CITY OF FORT LAUDERDALE

City of Fort Lauderdale
Historic Preservation Design Guidelines

Exterior Woodwork & Cladding

Several significant houses in Fort Lauderdale include exterior woodwork, including the Stranahan House with its wrapping 2-story porch.

PURPOSE

These *Guidelines* were prepared to assist property owners with information when considering the repair, alteration or installation of exterior woodwork and siding. It is not intended that these *Guidelines* should replace consultation with qualified architects, contractors, the Historic Preservation Board (HPB), City Staff and applicable ordinances.

These *Guidelines* were developed in conjunction with the City of Fort Lauderdale's Historic Preservation Board (HPB) and the Department of Sustainable Development (DSD). 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 DSD Staff is available to provide informal informational meetings with potential applicants who are considering improvements to their properties.

Additional *Guidelines* addressing other historic building topics are available at City Hall and on the City's website at www.fortlauderdale.gov. For more information, to clarify whether a proposed project requires HPB review, or to obtain permit applications, please call the DSD at (954) 828-3266.

EXTERIOR WOODWORK & CLADDING

Wood siding, shingles, cladding 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 that can be applied as siding, shingles, ornamental trim and larger elements such as porches.

Exterior woodwork and cladding:

- 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

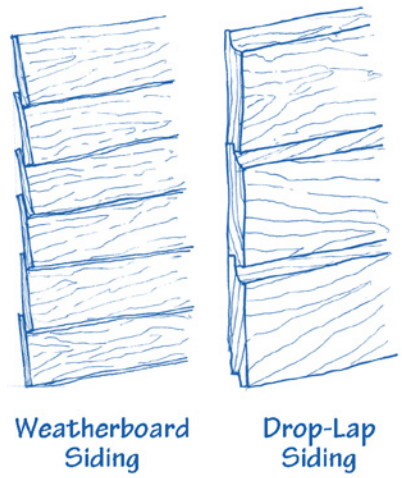
With proper maintenance, exterior wood elements can last for centuries; however, improper maintenance can result in problems and deterioration from water, fungus, mold and insects. Other forms of cladding can also be susceptible to deterioration, dependent on their properties and the installation conditions.

With regular maintenance and selective in-kind replacement of deteriorated elements, exterior woodwork can last for centuries.

EXTERIOR WOODWORK

Wood Siding Types

The most common type of wood siding in Fort Lauderdale is clapboard with drop-lap siding being more unusual. Clapboard siding, also known as weatherboard or beveled siding, is made from long boards, tapered across the width. Drop-lap siding, also known as German siding, is a flat faced board with a concave top and notched bottom.



Wood Shingle Types

Wood shingles provide a highly textured wall finish, and were used as a cladding material in Fort Lauderdale for Arts and Crafts style homes and some bungalows. Similar to clapboard siding, wood shingles are tapered and installed in an overlapping pattern with staggered joints to minimize potential moisture infiltration.

While uncommon, Fort Lauderdale does include several Arts and Crafts structures clad in wood shingles.

DEFINITIONS

Cladding: The exterior, nonstructural finish material of a building, such as siding.

Siding: The nonstructural exterior wall covering of a wood frame building; types include asbestos shingle, board and batten, clapboard, novelty siding, plank-on-plank, shingle, siding tile, weatherboard, weather slating, and various substitute materials of metal, asbestos, asphalt, and vinyl.

From: *Dictionary of building Preservation.* Ward Bucher, Editor.

Wood Ornament and Trim

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 ornament 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, wood trim and ornament are considered an architecturally significant feature.

Wood trim is used to transition between various building components. The molded wood cornice transitions between the roof and wall surface; the corner boards "seal" the joint between the wall planes; and the window trim transitions between the siding and the window opening.

