GUIDELINES FOR
EXTERIOR WOODWORK

Town of Riverhead
Landmarks Preservation Commission

GUIDELINES FOR EXTERIOR WOODWORK

The Petty House is one of the finest examples of Italianate homes in Riverhead. The contrasting paint scheme highlights the decorative woodwork and architectural details. The wood clapboards align with the top and bottom of window casings.

These *Guidelines* were developed in conjunction with the Town of Riverhead's Landmarks Preservation Commission (LPC) and Architectural Review Board (ARB). Please review this information during the early stages of planning your project. Familiarity with this material can assist in moving a project quickly through the approval process, saving applicants both time and money.

The LPC and ARB encourage informal informational meetings with potential applicants who are considering a project that might include exterior changes to their properties. Please call the Building Department at (631) 727-3200 ext. 213.

Nothing in these *Guidelines* shall be construed to prevent ordinary maintenance of repair with like materials of similar quality and color.

Additional *Guidelines* addressing other historic building topics are available at Town Hall and on its web site at www.riverheadli.com. For more information, to clarify whether a proposed project requires LPC review, or to obtain permit applications, please call the Building Department at (631) 727-3200 ext. 213.

PURPOSE

These *Guidelines* were prepared to assist property owners with information when considering the repair, alteration or installation of exterior woodwork. It is not intended that these *Guidelines* should replace consultation with qualified architects, contractors, the Landmarks Preservation Commission (LPC), Architectural Review Board (ARB) and applicable ordinances.

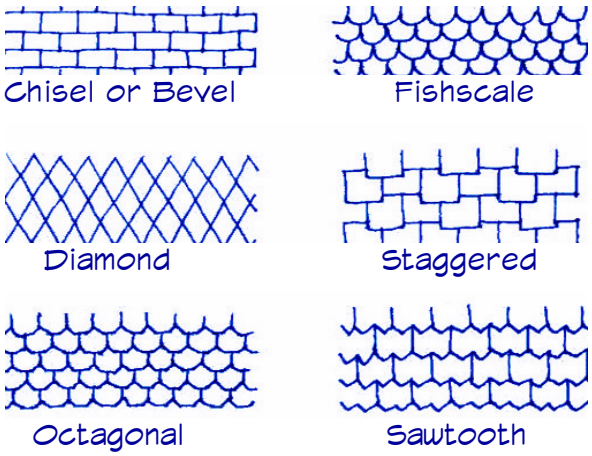
The exterior woodwork details at the Riverhead News Building are typical of the Greek Revival style including the fluted pilasters at the building's corners and the classically inspired ornate door surround.

EXTERIOR WOODWORK

Wood siding, shingles and trim on a building's wall surface serve both functional and aesthetic purposes. Functionally, exterior woodwork acts as the skin of the building, shedding water and deflecting sunlight and wind. Aesthetically, woodwork is an important design feature and can be applied as siding, shingles, ornamental trim and larger elements such as porches and cupolas. Exterior woodwork:

- Establishes a weather-tight enclosure, providing protection from rain, wind and sun
- Is affected by temperature variation and building movement
- Establishes a building's scale, mass and proportion adding visual interest to the streetscape
- Acts as an important design feature, helping to define a building's architectural style and adding pattern and casting shadows on wall surfaces

With proper maintenance, exterior wood elements can last for centuries, however improper maintenance can result in problems and deterioration from water, fungus, mold and insects.



COMMON SHINGLE TYPES

Wood shingles were a common form of cladding in Riverhead with 18th and early 19th century buildings sheathed in hand-cut shingles with a 12" exposure. This was followed by machine-cut shingles with a 5½" to 6" exposure. Similar to clapboard siding, wood shingles are tapered and installed in an overlapping pattern with staggered joints to minimize potential moisture infiltration. Types of wood shingles include:

a. **Chisel or Bevel:** Rectangular shape, similar to roof shingles
b. **Fishscale:** Bottom shingle edge cut in a U shape with multiple rows forming a fishscale pattern
c. **Diamond:** Bottom shingle edge cut in a V shape with multiple rows forming a diamond pattern
d. **Staggered:** Chisel or beveled shingles with alternating greater and lesser exposure
e. **Octagonal:** Bottom shingle corners cut with 45° angle with multiple rows forming an octagonal pattern
f. **Sawtooth:** Bottom shingle edge cut in a W shape with adjacent shingles forming a sawtooth pattern

This Queen Anne Corwin-Young House is elaborately clad with a variety of wood shingles, beveled siding and ornamental trim.

