



TOWN OF EXETER HISTORIC DISTRICTS Guidelines Introduction



BENEFITS OF LOCAL DESIGNATION

The designation of local historic districts and landmarks has been found to:

- Increase neighborhood stability and property values
- Preserve the physical history of the area
- Promote an appreciation of the physical environment
- Foster community pride and self-image by creating a unique sense of place and local identity
- Increase the awareness and appreciation of local history
- Increase tourism
- Attract potential customers to businesses
- Create local construction jobs employing skilled tradesmen

These *Guidelines* were developed in conjunction with the Town of Exeter's Historic District Commission (HDC) and the Building Department. Please review this information during the early stages of planning a project. Familiarity with this material can assist in moving a project forward, saving both time and money. The Building Department is available for informal meetings with potential applicants who are considering improvements to their properties.

Guidelines and application information are available at the Town Office and on the Commission's website at exeternh.gov/bcc/historic-district-commission. For more information, to clarify whether a proposed project requires HDC review, or to obtain permit applications, please call the Building Department at (603) 773-6112.

WHY IS HISTORIC PRESERVATION IMPORTANT IN EXETER?

The Town of Exeter recognizes that the character and quality of life enjoyed by its citizens depend in great measure upon the Town's rich architectural heritage and the importance of the natural and designed landscapes in our community. This historical, cultural, archaeological, social and economic heritage is entrusted to each generation, enriched and passed on to future generations. The Historic District Commission (HDC) of Exeter is charged with safeguarding this heritage as represented by the Town's historical and architectural value.

EXETER'S HISTORIC PROPERTIES

The Town of Exeter currently regulates three locally designated Historic Districts:

- **Front Street Historic District** - Established 1971
- **Downtown Historic District** - Established 1978
- **High Street Historic District** - Established 2006

The Town of Exeter regulates properties in current and future locally designated Historic Districts, as well as the proposed full or partial demolitions of buildings or structures over 50 years old.

In addition, The Town of Exeter also has several individually designated National Register properties and currently two National Register Historic Districts:

- **Front Street Historic District** - Listed 1973
- **Exeter Waterfront Historic District** - Listed 1980



There are several notable institutional buildings that are located within the locally designated historic districts including Exeter Town Hall.

HISTORIC DESIGNATION & LISTING

Definitions

- **Historic Resource:** An individual building, structure, site, object or district that has been determined to have historical significance or associations and whose distinctive character conveys a unique architectural and cultural heritage.
- **Historic District:** A defined area that contains concentrations of historic resources. A district can include as few as one historic resource or hundreds of resources.

Local Designation

Local designation of a historic property or district provides a tool for local communities to determine what is architecturally and historically important to their community and a mechanism for the regulation of proposed changes to those properties.

The National Register of Historic Places

The National Register of Historic Places is the United States government's official list of districts, sites, buildings, structures and objects identified as worthy of preservation. The National Register is administered by the National Park Service, a division of the Department of the Interior.

Listing in the National Register does not eliminate or restrict property rights of individual owners. Projects involving federal or state permits, licenses or funding are reviewed for their potential effects on significant historic properties, including those listed in the National Register. Having a property listed on the National Register could make its owners eligible for federal and state tax credits for expenses incurred rehabilitating an income-producing property. National Register information is available from the New Hampshire Division of Historical Resources. (Refer to *Preservation Organizations*, page 01-11.)

PRESERVATION ASSISTANCE PROGRAMS

There are federal and state incentive programs available for historic properties. The submission and review requirements are rigorous and it is highly recommended that applicants contact the applicable agency at the early planning stages of a potential project.

The Federal Historic Preservation Tax Incentive Program rewards private investment in rehabilitating historic income-producing properties such as offices, rental housing and retail stores. The Program, established by the Tax Reform Act of 1986, is jointly administered by the U.S. Department of the Treasury and the U.S. Department of the Interior's National Park Service. Owner-occupied single-family residences are not eligible for the program. If eligible, up to 20 cents on every dollar spent on qualified rehabilitation work (including most architectural and engineering fees) would be available as a credit against federal income taxes. The 20% tax credit is available to buildings that are listed in the National Register of Historic Places, either individually or as a contributing building in a National Register Historic District, or as a contributing building within a local historic district that has been certified by the Department of the Interior. To be eligible for the 20% tax credit, project work must be certified as meeting *The Secretary of the Interior's Standards for Rehabilitation*. (Refer to *Preservation Resources*, page 01-11.)

Preservation Easements are a tool often used to insure the preservation of the character defining features of a property for the public's benefit. The New Hampshire Preservation Alliance and Historic New England maintain easement programs to protect historic resources. The extent of the protection of the property is dependent on the strength of the easement. Some easements protect just the façade of a building. Other easements protect the larger preservation values including but not limited to the exterior and interior architectural features, materials, landscape features, outbuildings, fences and archeological resources of a property.

The Community Revitalization Tax Relief Incentive (RSA 79E) has been adopted by Town of Exeter to encourage revitalization of underutilized buildings. Program information is available at www.exeternh.gov.

SUSTAINABLE BENEFITS OF PRESERVATION

Historic buildings are intrinsically "green," as reusing an existing building has substantially lower environmental impact than building a new one. Preservation and rehabilitation minimize the wasteful loss of materials while maintaining a distinctive sense of place. Sustainable benefits of preservation include:

- The historic building or structure already exists, and the energy required to fabricate the lumber, bricks, windows and doors was expended long ago
- New construction often includes demolition of an existing building (construction waste comprises approximately 25% to 30% of landfills), and the fabrication of new construction materials creates additional waste, while preservation of an existing building conserves landfill space
- The most appropriate materials for the majority of preservation projects are often historic materials rather than non-biodegradable manufactured products, such as vinyl and/or plastics

PRESERVATION REGULATORY REVIEW

To maintain the character of properties within the Historic Districts, most proposed exterior changes require review and the issuance of a Certificate of Approval (COA) from the HDC prior to commencing work, or if deemed to be an exempt activity or a minor application by Building Department Staff, the approval process can be addressed administratively. The type of work requiring a COA includes:

- **Exterior Alteration** - Installation, modification and/or removal of materials or features from sites, buildings or structures including sign modification or installation
- **New Construction** - New building, structure or site feature and/or expansion of an existing building, structure or site feature
- **Demolition** - Complete or partial removal of a building, structure or site feature
- **Relocation** - Moving of a building, structure or site feature

Certificate of Approval applications are reviewed by the HDC at their monthly meetings. During their reviews, the HDC references the criteria set forth in the Historic Preservation sections of the Town's Zoning Ordinance. Review by the HDC ensures that any proposed changes will be compatible with the character and design of the individual property and/or Historic District.

The process of applying for a COA requires the project representative to provide sufficient information on the HDC's application form and to include drawings, sketches, photographs, a survey, product brochures or samples for certain building features that will be modified. The applicant is encouraged to consult with Building Department staff to ensure that all the information is included in the application. Once the application has been determined to be complete, it will be placed on the HDC agenda. The applicant or a project representative should attend the HDC meeting for COA reviews to answer any questions the HDC may have regarding the application, or the application could be tabled pending clarification and/or the submission of additional information as requested by the HDC.

DEMOLITION REVIEW COMMITTEE

The Demolition Committee is a subcommittee of the Exeter Heritage Commission charged with the review of the proposed demolition of:

- Any building or structure within the Town limits that is more than 50 years old (with the exception of manufactured homes)
- Any building or structure that is listed or eligible for the National Register of Historic Places
- Any building or structure within a locally established Historic District

If a building or structure is found to be historically significant, the Demolition Review Committee will work with the owner to encourage alternatives to demolition. If alternatives are not agreed upon, the Demolition Review Committee will photographically document the building or structure.

HISTORIC DISTRICT COMMISSION

Established in 1970, the HDC has oversight of the Town's preservation activities and regulatory review within the bounds of the Exeter Historic Districts. The HDC is comprised of seven members and four alternates, including a Selectman and a member of the Planning Board. Although the HDC's primary responsibility is to conduct to review applications for COAs, the HDC also provides recommendations to the Town Council regarding historic preservation activities in the Town including the documentation of historically designated properties.

The HDC can take one of four actions following the review of a COA application:

- **Approval as Submitted** - The Certificate for Approval will be issued
- **Approval with Conditions** - A Certificate for Approval will be issued pending review for compliance of required conditions
- **Continued** - The applicant provides additional information or clarification as requested by the HDC
- **Denial** - It is determined that the project does not meet the requirements for the granting of a COA - The applicant can work with Building Department Staff to bring the project into compliance with the ordinance using the *Guidelines* and resubmit to the HDC for re-review or appeal to the Zoning Board of Adjustment

WORKING WITHOUT A COA

The Building Department will inspect all work for compliance with an approved Certificate of Approval (COA). If any changes are proposed after the issuance of a COA, please contact the Building Department at (603) 773-6112 for additional required reviews. Work completed without an approved COA is subject to possible fines, removal and restoration of the site, building or structure to its appearance prior to the violation.

APPROVALS REQUIRED FOR WORK

HDC review and approval is triggered by the application for a building permit. This includes the replacement of signs, awnings, windows, doors and roofs. HDC approval is necessary but may not be sufficient for the granting of a building permit. Each property is subject to review for compliance with applicable zoning, building and safety ordinances and codes. The property owner is responsible obtaining all necessary approvals prior to commencing with work.

HERITAGE COMMISSION

The Exeter Heritage Commission is advisory to other local boards and commissions; conducts inventories; educates the public on matters relating to historic preservation; provides information on historical resources; and serves as a resource for revitalization efforts

DESIGN OF ALTERATIONS

In balancing the desire for a change to a historic property with regard to the historic integrity, the HDC encourages property owners to retain as much historic building fabric as possible. As such, the following guide can be used, listed in preferential order:

1. Maintenance
2. Repair and In-Kind Replacement
3. Alterations and Renovations
4. Adaptive Reuse
5. Additions and New Constructions

If demolition is considered, property owners should refer to the *Demolition Review Committee* process (page 01-3). Demolition of designated historic buildings is rarely appropriate.



The symmetry of this twin residence is one of its character defining features that should be preserved.

GUIDELINES FOR HDC DECISIONS FOR ALTERATIONS TO EXISTING BUILDINGS

When reviewing a proposed project for alteration to a historic building, the HDC's review is guided by principles contained in *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, and more specifically, *The Standards for Rehabilitation*. *The Standards for Rehabilitation* provide property owners and tenants common-sense guidelines to allow sensitive contemporary uses for their sites while retaining their architectural and cultural heritage. In reviewing projects, the HDC encourages sensitive rehabilitation involving the least amount of intervention or change as identified in the following guidelines:

- **Identify, retain and preserve** the overall form, materials and details that are important in defining the architectural and historical character of the building and site.
- **Protect and maintain** historic materials and features. This involves protection from other work that may occur in proximity to the historic materials, and also protection through regular maintenance. A regular program of protection and maintenance usually involves the least degree of intervention, and can prevent or postpone extensive and costly work.

