

4.0. EXISTING BUILDINGS AND MATERIALS

4.1 Wood

Although wood is not the most commonly used building material in Elm Heights there are still many clapboard and a few shingle houses. Masonry homes and other structures have decorative embellishments and functional wooden features that play an important role in the character of the building. Other uses include fences, gates and garden features around the neighborhood.



Preservation Goals for Wood

To retain, preserve and restore original exterior wood siding materials, decorative embellishments, and functional wooden features through repair, cleaning, painting, and routine maintenance.

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Guidelines for Wood

A Certificate of Appropriateness (COA) is required for the following bolded, numbered items. The bullet points that follow each numbered item further assist applicants with the COA process.

- I. Reconstruction of missing or installation of new functional or decorative wooden elements visible from the public right-of-way, such as doors, windows, siding, shingles, cornices, architraves, brackets, pediments, columns, balustrades, shutters, decorative panels, pergolas, trellises, fences, gates and architectural trim.**
 - Replace missing elements based on accurate documentation of the original or use a compatible new design.
 - Only consider substitute materials if using original materials is inadvisable or unfeasible.

- II. Removal or covering of functional or decorative wooden elements as outlined above and visible from the public right-of-way. (*facing or visible from a public right-of-way*)**
 - Structurally sound, painted historic wood siding should not be replaced with new siding to achieve a uniformly smooth surface.
 - Historic wood siding, trim, or window sashes should not be replaced or covered with contemporary substitute materials.
 - Although paint color is not reviewed in the Elm Heights Historic District, graphics and lettering are not appropriate.

Things to Consider As You Plan

Wooden features and surfaces on a building should be maintained and repaired in a manner that enhances their inherent qualities and maintains their original character. A regular maintenance program can extend the life of wood for 200 years and more. Yearly inspection of surfaces and trim with prompt application of caulk and paint will keep repairs to a minimum. Do not attempt caulking sealing or carpentry repairs unless the area is clean, dry and free of all loose material. Surface preparation is key to the long term success of your efforts. Painting over dirt or chalking and scaling surfaces will cause adhesion problems and any untreated mold or mildew will continue to grow and discolor your new paint. Flexible sealants and paintable waterproof caulking protect wooden joinery from moisture penetration as the wood shrinks and swells. A sound paint film protects wooden surfaces from deterioration due to ultraviolet light and moisture.

Repair or replacement of deteriorated wooden elements or surfaces may involve selective replacement of portions in kind through splicing or piecing. Although wood is a renewable resource new wood is less resistant to decay than the denser old growth wood* it is replacing.

Lumber from trees that grew very slowly in a natural forest have narrow growth rings and a dimensionally stable, with superior rot and insect resistant than modern tree farm products

Specifying decay-resistant wood species and priming the back and ends with a quality primer prior to installation can extend the lifespan of replacement wood. Borates and other pathogen-killing agents can be used to treat rot and insect damage and the application of a penetrating epoxy may help stabilize and replace the deteriorated portion of historic

wood features or details in place. For wood elements particularly vulnerable to ongoing damage—such as window sills, column bases and capitals—replacement with painted synthetic elements that replicate the original shape, texture, dimensions, and details may be a viable and cost-effective solution.



Many substitute siding materials are not as durable or environmentally-friendly as wood. In evaluating a possible substitute material, careful consideration should be given to the sustainability of its manufacturing process and its lifespan as well as its physical characteristics. Resurfacing a wooden building with synthetic siding materials, such as aluminum, vinyl, asbestos, and asphalt, change the shadow lines of the historic structure. Although we are led to believe these replacement products have a permanent maintenance free finish, ~~but~~ they eventually require repainting or replacement. ~~Such~~ Using impervious sheathing materials can endanger the historic structure by concealing maintenance issues such insect infestations, water infiltration and mold growth. At their best, synthetic sidings conceal the historic fabric of a building, and at their worst, they remove or destroy the historic materials and craftsmanship so beautifully displayed in our area.

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4.2 Masonry

Limestone and brick are the most prominent and pervasive building materials in Elm Heights. The most historically notable are the limestone homes and features as well as building elements, surfaces, and details executed in carved, cut and split stone. Many limestone sculptors, cutters and quarry owners built houses in the neighborhood during the peak of quarry production in the 20's and 30's. They proudly displayed their art and livelihood in the design and building of their homes and gardens. Even small bungalows and cottages have sturdy retaining and garden walls, foundations, steps and benches made of this locally available resource. Although other masonry materials such as brick, sandstone, geodes, terracotta and stucco were used, limestone was queen.

