terra-Cotta](#)
- [Preservation Brief #38: Removing Graffiti from Historic Masonry](#)

1. Stephen J. Leonary and Thomas J. Noel, Denver: From Mining Camp to Metropolis (Boulder: University Press of Colorado, 1991)

2. Thomas J. Noel and Barbara S. Norgren, Denver: The City Beautiful (Denver: Historic Denver, Inc., 1993)

3. Jack A. Murphy, Geology Tour of Denver's Buildings and Monuments (Denver: Historic Denver Guides, 1995)

4. Noel and Norgren, The City Beautiful.

## 2.3 Treatment of Architectural Features

### Intent Statements

- 2D** To maintain historic architectural details that convey the character and significance of historic properties
- 2E** To limit damage to historic features by using the method of preservation that requires the least intervention
- 2F** To respect historic design character and style of a historic building

### Guidelines for Architectural Features

#### 2.3.1 Preserve significant stylistic and architectural features.

- a. Retain and treat exterior stylistic features and examples of skilled craftwork with sensitivity.
- b. Employ preventive maintenance measures such as rust removal, caulking, and repainting.
- c. Do not add architectural details that were not part of the original structure. For example, decorative millwork should not be added to a structure if it was not an original feature as doing so would convey a false sense of history.
- d. Do not add/remove features that would change the architectural style of the building.

#### 2.3.2 Carefully clean historic architectural features to maintain the original finish.

- a. Use the gentlest cleaning method possible that will achieve the desired result.
- b. Employ treatments such as rust removal, caulking, limited paint removal and reapplication of paint or stain where appropriate.

#### 2.3.3 Replace architectural features that cannot be repaired.

- a. Replace only those portions that are beyond repair.
- b. Use a design that is substantiated by physical or pictorial evidence to avoid creating a misrepresentation of the structure's history. The replacement must match the original in material, composition, design, color, texture, and other visual qualities.
- c. Use the same kind of material as the original detail when feasible.
- d. An alternative material may be acceptable if the size, shape, texture, and finish conveys the visual appearance of the original.

#### 2.3.4 Develop a new design that is a simplified interpretation of a similar feature when the original is missing and cannot be documented.

- a. The new element should relate to comparable features in general size, shape, scale and finish.
- b. Use materials similar to those employed historically, where feasible.



**Left:** Retain and treat exterior stylistic features and examples of skilled craftwork, such as these terra cotta columns and art deco medallions with sensitivity. **Middle:** Preserve significant stylistic and architectural features, such as bay windows and masonry detailing. **Right:** Preserve significant stylistic and architectural features, such as decorative ornament, brackets, trim and moldings.

## 2.4 Treatment of Windows & Doors

### Intent Statements

- 2G** To maintain the pattern and location of historic window and door openings on facades visible from public vantage point
- 2H** To preserve character windows and historic front facade doors
- 2I** To provide flexibility in the replacement of common windows and doors while maintaining compatibility with the historic context
- 2J** To replicate the appearance and materials of historic character windows and historic front facade doors when replacement is necessary

### Guidelines for Window & Door Openings

#### 2.4.1 Preserve all historic window and door opening patterns and proportions on elevations that are visible from public vantage points.

- a. Preserve the placement, number, size, and shape of historic window and door openings.
- b. Do not reduce the size of historic window or doors openings to accommodate smaller windows or doors.
- c. Do not increase the size of historic window or door openings to accommodate larger windows or doors. Altering the size of a historic window or door opening may be considered to accommodate egress required for life safety. See "Guidelines for Egress Windows" for more information.
- d. Do not infill historic windows or doors or add new window or door openings.
- e. Return altered window or door openings to their historic configuration whenever possible.

#### 2.4.2 Alterations to common historic window or door opening patterns and proportions may be considered on elevations that are not visible from public vantage points.

- a. Windows and door openings may be increased or decreased in width when preserving the placement, number, and size of the majority of historic window and door openings on a given facade.
- b. Window sill heights may be lowered or raised when preserving the placement, number and size of the majority of historic window and door openings on a given facade.
- c. Maintain solid-to-void ratios typically found on the historic building.
- d. Limit the variety of window shapes, operations, and appearances to ensure compatibility with the architectural character of the historic building.
- e. Maintain the location of historic headers.
- f. Inset new windows or doors into the wall plane at the same depth as the existing on the structure. Inset is measured from the outside face of the window glass or door to the outside face of the adjacent wall.
- g. For new window units or new doors, only use divided-light windows or doors if there are existing divided-light windows and doors on the building or there is evidence of historic divided-light windows and doors. Evidence may include:
  - » historic photographs of the building
  - » historic windows within the surrounding historic context
- h. Divided-light windows or doors must be true divided lights or simulated divided lights with a spacer bar (interstitial spacer, preferably color matched to the window frame and non-reflective to reduce visibility between the double-glazed panes of glass). Windows with applied mullions (attached to the glass, snap-in, add-on grids, or grids only between the glass) are not allowed.
- i. When infilling historic window and door openings, install the new window/door or new infill at the depth of the historic window/door. For example:
  - » If an existing window or door is recessed in the wall plane, maintain the opening outline and inset infill materials or new window/door to match the existing recess.
  - » If an existing window or door is flush with the wall plane, install the new window/door or the infill flush with the surrounding wall.

## Guidelines for Window and Door Openings (Continued)

- 2.4.3** When adding new windows or doors on elevations that are not visible from public vantage points, create openings that match historic openings on the building or on buildings with a similar architectural character in the surrounding historic context.
- Maintain solid-to-void ratios typically found on the historic building.
  - Match the placement and size of historic windows and doors found on the historic building or on buildings with a similar architectural character in the surrounding historic context. A limited number of larger new openings may be appropriate to the extent that they do not impact the form of the structure and do not involve removal of significant architectural details.
  - Limit the variety of window shapes, operations, and appearances to ensure compatibility with the architectural character of the historic building.
  - Align headers with existing headers.
- 2.4.4** Windows and doors installed in new openings on elevations that are not visible from public vantage points must be made of materials that are compatible with historic window and door materials.
- For historic structures with wood windows, use wood, aluminum-clad wood, or composite fiberglass window materials. For historic structures with steel or aluminum windows, use steel, aluminum, or composite fiberglass window materials.
  - New windows may be double or triple glazed.
  - For new doors, use wood, metal-clad wood, or fiberglass. Do not use faux wood grain finishes.
  - A salvaged door may be considered if it is similar in design to historic doors found on the historic structure or in the surrounding historic context.
  - Inset new windows or doors into the wall plane at the same depth as existing windows or doors on the structure. Inset is measured from the outside face of the window glass or door to the outside face of the adjacent wall.
  - For new window units or new doors, only use a divided-light window design if there are existing divided-light windows or doors on the building or if divided-light windows or doors were present historically on the building or on other similar buildings within the historic context.
  - Divided-light windows or doors must be true divided lights or simulated divided lights with a spacer bar (interstitial spacer, preferably in a dark finish to reduce visibility, between the double-glazed panes of glass). Grills between the panes of glass are not allowed. If a building has divided lights, a simpler light pattern than used historically may be selected.
  - Use clear or nearly clear, low-e glass. Glass shall be void of tint, color, or reflection, with a minimum 65% visual-light transmittance and a maximum 25% reflectivity.
  - Windows at bathrooms may have frosted or obscured glazing.
  - Do not use vinyl or vinyl composite materials for new doors or windows.
  - Do not use integral shades or blinds.



## Character Windows & Doors Vs. Common Windows & Doors

### Character Windows & Character Front Façade Doors:

Front façade doors, and windows located completely above finished grade on any facade anywhere on the building that are part of the architectural identity of a building or are representative of a certain architectural style or type. Character windows and character front façade doors date to the period of significance, are distinctive, and are integral features of the building's design. Landmark Preservation staff or the Landmark Preservation Commission will determine if a window or front façade door is a character window or door.

#### Character Windows may include:

- Windows with arched, round, or bowed glazing or sashes
- Windows with ornate divided-light (muntin) patterns, such as diamond or intersecting arches, or any pattern that is not commonly manufactured today
- Windows with distinctive mullion configurations and window groupings, such as bay, oriel, or tripartite windows
- Windows with glazing that is etched, colored, textured, leaded or stained
- Windows with distinctive craftsmanship, such as elaborate carvings or casting patterns, or distinctive materials, such as bronze, nickel-silver, or steel
- Large windows that are not commonly manufactured today and are difficult to replicate

#### Character Front Façade Doors may include:

- Doors with a distinctive shape, such as arched doors.
- Doors with ornate divided-light or glazing patterns that are not commonly manufactured.
- Doors with distinctive glazing, such as etched, colored, textured, or leaded or stained glass
- Doors with distinctive craftsmanship, such as elaborate carvings or casting patterns, or distinctive materials, such as bronze or nickel silver
- Doors that are not commonly manufactured today and are difficult to replicate



Arched windows with leaded glass



Window with curved glazing



Window with ornate muntin patterns

### Common Windows and Doors:

Windows and doors that do not include the attributes of Character Windows and Doors, and whose replicas are readily available from most manufacturers.

