



Design Guidelines

September, 1999

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The Brewer-Arthur House (1999), 327 N. Main Street

I: Introduction

A. Preserving the Architectural Heritage

The Town of Wake Forest takes pride in the unique architectural and historical aspects of its identity and has worked over the years to protect and enhance its architectural and cultural heritage. Various civic groups, the Chamber of Commerce, and local government advisory boards have maintained and improved many of the town's visual and physical qualities, while also promoting community awareness of and appreciation for the town's history and architecture. Recently, Wake County's surging growth has motivated Wake Forest to realize that while a larger population provides many benefits, it also brings the danger of being consumed into an amorphous conglomerate where all unique identity is lost. Thus, the efforts to protect and enhance the town's historic buildings have had to become more thorough and extensive. These guidelines are one step toward preserving the architectural heritage that Wake Forest must cherish if it wishes to remain a unique and intact community.

B. History of the Historic District Area

Wake Forest's excellent and cohesive collection of 19th and early 20th century architecture radiates from the old Wake Forest College campus (est. 1832) which still acts as the town's physical and visual hub. The campus, a collection of handsome brick buildings and stately trees enclosed by a low stone wall, was sold to the Southeastern Baptist Theological Seminary in 1956 when the college moved to Winston Salem to become a university. Only one of the original buildings remains (Lea Laboratory, c. 1887) because the other early structures were lost to fire and demolition.

The college began to sell residential lots along North Main Street in 1839. This fund-raising drive resulted in the construction of faculty houses that lasted into the 20th century and provided Wake Forest with some of its most outstanding architecture. Styles range from Greek Revival through Queen Anne into Georgian, Classical Revival, and Bungalow examples. The first six blocks along North Main Street and several buildings surrounding the northern and southeastern edges of the campus along North and South Streets comprise the Wake Forest Historic District, designated in 1979.

C. Other Areas of Historical Significance

The opposite axis of North Main is South Main Street, the major artery that connects downtown Wake Forest to Forestville and Raleigh. Many houses in the three blocks closest to the campus are architecturally and historically significant and deserve recognition.

Forestville, annexed by Wake Forest in February, 1988, contains a small but still intact and valuable group of late 18th and early 19th century buildings that is highly endangered by new development. This tiny community predates the development of Wake Forest College and was the site of the Raleigh and Gaston Railroad depot until the college managed to wrest this valuable asset away in 1874 to a new location on the tracks along its own eastern boundary. The loss of the depot resulted in Forestville's gradual decline.

The Raleigh and Gaston Railroad was completed along the eastern edge of the Wake Forest College campus in 1840 and the depot, as mentioned, was relocated there in 1874. This action triggered the development of a central business district along the eastern side of the railroad tracks, opposite the campus. Consisting of approximately three blocks of South White Street, the original commercial district contains primarily one and two-story brick buildings that range in date from c. 1880 to c. 1915.

All of the buildings noted so far were built as a direct result of the establishment of Wake Forest College or are part of the early community of Forestville. The first major construction project that was not college related was the Royal Cotton Mill and Village. The mill began producing cotton sheeting in 1900 and the Village was incorporated in 1900 as the Town of Royal Mill. The Mill and its surrounding village of workers' housing is located on the northern edge of Wake Forest between North Main Street and the railroad tracks. The three-story mill building, its adjacent commissary, and several blocks of small frame houses was one of the largest cotton mill complexes in the region and remains surprisingly intact. The mill and commissary have been converted to apartment use. This area has had a major impact on the economic, physical, and social history of Wake Forest.

Besides the distinct and cohesive units of Wake Forest's early architecture mentioned above, there are several more isolated pockets of significant buildings within the town's jurisdiction. Some of these buildings were constructed as early as c. 1800, while others date more recently to c. 1930.

One very important site is the W.E.B. DuBois School is located on North Franklin Street and Cedar Avenue. The school received its current name in 1939 (named after William Edward Burghardt DuBois who became the first black to obtain a Ph.D. from Harvard in 1895) and functioned as the black high school from 1922 to 1970. The site includes three buildings and is listed on the National Register of Historic Places.