Stately brick homes with limestone or wood embellishments are well represented in the neighborhood along with a 1926 school building. Examples of homes using sandstone, and tapestry, rusticated, or colored brick are scattered throughout the area. A few striking clay and slate tile roofs sometimes incorporating colors or patterns also remain.

One of the key goals of the Elm Heights district is to preserve the local limestone heritage through careful stewardship of irreplaceable historic features.

Preservation Goals for Masonry

To retain and restore original exterior masonry surfaces, decorative embellishments, statuary and functional features through repair, cleaning, tuck pointing, and routine maintenance.

Guidelines for Masonry

A Certificate of Appropriateness (COA) is required for the following bolded, numbered items. The bullet points that follow each numbered item further assist applicants with the COA process.

- I. Removal of masonry or stone features or structures that contribute to the historic character of the property.**
 - Retain masonry features and statuary that contribute to the historic character of a site. These include but are not restricted to structures, foundations, chimneys, columns, arches, porches, decorative panels, patios, fenestration, balustrades, lintels, sills, key stones, spouts, brackets, flower boxes, steps, railings, copings, walks, walls, retaining walls, birdbaths, benches, urns, pots, sculptures, fountains, ponds, landscape edging and barbeque grills.
- II. Rebuild or change or historic masonry or stone features.**
 - Match mortar composition to historic construction and materials to prevent future damage to masonry or stone.
 - Retained and duplicated distinctive construction features and finish including bond and mortar patterns, width, profile, texture and color.
 - Provide adequate drainage to prevent water from collecting around, behind or under structures or features.
 - It is not appropriate to apply a waterproof coating or to paint exposed masonry or stone.

Things to Consider As You Plan

Masonry surfaces develop beautiful patina over time and should be cleaned only when heavy soiling or stains occur. Usually, gentle cleaning using a low-pressure water wash with detergent and the scrubbing action of a natural bristle brush will accomplish the task. Sandstone and limestone are very absorbent materials and should not be treated or cleaned in the same manner as brick or concrete. Their porosity and easily sculpted nature make them vulnerable to etching, staining and holding chemicals that can continue to act on the stone after it is rinsed.



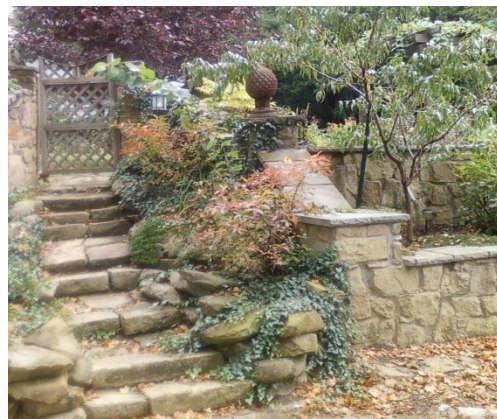
Water infiltration, with subsequent damage to a masonry wall, is often the result of open or deteriorated mortar joints. Inspect and repaired damaged areas promptly to prevent costly replacements. If repointing or rebuilding of masonry is required it is extremely important to match the original color, strength and hardness of the historic mortar. Incorrect mortar composition that is too strong will damage surrounding stone and brick when natural expansion and contraction of the surface occurs. Mortar that is too soft will not give needed support and create a situation where the wall will need to be rebuilt or repointed.

There are several companies that can analyze a sample of your mortar for an affordable price.



Water trapped behind or pooling around foundations, walls and features result in damage when capillary action sucks water into the stone causing fracturing and dissolution of stone during the next freeze cycle. To prevent damage, dry and cover all concave limestone features like bird baths and planters before freezing winter weather. Masonry sealers interfere with the natural ability of stone to evaporate moisture from its surface and can aggravate this problem. Trapped moisture will cause spalling (front of the masonry pops off), splitting and delamination when winter temperatures return. Painting masonry and stone surfaces is not a cost effective or sustainable practice, it reduces breathability of the material and initiates a frustrating cycle of maintenance involving scraping, sandblasting, sealing and repainting.

For more information on the care upkeep and restoration of limestone See page ----- in the Appendix.



4.4 Roofs

The Elm Heights Historic District is exceptional in the use of fine roofing materials that are increasingly rare in modern construction. Be aware that the salvage value of these materials alone may entice some contractors to suggest replacement. Any change in materials requires a COA. Some of these materials are associated with a specific style of architecture, for example, tile roofs on Spanish Colonial homes. Others are associated with higher quality construction: slate is a more lasting investment than asphalt shingling. Roof shapes may also illustrate styles of architecture.