COMMON SIDING TYPES

The most common type of wood siding in Riverhead is clapboard with German siding being more unusual. Clapboard siding, also known as weatherboard or beveled siding, is made from long boards, tapered across the width. German siding, also known as drop siding, is a flat faced board with a concave top and notched bottom. Historically, the two most traditional types of wood siding for secondary buildings were vertical board siding and board and batten siding.

The original building to the left has clapboard siding, and the later addition, located to the right, has German siding.

WOOD TRIM AND ORNAMENT

Visually, exterior wood trim frames areas of wood siding or shingles and serves as the transition to decorative elements such as doors, windows, cornices and porches. Functionally, it seals siding and shingles at joints, corners and openings, providing a weather-tight building enclosure. Wood trim includes window and door frames, corner boards, rake boards and wood sills. In addition to wood trim, there are numerous types of wood ornaments applied to buildings, including porch posts and columns, brackets, balustrades, newel posts, spindles and other decorative details. Historically, wood trim and ornament profiles, details and sizes varied with building styles and whether a building was "high-style" or vernacular. As a result, the wood trim and ornament are considered an important feature.

The Landmarks Preservation Commission encourages:

- Retaining historic wood trim and ornament
- Following guidelines for maintenance and repair of historic wood trim and ornament as outlined in the following Exterior Woodwork Checklist section
- Reusing original window frames and trim when replacing windows, or exactly replicating the dimensions and profiles of original frames
- Using modern composite materials as an alternative to wood in locations where rot is a problem

The Landmarks Preservation Commission discourages:

- Removal, alteration or concealing of original trim and detailing including window and door trim, corner boards, soffits, porch posts, railings, etc.

Exterior woodwork laid on a horizontal plane or located close to the ground is highly susceptible to deterioration such as this porch example. Ongoing exposure to moisture deteriorated the column bases, porch deck and apron. The green bloom is biological growth, probably algae, indicating the presence of moisture.

EXTERIOR WOODWORK CHECKLIST

Property owners generally do not notice their exterior woodwork unless a problem occurs, or there is desire to improve the appearance or reduce maintenance. Typical exterior woodwork concerns include lack of regular maintenance, peeling paint, rot or deterioration, infestation and loose, cracked or missing elements. Property owners will often hide these problems with materials such as vinyl without addressing the root cause of the problem, resulting in further deterioration.

The actual condition of un-maintained exterior wood is generally better than its appearance. In addition, a deteriorated component or area typically does not necessitate the replacement or covering of all exterior woodwork. In most instances, selective repair or replacement of damaged parts and implementation of a regular maintenance program is all that is required. Full exterior woodwork replacement or encapsulation with artificial siding or another material is rarely necessary and should be avoided whenever possible.

The Landmarks Preservation Commission encourages:

- **Conducting semi-annual inspections** of all exterior wood elements to verify condition and determine maintenance needs. Look for signs of deterioration including excessive paint peeling that might indicate moisture problems. Look for veins of dirt on the exterior walls that might be termite mud tunnels. (See Wood Rot section.) Clean exterior surfaces annually in warm weather with a garden hose, household detergent and a bristle scrub brush. Avoid using power washers that can force water into wall cavities through crevices and damage decorative details.
- **Maintaining and repainting** exterior woodwork on a regular basis. A good quality paint job can last five to eight years. For best results, address any moisture or deterioration problems prior to painting. Hand scrape and sand where possible to avoid removing or damaging decorative details with power tools or burning. Apply high quality and compatible primer and paint to clean and dry surfaces. Paint colors and luster should be appropriate to the building style.
- **Repairing smaller areas of deterioration** by reinforcing or patching as required. Small cracks and checks can be repaired with an exterior wood filler, glue or epoxy. Loose elements can be refastened with careful nailing or drilling.
- **Selective replacement** of deteriorated wood elements when they are beyond repair. The replacement wood pieces should be the same size, profile and character of the historic wood element. It might be helpful to take a sample of the historic wood to the lumber yard or millwork shop for the best match. Wood filler between the seams of the new and old wood will help provide a smooth finish.
- **Replacement** of all exterior wood might be necessary if deterioration of exterior woodwork is severe and extensive. Decorative woodwork should be retained whenever possible since it is a character defining element that can be difficult and costly to replace. Replacement wood elements should have the same visual characteristics as the historic woodwork including the size, profile and visual characteristics. Replacement siding materials should be installed in the original pattern being as careful as possible to match the original exposures and alignments relative to historic building elements such as door and window frames. Select replacement wood species appropriate for exterior use and location.