Another site important to the history of Wake Forest include the Wake Forest Town Cemetery on North White Street. This cemetery contains the graves of numerous early Wake Forest College Presidents and professors, including Samuel Wait, the first college President.

D. Historic Preservation Commission

The Historic Preservation Commission was created to promote the educational, cultural, and economic welfare of Wake Forest by preserving structures, sites, streets, and neighborhoods which serve as visible reminders of the history and cultural heritage of the town. The Commission consists of nine members, a minimum of four of which must live in the district. The Commission meetings, open to the public, are held the 2nd Wednesday of each month at 7:30 p.m. at the Wake Forest Planning and Inspections office at 221 South Brooks Street.

The Historic Preservation Ordinance, adopted in June, 1996 as part of the Zoning Ordinance, grants the Commission a wide range of authority to pursue the goals of historic preservation in Wake Forest, as well as setting up the Certificate of Appropriateness process, pursuant to the authority granted in the General Statutes Chapter 160A-400.

E. Purpose

The purpose of these guidelines is to provide standards by which the Wake Forest Historic Preservation Commission may evaluate the compatibility of a proposed improvement, alteration, or demolition in the Wake Forest Historic District or on a locally designated property. The guidelines and standards stated herein are intended to ensure, insofar as possible, that changes in covered properties shall be in harmony with the reasons for designation, yet to be flexible so that property owners will be encouraged to make innovative improvements. At the same time, property owners will be assured that other buildings and improvements in the Historic District and to other historic properties will be aesthetically compatible with their own.

F. Scope and Jurisdiction

1) Contents: In addition to defining the design review procedure, this document contains guidelines and standards that are central to the consideration of all Certificates of Appropriateness. Homeowners should familiarize themselves with them. In addition, these guidelines were developed with the intention of providing valuable information for property owners to use when considering restoration or renovation of their property. Thus, this document contains a combination of information, suggested procedures, and prohibited procedures.

Also included is a “minor works” section. Upon receipt of a completed application, the staff may issue a Certificate of Appropriateness, on behalf of the Commission, for those items classified as minor works when they are in conformance with these guidelines.

Appendices are located at the back of this guide to offer additional information that may be of value to the historic property owner.

2) When the Guidelines Apply: Within the Wake Forest Historic District, or any individually designated local historic landmark, these guidelines apply to all changes, other than painting, to exterior portions or features of buildings or other structures (including walls, fences, light fixtures, steps and pavement, or other appurtenant features), significant landscaping, above-ground utility structures, and outdoor advertising signs.

3) Certificate of Appropriateness Required: Before making changes, an application for a Certificate of Appropriateness (COA) as to exterior features must be submitted to and approved by the Wake Forest Historic Preservation Commission or its staff. This COA is required whether or not a building permit or other permit is required.

4) Exterior Features Defined: For the purpose of these guidelines, “exterior features” include the architectural style, general design, and general arrangement of the exterior of a building or other structure, including the kind and texture of the building material, the size and scale of the building or other structure, and the type and style of all windows, doors, light fixtures, signs, and other appurtenant fixtures, as well as historic signs, significant landscaping, archaeological and natural features of the area, and shall apply solely to the front and sides of any such structures as can be seen from the street upon which such structures fronts or corners. In the case of outdoor advertising signs, “exterior features” means the style, material, size, and location of all such signs.

5) Special Items of Significance:

Color: Changes in the color of buildings and structures will not require a Certificate of Appropriateness. Property owners and builders are encouraged to consult with an architect knowledgeable in historic preservation or the Historic Preservation Commission staff prior to selecting new colors. Guidelines for choosing paint color are available.

Artificial Siding: The application of artificial siding will require a Certificate of Appropriateness. Standards for using artificial siding are discussed elsewhere in these guidelines.



G. Certificate of Appropriateness

A Certificate of Appropriateness (COA) is a permit, issued by the Historic Preservation Commission or its staff, in the case of minor works, that authorizes the erection, alteration, restoration, demolition, or moving of a structure located in the Wake Forest Historic District or any structure locally designated as a historical landmark. This COA is valid for six months and may be renewed if necessary.