Encouraged:

- Retain and maintain historic wood siding and shingles
- Retain and maintain historic wood trim and ornament
- Follow guidelines for maintenance and repair of historic wood siding, trim and ornament as outlined in the *Exterior Woodwork Checklist* Section, *Page 4*
- Reuse original window frames and trim when replacing windows, or exactly replicating the dimensions and profiles of original frames

Discouraged:

- × Remove, alter or conceal original exterior woodwork including siding, shingles, trim and detailing including window and door trim, corner boards, soffits, porch posts, railings, etc.
- × Use of modern composite materials as an alternative to wood in locations that are highly visible to the public or where rot is not a significant problem
- × Apply historically inappropriate ornament or trim or apply it where it did not historically exist

SYNTHETIC SIDING TYPES

Synthetic siding has been applied by Fort Lauderdale'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.

Asbestos siding is often embossed with a wood grain pattern. Removing or repairing asbestos can be hazardous and should only be undertaken by trained professional.

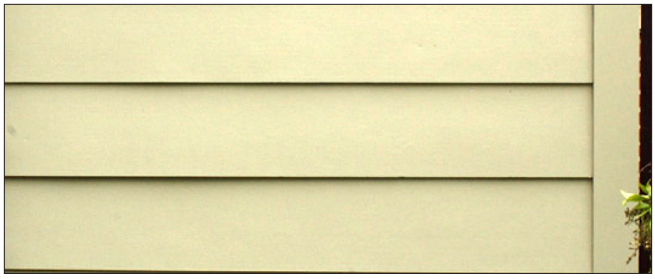
Asbestos Siding

Asbestos was a popular wall surface material from the beginning of the 20th century through 1973 when asbestos was banned by the EPA. It was installed as an original cladding material as well as over other materials such as clapboard. Asbestos wall shingles are made from asbestos mineral fibers and either Portland or hydraulic cement and they provide a durable, lightweight, economical, fireproof, rot and termite resistant alternative to wood siding and shingles. Asbestos shingles can last well over 30 years' with cracking and rusting nails being the most typical cause of failure. If the shingles are damaged, consultation with a professional to determine whether repair is feasible is recommended. Contact the Broward County at (954) 519-1260 for removal and disposal requirements and asbestos safety contact information.

This vinyl siding has been partially removed. If not repaired, the remainder of the vinyl is likely to be pulled off in hurricane force winds. Complete removal is recommended.

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.



Fiber-cement siding material is an economical alternative for an addition to a historic building. It can be painted to match the existing paint scheme.

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 and can have a manufacturer's warranty as long as 50 years. Although not appropriate for replacement of historic wood siding, fiber-cement siding can often be used at additions.

This Lustron panel house is listed on the National Register of Historic Places. It was built in the 1950s with over 3,000 steel enamel-finished parts that were manufactured in an automobile/ airplane factory in Ohio before being shipped and assembled in Fort Lauderdale.

Alternate Cladding Materials

In addition to wood and synthetic cladding, Fort Lauderdale has buildings with alternate cladding such as fiberglass and a home with Lustron panel (enamel-metal finish) cladding. The care of each of these materials varies, and because of their uniqueness, property owners are encouraged to retain and maintain them. The DSD Staff would be happy to provide information and identify resources for the appropriate care of alternate cladding materials.

Porches, steps and other areas where the woodwork is laid horizontally or located close to the ground are often first to deteriorate. Ongoing exposure to moisture can lead to rot of the column bases, porch deck and apron.

EXTERIOR WOOD 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.

Encouraged:

- Conduct semi-annual inspections of all exterior wood elements to verify their 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. (Refer to *Wood Rot*, *Page 4*.) 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.
- Maintain and repaint 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.
- Repair 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.
- Selectively replace deteriorated wood elements when they are beyond repair. The replacement wood pieces should be the same size, profile and character as 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.
- Large scale or significant 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 replicate the visual characteristics of the historic woodwork including the size and profile. Replacement siding materials should be installed in the original pattern replicating the original exposures and alignments relative to historic building elements such as door and window frames. Replacement wood species should be appropriate for exterior use.