#### Common Windows may include:

- One-over-one sash configurations
- Sash with orthogonal glazing patterns

#### Common Doors include:

- Full-light, half light or non-decorative paneled doors
- Doors with orthogonal divided-light patterns

**Top Right:** The original openings have been infilled with inappropriate glass block and louvers. **Middle Right:** Historic window portions and patterns are preserved. **Bottom Right:** Unique circular materials and shapes integral to the building design preserved, no new openings added on highly visible facades.

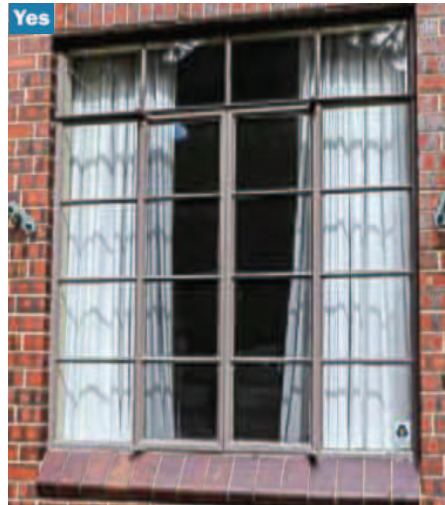
## Guidelines for Character Windows & Front Facade Doors

### 2.4.5 Preserve and repair character windows on all façades, and character front façade doors.

- Maintain historic components of character windows and character front façade doors including the frame, sash, divided-light patterns, mullions, glazing, sills, heads, jambs, moldings, transoms, and sidelights.
- Repair character windows and character front façade doors by re-glazing, patching, and splicing in replacement elements as needed.
- Do not add new materials on top of historic window materials, such as trim wrap.
- Do not enclose historic transoms or sidelights.

### 2.4.6 Replacement of character windows and character front façade doors may be considered if the character windows or character front façade doors are severely deteriorated.

- Match the size of character windows or character front façade doors.
- On primary elevations, do not use perimeter infill framing to create smaller windows and doors within historic openings.
- Match the profile and design of character windows and character front façade doors, including frame, sash, divided-light patterns, mullions, sills, heads, jambs, glazing, moldings, transoms, and sidelights.
- Match types and appearances of character windows. For example, if the character window is arched, the new window should be an arched window that matches the appearance of the historic character window.
- A salvaged door may be considered if it is similar in design to historic doors found on the historic structure or in the surrounding historic context.
- Inset replacement windows or doors into the wall plane at the same depth as the units being replaced. Inset is measured from the outside face of the window glass or door to the outside face of the adjacent wall.
- Match glazing patterns of historic character windows and character front façade doors. For example, replace diamond-patterned leaded glass with diamond-patterned leaded glass. When divided lights are present use true divided lights or simulated divided lights with a spacer bar (interstitial spacer, preferably in a dark finish to reduce visibility between the double-glazed panes of glass). Windows and doors with only grills between the panes of glass are not allowed.

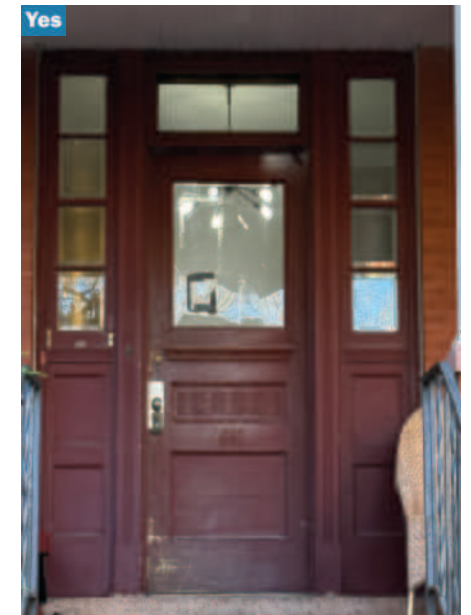
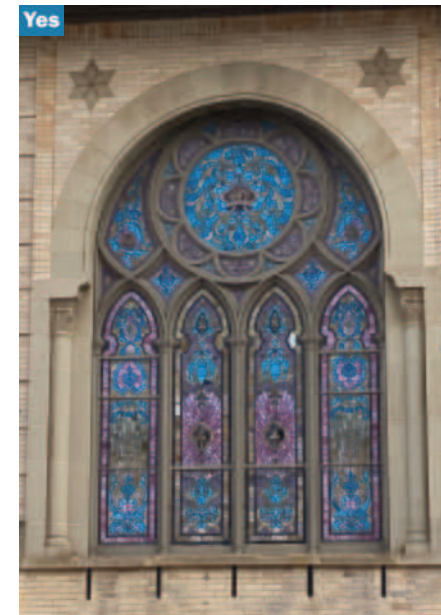


**Left:** Home with round opening with distinctive mullion configuration, a character window. **Middle:** Original steel casement window, a character window. **Top Right:** Original door with arched lights and panel below, a character front facade door. **Bottom Right:** Original Door with stained glass and decorative panel below, a character front facade door.

## Guidelines for Character Windows & Front Facade Doors (continued)

### 2.4.7 If replacement of severely deteriorated historic character windows or character front façade doors is necessary, closely match the materials of the historic window or door.

- Replace wood windows with wood or aluminum-clad wood windows. Replace steel or aluminum windows with steel or aluminum windows. Fiberglass composite windows may be considered if they closely replicate the historic window profiles and dimensions.
- Replace wood doors with wood or aluminum-clad wood doors. Fiberglass doors that replicate historic doors may be considered. Do not use faux wood grain finishes.
- A salvaged door may be considered if it is similar in design to historic doors found on the historic structure or in the surrounding historic context.
- Reuse specialty glass, such as etched, colored, textured, stained, or leaded glass.
- Replicate in kind any specialty glass that is damaged beyond repair.
- With the exception of leaded-glass windows, new glass windows may be double or triple glazed.
- Do not add new materials on top of historic window materials, such as trim wrap on top of historic brick mold.
- Use clear or nearly clear, low-e glass. Glass shall be void of tint, color, or reflection, with a minimum 65% visual-light transmittance and a maximum 25% reflectivity. Windows on secondary elevations at bathrooms may have frosted or obscured glazing.
- Do not use vinyl or vinyl composite replacement materials.
- Do not use integral shades or blinds.



**Left:** Cottage style windows with ornate divided lights in the upper sash, character windows. **Middle:** Leaded glass windows with distinctive shapes and configurations, character windows. **Right:** A distinctive entry door unit with an integrated sidelight configuration, a character front facade door.

## Guidelines for Common Windows & Doors

### 2.4.8 When replacing common windows and doors, infilled windows and doors, or non-historic windows and doors on any elevation, match the existing historic windows and doors on the building or similar historic buildings within the historic context.

- When historic windows and doors are present on the building, match the replacement window or door to the size and form of historic windows or doors found on the building.
- When existing windows or doors are non-historic, or openings have been infilled, use new windows or doors similar to those found on historic photographs of the building or similar to windows and doors on buildings with similar architectural character.
- On primary elevations, do not use perimeter infill framing to create smaller windows or doors within historic openings.
- A simplified version of a historic window or door may be used on elevations that are not visible from public vantage points.
- On secondary elevations, perimeter infill framing may be used to minimally reduce historic openings that are not visible from public vantage points, and when the historic opening proportions, headers, and sills remain expressed.
- Inset new windows and doors into the wall plane the same depth as the existing. Inset is measured from the outside face of the window glass or door to the outside face of the adjacent wall.
- Only use divided-light windows or doors if there are existing divided-light windows and doors on the building or there is evidence of historic divided-light windows and doors. Evidence may include:
  - » historic photographs of the building
  - » historic windows within the surrounding historic context
- Divided-light windows or doors must be true divided lights or simulated divided lights with a spacer bar (interstitial spacer, preferably color matched to the window frame and non-reflective to reduce visibility between the double-glazed panes of glass). Windows with applied mullions (attached to the glass, snap-in, add-on grids, or grids only between the glass) are not allowed.

### 2.4.9 When replacing common windows, infilled windows or doors, or non-historic windows or doors on any elevation, or doors on secondary elevations, replacement windows and doors shall match historic window and door materials found on the building or on similar historic buildings in the historic context.