From the time that a structure is designated a local historical landmark or any structure is located in the Wake Forest Historic District no exterior portion or features of any building or other structure (including masonry walls, fences, light fixtures, steps and pavement, or other appurtenant features), above ground utility structures, or any type of outdoor advertising sign shall be erected, altered, restored, moved, or demolished until an application for a COA has been approved by the Historic Preservation Commission or its staff, in the case of minor works. Such a certificate is required prior to the issuance of any building permit or other permit that may be required or granted for purposes of constructing or altering structures.

A Certificate of Appropriateness is not required for:

- Anything done to the interior of the building, unless the interior is designated as part of a local publicly owned historic landmark or when consent has been obtained from a private owner and filed with the Wake County Register of Deeds.
- The color a building is painted.
- Normal minor maintenance and repairs which do not visually change the property, no materials are replaced, and do not qualify as a minor work as described in Chapter III.
- Exterior work not visible from any point on the street.

H. Design Review Process

Historic districts are not created to prevent changes but, rather, to ensure that changes do not compromise or destroy the special historic and architectural character of the district. A design review process allows for the timely review of any exterior change proposed by a property owner or tenant in the historic district prior to its implementation. The Commission does not initiate or require changes. Its review is triggered, instead, by a request from the property owner. The review is limited to exterior changes and does not apply to routine maintenance. Proposed exterior alterations, new construction, demolition, significant site changes, and moving of historic buildings, however, are all reviewed by the Commission. For demolition requests, the Commission may delay demolition for up to 365 days while alternatives are explored.

The applicant must file a completed application and all supporting documents with the Wake Forest planning staff (Historic Preservation Commission staff) a minimum of thirty days prior to a regularly scheduled monthly meeting of the Commission. If the work constitutes “minor work” staff may issue the COA. In other cases the COA requires Commission approval.

Prior to approving the certificate the Commission must hold a public hearing. If necessary, the public hearing may be continued until the next regular meeting or a called meeting. The decision to approve, approve conditionally, or deny the request will generally be made at the meeting in which the public hearing is closed. If approved or approved conditionally, the applicant will be issued a Certificate of Appropriateness and may proceed with the work or apply for a Building Permit, if required. Granted conditionally or denied, a COA decision may be appealed to the Wake Forest Board of Adjustment, except for actions involving the State of North Carolina, in which case the North Carolina Historical Commission hears the appeal. Appeals must be in the nature of *certiorari*, meaning they may only challenge whether the Commission followed its rules, procedures, and guidelines properly.

The Commission will use the guidelines and standards found in this document when reviewing the application for a COA. The findings of fact, which must be moved, seconded, and adopted in the application review procedure, will reference one or more standards and guidelines that apply to the matter under consideration.



The Timberlake-Allen House (1999), 213 N. Main Street

II: Philosophy of Historic Preservation

A. Golden Rule of the Three R's

The overarching “rule-of-thumb” upon which these guidelines and standards are designed is the “*Golden Rule of the Three R's*”:

- 1) **R**etain and Repair
- 2) **R**eplace to Match
- 3) **R**eplace with Compatible
(Style and Materials)

First choice is always Number 1. If that is not practical, then proceed to Number 2. If Number 2 is not available, then proceed with Number 3.