The Landmarks Preservation Commission discourages:

- Removing or encapsulating of siding, trim, decorative features and trim elements such as brackets, spindles, cornices, columns, posts, etc.

HIRING A CONTRACTOR

- Repair, maintenance, installation and painting of siding can be potentially dangerous work and should be left to professionals
- All contractors are not necessarily experienced in all materials – check references for similar projects, especially from 5 years prior, to understand how well work has held up
- Verify extent of warranty for materials and labor

WOOD ROT

Almost all wood rot is caused by fungi that break down dead wood to return it back to the earth. Spores of decaying fungi are continuously produced and airborne at the interior and exterior of buildings. Rot-causing fungi need four basic elements to thrive: oxygen, moisture, food and moderate temperatures. If any of these elements are missing, rot can be controlled.

Since oxygen and moderate temperatures are prevalent in the environment and most historic buildings are full of wood, an excellent food source, the best hope to minimize rot is to control moisture. Moisture that leads to building rot generally comes from one of four sources: ground water, rain and snow, plumbing leaks and condensation.

Ground water can migrate from the soil into a building by: direct contact between wood and soil; improper drainage away from the foundation; vegetation too close to the foundation; water vapor condensation in crawl spaces; and capillary action or rising damp in masonry foundation walls carrying water several inches up to wood sills.

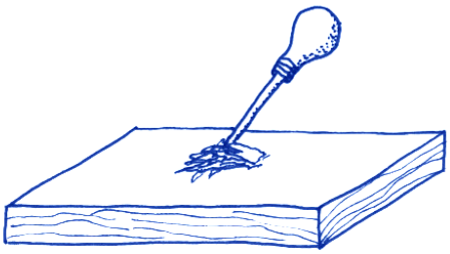
Rain and snow can find its way into a building through crevices and be confined within a wall cavity. Exterior surfaces with open joints or those that are not protected by paint, caulk or mortar are subject to water infiltration. Blocked or undersized gutters and downspouts can overflow and direct water towards building surfaces. Rainwater splashing on hard ground surfaces can rebound, saturating exterior woodwork. Ice build-up along roof eaves without appropriate flashing could back-up under shingles and melt.

Leaky plumbing is generally sudden, such as a cracked pipe; or slow, where a gradual, unnoticed leak can soak a wood structure until significant damage occurs. Cracks in grout and tiles on floors and around bathtubs, sinks and washing machines can emit enough water to rot wood framing. Periodic inspections for signs of leaking behind bathtub access panels, within sink vanities and around washing machines and dishwashers can help to catch a problem earlier.

Condensation is an insidious source of moisture since the water comes from air vapor rather than an obvious source such as rain or a cracked pipe. Condensation occurs when warm moist air contacts a cold surface. Warm air can hold more moisture than cold air. If warm moist air comes in contact with a cold surface that is below the dew point temperature, the excess moisture changes to water droplets on the cold surface. Some common areas for condensation include:

- Crawl spaces beneath a building where water can condense on framing members such as sills and joists, especially in corners with poor air circulation or if occupied spaces above are air conditioned – Plastic sheathing on the ground should be considered
- Cold water pipes in humid weather – Pipe insulation should be considered
- Window panes – Re-caulking of existing storm windows or new storm windows should be considered
- High humidity in kitchens, bathrooms and laundries – Exhaust fans and exterior clothes dryer vents should be considered
- Wood deterioration atop foundation – Wall insulation with an interior-facing vapor barrier and interior humidity control should be considered

Less penetration and long splinters are an indication of healthy wood



Greater penetration and short splinters against the grain are a possible indication of rot

DETECTING WOOD ROT

A simple means of testing for rot is to stab the wood member perpendicular to the grain with an awl or ice pick. Then measure the penetration depth and evaluate the type of splintering using the following criteria:

- If the penetration is less than ¼ inch, the component does not need replacement
- If the penetration is more than ½ inch, the component might need replacement
- If long splinters are produced, the wood is healthy and the component does not need replacement
- If short sections broken across the grain are produced, the component might need replacement

Vinyl siding of different colors has been installed at each residence. The siding is not aligned and obscures wood window surrounds.