- Use wood, aluminum-clad wood, or composite fiberglass window and door materials on buildings that historically had wood windows and doors. Use steel, aluminum, or composite fiberglass window materials on buildings that historically had steel or aluminum windows and doors.
- New glazing may be double or triple glazed.
- Use clear or nearly clear low-e glass. Glass shall be void of tint, color, or reflection, with a minimum 65% visual-light transmittance and a maximum 25% reflectivity. Windows on secondary elevations at bathrooms may have frosted or obscured glazing.
- Do not use vinyl or vinyl composite replacement materials.
- Do not use integral shades or blinds.



**Top Right:** Building with one-over-one common windows and common door. **Middle Right:** Easily replicated 6-over-6 divided light windows. **Bottom Right:** Common one-over-one window replaced to match the existing design and materials.

## Guidelines for Egress Windows

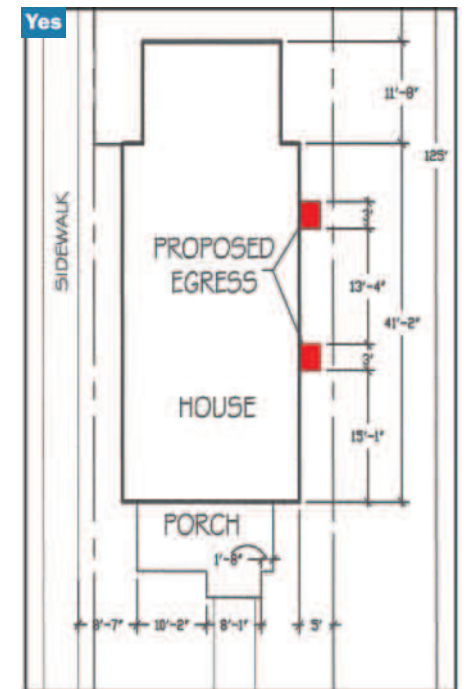
### 2.4.10 Locate and design basement egress windows and basement light wells to be as inconspicuous as possible.

- Place basement egress windows on secondary, non-street fronting elevations, when possible. See "Guidelines For Window & Door Openings" for more information.
- Align new basement egress windows or expansion of existing basement egress windows with other windows and features on the building.
- Match the appearance of new basement egress windows to other historic basement windows or use single-light casement windows.
- Do not place basement egress windows on a primary elevation unless lowering the sill of an existing window while maintaining the width and header height of the existing opening. If the new egress window will be entirely below grade, the Landmark Preservation Commission may consider allowing a new opening on the front facade.
- On the front façade, new basement egress windows must be inset into the wall plane at the same depth as existing windows on the structure. Inset is measured from the outside face of the window glass or door to the outside face of the adjacent wall.
- For basement egress windows use wood, aluminum-clad wood, aluminum, or composite fiberglass window materials.
- Do not use vinyl or vinyl composite materials for egress window materials.
- Do not use integral shades or blinds.
- Where visible from the street, construct egress window wells of masonry, concrete, wood, or matte-finished metal.
- Visible window well surrounds should not protrude more than 6 inches in height above grade.



### 2.4.11 Locate and design above-grade egress windows to be as inconspicuous as possible.

- Do not locate an above-grade egress window on the front façade. Locate above-grade egress windows on secondary, non-street fronting elevations. See "Guidelines For Window & Door Openings" for more information.
- In above-grade locations, creating new openings for egress is generally preferred over altering historic character windows. Align new above-grade egress windows with other windows and features on the building.
- Maintain the location of historic headers.
- Only replace character windows for egress if there is no other feasible option to meet life safety requirements, such as adding a new opening. If a character window must be replaced for egress, match the appearance of the window and replace wood windows with wood or aluminum-clad wood windows. Replace steel or aluminum windows with steel or aluminum windows. Fiberglass composite materials may be considered if they closely replicate the historic window profiles and dimensions. Maintain the location of historic headers.
- When replacing a common window above-grade for egress, use wood, aluminum-clad wood or fiberglass composite windows.
- Above-grade egress windows must be inset into the wall plane at the same depth as existing windows on the structure. Inset is measured from the outside face of the window glass or door to the outside face of the adjacent wall. Do not use vinyl or vinyl composite materials for egress window materials.
- Do not use integral shades or blinds.



**Top:** Corrugated metal well and casement egress. **Middle:** Metal well no more than 6 inches above grade. **Bottom:** Egress wells placed on the secondary non-street fronting elevation.

## Historic Window & Door Considerations

Original windows are among the most important features of a historic structure. In most cases, they are designed to last much longer than a new window, and can be repaired or treated to offer additional energy efficiency. The key elements of a typical historic window are illustrated below.

### Typical Historic Window Components



### Routine Window & Door Maintenance

When historic windows exist, they should be repaired when possible. A common misconception is that replacing windows and doors will save as much as 50% in energy costs, which is simply not true. The windows in many historic buildings have functioned for more than 100 years and, with regular maintenance, will typically last longer and perform better than most replacement windows. Replacement windows also rarely pay for themselves within a reasonable period of time. Unlike historic windows, new window assemblies generally cannot be repaired — they must be replaced again once they fail. The more sustainable choice is to maintain and repair historic windows and doors whenever possible.



Window Repair

### Storm Windows & Security Doors

The Landmark Preservation Commission (LPC) does not need to review or approve storm windows because storm windows do not require a permit. Many styles of storm windows are available to improve the thermal performance of existing windows. The use of exterior storm windows is encouraged whenever possible because they are thermally efficient, cost-effective, reversible, and allow for the retention of original windows. The visual impact of storm windows can be minimized by selecting colors that match the existing trim color. Additionally storm window meeting rails and other divisions should match the locations of the same elements of the historic windows.

The Landmark Preservation Commission (LPC) does not need to review or approve storm doors because storm doors do not require a permit. A storm door design should be compatible with the architectural character of the building.



Storm Windows

## 2.5 Treatment of Historic Roofs

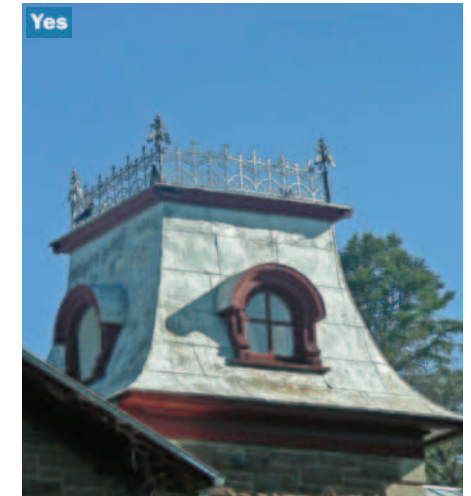
### Intent Statements

- 2K** To preserve the form, pitch, materials, size and orientation of an original roof because it contributes to the character of a historic building
- 2L** To maintain the visual continuity created by a pattern of similar roof forms along a block

### Guidelines for Roofs

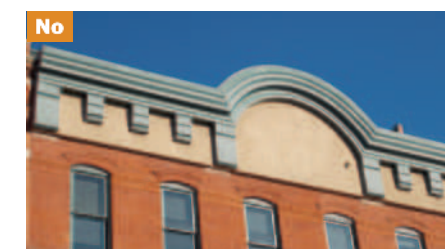
#### 2.5.1 Preserve the form, materials and features of an original historic roof.

- a. Maintain the perceived line and orientation of the roof as seen from the street.
- b. Maintain roof overhangs because they contribute to the perception of the building's historic scale.
- c. Preserve functional and decorative roof features, including original dormers, parapets, chimneys, towers, turrets, finials and crests, especially when they are character-defining features of the structure.
- d. Avoid altering the angle of a historic roof.
- e. Avoid removing or covering original roof materials and features that are in good condition, or that can be repaired.
- f. Do not cut back exposed roof rafters and soffits.



#### 2.5.2 Repair historic roofing materials and features and replace only when necessary.

- a. Retain and repair roofing details, including ornate gutters and downspouts. Replacement decorative gutters should match the historic gutters in material, profile, and location.
- b. When replacing roofing materials, match the replacement materials to those that would have been used historically on the structure. For example, use clay tile matching the historic roofing in profile and color to replace clay tile roofing. The use of historic materials is particularly critical for individual landmark structures and structures where the historic material is a character defining feature.
- c. When the use of historic roofing materials is not feasible, use alternative materials that match the profile and texture of the historic roofing materials or have a closely matching appearance. For example, wood shingle roofing may be replaced with a low-profile asphalt shingles in a traditional or neutral color palette, or engineered/synthetic roofing products that match the historic appearance of wood shingles. For slate and tile roofing, engineered/synthetic roofing products matching the historic material's appearance may be appropriate for structures taller than one story when the roof is not steeply pitched or otherwise highly visible from public view.



**Top Right:** Preserve original roof materials and decorative features of original roofs such as decorative finials. **Middle Right:** Preserve original roof forms such as towers, and turrets. **Left:** Avoid covering original roof materials and features. This original parapet is covered with a stucco replacement that does not match the original. **Middle:** Retain and repair roof detailing, including gutters and downspouts.