B. Secretary of the Interior's Standards for Rehabilitation

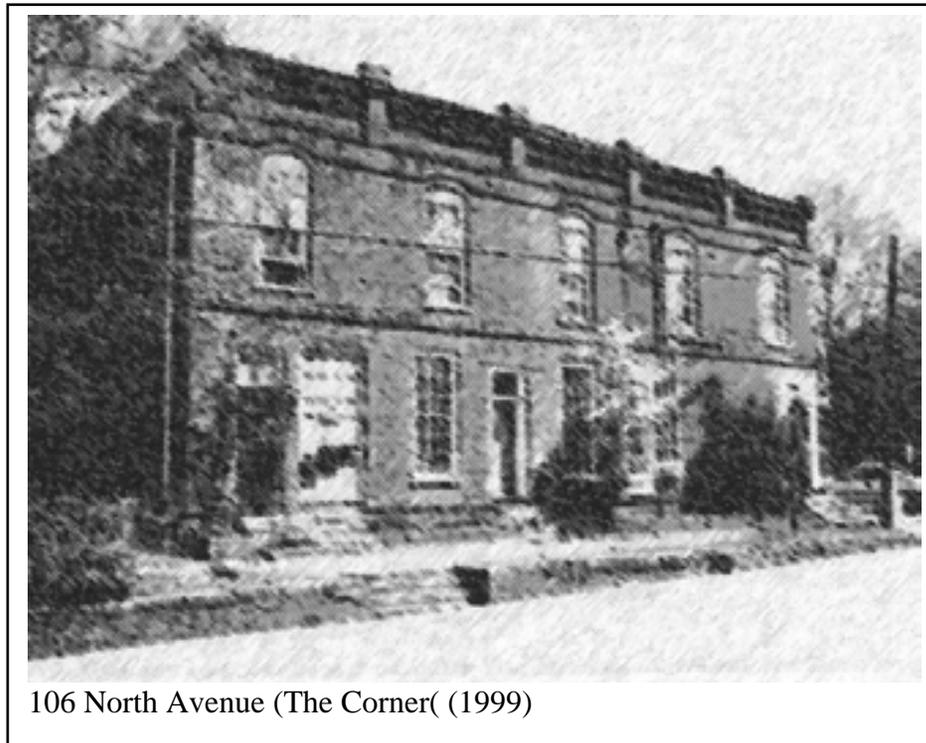
In addition to the overall concept outlined above, a more detailed set of standards are included in the Secretary of the Interior's Standards for Rehabilitation. These standards are also used by the Wake Forest Historic Preservation Commission in its review process. This set of standards for the preservation of historic properties were originally developed in 1976. These national standards for rehabilitation of historic buildings provide guidance to commissions across the country. Although our Historic Preservation Commission does not consider the use of a building in their deliberations (which is addressed in Standard #1), the Wake Forest design guidelines are modeled after the philosophical approach to rehabilitation described in this list. This philosophical approach emphasizes retaining and preserving historic buildings through ongoing maintenance and timely repairs so that the need for more major repairs is minimized. In turn, the approach also values repair above replacement of distinctive historic building elements and materials. The most current version (1992) of the Secretary's Standards is given below.

- 1) A property shall be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- 2) The historic character of a property shall be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property shall be avoided.
- 3) Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, shall not be undertaken.
- 4) Changes to a property that have acquired historic significance in their own right shall be retained and preserved.



- 5) Distinctive materials, features, finishes, and construction techniques, or examples of craftsmanship that characterize a property shall be preserved.
- 6) Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and, where possible, materials. Replacement of missing features shall be substantiated by documentary and physical evidence.
- 7) Chemical or physical treatments, if appropriate, shall be undertaken using the gentlest means possible. Treatments that cause damage to historic materials shall not be used.
- 8) Archaeological resources shall be protected and preserved in place. If such resources must be disturbed, mitigation measures shall be undertaken.

- 9)** New additions, exterior alterations, or related new construction shall not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and shall be compatible with the historic materials, features, size, scale, proportion, and massing to protect the integrity of the property and its environment.
- 10)** New additions and adjacent or related new construction shall be undertaken in such a manner that, if removed in the future, the essential form and integrity of the property and its environment would be unimpaired.





The Brewer-Dubber House (1999), 233 N. Main Street

III: Minor Works

A. Minor Works Defined Generally

The Commission staff may issue a Certificate of Appropriateness for minor works. Minor works include and are defined as changes to those exterior features that do not involve substantial alterations, additions, or removals that could impair the integrity of the property and/or district as a whole.