- **Repair** rather than replace deteriorated historic materials and features. Repairs maintain the building in its current condition while making it weather-resistant and structurally sound. Repairs should involve the least intervention possible, concentrating specifically on areas of deterioration. When repair is not possible, the HDC encourages replacement in-kind, reproducing by new construction the original feature exactly, including the original material, finish, detailing and texture.
- **Replace** missing or deteriorated historic materials and features in-kind when the extent of deterioration precludes repair. Similar to repair, the preferred approach is to replace the entire feature in-kind to match the original material, finish, detailing and texture. Since this is not always technically or financially feasible, substitute materials are sometimes acceptable when they convey the appearance and finish of the original feature.
- **Reconstruct** missing historical features if adequate historical, pictorial and physical documentation exists so that the feature may be accurately reproduced. The addition of features from other historic buildings or addition of historical elements for which there is no documentation is not appropriate.
- **Alterations and additions** are sometimes needed to ensure the continued use of a building. An alteration involves returning a building to a useful condition while saving those parts that represent its historical, architectural or cultural significance. It is important that alterations do not radically alter, obscure or destroy character-defining spaces, materials, features or finishes. An addition is new construction at the exterior of an existing building and should be carefully considered. New additions should be differentiated but also compatible with the historic building in terms of size, mass, form, fenestration, material, detailing and style, and should be constructed at a less visible side or rear elevation, so that the character-defining features are not radically obscured, damaged or destroyed.

TOWN OF EXETER - DESIGN GUIDELINES

The following *Guidelines* were prepared in this project:

- 01 *Guidelines Introduction*
- 02 *Guidelines for Roofing*
- 03 *Guidelines for Exterior Woodwork*
- 04 *Guidelines for Masonry & Stucco*
- 05 *Guidelines for Windows & Doors*
- 06 *Guidelines for Site Elements*
- 07 *Guidelines for New Construction & Additions*
- 08 *Guidelines for Commercial Buildings*

Further information is available at the Building Department and on Exeter's web site at www.exeternh.gov. These *Guidelines* serve to cover the topics most typically addressed by the HDC. Any work under the jurisdiction of the HDC that is not specifically covered in these *Guidelines* is subject to HDC review and approval.



The replacement of deteriorated roofing is potentially dangerous work that often requires the access of workers and materials by ladders. Consideration should be given to hiring a professional for any work that is unfamiliar or potentially unsafe.

SAFETY PRECAUTIONS

Repair and maintenance of a building can potentially be dangerous work. It is recommended that all manufacturers' recommendations be followed and appropriate safety precautions with ladders, tools, materials and processes be taken. Property owners should consult a professional for work that is unfamiliar or potentially unsafe.

Work on older buildings can uncover hazardous materials such as asbestos, lead, radon and mold. Property owners should familiarize themselves with these materials and their building's conditions prior to beginning work. Property owners who are unfamiliar with how to properly handle or work around potentially hazardous materials are strongly encouraged to consult with a trained or certified contractor.

Information about common hazardous materials can be found on national and state organizations web sites, including:

Asbestos

US Environmental Protection Agency Hotline
(800) 368-5888 www.epa.gov/asbestos

Lead

National Lead Information Clearinghouse
(800) 424-LEAD www.epa.gov/lead

Radon

The National Safety Council's Radon Hotline
(800) SOS-RADON www.epa.gov/radon

Mold

Indoor Air Quality Information Clearinghouse:
(800) 483-4318 www.epa.gov/iaq/molds/index

BUILDING CODES

All construction projects in the Town of Exeter must comply with the Zoning Ordinances as well as the International Building and Residential Codes as amended. The intent of the Ordinance and Code is to protect the public health, safety and welfare of citizens against the hazards of inadequate, defective or unsafe conditions. The Code addresses the interior and exterior conditions of buildings and structures, building systems and the surrounding property.

For specific information regarding the applicable ordinances and code sections for a project, please contact the Building Department at (603) 773-6112. Applicants are also welcome to meet with an Inspector who can assist with permit applications and regulatory questions.



All proposed exterior alterations, including the modification or installation of signage and awnings, is subject to HDC review and requires a Certificate of Approval (COA).

HDC REVIEW

It is important to remember that all exterior changes to a building or structure within the boundaries of a locally designated Historic District are required to receive a prior approval from the HDC. (Refer to *Preservation Regulatory Review* on page 01-3 or contact the Building Department at (603) 773-6112 for review requirements for proposed work.)

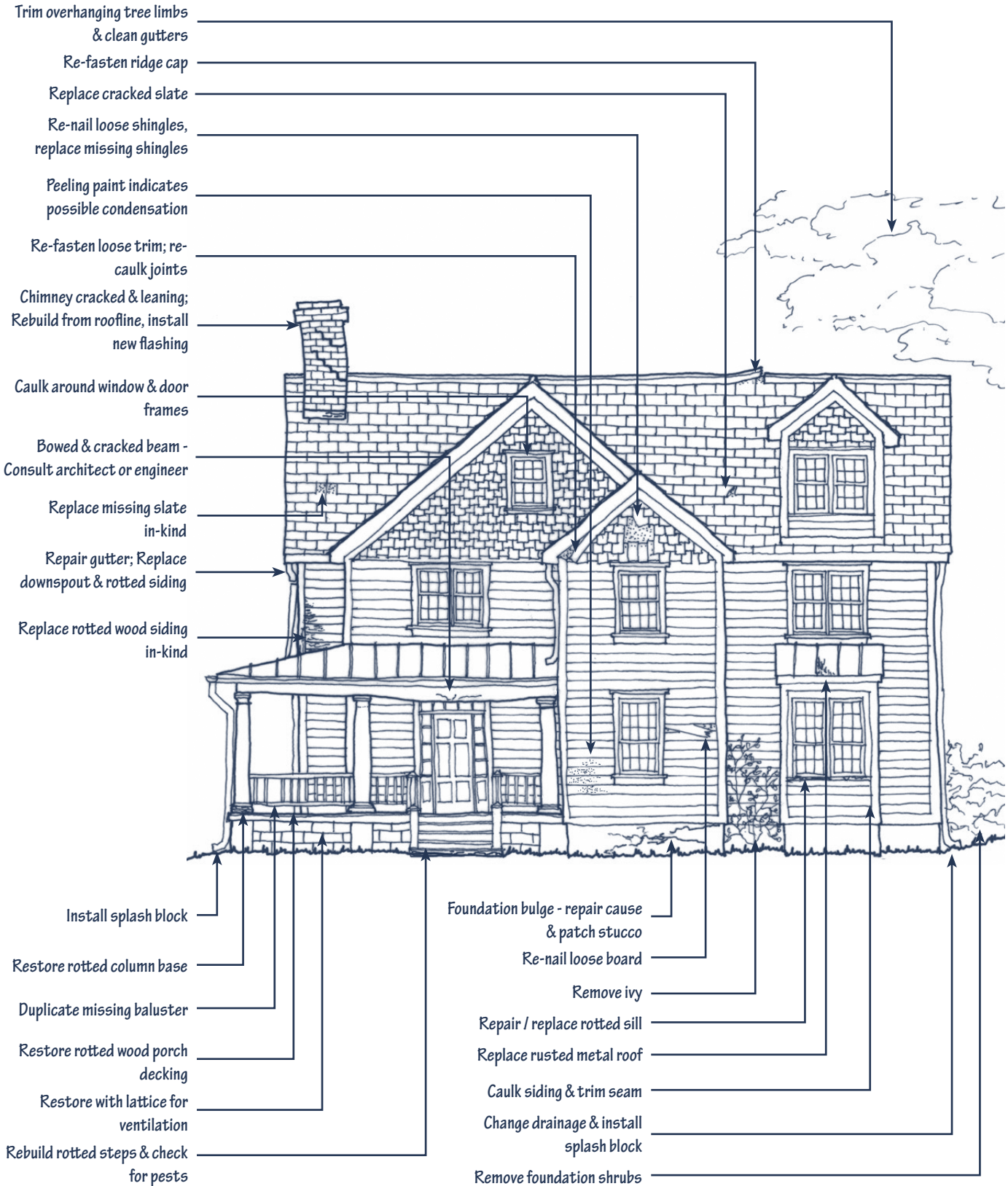
COST VS. VALUE-ADDED

While some of the recommendations in these *Guidelines* do not represent the least expensive options, the HDC strongly believes that selecting a better quality option will be less costly in the long-term.

An immediate benefit is that using traditional materials and construction methods tends to be more historically appropriate and sustainable. (Refer to *Benefits of Historic Preservation*, page 01-2.) Another benefit is that traditional materials generally have a longer life-cycle because they are appropriate for the local climate, requiring less frequent replacement. Additionally, traditional materials tend to reduce associated landfill waste and replacement costs, as well as potentially increasing a property's value associated with authentic, higher quality construction.

TYPICAL BUILDING MAINTENANCE NEEDS

General: Scrape all loose paint; sand to smooth surface; prime bare wood and metal; re-paint with historically appropriate colors



BUILDING ENVELOPE DETERIORATION

The exterior envelope of a building is made up of various components that typically include roofing, walls, windows and doors. Each of these building components can be executed in various materials within the same building envelope, such as a combination of shingle roofing at sloped surfaces and rolled roofing at flat surfaces, with metal flashing at the intersections.

These components of various materials act together as a system to protect the interior from exterior environmental extremes. Some of the environmental influences affecting the exterior building envelope include:

- Moisture including rain, snow, ice, humidity and groundwater
- Wind
- Sunlight
- Temperature variations
- Atmospheric chemicals and acid rain
- Insects, birds and rodents
- Vegetation, molds, algae and fungi

All building materials, new or old, will deteriorate over time. Each of the environmental influences listed above, individually and in combination, has the potential to react differently with the materials that comprise a building's exterior envelope and cause deterioration. The potential reactions are further complicated by the way the materials are installed and joined together, and their relative locations. However, by implementing a regular maintenance and repair program, the rate of deterioration can be dramatically slowed, allowing the Town's historic buildings to last for centuries.

MAINTENANCE IS PRESERVATION

Regular maintenance helps to preserve buildings and property, protect real estate values and investments, and keeps Exeter an attractive place to live, work and visit. Lack of regular upkeep can result in accelerated deterioration of building elements and features. In the case of historic buildings, these features often represent character defining elements that are difficult and costly to replace. Long-term lack of maintenance can impact a building's structure, resulting in expensive repairs.