## Guidelines for Roofs (continued)

### 2.5.3 When replacing missing or non-historic roofing material, match replacement materials to the historic roofing material if possible.

- If the original roofing material has been replaced, use photographs, historic records, or evidence from other similar properties to provide roofing that matches or appears similar to the historic roofing in appearance. For example, use clay-tile roofing when records show the roofing was originally clay tile. The use of historic roofing materials is particularly critical for individual landmark structures and structures where the historic roofing material is a character defining feature.
- When using alternative roofing materials, use materials that match the profile and texture of the historic roofing materials or have a closely matching appearance. For example, wood shingle roofing may be replaced with low-profile asphalt shingles in a traditional or neutral color palette, or engineered/synthetic roofing products that match the historic appearance of wood shingles. For slate and tile roofing, engineered/synthetic roofing products matching the historic material's appearance may be appropriate for structures taller than one story when the roof is not steeply pitched or otherwise readily visible from public view.
- Use roofing materials that were used historically on the building, or alternative products that imitate those historic roofing materials. For example, wood shingle roofing should not be replaced with metal roofing, and clay tile should not be replaced with slate.

## Historic Roofs

Typical roof shapes for historic buildings in Denver include:

- Gabled
- Hipped and Pyramid Hipped
- Gambrel
- Flat
- Mansard

In some cases, roofs are complex and may include several of these roof types plus dormers. Most historic roofs broadly overhang, creating deep shadows. These broad eaves are also a location of important detailing such as brackets, cornices, and bargeboards.

## Guidelines for Rooftop Alterations

### 2.5.4 Minimize the visual impacts of skylights, dormers and other rooftop alterations.

- Locate a new dormer or skylight below the ridge line of the roof.
- Locate a new dormer or skylight on a rear (preferred) or side-facing roof slope, when possible.
- Set back a side-facing gable from the front façade to minimize its visibility from the street and sidewalk.
- Set dormers back behind the roof eave and the building wall plane below to ensure that the building's original roof lines and building form are predominant. A setback of at least one foot from the adjacent wall plane is strongly recommended.
- Design a dormer to be subordinate to the overall roof mass and in scale with those on similar historic structures.
- Install a new skylight to have a low profile.
- Do not remove or alter sizes of historic dormers on street-facing elevations.
- Do not add a shed dormer in a visible location if shed dormers are not seen in the surrounding historic context.
- Do not install a bubble skylight or other form that is not flat.
- Do not install a dormer or skylight on a front-facing roof plane.
- Do not visually overwhelm the original roof, particularly on street-facing elevations, with dormers, skylights and other features.

## Dormer Locations

The roof form of the historic house illustrated below has not been altered:



As illustrated below, a new dormer has been added to the rear-facing roof plane to be less visible from the street and sidewalk:



As illustrated below, the new dormers on the front-facing roof plane are inappropriate because they overwhelm the original roof:



**Top Left:** 1864 photo of Denver rooftops along Lawrence Street, DPL Digital Collections, call no. X-19449 **Top Right:** W.G. Chamberlain 1864 photo of Denver at 14th and Arapahoe, DPL Digital Collections, call no. X-19375 **Bottom Left:** Match roof replacement materials to the historic roof materials whenever possible. **Bottom Right:** Use alternative roofing materials that imitate historic roofing materials such as asphalt shingles for wood shingle roofing.

**Left:** Design a dormer to be subordinate to the overall roof mass and scale with those on similar historic structures. The dormer is set back behind the overhanging roof eave and adjacent brick wall plane.

## 2.6 Treatment of Historic Foundations

### Intent Statement

**2M To preserve an original foundation and avoid alteration because it helps define the character of a historic building**

### Guidelines for Historic Foundations

#### 2.6.1 Maintain and repair an original foundation.

- Re-point original masonry foundations to retain the original design. Note, an analysis of appropriate mortar type is recommended since incompatible mortar can damage masonry structures.
- Keep stone foundations in good repair.
- Patch a deteriorated foundation using a restoration patching material that closely matches the appearance and texture of the original material.
- Avoid applying a coating or stucco over an existing foundation to create a uniform appearance, or to hide the original material due to its deteriorated condition.
- Do not cover an original foundation with newer siding material.
- Do not allow an original foundation to fall into disrepair.
- Do not install windows and window wells on the street-facing façades of an original foundation (new windows and window wells may sometimes be appropriate on non-primary façades).

#### 2.6.2 Only replace foundation materials that are beyond repair.

- If the foundation material cannot be repaired or patched, only replace the minimum amount of material needed to make the repair.
- When replacing foundation materials, match the original materials and details whenever possible.
- If original materials are not available for the foundation replacement, choose new materials that convey the scale, texture and appearance of the original.
- Do not increase the height of the structure when replacing a foundation

### Maintenance Tips

- Design landscaping and other site features to keep water from collecting near the foundation.
- Avoid planting near foundations.
- Ensure that gutters and drains are functioning and move water away from foundation walls.



**Top Right:** Do not allow an original foundation to fall into disrepair. **Left:** A damaged pink sandstone foundation. **Middle:** The damaged sandstone foundation was patched with a consolidant that was tinted to match the existing pink sandstone.



## 2.7 Treatment of Historic Additions

### Intent Statements

**2N To preserve existing additions that are historically significant**

**2O To restore a building by removing a non-historic addition that detracts from the historic appearance**

### Guidelines for Historic Additions

#### 2.7.1 Preserve a historic addition that has achieved significance in its own right.

- Respect character-defining building components of a historically-significant addition or accessory structure added during the period of significance.
- Avoid the demolition of a historically-significant addition or secondary structure added during the period of significance. For example, an 1890 kitchen wing added to an 1882 house would be important both for its age and its link with the house's long history. Such an addition is usually similar in character to the original structure in terms of materials, finishes and design.

#### 2.7.2 Remove a non-historic addition, if possible (enclosed front porches, covered storefronts, etc.)

- Ensure that the historic fabric of the primary structure is not damaged when removing a non-historic addition.
- When restoring an enclosed front porch, retain original porch fabric such as columns, porch floor and steps, when feasible.

### New Additions

The guidelines in this Chapter apply to existing additions that have gained historical significance. See Chapter 3 for information on additions to individually designated Denver Landmarks or contributing structures in a historic district. See Chapter 4 for information on additions to non-contributing structures in a historic district.



**Left:** Remove a non-historic addition that detracts from the historic appearance, such as this front facade flat roof addition.

## 2.8 Environmental Sustainability & Historic Properties

### Intent Statements

- 2P To maintain the inherent energy-savings features of historic structures**
- 2Q To facilitate energy efficiency improvements to historic structures while ensuring that they are compatible with the building and surrounding historic context**

### Guidelines for Environmental Sustainability

#### 2.8.1 Maintain and enhance the energy-saving features of the original structure.

- a. Retain original operable windows, shutters, awnings, canopies, transoms and porches. Such features allow for natural climate control.
- b. Install weatherization strategies in a way that avoids altering or damaging significant materials and their finishes.
- c. When installing weatherization use materials that are environmentally friendly and that will not interact negatively with historic building materials.

#### 2.8.2 Install compatible energy-efficiency improvements that enhance the energy saving features of the original structure.

- a. Consider a professional energy audit to identify energy efficiency improvements that will not compromise the historic character of the structure.
- b. Install operable systems such as storm windows and doors, insulated coverings, curtains and awnings to enhance performance of original windows and doors, whenever possible.
- c. When adding storm windows, match the proportions, profile and configuration (muntin pattern) of the original windows, and avoid an anodized or mill finish aluminum storm window, particularly on the exterior.
- d. Install draft stoppers in a chimney, if possible. Open chimney dampeners can increase energy costs by up to 30%.

### Environmental Sustainability

Rehabilitation of historic structures supports environmental sustainability by maintaining the inherent energy saving features in historic structures (such as porches and operable windows), conserving the energy that is embodied in the materials of existing structures and reducing landfill impacts from demolition.



**Left:** Consider a professional energy audit to identify energy efficiency improvements that will not compromise the historic integrity of the structure. **Right:** Maintain and enhance the energy saving features of the original structure such as porches, attic vents, large overhanging roof eaves and operable windows.