Discouraged:

- × Remove or encapsulate siding, trim, decorative features and trim elements such as brackets, spindles, cornices, columns, posts, etc.
- × Clad exterior with synthetic materials such as vinyl or aluminum siding

HIRING A CONTRACTOR

- Repair, maintenance, installation and painting of exterior woodwork can be potentially dangerous work and should be left to professionals
- All contractors are not necessarily experienced in all materials, choose a contractor with demonstrated experience on similar projects
- Verify extent of warranty for materials and labor
- Check references within the past 5 years to understand how well work has held up
- Hold final payment until work is properly completed

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, a food source and moderate temperatures. If one of these elements is 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 wood rot generally comes from one of four sources: ground water, precipitation, 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 that is too close to the foundation or growing on the building; and capillary action or rising damp in masonry foundation walls or piers carrying water several feet up to wood sills.

Precipitation in all of its forms, such as rain, snow, hail and mist can find its way into a building through small openings and crevices, trapping moisture within a wall cavity. Painted surfaces and caulked joints can reduce the potential for moisture 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. In cold weather, ice build-up along roof eaves without appropriate flashing could back-up under shingles and melt.

Leaky plumbing can be both 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 discharge 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 catch a problem before it becomes serious.

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 and possible solutions include:

- High humidity in kitchens, bathrooms and laundries - ***Consider:*** *Exhaust fans directing humid air to the outside and exterior clothes dryer vents*
- 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 - ***Consider:*** *Plastic sheathing on the ground*
- Cold water pipes in humid weather - ***Consider:*** *Pipe insulation*
- Exterior wood framed wall on top of foundation wall or piers - ***Consider:*** *Exterior wall insulation with no vapor barrier or an exterior-facing vapor barrier, painting of interior wall surface with latex paint and installation of interior humidity control*

The vertical wood corner boards were removed adjacent to the downspout exposing the structural wood post. Additional exploration revealed that there was significant rot of the post that extended deep into the thickness of the wood, compromising the structural capacity. It is likely that a persistent leak at the juncture of the roof gutter and downspout made the situation much worse.

TERMITE PREVENTION CHECKLIST[1]

Do not give termites easy access to the house:

- Eliminate wood to soil contact.
- Install wood siding, door and window frames and latticework at least 6 inches above ground level.
- Support outdoor wood porches and steps on a concrete base extending at least 1 inch above ground level.
- Do not allow any non-structural wood and tree branches to touch a house.

Do not provide termites with moisture:

- Place gutters and slope yard so that surface water drains away from the house.
- Be sure air conditioning condensate drains away from the house.
- Be sure moisture does not enter around windows, doors and siding.
- Repair leaks of roof, gutter, downspouts and plumbing promptly.
- Ensure sufficient clearance between soil and structural wood in crawl space to have adequate cross-ventilation.
- Keep mulched beds and gardens at least 12 inches away from foundation.

Eliminate hidden access to a house:

- Do not fill dirt beneath porches, terraces or steps.
- Do not extend stucco or foam insulation below the ground.
- Do not disturb the chemical barrier after soil treatment
- Prevent and fix cracks in concrete walls, piers and slabs.

Minimize the amount of wood available for termites:

- Remove all scrap wood, form boards and grade stakes used in construction.
- Remove wooden debris and cellulose material from under and around the house.
- Replace rotten or destroyed structural wood with properly pressure-treated wood or non-cellulose material.
- Store woodpiles away from the house, and make sure they are raised off the ground.
- Paint or seal all exterior wood.

Inspect your property frequently for termites:

- If a property is to be treated, get at least three licensed companies to inspect the property. They will make a diagram of the property showing proposed treatments and give you an estimate. Ask for a copy of the company's bond, insurance and contract. Ask to see copies of the labels and material safety data sheets (MSDS) for the termiticides to be used. With the above information, you are able to compare the services offered and the prices the companies want to charge. Read the contract carefully. Remember, it is a LEGAL contract.

1 From: *A Guide for Integrated Pest Management of Termites*, www.agctr.lsu.edu, Publication 2979. April 2000.

Termites have eaten the wood along the grain, weakening the wood sill. The pressure from the wood studs crushed the top of the weakened wood sill causing structural problems at the wall above.

