

DESIGN GUIDELINES

Hinton Historic District



Hinton, WV

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Table of Contents

Map	1
Introduction.....	2
Explanation of Design Guidelines	2
History and Development of Hinton.....	3
Hinton’s Historic Architectural Styles	4
General Concepts of Design	6
Neighborhood Sub-Types Within Historic District	7
Commercial Core/ CBD.....	7
Medium Density.....	7
Low Density/ Residential.....	7
Parts of a Residential Building.....	8
Parts of a Commercial Building.....	8
General Principals of Rehabilitation.....	9
Orientation: Blocks, Buildings.....	9
Residential: Low-Density	10
High Density Commercial Core Area.....	11
Demolition & Relocation.....	11
Applicable Building and Zoning Codes.....	12
Design Guidelines for Rehabilitation.....	13
Orientation	13
Fences	13
Masonry	14
Metals.....	16
Siding	17
Architectural Details	19

Doors.....	21
Windows	22
Storefronts.....	26
Roofs	28
Porches.....	32
Handrails and Balustrades.....	33
Secondary Outbuildings, Garages, Etc.....	34
Design Guidelines for New Construction & Additions	35
Massing and Scale.....	35
Setback.....	38
Height.....	38
Floor Levels	38
Roofs	40
Dormers.....	41
Rhythm.....	42
Style	42
Walls and Siding	42
Masonry	42
Siding	43
Doors.....	43
Windows	43
Orientation	43
Porches.....	44
Design Guidelines for Building Operations.....	44
Lighting.....	44

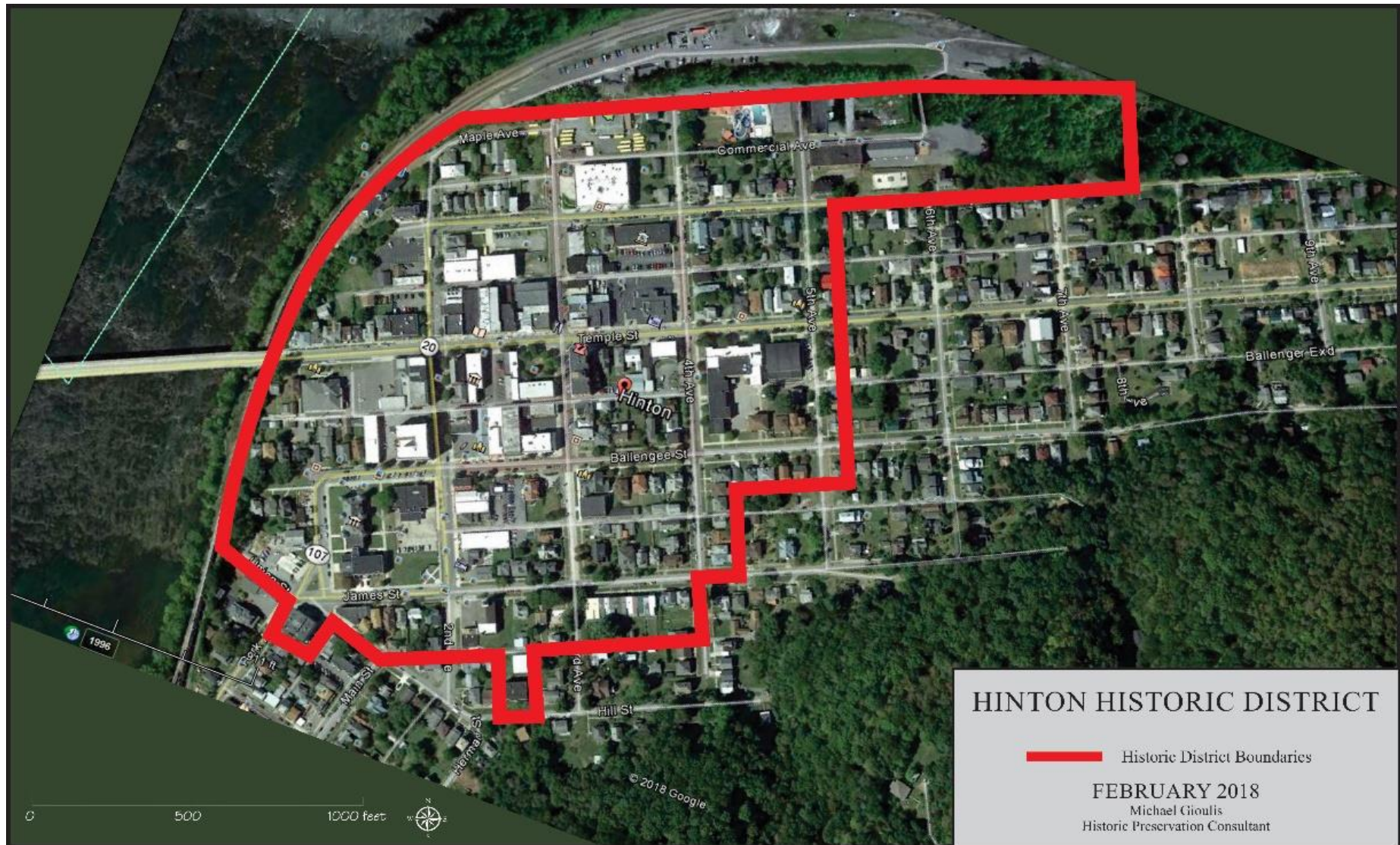
Table of Contents (Con.)

Mechanical Systems.....	45
Awnings & Canopies	45
Gutters and Downspouts	46
ADA	46
Design Guidelines for Site Features.....	47
Parking	47
Plantings.....	47
Paving	48
Walls and Fences	49
Garden Structures.....	50
Substitute Materials	50
Murals	51
Design Guidelines for Signage	51
Design Guidelines for Antennae and Dishes	52
Further Recommendations	52
Maintenance and Repair	52
Maintenance and Inspection Schedule	53
Color Schemes and Painting	53
Green Building Practices	54
Solar Panels.....	54
Appendix A: Glossary.....	55
Appendix B: Secretary of the Interior’s Standards	59
Appendix C: Substitute Materials List.....	62
Appendix D: Historic Preservation Contractors List	63
Appendix E: Certificate of Appropriateness Application	65

Appendix F: COA Application – Demolition Review Addendum ..	66
Appendix G: Substitute Roofing.....	67
Appendix H: National Parks Service Guidance on Window Replacement.....	69
Appendix I: Paint Color Chart	81
Appendix J: Financial Incentives for Preservation	82
Grants	82
Tax Incentives	82
Appendix K: Draft Sign Ordinance.....	83
Appendix L: Bibliography & References	88

MAP

Refer also to current zoning map to identify Historic District boundaries



INTRODUCTION

The City of Hinton, Summers County, West Virginia, and the Hinton Historic Landmarks Commission have long recognized the significance of Hinton's history to its continued development and preservation. The Historic District's association with the railroad and patterns of transportation is deeply entrenched in Hinton's history. The Hinton Historic District was listed in the National Register of Historic Places September 30, 1983 and May 19, 2005 (Boundary Revision) and contains approximately two hundred and forty-three (243) properties exhibiting the significant role that historic preservation has played in Hinton.

In recognizing the citizens' desire to protect the historic qualities that are the heritage of Hinton, the following design guidelines for maintenance, rehabilitation and new construction have been developed by the Hinton Historic Landmarks Commission.

The design guidelines were developed to reflect the specific character of Hinton's historic resources. They are intended to assist property owners in maintaining, rehabilitating, repairing and adding to historic buildings while respecting the original significant character that exists today. They are generally written to allow for individual application and flexibility for owners, while retaining the important architectural features of the building in question.

EXPLANATION OF DESIGN GUIDELINES

Design guidelines are used in directing the design review process by elaborating on the existing policies and principles established by the City of Hinton and the Hinton Historic Landmark Commission. They assist property owners, developers, architects and designers by offering suggestions for rehabilitation of historic buildings and in the design of new buildings which are compatible with the character of the Historic District. The Guidelines are instrumental in maintaining Hinton's strong historic identity.

These guidelines are intended to:

- Increase public awareness of the value of historic architecture and the importance of design issues;
- Help reinforce the character of the Hinton Historic District and protect its overall appearance;
- Preserve the integrity of designated historic areas;
- Assist property owners' contractors and architects in making basic design decisions;
- Improve the quality of development;
- Protect the value of public and private investment.

The guidelines conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. See Appendix B.

Additional information and assistance is available from the Hinton Historic Landmarks Commission; the City of Hinton; the West Virginia Division of Culture and History, State Historic Preservation Office (SHPO); and the National Park Service. The SHPO and the National Park Service publish a number of informational pamphlets based on the Secretary of the Interior's Standards. These include Preservation Briefs and Tech Notes which offer information on rehabilitation techniques such as cleaning masonry, repairing windows and making houses energy efficient. The Internet is also a valuable resource especially the National Park Service's site.

See also Appendix K, **Internet Connections for Historic Preservation**

COORDINATION WITH STATE OR FEDERAL AGENCIES

In instances where the project is being reviewed by the State Historic Preservation Office or the National Park Service the Hinton Historic Landmarks Commission will defer to their decisions.

HISTORY AND DEVELOPMENT OF HINTON

The City of Hinton is located on land originally claimed by Isaac Ballengee in 1785. His log house survived until the 1940s when the Bluestone Dam was constructed. However, he died in 1792 and one of his three sons, Isaac Jr. settled in the Hinton area near where the Chesapeake & Ohio Railroad (C&O) shops were built.

Patterns of transportation played a significant role in the history of Hinton. Early transportation arteries followed Native American trails intersecting near the Ballengee/Hinton settlement. By 1825, important early roads such as the Kanawha Turnpike and Red Sulphur were established. Prior to 1870 and the construction of the railroad, these trails were the principal transportation routes in and out of the New River country. However, improvement of roads in and out of Hinton was slow. Transportation did not see brisk growth until the arrival of the railroad and construction of the Courthouse.

Poor roadways lead to river transportation along the New and Greenbrier Rivers which played an important role in Hinton's history. Batteaux or rafts were operated to ship freight, lumber and materials used to build the railroad. Other river transportation included a steamboat and ferries.

Little development occurred before Summers County was formed in 1871 and only two houses stood in the Hinton/Avis area. In the early 1870's Hinton was chosen as a major terminal yard for the C & O Railway's main line and development followed. By the end of 1871 Isaac Ballengee, Junior's land was sold to the C & O Railway and the town platted for one hundred and seventy-eight building lots.

The railroad changed transportation for the region. The early river-based transportation gave way to locomotives and steam engines. When the railroad first came to Hinton, it transported agriculture-based freight. However, with industrial development in the region, the trains began to carry coal and lumber to markets in Virginia and Ohio. Hinton was an important stop for the C&O and its location assured the economic status of Hinton for decades.

The late 1800s were a time of growth and development in Hinton. After the city's incorporation in 1880, a water system, a school system, and other

governmental facilities and services were established, such as a sewer system and electric service.

By 1892, the C & O completed shops, a roundhouse, freight and passenger depots, and a YMCA.; the railroad operation employed five hundred and forty men that year. Along with this growth came the rise of the community's culture: an opera house was established in 1885 and organized religion developed. Most of the community's substantial church buildings were constructed in the late nineteenth century, many of these are still standing today.

Churches weren't the only things built during this time. During the years of 1895 and 1907 a building boom occurred. These monumental buildings defined Hinton's streetscape then and still do now – they include the Big 4/Hinton Hospital Building, the McCreery Hotel, the Laing-Humphries building on Second Avenues, as well as the buildings that make up the 200-block of Temple Street. The residential area on the fringes of the business district developed to provide worker housing that was close to the railroad and community amenities.

The population grew from 3,656 in 1910 to more than 6,654 in 1930. The railroad and coal fields along the New River were the driving economic force for the city. The 1930 high dropped slightly in 1940 and 1950. However, in the 1950's, changes in mining and locomotives affected the once stable economy of Hinton. The railroad did not need as many workers as machines became more efficient and hundreds of C & O workers were out of jobs and the population steadily declined each decade to a low of 2,556 in 2014.

Today the economy of Hinton is based on recreation and tourism. The railroad is an important part of Hinton's history and today's tourism. The Bluestone Dam, Bluestone Public Hunting and Fishing Area, Bluestone State Park, Pipestem State Park and New River Gorge National Park all contribute to the economy by attracting residents and visitors to Hinton.

HISTORIC ARCHITECTURE IN THE HINTON HISTORIC DISTRICT: STYLES

Colonial Revival: 1880-1955

Colonial Revival is one of the most common house styles. This style generally has two stories with a gable roof. The front door is accentuated, often with fanlights and/or sidelights. Usually, there is a front porch with narrow columns and a barrel vault roof. The windows are generally paired and double hung with multi pane glazing. There are many variations of this style.



Four Square: 1895-1930

Most Four Squares were built between 1910 and 1940 but examples do exist outside this time frame. The Four Square Form is prevalent throughout the United States. It is a type rather than an architectural style. This type is characterized by its cubic form and simple plan with four rooms on the first floor and four rooms on the second floor. It usually has a hip roof, often with hip or other roof type dormers. There is often a one-story front porch that can span the full façade or just part of it. The building may also have design elements from other popular styles incorporated.



Queen Anne: 1880-1900

This style is highly ornamented featuring a combination of steeply pitched hipped and gable roofs. Style is generally characterized by an asymmetrical façade, round or polygonal corner tower, projecting bay windows, patterned masonry and single pane windows often with small decorative panes or stained glass.



Greek Revival: 1825-1935

West Virginia has many examples of this style which date to a later period, often between 1880 and 1935. This style is usually two stories tall with a gable roof or a shallow hip roof. Characteristics include porches that span the entire façade, entryway columns scaled to the porch design and a front door decorative surround. Often, the door is centrally located and the cornice is very decorative and emphasized. The emphasized columns are often the most recognized elements of the style.



Gothic Revival: 1830-1860

The Gothic Revival style was popular for churches during this period. Common features of this style are: pointed arches as decorative elements and window shape, steeply pitched roof, gables often topped with finials, front facing gables with decorative trim and castle-like towers with parapets.



Bungalow: 1910-1940

The Bungalow Type is prevalent throughout the United States. It is a type rather than an architectural style. The low-pitched gable or hipped roof is the most prominent feature of this type and many have dormers with either gable or shed roofs. Features of this form include: one or two stories in height, front facing gables, full or partial front porch, multi pan windows and eaves with exposed rafters which overhang.



Tudor Revival: 1890-1940

In the 1920s and the 1930s, the Tudor style was second only to the Colonial Revival style in residential popularity. It is not as prevalent in Hinton. This style is easily recognized by its steeply pitched roof. Other features include: prominent chimneys, patterned stonework or brickwork, gables which overhang, entry porch or gabled entry and narrow multi-pane windows.



Italianate: 1840-1885

This style is modeled after the medieval farmhouses of the Italian countryside. Style is generally two or three stories in height and have single story porches. Features associated with this style are: tall narrow windows, low pitched roof, eaves which overhang, cornices with decorative brackets, elaborate window crowns and quoins.



Classical Revival: 1895-1950

Classical Revival is also known as Neoclassical and is commonly seen across the country. This style is often used for banks, schools, government offices and churches. Buildings of this style generally have massive columns with classical Corinthian, Doric or Ionic capitals and topped by a front facing pediment.

Characteristics of this style are: symmetrical design with center door, dentiled cornice, rectangular double hung windows, roof line balustrade, front façade columned porch and decorative door surrounds.



Art Deco: 1925-1940

The Art Deco style is widespread in commercial buildings but also occasionally found in residential architecture. Its use dates from 1925 to 1940 but its presence was made known at the Paris' Exposition des Arts Decoratifs et Industriels Modernes in 1925. Architect Eliel Saarinen is known for introducing the Art Deco style in the United States. Stylistic features of this style are, stylized decorative elements using geometric designs including zigzags and chevrons, smooth wall surfaces, forms simplified and streamlined, flat roof, and a vertical emphasis. In Hinton, the style is just associated with alterations to existing older buildings during the period. These are mostly in the commercial core, as storefronts.



GENERAL CONCEPTS OF DESIGN

The existing buildings combined with the streetscape and block patterns, open spaces and other elements that make up the Hinton Historic District form the overall experience. The mix of commercial and residential buildings in the Historic District is what makes Hinton unique. The individual resources that are a part of this environment must be recognized and preserved in order to protect and continue the existing sense of space and time.

The overall character of the Hinton Historic District is defined initially by historic town planning design concepts. This is then further refined to include specific architectural matters, such as style, detailing, etc. that create the specific form and context of the district. Design issues also include:

- Blocks
- Massing
- Orientation of buildings
- Setbacks
- Yards
- Landscape features such as fences, stairs, retaining walls, etc.
- Height and number of stories
- Rhythm
- Roof lines and shapes
- Materials
- Porches
- Decorative elements
- New construction and additions.
- Maintenance and Repair.

All of these factors impact the ambiance and experience of the built environment in the neighborhood. The design approaches are sometimes referred to as form-based zoning, or these design guidelines can make up a component of the city's form-based zoning code. See each heading for specific observations and recommendations.

Neighborhood Sub-Types Within Historic District

Commercial Core/ CBD

The commercial section of Hinton is made up of traditional – city commercial buildings and their patterns. These include:

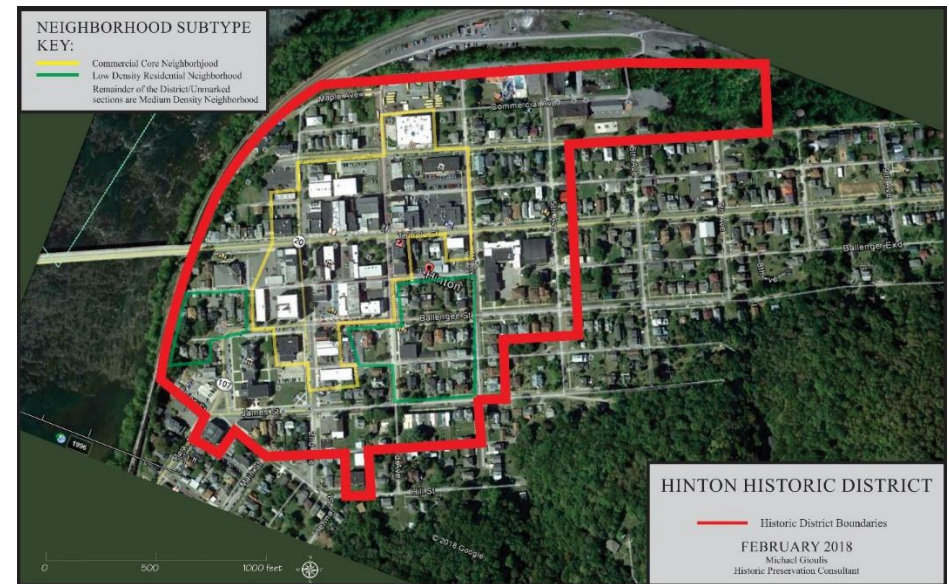
- Two and three story or low rise commercial buildings.
- Masonry materials, especially brick.
- Flat roofs.
- Storefronts on the first floor using typical storefront components (see illustration Parts Of A Storefront Building on page 14)
- Upper level residential or office use.
- Upper level window fenestration and patterns.
- Cornices and parapets at the top of the building.
- Cornices above the storefronts.
- No setback from the sidewalk.
- No side yards, buildings touching each other.

Medium Density

- Small front yards.
- Moderate side yard setbacks.
- Fence at edge of yard to sidewalk.
- Two story residential buildings.
- Frame buildings.
- Varied roof shapes.
- Sometimes row houses that are connected.
- Single or multiple family houses.

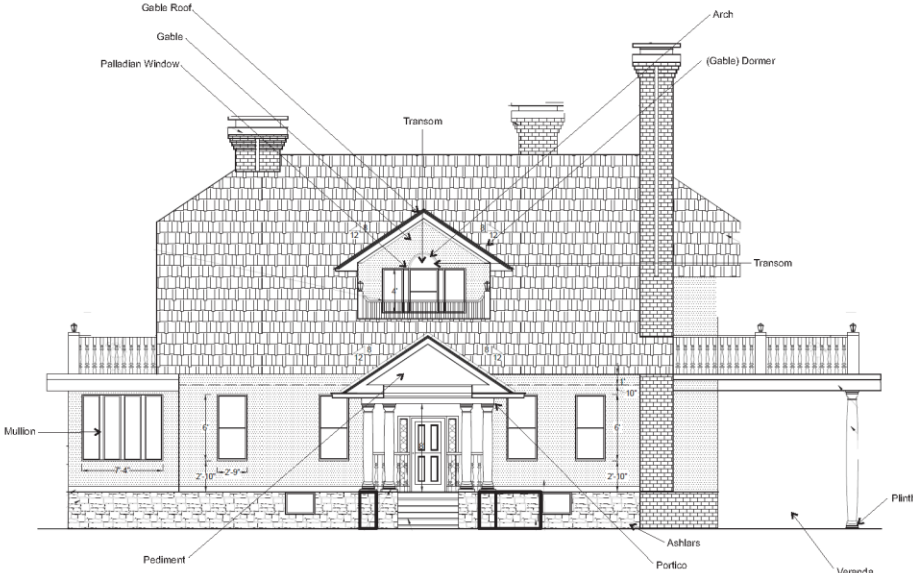
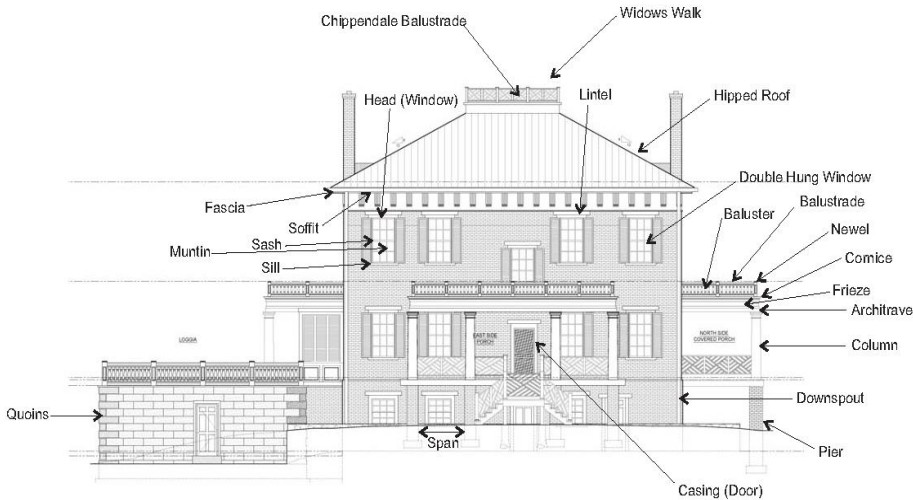
Low Density/ Residential

- Larger single family detached house.
- Some have been converted to office use.
- Two stories.
- Usually masonry.
- Varied roof shapes.
- Setback from sidewalk with large lawns.
- Mix of fences or no fences.
- Larger side yard setbacks.
- Not uniform alignment or orientation to street/sidewalk.



Map of Neighborhood Subtypes

Parts of a Residential Building



Parts Of A Storefront Building



PARTS OF A STOREFRONT BUILDING

GENERAL PRINCIPLES OF REHABILITATION

Orientation: Blocks, Buildings

Hinton has both residential and commercial buildings in its Historic District. Street structure is laid out in a patterned grid and is composed of one-way traffic in most instances except for the main streets through town. The sidewalks are concrete.

On blocks containing detached houses, the buildings are oriented towards the street with front, back, and side yards. The front entrance facing the street is the predominant entrance orientation. The density of the area changes from block to block exhibited by the change in building type from residential to commercial. Commercial area increases in density while the residential density decreases since houses are less closely situated. See also previous section Neighborhood Sub-types within Historic District.

Commercial buildings generally consist of a storefront on the lower street level and housing or office space above.

Almost all residential buildings have front porches; in many cases they are on the first and second story.