### Guidelines for Solar Panels

#### 2.8.3 Install solar panels in a location that minimizes visibility based on the structure's roof form.

- a. Avoid installing solar panels on the front-facing roof plane of a primary structure. When the front-facing roof plane of a primary structure is oriented to the south and when the main solar access for the structure is on the front-facing roof plane, the Landmark Preservation Commission will review proposals for solar panels on the front to ensure the panels do not negatively impact the structure's character-defining features.
- b. For primary structures with flat roofs, solar panels may be installed in any configuration and set on an angle as long as the panels are entirely below the top of the parapet.
- c. For primary structures with pitched roofs, minimize visual impacts to the structure's character-defining features.
- d. Set panels back from the horizontal roof ridge, and the front eave or vertical ridge of a sloped roof to minimize visual impacts. (Note: the location of solar panels must comply with current building code requirements.)
  - i. For a front-gable or front-facing gambrel roof, solar panels shall be set back at least three feet from the front eave.
  - ii. For a hipped roof, solar panels shall be set back at least three feet from the diagonal ridge.
  - iii. For a mansard roof, solar panels should not be installed on the lower slope at the front façade or visible side elevation.
- e. For primary structures with two street frontages, solar panels may be installed on the roof surface facing the side street, but the panels must comply with the setback requirements noted above.
- f. Solar panels may be installed anywhere on the roof of an accessory structure.

### Standards for Sustainability

The LPC has adopted the Secretary of the Interior's Standards for the Rehabilitation and illustrated Guidelines for Sustainability for Rehabilitating Historic Structures (2013). This document supplements the Denver design guidelines when energy retrofit and improvement projects are under consideration.



**Left:** Solar panels may be installed anywhere on the roof of an accessory structure. **Middle:** Solar panels placed on an unobtrusive location on the rear roof slope. **Right:** Solar panels should be installed at least 3 feet back from the diagonal roof ridge to reduce visual impact. These panels are not set back 3 feet.

## Guidelines for Solar Panels (continued)

### 2.8.4 When installing solar panels, minimize potential adverse effects on the historic character of a property.

- Locate solar panels to avoid obscuring distinctive roof features, such as dormers or chimneys, and adversely affecting the character-defining features of the property.
- Mount solar panels flush to the surface of a pitched roof or mount panels no more than 8" off the roof surface.
- Use the least invasive method feasible to attach solar panels to a historic roof.
- Install solar panels so they may be removed and the original character of the roof may be easily restored. For clay or concrete tile roofs, carefully remove selective roofing tiles, if necessary. (Note: salvage of historic tiles is highly encouraged for future reinstallation or repairs).
- Install electrical equipment associated with solar panels on the rear façade of a primary structure, on an accessory structure, or in another inconspicuous location.
- Use a matte finished electrical conduit located to minimize visibility.
- Integrated solar roof tiles may be used on accessory structures or to replace non-historic roofing materials, including asphalt shingles, and on primary structures in historic districts if the solar tiles match the profile and texture of the existing roofing material or have a closely matching appearance. For example, solar tiles may replace asphalt shingles or a synthetic wood shingle if the solar tiles have a flat profile and are a neutral color.

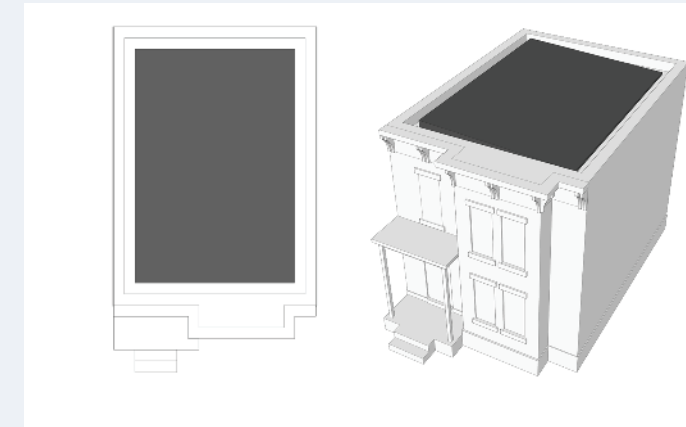


Left: Solar panels placed to avoid chimneys. Right: Solar panels placed flush to the roof surface and around cross gable roof form.

## Installing Solar Collectors on a Historic Property

When installing solar collectors on a historic property, it is important to minimize visibility from the street and potential impacts on the historic character of the property. Below are examples of appropriate locations for solar panels on various roof forms.

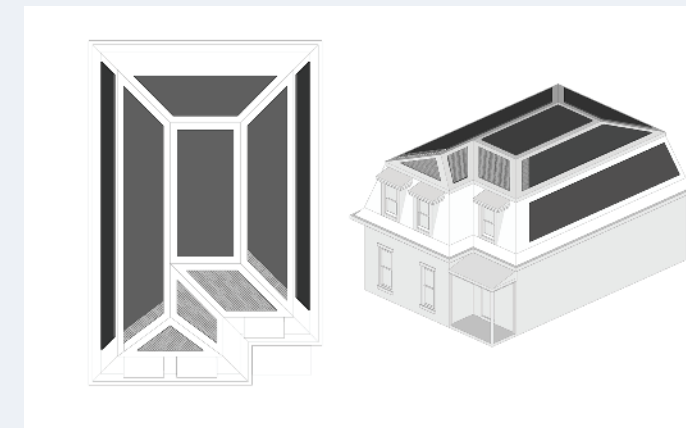
**Flat Roof** - Install solar panels in any configuration as long as the panels are entirely below the top of the parapet.



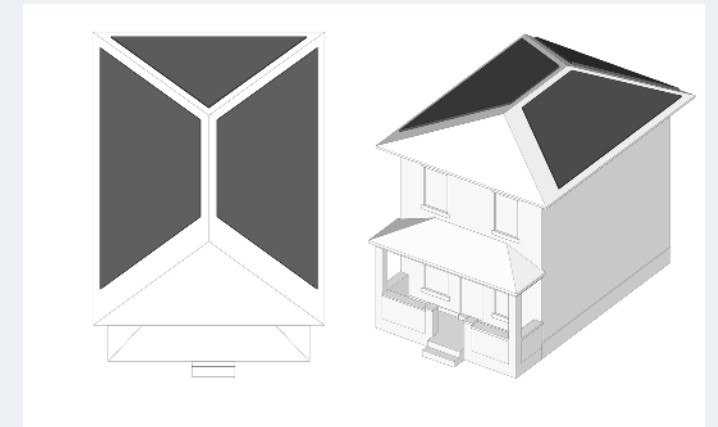
**Front Gable Roof** - Install solar panels on side roof slopes and at least 3 feet back from the front eave of the building.



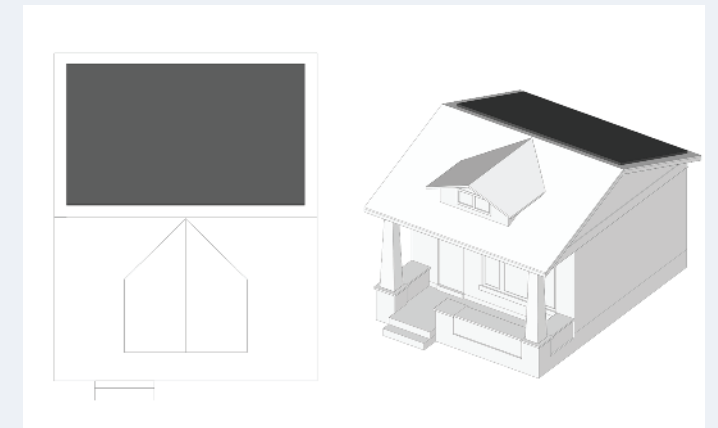
**Mansard Roof** - Install solar panels on side or rear roof slope. Solar panels may be installed on the low-slope at the front of the building (shown in gray hatch above) depending on visibility from the street.



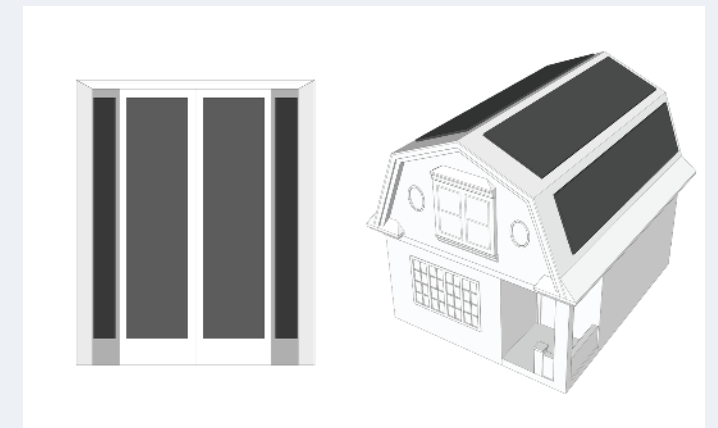
**Hipped Roof** - Install solar panels on side or rear roof slopes and at least 3 feet back from the diagonal ridge at the front of the building.



**Side Gable Roof** - Install solar panels on rear roof slope of roof.



**Gambrel Roof** - Install solar panels on the side roof slopes and at least 3 feet back from the front eaves of the building.