It is prudent to regularly inspect buildings, structures and landscape elements to identify potential problems. If problems are detected early, minor maintenance may not only improve a property's overall appearance and value, but also can prevent or postpone extensive and costly future repairs. Regular maintenance can include a variety of tasks such as cleaning gutters and downspouts, and painting of exterior woodwork. It is important to keep in mind that if completed in a timely fashion, regular maintenance can prolong the life of a historic building or structure, while enhancing its long term value, authenticity and cultural value.

EXTERIOR PAINT AS MAINTENANCE

Paint is one of the most common ways to protect exterior materials from the elements, particularly wood without natural or chemical preservatives, and metals that would otherwise rust. When the painted surface has been compromised, moisture and the elements can infiltrate the underlying material and substrate, accelerating deterioration. Exterior paint provides a layer of protection to a building by limiting moisture infiltration and damage from the sun, pests and other forms of deterioration. Exterior woodwork without natural or chemical preservatives is susceptible to moisture-related wood deterioration of the exterior envelope and underlying framing. Many metals are susceptible to rust. Although paint is an important protective layer that improves the longevity of a historic building element, it must be viewed as a temporary barrier that is subject to deterioration through cyclical temperature and humidity changes. It requires re-application to maintain its shielding properties.

In addition to providing a protective layer, paint colors can highlight a building's architectural features and style, visually tie parts of a building together, and reflect personal taste. A building's style, period of construction, materials and setting can all help identify appropriate paint colors. (A list of historic exterior color selections for buildings styles located in historic districts is available on the Town's web site at www.exeternh.gov.)

In general, exterior surfaces should be repainted every 5 to 8 years, with intermediate touch-ups of high traffic, worn or deteriorated areas. If a building requires frequent repainting, it might be an indication of another problem including moisture, inadequate surface preparation and non-compatible paint.

Encapsulating paints can be problematic as they can trap moisture in woodwork and promote rot. These are often referred to as "liquid siding," "liquid stucco" or "liquid ceramic coatings." Painting of previously unpainted masonry is strongly discouraged. (Refer to *Removing Paint from Masonry, Guidelines for Masonry & Stucco, page 04-7*.)

PROPERTY MAINTENANCE

Properties should be maintained in a manner that allows them to be safe and contribute to the Town culturally and economically. The Town and the HDC encourages the regular maintenance of any building or structure to prevent a hazardous or unsafe condition from occurring. Potential examples of hazardous or unsafe conditions include cases in which:

- All or part of the building may fall and injure people or property
- Structural elements are deteriorated such that they can no longer safely carry imposed loads
- A defect or condition makes the building susceptible to water damage, including unmaintained paint on exterior wood surfaces and openings in roofs or walls



An example of an adaptive reuse project is the conversion of a firehouse into a restaurant. If considering a change of use for a building, it is important to have a clear understanding of which uses are permitted under the Zoning Ordinance for a particular parcel, and those that would require a variance. In addition, other modifications, such as the installation of an accessible ramp, may be required.

ALTERATIONS & RENOVATIONS

Alterations and renovations are sometimes needed to ensure the continued use of a building, but have the potential to alter the character of historic properties. When considering alterations or renovations, careful attention should be given to the original building and its relationship to the alteration or renovation.

When considering changes to historic properties, applicants should strive to:

- Identify, retain and preserve the character defining features of the historic building
- Minimize alteration to the original design, materials and features
- Use design elements, materials and techniques that are compatible to the historic building and setting
- Maintain the appropriate historic contextual setting



HDC review is required for all alterations of exterior building materials including roofing, siding and windows. In addition the HDC reviews any proposed structure, including garages, fences and walls at properties within the locally designated Historic Districts.

ADAPTIVE REUSE

Similar to alterations and renovations, adaptive reuse projects might be necessary to use a building for a different purpose from which it is currently or was originally designed, if permitted under the Exeter Zoning Ordinance. Similar to alterations or renovations, great care should be given to the original building and its relationship to the alteration or renovation. In addition, careful attention should be taken with required alterations such as the modification or addition of window and door openings to accommodate the new use.

Examples of Adaptive Reuse:

- Conversion of a house to multi-family residential or offices
- Conversion of industrial/commercial buildings into housing
- Conversion of institutional buildings into commercial space
- Conversion of mill buildings into office space or residences

Benefits of Adaptive Reuse:

- Retention of historic character and high quality historic materials and craftsmanship
- Promotes stability of ownership and occupancy of historic resources
- Potential cost savings versus new construction
- Maintains and utilizes the established neighborhood and existing infrastructure

REPAIR VS. REPLACEMENT

When it is no longer feasible to maintain a historic feature due to its condition, repairs or replacement in-kind may be necessary. Repairs maintain the building in its current condition while making it weather-resistant and structurally sound, concentrating specifically on areas of deterioration. When repair is not possible, the HDC encourages replacement in-kind. Similar to a regular maintenance program, these activities can prevent or postpone extensive and costly future repairs.

In order of preference, the HDC encourages the following approach:

1. Non-intrusive repairs, focused at deteriorated areas, stabilizing and protecting the building's important materials and features
2. When repair is not possible, replacement in-kind to the greatest extent possible, reproducing by new construction the original feature exactly, matching the original material, size, scale, finish, profile, detailing and texture
3. When replacement in-kind is not possible, the use of compatible materials and techniques that convey an appearance similar to the original historic features, and the use of materials similar in design, color, texture, finish and visual quality to the historic elements



This 2-story side elevation addition is subordinate and diminutive in scale when compared to the side gable roofed main block. It is stepped back from the front elevation, and utilizes similar but larger windows, trim and siding. It is compatible but clearly identifiable as an addition to the historic building.

ADDITIONS

Additions to a building within a Historic District can dramatically alter the appearance of the individual property, the District and the surrounding landscapes. Exact reproduction of historic buildings is discouraged, while both traditional or contemporary design compatible to the context of the historic resources and their surroundings is encouraged. Because of the sensitivity of the area, the property owner should take great care when proposing an addition to a designated property.

When considering an addition to a historic building or structure, applicants should:

- Preserve the cohesive ambiance of historic resources with compatible, sympathetic and contemporary construction
- Use compatible siting, proportion, scale, form, materials, fenestration, roof configuration, details and finishes to the existing building
- Construct additions at secondary elevations wherever possible, subordinate to the historic building, and compatible with the design of the property and neighborhood
- Construct additions so that the historic building fabric is not radically changed, obscured, damaged or destroyed
- Reference the *Guidelines for New Construction & Additions*

NEW CONSTRUCTION

More dramatically than additions, new construction within a Historic District can dramatically alter the appearance of the individual property, the District and the surrounding landscapes. All new construction should be compatible within the property's surrounding context. As a result, those areas that are highly cohesive with strong historical integrity, will likely be more limited than those areas with a variety of building types, scales, materials and designs such as those found in some of Exeter's commercial corridors.

When considering a new construction or development project, exact reproduction of historic buildings is discouraged, while both traditional design or contemporary design compatible to the context of the historic resources and their surroundings is encouraged. Because of the sensitivity of the area, the property owner should take great care when proposing new construction or a new development within a Historic District.

When considering new construction within a locally designated historic district or historic context, applicants should:

- Preserve the cohesive ambiance of historic resources with compatible, sympathetic and contemporary construction
- Use compatible siting, proportion, scale, form, materials, fenestration, roof configuration, details and finishes
- Reference the *Guidelines for New Construction & Additions*



This house is sited in a manner similar to its neighbors. The multiple gable and hipped roof break down the overall mass and scale to be similar to its neighbors. The fenestration pattern includes punched window openings, avoiding a front-facing garage door.

RESEARCHING HISTORIC PROPERTIES

Property owners seeking information regarding the history of their property can consult with the Exeter Historical Society as well as reference historic property designation information, town atlases, Town Directories and potentially historic photographs. (Refer to *Preservation Organizations*, page 01-11.)

FREQUENTLY ASKED QUESTIONS

Q: Where should I begin the process?

A: It is often helpful to begin by understanding what makes your property historically or architecturally significant (see below.) Contact the Town's Building Department at (603) 773-6112 for a review of your property's significance. Obtain the *Guidelines* section applicable to your proposed project and consider whether the proposed changes are appropriate for the property.

Q: How can I find out about the history of my neighborhood or property?

A: The Exeter Historical Society is the best resources for local history, (refer to page 01-11), including historic photographs, National Register Nominations and survey forms on historic buildings. Links to information on local history are also available on the Town of Exeter's website. Additional information regarding historic properties is available from the New Hampshire Division of Historical Resources, and on its website. There are also numerous reference organizations and resources, a few of which are listed on page 01-11.

Q: How do I make it more likely that my project is approved?

A: It is helpful to have an understanding of what makes your property architecturally or culturally significant when considering a project. This will allow you to make informed decisions about the proposed project with an understanding of some of the issues considered by the HDC. Each section of the *Guidelines* outlines what is and is not likely to be approved by the HDC. If considering a complex application, particularly those that include an addition or new construction, it is often helpful to informally consult with the HDC in a conceptual review prior to submission of a Certificate of Approval (COA) application. The conceptual review process can provide feedback to guide an application towards a design that may be approved by the HDC prior to expending a lot of time and money in the development of detailed plans or Construction Documents.

Q: Is the review process expensive? Do I need to hire an outside professional?

A: The HDC does not charge a fee for a reviews; however, other City departments may assess fees, such as notification fees, based on the nature of the project. Carefully review of the applicable *Guidelines* and the application requirements for an approval prior to hiring a design professional or contractor can assist in the early planning stages of your project. If not required by Code to receive a building permit, you are welcome to submit applications for work without the assistance of a design professional. However, for complex proposals or those that requires the submission of scaled drawings, consultation with a professional may be required and may expedite the review process. If you are retaining the services of a professional, it is helpful to work with architects, contractors and others familiar with the requirements of working with the HDC. Before submitting your application, confirm that it is complete with the Building Department.

Q: I am planning a complex project. When is the best time to talk to the HDC?

A: If your project is complex or requires review from multiple land use Commissions and Boards, the best time to talk to the HDC is as early in the project as possible, before you invest significant time and money into the design process. This initial informal informational review can help move a project more quickly through the review process. Please contact the Town's Building Department at (603) 773-6112 for an appointment.

Q: Is there a way to expedite the review process?

A: It is important to thoroughly complete the application and submit all required materials to the HDC for review. It is recommended that you contact the Town's Building Department directly to understand what submission materials are required for your project; whether Commission review is required or a conceptual review is recommended; and the specific submission requirements, deadlines and meeting dates. Contact the Town's Building Department to determine what other reviews are required; if multiple reviews are necessary they can often be pursued simultaneously.

Q: Does my project require HDC review?

A: Proposed changes to any building, site or structure within the boundaries of a locally designated Exeter Historic District are required to receive an approval. This includes all work that might be considered ordinary maintenance and repair with the exception of repainting. Refer to applicable *Guidelines* sections for clarifications regarding types of work that is subject to review. Most applications for maintenance and in-kind repair are reviewed at the Staff level within 7 to 10 days of a completed application filing.