The most common style of house in Elm Heights is Colonial Revival. Colonial style roof shapes are often an assemblage of simple rectangular forms and are usually side-gabled.

In this style, additions on either side of the principal roof of the house may have flat roofs with balustrades, a popular sunroom type. This is a typical form that may also assist owners in designing appropriate new additions on existing colonial homes. Roofs are a key element expressing the quality, level of detail, and substance of the historic district as a whole.

Preservation Goals for Roofs

To ensure the structural soundness of the building by preventing moisture damage.

To retain and restore original roofs and special features such as unique materials, cresting, box gutters, dormers, cornices, cupolas.

To minimize impacts to historic roofs and street views by designing appropriate new features, room additions, or energy retrofits.

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Guidelines for Roofs

A Certificate of Appropriateness (COA) is required for the following bolded items. The bullet points that follow each numbered item further assist applicants with the COA process.

I. A change in the appearance, either shape or materials, of a roof or roof feature including guttering.

Replace only the deteriorated portion of a historic roof in kind and use substitute materials only if using the original material is not technically feasible. If full replacement is necessary, replace it “in kind”, matching the original in scale, detail, pattern, and design.

- If a historic roof feature is completely missing, replace it with a new feature based on accurate documentation of the original feature or a new design compatible in scale, size, material, and color with the historic building and district.
- If new gutters and downspouts are needed, install them so that no architectural features are lost or damaged. For modest postwar roofs, galvanized metal may be an appropriate choice. Retain the shape of traditional half-round gutters and downspouts if replacing them. Historically, copper guttering is not painted.
- When attempting to introduce new roof features such as skylights, dormers, or vents, locate them so that they minimize damage to the historic roof design, or character-defining roof materials, or the character of the historic district or landmark.
- Install equipment such as solar collectors or antennae in locations that do not compromise roofs of significant durability (clay or slate) and on roof slopes less visible from the street.

Things to Consider As You Plan

Historic roofs should be preserved using methods for resetting or reinforcing rather than replacement. See especially *Preservation Briefs #4* General information about roofs, #19 Wood Shingles, #29 Slate Shingles, and #30 Tile Shingles.(include web site) Do not walk on roofs made of clay tile or slate, use scaffolding to distribute weight and prevent damage.



The best way to preserve is always to provide timely maintenance on historic materials. A routine of regular roof inspections, gutter cleaning, and flashing replacement is advisable. When wind damage occurs, the anchors for shingling should be checked. Adequate ventilation of roof sheathing can prevent premature curling and rippling. The distinctive shape of half-round gutters is typical for exposed gutters and preserves cornice crown molding, although some K-style gutters are original to later homes in the neighborhood.

Although most homes today use asphalt or fiberglass tab shingles, roofs made of historic durable and natural materials can last far longer. Unbelievably the life span on slate or tile roofs, if well maintained can easily reach 200 years, and they are frequently repairable without wholesale replacement.

Historic roofs create distinctive effects through shapes, materials, or color. Because they usually define an architectural style, the view from the front facade is the most important.

This view provides the most public benefit. If existing roofing materials must be replaced, and it is a rare or unique type that is not readily available, then a compatible substitute material should be selected that closely resembles the original. Retaining or replacing “in kind” is important if a roofing material obviously reflects a particular architectural style. Several Elm Heights bungalows illustrate the deep overhanging eaves that were designed to shade the house from direct sunlight and to naturally cool the air. This was a trait of the Craftsman style and it provides real practical utility. The owner of a Craftsman home may be able to manage warmer temperatures by just using the double hung window system and taking advantage of the shade provided by the deeper eaves.

The vast majority of roofs in Elm Heights is fiberglass or asphalt shingle, and their historic significance is slight. Even the best quality fiberglass shingle roofs will last only 20 to 30 years before going to the landfill. Metal roofs, with proper maintenance, can also last 100 years. The paint coating on metal roofs should be maintained in good condition.

“In kind” means replacement with the same materials and dimensions as the original: an exact substitute. This can easily be done with asphalt and fiberglass shingles, but some forms of clay tile may be difficult to replicate. There are salvage businesses now available on the internet.