## 2.9 Treatment of Residential Buildings

### Intent Statements

- 2R** To preserve the historic structures that define residential historic districts
- 2S** To preserve historic residential building and site features such as porches and garages because they define the scale of the district and help interpret how the site and buildings were used historically

### Guidelines for Porches & Decks

#### 2.9.1 Preserve an original porch or stoop.

- a. Maintain the historic location and form of a porch or stoop.
- b. Maintain and repair historic porch and stoop components, finishes and details.
- c. Retain the historic location, orientation and size of front porch steps.
- d. Avoid enclosing a historic porch, particularly on a highly-visible façade.
- e. Do not remove an original porch or stoop.

#### 2.9.2 If necessary, repair or replace damaged porch elements.

- a. Replace missing or deteriorated components and decorative features to match existing components and features.
- b. Use historical documentation to guide the design of a replacement component or decorative feature, or design simplified versions of similar components seen on nearby historic properties, if no documentation is available (See “Historic Porches on Residential Buildings” on page 43 for more information).
- c. Maintain the overall composition when replacing components and decorative features (i.e., when replacing balusters, match the original proportions and spacing).
- d. Restore altered or non-original components and decorative features to their original condition, whenever possible (i.e., if original wood porch steps have been replaced with concrete, consider restoring them to their original, wood condition).
- e. Do not replace wood porch decking and steps with concrete or synthetic materials.



**Left:** Preserve an original porch. **Right:** Maintain and repair historic porch components such as original columns.

### Guidelines for Porches, & Decks (continued)

#### 2.9.3 Use historic evidence to inform replacement of a missing front porch or stoop.

- a. Add a new front porch or stoop to a historic residential structure only when there is evidence that one was historically present, or an original porch or stoop is present on a very similar adjacent structure.
- b. Reconstruct a porch or stoop based on historic documentation of its location, appearance and materials. If good documentation does not exist, a replacement design may be based on contextual analysis.
- c. If there is evidence that a porch or stoop once existed, but no historical documentation is available, design a new porch or stoop as a simplified version of a comparable feature on a similar structure in the surrounding historic context (preferred). A more decorative porch design may be appropriate if decorative porches appear on comparable structures in the surrounding historic context (will be considered on a case-by-case basis).
- d. Design a replacement porch or stoop to be appropriate to the architectural style and relate to the overall scale of the primary structure.
- e. When there is no evidence that a front porch or stoop existed, consider adding a sensitive and appropriately scaled patio as an outdoor seating area.

#### 2.9.4 Ensure that decks are compatible with the surrounding historic context.

- a. Locate decks to minimize visual impacts on the street when they are not a part of the historic context.
- b. Do not incorporate a roof deck on a historic residential structure.



**Left:** Maintain the overall composition of a porch when replacing missing components and decorative features. For example, if this porch originally had a wood balustrade replace with a wood balustrade. If not, a simple metal design may be appropriate. **Middle:** A damaged porch newel. **Left:** The damaged porch newel repaired.

# Historic Porches on Residential Buildings

Porches are a key feature of most of Denver's historic residential structures. They help establish a pedestrian-scaled streetscape, provide sheltered transition spaces, and clearly define building entrances.

## Typical Features of Historic Porches

- Masonry, stone, or wood foundations
- Wood skirting
- Wood stairs with risers and tread
- Newel Post
- Railings or balustrades with bottom and top rails
- Wood tongue and groove decking
- Pilasters, post, or columns
- Decorative brackets or spindlework
- Beam and soffit detailing
- Shed, gable or hipped porch roofs



## A Replacement Porch

A front porch should be added to a historic residential structure only when there is evidence that a porch was historically present, or an original porch is present on a very similar adjacent structure.

The design of a replacement porch should:

- Match the overall location, proportions and appearance of the original porch based on historical documentation
- If historic documentation is not available, be a simplified version of comparable porch on a similar, adjacent structure. A more decorative porch design may be appropriate if decorative porches appear on comparable structures in the surrounding historic context and will be considered on a cases-by-case basis.



## A New Porch

A new porch should not be added where one did not exist historically, as doing so creates a false sense of history. When there is no evidence that a front porch ever existed, consider adding an appropriately scaled patio as an outdoor seating area. A new porch may be added on a non-primary facade, accessory structure, or addition.



**Top Right:** c. 1890 view of a Denver duplex residence with an elaborate porch design, DPL Digital Collections, call no. X-19026 **Middle Right:** Contemporary photo of a replacement porch on an historic Denver duplex residence **Bottom Right:** Contemporary photo showing a patio area at the front of a residence

# Guidelines for Garages & Secondary Structures

## 2.9.5 Preserve original detached garages and secondary structures where feasible.

- Keep historic garages and outbuildings in good repair, similar to the main house.
- Respect character-defining building components of a historically-significant garage or secondary structure.
- Do not demolish a historically-significant garage or secondary structure. See "Demolition" in Chapter 1 for more information.
- When additional space is needed, consider constructing an addition, or adding another secondary building, rather than demolishing the historic one.
- Do not move a historically-significant garage or secondary structure from its original location whenever possible.
- Preserve and repair historic wooden garage doors if at all possible since they are rare in Denver.
- Preserve historic windows and doors on a garage or secondary structure, if possible.

## 2.9.6 Preserve other original secondary structures features such as a porte cochere.

- Respect character-defining building components of a porte cochere.
- Avoid the demolition of a historic porte cochere structure.

## Denver's Alleys

Most of Denver's historic residential neighborhoods and commercial areas have alleys that provide automobile and service access to properties. As a result, most historic garages are located to the rear of the property, along the alley



**Left:** Preserve original detached garages and secondary structures where feasible. **Right:** When additional spaces is needed, consider constructing an addition, or adding another secondary building, rather than demolishing the historic one. **Top Right:** Preserve other original residential building features, such as a porte cochere.

## Historic Commercial Buildings

Storefronts are often the most prominent feature of historic commercial structures. In Denver, retail storefronts with large display windows and prominent entries are most commonly found on structures located near former streetcar stops or within historic retail districts, such as Larimer Square. They typically feature a tall ground floor and upper stories with shorter floor-to-floor heights.

### Typical Features of Commercial Buildings

- Bulkhead/Kickplate
- Pilasters/columns/piers
- Recessed Entry
- Display Windows
- Transoms
- Storefront Cornices
- Punched Upper Story Windows
- Sign Band Signage
- Awnings & Canopies
- Lighting
- Building Cornices and Parapets



### Storefront Maintenance

Storefronts communicate the nature of the business and help establish an image. It is important to keep storefronts neat and clean, establish attractive window displays and provide adequate lighting.

## Civic & Institutional Buildings

Civic and institutional structures include those used for government, religious, educational, or other public purposes. Some of Denver's most important civic structures are located around Civic Center Park and include the State Capitol and the City & County Building.

### Typical Features of Civic & Institutional Buildings

- Landscaped lawns
- Grand entry features
- Building division into "base, middle, and cap"
- Rooftop elements such as steeples, towers, domes, and cupolas
- A sense of mass with low window-to-wall ratio
- Decorative ornamentation and elaborate detailing that can include leaded glass, quoins, crenellations, etc.
- High quality masonry materials
- Clearly articulated stone bases
- Tile, slate, or metal roofs



## 2.10 Treatment of Commercial & Mixed-Use Buildings

### Intent Statements

- 2T** To preserve the original character-defining features of a historic commercial, mixed-use building because they assist with interpretation of the building's history and significance.
- 2U** To maintain a comfortable pedestrian environment in historic commercial areas

### Guidelines for Historic Commercial Facades

#### 2.10.1 Preserve the character-defining elements of a historic storefront.

- Maintain the interest of pedestrians through an active street level storefront.
- Preserve the storefront glass if it is intact.
- Repair storefront elements by patching, splicing, consolidating or otherwise reinforcing the historic materials.
- Avoid altering the size and shape of a storefront opening.
- Do not use reflective, opaque or tinted glass except in the transom, if necessary.
- Do not remove or enclose a transom.
- Do not insert a garage door into a historic storefront.

#### 2.10.2 Restore an altered storefront to its original design.

- Restore and reconstruct missing features based on historical documentation and physical evidence.
- Reconstruct a missing lintel or cornice to help define the storefront.
- Replace missing pilaster elements.
- Reopen an enclosed or covered transom.
- If the original transom glass is missing, use new glass, or a sign panel/ decorative band if the transom must be blocked out.
- Use wood and glass, or metal and glass doors, as appropriate to the building.
- Do not install solid non-commercial doors.
- Do not install mill-finish metal doors or decorative historic-looking doors not original to the building.



**Left:** Maintain the interest of pedestrians through an active street level storefront. **Right:** Preserve the character-defining elements of a historic storefront.