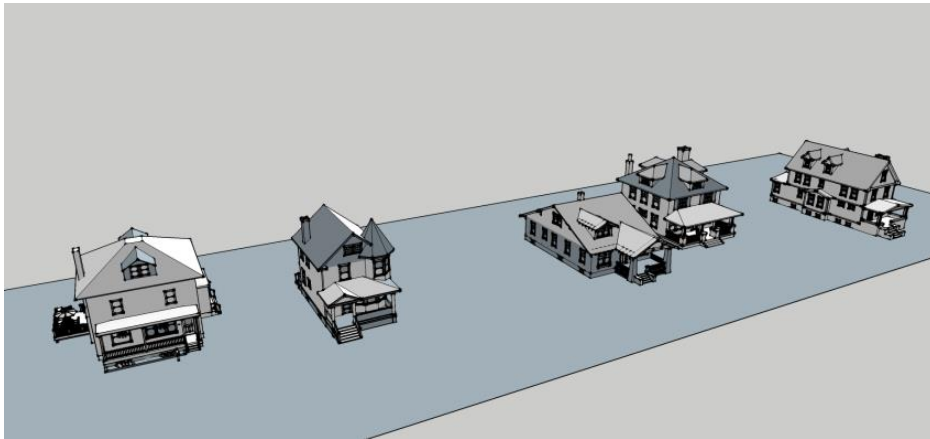
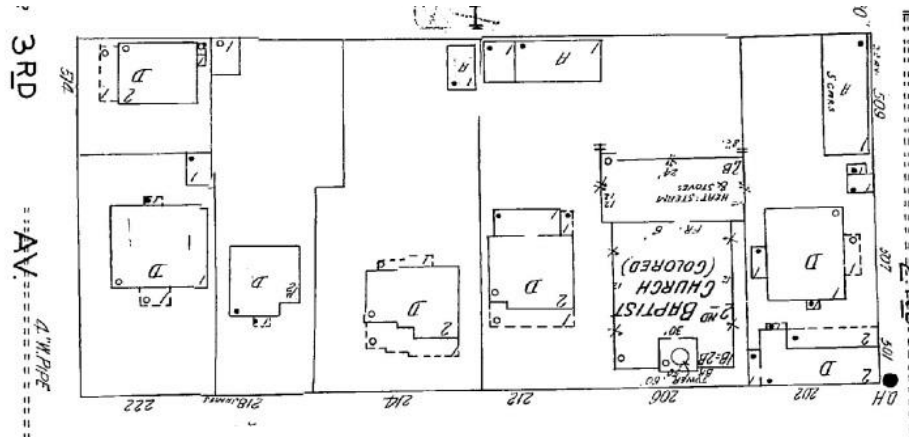
In Residential: Medium Density, houses are parallel to street.



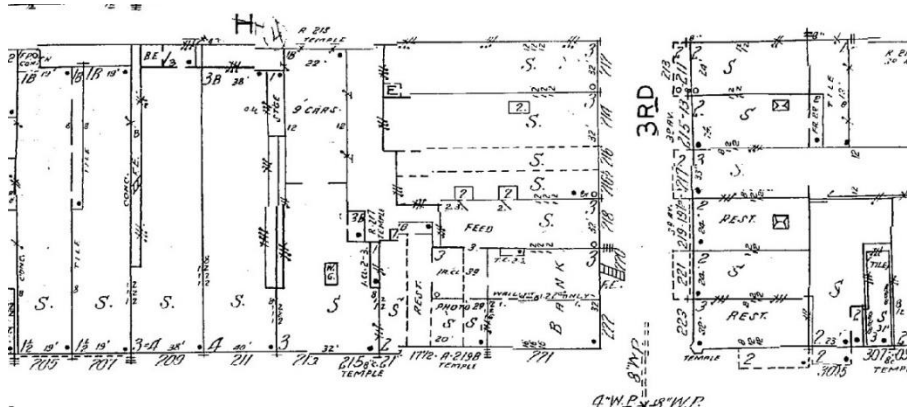
The 100-Block of Temple Street (Medium Density) features double porches and a two-way street

Residential: Low-Density

In low-density residential areas, the setback varies from property to property.



High Density Commercial Core Area



Demolition & Relocation

Relocation and demolition of historic structures should be avoided and should be considered only when all other possible options have been investigated. Relocation removes the building from its historical context and alters the overall block and setting. Demolition forever removes the building from existence. It is not reversible. If relocation or demolition cannot be avoided, the building should first be fully documented with photographs and a written record. This documentation should be completed before such action is taken.

The intent is to maintain the existing character of the neighborhood and to protect the valuable resources that cannot be replaced.

- If relocation is absolutely necessary, the building should be placed in a setting as near to the original as possible, with the same orientation, context, etc.

Demolition of a historic resource should take place only as a last resort. The following should be considered:

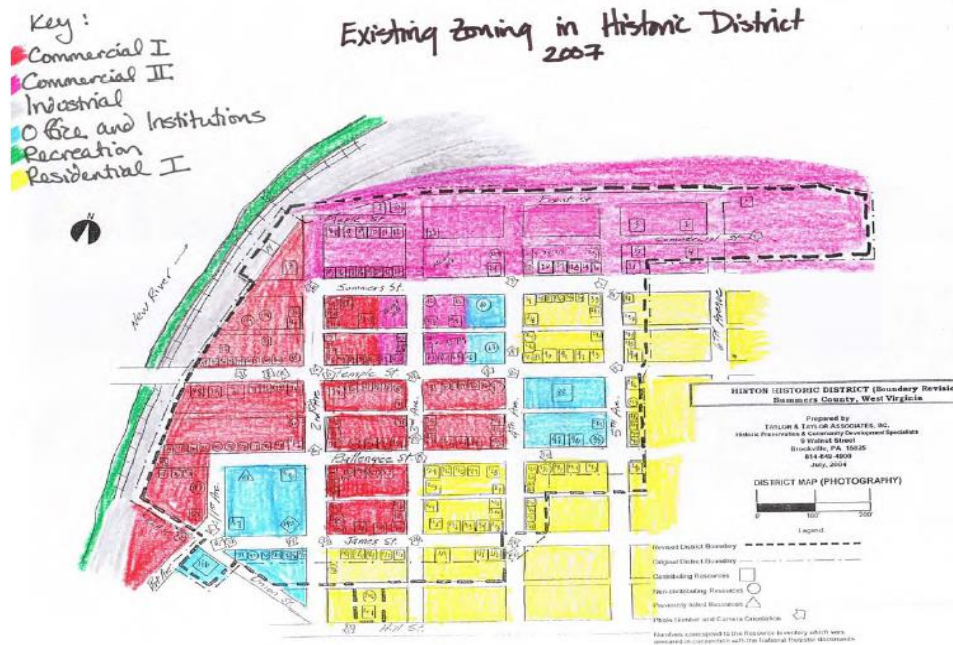
- The physical condition of the building based on an architect's or engineer's report.
- The cost of stabilizing the structure and bringing the building into compliance with the building code for its intended use as compared to the cost of new construction on the site for the same purpose.
- The intended use of the property and the design and compatibility of any replacement buildings.

To demonstrate the above the applicant must have:

- Engineer or architect report regarding the condition of the building and the integrity.
- Cost estimates for bringing the building into structural stability and code compliance.
- Cost estimates of new construction of a similar sized and use building.
- Plans illustrating the intended use of the property after demolition.

APPLICABLE ZONING AND BUILDING CODES

Hinton has a zoning ordinance, Chapter 35 “City of Hinton Municipal Zoning Ordinance”. The ordinance establishes seven zoning districts. The Historic District contains six zones. See the map below from the Hinton Historic District Master Plan 2009. These are consistent with the guidelines and use and function of the neighborhoods.



Source: Hinton Historic District Master Plan 2009

The following are excerpts from the Master Plan:

The current zoning ordinance allows for all of the use categories (Commercial I and II, Industrial, Office and Institutions, Recreation, and Residential I) within the Historic District boundaries. The current ordinance is not designed to treat the land within the historic district boundary any differently than other zoned areas of the downtown.

The Historic Landmarks Commission ordinance is not a section of the Zoning Ordinance and is not specifically referenced in the Zoning Ordinance. The Historic Landmarks Commission ordinance was enacted in 1989 and the current Zoning Ordinance in 1996.

For example, Section 30 calls for each building in every district to provide a prescribed number of off street parking spaces. Current practice for central business districts and historic commercial districts is to not specific parking spaces for each building, and rather, allow parking to be provided by public lots or other on-street and public off-street facilities. This protects the integrity of the historic district by not promoting demolition for parking spaces, by keeping buildings in a dense area, but utilizing 100% of lot line coverage, at least at the street line, and by protecting traditional relationships between the buildings and the sidewalks and streets. Parking is only one of many possible regulations that may be applied differently within the historic district and outside of the district.

It is essential that preservation regulations, such as historic district design review by the HLC, and zoning be coordinated. Coordination can take place in a variety of ways. One way is to arrange for regular meetings between members of the zoning board and the preservation commission. Interaction between the staff of both groups is also important.

The zoning ordinance was reviewed as part of this project and comments provided to the city to address discrepancies or suggest amendments. These included:

- Sec. 15. Recommend including a setback provision for front yards, where a 0 setback is required for the central business district.
- A comment on parking regulations recommending that parking be in the rear of buildings.
- A comment on vinyl materials in the Historic District.
- Recommend adding a separate district for the Central Business District.
- Recommend no parking requirements in the CBD.

Overall though the Zoning Ordinance and the Historic Commission Ordinance are consistent.

DESIGN GUIDELINES FOR REHABILITATION

Orientation

In all neighborhood types, buildings' orientation and setback are similar to that of adjacent properties.

- Setbacks should be kept within 10% of surrounding properties. The exception to this is in the commercial core and other areas where buildings abut each other; in this case, setbacks should exactly match that of the adjacent buildings.
- In the Commercial Core there are no front setbacks.

Lawn to Sidewalk Interface

In the low density residential areas, the lawn to sidewalk interface is often a single curb height step or curb or the lawn slopes to the sidewalk.



Single Curb and Lawn Slope Separating Sidewalk with Private Lawn

Fences

In the medium density residential areas, there is usually a fence or shrub line separating the sidewalk from the private lawn. This sometimes also occurs in the lower medium density residential areas. At times, due to the terrain of Hinton the interface is an actual retaining stone or brick wall.



Brick Fence Separating Sidewalk and Private Lawn.



Shrub Line Separating Sidewalk and Lawn

Treatment

- Relationship of the lawn to the sidewalk should be similar to adjacent properties. Fences in locations that have adjacent properties with fences are encouraged. In areas that do not have fences, such as the west end of Ballangee Street, fences are discouraged.

Masonry

Whenever feasible, original masonry should be preserved and maintained to help define the historic building's appearance. The most commonly used masonry material in the Hinton Historic District is brick. Sandstone is also used in many of the building foundations and details. Other types of masonry include exterior plaster and stucco.

Deterioration can be reduced by periodic inspection and proper maintenance. The proper maintenance including cleaning, pointing and replacement of sections too deteriorated to repair, will ensure its longevity.



Glazed Terra Cotta Block



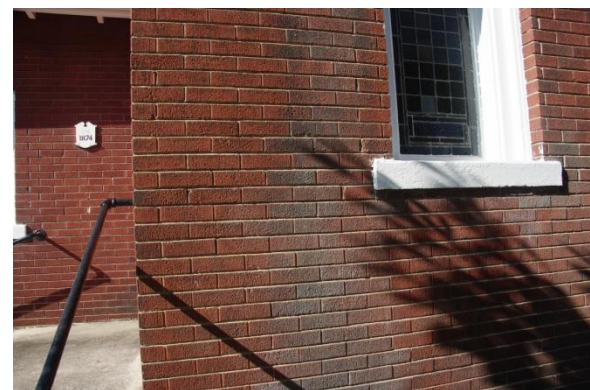
Sandstone Foundation



Blond Brick With Pink Mortar



Painted Brick



Red Brick With Recessed Mortar

Masonry Treatment

Cleaning

- Clean masonry only when it is necessary to halt deterioration or remove heavy soiling.
- Cleaning of buildings should be undertaken with extreme caution. Use the gentlest means possible.
- Before proceeding test various types of cleaning methods to determine which to use and amount of “clean” you want.
- A small to moderate amount of dirt is acceptable, especially if its removal will damage the building.
- A number of test areas should be prepared for observation using different chemicals and concentrations. Optimally, these should be left for six weeks before selecting any one treatment.
- While cleaning protect adjacent materials, landscaping and vehicles.
- Do not use acid for cleaning.
- Do not use high pressure water cleaning.
- Do not use any abrasive means for cleaning masonry. This includes sandblasting, grit blasting, black beauty, walnut shell blasting and any form of blasting.
 - Acid, high pressure water and abrasives can remove the exterior face of the masonry, exposing the soft inner material to the environment and causes deterioration and should not be used.
- Use chemicals formulated expressly for historic masonry.
 - Cleaners such as ProSoCo; Diedrich Chemicals; Dumont. Other manufacturers as appropriate.

Pointing

Masonry should be pointed, mortar joints retouched, whenever there is missing or deteriorated mortar.

- Wholesale, 100% joint replacement is not recommended.
- Spot point only the joints that are in poor condition.
- Removal of deteriorated mortar should be done by hand.
- Replacement mortar should match the original in color, strength, joint profile, composition, texture and other characteristics.
- Mortar should contain lime, sand and a small amount of White Portland cement in a mixture that is similar to the existing. Sand

should be selected to match the original in color, size of granules and texture. Pre-mixed masonry mortar should be used when it is compatible with the existing in all aspects.

- Samples of mortar and pointing techniques should be prepared and allowed to dry and weather to see if they match the original.
- Applications should include a description of the mortar to be used and close-up photographs of the exiting mortar joints.

Coatings/Waterproofing/Paint Removal

Coating masonry to provide waterproofing can lead to more damage than if untreated. Coating may form a barrier on the surface of the masonry, trapping moisture inside the wall. This can result in damage to the wall from freezing or other water related causes.

- Whenever possible, original masonry should be kept without applying any surface treatment.
- Do not paint masonry that is not painted.
- Continue painting masonry walls that have previously been painted.
- Do not coat walls with “waterproof” compounds, such as silicone.
- Remove paint from existing masonry only when it is necessary to halt deterioration.
- Do not remove paint from masonry without testing and study first. Removal of paint is very difficult and can cause damage.
- Do not use acid for removal.
- Do not use high pressure for removal.
- Do not use any abrasive means for paint removal. This includes sandblasting, grit blasting, black beauty, walnut shell blasting and any form of blasting.
- Acid, high pressure water and abrasives can remove the exterior face of the masonry, exposing the soft inner material to the environment and causes deterioration.
- Use chemicals formulated for historic masonry paint removal.
- Install test panels to determine proper chemical concentration, treatment and dwell time.
- In repairing stucco, use a mixture that matches the original in texture and appearance.
- Do not apply cement, stucco or other coatings to masonry buildings.
- Use chemicals formulated expressly for historic masonry.
- Applications should include a description of the cleaning method to be used.

Metals

Original pressed metal cornices, details and ornamentation from the late nineteenth and early twentieth century is prevalent in West Virginia and may occur in locations in the Hinton Historic District. Much of this work was purchased through mail order distributors and was readily available to contractors accessible by rail. In time these elements deteriorate through water attack and rust, physical attack by the elements and physical attack by demolition, alteration, etc. Other metals are prevalent also. These include cast iron, wrought iron, steel and other details such as fences, balconies, grills balustrades and handrails.

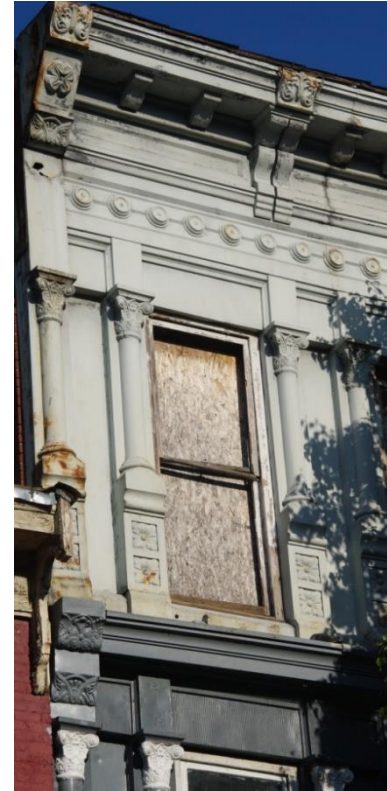
Repairs may consist of reattachment of loose sections, caulking joints and repainting. Original sections should be kept in all projects. Missing sections should be replaced with matching pieces, if available. If not, similar materials or replacement materials of the same appearance may be used.



Iron Cresting On Roof



Iron Fence Gate Detail



Cast Iron And Pressed Metal Details



Pressed Metal Pediment

Metal Treatment

- Repaint panels as required to avoid rusting and corrosion. Remove loose rust and prime the exposed surface before repainting.
- Repair damage with patching material compatible with the original material before repainting.
- Caulk and fill joints between panels before painting to avoid moisture penetration.
- Replacement panels can be fabricated with sheet metal and painted to match the existing material.
- When necessary to remove old paint, use a chemical remover or low pressure (80 to 100 psi) dry grit blasting.
- Repair or replace cast details with the same material.
- Do not install new details that are more decorative or from a historic time period not consistent with the building.



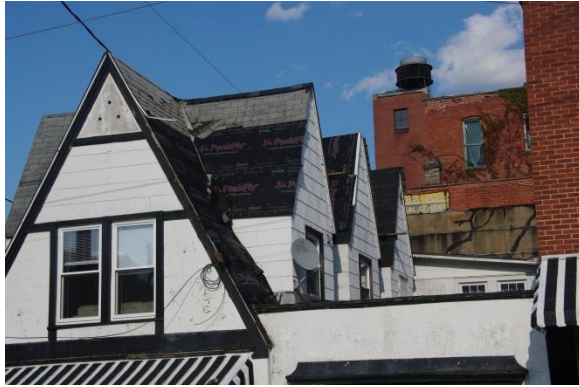
Shingle Siding

Siding

Many of the buildings in the Hinton Historic District are wood frame structures with various types of siding covering them. Siding comes in various forms, including clapboard, wide siding, vertical boards, vertical board with battens (smaller boards over the joints), cove or German siding, shingles and other variations. Wood is relatively easy to maintain and repair, as replacement of deteriorated sections can be simply accomplished. After repair or replacement, the wood must be prepared and painted.



Clapboard, Beaded Tongue and Groove, and Diagonal Siding



Half-Timbered and Stucco



Board and Batten

- Replace any details and molding, such as window trim, that is disturbed or removed when repairing or replacing siding. Keep any that is possible to keep.
- Remove later coverings of inappropriate materials over siding.
- Should not use vinyl or aluminum over existing materials.
- Vinyl and aluminum siding should not be used on primary elevations.
- Repair stucco with similar materials as the original.
- EIFS systems should not be used on primary elevations.

Treatment

Repair the original wood material if possible, replace only those portions missing or damaged, and prepare and paint it.

- Repair existing wood in place.
- Replace only those sections too damaged to repair. Use replacements that match the originals in size, shape, etc.
- Do not cover or remove historic materials.
- Prepare and paint wood.
- Do not use harsh chemicals or abrasive measures to prepare for painting
- Caulk all dissimilar materials and joints.

Details

Most of the homes in the Historic District contain architectural details and elements. These are columns, window and door trim, corner boards, brackets, cornice, caps, porch details, etc. They are important to defining the architectural style of the building and the construction techniques and styles of the period. They should be kept whenever possible or replaced if sections are missing.



Decorative Drop Finial



Jack Arch Lintel, Cartouche, and Modillion Cornice



Decorative Window Hood



Queen Anne Turret



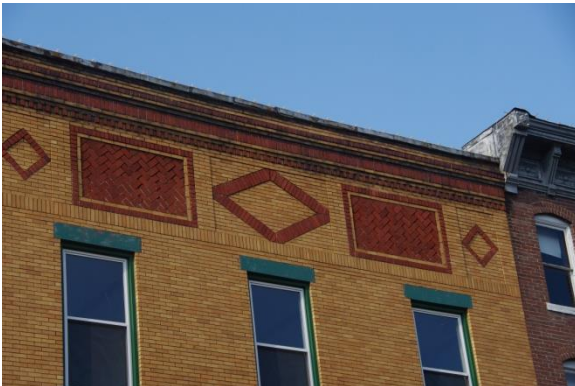
Ionic Columns and Plinths at Base



Projecting Scroll Brackets



Brick Corbeling and Coping



Brick Belt-course, Herringbone Panels, and Corbel Design



Battered Columns on Piers

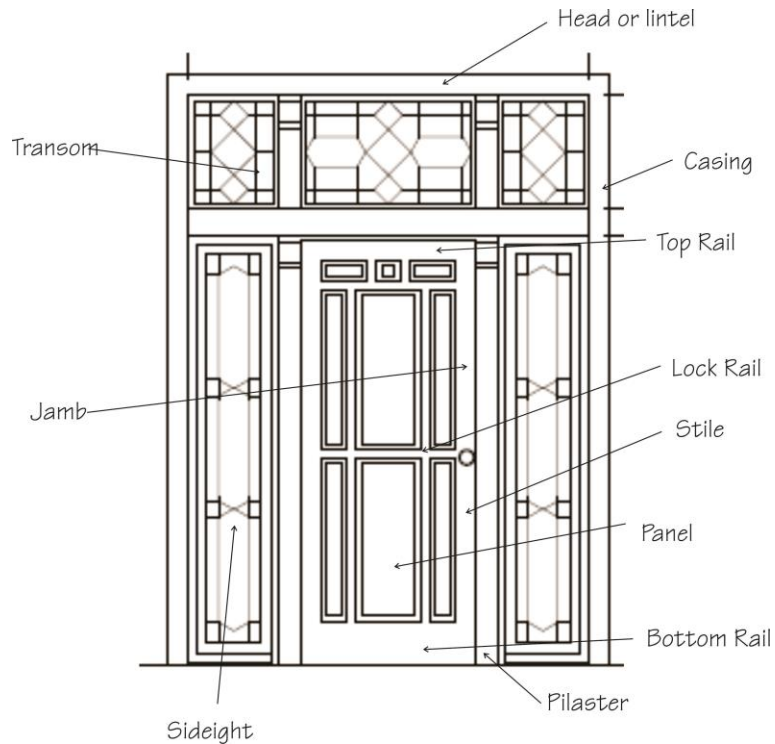
Treatment

Preserve the architectural details that give the buildings in Hinton's Historic District character and to replace them when missing.

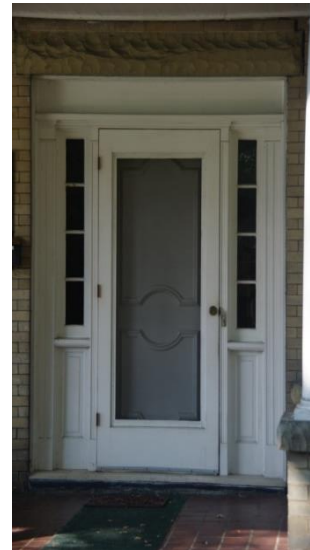
- Keep original details whenever possible. Do not cover with siding, signs, new elements, plywood, etc.
- Remove non-original elements covering original details whenever possible.
- Replace missing portions of details with ones that match the originals in size, shape, profile and details.
- Do not apply details that do not correspond to the architectural style of the building or the historic time period. Do not try to make a building more “historic” than it is.
- Details that are replacements may be simpler than originals, but in proportion and placement on the building similar to the originals.

Doors

Doors are the first elements encountered when approaching a building. They are extremely important to identifying the character and historical significance of the building. Original doors maintain the architectural style of the building. Many doors have been replaced with newer metal doors that do not match the character of the building. Often a commercial door is replaced with a residential style door or vice versa, thus confusing the style and function of the building. These actions are reversible. Alternative materials are allowed if they represent the period of construction. However, the proportions and dimensions should match historic doors in reference to stiles, rails, number of panels, recess of panels, general profiles, etc.



Parts of a Door



Residential Door with Fanlights



Commercial Door with Transom



Commercial Door with Large Transom



Residential Door

Treatment

Keep the original doors whenever possible and replace them with doors that match or that fit the architectural and historic character of the building.

- Keep and repair original doors if possible.
- Paint newer non-original doors to blend with the style of the building if not possible to replace.
- Replace doors with ones that match the originals and keep in style with the building when it is not possible to keep the original or the original does not exist.
- Do not change door opening size unless there are code or ADA issues.
- Replace doors that do not match the style or function of the building if possible.
- Maintain the existing relationship between the door and the street. For example, if the door is recessed on a porch, keep it in that location.

- If new metal doors must be used, keep them on a secondary elevation – not the front elevation.
- Keep the differentiation between main entrances and secondary entrances. For example, keep porch doors more simple than the front door.
- Changing the number, location or size of original door openings is not permitted on a primary façade. If new uses for a structure require additional doors, these should be located where they are not visible from a principal street.
- Use storm doors to improve thermal efficiency of existing doors. Exterior storm doors may be installed if they are made of wood, metal, fiberglass or composite and finished to match the trim or sash. Storm doors must have full view glass. If meeting rails or mullions are used, they should align with the meeting rails and mullions of the door.
- Replacement doors should match the configuration of the historic door, such as stiles and rails, panels, glass sections, etc.

Windows

Windows are often the major item in a rehabilitation program. They are one of the more character defining elements in a building, and unfortunately, often require repair. Many of the windows in the Hinton Historic District are residential style. The windows in residential buildings are usually vertically oriented. They are seldom square or horizontal. Many buildings have novelty or decorative windows unique to their architectural style. An example of this are the diamond shaped leaded glass windows in some of the Queen Anne style houses, or novelty windows with small square surrounds found in Foursquare and Bungalow house types.