B. Minor Works Defined Specifically

Specifically, minor works include the following:

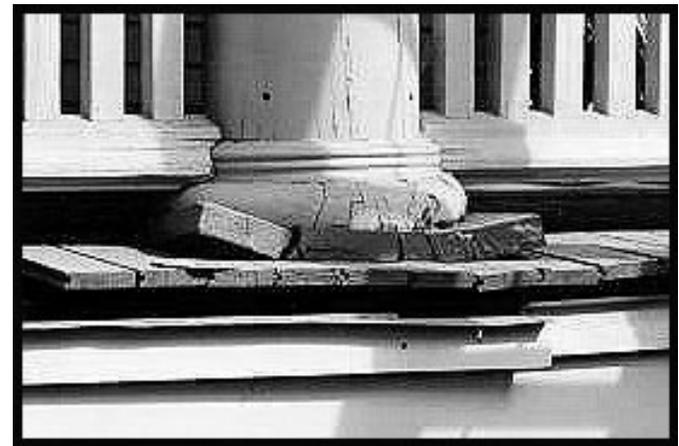
- 1) Removal of any prohibited element described in these guidelines.
- 2) Removal of asbestos, aluminum, vinyl, or other artificial siding.
- 3) Removal of awnings.
- 4) Removal of carriage lamps and kickplates that are not part of the original design of the structure.
- 5) Removal of carports that are not part of the original design of the structure.
- 6) Removal of concrete block walks, steps, and walls that are not part of the original design of the premises.
- 7) Removal of storm doors and windows that feature panels or decorative work which is inappropriate to the building.

- 8) Removal of accessory buildings which are not architecturally or historically significant.
- 9) Removal of metal flues.
- 10) Removal of other types of roof vents and ventilators.
- 11) Removal and installation of plumbing vents.
- 12) Repair or replacement of exposed foundation walls, including installation of vents, infill panels between piers, and access doors.
- 13) Repair or replacement of asphalt or fiberglass shingle roofs.
- 14) Repair or replacement of flat roofs.
- 15) Construction, alteration, or removal of temporary features that are necessary to ease difficulties associated with a medical condition but do not permanently alter exterior features.
- 16) Repainting and other masonry repairs when the color and composition of the mortar matches the original and new brick or stone matches the original as closely as possible.
- 17) Construction or replacement of walks, sidewalks, and entry steps.
- 18) Installation or replacement of storm windows and doors that feature one of the following treatments:
 - Baked-on finish on the metal surrounds
 - Mill finish aluminum painted with zinc chromate primer and top coated with a color to match the window sash, door, or window or door trim, as appropriate.
- 19) Installation or replacement of shutters or blinds original to the building.

- 20)** Installation of exterior lighting fixtures which cannot be easily seen from the street or are similar to those found within the historic district or to those original to the structure.
- 21)** Installation of mechanical equipment such as heating and air-conditioning units which cannot easily be seen from the street or are screened from view by shrubbery or appropriate fencing.
- 22)** Installation of identification signs, including address numbers, 144 square inches (one square foot) or smaller.
- 23)** Replacement of missing architectural details, provided that at least one of the following conditions are met:
- At least one (1) example of the detail to be replaced exists on the house; or
 - Physical or documentary evidence exists which illustrates or describes the missing detail or details; or
 - The proposed detail is very similar to original details found on at least one (1) building or structure within the Wake Forest Historic District that is comparable in terms of style, size, and age.
- 24)** Landscape changes, including new parking areas which are located to the rear of buildings, are not easily visible from the street, and are screened from adjoining properties with fencing or plant materials.



25) Repair or replacement of wood trim, eaves, cornices, fascia, gutters, steps, hand rails, porch decking, sills, windows, and doors, when the repair or replacement will match the original in material, style, and size.



- 26)** Reglazing of windows.
- 27)** Review of material samples and dimensions for projects which have received approval in concept or a Certificate of Appropriateness from the Commission.
- 28)** Changes to previously approved Certificates of Appropriateness which will not substantially affect design elements of the project or surrounding property owners.
- 30)** Renewal of expired Certificates of Appropriateness where no change to approved plans is being proposed and where there is no change in the circumstances under which the Certificate is granted.