Q: How do I apply for HDC review?

A: The specific submission requirements for HDC review will vary based upon whether the submission is for a conceptual review or a Certificate of Approval. In most instances, the submission materials are typically similar to those required for a building permit review. For specific information regarding the submission requirements for your proposed project please refer to the applications available on the Town of Exeter website at www.exeternh.gov or contact the Town's Building Department at (603) 773-6112.

Q: Can I begin construction immediately after I get the HDC approval?

A: The HDC review is not necessarily sufficient for the granting of a building permit. Each project is also subject to review by all departments having jurisdiction over compliance with zoning, building and safety codes. HDC review is just one step in obtaining a building permit. You must complete all necessary reviews and obtain all necessary permits applicable to your project prior to proceeding with any work. However, you cannot receive a building permit without obtaining an approval from the HDC.

PRESERVATION RESOURCES

Reference

- Belle, John, John Ray Hoke, Jr., Stephen A. Kliment (eds.). *Traditional Building Details for Building Restoration, Renovation, and Rehabilitation*. New York: John Wiley & Sons, Inc., 1998.
- Bucher, Ward (ed.). *Dictionary of Building Preservation*. New York: John Wiley & Sons, 1996.
- Cusato, Marianne, et. al. *Get Your House Right; Architectural Elements to Use & Avoid*. New York: Sterling, 2007.
- Harris, Cyril (ed.). *A Dictionary of Architecture and Construction*. New York: McGraw Hill, 2006.
- McAlester, Virginia and Lee. *A Field Guide to American Houses*. New York: Knopf, 2014.
- Mouzon, Stephen A. *Traditional Construction Patterns*. New York: McGraw-Hill, 2004.
- Poppeliers, John C. and S. Allen Chambers, Jr. *What Style is it? A Guide to American Architecture, Revised Edition*. New York: John Wiley & Sons, 2003.

Building & Landscape Preservation

- Bernhard, Sandy and Tom Ela. *The House Journal: A Resource to Evaluate and Document the History, Alterations, and Records of Your House and Property*. Washington, DC: The Preservation Press, 1993.
- Favretti, Rudy and Joy Favretti. *For Every House A Garden: A Guide for Reproducing Period Gardens*. Chester, CT: The Pequot Press, 1977.
- Moss, Roger W. ed. *Paint in America: The Colors of Historic Buildings*. New York: John Wiley & Sons, 1995.
- Poore, Patricia (ed.). *The Old-House Journal: Guide to Restoration*. New York: Dutton, 1992.
- Preservation Briefs*. Washington, DC: National Park Service, Technical Preservation Services. www2.cr.nps.gov/tps/briefs/presbhom.htm
- Technical Preservation Services, National Park Service. *Respectful Rehabilitation: Answers to your Questions About Old Buildings*. Washington, DC: The Preservation Press, 1982.
- Weaver, Martin E. *Conserving Buildings: A Manual of Techniques and Materials, Revised Edition*. New York: John Wiley & Sons, 1997.

Town of Exeter History

- Bell, Charles H. *History of the Town of Exeter New Hampshire*. Massachusetts, Higgins Book Company, 1888.
- Merrill, Nancy Carnegie. *Exeter, New Hampshire, 1888-1988*. Exeter Historical Society and the Town of Exeter, NH, 1988.
- Rimkunas, Barbera. *Hidden History of Exeter*. Charleston, SC: Arcadia Publishing, 2014.
- Rimkunas, Barbara. *Exeter Historically Speaking*. Charleston, SC: Publishing, 2008

PRESERVATION ORGANIZATIONS

Local Organizations

- Town of Exeter Building Department
Historic District Commission (HDC); Heritage Commission
Town Hall; 10 Front Street, Exeter, NH 03833;
(603) 773-6112; www.exeternh.gov
- Exeter Historical Society
47 Front Street; Exeter, NH 03833;
(603) 778-2335; www.exeterhistory.org

State and Regional Organizations

- New Hampshire Division of Historical Resources
19 Pillsbury Street; Concord, NH 03302
(603) 271-3483; preservation@dcr.nh.gov
- New Hampshire Preservation Alliance
7 Eagle Square; Concord NH 03302
(603) 224-2281; www.nhpreservation.org
- Historic New England
Otis House; 141 Cambridge Street; Boston, MA 02114
(617) 227-3956; www.historicnewengland.org



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Town of Exeter

- Dan Chartrand, Chair, Selectboard
Julie Gilman, Vice-Chair, Selectboard
Nancy Belanger, Clerk, Selectboard
Don Clement, Member, Selectboard
Anne L. Surman, Member, Selectboard
Russell Dean, Town Manager

Historic District Commission

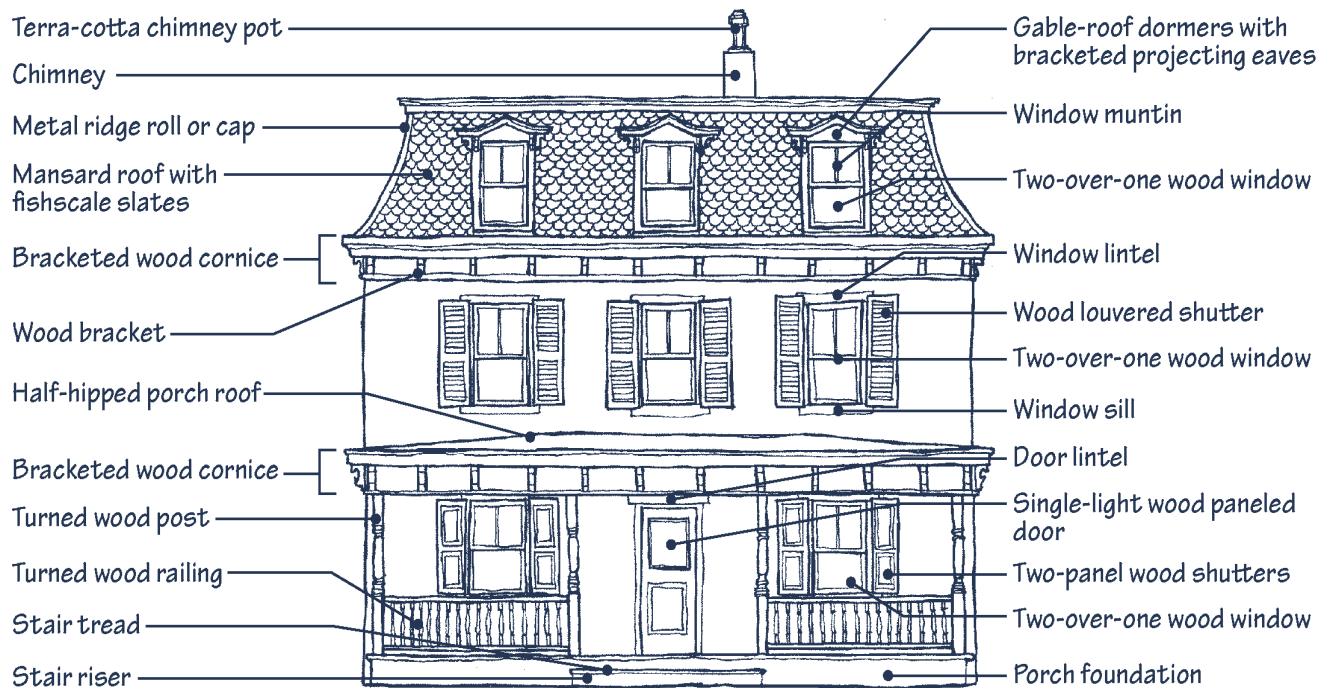
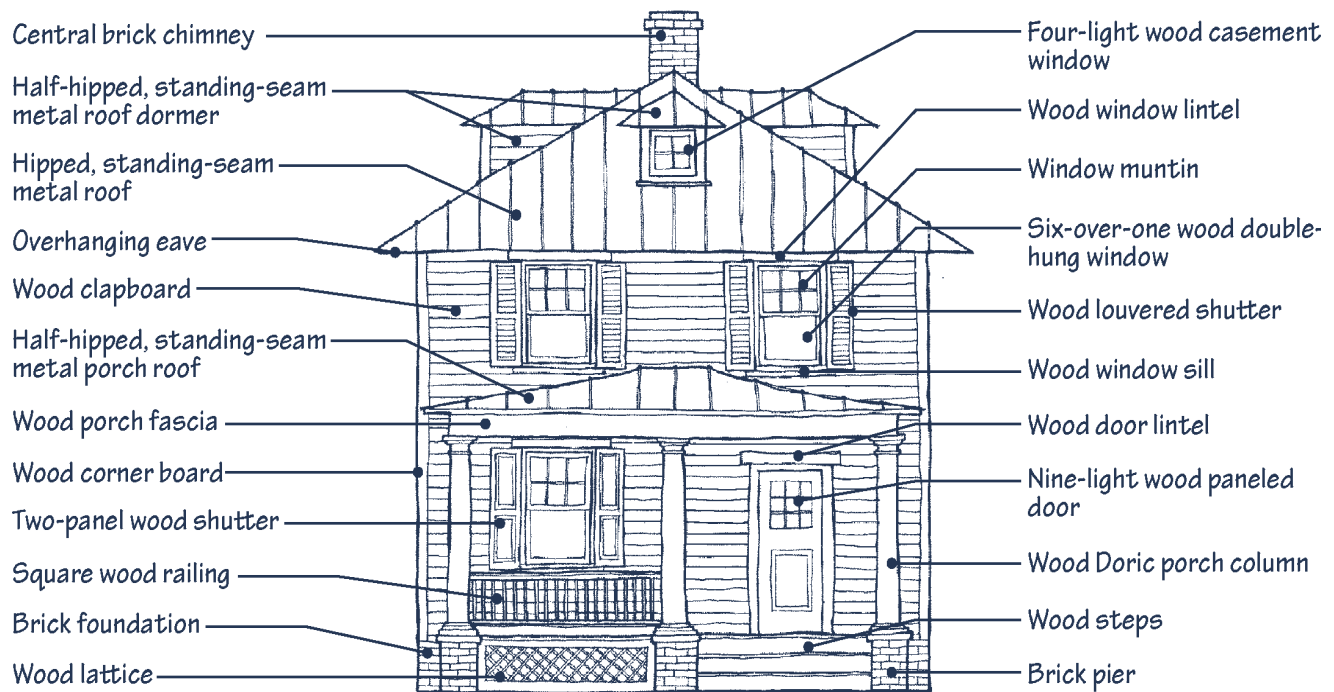
- Patrick Gordon, Chairman
Julie Gilman, Board of Selectman Representative
Pam Gjettum, Clerk
Curtis Boivin, Member
Nicole Martineau, Member
Valerie Ouellette, Member
Pete Cameron, Planning Board Representative, Alternate

Building Department

- Doug Eastman, Building Inspector/Code Enforcement Officer
Barbara McEvoy, Deputy Code Enforcement Officer

GLOSSARY OF ARCHITECTURAL TERMS

The following diagrams represent composite buildings, and provide a basic vocabulary of architectural elements and terms. Please refer to the individual *Guidelines* for additional information.