Original windows should be kept whenever possible. Historic wood and metal windows can nearly always be repaired and frequently cost less than replacements. Before a decision to replace historic windows is made a few basic questions need to be considered. What impact will replacement windows have on the building as well as other buildings in the Historic District? Are the windows original and if not how old are they? Are the window features distinctive? Can the windows be seen from public spaces?

The last and most important question remains. When is it appropriate to replace historic windows? This cannot be decided until a complete evaluation of the windows is concluded. The evaluation needs to cover the overall condition of the window; glazing problems; condition of all window parts (sash, rail, muntins and stiles); condition of the sill and frame; the location of the window; condition of the hardware; and condition of the paint. The remaining factors are the overall number of windows to be repaired and how extensive the necessary repairs are to the windows. To answer the question, consider the following:

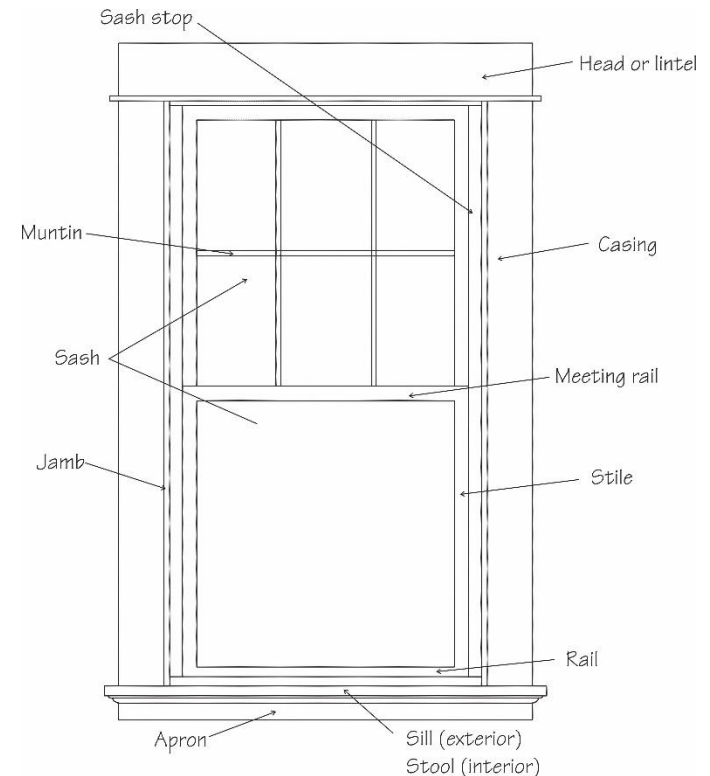
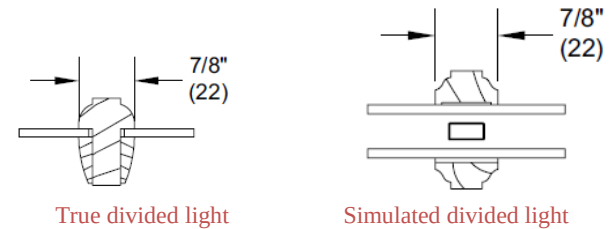
Categories of Deterioration and Repair

The following three categories of deterioration and repair are listed in the National Park Service Preservation Brief #9 (see Appendix H):

1. **Routine Maintenance.** Small repairs, often a part of a cyclical maintenance program. These include:
 - Paint removal or preparation
 - Painting
 - Glazing
 - Caulking
 - Weather stripping
2. **Stabilization.** Physical deterioration that can be repaired with minor work to the original material. This includes:
 - Patching
 - Waterproofing
 - Consolidating
 - Regluing
3. **Splices and Component Replacement.** Deterioration in specific locations that requires replacement of sections of the material or entire replacement of the components. This includes:
 - Remove sash
 - Repair frame or splice sections into the frame
 - Dismantle and remove sections of the sash or window
 - Replace removed sections with matching wood or historic material
 - Replace entire sash

On primary facades if the treatment exceeds category 2 replacement is acceptable.

On secondary facades if the treatment exceeds category 1 replacement is acceptable.



Window Types



Novelty Upper Sash



Three Over One Sash



Twelve Over Twelve Sash



Leaded Transom Over Fixed Sash



One Over One Sash, Paired



Two Over Two Sash



Porthole Window

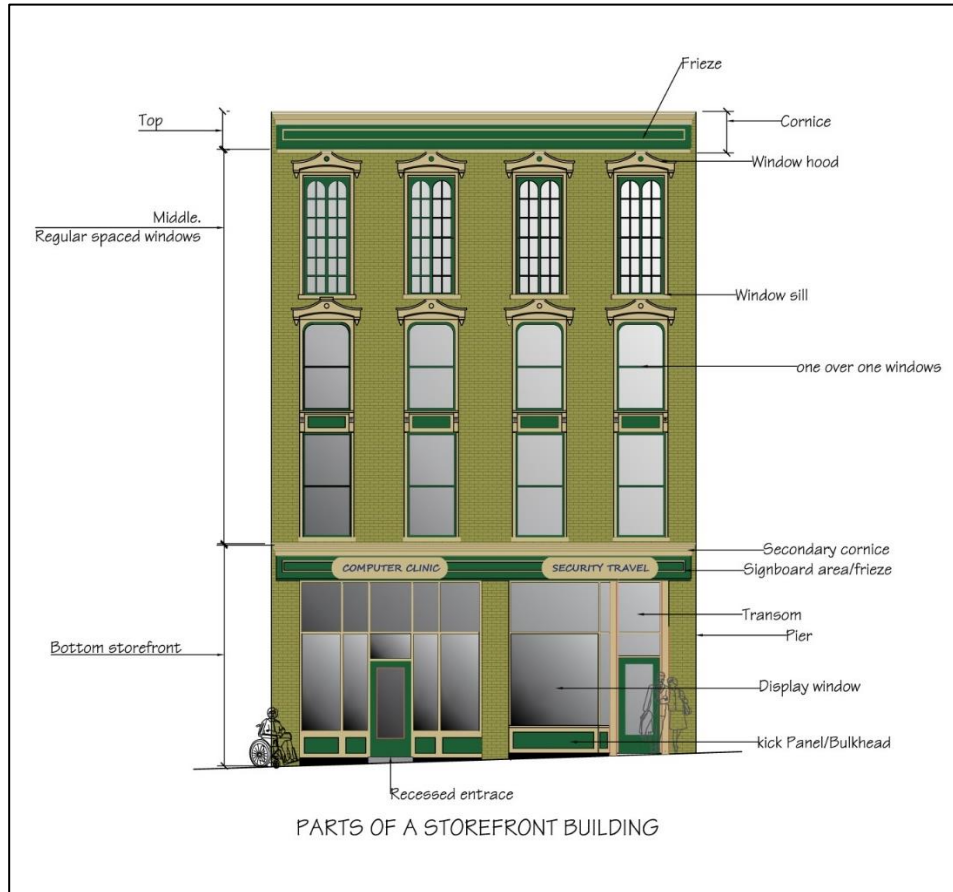
Treatment

Keep the original windows whenever possible and replace them with windows that match the original. If the originals do not exist use documentation evidence such as historic photographs or drawings of the building as guides to the types of windows to use. If none exists use simple one over one windows.

- Do not change the number, location or size of original window openings on a primary façade. If new uses for a structure require additional windows, these should be located where they are not visible from a principal street.

- Windows must fit the existing opening in the building.
- Do not use smaller windows with infill around them.
- Do not cover window openings with plywood or other material on primary elevations.
- Windows may be replaced on a primary façade as per the chart above.
- Use simulated divided light windows on primary elevations.
- Do not use tinted glass on primary elevations.
- Use wood windows on primary elevations.
- Vinyl windows are not allowed on primary elevations.
- Metal replacements may be considered on secondary façades provided that the finish, mullion and muntin configuration and profile are similar to the historic window.
- Where feasible, original casings should be preserved.
- Storm windows may be used to increase thermal performance of windows. Use storm windows that fit within the existing window opening, not attached to the frame.
- Use storm windows that do have similar or smaller stiles and rails to the windows.
- Storm windows should be made of wood, metal, vinyl or composite and finished to match the trim or sash.
- Rails must be in the same location as the original windows.
- Interior storm windows may be installed with airtight gaskets, ventilating holes, and removable clips to allow proper maintenance and avoid condensation.
- Shutter(s) should be installed only where evidence supports they were present historically. In such cases, each shutter should be equal to the height of the window opening and one-half its width. Shutter(s) should be operable and hung so that the slats shed water away from the window or door when closed.
- Vinyl shutters are not recommended.
- Alternative materials such as fiberglass, Hardie, metal, may be used for shutters as long as the configuration, details, stiles and rails, etc. match the original or historic shutters.

Storefronts



The storefront is the most important architectural feature of many of Hinton's Commercial Core buildings. Because they are such an important component of the building's commercial function storefronts have often been altered through time with changing retail concepts. Often these changes have altered or destroyed a building's distinguishing architectural features that make up its historic character.

The typical 19th-and-early-20th-century storefront consisted of single or double doors flanked by display windows. The entrance was frequently

recessed. In some cases, an additional side door provided access to the upper floors. The typical storefront had the following elements:

- Structural frame around the storefront itself.
- Secondary cornice separating the storefront from the upper floors.
- Signboard or frieze band beneath the secondary cornice.
- Recessed entrance, often centered.
- Display windows flanking the entrance.
- Kick panels beneath the display windows.
- Transom windows above the display windows and entrance door.

Some storefronts that were altered in the early to mid-20th century have gained historic significance in their own right. These are often Art Deco, Art Modern, or Mid Century Modern style storefronts. If the storefront design is a good example of its period and if it has gained significance over time, it should be retained as part of the historical evolution of the building.

If the original or significant storefront exists, repair and retain the historic features using recommended treatments.

If the original or significant storefront no longer exists or is too deteriorated to save, undertake a contemporary design which is compatible with the rest of the building in scale, design, materials, color and texture; or undertake an accurate restoration based on historical research and physical evidence. Where an original or significant storefront no longer exists and no evidence exists to document its early appearance, it is generally preferable to undertake a contemporary design that retains the commercial "flavor" of the building. The new storefront design should not draw attention away from the historic building with its detailing but rather should respect the existing historic character of the overall building.

A new design that copies traditional details or features from neighboring buildings or other structures of the period may give the building a historical appearance which blends in with its neighbors but which never, in fact, existed. For this reason, use of conjectural designs, even if based on similar buildings elsewhere in the neighborhood or the availability of different architectural elements from other buildings or structures, is generally not recommended.

Treatment

Storefront Rehabilitation

Become familiar with the style of the building and the role of the storefront in the overall design. Don't "early up" a front. Avoid stock "lumberyard colonial" detailing such as coach lanterns, mansard over-hangings, wood shakes, non-operable shutters and small paned windows except where they existed historically.

Preserve the storefront's character even though there is a new use on the interior. If less exposed window area is desirable, consider the use of interior blinds and insulating curtains rather than altering the existing historic fabric. Avoid use of materials that were unavailable when the storefront was constructed; this includes vinyl and aluminum siding, anodized aluminum, mirrored or tinted glass, artificial stone, and brick veneer.

Choose paint colors based on the buildings historical appearance. In general, do not coat surfaces that have never been painted. For 19th-century storefronts, contrasting colors may be appropriate, but avoid too many different colors on a single facade.

Replacement Storefronts

1. *Scale:* Respect the scale and proportion of the existing building in the new storefront design.
2. *Materials:* Select construction materials that are appropriate to the storefronts; wood, cast iron, and glass are usually more appropriate replacement materials than masonry which tends to give a massive appearance.
3. *Cornice:* Respect the horizontal separation between the storefront and the upper stories. A cornice or fascia board traditionally helped contain the store's sign.
4. *Frame:* Maintain the historic planar relationship of the storefront to the facade of the building and the streetscape (if appropriate). Most storefront frames are generally composed of horizontal and vertical elements.
5. *Entrances:* Differentiate the primary retail entrance from the secondary access to upper floors. In order to meet current code requirements, out-swinging doors generally must be recessed. Entrances should be placed where there were entrances historically,

especially when echoed by architectural detailing (a pediment or projecting bay) on the upper stories.

6. *Windows:* The storefront generally should be as transparent as possible. Use of glass in doors, transoms, and display areas allows for visibility into and out of the store.
7. *Secondary Design Elements:* Keep the treatment of secondary design elements such as graphics and awnings as simple as possible in order to avoid visual clutter to the building and its streetscape.

Specific Treatments

- Transoms should be located where they originally were. Retain height of transoms. If no transom exists, use adjacent buildings as guide for height of transom.
- Kick panels should be between 18-28 inches unless there is evidence of other dimensions. Some mid-century storefronts had tall kick panels to display small items closely, such as in jewelry stores.
- Do not cover existing storefronts or fill in storefront spaces with plywood or other siding materials.
- Maintain a transparency to solid ratio of approximately 70% transparent: 30% solid.
- Provide recessed entrances.
- Align cornices with adjacent storefronts to preserve the street line. Keep cornices within 10% of adjacent heights.
- For replacement storefronts metal framing may be used if it has similar proportions to the historic storefront.
- Use metal doors unless original wood ones still exist. Maintain a wide stile and rail configuration. Bottom rails should be 12-16 inches unless the style of the storefront is different.
- Transoms may be obscure glass or frosted glass if necessary.

Roofs

Roofs are an important element in defining the character and architecture of a building, particularly for residential styles. The shape, alignment, slope, materials, colors and overhang are all important in identifying the historic character. Special materials, such as slate, clay, tile or metal are important architectural elements in themselves, and should be kept whenever possible. When not visible, such as on flat roofs, the material is not as important as the actual operation and other considerations.

Roof Styles

Gambrel

Characteristics are: four sides; top two sides extend from peak and are not as steep as the bottom two sides; often include window dormers.



Mansard

A roof having two slopes on every side, the lower slope being considerably steeper than the upper. It is like a gambrel but the slopes are the same on all sides. It's often used as an accent detail on commercial or apartment buildings. In these instances, the upper roof may also be flat. Characteristics are: two slopes on each of its sides; lower slope steeper than the upper, lower slope punctured by dormer windows, steep roof with windows creates additional floor for habitable space.



Gable

Characteristics are: pitched roof; equal downward slopes on each side of a central, horizontal ridge which form a gable at each end.

Side-Gable



End-Gable



Cross-Gable



Hip

Characteristics are: all four sides slope downwards to the walls; a hip is the line of meeting of two of these slopes.



Flat

A flat roof has almost horizontal roof pitch for water drainage only. It almost always is concealed by a parapet wall.



Barrel

A barrel roof is curved resembling a cut-away barrel. Due to their uniform cross section they are able to cover rectangular buildings.



Character Defining Roof Styles

Certain architectural styles and roof details are considered significant character defining elements in themselves. These are styles whose definitions rely on the roof or roofs that are significantly prominent on the building.

Queen Anne

Roof characteristics are: steep pitched irregular shapes; dominant front-facing gable; hipped with lower gable; cross-gable; decorative gable ends; patterned shingle and spindle gable insets.



Craftsman/Bungalow

Roof characteristics are: low pitched gables; wide overhanging eaves; exposed rafter tails; and decorative brackets and corbels.



Roof Materials

Tile



Shingle, Fiberglass or Asphalt



Slate



Metal



Treatment

Keep original character defining roofing whenever possible. The original shape, configuration, dormers, overhangs and details of the roof should be kept. Also, if possible, gutters, etc. should be kept.

- Keep original roofing if possible.
- Replace original roofing with materials that match the original, if possible.
- Keep the original shape and slope of the roof. Keep the original alignment and configuration.
- New fiberglass shingles may be used, provided they are similar in appearance, color and texture to the original roofing and original detailing such as built-in gutters, snow boards, etc. are not removed in the replacement.
 - Replacing smooth textured shingles with dimensional textured architectural shingles is not appropriate.
- Unless the roof is identified as a character defining feature and a significant feature of the building, replacement with alternative materials including substitute slate, substitute tile, cement tile, or fiberglass shingles, when the correct overall scale in terms of size of the original material is selected, is acceptable.
- Examples of when the roof is character defining may include:
 - Craftsman Style building
 - Mansard roof
 - Mansard detail on roof or top of front elevation
 - Some Romanesque or Richardsonian Romanesque buildings
 - Slate roofs that have a pattern to them such as accent color stripes, fish scale stripes etc.
 - Some individually listed properties within the district where architecture is significant
- The overall texture and scale of the roof in relation to the building and to the district is a more important consideration than the specific individual roof tile texture, color etc. The overall color, scale, pattern, and texture should be approximated in the replacement roofing.
- If the roof has been replaced previously replacement with a matching roof is acceptable.

- Unless documentation is available, replacement with metal roofing is not acceptable.
- Metal roofing designed to match the appearance of other materials, such as slate or tile, is acceptable if the characteristics match the original roof.
- Use of “5 V” “V seam” etc. type through fastener roofs is discouraged. These may be appropriate for garages, outbuildings etc.
- Roof colors should match the historic appearance of historic roofing materials. For example, fiberglass shingles meant to imitate slate should be a slate color. Light colors were generally not used. For painted metal the color should match those available historically. Mill finish aluminum, bright gold colors, bright copper colors, bright primary colors such as red or green etc. are generally not acceptable. Black, iron oxide red, dark green, dark grey, brown, patina color verdis gris or brown are colors that are acceptable for metal roofs.
- Soffits and fascias should not be vinyl.
- See additional guidance on roofing in the appendix.

Porches

As with roofs, porches are an important element in defining the character and architecture of a building, particularly for residential styles. The individual elements, sizes and roof type are all important in identifying the historic character. The individual railings, posts, balustrades, etc. are important architectural elements in themselves, and should be kept whenever possible. Many commercial buildings in Hinton also had second floor porches.



Streetscape of lower James Street featuring two-story porches.



One-story porches on James Row House.



Residential building with one-story porch and inset balcony.



Three-story apartment building with inset porches.

Porch Treatment

Keep original character defining porches whenever possible. All original elements and configurations should be kept. If it is necessary to replace individual elements such as a porch post, the replacement should match the original. Most historic porches are constructed of wood and replacements should be wood also. Secondary, especially rear façade porches are generally simple and utilitarian. However, the same principles apply to them as well.

- Keep original porches and elements such as posts, rails, etc. if possible.
- Replace original elements with materials that match the original, if possible.
- Keep the original alignment, size, individual elements and roof type if possible.
- Keep the original alignment and entrance location.
- See handrail and balustrade section.
- Enclosing front porches should not be allowed.
- Porch ceilings should not be vinyl.



Raised porch on commercial building

Handrails and Balustrades

Balustrades and rails are some of the more visible character defining features of porches. A balustrade is a row of balusters or short columns supporting a railing. They often make up a major percentage of the porch's elevation. Balustrades are also used as decorative elements at roof edges, on balconies, and in front of windows.

New rails and balustrades located on porches or decks must meet building and other code requirements for safety and accessibility. Existing historic balustrades and rails often do not meet these standards.



Existing low-rise balustrade



Potential option for raising rail heights without compromising historic integrity.

Treatment

Treatment on primary facades and for character defining balustrades or railings:

- Retain existing historic balustrades and railings.
- Repair existing balustrades and railings if possible.
- Replace in kind with matching materials, profiles, shapes and dimensions when repair is not possible.
- Install new railings behind or adjacent to the historic railings, rather than adding to the historic railing, to comply with codes.
- New railings or balustrades required to comply with codes should not copy the original, as to not provide a false history. They should be compatible but neutral in design and appearance.
- Replacement materials such as extruded polystyrene and polyvinyl chloride are acceptable on non-primary facades.

Secondary Outbuildings, Garages, Etc.

In a residential neighborhood, secondary outbuildings such as garages and other shed buildings were typically located to the rear of the main house. These secondary structures are often similar in style, materials used, and date of construction as the main house. However, they are usually shorter and smaller than the main house. If the building is historic, keep it as is, if possible. If replacement is necessary, match the shape, style and materials to the original, but use contemporary materials that are compatible. Do not create a false historic structure. This applies to individual elements on the outbuilding as well, such as a garage door. The replacement should match the original in configuration location and appearance.

Comply with applicable zoning and other codes for placement, setbacks, height etc.

DESIGN GUIDELINES FOR NEW CONSTRUCTION & ADDITIONS

The intent of the guidelines is to preserve the architectural details that give buildings in the Hinton Historic District character and to replace them when missing. New buildings can be given a connection to historic ones with the application of details that are appropriately scaled and designed to complement the new building and the neighboring existing ones.

- Details in new construction or details that are replacements may be simpler than originals, but in proportion and placement on the building similar to the originals.

When new construction or additions are necessary for the continued use of a site, the new elements must enhance the existing historic character and yet still be identified as significant architecture on its own, representing its construction time period.

The construction of new buildings or additions to existing resources can significantly affect the character of a historic neighborhood like the Hinton Historic District.

New construction and additions should complement the qualities that have been identified as significant to the neighborhood. New construction should be contemporary in design yet be compatible with the historic qualities identified in these guidelines.

The intent is to design new buildings and additions that are compatible with the historic architectural qualities of the neighborhood and with urban design qualities. It is not to create cookie cutter imitations of the historic buildings or styles. However, modern designs are not discouraged but should respect the existing buildings and neighborhood through the elements and materials discussed.

- Do not remove or destroy original significant portions of buildings or entire buildings.
- Use materials that are similar to those that are found in the historic district buildings.

- Use a simple arrangement, not mixing more than two different patterns, textures or styles.
- Do not imitate historic buildings, details or elements to create a false history.

New construction can enhance the Hinton Historic District if the proposed design and its citing reflect an understanding of and a compatibility with the distinctive character of the district. In fact, appropriate new construction can add depth and interest to the district. See the discussion of design concepts and form-based codes in previous sections such as density, setback, orientation and height. Some of the fundamental design features that help a building relate to its context in the Hinton Historic District are described below.

It is important to in all instances to comply with applicable zoning and building codes.

Massing and Scale

New structures should appear from the street to be similar in size and shape to neighboring historic properties. The Hinton Historic Landmark Commission may require drawings, photographs or models to be submitted comparing the size and shape of proposed new construction to the size and shape of an appropriate number of buildings in the vicinity.

The overall shape and mass of buildings in a neighborhood is important in defining the character. In a residential area the buildings are two or three stories tall with varied roof lines, set back from the front line, with a fence defining the sidewalk. The parcels contain side, front and rear yards and the effect is a series of blocks within open spaces. The overall shapes also contain shorter or smaller masses at the rear. These are usually kitchens or additions on original buildings. Also, there is often a one or two-story porch on the front and rear, which may be shorter than the roof. This applies to both middle and low-density neighborhoods in Hinton.

Buildings should follow the setback, side yard, massing, etc of the adjacent buildings. Window fenestration, entrance rhythm should be similar to the existing buildings.

The intent of the guidelines is to maintain the massing system or rhythm of Hinton's residential and commercial areas. For example, in the residential neighborhoods, the lawns create a buffer between the public space, the sidewalk, and the private space, the building. The building a free-standing block within the lot. In the commercial core, this relationship changes so that there is essentially no private buffer between the building and the sidewalk. The purpose of the building is to be public space. Rhythm occurs with the spacing of buildings, steps up to porches, and spacing of entrances. In commercial core buildings there is an approximately twenty-five to thirty-foot spacing, or rhythm, between entrances. This serves to maintain a pedestrian's interest by providing objects in the display windows of the storefronts. Studies have shown that a gap of over seventy-five feet in a commercial street wall, such as a parking lot, discourages pedestrian activity across the gap.

For residential and low and medium density areas:

- Buildings should be located as free-standing blocks within the property lines.
- They should align themselves in the general direction of the neighboring properties.
- Front masses associated with porches should be lower than the building height. Lower additions or masses should be located on the rear of main blocks of the buildings.
- Free standing additions or new construction should be located in the same general locations as traditional outbuildings, to the rear and side of the main block.
- Entrances and rear or side additions should be lower than the main block of the buildings.
- Entrances should be oriented to the sidewalk, unless it is a corner lot, where they may be oriented to the sidewalk intersection at the corner.
- Residential style buildings should have front porches and should have rear porches.
- Large buildings, such as multiple family residential units, should have their massing reduced to similar proportions of neighboring buildings. This can be accomplished with stepped sections, recessed dividing lines at intervals, etc. Provide similar three-part massing or proportional five or greater part massing as noted in apartment buildings above.

- Buildings should have irregular massing. This means central mass block with smaller masses for porches or wings, dormers or bays.
- Buildings should have irregular roof lines.
- Massing should be varied, without a single large block. It should be similar to the massing of adjacent buildings.

Appropriate



Appropriate streetscape massing



Appropriate CBD infill

Appropriate (con.)