TYPES OF ARTIFICIAL SIDING

Artificial siding has been applied by Riverhead's property owners for years to provide an updated appearance and minimize maintenance and repair needs. Artificial siding materials include asphalt and asbestos and more commonly, vinyl and aluminum siding and capping. These materials can significantly change a building's character and appearance and are not necessarily maintenance free. Most forms of artificial siding can trap moisture within a wall thickness, accelerating potential rot and decay.

Asphalt siding often simulates brick or stone wall surfaces.

Asbestos siding is often embossed with a wood grain pattern. The removal of asbestos siding can be dangerous and should be undertaken by trained professionals.

VINYL AND ALUMINUM SIDING

Vinyl and aluminum siding typically simulate wood. Because vinyl and aluminum are extruded pieces of plastic and metal, they are thinner and visually lighter than wood. It should also be noted that in the event of a fire, the fumes from vinyl can be very hazardous.

If considering artificial siding, a smooth finish is recommended rather than a wood-grain finish. Replacement of this aluminum siding section would be the best way to repair the puncture. Since siding colors tend to fade from sunlight, the replacement siding probably would not match the existing adjacent siding.

FIBER-CEMENT SIDING

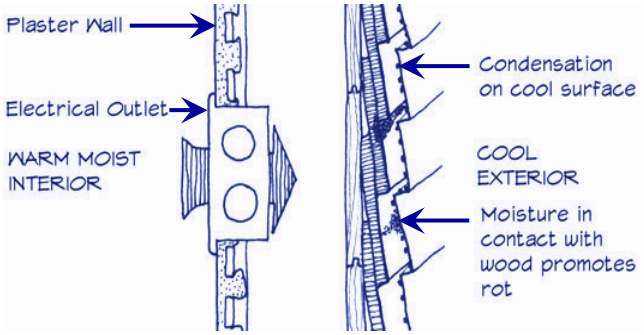
Fiber-cement siding is a lightweight, solid material that is a durable and visually more compatible material to wood than vinyl or aluminum siding. It is manufactured in similar sizes and shapes to wood products including siding, shingles and trim, making it easier to duplicate historic characteristics. The installation method is similar to wood allowing historic alignments around window and door frames, and it can be cut to shape on-site using hand tools, and painted to match any color scheme. Manufacturers indicate that fiber-cement products are resistant to rot, termites, fire and delamination, and are dimensionally stable, allowing paint to last longer. Fiber-cement products cost more than vinyl or aluminum siding but much less than wood siding. They are increasingly common in this region, and some manufacturers offer warrantees for as long as 50 years.

Fiber-cement siding material is a good economical alternative for an addition to a historic building. The surface of the cementitious siding above was painted to match the existing paint scheme.

EXTERIOR WOODWORK OR ARTIFICIAL SIDING?

Property owners generally install artificial siding to avoid maintenance issues associated with repainting and because of aggressive marketing by the vinyl industry. They believe that artificial siding provides a maintenance free solution that will solve their exterior building problems for a lifetime. The table below contrasts common statements by the vinyl industry with the viewpoint of preservation professionals.