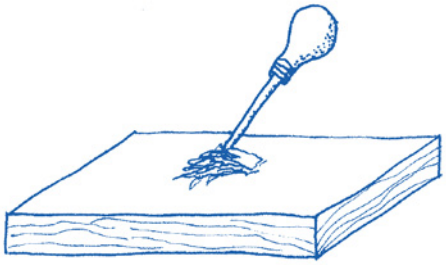
DETECTING WOOD ROT

A simple means of testing for rot is to stab the wood member perpendicular to the grain with an awl or ice pick, particularly if the wood appears darker in color. Measure the penetration depth and evaluating the type of splintering using the following criteria:

- If the penetration is less than 1/4", the component does not need replacement
- If the penetration is more than 1/4", the component might need replacement
- If long, dry 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

If replacement is required, it is recommended that the replacement wood be decay resistant and match the size, profiles and detailing of the historic woodwork.

Less penetration and long splinters are an indication of healthy wood

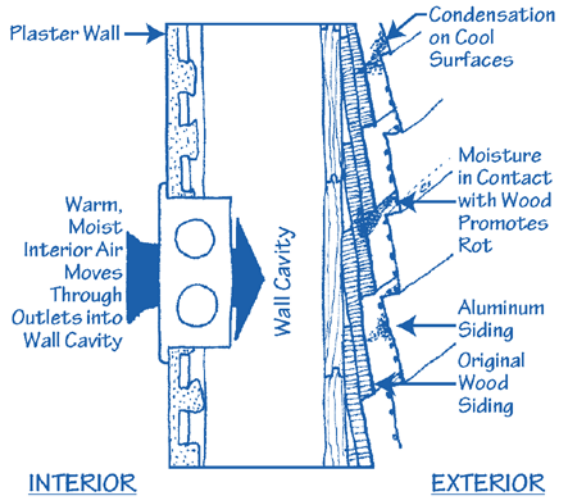


Greater penetration and short splinters are a possible indication of rot

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, laundry and cooking facilities. While interior conditions have stabilized and moisture laden activities have 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 "bridged" 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 make this problem much worse and hide deterioration until it is 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. As a result, it is important to inspect and repair potential water sources to minimize the moisture within the wall cavity.



DECAY RESISTANT WOOD

There are some woods that are naturally decay resistant, while others have a higher propensity to rot. These naturally decay-resistant woods tend to be denser than woods such as pine. In some cases, these naturally decay-resistant woods are more expensive than common woods but are not necessarily suited for all uses, such as detailed trim work. Therefore, it is important to understand the proposed location and final finish when selecting wood for a project. Available decay-resistant woods include:

- Mahogany
- Redwood
- Air-dried, pressure treated, southern yellow pine
- Pressure treated wood for framing members

WOOD / ARTIFICIAL SIDING

In Fort Lauderdale, many of the historic framed buildings were originally clad with wood clapboard, which allowed some flexibility in installation by carpenters. 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, siding was typically installed with a horizontal band aligning with the top and bottom of window and door frames.)

Most historic buildings usually have 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.

Encouraged:

- Retain and maintain existing exterior woodwork including siding and trim
- Repair or replace wood siding and trim in kind
- Use painted fiber-cement clapboards with similar profiles and detailing to historic clapboards, as an alternative to wood clapboards at new additions

Discouraged:

× Install aluminum or vinyl siding or coatings

Aluminum and vinyl siding were sometimes installed to conceal an underlying problem. In some cases, removal might be necessary to repair a deteriorated condition.

REMOVING ARTIFICIAL SIDING & VENEER

Fort Lauderdale's property owners should 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
- Anticipate surprises such as removed ornament and trim
- Sell aluminum siding for recycling

Historic porches - such as the multi-level porch on this historic house - can be an important element of a building's exterior.

PORCHES

Historically, porches were an outdoor room where residents could find a sheltered transition into their homes, an exterior living space, and a place to meet and converse with neighbors. When they were constructed, their form, details and decorative elements were often intended to complement the style of the house.

Porches are one of the most visible house elements and play a significant role in the appearance of the house and of the streetscape. They can act as an extension of a home providing a welcoming feeling for visitors. Unfortunately, porches today are often one of the most altered components of a building, often because they are not properly maintained or they are viewed as potentially enclosed indoor space.