Irregular Roof Line



Varied Massing

Inappropriate



Example of inappropriate infill in the Hinton Historic District. The house's massing and materials are not compatible with the streetscape.



Example of inappropriate modern infill in the Hinton Historic District. The building's massing is not compatible with the streetscape

Treatment: Massing

For buildings within the Commercial Core:

- Buildings should be located as part of the street line of the adjacent buildings.
- Porches should be allowed if adjacent buildings had or have a porch. Front masses associated with porches should be lower than the building height.
- Lower additions or masses should be located on the rear of main blocks of the buildings.
- Front entrances should be recessed and in similar location in the storefront as adjacent buildings.
- For large scale new commercial buildings maintain a rhythm of approximately 30 linear feet of massing to mimic the traditional length of atypical commercial building. Separate the sections with pilasters, shadow lines etc.
- Even if there are new functions within the first floor, maintain a storefront design for each segment.
- Buildings should have flat roofs or be concealed from visibility with parapets giving a flat appearance.

Setback

All of the residential buildings in the Hinton Historic District are set back from the front property line, providing a front yard. This is important to interpreting the residential character of the neighborhood.

The intent of the guidelines is to maintain this feature.

- Buildings should be set back from the property lines.
- Additions should not be constructed in the front of buildings that eliminate the setbacks.
- Setbacks should be within 10% of the depth of neighboring buildings.
- Setbacks refer to the main building mass, not the porch. Porches should project within 10% of adjacent porches.

In the Commercial Core buildings should have no setbacks.

Height

Most of the residential buildings in the Hinton Historic District are two stories tall. They are all relatively similar in height, with all shapes of roofs represented, mostly of varied heights and shapes. Most of the buildings in the Commercial Core are two or three stories.

The intent of the guidelines is to have buildings similar in height, to provide a cohesive ambiance to the neighborhood. Buildings that are too tall will create a barrier to the rhythm of the massing in the neighborhood. Buildings that are too short will create an open space in the rhythm of the blocks.

- Buildings should be constructed to be within 10% of the heights of neighboring buildings.
- False walls, additions and parapets should be constructed to be within 10% of the height of neighboring buildings.
- Details, cornices, brackets, etc. rehabilitated or installed on new or existing buildings, should be similar in height location as neighboring buildings.
- Follow Hinton Zoning Ordinance for building height restrictions.
- Additionally, similarity in the heights of prominent building features, such as porches and cornices, is encouraged.
- Heights of dormers, porches, bays, oriels, towers, turrets etc. should be similar in proportion to those of adjacent buildings. They should not be the same height as the main roof or block of the building mass.

Floor Levels

Most buildings have their different stories identified on the exterior by the position of windows and doors, installation of belt courses, cornices or other details, or by the arrangement of porches, etc. Though the overall height can be similar, buildings with different floor levels will not appear the same from the exterior and will spoil the rhythm of the neighborhood. Many of the residential buildings have a first floor which is higher than ground level.

The intent of the guidelines is to have buildings with similar proportions, indicated by identifying floor levels. Tall buildings and large massed

buildings should have the massing broken with floor level indicators and window and door positions in proportion to neighboring buildings.

- Window and door heads should be located to a height similar, within 10%, of neighboring buildings.
- Belt courses or accent strips at floor level, identifying floor levels similar to neighboring buildings should be added to break up solid sections of large walls.
- Porch floors and ceilings, and roofs should be located at similar heights as neighboring buildings, within 10%.
- Residential buildings should have the first floor elevated from the ground with a water table or other element identifying the first-floor level on the exterior.

Appropriate Height Rhythm Illustrations



Windows, Door Heads and Roof Heights Are Within 10% Of Neighboring Buildings.



Even Parking Garage Openings Align with Porches and Windows.

Inappropriate height rhythm



Windows and roof heights are at different levels than surrounding buildings.

Roofs

New roofs in additions or new construction should match the originals in appearance. They should be aligned in a similar manner as the originals or as neighboring buildings. Slopes should reflect the original configurations or be similar to neighboring buildings.

Roof Lines

Roofs are very important to residential architecture. Residential roofs in the Hinton Historic District are varied in height and shape. Hinton's commercial building roofs are generally flat with a few exceptions.

The intent of the guidelines is to have roofs be similar in shape and character to their neighbors, to maintain the overall effect and rhythm.

- For residential buildings new roofs should be hip or gable, in similar slopes to the neighboring buildings.
- For commercial buildings roofs should be flat.
- Roofs should retain the irregular massing and size, shapes and arrangement.
- Roofs should be oriented in the same direction as neighboring buildings. For example, a gable roof should run parallel to the sidewalk if the neighbors run in the same directions.
- Irregular roof lines should be considered in the Hinton Historic District as many of the roofs contain irregular massing. A large solid roof will spoil the rhythm of the block if the other roofs are composed of intersecting gables or a number of different heights and slopes.
- Solid roofs should have dormers or other penetrations and masses similar in proportion to neighboring buildings.
- Additions to roofs or the building should have varied roof lines as well, to break up the overall massing.
- For buildings designed to a specific style that has different roof lines, such as Art Deco flat roofs, demonstrate the appropriateness of this type of roof for the new building or addition.

Roof Materials

Roofing materials for new construction should reflect what is common in the neighborhood.

- Standing seam metal in copper, tin, or terne coated steel, slate, clay tile and mineral fiber slate substitutes are traditional materials that can be used in contemporary work. Other metal roofs, such as snap seam or other concealed fastener systems are encouraged. Aluminum with a baked-on finish is acceptable material.
- Metal roofing designed to match the appearance of other materials, such as slate or tile, is acceptable if the characteristics match the intended design style of the building.
- Use of “5 V” “V seam” etc. type through fastener roofs is discouraged. These may be appropriate for garages, outbuildings etc.
- Roof colors should match the historic appearance of historic roofing materials. For example, fiberglass shingles meant to imitate slate should be a slate color. Light colors were generally not used. For painted metal the color should match those available historically. Mill finish aluminum, gold colors, copper colors, bright primary colors such as red or green etc. are generally not acceptable.
- Slate and clay tile is sometimes used but is expensive. There are several substitutes that are less expensive and lighter in weight for new applications. See discussion in Appendix G.
- New roofs in new construction should match the adjacent in material and appearance. They should be aligned in a similar manner as the neighboring buildings. Slopes should reflect or be similar to neighboring buildings.



Slate Substitute Rubber Roofing

Dormers

Many of the buildings in the Hinton Historic District have roof and wall dormers so it is appropriate to use them in new construction provided they are used in a similar manner.

- Design dormers with the same or steeper roof pitch as that of the main building. The dormers should not overpower the roof slope and elevation on which they are placed.
- Use shed dormers on buildings when appropriate to the architectural style for the building. For example, shed dormers are acceptable for Bungalow, Craftsman, and some Colonial Revival Style buildings. Gable or hip dormers are often appropriate for Four Square, some Colonial Revival, and Gothic styles.
- Either align dormers with the windows on the façade or locate them between the windows below.



Dormer Aligned with Windows

Rhythm

The rhythm of the buildings in the Hinton Historic District establishes the overall opening and solid feeling of the blocks. Within the blocks, each building also contains a rhythm. These are established by the arrangement of windows and doors versus solid wall sections.

- For residential buildings there is a relatively small proportion of void (openings such as windows and doors) to solids in the main body of the house. The proportion should be about 15 to 25% void to solid.
- If there is a front porch, the porch should be open, with very little solid sections.
- Window openings should be oriented vertically, in similar proportions to neighboring buildings.
- The spacing of porches or entrances should be similar to those on the block. For example, if most entrances are spaced approximately 30 feet from adjacent building entrances this rhythm should be retained or replicated.



Note rhythm established by this row of houses with regular spacing, similar distances to the entrances, and porches.

Style

Buildings in the Hinton Historic District reflect the extended period of significance of the area. They are reflections of the time that they were constructed. New construction should respect this continuum of development in the town and be contemporary in design, while respecting the neighboring buildings. False “historical” buildings should not be created.

Walls and Siding

Building materials in the Hinton Historic District vary from substantial stone and brick, simple shingles of residences to more elaborate woodwork. A designer has options but should respond to the general rule that neighborhood context indicates choice of materials. The proper selection of building materials will help determine whether a new building is successfully integrated into an existing neighborhood. Asbestos, reflective glass, unparged or unpainted concrete block, porcelain-coated metal panels, permastone, formstone and fiberglass are not recommended as they disrupt the continuity of the neighborhood.

Masonry

New construction in brick or stone masonry often helps new buildings blend into existing neighborhoods. Masonry veneer often provides a less expensive alternative to complete masonry construction. However, care must be taken in the appearance of masonry veneer; it should complement the existing masonry of the neighborhood.

- Additions should match the masonry materials used on the main building, as well as the bonding and joint patterns.
- Brick color and texture should match those used in the neighborhood for new buildings.
- Most historic brick siding has a relatively narrow range of hues. Do not use a range of brick with wide variations, or stark contrasts.
- Stone should be sized to match the scale of the building and should be compatible with the stone used in the neighborhood.
- The texture of brick walls can be varied by using different bonds: all-header bond gives a dense texture; Flemish and English bond a normal texture; and common bond a very low-key texture.

Siding

Wood is a common building material in the Hinton Historic District. New construction can continue this tradition through the use of window and door trim and various wood sidings. Beveled siding, cedar shingles and German siding are common traditional materials used in contemporary designs. Again, neighborhood context should dictate choice of materials.

Aluminum or vinyl sidings are not recommended, if used smooth finishes and widths appropriate to the neighborhood or existing buildings should be selected. Avoid siding with an exaggerated “woodgrain” texture, or excessively wide or narrow profile. In addition, the design should include sufficient detail and trim.

- Use wood if possible in new construction.
- Use similar detailing, such as window trim, in new construction to provide architectural elements and proportions.
- Cement board-type siding is acceptable.
- Use of vinyl or aluminum siding on new construction is not appropriate.

Doors

Doors provide a good opportunity to define overall style and to relate new construction to surrounding buildings. Recommendations are:

- The proportion, size and detailing of doors in new construction should relate to existing and adjacent buildings.
- New secondary entries should be low-key and located on side or rear elevations where they will not conflict with the primary entrance.
- Ramps for handicapped accessibility should be located at the point of best access to users and, where possible, should be sensitive to the overall design and character of the building.
- For residential buildings new doors should be residential in design with panels, lights or other similar divisions. Flush panel doors are not acceptable for primary elevations.
- For commercial buildings, doors should be commercial in nature. Single light doors with wide stiles and rails are appropriate. Flush panel doors on primary elevations are not acceptable.

- Wood, metal, fiberglass are acceptable materials. Use proportions and configuration of door elements such as panels, stiles and rails that are compatible with historic details.

Windows

Most residential buildings have windows that are oriented vertically. The Hinton Historic District contains windows that are single-hung, double-hung, have leaded glass, stained or colored glass, etc. depending on the style of the house. New construction should respect the vertical orientation of windows in a residential setting and for thermal efficiency, should be double-hung. This is entirely appropriate. If combined windows are used as a focal point in the design of an elevation, they should relate to other features of the façade. The window placement should relate to the adjacent buildings as in the previous discussion about floor levels.

Orientation

The entrance should be oriented to the same elevation as the adjacent buildings.

- Generally, this will have entrances on the facades that are parallel to the street.
- In corner lots, corner entrances are allowable.
- Orient the front façade in the same plane as the adjacent buildings. In some instances, houses are not parallel to the street, but step back in a sawtooth pattern to follow the street alignment.



Note the houses all have their entrance to the front.

Porches

New rear and side porches should be lower than the height of the structure.

Historically, if a front porch did not exist on the front façade then a porch should not be constructed. New porches should be constructed in the rear or on the side of structure.

- Should not exceed the height of the house.
- On secondary elevations, timber porches are acceptable.

DESIGN GUIDELINES FOR BUILDING OPERATIONS

In addition to the structural and architectural elements of a building, other elements contribute to its character.

These include items such as lights, awnings, handicapped access ramps, etc. In order to maintain the character of the neighborhood, these should be addressed in new construction, rehabilitation and additions.

The intent is to provide a complete package of compatible elements in a building. It is not worth protecting and saving decorative architectural fabric if it will be covered over with an insensitive awning, etc.

Lighting

- Install lights that are compatible with the style and architectural elements of the building. Do not install false historical lighting to create a specific time period.
- In new construction, install lights that are compatible with the building and the adjacent buildings.
- Proper installation of lighting will prevent direct and indirect light and glare from disturbing adjacent properties.
- Install highlights in obscure areas so the fixtures do not intrude on the historic elements of the buildings.
- Do not install lights that damage architectural elements.
- Design brackets and attachments to complement the architectural style of the building.
- Paint exposed brackets and conduit, etc. to blend with adjacent materials and not be visually distracting.
- Retain existing original exterior lighting fixtures.
- Lamps should be selected in the 2700 to 3500 K temperature range.
- Many lighting manufacturers or suppliers provide guidance on light fixtures that correspond to architectural styles, such as Rejuvenation Lighting below.

Lighting Resources

- Rejuvenation Lighting www.rejuvenation.com
- House of Antique Hardware www.houseofantiquehardware.com
- Renovator's Supply <https://www.rensup.com/>
- Product listings in The Old House Journal <https://www.oldhouseonline.com/old-house-directory/lighting>
- Product guides at Traditional Building <https://www.traditionalbuilding.com/>
- Van Dyke's Restorers <https://www.vandykes.com/>

Mechanical Systems

The location of new heating and cooling equipment can affect the historic and architectural appearance of the building. If installed insensitively it can cover up or damage significant elements. If left unchecked water may discharge from a projecting unit causing damage to exterior walls, windows and sidewalks.

Insure that features installed for modern functional purposes do not damage the historical appearance or architectural character.

- Install mechanical systems on roof if possible to be obscured from view. If the roof is not flat or is visible, install in non-visible side of roof.
- If necessary to install units on the ground, locate them in obscure locations, or screen them with compatible fencing or landscaping. Do not install in front of building or front lawns.
- Mechanical systems should not be installed through the wall or as window units on the primary facade.
- In the commercial business district mechanical systems should not be installed through the wall or as window units on the front elevation.
- Install Window air conditioners in a safe and secure manner. Follow all manufacturers recommendations and applicable codes. The following suggestions are presented for information only:
 - Make sure that electrical service is adequate. AC units should have dedicated outlets.
 - Ensure that the window and frame where the unit will be installed are in good condition.
 - Follow the manufacturer's instructions.

- Make sure the unit is installed securely. Support the unit from underneath, or firmly fasten it from inside with angles. You may use metal brackets, mounting rails, etc.
- Supporting metal brackets, interior angles, etc. should be structurally fastened to the building and must be strong enough for the size and weight of the AC unit.
- Objects or shims used to adjust the position of the AC unit must have an independent source of fastening or attachment.
- Secure leveling objects to prevent movement and shifting due to vibrations from the AC unit, wind and other weather conditions.
- Install the AC unit so it remains in place when the window is opened, or affix it so that the window can't be opened accidentally.
- Tilt the unit slightly to provide water drainage, but don't over tilt. Do not allow water to drip on building or sidewalk.
- Do not use loose objects - such as wood blocking, bricks, telephone books, gypsum board or cans - to support the leveling of the AC unit.
- Do not place anything (TV antennae, satellite dishes, plants, etc.) on top of the AC unit.
- Do not block fire escape windows or other exits with the AC unit.

Awnings & Canopies

Awnings and canopies have historically been utilized to protect the interior of the building from the sun. More modern developments have transformed this utilitarian equipment into advertising and design features. It is important to keep the original function of awnings in mind when installing them on new or existing buildings.

Provide awnings that complement the architectural features and style of a building rather than define it. Awnings should be functional.

- Shed-style awnings are preferred; avoid barrel, bubble or umbrella types.
- Fabric awnings are preferred.
- Retractable awnings are acceptable, though not necessary.

- Install awnings in relation to the opening that they are to protect. For example, the awning should be approximately the same width as the window or storefront that it covers.
- Awnings should be installed to provide a minimum 8-foot clearance above the sidewalk, if possible.
- Awnings should not extend up the façade of a building covering the cornice or window or door head.
- Awning valances should be no more than twelve inches tall, preferably eight inches.

Gutters and Downspouts

Gutters and downspouts are often a historical element on a historic building. Many buildings of the early twentieth century had built-in gutters lined with tin or other metals; Yankee gutters; and half-round gutters and round downspouts, often in copper. Scuppers (water outlets) were often decorative using gargoyle or other decorative features. It is important to keep any and all of these features as long as they are in good repair and operational.

The intent is to retain all historic and original gutters and downspouts that are in good repair and usable.

- Retain all original and historic gutters, downspouts and scuppers in good repair.
- If repair is necessary, match the configuration and materials of the original.
- If replacement is necessary, only do spot replacement. Replacements should match the originals in configuration and materials.
- If wholesale replacement is necessary, match the original configuration and materials, if possible.
- Half-round gutters and round downspouts in a galvanized finish are acceptable replacements in a residential application.

ADA

Ramps for handicapped accessibility should be located at the point of best access to users and, where possible, should be sensitive to the overall design

and character of the building. Lifts and ramps must comply with all city building codes.

Recommendations:

- Whenever possible locate ramps to access the front of the building, or the main entrance in use.
- If locating the ramp will permanently damage historic materials locate in an alternate place.
- Consider regrading the yard or driveway to provide access to the floor level if the grade difference is not too great and if the regrading would not damage historic features of the house.
- Consider installing a wheelchair lift if ramps or regrading are not feasible.
- Conceal lifts and ramps behind screens, balustrades walls or other features that are compatible with the historic design, style and materials of the building.
- Ramps should also be located to minimize the loss of historic features at the connection points-porch railings, steps, and windows-and should preserve the overall historic setting and character of the property.
- If it is not possible to locate a ramp or entrance on the front locate it on a secondary façade. New door openings, doors, covering over entrances etc. should comply with other sections of these guidelines.
- Design should retain the key detailing of the historic structure and not remove any historic features.
- Appropriate materials for ramps include wood decking, substitute wood decking and flooring, brick paving, concrete, and other paving materials.
- See the discussion on railings for guidance on rails.

For more information concerning accessibility design go to:

- Americans With Disability Act (ADA) Standards for Accessible Design, U.S. Department of Justice web site at <http://www.ada.gov/stdspdf.htm>.
- Preservation Brief 32 Making Historic Properties Accessible <https://www.nps.gov/tps/how-to-preserve/briefs/32-accessibility.htm>.

DESIGN GUIDELINES FOR SITE FEATURES

Parking

Ensure compliance with Hinton Zoning Code.

- Parking lots should not front any main street, but be located to the rear of buildings and accessed from the alley or side street. If this is not possible for residential buildings a side driveway is acceptable.
- New or expanded loading docks or ramps for the delivery of freight should be as unobtrusive as possible and generally oriented to the rear of the site. They should not be visible from the street and should be screened from side streets.
- Private curb cuts on the street are highly discouraged.
- Parking Lots
 - Parking lots should not be adjacent to or accessed from the street, but instead should be screened from view by buildings.
- Parking lots should be located behind buildings with primary access from public alleys.
- Parking lots may be located adjacent to side streets, but should be fully screened and have primary access provided via an alley if one is present.
- In the Commercial Core, when adjacent to a public right-of-way, parking lots should be screened to a height between three feet and four feet above the parking grade with an opacity of 75 percent or greater. Screening may include a combination of landscaping, masonry walls and fencing. Structural screening should comply with the fencing and masonry guidelines.
- Allowance should be given for adequate vision clearance and pedestrian sight lines at parking lot entry points.
- When adjacent to a residential use, parking lots should generally be screened to a minimum height of five feet above the parking grade with a minimum opacity of 90 percent, provided adequate vision clearance is provided for vehicles and pedestrians. Screening may include a combination of landscaping, masonry walls and fencing. Structural screening should comply with the fencing and masonry guidelines of this document.

- Use of unpainted wood, chain link, plastic, vinyl and similar materials for parking lot screening purposes is not appropriate.
- Parking not allowed in front of buildings, or on front lawn. This does not include on street parking where allowed.
- Front yards or lawns should not be converted to parking pads, driveways etc.

Plantings

Trees, shrubs, flowers and grass add important visual effects and texture to a building. They can offer shade and privacy. They should be considered as building elements in the same way other building details are, in balance and proportion. They should be compatible and complement the architectural style of the building. Remember to consider the full-grown size of any plant you install. Window boxes are often an opportunity to add color and variety but care should be taken in their placement and use. A landscape architect or local garden nursery can assist the property owner in a planting schedule and program.

On primary facades window boxes should match the color of the building's trim, be simple in style and extend not more than the width of the window opening. They should be located at the sill line and be no more than 16 inches in height. Materials should be compatible with the style of the building and should be durable. Mounting should be done in such a way that it does not harm or remove historic features and if necessary, reversible to ensure original appearance.

Consider using free standing flower boxes, urns and planters instead of attaching them to the building. Also consider the use of hanging baskets, or boxes attached to the balustrades or rails of porches.



Baskets on Rails and Free-Standing Planters



Appropriate Location and Size of Boxes



Free Standing Planters

Paving

Paving should also be considered in the same way as plantings. It should complement and be compatible with the architectural style of the building. Avoid the use of one monochromatic expanse of a material. Paving materials and patterns will introduce a visual texture in the landscape. Brick, stone and masonry units in a variety of patterns are suitable.

- Granite curbs, edging and steps can be used in masonry paving to provide variety.
- Concrete may be colored and stamped to simulate texture.
- Concrete may also be exposed river rock aggregate to be compatible with historic concrete.
- Masonry paving should be manufactured specifically for exterior use and installed per the manufacturer's recommendations.
- Sidewalks and walkways should be maintained in good condition and patched in kind when damaged.
- When installing or repairing stairs and curbs at sidewalks and lawn edges, use flares and curved faces unless there is evidence angular intersections were used.
- In the commercial core, match the adjacent texture color material etc.

Walls and Fences

Walls and fences in the Hinton Historic District should not prevent or restrict the view of historic buildings from a public way. The design of fences should be appropriate in scale and architectural style to the historic characteristics of the building, its site and the surrounding properties.

The intent is to provide walls and fences that are compatible with the building's architectural style and character, and function. They should not obscure any significant details of the building or of the lot and site. They should be neighbor-friendly.

- Fences should be allowed in instances and locations where there are fences in adjacent properties. Traditional fences, walls and hedges should be maintained. Concrete knee walls, curb cuts and related ornamentation that contribute to the overall historic character of the site should be retained.
- The design of new fences and walls should complement with materials and designs found in Hinton. Commonly used materials are brick, stucco, iron, wood and shrubby hedges. Materials should relate to those used elsewhere on the property and on the structures.
- New fences and walls must conform to City zoning requirements in terms of height and sight lines at intersections.
- Neighbor-friendly fences of wood, or other composite, or factory finished aluminum are permitted behind the front building line and may be approved administratively. Other fence types require Hinton Historic Landmark Commission review.
- Brick walls should use historically appropriate brick. Bricks and mortar joints should be compatible in color, aggregate and joint profile with the building.
- Fences made of the following types and/or materials are prohibited:
 - Chain link
 - Split rail
 - Mesh or wire
 - Pipe rail, only when appropriate to the architectural style of the building

The aforementioned criteria may be altered or waived for compliance with the Americans with Disabilities Act.



Iron Fence



Wooden Picket Fence



Brick wall



Natural fence

Garden Structures

Garden structures - including but not limited to pergolas, gazebos, arbors and trellises - are open structures whether permanently or temporarily installed on, above or below the surface of land or water. Garden structures may be approved administratively when they satisfy the following criteria:

- Garden structures should be located behind the front building line in either the side or rear yard.
- Garden structures located in the side yard should be screened from view with appropriate landscaping materials.
- Garden structures should not be attached to either a principal structure or accessory garage structure.

Substitute Materials

Substitute materials are the last option when repair is necessary. Repair is the first choice to ensure that the building's architectural character is kept. If repair is not possible due to missing features or extreme deterioration, then replacement is the second option. Replacement of a feature must replicate in detail materials, finishes, and color used. When both repair and replacement are not options, only then can alternate materials be used. Consideration in selection of substitute materials must be made to replicate the appearance of the historic feature.

Acceptable substitute materials include:

- Extruded polystyrene (ex. Fypon)
- FRP (fiberglass reinforced polymer)
- Cementitious siding (Hardieboard) not on primary facades.
- Metal, fiberglass, or composite material doors
- Composite flooring for porches (ex. Trex)
- Composite trim such as AZEK and Trex
- Fiber reinforced cement
- Fiberglass for columns, brackets details etc.