VINYL INDUSTRY VIEW	PRESERVATION VIEW
"Vinyl siding is a cost effective alternative to wood"	• Vinyl siding is usually guaranteed for 20 years and costs approximately the same as two quality paint jobs. (Guarantees over 20 years are usually prorated.) Properly maintained wood siding has been found to last hundreds of years. • Vinyl siding installed over existing woodwork can trap moisture and lead to costly hidden structural repairs. (See weatherproof section below.) • Artificial siding can reduce home values by covering distinctive qualities and details.
"Vinyl siding improves the appearance of a building"	• Exposures, shadow lines, joint layout, texture and the sheen of vinyl siding typically do not match wood. • Historic or decorative trim is often covered or removed in the installation process. Installation typically requires damage to historic wall materials. • Stock vinyl trim is generally narrower than historic wood trim. • Historic details and decorative elements are generally not available in vinyl. • Available vinyl colors are limited and might not be appropriate for the building style. • Colors are difficult to change. (If change is desired, the type of paint should be compatible in material and color to minimize peeling, warping and curling.)
"Vinyl siding is weatherproof"	• It can be weatherproof if properly installed, but at many historic buildings there are crevices and uneven surfaces that allow moisture behind the artificial siding or capping. (Generally, new buildings with vinyl siding are constructed with an internal vapor barrier to exhaust moisture-laden air.) • Unlike wood, vinyl or metal siding does not breathe and can trap moisture within a building's wall cavity. Trapped moisture condenses when it reaches the dew point, changing to water droplets that can drip and run through the wall's structure. This can lead to rotting of sills and structural components and potential mold and insect damage. (To reduce trapped moisture, install continuous wall vents under eaves and add weep holes to artificial siding.) • Installing vinyl or metal over deteriorated wood will not make the problem disappear. (Generally, by trapping additional moisture, the deterioration could accelerate and lead to costly hidden structural repairs.)
"Vinyl siding conserves energy"	• Insulation value of vinyl siding is minimal, even when it is backed by a thin layer of insulating foam or rigid board insulation. Furthermore, the insulation could trap additional moisture within the wall cavity. • Tests have shown that up to 75% of a typical building's heat loss is through its roof. Installing attic insulation is a more cost effective method of reducing a heating bill.
"Vinyl siding is maintenance free"	• Like wood, vinyl siding needs regular cleaning. • Vinyl and aluminum siding is subject to denting, warping, cupping, puncturing and fading from sunlight exposure. Vinyl siding is prone to cracking in cold weather. Replacement patches usually do not match the earlier installation. • The painting of vinyl or aluminum siding to change or to freshen the appearance typically voids the manufacturer's warrantee. (Type and color of paint used over vinyl siding should be compatible to minimize potential peeling, warping and curling. Once painted, artificial siding will need to be repainted as often as wood.)



CONDENSATION

As a result of changes in our living standards, condensation has become a significant problem in historic buildings. Today's buildings include central heating and air conditioning to stabilize temperatures and relative humidity, as well as insulation that can trap moisture. Buildings also include moisture-intensive conveniences such as plumbing, bathrooms, and laundry and cooking facilities. While interior conditions have stabilized and moisture laden activities increased, exterior temperatures and relative humidity are continuously changing.

The differences in temperature and relative humidity between the interior and exterior of our buildings are distributed through the thicknesses of exterior building walls. If the temperature is below the dew point at any location within the wall, condensation will occur causing the moisture to change into water droplets. Installing artificial siding or impervious coatings over wood can exacerbate this problem and hide deterioration until it is very severe.

Unlike wood, vinyl and aluminum do not "breathe" and can trap moisture within a building's wall cavity, leading to rot, mold and insect damage of the wood structure. Therefore, it is important to inspect and repair potential water sources to minimize the moisture within the wall cavity.

REMOVING ARTIFICIAL SIDING

Riverhead residents might consider removing artificial siding and restoring underlying woodwork. Artificial siding removal allows buildings to function as originally designed and exposes problems that might have developed since its installation. If removing artificial siding from woodwork:

- Expect to replace about 20% of woodwork
- Expect surprises such as removed details and trim
- Sell aluminum siding for recycling

Aluminum capping has been installed over the window frame. Aluminum capping usually lacks the profile and detail of wood trim. It can also trap moisture within the wall surface that can accelerate rot and deterioration.

The window frame has been completely covered with the vinyl siding. The depth and articulation formerly provided by the frame has been eliminated. Without the frame, the visual dimensions of the window are changed and character of the building diminished.

ARTIFICIAL SIDING IN RIVERHEAD

In Riverhead, many of the historic buildings were originally clad with wood shingles and most artificial siding materials are designed to simulate wood siding. As a result, the installation of artificial siding over a traditional shingled building alters the overall character of the building. In addition, most artificial siding materials, particularly vinyl and aluminum siding, must be installed at a consistent vertical spacing as defined by the manufacturer. They do not allow flexibility to accommodate historic alignments at existing building fabric such as at window and door frames. (In historic buildings, shingles or siding was typically installed with a horizontal band aligning with the top and bottom of window and door frames.)

Most historic buildings usually have significant wood door and window frames, moldings and trim that can be removed, damaged or concealed in inappropriate artificial siding installations. The loss of these features can significantly alter the character of a building. Artificial siding installation over existing materials can also increase the wall thickness, causing the existing wood trim to appear set back from the wall rather than projecting from it. This can further diminish the visual characteristics of the building.