PORCH REPAIR INFORMATION

Since many of the components of porches including roofing, foundations and support piers, are discussed in depth in other *Guideline* brochures, it may be helpful to consult the following information to address specific repair needs:

- *Guidelines for Roofing*
- *Guidelines for Masonry & Stucco*

MAINTAINING HISTORIC PORCHES

Because of the importance porches play in the perception of historic buildings and streetscapes, original materials and details should be preserved whenever 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 may require additional maintenance. One of the best ways to preserve wood porch features is regular painting. If a component is deteriorating, repair or replacement in kind is recommended as part of the porch's regular maintenance.

Encouraged:

- Identify deteriorated elements
- Find and correct sources of deterioration, such as deteriorated, cracked, blocked, inappropriately hung, broken or missing gutters or downspouts
- Replace only those parts which cannot be repaired - in some instances, such as columns and posts, the base can be replaced at a fraction of the cost without replacing the entire column or post
- Replace missing or deteriorated materials with similar new materials - avoid replacement of a wood railing with a metal or vinyl railing system
- Repair damaged elements using standard repair techniques for that material (Refer to the *Guideline* brochures appropriate for each material, particularly *Guidelines for Roofing* and *Guidelines for Masonry, Stucco & Concrete*) and restoring the porch to its original historic appearance
- Replace only the original elements that cannot be repaired using elements of the same material, size, profile and other visual characteristics
- Rebuild porches with appropriate documentation
- If a substantial portion of the porch is deteriorated and cannot be repaired or replicated, or if a porch is missing, create 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
- Paint porches regularly to preserve the wood
- Use a painted finish complementing the architectural characteristics of the house - Refer to *Page 10* for additional information regarding painting

Discouraged:

- × Replace wood porch posts and railings with metal
- × Replace wood steps with concrete or brick - wood steps are typically appropriate for wood porches
- × Use"natural" or stained wood; this is generally not appropriate for a porch on a painted historic building

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.

Encouraged When Considering a New Porch:

- New front elevation porches are encouraged in cases where a historic porch that was previously removed is being replicated, preferably with appropriate documentation
- At existing buildings, new construction should not damage, destroy, conceal or negatively affect existing historic material and features
- On additions, porches should be simple in design and relate to the existing building
- Side and rear elevation porches should typically be 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 house and streetscape
- Most porches at framed buildings were historically made of wood; stone or brick porches might only be appropriate only on masonry and stucco buildings

Discouraged:

× New decks visible from the streetscape

Porches can serve as an "outside room", providing a transition into a home. In this example, the slope of the porch roof is similar to the main roof of the house, the scale does not overwhelm the elevation, and the materials and detailing complement the vernacular style, scale, materials and detailing of the house.

The porch on this historic home has been enclosed with screens that allow the wall surface to remain visible.

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 in locations that are not visible from the public view. If enclosing a porch, it is recommended that the finished space look more like a porch than an enclosed room.

Encouraged When Considering a Enclosing a Porch:

- Retain porch elements in place and construct enclosure framing inside porch columns and railings
- Use temporary enclosure systems, such as screens or glazing that can be removed seasonally
- Use reversible enclosure systems that do not damage decorative or unique historic building fabric
- Use transparent enclosure systems, with large screened or glazed openings
- Install vertical and horizontal framing members that align with porch elements like columns and railings

Discouraged:

× Enclosed porches, particularly at the front elevation

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 faint outlines 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 look in attics and garages for original components
- Compare porches on neighboring buildings of similar type, design, style and date of construction

EXTERIOR PAINT

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 potentially accelerate deterioration.

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 wood deterioration of the exterior envelope and underlying framing, and many metals are susceptible to rust, particularly with salt air. Although paint is an important protective layer that improves 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 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 the 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.

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 such as moisture, inadequate surface preparation and non-compatible paint.