References:

- Preservation Brief 16, The Use of Substitute Materials on Historic Building Exteriors <https://www.nps.gov/tps/how-to-preserve/briefs/16-substitute-materials.htm>
- Evaluating Substitute Materials in Historic Buildings <https://www.nps.gov/tps/standards/applying-rehabilitation/successful-rehab/substitute-materials.htm>.
- Alternative Roofing Materials: A Guide for Historic Structures USDA, <https://www.fs.fed.us/t-d/pubs/pdf/07231812.pdf>

Murals

A mural is an expression of public art painted directly on the exterior of a building or on a backing that is affixed to a building and is sanctioned by the property owner. Murals are not to contain commercial speech or images, which would constitute advertising or signage. Murals can be an important enhancement to the built environment, as well as having a beneficial impact on quality of life. In these cases, such murals serve as a form of public art.

A long-term maintenance plan should be submitted with the COA application.

Whether on public or private property, all murals require review and approval.

Treatment

- Murals are not appropriate on building primary elevations.
- The appropriate location for the placement of murals is on side and rear elevations of buildings.
- Murals should not be placed on unpainted brick or stone walls of historic/contributing buildings.
- The paint used for creating a mural should be appropriate for use in an outdoor setting, for an artistic rendition and should be of a permanent, long-lasting variety.
- Murals should not cover or obscure architectural elements, such as windows, doors, trims, cornices or other such features.

DESIGN GUIDELINES FOR SIGNAGE

With the rise of home-based businesses more and more residential buildings are being converted to commercial use.

Signs are an important element for commercial buildings and sign design plays an increasingly important role for commercial buildings in residential neighborhoods. The sign is necessary to identify the business and highlight the building. They should be compatible with the design of the building and also with the block. Signs should be oriented to the pedestrian rather than vehicular traffic. This results in signs that are smaller than normally associated with traditional strip and mall development, but more in character with the neighborhood and actual function. Most clients will be familiar with the location or will be traveling at low speeds in vehicles or on foot. Large, garish or lighted signs are not necessary to convey the information.

The intent is to provide signs that are compatible with the building's architectural style and character, and provide information. They should not obscure any significant details of the building or of the lot and site. They should not distract adjacent property owners.

- Size of signs:
 - Projecting or blade signs should not be larger than six square feet.
 - For commercial buildings signs should be sized at 1 square foot per lineal foot of street frontage. Maximum size is 200 square feet
 - Free standing signs in residential areas should not exceed twenty-four square feet with a maximum height of eight feet.
 - Free standing signs in commercial areas should not exceed twenty-four square feet with a maximum height of ten feet.
- Signs should be simple in nature with legible typestyles and color arrangements. Lettering should encompass approximately 33-50% of the sign height. Logos should be limited to 20% of the sign area.
- New signs should be fabricated to professional standards, out of traditional materials such as wood or polymer that closely resemble wood, with copper or bronze or other appropriate letters.

- Signs of unfinished wood are not acceptable. The use of plywood is permitted so long as it is properly sealed from the elements with all visible edges of the plywood concealed. Use of signboard material, mdf is acceptable.
- Install light directed at the sign to illuminate it. The use of backlit or lighted signs is prohibited.
 - Shield the light source. The light source, whether internal or external, should be shielded from view or directed so that the light intensity or brightness shall not be objectionable to surrounding areas. Signs should feature the minimum level required for nighttime readability.
 - Illuminated Signs. Individually illuminated letters, either internally illuminated or backlit (halo lit) solid letters (reverse channel) are encouraged and are preferred to internally illuminated cabinet (can) signs. Signs comprised of individual letters mounted directly on a structure can often use a distinctive element of the structure's façade as a backdrop, better integrating them with the structure.
 - Cabinet signs. The background field should be opaque so that only the lettering appears illuminated. When the background is not opaque, the entire face becomes bright and the sign becomes visually separated from the building, disrupting
- Neon signs should be acceptable when appropriate for the style of the building. Examples include Art Deco, Art Moderne, and Mid Century Modern.
- Avoid the use of national logos.
- Signs should be compatible with the color, materials and textures of the building.
- Original historic or architecturally significant signs should be retained.
- Do not cover historic or architectural detail on the building.
- Install signs in locations reserved for them on buildings, such as in recesses.
- Install signs in appropriate areas such as above cornices or within the transom areas of storefronts.
- Install signs on windows. Use less than 25% of window area.
- Install signs in similar locations as on adjacent buildings.
- Signs which extend above the roofline of the building are prohibited.

- First floor uses should not have signs above the first floor.
- The use of flashing or moving lighting and electronic message boards are prohibited.
- Additional information should be arranged orderly on the window or door in an inconspicuous location.
- Signs should be maintained while installed and removed as soon as the tenant vacates the building.

DESIGN GUIDELINES FOR ANTENNAE AND DISHES

Installation of satellite dishes and antennas when visible from a public way is prohibited.

FURTHER RECOMMENDATIONS

Maintenance and Repair

All buildings require routine maintenance, an ongoing process of repair and replacement of elements and finishes. Maintenance is a primary concern for all owners. Owners who neglect or defer maintenance often find that the cost of correcting advanced deterioration far exceeds that of keeping the building in good repair. By developing a regular maintenance schedule and program, major repairs and expenses can be avoided and it will prolong the building's useful life as well as protect its architectural character.

The key to proper maintenance is a regular inspection schedule. Periodic inspections will alert owners to required repairs and potential problems. They will identify trouble spots before they become major issues. Inspections should be done on a regular basis, usually associated with the seasons, such as spring cleaning, winter preparations, etc.

The following items are considered general maintenance and do not require a review by Hinton Historic Landmark Commission or its staff. The definition included in WV State Code §8-26A-7 (11) is used to define general

maintenance here: “which maintenance or repair does not involve a material change in design, material or outer appearance thereof”:

- Periodic painting in same color as existing and repair of wood elements
- Repair of glazing in windows
- Repair of caulking in doors and windows
- Gutter inspection, cleaning and repair
- Roof flashing inspection and repair
- Roof valley inspection and repair
- Siding inspection and repair
- Masonry mortar inspection
- Foundation and drainage inspection
- Electrical system inspection
- HVAC inspections
- Insulation and attic inspections for moisture problems
- Trees, vines, etc. inspection and trimming.
- In addition, comply with the applicable city ordinances and codes regarding maintenance.

Top maintenance items to observe:

- Windows
 - Paint peeling
 - Caulk between window frame and building
 - Glazing on window sash
 - Weather stripping
- Roof/gutter/downspouts
 - Misaligned
 - Leaky
 - Flashing, other intersection problems
 - Parapet flashing, note leak evidence on upper bricks at cornice/parapet
 - Skylights susceptible to leaks
 - Valley flashing
 - Accumulation of leaves and debris in gutters
- Chimney flashing
- Chimney masonry
- Masonry around downspouts

- Insulation
 - Crawl spaces
 - Attics
 - Attic and crawl space ventilation
- Insects
- Rising damp at intersection of wall and ground
- Drainage and ground water control
- Vegetation
 - Vegetation too close to building
 - Vegetation growing on building
- Grade slopes to building
- Deteriorating shutters
- Unpatched settling paving.

Maintenance and Inspection Schedule

See attached calendar example from Illinois Historic Preservation Office in Appendix.

<https://www2.illinois.gov/dnrhistoric/Preserve/Pages/Architectural.aspx>

Color Schemes and Painting

Color is one of the most subjective decisions made in a rehabilitation project. The options are endless and it often boils down to preference and personal taste. It is difficult to provide guidelines to assist in making this decision. Colors selected from the color charts included in the appendix are acceptable. See the appendix for appropriate paint color charts formulated for historic architectural styles.

Some basic concepts

Essentially, the intent is to insure compatibility with the architectural style and elements of the building and to not obscure the architectural character with inappropriate painting.

- Color schemes should be limited to two colors plus white, at the most, unless there is documentation to show other arrangements.

- Detailing and picking out elements should be done minimally to not overly confuse the observer.
- Original color schemes, if known, are the best approach.
- Do not paint masonry not intended for painting.
- Do not paint metals such as bronze or brass not originally intended for painting.
- Do not remove patina on metals such as bronze or brass to achieve a shiny bright appearance.
- Natural or stained wood elements were seldom used on the exterior of buildings apart from a few architectural styles, such as Bungalow or Craftsman style.
- New metal elements should be painted or have a baked-on finish to match the original materials.
- Aluminum or stainless steel of period appropriate building elements, such as 1930's and 1940's elements, should match the originals and not be painted.
- The building wall is the largest and most dominant expanse of color and can provide a unifying background. The color of this material should reflect the overall color context of the streetscape.
- Consider the overall color scheme for the entire building. Coordinate between walls, trim, accent, etc.
- Consider the gloss characteristics of paint as well as its color. High gloss paint draws attention to surface imperfections; matte finishes collect dirt, grime and dust and are difficult to maintain.

- Solar roof shingles should be permitted.

See Technical Preservation Services Overview on Solar Panels On Historic Properties on the National Park Service website.
<https://www.nps.gov/tps/sustainability/new-technology/solar-on-historic.htm>

Green Building Practices

Solar Panels

Solar panels should be mounted on secondary roof facades or as part of an integrated roof design which cannot be seen.

- Flat Roof - install with setback so panels are not seen from primary street or sidewalk
- Sloped Roof - install on secondary façade. Panels must be same angle as roof. Panels may not protrude more than 12" above ridge of roof. Panels must not be located closer than 3' from edge of roof.
- Ground - install in rear or on secondary façade out of sight
- Solar panels should not be mounted on primary facades.

APPENDIX A: GLOSSARY

Alteration. Work which impacts exterior architectural features, including construction, alteration, restoration, reconstruction, moving or demolition of buildings or structures and the removal of building elements.

Appointments. Decorative details which are applied to building cornices, window trim, doors, etc.

Arch. A structural elements usually curved built to support the weight above an opening.

Architrave. Lowest part of the three main parts of the entablature.

Ashlar. A block of cut stone with straight edges.

Baluster. A short column support of a railing, typically decorative.

Balustrade. A row of balusters supporting a railing.

Bay. A vertical division of a building usually marked by windows or other architectural elements.

Bay Window. Protruding outward bay with window from the main wall of a building. If curved it is known as a bow window and if it appears on the upper floor only it is known as oriel or oriel window.

Belt Course. A horizontal band usually projecting and continuous on the exterior of a building.

Board and Batten. A type of siding with vertical boards and a narrow strip of wood or batten to cover the joints between vertically placed boards.

Bracket. Projecting piece of wood, metal or stone found under eaves or other overhangs. May be decorative or supportive.

Bulkhead. Storefront sections at the lowest level that forms a base for one or more display windows.

Buttress. A structure of stone or brick projecting or built against a wall to give additional strength and support.

Casing. Molding that covers the edge of door jambs and the rough openings between the window unit and the wall.

Certificate of Appropriateness. An authorization by the Hinton Historic Landmark Commission which grants application for alteration, demolition or new construction to a historic site or non-contributing site or structure in a historic district.

Cladding. To cover surface material usually metal with another material or metal. Intended to protect the surface material.

Clapboards. Narrow wooden boards, thinner at the top edge, used as overlapping horizontal siding covering a wood-framed all.

Colonial Revival. An architectural style popular during the end of the 19th century, primarily characterized by gambrel roofs with curved eaves, multi-pane sash windows, and cornice dentils on a symmetrical façade.

Column. A slender upright structure consisting of a base, a shaft, and a capital, which is usually supporting.

Contributing. A contributing property in a historic district is any building, structure, object or site which reflects the significance of the district as a whole, either because of historic associations, historic architectural qualities or archaeological features.

Coping. A capping layer at the top of a brick or masonry wall.

Corbel. Design feature in brick and masonry which projects as one or as a series of projections from the surface of the wall.

Cornice. A continuous horizontal molding which projects from the face of a wall or building and is located in the uppermost section.

Craftsman. An architectural style popular in the 20th century which emphasized organic materials, asymmetry, textures, low pitched roofs, brackets and exposed beams.

Cresting. A decorative ridge or railing on a roof.

Cross Gable. Two or more gable rooflines which intersect.

Cupola. A small structure placed on the top of a building's roof or dome, either circular or polygonal, enclosed with openings.

Dentils. A series of small projecting blocks which are often used as part of the decorative detail of a building cornice.

Doric. A classical order of architecture characterized by simplicity of form and sturdy fluted columns with simple capitals.

Dormer. A structure which contains a window and projects from a slope in the roof and usually has its own roof.

Double Hung Window. A window with two vertical sashes, one sliding over the other.

Downspout. A pipe which carries rainwater from a roof gutter to the ground and away from building.

Eave. Underside of roof which overhangs the wall of the building.

Façade. The face, front or side of a building which faces the a street or open space.

Fanlight. Semicircular glass opening above a door or window.

Fascia. A flat projecting horizontal board between moldings; part of a classical entablature.

Finial. A decorative element at the top of a roof turret, gable, canopy, etc.

Finish. The decorative texture of appearance of a surface.

Flashing. Thin continuous sheets of copper or other metal to prevent moisture infiltration at joints of roof, wall or chimney.

Fluting. Shallow concave grooves running vertically on the shaft of pilaster, column or other surface.

Frieze. Middle portion of an entablature which is often decorated.

Gable. Triangular edge of a wall under a pitched roof.

Gable Roof. A pitched roof with downward slopes on each side of a central, horizontal ridge.

Head. Top part of a door or window opening.

Hipped Roof. All four sides slope downwards to the walls; a hip is the line of meeting of two of these slopes.

Jamb. The side of a window or door opening.

Ionic. A classical order of architecture characterized by a column with ornamental scrolls on the capitals.

Keystone. A center stone at the summit of an arch.

Knee Wall. The space between the tops of the front windows and the eaves in a gabled-roof building.

Label Molding. A square-arched hoodmold or dripstone which extends across the top of an opening and returns vertically downward for a short distance.

Lintel. A horizontal beam over a window, door or other opening; used also to mean the trim over a window or door opening.

Mansard Roof. A pitched roof with two slopes with lower slope being almost vertical and the upper slope almost horizontal.

Meeting Rail. In a double-hung window, the horizontal member at the top of the lower sash or the bottom of the upper sash.

Modillion. An ornate block or bracket underneath a cornice sometimes supporting it, more elaborate than dentils.

Mullion. The vertical or horizontal divisions or joints between single windows in a multiple window unit.

Muntin. A member to divide or and hold panes of glass in a window or glazed door.

Newel. A post situated at the top and bottom of a flight of steps for support.

Oculus. A round window.

Palladian Window. A three-part window with a large central arched window flanked by two narrow, shorter windows.

Parapet. A low horizontal wall along the edge of a roof.

Pediment. A triangular area on the front of a building above the doorway or portico.

Pier. A vertical supporting member, square or rectangular in cross-section.

Pilaster. A flat pillar representing a column attached to a building surface.

Plinth. A square block at the base of a column, pedestal, or statue.

Port-cochere. A roofed structure providing coverage from the driveway to the entrance of the building while entering or leaving a vehicle.

Portico. A roofed structure supported by columns, usually attached to a building as a porch.

Profile. The side view of a window showing the exact shape of muntins and the like.

Queen Anne Style. Popular late 19th century and the early decades of the 20th century revival style characterized by irregularity of plan and massing and a variety of texture.

Quoins. Masonry blocks at the corner of a wall, these cornerstones are both decorative and structural.

Sidelights. Vertical glass panes which flank a door.

Simulated Divided Light Window. Window with muntins applied to the inside and outside of a panel of insulating glass and with spacers within the glass in the same locations as the muntins to simulate the look of true divided light.

Sash. Moveable framework containing the glass in a window.

Sill. The bottom horizontal member in a frame or opening of a window or door.

Soffit. The underside of a part or member of a building such as an overhang.

Soldier Course. A course of bricks in which the bricks are laid standing on end with the narrow edge facing out.

Span. The distance between supports such as in a beam or lintel.

Terra Cotta. Hard fired clay, brownish in color, usually unglazed and used for architectural ornaments and facing.

Transom. A fixed or operable window over a doorway or a window.

True Divided Light Window. This type of window has individual multiple small panes of glass which are separated by muntins. Also referred to as multi-light windows.

Turret. A small square tower.

Valley. The internal angle formed by the junction of two inclined sides of a roof.

Vault. Term for an arched ceiling or roof used to provide a space.

Veranda. A long, covered porch or balcony.

Wall Dormer. A dormer in which the front surface is a continuation of the wall below.

Weatherboard. Wood siding consisting of overlapping boards usually thicker at one edge than the other.

APPENDIX B: SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

The Secretary of the Interior's Standards for Rehabilitation are ten basic principles created to help preserve the distinctive character of a historic building and its site, while allowing for reasonable change to meet new needs.

The Standards (**36 CFR Part 67**) apply to historic buildings of all periods, styles, types, materials, and sizes. They apply to both the exterior and the interior of historic buildings. The Standards also encompass related landscape features and the building's site and environment as well as attached, adjacent, or related new construction.

The Standards are applied to projects in a reasonable manner, taking into consideration economic and technical feasibility.

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

In addition, to further explain and illustrate these standards, the National Park Service has developed guidelines for the application of the Standards. See below to review these guidelines.

National Park Service's Guidelines for Rehabilitating Historic Buildings

Introduction

The **Guidelines for Rehabilitating Historic Buildings** were initially developed in 1977 to help property owners, developers, and Federal managers apply the Secretary of the Interior's **Standards for Rehabilitation** during the project planning stage by providing general design and technical recommendations. Unlike the Standards, the Guidelines are not codified as program requirements. Together with the Standards for Rehabilitation they provide a model process for owners, developers, and Federal agency managers to follow.

The Guidelines are intended to assist in applying the Standards to projects generally; consequently, they are not meant to give case-specific advice or address exceptions or rare instances. For example, they cannot tell owners or developers which features of their own historic building are important in

defining the historic character and must be preserved--although examples are provided in each section--or which features could be altered, if necessary, for the new use. This kind of careful case-by-case decision-making is best accomplished by seeking assistance from qualified historic preservation professionals in the planning stage of the project. Such professionals include architects, architectural historians, historians, archeologists, and others who are skilled in the preservation, rehabilitation, and restoration of the historic properties.

The Guidelines pertain to historic buildings of all sizes, materials, occupancy, and construction types; and apply to interior and exterior work as well as new exterior additions. Those approaches, treatments, and techniques that are consistent with the Secretary of the Interior's "Standards for Rehabilitation" are listed in **bold-face type** under the "**Recommended**" section in each topic area; those approaches, treatments, and techniques which could adversely affect a building's historic character are listed in the "**Not Recommended**" section in each topic area.

To provide clear and consistent guidance for owners, developers, and Federal agency managers to follow, the "Recommended" courses of action in each section are listed in order of historic preservation concerns so that a rehabilitation project may be successfully planned and completed--one that, first, assures the preservation of a building's important or "character-defining" architectural materials and features and, second, makes possible an efficient contemporary use. Rehabilitation guidance in each section begins with protection and maintenance, that work which shall be maximized in every project to enhance overall preservation goals. Next, where some deterioration is present, repair of the building's historic materials and features is recommended. Finally, when deterioration is so extensive that repair is not possible, the most problematic area of work is considered: replacement of historic materials and features with new materials.

To further guide the owner and developer in planning a successful rehabilitation project, those complex design issues dealing with new use requirements such as alterations and additions are highlighted at the end of each section to underscore the need for particular sensitivity in these areas.

How to Use the Guidelines

Identify, Retain, and Preserve

The guidance that is basic to the treatment of all historic buildings--**identifying, retaining, and preserving** the form and detailing of those architectural materials and features that are important in defining the historic character--is always listed first in the "Recommended" area. The parallel "Not Recommended" area lists the types of actions that are most apt to cause the diminution or even loss of the building's historic character. It shall be remembered, however, that such loss of character is just as often caused by the cumulative effect of a series of actions that would seem to be minor interventions. Thus, the guidance in *all* of the "Not Recommended" areas must be viewed in that larger context, e.g., for the total impact on a historic building.

Protect and Maintain

After identifying those materials and features that are important and must be retained in the process of rehabilitation work, then **protecting and maintaining** them are addressed. Protection generally involves the least degree of intervention and is preparatory to other work. For example, protection includes the maintenance of historic material through treatments such as rust removal, caulking, limited paint removal, and re-application of protective coating; the cyclical cleaning of roof gutter systems; or installation of fencing, protective plywood, alarm systems and other temporary protective measures. Although a historic building will usually require more extensive work, an overall evaluation of its physical condition shall always begin at this level.

Repair

Next, when the physical condition of character-defining materials and features warrants additional work **repairing** is recommended. Guidance for the repair of historic materials such as masonry, wood, and architectural metals again begins with the least degree of intervention possible such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading them according to recognized preservation methods. Repairing also includes the limited replacement in kind--or with compatible substitute material--of extensively deteriorated or missing parts of features when there are surviving prototypes (for example, brackets, dentils, steps, plaster, or portions of slate or tile roofing). Although using the same kind of material is always the preferred option, substitute material is acceptable if the form and design as well as the substitute material itself convey the visual appearance of the remaining parts of the feature and finish.

Replace

Following repair in the hierarchy, guidance is provided for **replacing** an entire character defining feature with new material because the level of deterioration or damage of materials precludes repair (for example, an exterior cornice; an interior staircase; or a complete porch or storefront). If the essential form and detailing are still evident so that the physical evidence can be used to re-establish the feature as an integral part of the rehabilitation project, then its replacement is appropriate. Like the guidance for repair, the preferred option is always replacement of the entire feature in kind, that is, with the same material. Because this approach may not always be technically or economically feasible, provisions are made to consider the use of a compatible substitute material.

It shall be noted that, while the National Park Service guidelines recommend the replacement of an entire character-defining feature under certain well-defined circumstances, they never recommend removal and replacement with new material of a feature that--although damaged or deteriorated--could reasonably be repaired and thus preserved.

Design for Missing Historic Features

When an entire interior or exterior feature is missing (for example, an entrance, or cast iron facade; or a principal staircase), it no longer plays a role in physically defining the historic character of the building unless it can be accurately recovered in form and detailing through the process of carefully documenting the historical appearance. Where an important architectural feature is missing, its recovery is always recommended in the guidelines as the *first* or preferred, course of action. Thus, if adequate historical, pictorial, and physical documentation exists so that the feature may be accurately reproduced, and if it is desirable to re-establish the feature as part of the building's historical appearance, then designing and constructing a new feature based on such information is appropriate. However, a second acceptable option for the replacement feature is a new design that is compatible with the remaining character-defining features of the historic building. The new design shall always take into account the size, scale, and material of the historic building itself and, most importantly, shall be clearly differentiated so that a false historical appearance is not created.

Alterations/Additions to Historic Buildings

Some exterior and interior alterations to historic building are generally needed to assure its continued use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining

spaces, materials, features, or finishes. Alterations may include providing additional parking space on an existing historic building site; cutting new entrances or windows on secondary elevations; inserting an additional floor; installing an entirely new mechanical system; or creating an atrium or light well. Alteration may also include the selective removal of buildings or other features of the environment or building site that are intrusive and therefore detract from the overall historic character.

The construction of an exterior addition to a historic building may seem to be essential for the new use, but it is emphasized in the guidelines that such new additions shall be avoided, if possible, and considered only after it is determined that those needs cannot be met by altering secondary, i.e., non character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it shall be designed and constructed to be clearly differentiated from the historic building and so that the character-defining features are not radically changed, obscured, damaged, or destroyed.

Additions to historic buildings are referenced within specific sections of the guidelines such as Site, Roof, Structural Systems, etc., but are also considered in more detail in a separate section, New Additions to Historic Buildings.

Energy Conservation, Accessibility Consideration, Health and Safety Consideration

These sections of the rehabilitation guidance address work done to meet accessibility requirements and health and safety code requirements; or retrofitting measures to conserve energy. Although this work is quite often an important aspect of rehabilitation projects, it is usually not a part of the overall process of protecting or repairing character-defining features; rather, such work is assessed for its potential negative impact on the building's historic character. For this reason, particular care must be taken not to radically change, obscure, damage, or destroy character-defining materials or features in the process of rehabilitation work to meet code and energy requirements.

For further specifics see: <https://www.nps.gov/tps/standards/treatment-guidelines-2017.pdf>

APPENDIX C: SUBSTITUTE AND OTHER MATERIALS LIST AND SELECTED SUPPLIERS/CONTRACTORS

This list does not constitute endorsement of any manufacturer supplier or contractor. It is only a listing of known entities who have worked in historic preservation projects.