The Landmarks Preservation Commission encourages:

- Retaining and maintaining existing exterior woodwork including siding and trim
- Repairing or replacing siding and trim in kind
- Using fiber-cement clapboards as an alternative to wood clapboards

The Landmarks Preservation Commission discourages:

- Installing aluminum or vinyl siding or coatings

Porches provide a sheltered transition into a building and should complement the architectural style of the building.

PORCHES

Riverhead's rich architectural variety is distinguished by its collection of porches. Historically, porches were an outside room where residents could find a sheltered transition into their homes, exterior living space, and a place to meet and converse with neighbors. When they were constructed, the form, details and decorative elements were often intended to complement the style of the house.

Porches remain one of the most visible elements on residential buildings and play a significant role in their appearance and that of the streetscape. They can act as an extension of a building providing a welcoming feeling for visitors. Unfortunately porches today are often one of the most frequently altered building components because they are not properly maintained or they are viewed as potentially enclosable indoor space.

LOOKING FOR EVIDENCE OF PRIOR PORCHES

It is important that documentation be found when replacing a missing porch. This can be physical evidence that a porch was present or documentation that shows or describes a porch.

- Look for shadows on the wall or trim from roofs, posts or railings, evidence of nailing patterns on siding, repairs to masonry walls and evidence of former porch piers or foundations in landscape
- Look for historic photos, drawings or maps and in attics and garages for original components
- Compare porches on neighboring buildings of similar type, design, style and date of construction

PORCH GUIDELINES

The Landmarks Preservation Commission encourages:

- Painting wood components of porches regularly to minimize potential deterioration
- Retaining, repairing and replacing porch elements in-kind whenever possible
- Rebuilding a porch with appropriate documentation
- A painted finish complementing the architectural characteristics of the house – Pressure-treated wood can generally be painted after its initial weathering period of 6 to 12 months

The Landmarks Preservation Commission discourages:

- Enclosing a porch at the front or prominent elevation of a building
- Installing metal posts and railings; they are almost never appropriate for a historic building
- Replacing wood steps with concrete or brick – wood steps are typically appropriate for wood porches

Following the removal of aluminum siding, evidence of the former, full-width porch at the front elevation was revealed. The profile of the former porch cornice is visible at the left side of the building and can provide the basis for the construction of the replacement porch. The size of the first floor windows was reduced and the former openings infilled with plywood prior to installing aluminum siding. Also note the clapboards align with the tops and bottoms of the historic 2nd and 3rd floor window casings.

MAINTAINING HISTORIC PORCHES

Because of the importance porches play in the perception of historic buildings and streetscapes, original materials and details should be preserved as long as possible. Typically areas covered by a porch roof tend to require less maintenance; however, steps, railings and roofs are usually exposed to the weather and might require additional maintenance. One of the best ways to preserve painted wood porch features is regular repainting. If a component is deteriorating, repair or replacement in kind is recommended as part of the porch's regular maintenance. Since many of the components of porches are discussed in depth in other *Guidelines* brochures, it might be helpful to consult them to address specific repair needs.

The Landmarks Preservation Commission encourages:

- Finding and correcting sources of deteriorated elements, such as deteriorated, cracked, blocked, inappropriately hung, broken or missing gutters or downspouts
- Replacing only those parts which can not be repaired – in some instances, such as columns and posts, the base can be replaced without replacing the entire column or post at a fraction of the cost
- If a substantial portion of the porch is deteriorated and cannot be repaired or replicated, or if a porch is missing, creating a simplified design using stock lumber and moldings that convey similar visual characteristics as the original porch, duplicating the dimensions and materials but not necessarily the detailing

A portion of this wraparound porch is partially enclosed with insect screening at the interior of the columns and railings that is visually unobtrusive.

GUIDELINES FOR NEW PORCHES

There are times when property owners might consider the construction of a new porch. This can occur when a previous porch is reconstructed; a new porch is added onto an existing house or is part of an addition; or when a new residence is erected. If considering the construction of a new porch, the Landmarks Preservation Commission and Architectural Review Board recommend the following general guidelines:

- New porches are encouraged on streets where porches are common
- At existing buildings, new construction should not damage, destroy, conceal or negatively affect existing historic material and features
- On additions, side and rear elevation porches are typically simpler in design than front elevation porches
- On new buildings, porches should visually relate to the proposed building in a manner similar to historic porches on neighboring buildings
- Consider the size, shape, scale, massing, form, materials and color of the design and its appropriateness to the building and streetscape
- Most porches in Riverhead were historically made of wood; stone or brick porches or stoops might be appropriate on masonry buildings

ENCLOSING PORCHES

Porches were meant to be open exterior spaces. Enclosing a front porch is a radical change to the building and its visual perception from the streetscape. If considering porch enclosure, it is recommended that this occur only at a side or rear elevation porch. If enclosing a porch, it is recommended that the finished space look more like a porch than an enclosed room.