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TOWN OF EXETER HISTORIC DISTRICTS

Windows & Doors

WINDOWS & DOORS

Windows and doors typically comprise at least one quarter of the surface area of the exterior walls of most historic buildings. In terms of operation, windows and doors provide access to natural light and ventilation for a building. In terms of appearance, they are an important design feature that helps to define the style and period of a building.

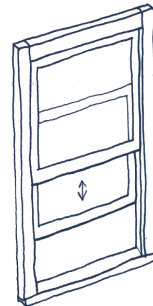
Whether elaborate or simple, windows and doors demonstrate both the history of the building and the history of the methods of manufacturing when they were created. These histories help to tell the story of Exeter's rich manufacturing tradition at multiple scales.

Windows and doors, including their shutters, trim and associated features, are important elements of historic buildings because they can:

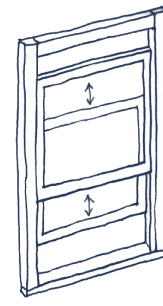
- Act as a welcoming transition from the building's exterior to the interior
- Act as the "eyes" of a building
- Establish a pattern on a wall plane and cast shadows in openings
- Provide natural light and ventilation
- Help define architectural style and building type
- Help date the age of construction
- Define the character of each individual building and provide a visual connection to the streetscape
- Contribute to the visual cohesiveness and architectural vocabulary of the surrounding area

These *Guidelines* were developed in conjunction with the Town of Exeter's Historic District Commission (HDC) and the Building Department. Please review this information during the early stages of planning a project. Familiarity with this material can assist in moving a project forward, saving both time and money. The Building Department is available for informal meetings with potential applicants who are considering improvements to their properties.

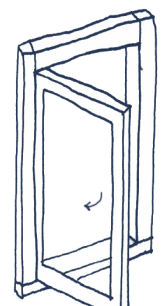
Guidelines and application information are available at the Town Office and on the Commission's website at exeternh.gov/bcc/historic-district-commission. For more information, to clarify whether a proposed project requires HDC review, or to obtain permit applications, please call the Building Department at (603) 773-6112.



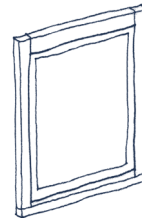
Single-Hung



Double-Hung



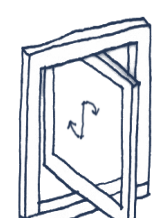
Casement



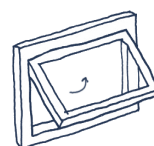
Fixed



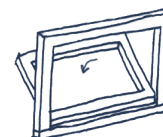
Gliding



Vertical Pivot



Awning



Hopper



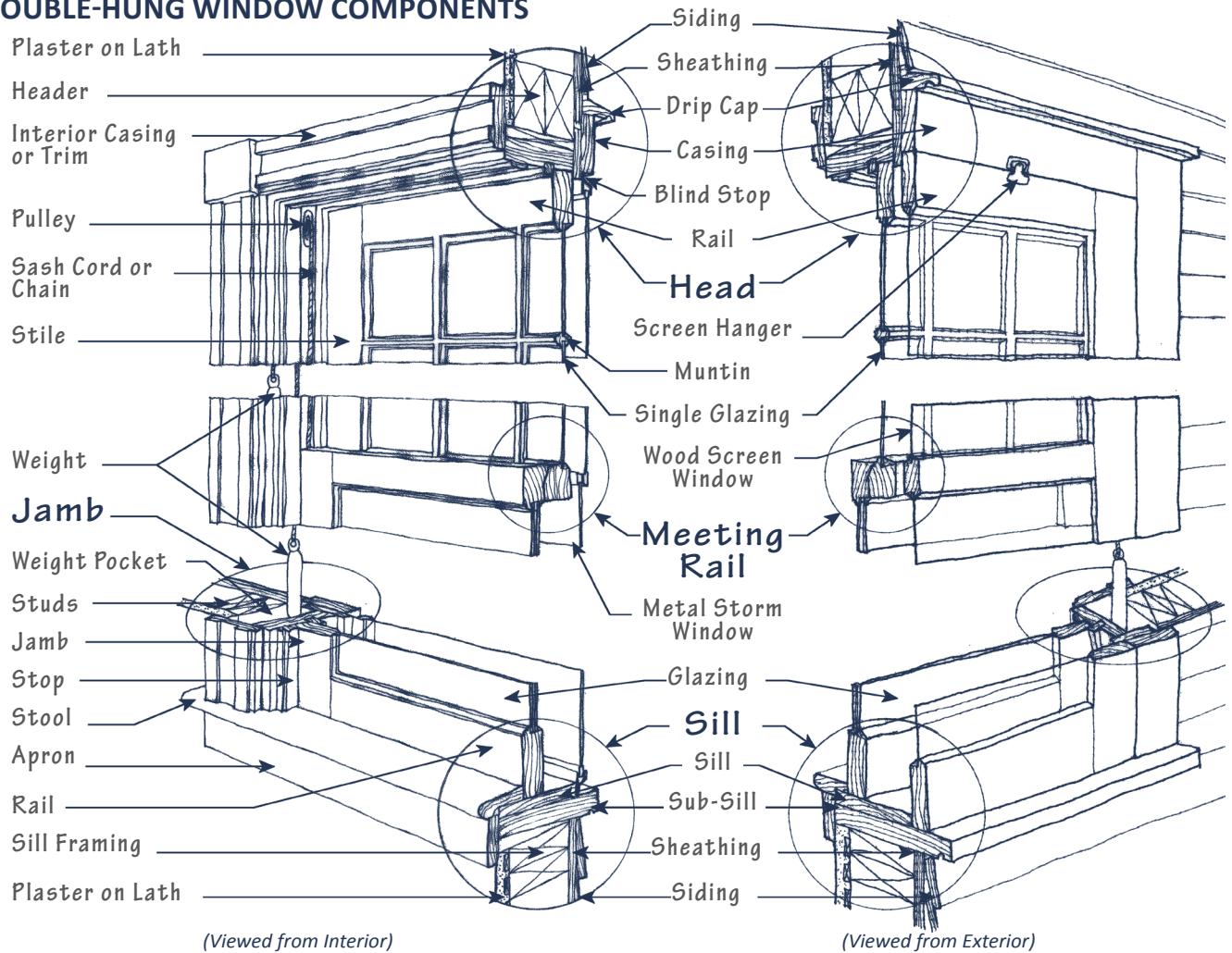
Horizontal Pivot

COMMON WINDOW TYPES

All of the identified window types can have different muntin patterns or configurations. Muntin patterns are defined in terms of the number of panes or lights. (Refer to *Window Configurations*, page 05-3 for additional information.)

- **Fixed:** Non-operable framed glazing
- **Single-hung:** Fixed upper sash above a vertically rising lower sash
- **Double-hung:** Two sashes that can be raised and lowered vertically
- **Gliding:** Either a fixed panel with a horizontally sliding sash or overlapping horizontally sliding sash
- **Casement:** Hinged on one side, swinging in or out
- **Awning:** Hinged at the top and projecting out at an angle
- **Hopper:** Hinged at the bottom and projecting in at an angle
- **Vertical Pivot:** Pivots vertically along its central axis
- **Horizontal Pivot:** Pivots horizontally along its central axis

DOUBLE-HUNG WINDOW COMPONENTS



(Viewed from Interior)

(Viewed from Exterior)

HISTORIC WINDOW PROBLEM SOLVING

Property owners may not pay attention to their windows until a problem occurs. Typical concerns include operability, air infiltration, maintenance and appearance. Generally, the appearance of a window that has not been properly maintained can seem significantly worse than its actual condition. Replacement of an entire wood window because of a deteriorated component, typically the sill or bottom rail, is rarely necessary. In many instances, selective repair or replacement of damaged parts and the implementation of a regular maintenance program is all that is required. It is generally possible to repair windows in fair or good condition relatively economically.

Maintenance

- Regularly review condition, repair and repaint windows

To improve operation

- Verify that sash cords, chains and weights are functional — Install metal sliders or sash tape, balances or operators at jambs if repair is not practical
- Repair or replace deteriorated components such as parting beads that separate window sash
- Remove built-up paint, particularly at jambs

To reduce air infiltration

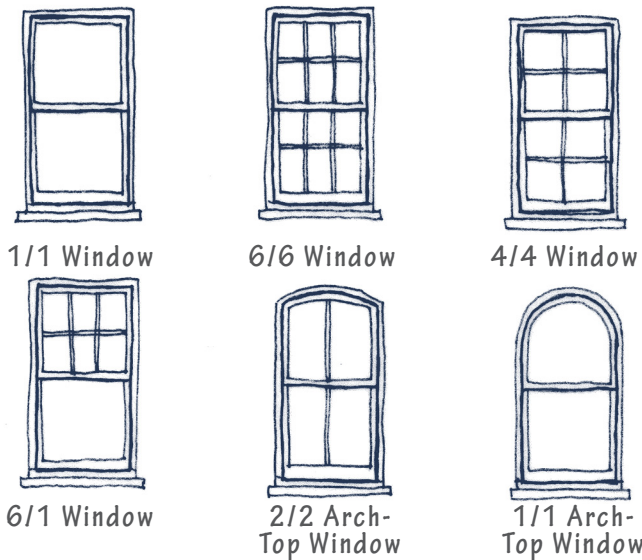
- Replace broken glass (glazing)
- Install weather-stripping snugly between moving parts — Quality metal weather-stripping can last 20 years (Refer to *Weather Stripping & Caulk*, page 05-7)
- Re-caulk perimeter joints
- Remove and replace missing or cracked glazing putty
- Add sash locks to tighten windows
- Add interior or exterior storm window — A storm window can achieve similar R-values to a new thermal window
- Insulate weight pockets if no longer in use

To reduce solar heat gain or heat loss

- Install and utilize operable exterior shutters where historically appropriate
- Install interior blinds, curtains or UV window shades
- Plant deciduous trees at south and west elevations to block summer sun and allow in winter sun, and plant conifer trees at north to reduce effect of winter winds
- Install clear, transparent low-e film or glass

The HDC encourages:

- Retaining and maintaining serviceable historic windows
- Using storm windows rather than replacement windows as the best means to achieve energy efficiency



WINDOW CONFIGURATIONS

Window patterns and configurations are intrinsically linked to a building's period of construction and architectural style. Older buildings, such as those built in the Colonial and Federal periods, typically have double-hung or casement windows with smaller panes of glass and more simplified detailing reflective of the materials and hand manufacturing processes readily available at that time. Late-19th century buildings, such as those from the Victorian period, often had windows of varying shapes with elaborate frames, casings, applied ornament and trim, and larger glass lights. Finally, Colonial Revival buildings of the early-20th century often reproduce aspects of the Colonial and Federal styles, but might include larger lights.