Allied Window
111 Canal Road
Cincinnati, OH 45241
1.800.445.5411
info@alliedwindow.com
Storm Windows & Doors

Bob Raleigh
Renaissance Roofing
3524 35th Street
Rockford, IL 61109
1.800.699.5695
Used and new clay tile roofing

Stewart Iron Works Company
PO Box 2612
Covington, KY 41012
606.431.1985
Custom & Reproduction Iron Work

Tim Dunn
2402 Bredell
St. Louis, MO 63143
314.645.4317
Vitrolite & Carrarra Glass Replacement Panels & Repair

Bendheim Glass
Passaic, NJ
1.800.221.7379
Reproduction window glass/All historic glass types

Hardie Board/Plank
3524 35th Street
Rockford, IL 61109
1.800.699.5695
Used and new clay tile roofing

1.888.542.7343
Alternative wood siding
Available at local suppliers.

Evaluating Substitute Materials in Historic Buildings
<https://www.nps.gov/tps/standards/applying-rehabilitation/successful-rehab/substitute-materials.htm>.

Alternative Roofing Materials: A Guide for Historic Structures USDA,
<https://www.fs.fed.us/t-d/pubs/pdf/07231812.pdf>

Rejuvenation Lighting www.rejuvenation.com

House of Antique Hardware www.houseofantiquehardware.com

Renovator's Supply <https://www.rensup.com/>

Van Dyke's Restorers <https://www.vandykes.com/>

Product listings in The Old House Journal
<https://www.oldhouseonline.com/old-house-directory/lighting>

Product guides Traditional Building <https://www.traditionalbuilding.com/>

APPENDIX D: HISTORIC PRESERVATION CONTRACTORS

The following list is not a sign of endorsement for these specific contractors. It is provided merely for expediency and convenience. It is always a good idea to check references and look at examples of their work prior to hiring them. It shall also be noted that while a specific contractor is listed as a "Masonry Cleaner, etc." that is not necessarily the only thing they do; many of them do all phases of historic preservation construction work.

Business	Address	Contact Info	Specialty
Tom Anderson, Allegheny Restoration & Builders	PO Box 18032 Morgantown, WV 26507	304-594-2570	
Bill Croye, Steve Tibbs, Compton Construction	PO Box 1010 Princeton, WV 24740	304-487-3467	
Carl Bailey, Classic Builders Construction	45 Setzer Drive Barboursville, WV 25504	304-733-4152	
Michael Corlis, Corlis Design & Construction	Route 1, Box 50 Frametown, WV 26623	304-364-2687	Custom Woodwork & Furniture
Bill Bilott	Erwin, PA	724-863-5958	Light Fixture Restoration
Travis Cox, Metro Roofing & Sheet Metal	PO Box 4037 Parkersburg, WV 26104	304-485-9150	Sheet Metal, Roofing
Terry Bishop, Bishop Construction	PO Box 8254 Huntington, WV 25705	304-529-6412	Masonry Cleaning, Painting, & Pointing
Tim Dorsch, Tri-State Roofing Company	321 Harris Drive Poca, WV 25159	(304) 755-8135	Roofing, Sheet Metal
Brad Bolyard, High County Contractors	100 W State Ave Terra Alta, WV 26764	304-789-2747	

Business	Address	Contact Info	Specialty
Fredeking Stafford	PO Box 1232 Princeton, WV 24740	304.425.2534	General Contractor
Johnny Nance, The Old House Doctor	3059 Wilson Road Barboursville, WV 25504	304.736.1655	Historic Preservation
Clifford Gillian, Valcon	PO Box 180 Frankford, WV 24938	304.497.3100	
Chuck Presuch, Reliable Roofing Company	PO Box 1908 Elkins, WV 26241	304.636.7188	
Harris Bothers Roofers & Sheet Metal	1518 Hansford St Charleston, WV 25331	304.343.5566	Slate/Clay tile/ Metal Roofing & Sheet Metal
RG Friday Restoration	150 Perry Hwy Pittsburgh, PA 15229	412.931.6992	
John Jarrett, Jarrett Construction	1605 Virginia St, East, Charleston, WV 25311	304-344-9140	
Mike Rish, General Restoration	829 Bethel Road, Suite 210 Columbus, OH 43214	614-888-0654	
Bob Ruddy, Mountain State Slate Roofing	Route 1, Box 77-C New Milton, WV 26411	304-873-3569	Slate, Copper, Tile Roofing
Dave Lafrate, Al's Masonry & Son Construction	4624 Smithfield Street, Shadyside, OH 43947		
Blair Lee, Allegheny Restoration & Builders	106 Edgell St Beckley, WV 25001	304.252.9202	Wood window & door restoration & reproduction

Business	Address	Contact Info	Specialty
Tom Snyder, Olentangy Restorations	1736 Sheffield Terrace Marion, OH 43302	740-389-5883	
Dale Spicer Company	1200 6 th Street Charleston, WV 25302	304-346-6351	Ornamental Plaster Specialist
John Thiry, Keystone Waterproofing	RD 7, Box 34G Greensburg, PA 15601	724-834-2040	Masonry Cleaning, Pointing, etc.
Bud Henderson, City Windows & Construction Co.	Route 2, Box 285 Clarksburg, WV 26301	304-623-2573	
Frank Unger, Past Respects	821 Johnson Creek Rd, Walton, WV 25286	304.577.6217	
William Jelinek	Route 1, Box 206 Rock Oak, WV 26801	304-897-5574	Woodright, Historic Restoration, Architectural Millwork
Gary Venturino	Route 1, Box 2A Williamson, WV 25661	304-235-5386	
Ed Devine	Route 1, Box 209- 5, Elkins, WV 26241	304-636-6765	
L.R. Dorsey, Inc.	2700 Smith Road Charleston, WV 25314	304-744-0678	

APPENDIX E: APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

Hinton Historic Landmarks Commission Certificate of Appropriateness Application					
APPLICATION INSTRUCTIONS					
The Hinton Historic Landmarks Commission (HLC) reviews all applications for construction, alteration, relocation, demolition, or repair of any landmark, building, structure, or site within the Historic District where such changes are visible or intended to be visible from an adjacent public right-of-way. Design review for this project will not begin until a complete application is received. The HLC reserves the right to delay consideration and/or action on a submittal in the event that information is missing and/or changed at the time of the scheduled design review or public hearing. There is no fee for the application. Applications requiring HLC ruling must be received at least ten business days prior to an HLC meeting for inclusion on meeting agenda. Applications that can be reviewed by staff are done so on a rolling basis. Please consult the attached table on page 3 of this application to determine the reviewer of your project. Drawings, sketches, photographs, material samples, and a written description sufficient in detail to explain planned work must be submitted with the application. HLC will not take action without submission of proposed materials. Submit this form with supporting documentation to Hinton Historic Landmarks Commission, City Hall, 322 Summers St, Hinton, WV 25951. Applications can also be emailed as PDF files to HintonHLC@gmail.com. Applications must be typed or legibly printed.					
CURRENT OWNER INFORMATION					
Owner's Name:					
Property Name and Address:					
Contact Phone:	E-mail:				
City:	State:	ZIP Code:			
APPLICANT INFORMATION (IF DIFFERENT FROM OWNER)					
Applicant's Name:					
Address:					
City:	State:	ZIP Code:			
E-mail:	Contact Phone:				
Relationship to Current Owner:					
CONTRACTOR INFORMATION					
Company Name:			Contact Name:		
Mailing address:			Project Estimate:		
Phone:			E-mail:		
State Contractor's License Number:			City Business License Number:		
SCOPE OF WORK					
☐ Repair/Replacement-in-kind ☐ Demolition ☐ Addition ☐ New Construction ☐ Alteration ☐ Relocation					
CHECK ALL THAT WILL BE AFFECTED BY PROPOSED ACTIVITY					
☐ Architectural feature (decorative)	☐ Masonry: cleaning, tuck pointing, removal	☐ Doors and transoms	☐ Wood cornices and concealed box gutters	☐ Windows: replacement, removal, or new opening	☐ Historic markings or paintings
☐ Porch or Deck	☐ Signs	☐ Cut stone steps	☐ Awnings and canopies	☐ Major landscaping or site work	☐ Trim: wood or metal
☐ Roof: Change in shape/profile	☐ Shutters	☐ Security features	☐ Iron fences	☐ Painting	☐ Other (explain)

DESCRIPTION OF THE PROPOSED ACTIVITY:

CERTIFICATION

I hereby certify that the project described herein as approved by the Hinton Historic Landmarks Commission (HHLC), as required by the Landmark Preservation Ordinance (Chapter 32, Hinton Municipal Code). I understand that HHLC staff will monitor this project to ensure compliance with the approved design. I also authorize HHLC staff to perform unannounced site visits as part of the compliance verification process. I further understand that falsification of factual representation in the application is subject to criminal sanctions of up to \$1000 a day in fines pursuant to the Hinton Municipal Code, Chapter 32, Section 12.

Signature of Applicant: _____ Date: _____

Please submit an original, completed application to one of the following addresses. Incomplete applications will be returned to the applicant.

Hard Copy:

Electronically:

City of Hinton
Historic Landmarks Commission
322 Summers St
Hinton, WV 25951

HintonHLC@gmail.com

HHLC Use Only	
Staff Review	☐ Approved ☐ Rejected ☐ Incomplete ☐ COA Not Required
HHLC	☐ Approved ☐ Rejected ☐ Tabled until _____
Conditions of Approval	
Date	Signature

<http://www.hintonwva.com/Documents/Resident/Forms%20&%20permit/H HLC-app2017.pdf>

APPENDIX F: COA APPLICATION – DEMOLITION REVIEW ADDENDUM

Hinton Historic Landmarks Commission Certificate of Appropriateness - Demolition Review Addendum

Hearing Date: _____

Project Address: _____

Applicant Information	Property Information
Name:	Address:
Address:	Tax Map and Parcel:
Phone:	Zoning District:
E-mail:	Historic District:
Agent Name, Address, Phone Number, and E-mail: (if other than applicant)	Property Owner and Mailing Address: (if other than applicant)

IMPORTANT: This application must be typed or legibly printed and filed with the Hinton Historic Landmarks Commission, City Hall, 322 Summers St, Hinton, WV 25951. The following items must accompany this application: 1) a site plan drawn to scale; 2) photographs, elevations, testimonials or other documentation, which may support your application. You or your representative must be present at the scheduled public hearing in order to present your request and answer questions. Incomplete applications will not be accepted.

This request for a Certificate of Appropriateness-Demolition Review Permit involves:

* Partial Structure Demolition * Entire Structure Demolition

Please describe the building, or portion of the building, proposed for demolition. _____

Date of construction: _____ Style of architecture: _____

Most recent use: _____ Architect of record: _____

As an attachment to this application, please provide photographs of each elevation of the structure as well as copies of any additional historical photographs you may have acquired.

Hinton Historic Landmarks Commission Certificate of Appropriateness - Demolition Review Addendum

For what reason is the demolition requested?

- ☐ The structure constitutes a **hazard to the safety** of the occupants, surrounding structures, or the general public. Evidence should be provided documenting any damage caused by forces of nature, destruction by fire, or other event beyond the control of the owner/applicant.
- ☐ The structure is a **deterrent to a major improvement program** that will be of substantial benefit to the community.
- ☐ Retaining the structure will cause **undue financial hardship**. The HHLC will consider the financial capacity of the structure itself, not the financial circumstances of the owner/applicant. Evidence of financial hardship should show that the cost of preservation exceeds the value of the structure, or that preservation of the structure will deprive the owner of all reasonable use of the property.
- ☐ Retaining the structure is **not in the interest of the majority** of the community.

What alternatives to demolition have been explored? Explain, and provide copies of any relevant documentation that may aid the HHLC in their consideration of the request. _____

What measures are being taken to mitigate the loss of the historic structure (inventory form, architectural salvage, etc.)? _____

What is proposed for replacement of the structure? Does any proposed new construction honor the historic significance of the property and conform to the massing, size and scale of the historic environment? Explain. _____

Please include a site plan and elevations for any proposed replacement structures and/or other developments on the property.

I hereby affirm that all of the statements and information contained in or filed with this application are true and correct to the best of my knowledge.

Signature _____

Date _____

APPENDIX G: SUBSTITUTE ROOFING DISCUSSION

The following is a discussion on the appropriateness of substitute materials which may be used when replacing slate on a roof.

Reviewers at the National Parks Service provide this advice:

- They look good up close, in your hand or within 3 feet. They have the correct texture etc. But a big concern is that most manufacturers only offer them in 12-inch sizes. EcoStar and NovaSlate have 10-inch versions also. So, they may not match the specific characteristics of the roof in question.
- In instances where there are currently 12-inch slates then these replacements could be appropriate.
- Most slate roofs in WV use an 8x16 or 9x18 slate with a 5-7.5 inch exposure.
- There are some manufacturers whose slate substitutes are too thin and sometimes curl at the edges, which is inappropriate.
- A significant consideration then is the overall texture of the roof, not the individual texture of one piece of the roof, the slate itself. From the ground, the visual aspect of differences between individual pieces of slate, slate substitutes, or fiberglass are not going to be readily apparent. What is apparent is the scale, texture, color, shapes, proportions etc. of the overall roof and how it interacts with the house as a whole.
- In cases where the slate substitute is not available or applicable because of size, and the change in proportion and overall character is affected, use of a fiberglass shingle that does have the proper size proportions is preferable to using the wrong size slate substitute which would change the character of the roof overall.
- For example, GAF SlateLine has a 5 tab shingle that results in an 8" slate. This would match the visual character of the roof (from a distance) and maintain the overall character of the house.
- Also, determining how significant an element the roof is in relation to the overall house is important. If it is "just" a background "pedestrian" roof then alternate materials are acceptable. If it comprises a major element of the house, then slate shall be used. Or at least used on the primary elevation (he said they would accept different materials in different locations). So, interpretation of the

style of the house and the relationship of the roof to the significance plays a part in the decision process. (my emphasis in quotes)

- Additionally, since we are looking at a historic district, and not individual listed buildings, the significant consideration is the integration and compatibility of the building in the district. In this case, the overall scale, texture, color, massing etc. become more important than individual elements.
- There is also a limited special shapes selection on all of the alternatives. Such as fish-scale, pointed etc.
- Some manufacturers mentioned include:
 - Certainteed Grand Manor has 9" <http://www.certainteed.com/residential-roofing/products/grand-manor/>
 - Atlas has 7.5" <https://www.atlasroofing.com/roof-shingles/stormmaster-slate#pewter>
 - Pabco Cascade hex shape to mimic asbestos shingle. <http://www.pabcoroofing.com/roofing-shingles>
 - GAF Slateline <https://www.gaf.com/Roofing/Residential/Products/Shingles/Designer/Slateline>
 - GAF Sienna hex shape to mimic asbestos shingle

To summarize:

- Unless the roof is identified as a character defining feature and a significant feature of the building, replacement with fiberglass shingles, when the correct overall scale in terms of size of the "slate" is selected, is acceptable.
- Examples of when the roof is significant may include:
 - Craftsman Style building
 - Mansard roof
 - Mansard detail on roof or top of front elevation, such as some of the apartment buildings
 - Some Romanesque or Richardsonian Romanesque buildings
 - Slate roofs that have a pattern to them such as accent color stripes, fish scale stripes etc.
 - Some individually listed properties within the district where architecture is significant

- The overall texture and scale of the roof in relation to the building and to the district is a more important consideration than the specific individual roof tile texture, color etc. The overall color scale pattern texture should be approximated in the replacement roofing.

Fiberglass/Asphalt Roofing

with slate-like proportions

Manufacturer	Brand	Weight	Exposure	Tab / Shingle Width
Certainteed	Grand Manor	425	8	9
Certainteed	Hatteras	235	8	9
Certainteed	Highland Slate	240	8	9
Owens Corning	Berkshire	360	8 3/8	9 1/2
GAF – Elk	Slateline	425	7 1/2	8
Atlas	StormMaster Slate		8 1/2	7 1/2

Hexagonal / Diamond

Pabco	Cascade	495	9 (at center)	8
GAF	Sienna	Varies	12 (at center)	11-12

Scallop (modified)

Certainteed	Carriage House	355	8	9
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Polymer Roofing

with slate-like proportions

					Butt Th.
Da Vinci	Valore	225 - 300	6 - 8	12	
Certainteed	Symphony	266 - 332	6 - 7 ½	12	
Tapco	Inspire	273 - 304	6 – 7 ½	12	
Ecostar	Majestic	280 - 320	6 – 7 also	10 , 12	
	Empire (cool)		Chisel, Bevel & Round Corner		
Novik	Novislate	75	7/12	10 1/2	
EuroShield	EuroSlate		10	12	.75
Euro Shield	EuroSlate Lite		7 5/8	10	.375

APPENDIX H: NATIONAL PARK SERVICE GUIDELINES ON WINDOW REPLACEMENT

Replacement Windows that Meet the Standards

The decision-making process for selecting replacement windows divides into two tracks depending on whether historic windows remain in place or no historic windows survive.

Replacement of Existing Historic Windows

When historic windows exist, they should be repaired when possible. When they are too deteriorated to repair, selection of the replacement windows must be guided by Standard 6. Design, visual qualities, and materials are specific criteria provided by the Standard that are pertinent to evaluating the match of a replacement window. Evaluating the adequacy of the match of the replacement window involves the consideration of multiple issues.

How accurate does the match need to be?

The more important a window is in defining the historic character of a building the more critical it is to have a close match for its replacement. Location is a key factor in two ways. It is usually a consideration in determining the relative importance of a building's various parts. For example, the street-facing facade is likely to be more important than an obscured rear elevation. The more important the elevation, feature or space of which the window is a part, the more important the window is likely to be, and thus, the more critical that its replacement be a very accurate match. Secondly, the location of the window can affect how much of the window's features and details are visible. This will affect the nature of an acceptable replacement. For example, windows at or near ground level present a different case from windows in the upper stories of a tall building.

Using the hierarchy of a building's features and taking into account the window's visibility, some general guidance can be drawn.

- Replacement windows on primary, street-facing or any highly visible elevations of buildings of three stories or less must match the historic windows in all their details and in material (wood for wood and metal for metal).

- Replacement windows on the primary, street-facing or any highly visible elevations that are part of the base of high-rise buildings must match the historic windows in all their details and in material (wood for wood and metal for metal). The base may vary in the number of stories, but is generally defined by massing or architectural detailing.
- Replacement windows on the primary, street-facing or highly visible elevations of tall buildings above a distinct base must match the historic windows in size, design and all details that can be perceived from ground level. Substitute materials can be considered to the extent that they do not compromise other important visual qualities.
- Replacement windows on secondary elevations that have limited visibility must match the historic windows in size, configuration and general characteristics, though finer details may not need to be duplicated and substitute materials may be considered
- Replacement windows whose interior components are a significant part of the interior historic finishes must have interior profiles and finishes that are compatible with the surrounding historic materials. However, in most cases, the match of the exterior of a replacement window will take precedence over the interior appearance.
- Replacement windows in buildings or parts of buildings that do not fit into any of the above categories must generally match the historic windows in all their details and in material (wood for wood and metal for metal). Variations in the details and the use of substitute materials can be considered in individual cases where these differences result in only minimal change to the appearance of the window and in no change to the historic character of the overall building.

How well does the new window need to match the old?

The evaluation of the match of a replacement window depends primarily on its visual qualities. Dimensions, profiles, finish, and placement are all perceived in relative terms. For example, an eighth of an inch variation in the size of an element that measures a few inches across may be imperceptible, yet it could be more noticeable on the appearance of an element that is only half an inch in size. The depth of a muntin or the relative complexity of a

brick mold profile are more often made visually apparent through the shadows they create. Thus, while comparable drawings are the typical basis for evaluating a replacement window, a three-dimensional sample or mock-up provides the most definitive test of an effective visual match.

The way a historic window operates is an important factor in its design and appearance. A replacement window, however, need not operate in the same manner as the historic window or need not operate at all as long as the change in operation does not change the form and appearance of the window to the point that it does not match the historic window or otherwise impair the appearance and character of the building.

Factors to consider in evaluating the match of a replacement window

- **Window unit placement in relation to the wall plane;** the degree to which the window is recessed into the wall. The location of the window affects the three-dimensional appearance of the wall.
- **Window frame size and shape.** For example, with a wood window, this would include the brick mold, blind stop, and sill.
 - The specific profile of the brick mold is usually less critical than its overall complexity and general shape, such as stepped or curved.
 - Typical sight lines reduce the importance of the size and profile of the sill on windows high above ground level, especially when the windows are deeply set in the wall.
 - Though a blind stop is a small element of the overall window assembly, it is a noticeable part of the frame profile and it is an important part of the transition between wall and glass.
 - Steel windows that were installed as a building's walls were constructed have so little of their outer frame exposed that any replacement window will necessitate some addition to this dimension, but it must be minimal.
- **Glass size and divisions.** Muntins reproduced as simulated divided lights – consisting of a three-dimensional exterior grid, between-the-glass spacers, and an interior grid – may provide an adequate match when the dimensions and profile of the exterior grid are equivalent to the historic muntin and the grid is permanently affixed tight to the glass.
- **Sash elements width and depth.** For example with a wood window, this would include the rails, stiles and muntins; with a steel window, this would include the operator frame and muntins.
 - The depth of the sash in a double-hung window, or its thickness, affects the depth of the offset at the meeting rail of a hung window. This depth is perceived through the shadow that it creates.
 - Because of its small size, even slight differences in the dimension of a muntin will have a noticeable effect on the overall character of a window. Shape, as well as depth, is important to the visual effect of a muntin.
 - The stiles of double-hung historic windows align vertically and are the same width at the upper and lower sashes. The use of single-hung windows as replacements may alter this relationship with varying effects on the appearance of a window. In particular, when the distinction between the frame and the sash is blurred, details such as lugs may be impossible to accurately reproduce.
 - Meeting rails of historic windows were sometimes too narrow to be structurally sound. Reproducing a structurally-inadequate condition is not required.
 - The operating sash of a steel window is usually wider than the overall muntin grid of the window. In addition, the frame of the operating sash often has slight projections or overlaps that vary from the profile of the surrounding muntins. The shadow lines the muntins create add another important layer to the three-dimensional appearance of the window.
- **Materials and finish.**
 - While it may be theoretically possible to match all the significant characteristics of a historic window in a substitute material, in actuality, finish, profiles, dimensions and details are all affected by a change in material.

- In addition to the surface characteristics, vinyl-clad or enameled aluminum-clad windows may have joints in the cladding that can make them look very different from a painted wood window.
- Secondary window elements that do not match the finish or color of the window can also diminish the match. Examples include white vinyl tracks on dark-painted wood windows or wide, black, glazing gaskets on white aluminum windows.
- **Glass characteristics.**
 - Insulated glass is generally acceptable for new windows as long as it does not compromise other important aspects of the match.
 - The clarity and reflectivity of standard clear window glass are significant characteristics of most windows. Because these characteristics are often diminished for old glass, new glass equivalent to the original should be the basis for evaluating the glazing proposed for new windows. Color should only be a noticeable characteristic of the new glass where it was historically, and any coating added must not perceptibly increase the reflectivity of the glass.
 - Where the glazing is predominantly obscure glass, it may be replaced with clear glass, but some evidence of the historic glazing must be retained, either in parts of windows or in selected window units.

Replacement Windows Where No Historic Windows Remain

Replacement windows for missing or non-historic windows must be compatible with the historic appearance and character of the building. Although replacement windows may be based on physical or pictorial documentation, if available, recreation of the missing historic windows is not required to meet the Standards. Replacement of missing or non-historic windows must, however, always fill the original window openings and must be compatible with the overall historic character of the building. The general type of window – industrial steel, wood double-hung, etc. – that is appropriate can usually be determined from the proportions of the openings,

and the period and historic function of the building. The appearance of the replacement windows must be consistent with the general characteristics of a historic window of the type and period, but need not replicate the missing historic window. In many cases, this may be accomplished using substitute materials. There may be some additional flexibility with regard to the details of windows on secondary elevations that are not highly visible, consistent with the approach outlined for replacing existing historic windows. Replacing existing incompatible, non-historic windows with similarly incompatible new windows does not meet the Standards.

Evaluating Historic Windows for Repair or Replacement

Determinations concerning the treatment of historic windows begin with Standard 6 of the Secretary of the Interior's Standards for Rehabilitation: "Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence." Repair should be the first option considered. Repair can include renewal of finishes, material repair using epoxies, replacement of component parts and additions such as weather stripping. While it may be possible to repair even severely deteriorated windows, repair of deterioration beyond a certain level is not practical or reasonable and replacement becomes the appropriate treatment.

The Standards also require, "The removal of historic materials or alterations of features and spaces that characterize a property shall be avoided." While most windows are significant to the character of a property, every window on all properties is not, and it is in these cases that considerations beyond deterioration as described below are appropriate.

Documentation of deterioration

Determination as to when deterioration is sufficiently severe to justify replacement must be based on documentation of the condition of the windows. What constitutes effective documentation may vary with the circumstances of the project, but at minimum must include enough good quality photographs to clearly depict the full range of conditions. When a project involves a great many deteriorated windows, general quantification of the specific aspects of the deterioration may substitute for photographs and

descriptions of every window. A full window survey should only be needed in limited instances.