It can be problematic to use encapsulating paints that trap moisture in woodwork and promote rot. These are often referred to as "liquid siding," "liquid stucco" and "liquid ceramic coatings." Painting of previously unpainted masonry is strongly discouraged. Refer to *Guidelines for Masonry, Stucco & Concrete, Page 11* for more information on masonry paint removal and application.

REPAINTING

When considering repainting, the following five steps are recommended:

1. **Determine whether repainting is necessary:** Prior to beginning a painting project, it is appropriate to determine whether complete repainting is required or if cleaning and 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 that 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 - review for moisture problems
   - **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
   - **Wrinkling** - typically the result of the top coat drying before the underlying coat - sand smooth, repaint
   - **Blistering** - air bubbles under the paint; 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
   - **Alligatoring** - severe cracking and crazing - remove all paint down to bare wood
3. **Repair causes of failure:** Before repainting, the causes of paint failure should be repaired. The most common cause of paint failure is moisture. The most typical causes of moisture problems are ground water, rain or storm water,

Paint colors can be used to highlight architectural building features.

The blistering and peeling paint are a possible indication of moisture problems.

leaking plumbing and condensation. (Refer to *Page 4* of this section and the *Guidelines for Exterior Maintenance* for additional information on how to identify moisture-related problems and some suggestions that might alleviate the situation.)

Portions of the building that are most susceptible to moisture and its related problems include: areas near rooflines, gutters and downspouts; areas near the ground; horizontal surfaces such as window and door sills, porches and wood steps; and areas or walls adjacent to high humidity including kitchens, bathrooms and laundry rooms.

4. **Prepare surface:** To ensure 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
   - 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 dry thoroughly 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 at least two coats of paint to previously bare wood or metal.
   - For best results, apply paint during appropriate weather conditions: generally, 50˚F to 90˚F; less than 60% relative humidity; no direct sunlight

The paint on this door has alligatored, and severe cracking is visible. Removal of paint down to bare wood and proper door repair are recommended prior to repainting.

COMPLETE PAINT REMOVAL

It is important to remember that any method of paint removal can result in harm to historic building fabric. Therefore, complete paint removal from a surface should only occur under limited circumstances.

Complete paint removal might be necessary in circumstances in which the existing paint on a surface has completely failed. Examples where complete paint removal would be appropriate include:

- Wholesale blistering or peeling that reveals the underlying substrate
- Continuous patterns of deep cracks in the surface of painted wood
- Windows, doors or shutters that have been painted shut
- To achieve a smooth transition when a new wood element is being installed as a repair
- To prevent deterioration of historic building features
- To prevent deterioration of masonry for historically unpainted masonry surfaces

PAINT COLORS

Although paint colors are not subject to review of the Historic Preservation Board (HPB), property owners seeking historically accurate paint colors for a project can complete a paint analysis or consult reference books. The books can provide information on appropriate colors related to building types and architectural styles.

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 and the surrounding environment. All manufacturers' recommendations should be followed during the paint removal process.

Encouraged:

- Hand washing with mild detergent and bristle brush
- Hand scraping
- Hand sanding

Strongly Suggest Care With:

- × 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 or vaporize paint
- × Chemical paint removers - can raise grains, are expensive and potentially volatile; runoff can be hazardous and should be collected to reduce harm to children, pets, vegetation and ground water

Strongly Discouraged:

- × 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, wear away protective exterior coating and raise the wood grain
- × High-pressure water wash - forces water into open joints affecting interior finishes and structural framing; can be abrasive to exterior surface and raise the grain

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.

- Paint removal, particularly lead based paint removal, must comply with City requirements - Owners are strongly encouraged to contact the lead safety organizations found in the *Guidelines for Exterior Maintenance* for additional information prior to completing any work potentially involving lead paint
- Always wear safety goggles and a dust mask
- With heat tools, always wear appropriate clothing and keep a fire extinguisher nearby, and monitor areas of work for at least 1 hour after stopping work
- 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

Painted woodwork is also present at some stuccoed buildings. The contrasting color of the porch detailing increases its prominence.

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PREPARATION

All components of the *Fort Lauderdale Historic Preservation Design Guidelines* including all text, graphic design, photography and illustrations unless noted otherwise were prepared by:

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