Because all of the components and details of a window are essential to defining the construction period and style, the pattern and configuration of a proposed replacement window should be historically appropriate for each building. If considering a replacement window, it is important to keep in mind that altering the window type, style, shape, material, size, component dimension, muntin pattern or location can dramatically alter the appearance of the building.

The paired 4/4 arch-top windows have louvered shutters that are appropriately sized and shaped to fit the opening.



The majority of historic windows in Exeter are double-hung, made of wood, and are in a 6/6 configuration. This example also includes wood louvered shutters that are operable and sized to fit the window opening when closed.

WINDOW MATERIALS: PAST & PRESENT

Wood windows were historically manufactured from durable, close-, straight-grained hardwood of a quality uncommon in today's market. The quality of the historic materials and relative ease of repairs allows many well-maintained old windows to survive from the early 20th century or earlier.

Replacement windows and their components tend to have significantly shorter life spans than historic wood windows. Selecting replacement windows is further complicated by manufacturers who tend to offer various grades of windows, with different types and qualities of materials and warranties. Today, lower cost wood windows are typically made from new growth timber, which is much softer and more susceptible to deterioration than the hardwoods of the past. Vinyl and PVC materials, now common for replacement windows, break down in ultraviolet light, and generally have a life expectancy of less than 20 years. Fiberglass and composite windows, typically made from a combination of wood material and plastic resins, have only been available since the 1990's, so their longevity has not been fully evaluated. Because of the great variety of finishes for aluminum windows, they continue to be tested to determine projected life spans.

Other areas of concern with replacement windows, beyond the construction materials used in the frame and sash, include the type and quality of the glazing, seals, fabrication and installation. Double glazing or insulated glass, used in most new window systems, is made up of an inner and outer pane of glass sandwiching a sealed air space. The air space is typically filled with argon gas and sealed around the perimeter. This perimeter seal can fail in as few as 10 years, resulting in condensation between the glass layers, necessitating replacement to allow for clear visibility. Many of the gaskets and seals that hold the glass in place also have a limited life span and deteriorate in ultraviolet light.

Significant problems with replacement windows also result from poor manufacturing or installation. Twisted or crooked frames can make windows difficult to operate. Open joints allow air and water infiltration into the wall cavity or building interior. When selecting replacement windows, it is important to consider life span and life-cycle costs.

WOOD WINDOW REPAIR

Given the significance windows play in defining the architectural character of a building, **the HDC strongly encourages the maintenance and repair of existing windows.** If portions of a window are deteriorated, it is often possible to replace only the deteriorated portion or component of the window. Replacement of the entire component or unit might not be necessary. (Refer to *Detecting Wood Rot* and *Wood Repair Options, Guidelines for Exterior Woodwork*, page 03-4)

A property owner wishing to pursue historic window replacement is required to demonstrate that the existing windows are beyond repair and replacements are warranted.

When evaluating window repair versus replacement, the following guidelines can be helpful:

- 1. Perform routine maintenance:** Replace broken or missing components such as trim, glazing or sash cords. Verify that caulking, glazing putty, parting beads and weather-stripping are applied securely and repaint the window.
- 2. Treat or repair deteriorated components:** At the earlier stages of wood deterioration, it is possible to complete in-place treatments that do not necessitate component replacement. These include treating wood for insects or fungus, consolidating with epoxy and applying putty at holes and cracks and painting. Refer to *Wood Repair Options, Guidelines for Exterior Woodwork*, page 03-4.
- 3. Replace Deteriorated Components:** Replace either the deteriorated portion of wood with a “Dutchman” or the entire component if the majority is deteriorated. (A Dutchman is a repair with a piece of the same material in a sharp-edged recessed cut. Refer to photograph below.) The replacement piece should match the original in design, shape, profile, size, material and texture. New wood sills are usually easily installed, while complete sash replacement might solve problems of broken muntins and deteriorated rails.
- 4. Replace Window:** If the majority of the window components are deteriorated, damaged or missing and in need of replacement, installation of a new window that matches the original window might be warranted with appropriate documentation.

One of the advantages of historic wood windows over a modern prefabricated unit is repairability. This photograph demonstrates a Dutchman repair at the corner of the historic wood window sash. Also note the application of new glazing putty as part of the repair.



Typically, the deterioration of wood windows first occurs at the sill. Peeling paint can allow moisture to enter wood and cause rot. Regular repainting is recommended to provide a protective layer against moisture.

WINDOW REPAIR VERSUS REPLACEMENT

When considering repair and retention of existing windows versus installation of replacement windows, applicants are encouraged to retain existing historic windows except in the case of extensive deterioration. In such a case, documentary evidence must be provided with an application. It can often be less costly to repair an existing historic wood window than to install a replacement window. (Refer to *Historic Window Problem Solving*, page 05-2)

It is important to remember that just because a portion of the window or door is deteriorated, replacement of the entire component or unit might not be necessary, particularly for wood windows. A simple means of testing wood window deterioration is to probe the element with an awl or ice pick. Pierce the element perpendicular to the grain and at an angle where the wood appears darker in color, measure the penetration depth and damp wood and assess the type of splintering. (Refer to *Detecting Wood Rot, Guidelines for Exterior Woodwork*, page 03-4.)

REPLACEMENT WINDOW QUALITY

Reputable mill shops, lumber yards and window specialists typically provide a better selection and higher quality replacement window options than companies that advertise with bulk mailings or flyers. Local companies are often familiar with the unique attributes of window detailing for building types and periods in Exeter and are a better option for matching historic detailing.

REPLACEMENT WINDOW COSTS

The costs that should be anticipated when considering the installation of replacement windows include:

- Labor to remove old windows and a disposal fee
- Purchase price and delivery of new windows
- Labor and materials to modify existing framing for new windows
- Labor to install new windows
- Life-cycle cost of more frequent replacement of deteriorated components, sash and window units

FIBERGLASS & COMPOSITE WINDOWS

Fiberglass and composite windows are made from a binder and particulate material. When compared to vinyl windows, fiberglass and composite windows:

- Are stronger, harder and more rigid than vinyl - Thus requiring smaller frame and sash dimensions and allowing greater glass sizes and admission of sunlight
- Have similar expansion and contraction rates as wood and glass, minimizing seasonal opening of seams and joints
- Can be fabricated with profiled exterior frames and exterior muntins to approximate the appearance of wood windows
- Can have a paintable, exterior finish

Both fiberglass and composite windows tend to be more affordable than wood windows. However, there is great variety in the type of detailing, with some manufacturers doing a better job of approximating the appearance of wood windows. Care should be taken in reviewing the appearance with regard to all dimensions, such as frames, sash, and muntin thicknesses, as well as overall configuration.

ALUMINUM WINDOWS

When the majority of windows in commercial and large-scale residential buildings are deteriorated, property owners often seek a quality replacement window that will not require a high level of maintenance. One option that is often considered is aluminum replacement windows. Because aluminum replacement windows are typically custom made to fit within existing masonry openings, they are frequently used in larger commercial applications rather than as replacement windows for single- or two-family homes.

Some of the advantages of aluminum replacement windows is that they can usually be made to replicate historic wood windows while including insulated glass for better thermal performance. This replication can include the sash operation and exterior profiled muntins matching the historic configuration. In addition, because they have a factory-applied, baked on paint finish, which can be selected to match historic paint colors, they do not require the regular repainting associated with wood windows.

Due to the strength of aluminum and its ability to fasten the window parts with strong connections, aluminum replacement windows can easily outlast the lifespan of vinyl alternatives by two to three times depending on the quality of each product. Although the initial costs of aluminum replacement windows is typically greater than vinyl, the life-cycle costs associated with more frequent replacement of lower-quality windows might provide overall, long term costs savings.

DEFINITIONS

Light: A pane of glass

Mullion: The vertical framing element separating two window or door frames

Muntin: The narrow molding separating individual panes of glass in a multi-paned window sash



Vinyl windows with applied muntins lack the profiles and details of traditional wood windows and are not appropriate at historic buildings. They are also mounted flush to the outside wall without trim or casings.

VINYL WINDOWS

One of the claims of sales people is that vinyl replacement windows do not require maintenance. However, considering the relatively short life-span of many of the materials and components, they will need more frequent replacement. In addition, the profiles and details of vinyl windows tend to be very different in appearance to historic wood windows.

MAINTAINING REPLACEMENT WINDOWS

One of the selling points of replacement windows is that they do not require maintenance. With the relatively short life expectancy of many of the materials and components, this is a very optimistic viewpoint.

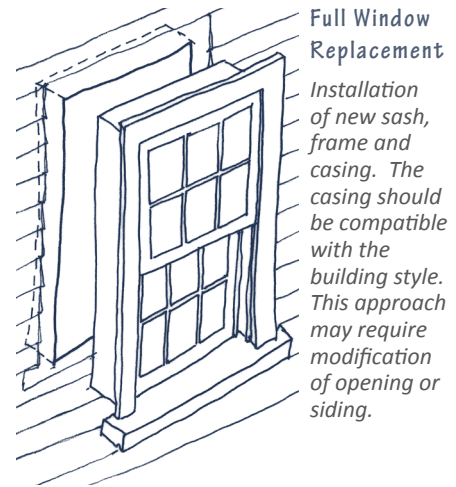
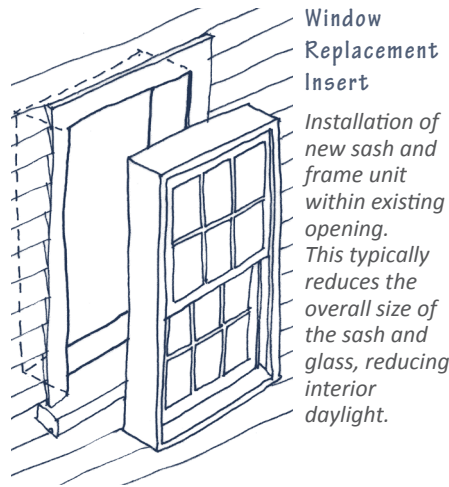
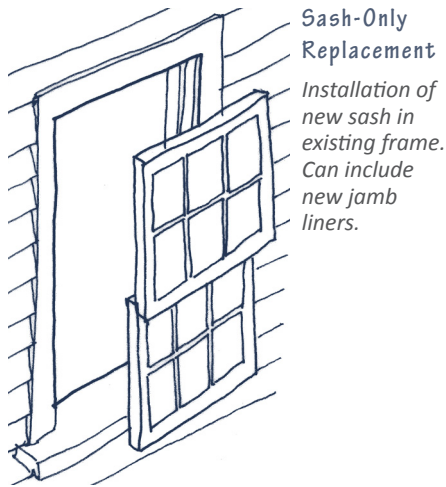
As joints or seals in replacement windows deteriorate, openings can be formed that allow air and water to enter into the window frame, wall cavity and/or building interior, causing additional damage. Repair of these openings typically requires replacement of the deteriorated parts. This can present a problem if the manufacturer has modified their designs or is no longer in business, necessitating custom fabrication of deteriorated elements or replacement of the window.