The Landmarks Preservation Commission encourages:

- Retaining porch elements in place and constructing enclosure framing inside of porch columns and railings
- Temporary enclosure systems, such as screens or glazing that can be removed seasonally
- Reversible enclosure systems that do not damage decorative or unique historic building fabric
- Translucent enclosure systems, with large screened or glazed openings
- Vertical and horizontal framing members that align behind porch elements like columns and railings

The Landmarks Preservation Commission discourages:

- Removing or enclosing historic porches

The contrasting colors of the bargeboards and brackets highlight the framing details.

EXTERIOR PAINT

Exterior paint provides a layer of protection to a building by adding a barrier that limits 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 w**o**od deterioration of the exterior envelope and underlying framing. Although paint is an important protective layer to improve the longevity of a historic resource, it must be viewed as a temporary barrier that is subject to deterioration through cyclical temperature and humidity changes and requiring 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 the parts of a building together, as well as reflect personal taste. A building's style, period of construction, materials and setting can all help identify appropriate paint colors.

PAINT COLORS

The application of paint or stain and associated colors are not subject to LPC or ARB review.

PAINT PROPERTIES

Paint is one of the most common ways to protect exterior materials from the elements, particularly wood without natural or chemical preservatives. When the painted surface has been compromised, moisture and the elements can infiltrate the underlying material and potentially accelerate deterioration.

In general, exterior surfaces should be repainted every five to eight years, with potential touch-ups of high traffic, worn or deteriorated areas. If the frequency of complete repainting is greater, it might be an indication of another problem including moisture, inadequate surface preparation and non-compatible paint.

STAINS

Exterior stains are typically applied to woods and come in many varieties: semitransparent and opaque; oil or latex; and preservative or weathering. As their popularity increases, the number of color options has also increased to include many colors more commonly associated with paint. Visually, stains generally fall into one of two categories, semitransparent and opaque. Semitransparent allows some or all of the wood's color, grain and texture to show through while opaque provides a consistent color finish but allows more texture than paint.

Some stain products include wood preservatives and mildewcides that reduce the potential for wood deterioration and could be appropriate to apply to areas such as wood roofs in a clear or semi-transparent finish. There are also weathering stains that appear to weather the wood to a soft gray finish and natural stain that keeps the wood looking new.

Generally speaking, exterior stains weather differently than paint because they do not build up into a thick film that can peel off, but rather slowly fade when exposed to weather conditions. This fading will be more apparent in south-facing surfaces that receive more sunlight. In addition, there is less preparation required when re-staining of surfaces is needed since loose paint layers will not require removal.

Since stains are less forgiving than paint and allow the underlying wood texture and any blemishes to show through the finished surface, it is generally recommended that a building's body and trim, with the exception of stained shingle buildings, be painted. However stain can be considered at high traffic areas such as porch floors, fences and other garden elements.

Weathering stains appear to weather the wood to a soft gray finish allowing areas of repair to blend faster with existing shingles.

Building window, door and trim details are highlighted with complementary earth toned colors typical of the Victorian period. Also note the rows of shingles align with the tops and bottoms of the historic window and door casings.

REPAINTING

When considering repainting, the following five steps are recommended:

1. **Determine whether painting is necessary:** Prior to beginning a painting project, it is appropriate to determine whether complete repainting is required or if cleaning and/or spot repainting is more appropriate. By painting more often than is necessary, paint layers can build up, increasing the potential for future paint failure. A dingy finish might only require washing with a mild detergent solution and natural bristle brushes to freshen the appearance.