## Guidelines for Historic Warehouses

### 2.10.3 Preserve the character-defining elements of a historic warehouse building. These can include:

- Man-door: A small door for use by people entering the building. These can be similar in character to a storefront on a retail building. They often include a transom.
- Ground floor windows: Windows located at the street level. These often are larger and display a similar pattern to the upper story windows.
- Upper-story windows: Windows located above the street level. These usually have a vertical orientation.
- Cornice: A decorative band at the top of the building.
- Loading dock: A raised landing for handling goods; some project from the façade while others are inset behind the building plane.
- Loading bay doorway: A large opening at the landing dock. Typically these are rectangular, although sometimes arched. Rolling overhead or horizontal sliding doors were used in these openings. Singular and multiple openings were found on façades.
- Canopy: A metal structure usually sheltering the loading dock. Some were horizontal and others were sloped. They were supported on metal and heavy timber supports that were wall mounted.

### 2.10.4 Preserve a historic warehouse façade when considering alterations and new openings.

- Install new openings for windows and doors only on a façade that is not visible from the street or sidewalk. See guidelines for "Window & Door Openings" for more information.
- Insert a garage door for sidewalk or patio access only where there is an existing industrial opening of sufficient size.



**Left:** Photo of the Denver Public School District One Warehouse, DPL Digital Collections, call no. MCC-4178 **Top Right:** c. 1940's view of the State Grocery Warehouse at 1535 13th St, DPL Digital Collections, call no. X-25158 **Middle Right:** c. 1920's view of the Denver Dry Goods Store Warehouse at 12th and Wazee in Denver, DPL Digital Collections, call no. X-24064 **Bottom Right:** c. 1910 photo of the Barteldes Seed Warehouse at 16th Wynkoop St in Denver, DPL Digital Collections, call no. Rh-760.

## Guidelines for Patios & Loading Docks

### 2.10.5 If locating a rooftop patio on a historic building, minimize visual impacts on the original building and historic streetscape.

- Set the rooftop patio back at least ten feet from the street-facing façade of the historic building and from readily visible façades. Small exceptions to this setback may be appropriate if the patio is not readily visible from public vantage points due to a raised roof parapet or other similar reasons.
- Use simple, open railings to minimize visibility of the rooftop patio from the street.
- Integrate permanent shade devices into the design of rooftop patios and deck.
- Do not use temporary materials such as plywood and drapery to provide shade for a rooftop deck or patio in lieu of more permanent and integrated shading designs.
- Locate any necessary elevator or stairwell enclosures at the rear of the rooftop patio, away from the historic façade.
- Do not affix umbrella holders or planters to rooftop patio railings.

### 2.10.6 Preserve historic loading docks.

- Maintain the historic location and form of a loading dock, since this influences the perceived scale of the structure.
- Maintain and repair loading dock components and details, such as a canopy or railing.
- Avoid altering, enclosing or removing a historic loading dock.

### 2.10.7 Design a new loading dock to be as inconspicuous as possible.

- Locate in a secondary location when feasible.
- If it must be located on the primary façade, design a new loading dock to be subordinate in character.
- Screen a new loading dock so that it is unobtrusive when viewed from sidewalks, streets and nearby buildings or houses.
- Do not adversely affect the character of the historic commercial structure when adding a new loading dock.



**Left:** Preserve historic loading docks and repair original components and details such as railings.

## Guidelines for Awnings & Canopies

**2.10.8** Preserve original canopies and awnings, when possible.

**2.10.9** Use historic evidence to inform replacement of a missing canopy.

- Add a new permanent metal canopy to a commercial, mixed-use or civic building only when there is evidence that a canopy was historically present.
- Reconstruct a canopy based on historic documentation of its location, appearance and materials. If good documentation does not exist, a replacement design may be based on contextual analysis.
- If there is evidence that a canopy existed, but no historical documentation on design is available, design a new canopy as a simplified version of a comparable canopy on a similar structure in the surrounding historic context.
- Position a replacement canopy to be consistent with historically-established canopy heights. When the original height is not known, use a height level with the second floor or that of other canopies on the block.
- Design a replacement canopy to be appropriate to the architectural style and relate to the overall scale of the primary structure.
- Do not add a permanent metal canopy where one did not exist historically.
- Do not use architecturally-salvaged canopy poles unless adequate documentation and historical research support their use.

**2.10.10** Ensure that new awning locations and designs are in character with the original building and surrounding historic context.

- Design an awning to be a subordinate feature that accentuates the character defining features of the historic building.
- Fit the awning within the opening of the building.
- Consider using a traditional triangular-shaped awning to frame a storefront window or door.
- Use a solid color or other scheme that is compatible with the overall façade.
- Do not cover historic features, such as decorative banding or a transom with an awning.
- Do not use arched, bubble-shaped or bull nose awnings.
- Do not use plastic, plastic-like, or shiny awning materials.

### Promoting Pedestrian Activity with Awnings & Canopies

Historically, awnings were used throughout the commercial areas of Denver to provide continuous, covered walkways that protected pedestrians from the elements. The continued use of awnings and canopies promotes a comfortable predestine environment by providing shade and creating a connection between the sidewalk and interior spaces.



**Left:** c. 1890-1900 Rooftop View of Larimer Street, DPL Digital Collections, call no. X-23444 **Top Right:** Add a canopy to define the storefront. **Middle Right:** A traditional, operable fabric awning installed between the storefront bays on the Kittredge Building, consistent with historic commercial facade features. **Bottom Right:** The historic canopy of the Paramount Theater.

## 2.11 Treatment of Civic & Institutional Buildings

### Intent Statement

**2V To preserve the original character-defining features of historic civic and institutional buildings because they assist with interpretation of the building's history and significance**

### Guidelines for Civic & Institutional Buildings

**2.11.1** Preserve the character-defining elements of a civic or institutional building. These can include:

- Site features such as landscaped front, side and rear setbacks and parking in rear or off-site
- High quality materials such as brick and stone, clearly articulated stone base, and tile, slate or metal roofs
- Four-sided architecture
- Building features such as a:
  - » Grand entry with a broad stairway and additional side entrances
  - » Building division into base, middle and top
  - » Steeples, towers, domes, cupolas and other iconic rooftop features
  - » Sense of mass with a low window to wall ratio (less transparency at the ground level especially)
  - » Elaborate window openings

**2.11.2** Retain civic and institutional building entry features in their original condition. These can include:

- Elaborate doors and doorways
- Porticos
- Stairways



**Left:** The City & County Building features a grand entry portico. **Right:** The replacement doors at Denver Fire Station No. 11 matched the design of the original doors, with the original hardware reused.

## 2.12 Treatment of Vacant Buildings

### Intent Statement

**2W** To stabilize unoccupied historic buildings using methods that maintain their integrity

### Guidelines for Vacant Buildings

**2.12.1** If a building is unoccupied, secure it in a way that protects its historic character.

- Maintain a weather-tight roof. Temporary roofing may be installed if needed.
- Structurally stabilize the building, if needed.
- Provide adequate ventilation to the interior of the building.
- When closing off or boarding up a window or door opening, paint the boards and panels to match the building color.
- When closing off a window or door opening, avoid mounting boards or panels on the exterior, especially if that may damage frames, sashes or other historic components.
- Consider performing a Historic Building Assessment to document a building's condition and identify possible adaptive reuse scenarios.

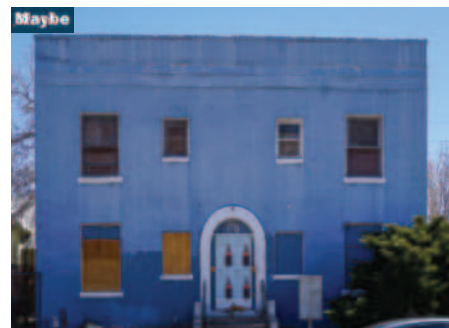
### Stabilizing a Historic Building

When a structure is to be unoccupied for an extended period of time, it may be secured in a way in which to preserve historically significant features and prevent deterioration from weathering or vandalism. Often termed "mothballing," such procedures are particularly relevant to properties that have been vacant for a long time.

Structures in need of substantial repair may benefit from a Historic Structure Assessment which documents character defining features, their condition, appropriate preservation treatments and future maintenance.

Consult a structural engineer with historic building experience if a structure shows evidence of structural issues such as cracks in brick, building movement, etc.

For suggestions on specific procedures, see National Park Service Preservation Brief #31: Mothballing Historic Buildings.



**Left:** Temporarily secure unoccupied structures and stabilize them. **Right:** The structure on the left was rehabilitated and restored after temporary mothballing.

## 2.13 Demolition of Historic Buildings

### Intent Statement

**2X** To preserve historic properties including historic form, massing and integrity of historic properties and their context

### Guidelines for Demolition

**2.13.1** Do not demolish contributing buildings to a historic district or historic buildings with individual landmark designation.