Adding solar collectors that optimize panel efficiency yet are sensitively placed on historic roofs can be a challenge. It is best to first look for roof planes not visible from the street and in areas where historic roof features will not be damaged. See Section 5.5 on *Sustainability and Energy Retrofits* for more in depth guidelines on new technology.

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4.5 Windows and Doors

Windows and doors are important character-defining features of a building. They present the public “face” of the building and lend texture, movement and color changes that create interest. Those windows and doors with unusual shapes, colors or glazing patterns, or that are of an unusual material are particularly important character-defining features that generally can not be replicated.



Although many types of windows are found in Elm Heights’ homes, a majority of those found in early houses are wooden double-hung windows and metal casement windows. Each sash, depending on the style and the age of the house, may be divided, usually by muntins that hold individual lights (panes) in place.



Large multi-paneled, metal frame windows are common in the larger limestone and brick

homes. The introduction of mass-produced metal windows and doors contribute to the variety of configurations, like picture windows and clerestories found in post-war architecture, such as those in the Lustron houses in Elm Heights.



Doors with various panel configurations as well as a combination of solid panels and glazing are found throughout the neighborhood. Of special note are the round-topped entrance doors, many with distinctive glass inserts and detailing. Decorative stained, beveled, and etched glass is sometimes found, often in entry sidelights and transoms or individual fixed sash.



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Preservation Goals for Windows and Doors

To retain and restore character defining windows and doors with their original materials and features through cleaning, repair, painting and routine maintenance.



Guidelines for Windows and Doors

A Certificate of Appropriateness (COA) is required for the following bolded, numbered items. The bullet points that follow each numbered item further assist applicants with the COA process.

- I. Restoration, replacement, or the installation of new windows or doors and their character-defining features that are visible from the public right-of-way including sashes, lintels, sills, shutters, awnings, transoms, pediments, molding, hardware, muntins, or decorative glass.**
 - Replace missing elements based on accurate documentation of the original.
 - Consider salvage or custom-made windows or doors to ensure compatibility with original openings and style.
 - New units or materials will be considered, for a non-character defining features and when the use of the original units or materials has been determined to be inadvisable or unfeasible.
 - Inappropriate treatments of windows and doors, particularly in the primary facades, include:
 - a) creation of new window or door openings
 - b) changes in the scale or proportion of existing openings
 - c) introduction of inappropriate styles or materials such as vinyl or aluminum or steel replacement doors
 - d) addition of cosmetic detailing that creates a style or appearance that the original building never exhibited
 - Install shutters only when they are appropriate to the building style and are supported by evidence of previous existence. Proportion the shutters so as to give the appearance of covering the window opening even though they may be fixed in place.
 - Install awnings of canvas or another compatible material. Fiberglass or plastic should generally be avoided; however, metal may be appropriate on some later-era homes.
- II. Installation of new storm windows or doors visible from the public right-of-way.**
 - Wood frame storm windows and doors are the most historically preferred option. However, metal blind-stop storm windows or full light storm doors are acceptable. All should be finished to match the trim or be as complimentary in color as possible to the building.
- III. Removal of any window or door or their unique features outlined above and visible from the public right-of-way.**
 - If original windows, doors, and hardware can be restored and reused, they should not be replaced.

Things to Consider as You Plan

Because rehabilitation projects frequently include proposals to replace doors, window sashes, or even entire windows in the name of improved security, thermal efficiency, or new appearance, it is essential that the contribution of the windows and doors to the overall historic character of the building be assessed together with the physical condition before specific repair or replacement work is undertaken. Improper or insensitive treatment of the windows and doors of a historic building can seriously detract from its architectural character.

Repairing the original windows in an older home is more appropriate, sustainable, and cost-effective than replacing them with new ones. Life-cycle cost analyses indicate replacement windows do not pay for themselves with energy savings. Replacement windows have a finite life and, once historic sash are replaced, the owner will need to replace them cyclically. Wood windows also have a lower carbon footprint than their vinyl counterparts.

Please refer to the R-Factor computations included in the Appendix.

Routine maintenance and repair of historic wood windows is essential to keep them weather tight and operable. Peeling paint, high air infiltration, sticking sash, or broken panes are all repairable conditions and do not necessitate replacement. Wood windows are generally easy and inexpensive to repair. For example, changing a sash cord is relatively simple, and lightly coating a window track with paste wax may allow the sash to slide smoothly. The inherent imperfections in historic glass give it a visual quality not replicated by contemporary glass manufacturing and such glazing should be retained.

Refer to the sections on *Wood* or *Architectural Metals* for further assistance with repairs and maintenance.