2. **Inspect existing paint for causes of failure:** To assure the new paint will last as long as possible, property owners should inspect the existing paint for causes of failure. Some common paint problems are:
   - Peeling – possible causes are painting under adverse conditions, inadequate surface preparation or moisture infiltration
   - Blistering – cut into blister, and if wood is visible the problem is probably moisture related; if paint is visible, the problem area was probably painted in direct hot sun
   - Wrinkling – typically the result of the top coat drying before the underlying coat; sand surface smooth and repaint
   - Cracking or crazing – typically the sign of a hard surface that does not expand and contract with underlying material; sand and repaint if cracking and crazing is limited to the surface; remove paint if it extends down to the wood
   - Alligatoring – severe cracking and crazing; remove all paint down to bare wood

3. **Repair causes of failure:** Before repainting, causes of paint failure should be repaired. A substantial amount of paint failure is due to moisture problems such as: areas near rooflines, gutters and downspouts; areas near the ground; horizontal surfaces such as window sills; and moisture migration through exterior walls from kitchens, bathrooms and laundry rooms.

   Remediate areas of moisture and repair any damaged wood or substrate material prior to repainting. Remediation of moisture can include repair of gutters and downspouts, reducing moisture migration through the walls by installing an interior dehumidifier, improving perimeter drainage away from the building foundation, and removing perimeter shrubs and other vegetation. Refer to the *Guidelines* brochures, in particular the *Guidelines for Exterior Maintenance,* for additional information.

4. **Prepare surface:** To insure a long-lasting painted surface, appropriate surface preparation should be undertaken before repainting.
   - Begin by washing the painted surfaces with a mild detergent solution and natural bristle brushes, then carefully scrape and sand for a smooth finish, removing any paint that is not tightly bonded to the surface
   - Putty or caulk countersunk nails, window glazing, gaps, joints and openings
   - Allow substrate to thoroughly dry before applying primer or paint
   - Spot prime bare wood, areas of repair and wood replacement

5. **Repaint:** High quality paint appropriate for the substrate applied in accordance with manufacturer's recommendations should improve the longevity of a paint job. In general, it is best to use compatible primer and paint from the same manufacturer, and apply two coats of paint to previously bare wood.
   - Apply paint during appropriate weather conditions, generally 50˚F to 90˚F, less than 60% relative humidity, avoiding direct sunlight

STRIPPING PAINT

If the existing paint has failed, it might be necessary to strip all or portions of the paint from the surface. Although there are a variety of tools and chemicals available to strip paint, many of them are potentially hazardous and can cause significant damage to exterior surfaces. All manufacturers' recommendations should be followed during the paint removal process.

The Landmarks Preservation Commission encourages:

- Hand washing with a mild detergent and natural bristle brushes
- Hand scraping
- Hand sanding

The Landmarks Preservation Commission suggests care using:

- Rotary tools – disks can leave circular marks and wires can tear into surface
- Heat guns and heat plate – can ignite paint or underlying surface if left in one location too long
- Chemical paint removers – can raise grains of some woods, be expensive and potentially volatile; runoff is potentially hazardous and should be collected to prevent harm to children, pets, vegetation and ground water

The Landmarks Preservation Commission strongly discourages:

- Flame tools such as blowtorches to soften paint – smoldering sparks can start a potentially devastating fire; lead components in paint can vaporize and create highly toxic fumes
- Sandblasting – can be abrasive to surface and wear away protective exterior coating
- High pressure water wash –forces water into open joints affecting interior finishes and structural framing; can be abrasive to exterior surface

PAINT REMOVAL SAFETY

Paint removal is potentially hazardous work. Keep children and pets clear of work areas. Property owners should consult a professional for work that is unfamiliar or potentially unsafe.

- Always wear safety goggles and a dust mask
- With heat tools, always wear appropriate clothing and keep a fire extinguisher nearby
- Paint dust from older buildings can contain lead – wear a dust mask, avoid open food or beverage containers in area of paint removal, and thoroughly clean exposed skin and launder work clothes

Paint color can highlight architectural features and materials. The choice of paint colors and application locations should complement a building's architectural style such as this Italianate example.

PAINTING REFERENCES

Paint colors can highlight a building's architectural features and reflect personal taste. Generally, Colonial Revival homes would historically have a two-color paint scheme; Victorian homes might have a three or four-color, earth-tone, paint scheme. Please refer to the appropriate *Guidelines* and the *Guidelines for Exterior Maintenance* for information on painting additional materials. The following books address appropriate historic building paint colors:

Moss, Roger W. ed. *Paint in America: The Colors of Historic Buildings*. New York: John Wylie & Sons, 1995.

Moss, Roger W. and Gail Caskey Winkler. *Victorian Exterior Decoration: How to Paint Your Nineteenth-Century American House Historically*. New York: Henry Holt & Company, 1987

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