Questions about the feasibility of repair or the quality of the repaired window can usually be best answered by doing a sample repair. The appearance, the cost of the repair, and other factors may be considered. Where particular performance levels are critical, testing of the repaired window may provide information useful in evaluating the viability of repair.

Considerations beyond deterioration

While condition is the primary determinant in decisions regarding the treatment of historic windows, the importance of the windows to the historic character of the building can also be taken into account. The design and location of windows and their relationship to the design of the building can affect their role in the character of a building. Windows that are distinctive features or exemplify fine craftsmanship are more critical to retain and repair than those that play a lesser supporting role in the design of the building or are simple manufactured units. The more important the elevation, feature or space of which the windows are a part, the more important it is to retain the historic windows.

While factors including occupant operation, presence of hazardous materials, code requirements, or energy performance, if taken individually, are not reasons to replace windows, they may be issues to consider in conjunction with deterioration in establishing a need for window replacement. In many cases these requirements can be met without losing the historic windows. For example, studies have shown that the energy performance of historic windows can be significantly improved by adding storm windows and weather-stripping or by replacing the glazing or the sash.

The number of windows being replaced is a consideration that may allow for window replacement that does not depend on deterioration. It may be possible that the replacement of a few windows may have only an inconsequential effect on the character of an elevation with many windows. Thus, where a need such as egress can be achieved with little change to the appearance of the building, a few windows may be replaced irrespective of their condition.

Some areas have code requirements in response to severe weather conditions. Mandates such as impact resistance may make it impossible for a building to have any compliant occupancy with the historic windows in place,

particularly on taller buildings. In these cases, replacement of the historic windows will not be dependent on documentation of deterioration.

Preservation Briefs, 9: The Repair of Historic Wooden Windows John H. Myers



Historic six-over-six windows--preserved. Photo: NPS files.

The windows on many historic buildings are an important aspect of the architectural character of those buildings. Their design, craftsmanship, or other qualities may make them worthy of preservation. This is self-evident for ornamental windows, but it can be equally true for warehouses or factories where the windows may be the most dominant visual element of an otherwise plain building. Evaluating the significance of these windows and planning for their repair or replacement can be a complex process involving both objective and subjective considerations. *The Secretary of the Interior's Standards for Rehabilitation* and the accompanying guidelines, call for respecting the significance of original materials and features, repairing and retaining them wherever possible, and when necessary, replacing them in kind. This Brief is based on the issues of significance and repair which are implicit in the standards, but the primary emphasis is on the technical issues of planning for the repair of windows including evaluation of their physical condition, techniques of repair, and design considerations when replacement is necessary.

Much of the technical section presents repair techniques as an instructional guide for the do-it-yourselfer. The information will be useful, however, for the architect, contractor, or developer on large-scale projects. It presents a methodology for approaching the evaluation and repair of existing windows,

and considerations for replacement, from which the professional can develop alternatives and specify appropriate materials and procedures.

Architectural or Historical Significance

Evaluating the architectural or historical significance of windows is the first step in planning for window treatments, and a general understanding of the function and history of windows is vital to making a proper evaluation. As a part of this evaluation, one must consider four basic window functions: admitting light to the interior spaces, providing fresh air and ventilation to the interior, providing a visual link to the outside world, and enhancing the appearance of a building. No single factor can be disregarded when planning window treatments; for example, attempting to conserve energy by closing up or reducing the size of window openings may result in the use of *more* energy by increasing electric lighting loads and decreasing passive solar heat gains.



Windows are frequently important visual focal points, especially on simple facades such as this mill building. Replacement of the multi-pane windows with larger panes could dramatically alter the appearance of the building. Photo: NPS files.

Historically, the first windows in early American houses were casement windows; that is, they were hinged at the side and opened outward. In the beginning of the eighteenth century single- and double-hung windows were introduced. Subsequently many styles of these vertical sliding sash windows have come to be associated with specific building periods or architectural styles, and this is an important consideration in determining the significance of windows, especially on a local or regional basis. Site-specific, regionally

oriented architectural comparisons should be made to determine the significance of windows in question. Although such comparisons may focus on specific window types and their details, the ultimate determination of significance should be made within the context of the whole building, wherein the windows are one architectural element.

After all of the factors have been evaluated, **windows should be considered significant to a building if they:**

1. are original,
2. reflect the original design intent for the building,
3. reflect period or regional styles or building practices,
4. reflect changes to the building resulting from major periods or events, or
5. are examples of exceptional craftsmanship or design.

Once this evaluation of significance has been completed, it is possible to proceed with planning appropriate treatments, beginning with an investigation of the physical condition of the windows.

Physical Evaluation

The key to successful planning for window treatments is a careful evaluation of existing physical conditions on a unit-by-unit basis. A graphic or photographic system may be devised to record existing conditions and illustrate the scope of any necessary repairs. Another effective tool is a window schedule which lists all of the parts of each window unit. Spaces by each part allow notes on existing conditions and repair instructions. When such a schedule is completed, it indicates the precise tasks to be performed in the repair of each unit and becomes a part of the specifications. **In any evaluation, one should note at a minimum:**

1. window location
2. condition of the paint
3. condition of the frame and sill
4. condition of the sash (rails, stiles and muntins)
5. glazing problems
6. hardware, and
7. the overall condition of the window (excellent, fair, poor, and so forth)

Many factors such as poor design, moisture, vandalism, insect attack, and lack of maintenance can contribute to window deterioration, but moisture is the primary contributing factor in wooden window decay. All window units should be inspected to see if water is entering around the edges of the frame and, if so, the joints or seams should be caulked to eliminate this danger. The

glazing putty should be checked for cracked, loose, or missing sections which allow water to saturate the wood, especially at the joints. The back putty on the interior side of the pane should also be inspected, because it creates a seal which prevents condensation from running down into the joinery. The sill should be examined to insure that it slopes downward away from the building and allows water to drain off. In addition, it may be advisable to cut a dripline along the underside of the sill. This almost invisible treatment will insure proper water runoff, particularly if the bottom of the sill is flat. Any conditions, including poor original design, which permit water to come in contact with the wood or to puddle on the sill must be corrected as they contribute to deterioration of the window.



Deterioration of poorly maintained windows usually begins on horizontal surfaces and at joints, where water can collect and saturate the wood. Photo: NPS files.

One clue to the location of areas of excessive moisture is the condition of the paint; therefore, each window should be examined for areas of paint failure. Since excessive moisture is detrimental to the paint bond, areas of paint blistering, cracking, flaking, and peeling usually identify points of water penetration, moisture saturation, and potential deterioration. Failure of the paint should not, however, be mistakenly interpreted as a sign that the wood is in poor condition and hence, irreparable. Wood is frequently in sound physical condition beneath unsightly paint. After noting areas of paint failure, the next step is to inspect the condition of the wood, particularly at the points identified during the paint examination.

Each window should be examined for operational soundness beginning with the lower portions of the frame and sash. Exterior rainwater and interior condensation can flow downward along the window, entering and collecting

at points where the flow is blocked. The sill, joints between the sill and jamb, corners of the bottom rails and muntin joints are typical points where water collects and deterioration begins. The operation of the window (continuous opening and closing over the years and seasonal temperature changes) weakens the joints, causing movement and slight separation. This process makes the joints more vulnerable to water which is readily absorbed into the end grain of the wood. If severe deterioration exists in these areas, it will usually be apparent on visual inspection, but other less severely deteriorated areas of the wood may be tested by two traditional methods using a small ice pick.

An ice pick or an awl may be used to test wood for soundness. The technique is simply to jab the pick into a wetted wood surface at an angle and pry up a small section of the wood. Sound wood will separate in long fibrous splinters, but decayed wood will lift up in short irregular pieces due to the breakdown of fiber strength.

Another method of testing for soundness consists of pushing a sharp object into the wood, perpendicular to the surface. If deterioration has begun from the hidden side of a member and the core is badly decayed, the visible surface may appear to be sound wood. Pressure on the probe can force it through an apparently sound skin to penetrate deeply into decayed wood. This technique is especially useful for checking sills where visual access to the underside is restricted.

Following the inspection and analysis of the results, the scope of the necessary repairs will be evident and a plan for the rehabilitation can be formulated. **Generally, the actions necessary to return a window to "like new" condition will fall into three broad categories:**

1. **routine maintenance procedures,**
2. **structural stabilization, and**
3. **parts replacement.**

These categories will be discussed in the following sections and will be referred to respectively as **Repair Class I**, **Repair Class II**, and **Repair Class III**. Each successive repair class represents an increasing level of difficulty, expense, and work time. Note that most of the points mentioned in Repair Class I are routine maintenance items and should be provided in a regular maintenance program for any building. The neglect of these routine items can contribute to many common window problems.

Before undertaking any of the repairs mentioned in the following sections all sources of moisture penetration should be identified and eliminated, and all existing decay fungi destroyed in order to arrest the deterioration process.

Many commercially available fungicides and wood preservatives are toxic,

so it is extremely important to follow the manufacturer's recommendations for application, and store all chemical materials away from children and animals. After fungicidal and preservative treatment, the windows may be stabilized, retained, and restored with every expectation for a long service life.

Repair Class I: Routine Maintenance



This historic double-hung window has many layers of paint, some cracked and missing putty, slight separation at the joints, broken sash cords, and one cracked pane. Photo: NPS files.



After removing paint from the seam between the interior stop and the jamb, the stop can be pried out and gradually worked loose using a pair of putty knives as shown. Photo: NPS files.

Repairs to wooden windows are usually labor intensive and relatively uncomplicated. On small scale projects this allows the do-it-yourselfer to

save money by repairing all or part of the windows. On larger projects it presents the opportunity for time and money which might otherwise be spent on the removal and replacement of existing windows, to be spent on repairs, subsequently saving all or part of the material cost of new window units. Regardless of the actual costs, or who performs the work, the evaluation process described earlier will provide the knowledge from which to specify an appropriate work program, establish the work element priorities, and identify the level of skill needed by the labor force.

The routine maintenance required to upgrade a window to "like new" condition normally includes the following steps:

1. some degree of interior and exterior paint removal,
2. removal and repair of sash (including reglazing where necessary),
3. repairs to the frame,
4. weather-stripping and reinstallation of the sash, and
5. repainting.

These operations are illustrated for a typical double-hung wooden window, but they may be adapted to other window types and styles as applicable. Historic windows have usually acquired many layers of paint over time. Removal of excess layers or peeling and flaking paint will facilitate operation of the window and restore the clarity of the original detailing. Some degree of paint removal is also necessary as a first step in the proper surface preparation for subsequent refinishing (if paint color analysis is desired, it should be conducted prior to the onset of the paint removal). There are several safe and effective techniques for removing paint from wood, depending on the amount of paint to be removed.

Paint removal should begin on the interior frames, being careful to remove the paint from the interior stop and the parting bead, particularly along the seam where these stops meet the jamb. This can be accomplished by running a utility knife along the length of the seam, breaking the paint bond. It will then be much easier to remove the stop, the parting bead and the sash. The interior stop may be initially loosened from the sash side to avoid visible scarring of the wood and then gradually pried loose using a pair of putty knives, working up and down the stop in small increments. With the stop removed, the lower or interior sash may be withdrawn. The sash cords should be detached from the sides of the sash and their ends may be pinned with a nail or tied in a knot to prevent them from falling into the weight pocket.



Sash can be removed and repaired in a convenient work area. Paint is being removed from this sash with a hot air gun. Photo: NPS files.

Removal of the upper sash on double-hung units is similar but the parting bead which holds it in place is set into a groove in the center of the stile and is thinner and more delicate than the interior stop. After removing any paint along the seam, the parting bead should be carefully pried out and worked free in the same manner as the interior stop. The upper sash can be removed in the same manner as the lower one and both sash taken to a convenient work area (in order to remove the sash the interior stop and parting bead need only be removed from one side of the window). Window openings can be covered with polyethylene sheets or plywood sheathing while the sash are out for repair.

The sash can be stripped of paint using appropriate techniques, but if any heat treatment is used, the glass should be removed or protected from the sudden temperature change which can cause breakage. An overlay of aluminum foil on gypsum board or asbestos can protect the glass from such rapid temperature change. It is important to protect the glass because it may be historic and often adds character to the window. Deteriorated putty should be removed manually, taking care not to damage the wood along the rabbet. If the glass is to be removed, the glazing points which hold the glass in place can be extracted and the panes numbered and removed for cleaning and reuse in the same openings. With the glass panes out, the remaining putty can be removed and the sash can be sanded, patched, and primed with a preservative primer. Hardened putty in the rabbets may be softened by heating with a soldering iron at the point of removal. Putty remaining on the glass may be softened by soaking the panes in linseed oil, and then removed with less risk of breaking the glass. Before reinstalling the glass, a bead of glazing compound or linseed oil putty should be laid around the rabbet to cushion and seal the glass. Glazing compound should only be used on wood which

has been brushed with linseed oil and primed with an oil based primer or paint. The pane is then pressed into place and the glazing points are pushed into the wood around the perimeter of the pane. The final glazing compound or putty is applied and beveled to complete the seal. The sash can be refinished as desired on the inside and painted on the outside as soon as a "skin" has formed on the putty, usually in 2 or 3 days. Exterior paint should cover the beveled glazing compound or putty and lap over onto the glass slightly to complete a weather-tight seal. After the proper curing times have elapsed for paint and putty, the sash will be ready for reinstallation.



Following the relatively simple repairs, the window is weathertight, like new in appearance, and serviceable for many years to come. Photo: NPS files.

While the sash are out of the frame, the condition of the wood in the jamb and sill can be evaluated. Repair and refinishing of the frame may proceed concurrently with repairs to the sash, taking advantage of the curing times for the paints and putty used on the sash. One of the most common work items is the replacement of the sash cords with new rope cords or with chains. The weight pocket is frequently accessible through a door on the face of the frame near the sill, but if no door exists, the trim on the interior face may be removed for access. Sash weights may be increased for easier window operation by elderly or handicapped persons. Additional repairs to the frame and sash may include consolidation or replacement of deteriorated wood. Techniques for these repairs are discussed in the following sections. The operations just discussed summarize the efforts necessary to restore a window with minor deterioration to "like new" condition. The techniques can

be applied by an unskilled person with minimal training and experience. To demonstrate the practicality of this approach, and photograph it, a Technical Preservation Services staff member repaired a wooden double-hung, two over two window which had been in service over ninety years. The wood was structurally sound but the window had one broken pane, many layers of paint, broken sash cords and inadequate, worn-out weather-stripping. The staff member found that the frame could be stripped of paint and the sash removed quite easily. Paint, putty and glass removal required about one hour for each sash, and the re-glazing of both sash was accomplished in about one hour. Weather-stripping of the sash and frame, replacement of the sash cords and reinstallation of the sash, parting bead, and stop required an hour and a half. These times refer only to individual operations; the entire process took several days due to the drying and curing times for putty, primer, and paint, however, work on other window units could have been in progress during these lag times.

Repair Class II: Stabilization

The preceding description of a window repair job focused on a unit which was operationally sound. Many windows will show some additional degree of physical deterioration, especially in the vulnerable areas mentioned earlier, but even badly damaged windows can be repaired using simple processes. Partially decayed wood can be waterproofed, patched, built-up, or consolidated and then painted to achieve a sound condition, good appearance, and greatly extended life. Three techniques for repairing partially decayed or weathered wood are discussed in this section, and all three can be accomplished using products available at most hardware stores.

One established technique for repairing wood which is split, checked or shows signs of rot, is to:

1. dry the wood,
2. treat decayed areas with a fungicide,
3. waterproof with two or three applications of boiled linseed oil (applications every 24 hours),
4. fill cracks and holes with putty, and
5. after a "skin" forms on the putty, paint the surface.

Care should be taken with the use of fungicide which is toxic. Follow the manufacturers' directions and use only on areas which will be painted. When using any technique of building up or patching a flat surface, the finished surface should be sloped slightly to carry water away from the window and not allow it to puddle. Caulking of the joints between the sill and the jamb will help reduce further water penetration.



This illustrates a two-part epoxy patching compound used to fill the surface of a weathered sill and rebuild the missing edge. When the epoxy cures, it can be sanded smooth and painted to achieve a durable and waterproof repair. Photo: NPS files.

When sills or other members exhibit surface weathering they may also be built-up using wood putties or homemade mixtures such as sawdust and resorcinol glue, or whiting and varnish. These mixtures can be built up in successive layers, then sanded, primed, and painted. The same caution about proper slope for flat surfaces applies to this technique.

Wood may also be strengthened and stabilized by consolidation, using semirigid epoxies which saturate the porous decayed wood and then harden. The surface of the consolidated wood can then be filled with a semirigid epoxy patching compound, sanded and painted. Epoxy patching compounds can be used to build up missing sections or decayed ends of members. Profiles can be duplicated using hand molds, which are created by pressing a ball of patching compound over a sound section of the profile which has been rubbed with butcher's wax. This can be a very efficient technique where there are many typical repairs to be done. The process has been widely used and proven in marine applications; and proprietary products are available at hardware and marine supply stores. Although epoxy materials may be comparatively expensive, they hold the promise of being among the most durable and long lasting materials available for wood repair. More information on epoxies can be found in the publication "Epoxies for Wood Repairs in Historic Buildings," cited in the bibliography.

Any of the three techniques discussed can stabilize and restore the appearance of the window unit. There are times, however, when the degree of deterioration is so advanced that stabilization is impractical, and the only way to retain some of the original fabric is to replace damaged parts.

Repair Class III: Splices and Parts Replacement

When parts of the frame or sash are so badly deteriorated that they cannot be stabilized there are methods which permit the retention of some of the existing or original fabric. These methods involve replacing the deteriorated parts with new matching pieces, or splicing new wood into existing members. The techniques require more skill and are more expensive than any of the previously discussed alternatives. It is necessary to remove the sash and/or the affected parts of the frame and have a carpenter or woodworking mill reproduce the damaged or missing parts. Most millwork firms can duplicate parts, such as muntins, bottom rails, or sills, which can then be incorporated into the existing window, but it may be necessary to shop around because there are several factors controlling the practicality of this approach. Some woodworking mills do not like to repair old sash because nails or other foreign objects in the sash can damage expensive knives (which cost far more than their profits on small repair jobs); others do not have cutting knives to duplicate muntin profiles. Some firms prefer to concentrate on larger jobs with more profit potential, and some may not have a craftsman who can duplicate the parts. A little searching should locate a firm which will do the job, and at a reasonable price. If such a firm does not exist locally, there are firms which undertake this kind of repair and ship nationwide. It is possible, however, for the advanced do-it-yourselfer or craftsman with a table saw to duplicate moulding profiles using techniques discussed by Gordie Whittington in "Simplified Methods for Reproducing Wood Mouldings," *Bulletin of the Association for Preservation Technology*, Vol. III, No. 4, 1971, or illustrated more recently in *The Old House*, Time-Life Books, Alexandria, Virginia, 1979.

The repairs discussed in this section involve window frames which may be in very deteriorated condition, possibly requiring removal; therefore, caution is in order. The actual construction of wooden window frames and sash is not complicated. Pegged mortise and tenon units can be disassembled easily, if the units are out of the building. The installation or connection of some frames to the surrounding structure, especially masonry walls, can complicate the work immeasurably, and may even require dismantling of the wall. **It may be useful, therefore, to take the following approach to frame repair:**

1. conduct regular maintenance of sound frames to achieve the longest life possible,
2. make necessary repairs in place, wherever possible, using stabilization and splicing techniques, and

3. if removal is necessary, thoroughly investigate the structural detailing and seek appropriate professional consultation.

Another alternative may be considered if parts replacement is required, and that is sash replacement. If extensive replacement of parts is necessary and the job becomes prohibitively expensive it may be more practical to purchase new sash which can be installed into the existing frames. Such sash are available as exact custom reproductions, reasonable facsimiles (custom windows with similar profiles), and contemporary wooden sash which are similar in appearance. There are companies which still manufacture high quality wooden sash which would duplicate most historic sash. A few calls to local building suppliers may provide a source of appropriate replacement sash, but if not, check with local historical associations, the state historic preservation office, or preservation related magazines and supply catalogs for information.

If a rehabilitation project has a large number of windows such as a commercial building or an industrial complex, there may be less of a problem arriving at a solution. Once the evaluation of the windows is completed and the scope of the work is known, there may be a potential economy of scale. Woodworking mills may be interested in the work from a large project; new sash in volume may be considerably less expensive per unit; crews can be assembled and trained on site to perform all of the window repairs; and a few extensive repairs can be absorbed (without undue burden) into the total budget for a large number of sound windows. While it may be expensive for the average historic home owner to pay seventy dollars or more for a mill to grind a custom knife to duplicate four or five bad muntins, that cost becomes negligible on large commercial projects which may have several hundred windows.

Most windows should not require the extensive repairs discussed in this section. The ones which do are usually in buildings which have been abandoned for long periods or have totally lacked maintenance for years. It is necessary to thoroughly investigate the alternatives for windows which do require extensive repairs to arrive at a solution which retains historic significance and is also economically feasible. Even for projects requiring repairs identified in this section, if the percentage of parts replacement per window is low, or the number of windows requiring repair is small, repair can still be a cost effective solution.

Weatherization

A window which is repaired should be made as energy efficient as possible by the use of appropriate weather-stripping to reduce air infiltration. A wide variety of products are available to assist in this task. Felt may be fastened to the top, bottom, and meeting rails, but may have the disadvantage of absorbing and holding moisture, particularly at the bottom rail. Rolled vinyl strips may also be tacked into place in appropriate locations to reduce infiltration. Metal strips or new plastic spring strips may be used on the rails and, if space permits, in the channels between the sash and jamb. Weather-stripping is a historic treatment, but old weather-stripping (felt) is not likely to perform very satisfactorily. Appropriate contemporary weather-stripping should be considered an integral part of the repair process for windows. The use of sash locks installed on the meeting rail will insure that the sash are kept tightly closed so that the weather-stripping will function more effectively to reduce infiltration. Although such locks will not always be historically accurate, they will usually be viewed as an acceptable contemporary modification in the interest of improved thermal performance. Many styles of storm windows are available to improve the thermal performance of existing windows. The use of exterior storm windows should be investigated whenever feasible because they are thermally efficient, cost-effective, reversible, and allow the retention of original windows (see "Preservation Briefs: 3"). Storm window frames may be made of wood, aluminum, vinyl, or plastic; however, the use of unfinished aluminum storms should be avoided. The visual impact of storms may be minimized by selecting colors which match existing trim color. Arched top storms are available for windows with special shapes. Although interior storm windows appear to offer an attractive option for achieving double glazing with minimal visual impact, the potential for damaging condensation problems must be addressed. Moisture which becomes trapped between the layers of glazing can condense on the colder, outer prime window, potentially leading to deterioration. The correct approach to using interior storms is to create a seal on the interior storm while allowing some ventilation around the prime window. In actual practice, the creation of such a durable, airtight seal is difficult.

Window Replacement

Although the retention of original or existing windows is always desirable and this Brief is intended to encourage that goal, there is a point when the condition of a window may clearly indicate replacement. The decision process for selecting replacement windows should not begin with a survey of

contemporary window products which are available as replacements, but should begin with a look at the windows which are being replaced. **Attempt to understand the contribution of the window(s) to the appearance of the facade including:**

1. the pattern of the openings and their size;
2. proportions of the frame and sash;
3. configuration of window panes;
4. muntin profiles;
5. type of wood;
6. paint color;
7. characteristics of the glass; and
8. associated details such as arched tops, hoods, or other decorative elements.

Develop an understanding of how the window reflects the period, style, or regional characteristics of the building, or represents technological development.

Armed with an awareness of the significance of the existing window, begin to search for a replacement which retains as much of the character of the historic window as possible. There are many sources of suitable new windows. Continue looking until an acceptable replacement can be found. Check building supply firms, local woodworking mills, carpenters, preservation oriented magazines, or catalogs or suppliers of old building materials, for product information. Local historical associations and state historic preservation offices may be good sources of information on products which have been used successfully in preservation projects.

Consider energy efficiency as one of the factors for replacements, but do not let it dominate the issue. Energy conservation is no excuse for the wholesale destruction of historic windows which can be made thermally efficient by historically and aesthetically acceptable means. In fact, a historic wooden window with a high quality storm window added should thermally outperform a new double-glazed metal window which does not have thermal breaks (insulation between the inner and outer frames intended to break the path of heat flow). This occurs because the wood has far better insulating value than the metal, and in addition many historic windows have high ratios of wood to glass, thus reducing the area of highest heat transfer. One measure of heat transfer is the U-value, the number of Btu's per hour transferred through a square foot of material. When comparing thermal performance, the lower the U-value the better the performance. According to ASHRAE 1977 Fundamentals, the U-values for single glazed wooden windows range from

0.88 to 0.99. The addition of a storm window should reduce these figures to a range of 0.44 to 0.49. A non-thermal break, double-glazed metal window has a U-value of about 0.6.