- Take all measures required to repair and retain a contributing or landmark historic structure to protect the community interests in its preservation.
- Preserve the essential form and integrity of historic buildings and structures.
- Avoid demolitions that change the overall appearance, massing and volume of the historic building as perceived from public vantage points.
- Avoid demolition actions that remove historic structural systems or which compromise the structural integrity of a historic building.
- Do not demolish character-defining features of a historic property.

**2.13.2** Minimize damage to historic structures when demolishing non-contributing additions or features.

- Carefully remove non-historic additions or features (such as a non-original porch) to avoid damage to historic building walls and features.
- Evaluate and repair historic building walls that are exposed when non-historic additions or features are removed.
- Restore any damaged or missing historic building walls or features when historic exterior walls are re-exposed as a result of a demolition.

**2.13.3** Plan projects to minimize demolition to a historic structure, including its historic additions and accessory structures.

### Minimum Maintenance of Designated Structures

Structures designated for preservation or structures in a district designated for preservation shall be preserved against decay and deterioration and kept free from structural defects. Structures that are not maintained in accordance with the Landmark Preservation Ordinance can be cited and fines assessed. The City can also order owners to make repairs. The demolition of a historic structure through intentional neglect is not permitted. See "Demolition Review Process" in Chapter 1 for more information.



**Left:** A non-historic front porch was carefully removed from this home. **Right:** A non-contributing addition was removed from the front facade, allowing for the original exterior to be repaired.

## 2.14 Adaptive Reuse of Historic Buildings

### Intent Statement

**2Y To keep historic properties in use so they remain integral to the life of the City**

### Guidelines for Adaptive Reuse

**2.14.1 Select uses that are compatible with the original historic character of the building.**

- When a significant change in use is necessary to keep a building in active service, select a use that requires the least alteration to significant elements.
- Do not select a use that requires alteration of the structure's character defining features.
- Do not select a use that adversely affects the integrity of the building.

**2.14.2 Maintain a structure's character when converting to a new use.**

- Retain the key character-defining features of a residential structure, such as the front yard, front door, moldings, siding etc.
- Retain the key character-defining features of commercial, mixed use and multifamily buildings, such as storefronts, entries, windows, loading docks, etc.
- Retain the key character-defining features of civic and institutional buildings when converting to a new use, such as iconic rooftop features or grand entry features.



**Left:** The upper two floors of the Airedale Building historically operated as a hotel and boarding rooms, while the ground floor housed a saloon. Today, the building functions as a music venue and hostel. **Right:** Select uses that are compatible with the historic use and require the least alteration to significant elements.

## 2.15 Mechanical, Utility & Security Equipment

### Intent Statements

**2Z To minimize the visual impacts of mechanical, utility and security equipment**

**2AA To preserve the significant features of sites and buildings when installing utility and security equipment**

### Guidelines for Mechanical & Utility Equipment

**2.15.1 Place mechanical, utility and communications equipment to minimize visual impacts on a historic building.**

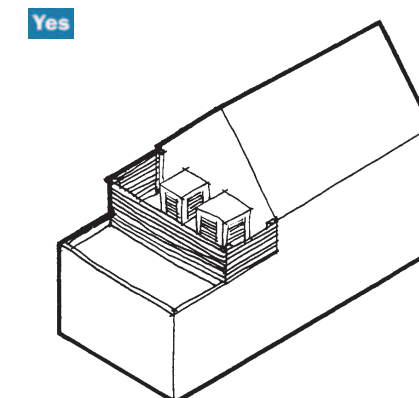
- Install roof-mounted, and other mechanical/HVAC equipment, such as air conditioners and cooling towers to be inconspicuous when viewed from public streets and public vantage points.
- Locate ground-mounted units in an inconspicuous location and sensitively screen if visible from public vantage points.
- Install automated teller machines (ATMs) on the inside of a building to avoid impacts to the historic façade.
- Incorporate mechanical equipment with matte or non-reflective finishes that blend with building colors if the equipment will be visible from the street or sidewalk.
- Group utility lines into one conduit, when feasible.
- Install vertical runs of ducts, pipes and cables in closets, service rooms and wall cavities where they will not be visible on the exterior elevations.
- Do not use exposed conduit for lighting on the exterior of a building.

**2.15.2 Install communications, utility and mechanical equipment to minimize damage to historic building fabric.**

- Install mechanical equipment in areas and spaces that require the least amount of alteration to the historic materials and elevations of the building.
- Avoid cutting holes in important architectural features, such as cornices, decorative ceilings and paneling.
- Avoid cutting into a masonry wall to install conduit.
- Do not install mechanical equipment on a primary façade.

### Additional Guidelines

Additional guidelines for ground mounted mechanical, utility equipment and service areas can be found in Chapter 5.



**Left:** Install roof-mounted, and other mechanical/HVAC equipment to be as inconspicuous as possible when viewed from public streets when standing in a public vantage point. **Middle:** The commercial building has roof-mounted equipment that is screened by the building parapet. **Left:** The roof-mounted equipment becomes minimally visible as you move along the street; however, because it is placed at the rear of the building, it does not negatively impact the historic character.

## Guidelines for Security Equipment

### 2.15.3 Do not damage the historic character of the original building when installing security devices.

- Do not damage or obscure significant architectural features of the original historic building.
- The installation should be reversible. Once the security device is removed, the original building should remain intact and the integrity of historic materials should not be compromised.
- Do not run exposed conduit on the exterior of a building.

### 2.15.4 Minimize the visual impact of security devices on commercial buildings.

- When locating a security camera, use a small size and an inconspicuous location, such as inside the building eaves or inside an awning.
- When locating security devices on a retail frontage, install them inside the storefront, whenever possible.
- Use operable and transparent security screens on ground floor storefronts, when necessary.
- Opaque, roll-down metal screens are discouraged because these obscure products on display and thereby weaken the interest of the street to pedestrians when in a closed position.
- Decorative security devices are appropriate when they complement the building's architectural style.
- Generally security devices are inappropriate above the second floor unless unique security conditions are indicated.

### 2.15.5 Minimize the visual impact of security devices on residential buildings.

- Security devices should be small and simple in design.
- For residential buildings, locating security devices on the interior is preferred, but the exterior is an acceptable location if it is in keeping with the architectural style of the building. If located on the exterior, ensure there is no exposed conduit on the building or site.



**Top Right:** Use transparent gates on historic buildings. **Bottom Right:** Gates and security devices should be reversible and not damaged the historic building.

## 2.16 Accessibility for Historic Buildings

### Intent Statement

**2AB To preserve the integrity of historic buildings and sites while ensuring compliance with accessibility regulations**

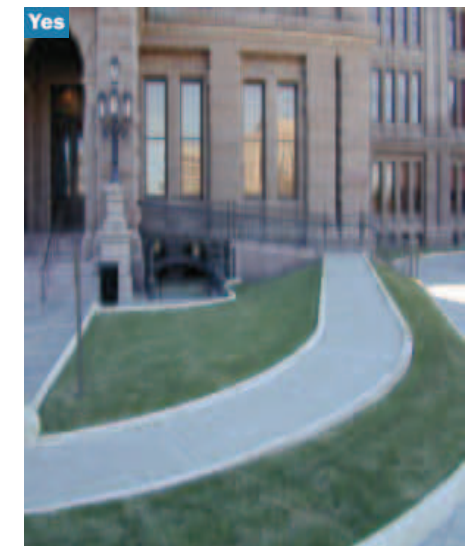
### Guidelines for Accessibility

#### 2.16.1 When adding accessibility features, such as ramps, minimize impacts on historic buildings and the surrounding historic context.

- Retain the key features of the historic structure in any design.
- Ensure that accessibility improvements are reversible to accommodate future changes in technology or building use.
- Add a ramp to the outside of a building or at an entry, wherever possible.
- Do not alter a storefront design or location to accommodate a ramp on the inside.

#### 2.16.2 When adding accessibility features to historic civic/institutional buildings, or other buildings that are located on a landscaped site, ensure compatibility with the historic site.

- Integrate ramps with the building's architecture and landscape setting.
- Consider providing access by gently re-sloping a large lawn and eliminating the need for railings, ensuring that the historic character of the building and site are not negatively impacted.
- Place ramps behind historic features such as low walls or railings, ensuring that they remain easy to find.
- Use materials for ramps that are compatible with the original building materials and design.
- Avoid installing pre-manufactured steel ramps or wheelchair lifts on the primary façade(s) of a historic building.



**Left:** An exterior ramp at the primary building entry, ensuring that it is easy to find. **Middle:** A ramp integrated into the historic loading dock. **Right:** A ramp integrated into the landscape setting.



This page is intentionally left blank