As previously described, the double-glazing has similar problems over time due to deterioration of the perimeter seal. In addition, if the glazing unit is cracked or broken, it will require full replacement. This is further complicated when the double-glazing includes an internal muntin grid. By contrast, a good carpenter can generally repair a historic wood window with single-pane glazing and install an interior or exterior storm window to improve thermal performance.

Sash: The part of the window frame that holds the glazing, especially when movable

Simulated Divided Light (SDL): A window or door in which muntins are applied to a larger piece of glass at the exterior, interior and/or between layers of insulated glass

True Divided Light: A window or door in which a glass area is divided into several small panes



WINDOW OPTIONS

Repair or replacement of existing components: Deteriorated sills, sash and muntins are repairable by craftsmen with wood consolidant or replacement parts, retaining original fabric and function. (Refer to *Wood Repair Options, Guidelines for Exterior Woodwork*, page 03-4.) In-kind replacement sash components and sills can be custom-made to replace deteriorated elements if necessary. Property owners are strongly urged to explore repair and selective replacement parts options prior to considering whole sash or frame replacement, particularly at historically significant buildings.

Repair and selective component replacement benefits:

- Original building fabric and historic character remain
- Historic profiles, dimensions and proportions can be retained and matched
- Repairs can be completed by skilled local carpenters
- Timber used in historic windows can last substantially longer than replacement units

Sash replacement package: If the sash is beyond repair, some manufacturers offer replacement jamb liners and new sash for installation within existing window casings. (Jamb liners are the vertical internal facing between the window sash and structural frame.) Because of the loss of the historic sash, this option is discouraged by the HDC.

Sash replacement package disadvantages:

- Stock replacement sash are often inappropriate to the size, profiles and proportions of existing openings and detailing
- Replacement sash have a limited warranty, likely needing another partial or full replacement in 10 to 25 years as seals and joints open
- Modification of the jambs is necessary
- Liner often made from vinyl or other inappropriate material
- The jamb liners do not always work well in existing window openings and might need more frequent replacement
- Out-of-square (wrecked) openings can be hard to fit, making window sash hard to operate, and seals might not be tight
- Historic sash are removed and become landfill debris

Frame and sash replacement unit: If the frame is beyond repair, a frame and sash replacement unit is a complete frame with a pre-installed sash of various muntin patterns for installation within an existing window frame opening. Due to the total loss of the sash and modification of the frame, this is not recommended by the HDC for historic buildings. It might be an option in new construction, based upon the specific circumstances of a project.

Frame and sash replacement unit disadvantages:

- Stock replacement sash are often inappropriate to the size, profiles and proportions of existing openings and detailing
- As the surrounding frame typically must be modified, alteration of built-in surrounds might be required and two frames and sills are typically visible at the exterior
- The size of the window sash and glass openings are reduced due to the new frame within the old frame
- In-fill might be required for non-standard sizes
- Modification of existing casing and sills may be required
- Historic sash are removed and become landfill debris

INSTALLING REPLACEMENT WINDOWS

When installing windows, it is important to keep in mind that the overall appropriateness of any installation is largely based upon its details. It is generally best to review buildings of similar style, materials and construction period for the appropriate details for a project.

- **Wall Plane** — An easy way to identify new windows is by how far back a window is set into a wall plane from the outside wall face. A historic window tends to have greater depth than a new window, with the window casing, frame and sash receding back from the wall plane, providing shadow lines between components
- **Casing & Sill** — Many replacement windows do not come with a factory-installed casing or sill, requiring them to be field-applied by a contractor during installation. To ensure that the replacement windows look like they “fit” a building, the stylistically appropriate casing and sill should be installed related to the building’s style and construction type, either masonry or wood-framed.

SHUTTERS

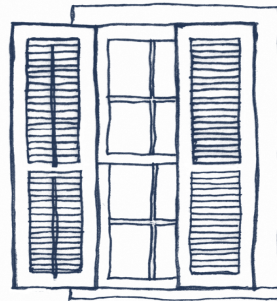
Historically, exterior shutters were used as shielding devices to modulate light and protect against inclement weather. Paneled shutters were installed to provide a solid barrier when closed and louvered shutters were used to regulate light and air. Shutters were not used on all historic buildings or in all locations.

Some building styles such as Arts and Crafts and ranch style homes did not typically include shutters. It is often possible to determine if shutters previously existed by looking for hardware such as hinges or tie-backs or evidence of their attachment, such as former screw holes in the window casing.



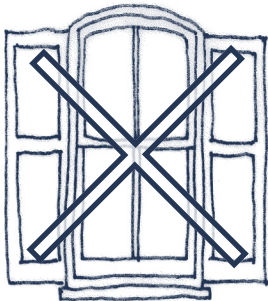
Paneled Shutter

Six-over-six double-hung window with paneled shutters



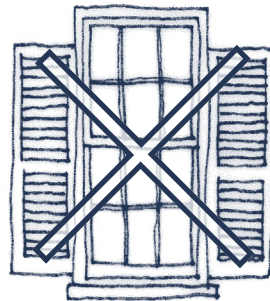
Louvered Shutter

Six-over-six double-hung window with louvered shutters



Not Recommended

The shutters do not fit the arched opening of the window



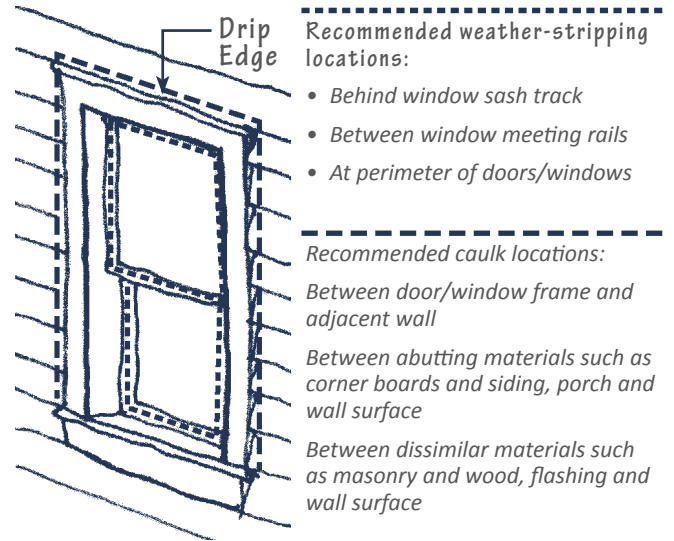
Not Recommended

The shutters are too short and narrow for the window

SCREEN / STORM WINDOWS & DOORS

Screen and storm windows and doors should conceal as little of the historic window or door as possible and should be selected to complement each window or door type. This generally means selecting a half-screen for double hung windows and a wood storm window that has rails that coincide with the frames, rails, stiles and glazing pattern and overall configuration of the associated window.

The most recommended option for a screen or storm door is a simple wood framed opening with a large screen and minimal ornament. As an alternative, metal storm windows and doors are appropriate if they do not conceal important details and their color matches the door or window. If more elaborate detailing is desired, the style and level of detailing should complement the building style; for example, a screen or storm door with Victorian gingerbread would not be appropriate for a Colonial or Federal style house.



Recommended weather-stripping locations:

- Behind window sash track
- Between window meeting rails
- At perimeter of doors/windows

Recommended caulk locations:

- Between door/window frame and adjacent wall
- Between abutting materials such as corner boards and siding, porch and wall surface
- Between dissimilar materials such as masonry and wood, flashing and wall surface

WEATHER STRIPPING & CAULK

Proper application of weather stripping and caulk around windows and doors can greatly reduce air infiltration and drafts. When selecting weather stripping or caulk, choose materials appropriate for each location and follow the manufacturer's installation recommendations for best results. Because weather stripping is used between the moving parts of windows and doors, it can easily become damaged, loose, bent or torn. Inspect weather stripping regularly, preferably every fall, and replace it as needed. For heavy-use installations such as entrance doors, it may be beneficial to install more durable weather stripping, such as spring metal or nailed felt.

The installation of caulk or other sealants should occur throughout the exterior of the building to minimize interior drafts and to protect the building's wall system from wind-driven rain. Locations where caulk is recommended include where two dissimilar materials meet; where expansion and contraction occur; or where materials are joined together. Select caulks and sealants that can be sanded and/or painted to minimize their visual appearance. In addition, care should be taken to prevent caulk or sealant from being smeared onto the face of adjacent materials since the residue might affect paint adherence. It is also important to select the appropriate type for each location and exercise care when removing old caulk that might contain lead. (Refer to *Safety Precautions, Guidelines Introduction*, page 01-5.)

DEFINITIONS:

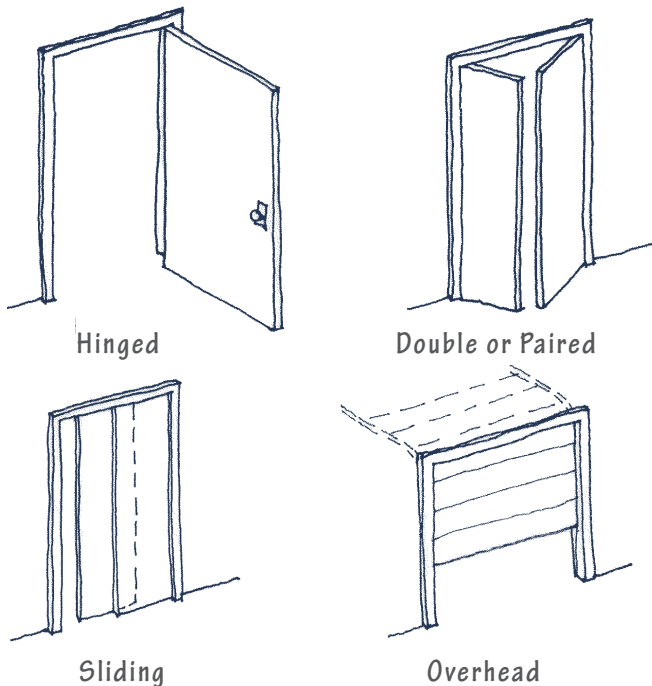
Weather Stripping: A narrow compressible band used between the edge of a window or door and the jambs, sill, head and meeting rail to seal against air and water infiltration; made of various materials including spring metal, felt, plastic foam and wood with rubber edging.