Summary and References

Technical Preservation Services recommends the retention and repair of original windows whenever possible. We believe that the repair and weatherization of existing wooden windows is more practical than most people realize, and that many windows are unfortunately replaced because of a lack of awareness of techniques for evaluation, repair, and weatherization. Wooden windows which are repaired and properly maintained will have greatly extended service lives while contributing to the historic character of the building. Thus, an important element of a building's significance will have been preserved for the future.

This publication has been prepared pursuant to the National Historic Preservation Act of 1966, as amended, which directs the Secretary of the Interior to develop and make available information concerning historic properties. Technical Preservation Services (TPS), National Park Service prepares standards, guidelines, and other educational materials on responsible historic preservation treatments for a broad public.

1981

Reading List

ASHRAE *Handbook 1977 Fundamentals*. New York: American Society of Heating, Refrigerating and Air-conditioning Engineers, 1978 (chapter 26).

Ferro, Maximillian. *Preservation: Present Pathway to Fall River's Future*. Fall River, Massachusetts: City of Fall River, 1979 (chapter 7).

"Fixing Double-hung Windows." *Old House Journal* (no. 12, 1979): 135.

Morrison, Hugh. *Early American Architecture*. New York: Oxford University Press, 1952.

Phillips, Morgan, and Selwyn, Judith. *Epoxies for Wood Repairs in Historic Buildings*. Washington, DC: Technical Preservation Services,

U.S. Department of the Interior (Government Printing Office, Stock No. 024016000951), 1978.

Rehab Right. Oakland, California: City of Oakland Planning Department, 1978 (pp. 7883).

"Sealing Leaky Windows." *Old House Journal* (no. 1, 1973): 5.

Weeks, Kay D. and David W. Look, *Preservation Brief 10: Exterior Paint Problems on Historic Woodwork*. Washington, DC: Technical Preservation Services, U.S. Department of the Interior, 1982.

APPENDIX I: PAINT COLOR CHART

Color has a significant impact upon a building's appearance, therefore it is recommended to use appropriate colors which characterize Hinton's Historic District. Use colors which are compatible with those used in the historic district. Avoid using bright colors not typically found in the district and the use of too many colors.

In older buildings it is recommended to research the original paint color before repainting. This can be done by chipping or scrapping through the paint layers to expose the earlier colors. Keep in mind that older paint can contain lead and that safety precautions, such as eyewear and protection from lead dust, should be taken when removing the sample to color match. It is best to have a qualified contractor do this work. If for some reason the original color does not work choose an alternate color acceptable for the time period of the building from historic color samples.

In new construction colors shall be selected to match or be compatible with those colors in the district or appropriate for the time period of the building.

Historic color samples such as those outlined by Benjamin Moore and Sherwin Williams and others shall be used when selecting exterior paint. Also other manufacturers with computer color matching can be used with those samples to obtain the historic color necessary.

Selection of color shall be appropriate to the historic district, building's age, style and setting while giving owners freedom in color choices.

If using historic colors selected from manufacturers' historic palettes, the staff can approve painting. The colors however should be appropriate to the specific style of building as indicated by the manufacturer's literature. Some approved palettes include:

- Benjamin Moore Historic Paint Colors
- Porter/Pittsburgh Paints (PPG) Historic Paint Colors
- PPG Frank Lloyd Wright Colors
- Sherwin-Williams Historic Paint Colors
- Olde Century Colors (Craftsman/Prairie Style)
- Historic Linseed-Oil Paint Colors
- Historic Milk Paint Colors The Old Fashioned Milk Paint Co., Inc.

- Homestead House Paint Co.
- Historic Colors of America Paint Chart, Historic New England. Not a paint manufacturer but a chart of appropriate colors and lists of manufacturers. <http://shop.historicnewengland.org/000558-355/>
- Valspar paints, Exterior Styles Collections, <https://www.valsparpaint.com/en/explore-colors/find-ideas/styles/victorian-1/victorian-1.html?index=1>

For manufacturers not listed, staff shall review palette literature provided by the owner and determine if it is appropriate. If so, the manufacturer shall be added to the list.

APPENDIX J: FINANCIAL INCENTIVES FOR PRESERVATION

Listing in the National Register of Historic Places provides a number of benefits to the property owner, particularly commercial property. These include:

- The recognition and honorary significance of resources.
- The possibility of grant funds for protection or other activities.
- Protection from federally funded or licensed activities and projects.
- Federal tax credits for rehabilitation of income producing properties.
- State tax credits for rehabilitation of income producing and primary residence properties.

Grants

The State Historic Preservation Office provides matching grants for planning, studies, architectural services and construction on historic properties both publicly and privately owned. The grants require a fifty percent match. Priorities include roof repair, replacement, masonry repair, replacement, structural repair, replacement, door and window repair, replacement. The funds are available annually. Contact the State Historic Preservation Office for applications and information.

Grant Application Deadlines:

March 31 – Development Grant Applications – Forms are available mid-January for projects beginning mid-July and ending May 31 of the following year.

October 31 – Survey and Planning Grant Applications (CLG Grant Program) – Forms are available mid-August for projects beginning in March and ending in June of the following year.

To receive application forms, please visit the SHPO website, www.wvculture.org or contact the Grants Coordinator at (304) 558-0240 ext. 720 or by email pam.a.brooks@wv.gov

Tax Incentives

The most important significant elements of listing are tax credits for rehabilitation. Tax credits are available for both commercial buildings and owner-occupied residences. The historic preservation tax credits are briefly described as:

- The federal historic preservation tax credit is equal to 20% of all approved capital investment in the building. The state historic preservation tax credit is equal to 25% of all approved capital investment in the building. In other words, if you spend \$100,000.00 on qualified rehabilitation you will receive a federal tax credit of \$20,000.00 and a state tax credit of \$25,000.00.
- The commercial building must be a depreciable building. Residential rental is allowed.
- The rehabilitation expenditure must be greater than \$5,000.00 or the adjusted basis in the commercial building, whichever is greater.
- The work must meet the Secretary of the Interior's Standards for Rehabilitation.
- A completed application for the tax credit must be filed with the State Historic Preservation Office. It is recommended that the application be completed and submitted prior to commencement of work on the project. This will allow the reviewers to determine if the proposed work will meet the Secretary's Standards.
- The tax credit can only be taken when the work is complete. The application may be submitted at the conclusion of the project. The owner assumes the risk that the work will not meet the Standards and the application will be denied.
- The West Virginia State Historic Preservation Office makes a recommendation to the National Park Service but does not provide the final determination.
- West Virginia also has a credit for the rehabilitation of owner-occupied residences. The credit is 20% of the cost of rehabilitation credited against WV State income tax. This is an important tool for the continued preservation of residential sites not eligible for the commercial credits.

For information on tax credits and application forms, contact the State Historic Preservation Office at 304.558.0240. Website

<http://www.wvculture.org/shpo/taxcredit.html>

APPENDIX K: HINTON DRAFT SIGN ORDINANCE

Article II. Billboards and Signs

Section. 18. General Provisions.

No billboard, sign or other structure for advertising purposes shall be erected, hung, placed, or painted in the city, except as provided in this ordinance.

No sign erected before the enactment of this ordinance shall be structurally altered or moved except in accordance with this ordinance. No permit shall be required for the repainting or repapering of a sign unless otherwise noted.

18.01 Permits for Signs.

No sign shall be erected or displayed until the sign has been approved and a permit granted by the City Council, except as permitted in Section 18.02. Application for permits shall be submitted on forms provided by the City of Hinton. Each application shall be accompanied by plans showing the sign area, size, character, and color of letters; designs proposed; method of illumination, if any; proposed location; and, if a projecting business sign, proposed method of fastening such sign to the building or structure. The permit number and date of issuance shall be affixed to each sign in a conspicuous manner. Signs erected without conformance to these standards may be removed on order of the City Council.

The fee for a sign permit shall be based on the fee schedule for a building permit. This fee is \$5.00 per each thousand dollars of costs of construction. Fee for sign permit shall be collected by the City Manager at the time of issuance. Any person who shall violate this section shall be fined not less than \$10.00 nor more than \$100.00. Each and every day the violation remains shall constitute a separate offense.

18.02 Signs Permitted Without a Permit.

The types of signs listed below are allowed in the city without a permit, subject only to the requirements outlined for each type of sign and the construction and lighting standards of this section:

- a. Incidental, Identification Sign, indicating the name or number of the building or premises or the accessory use of a dwelling for a home occupation or for professional purposes. Such sign shall not exceed two (2) square feet in area.
- b. Construction Signs, identifying the contractors, engineers, or architects on building projects under construction, limited to a total area for all such signs of one hundred fifty (150) square feet. Signs shall be hung with the bottom thereof nearer than eight feet vertically to the sidewalk nor ten feet horizontally from the curb nor hung without being suspended by wire ropes and guy wires. The signs shall be confined to the construction site and removed when construction is completed.
- c. Political Campaign Signs, provided, however, that such signs are removed within five (5) days after election date.
- d. Street Banners and Temporary Banners, advertising a public event, provided, however, that such signs shall not be displayed more than sixty (60) days prior to the event, and are removed within five (5) days after the event.
- e. Temporary Business Signs, excluding banners, not to exceed twenty (20) square feet, and not to be displayed longer than fifteen (15) days within any one-year period.

f. Window Signs, provided that such signs shall not exceed thirty (30) percent of the glass area.

g. Direction and Information Signs, of a public or quasi-public nature.

h. Integral Building Signs, giving the name of the building, date of erection or the like, when made an integral part of the structure.

i. Institutional Signs, given the name or announcement of any public charitable, or religious institution. Such signs shall be set back at least fifteen (15) feet from the property line and shall not exceed twenty-four (24) square feet in area.

j. Private Traffic Direction Signs, for directing traffic onto or within a property. Such signs shall not include any advertising.

k. Historical Markers.

l. Sidewalk Signs, not to exceed eight (8) square feet, and only for sidewalks that can provide a continuous unobstructed path of six (6) feet wide or more. Signs must be within the building frontage. Signs must be first registered with the City of Hinton and may require approval by the Historic Preservation Review Commission before sign is authorized for display.

m. Banners, not to exceed twenty (20) square feet, for temporary promotions or onsite business advertising, and not to be displayed for longer than fifteen (15) days within any one-year period. Banners must be first registered with the City of Hinton.

n. Tourist Home Sign, for a tourist home permitted as a Special Exception, shall not exceed six (6) square feet in area.

18.03 Number and Area of Signs.

For the purpose of determining number of signs, a sign shall be considered to be a single display surface or display device containing elements organized, related, and composed to form a unit. Where matter is displayed in a random manner without organized relationship of elements, or where there is reasonable doubt about the relationship of elements, each element shall be a single sign. The surface area of a sign shall be computed as including the entire area within a regular geometric form or combinations of regular geometric forms comprising all of the display area of the sign and including all of the elements of the matter displayed. Frames and structural members not bearing advertising matter shall not be included in computation of surface area. Only one side of a two-face sign shall be used for computing sign area.

18.04 Non Conforming Signs.

Assignment of Status. It is the intent of this chapter to encourage eventual elimination of signs that, as a result of the adoption of this chapter, become nonconforming. Existing signs which do not conform to the specific provisions of the Ordinance may be eligible for the designated "legal nonconforming" provided that:

- a) The Administrator determines such signs are properly maintained and do not in any way endanger the public, and
- b) The sign was installed in conformance with a valid permit or variance, or complied with all applicable laws on the date of adoption of this Ordinance.

Any nonconforming sign shall be removed or rebuilt in full conformity to the terms of this Ordinance if it is damaged or allowed to deteriorate to such an extent that the cost of repair or restoration is 50% or more of the cost of reconstruction of such sign.

Loss of Status. It is considered as much a subject of health, safety, and welfare as the prohibition of new signs in violation of this chapter. It is the intent, therefore, to administer this chapter to realize the removal of illegal nonconforming signs and to avoid any unreasonable invasion of established private property rights.

a. A legal nonconforming sign may be continued in good condition, but shall not be:

1. Replaced by another nonconforming sign;
2. Structurally altered so as to prolong the life of the sign;
3. Expanded; or,
4. Reestablished after damage or destruction if the estimated expense of reconstruction exceeds fifty (50) percent of the estimated replacement cost, or
5. Relocated, unless caused by government action, and said location approved by Building Development Services Department.
6. Advertising a business or activity no longer occupying the property on which it is located for a period exceeding 14 days. (abandoned sign)

18.10 Sign Design.

18.11 Lighting.

Lighted signs shall not reflect or result in glare in adjacent residential lots or areas or on adjacent streets. Lighting or wording on a sign shall not be of a nature to be confused with public traffic and directional signs.

18.12 Placement on Building.

Signs shall not be erected on the roofs of buildings and signs erected on the sides of buildings shall not extend above the peak of the roofline. Signs shall not obstruct any window, door, fire escape, stairway, or other opening intended to provide light, air, ingress or egress for any building or structure. Any sign mounted flat against the wall of a building and having a uniform thickness of not more than twelve (12) inches

shall not be deemed an overhanging and/or projecting sign.

18.13 Construction and Maintenance.

Signs shall be constructed so as to be structurally sound and shall be maintained in good order. Whenever a sign becomes structurally unsafe or endangers the safety of a building or premises or the public safety, in the opinion of the City Council, they shall order that such sign be made safe or removed. Such order shall be complied with within five (5) days of receipt thereof by the person, firm, or corporation owning or using the sign or the owner of the building or premises on which such unsafe sign is affixed or erected.

Banners intended for use as business signage displays for periods of more than fifteen (15) days shall be professionally constructed of exterior-grade, weather-resistant material. Banners shall be installed within a permanent mounting frame that surrounds the perimeter of the banner. Whenever a banner becomes torn, frayed, or begins to show deterioration of signage contents, the City Council shall order that such banner be removed. Such order shall be complied with within five (5) days of receipt thereof by the person, firm, or corporation owning or using the sign or the owner of the building or premises on which the banner is affixed or erected. Subsequently, a new sign permit shall be required for another banner sign.

No signs shall be permitted which are changeable message board signs unless they are less than forty (40) percent of the overall signage area of a designed business sign assembly that is architecturally compatible with the onsite business.

18.14 Location of Signs.

No sign shall be located in a public right-of-way. No sign or supporting structure shall be located in such a manner that traffic visibility is impaired. The City may remove violating signage displays without prior notice to sign owner.

18.15 Business Signs on Buildings.

Business signs attached to buildings may be erected in business and industrial districts in accordance with the following regulations. The total area of signs allowed on any building frontage is calculated on the basis of the length of that frontage. On a corner building, the sign area that may be displayed on the side street shall be limited to fifty (50) square feet, if the side street provides the principal frontage for residential lots on either side of the street between the building and the next intervening street.

18.16 C-1, O-1 Districts.

The total area of signs on any one building frontage shall not exceed one (1) square foot for each lineal foot of the building frontage on which the sign or signs are placed, but in no case shall the total sign area exceed two hundred (200) square feet.

Projecting signs for storefront tenants are allowed in the C-1 and O-1 District; they must be mounted at a right angle, and situated below the cornice line of the first floor. The mounting arm shall extend no more than four (4) feet from the plane of the structure and shall be more than three (3) feet from the nearest the curb line. The sign area shall not exceed six (6) square feet and the lower edge of the sign must be a minimum of eight (8) feet above the sidewalk.

18.17 I-1 District.

The total area of signs on any one building frontage shall not exceed two (2) square feet for each lineal foot of the building frontage on which the sign or signs are placed,

but in no case shall the total sign area exceed four hundred (400) square feet.

Exception: For buildings that were originally built and used as residential dwellings, the total area of signs on any one building shall be governed by the sign regulations for the C-2 District.

18.18 C-2 District.

The total area of signs on any one building frontage shall not exceed two (2) square feet for each lineal foot of the building frontage on which the sign or signs are placed, but in no case shall the total sign area exceed four hundred (400) square feet.

Projecting signs for storefront tenants are allowed in the C-2 District; they must be mounted at a right angle, and situated below the cornice line of the first floor. The mounting arm shall extend no more than four (4) feet from the plane of the structure and shall be more than three (3) feet from the nearest the curb line. The sign area shall not exceed six (6) square feet and the lower edge of the sign must be a minimum of eight (8) feet above the sidewalk.

18.19 Freestanding Business Sign.

Individual commercial or industrial establishments may erect a freestanding business sign. The freestanding sign may be erected anywhere back of the property line established in this ordinance, provided that no part of the freestanding sign shall extend past the street right-of-way line. In R & R-1 the total sign area shall not exceed twenty four (24) square feet and the total height of the sign structure shall not exceed eight (8) feet. Businesses or industries having frontage on more than one street may have an additional freestanding sign for each street frontage, provided that the total area for all freestanding signs does not exceed forty eight (48) square feet. In C-1,

C-2 & O-1 the total sign area shall not exceed twenty four (24) square feet and the total height of the sign structure shall not exceed ten (10) feet. Businesses or industries having frontage on more than one street may have an additional freestanding sign for each street frontage, provided that the total area for all freestanding signs does not exceed forty eight (48) square feet. Signage must be architecturally compatible with the building.

Integrated shopping centers, industrial parks, and similar combined developments may have larger, freestanding identification signs, limited to the name of the center or development and a listing of the major tenants. Such signs shall not exceed a total height of forty (40) feet and the total sign area shall not exceed five hundred (500) square feet.

18.20 Signs for Nonconforming Businesses.

Signs for nonconforming businesses in a Residential District shall be governed by the sign regulations for the C-1 and O-1 District.

18.21 Approval of Location and Maintenance of Signs Requiring Zoning Permits.

The following regulations shall, without exception, be observed with respect to the approval of location and maintenance of signs.

a. No sign shall be permitted that is an imitation of, or that resembles an official traffic control device, railroad sign or signal, or that hides from view or interferes with the effectiveness of any official traffic control device or any railroad sign, signal or traffic sight lines.

b. No sign that implies the need or requirement of stopping or the existence of danger shall be displayed.

c. No sign shall be located on the right-of-way of any road or on any slope or drainage easement for such road.

d. No sign shall be permitted which contains statements, words or pictures of an obscene, indecent or immoral character, or such as will offend public morals or decency.

e. No sign shall be placed on rocks, trees or on poles maintained by public utilities.

f. No signs shall be permitted that become unsafe or endanger the safety of a building, premises or persons and unless maintained in a good general condition and in reasonable state of repair.

g. Where a sign structure does not include advertising information or is in a deteriorated condition for a period of one hundred twenty (120) days, such sign shall be repaired and/or repainted or repapered to include advertising information. If this requirement is not fulfilled the sign structure shall be removed no later than sixty (60) days from notice of violation.

h. Any sign which no longer advertises a bona fide business, service, activity, campaign or product shall be removed within thirty (30) day.

i. No signs shall be permitted which are of a temporary or portable nature, except those specifically allowed under other provisions.

APPENDIX L: BIBLIOGRAPHY & RESOURCES

What Style Is It: A Guide to American Architecture. Poppeliers, Chamber and

Schwartz, H.A.B.S and National Trust for Historic Preservation.

Identifying American Architecture. Blumenson, John J.G., American Association for
State and Local History.

A Field Guide to American Houses. McAlester, Virginia and Lee. Published by Alfred
A. Knopf.

HINTON HISTORICAL DISTRICT, Marshall, Paul D. A.I.A. New River Symposium Proceedings 1984

Introduction to Early American Masonry, Stone, Brick, Mortar and Plaster.
McKee, Harley J, FAIA. Published by the National Trust for Historic Preservation
And Columbia University.

Masonry: Respectful Rehabilitation. London, Mark.

Masonry: How to Care for Old and Historic Brick and Stone. London, Mark.
Published by The Preservation Press/National Trust for Historic Preservation.

Twentieth Century Building Materials, History and Conservation. Jester, Thomas C.,
Editor. Published by McGraw-Hill Companies.

Keeping It Clean: Removing Exterior Dirt, Paint, Stains and Graffiti from Historic

Masonry Buildings. Grimmer, Ann E. Published by the U.S. Department of the
Interior/National Park Service.

Old Building Owner's Manual. Kitchen, Judith L. Ohio Historic Preservation Office.

Victorian Exterior Decoration: How to Paint Your Nineteenth-Century American House
Historically. Moss, Roger W. and Winkler, Gail Caskey.

Illustrated Dictionary of Historic Architecture. Harris, Cyril M. Published by Dover
Publications.

Badger's Illustrated Catalog of Cast Iron Architecture. Dover Books
(Reprint of 1860
Catalog)

Traditional Building: The Professional's Resource for Public Architecture.
Labine, Clem.

Old House Journal; Old House Journal Catalog; Old House Journal Interiors.

Preservation Briefs. National Park Service.

Preservation Tech Notes. U.S. Department of the Interior, National Park Service.

Century of Color: Exterior Decoration for American Buildings 1820-1920.
Moss, Roger. Published by the American Life Foundation.

Sloan's Victorian Buildings. Sloan, Samuel. Published by Dover Publications.

Paint in America: The Colors of Historic Buildings. Moss, Roger W., Editor.
Published
By The Preservation Press/National Trust for Historic Preservation.

Identifying American Architecture: A Pictorial Guide to Styles and Terms 1600-1945.
Blumenson, John J. and G. Published by the American Association for
State and Local
History.

The Victorian Design Book: A Complete Guide to Victorian House Trim.
Introduction

By Richard O. Byrne. Published by Lee Valley Tools Ltd. With the Association
For Preservation Technology.

The Outdoor Lighting Pattern Book. Leslie, Russell P., AIA and IES and
Rodgers,
Paula A., IES. Published by McGraw-Hill Companies.

Historic Building Facades: The Manual for Maintenance and Rehabilitation.
Foreward

By James Marston Fitch. Published by John Wiley & Sons and The
Preservation
Press/National Trust for Historic Preservation.

Martinsburg, West Virginia, Municipal Code Section 440. Signs.

NYC Building Dept. web site
<http://www1.nyc.gov/site/buildings/homeowner/installing-air-conditioning-unit.page> accessed 1 29 2018

Internet Connections for Historic Preservation

Federal Government

Advisory Council on Historic Preservation
<http://www.achp.gov>

Americans With Disability Act (ADA) Standards for Accessible Design,
U.S. Department of Justice web site at <http://www.ada.gov/stdspdf.htm>.

National Park Service, Heritage Preservation Services
<http://www2.cr.nps.gov>

National Register of Historic Places
<http://www.cr.nps.gov/nr/nrhome.html>

National Park Service Preservation Briefs
www.nps.gov/tps/how-to-preserve/briefs.htm

National Park Service Secretary of Interiors Guide
[http://www.nps.gov/training/tel/Guides/HPS1022_Sec_of_Interiors_Guide.p
df](http://www.nps.gov/training/tel/Guides/HPS1022_Sec_of_Interiors_Guide.pdf)

National Center for Preservation Technology and Training
<http://www.ncptt.nps.gov>

Preservation Tech Briefs
<http://www2.cr.nps.gov/tps/briefs/presbhom.htm>

Secretary of the Interior's Standards for Rehabilitation
www2.cr.nps.gov/tps/tax/brochure2.htm

Library of Congress (Check heading for bills and click on public laws)
<http://Thomas.Loc.Gov/>

National Archives and Records Administration
<http://www.nara.gov>

State Government

West Virginia State Historic Preservation Office
<http://www.wvic.wvnet.edu/culture/shpo.html>

West Virginia Archeological Research Library
<http://www.wvic.wvnet.edu/wvarl/archp.html>

Non-Profit and Education

National Trust for Historic Preservation
<http://www.nationaltrust.org>

Preservation Alliance of West Virginia
<http://www.pawv.org/>

Preserve/Net Historic Preservation Source
<http://www.preservenet.comell.edu>

Web Site for the History Profession
<http://www.indiana.edu/oah/links.html>

Partners for Sacred Places
<http://www.sacredplaces.org>

New York Landmarks Conservancy
<http://www.nylandmarks.org>

Other

Traditional Building Magazine
www.traditional-building.com

Interactive Old House Network
www.oldhouse.com

Aardwolf's Restoration Net
www.wp.com/OLDHOUSE

Building Online
www.Buildingonline.com

Old House Interiors & Old House Journal
www.oldhouseinteriors.com

Old House Realty Network
www.old-houses.com

Preservation Web
www.preservationweb.com

Restoration & Renovation
<http://egiexib.com>

John Leek's Historic Homeworks
<http://members.aol.com/johnleeke/private/pages/hhw-home.htm>

Rejuvenation Lighting www.rejuvenation.com

House of Antique Hardware www.houseofantiquehardware.com

Renovator's Supply <https://www.rensup.com/>

Van Dyke's Restorers <https://www.vandykes.com/>

Product listings in The Old House Journal
<https://www.oldhouseonline.com/old-house-directory/lighting>

Product guides Traditional Building <https://www.traditionalbuilding.com/>