Caulk: Flexible sealant used to close joints between materials; made of various substances including tar, oakum, lead, putty and modern elastomers such as silicone and polyurethane.

DOORS

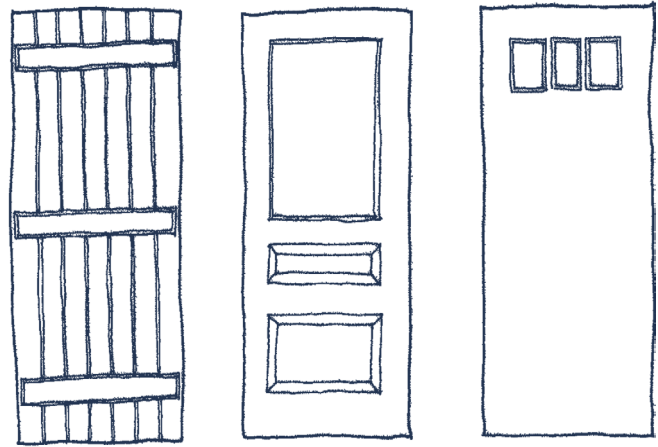
Entrance doors serve an important role in regulating the passage of people, light and air into a building, as well as providing a threshold separating the exterior and interior. Historically, most doors were wood and varied stylistically based upon the architectural style of the building, with some more “high-style” and others simpler interpretations. Similarly, a building can have a grand front door, and a simpler side or rear door. As a result, doors are considered an important feature and the retention, maintenance and repair of historic doors is recommended. Traditionally, a door’s hardware and trim complemented the overall building style. When selecting hardware for a door it is important to complement its historic style.

Doors are typically constructed of numerous parts. By the middle of the 18th century, elaborate paneled doors became more common, and now represent the most common door type in American residences. Paneled doors can be constructed in a variety of configurations that can reflect the style of the building. Later 19th century doors often included glazed panels. In the 20th century, new door types, including flush doors and metal doors, had periods of popularity.



COMMON DOOR TYPES

- **Hinged:** Swings to close at opposite jamb – almost always mounted at interior thickness of wall swinging inward
- **Double or Paired:** A pair of swinging doors that close an opening by meeting in the middle – includes French doors
- **Sliding:** Either a fixed panel with a horizontally sliding door or overlapping horizontally sliding doors – includes patio doors
- **Overhead:** Horizontal sections that open upward by sliding on tracks – most often found at garages



a. Batten

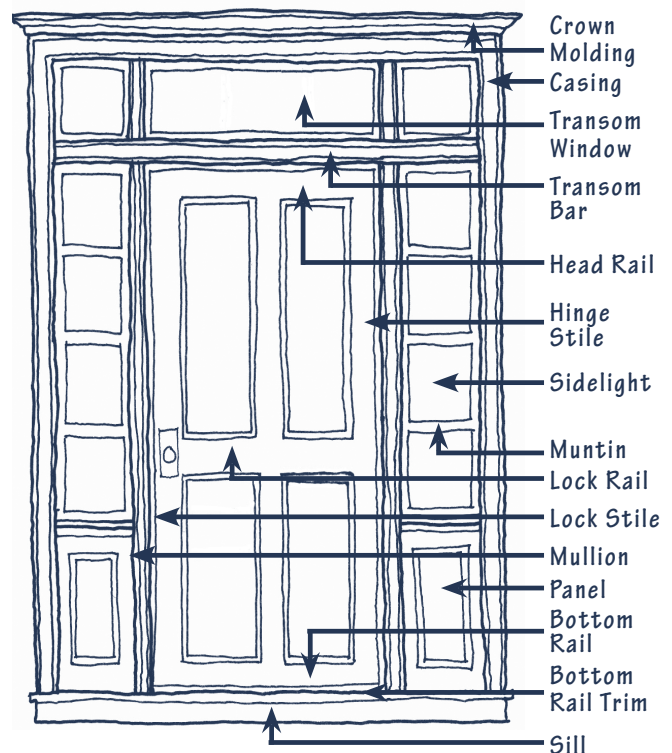
b. Raised Panel

c. Flush

COMMON WOOD DOOR STYLES

All door styles can have glazing installed in different configurations.

- **Batten:** Full height boards attached edge to edge with horizontal boards nailed to the verticals
- **Paneled:** A frame of solid wood parts with either glass or wood panels
- **Flush:** A single plain surface on its face, typically wood veneer



PANELED WOOD DOOR COMPONENTS

In Exeter, paneled wood doors are the most common at historic residences. The diagram above identifies typical wood paneled door components. Door configurations vary with a building’s architectural style.

Wood checking and peeling paint is visible. Minor repair and maintenance can prolong the serviceable life of this door.



HISTORIC DOOR PROBLEM SOLVING

Since doors tend to be one of the most operated elements on the exterior of a building, they are more likely to deteriorate from wear or damage and require regular maintenance, such as painting. If deterioration occurs, selective repair or replacement of damaged parts and the implementation of a regular maintenance program is often all that is required to retain a historic door.

To improve operation:

- Verify that doors fit properly in their frames and joints are tight
- Verify that hardware is operational, particularly that hinges are tight and hinge pins not worn
- Remove built-up paint at door and jambs
- Repair or replace deteriorated components such as trim and stops (molding inside a door frame that stops a door from swinging)

To reduce air infiltration:

- Install weather-stripping snugly between door and frame (quality metal weather-stripping can last 20 years)
- Replace broken glass (glazing) and missing or cracked glazing putty
- Caulk perimeter joints around casing and frame
- Install a storm door

To reduce solar heat gain or heat loss:

- Install and utilize operable exterior shutters
- Install clear, transparent low-e film or glass

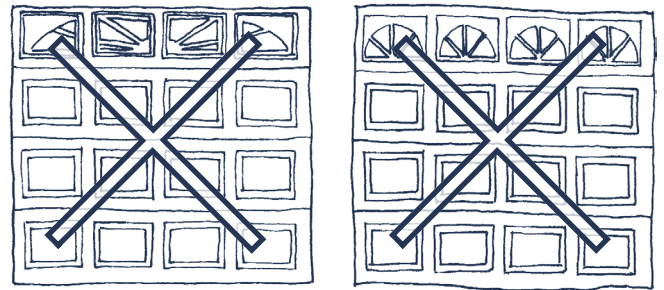
Door maintenance:

- Regularly inspect, repair and repaint doors

If door replacement is warranted, the door should be appropriate to the architectural style and character of the building. Similar to windows, replacement doors should match the original materials, type, size, shape, configuration, panel pattern, glazed window type and pattern, proportions, profiles and details as historic doors. Salvaged doors may be more appropriate than new doors. However, salvaged doors must match the size, shape, type, configuration, proportions and profiles of the original doors to be appropriate. (Contact HDC for additional style information.)



This wood paneled door has simple three-light sidelights topped by a semi-elliptical transom window. Also note the decorative iron railing.



Garage doors with arched or round window openings are generally not appropriate at historic buildings.

GARAGE & NON-TRADITIONAL DOOR TYPES

Occasionally, modern functions require openings not found in historic architecture such as garage doors. The goal of the HDC is to integrate these types of openings into buildings in such a way as to maintain the historic character of the building and the neighborhood, which generally means minimizing their visibility from the public way. It should also be understood that in some cases, it may be impossible to make certain desired changes simply because the style or type of building does not lend itself to such modification.

MODIFYING OR ADDING OPENINGS

The arrangement, size and proportions of window and door openings are key components of a building's style and character. As a result, the modification or addition of window or door openings, particularly on more prominent building façades, is strongly discouraged. This includes the infill of all or part of an opening to make it smaller or to visually remove it. It also includes increasing the size of a door opening to provide a larger opening for a display window, garage, loading dock or other use.

WINDOW & DOOR REVIEW

The HDC encourages:

- Retaining and maintaining serviceable historic windows and doors and associated trim
- Maintaining historic wood shutters
- Improving energy efficiency by installing storm windows and doors; installing weather stripping, caulk and appropriate hardware; and such activities as utilizing shutters, blinds or curtains, strategically locating trees and installing UV protection
- Installing clear glass at all openings unless replacing cracked historic colored, beveled or frosted glass in-kind
- Shutters of the appropriate style for the building and location, with a painted finish
- Operable shutters made of wood or other materials with a paintable finish
- Appropriately sized and shaped shutters for the window opening, fitted to cover the window when closed
- Period-appropriate hardware for each building style and location
- Simple storm/screen windows and doors with large screened openings that reveal as much of the historic window or door as possible and fit historic openings
- Removable storm/screen windows to facilitate maintenance of historic windows
- Storms/screens (half screens) that minimize the change to the exterior appearance
- Painting the wood storm/screen window or door frame to match the adjacent window or door trim
- Retaining historic garage and non-traditional doors and their original opening
- Stylistically appropriate replacement garage and non-traditional doors
- Minimizing the public view of new non-traditional doors
- New paneled garage doors with a paintable exterior finish

If replacement windows are warranted, the HDC encourages:

- Reviewing grades of windows offered by manufacturers
- Utilizing quality materials in the installation process
- Understanding the limits of the warranties for all components and associated labor for replacement

- Selecting reputable manufacturers and installers who are likely to remain in business and honor warranties
- Installing quality true divided-light or simulated divided-light replacement windows to match the original material, size, shape, configuration, operation, dimensions, profiles and detailing of historically appropriate windows to the greatest extent possible, including the use of egress windows
- Selecting wood- or aluminum-clad wood replacement windows for street elevations
- Installing replacement windows in less visible areas
- Installing historically and stylistically appropriate wood replacement doors when level of deterioration requires replacement
- Matching replacement doors as closely as possible to the original doors or using salvaged doors appropriate to the period and style of the building
- Maintaining serviceable trim, hardware and components or utilizing hardware appropriate for the historic period

The HDC discourages:

- Interior or internal muntin grids for multi-paned appearance
- Removing or encapsulating surrounding trim
- Replacing original doors, unless seriously deteriorated
- Shutters where they did not exist historically
- Shutters screwed or nailed into the building wall, unless historically appropriate
- Vinyl or aluminum shutters
- Vinyl, aluminum, metal or other synthetic materials for storm/screen frames – Wood frames can be custom made to fit any size or shape opening
- Visually opaque screen material
- Plexiglas, or similar material, fastened to window or door frames, screens or shutters
- Storms/screens adhered or fastened directly to window or door trim or shutters
- Storm/screen windows that are too small or a different shape than the opening and require in-fill trim or panels
- Full window screens covering the entire window opening — Half screens are appropriate for single- and double-hung windows

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