The Gorrell-Hall House (1999), 305 N. Main Street

IV: Architectural Styles and Details

A. Architectural Styles

Architectural Styles are the means by which a type of building can be identified. Because Wake Forest did not really become established until the early years of the nineteenth century and experienced considerable growth in the middle of the twentieth century, there are few existing antebellum (pre-Civil War) buildings. The bulk of the early Wake Forest buildings date from the late nineteenth and early twentieth centuries. The following index of architectural styles describes and illustrates those found in Wake Forest.

Georgian	Federal	Greek Revival	Colonial Revival
Gothic Revival	Italianate	Queen Anne Style	Georgian Revival
		Triple A Bungalow	Ranch Neoclassical Revival

B. Architectural Details

The architectural details of an early Wake Forest building, whether they are applied with the exuberance of Victorian-era styles or with the restraint of the classically inspired, are signatures of design. Often, an individual will be attracted to a building because of the presence of these details -- the “gingerbread” or carvings associated with Victorian houses, or because of the Ionic capitals that suggest antebellum plantation houses. Some styles or types of 19th century architecture take their names from details associated with them. The following list of architectural details defines some that are common to early Wake Forest buildings.

C. Definitions

- 1) **Adamesque**: Details in the style of the Adam brothers, designers whose work was characterized by the use of classical ornament.
- 2) **Architrave**: The lowest part of a classical entablature, symbolizing a beam laid across capitals of columns, or as more commonly used in connection with houses, the molded trim around a door or window opening.
- 3) **Attic Ventilators**: In houses, screened or louvered openings, sometimes in decorative shapes, located on gables or soffits. Victorian styles sometimes feature sheet soffits or metal ventilators mounted on the roof ridge above the attic.
- 4) **Balustrade**: A low barrier formed of uprights supporting a railing.



- 5) **Band, Band Course, Bandmold, Belt**: Flat trim running horizontally in the wall to denote a division in the wall plane or change in level.
- 6) **Bargeboard (also Vergeboard)**: A wooden member, usually decorative, suspended from and following the slope of a gable roof. Bargeboards are used on buildings inspired by Gothic forms.
- 7) **Bead, Bead Molding**: A wooden strip with a round molded edge against which a window slides or door closes, or a cylindrical molding resembling a string of beads.
- 8) **Beaux Arts**: A monumental style featuring classical details taught by the Ecole de Beaux Arts in Paris during the late 19th century.
- 9) **Belt Course (also String Course)**: A horizontal “belt” for decorative purposes formed by a projecting course (or courses) in a masonry wall.
- 10) **Beveled Glass**: A type of decorative glass on which the edges of each pane are beveled or cut to an angle less than 90 degrees.

- 11) **Box Cornice:** A bulky hollow cornice concealing a roof gutter and suggesting masonry, though usually of wood.
- 12) **Blinds:** An external or internal louvered wooden shutter on windows or doors that excludes direct sunlight but admits light when the louvers are raised.

13) **Bracket:** A symbolic cantilever, usually of a fanciful form, used under the cornice in place of the usual multile or modillion. Brackets were used extensively in Victorian architecture and gave rise to a style known as Bracketed Victorian.

14) **Bullnose:** A convex rounding of a horizontal member as the edge of a stair tread.

15) **Cantilever:** A horizontal structural member supported at one end, a bracket.

16) **Capital:** The top or head of a column. In classical architecture there exist *orders* or columns. These are proportioned and decorated according to certain modes, the three basic ones being established by the ancient

Greeks. These are the *Doric*, the *Ionic*, and the *Corinthian*. These were modified by the Romans who added the *Tuscan*, the *Roman Doric*, and the *Composite*, the latter being a combination of the Greek Ionic and Corinthian orders. In American 19th century buildings the Greek Revival style is a conscious effort to reproduce and adapt the styles and ideals of ancient Greece. The later “classical” styles tend to be borrowed from the Renaissance forms which were borrowed from ancient Roman forms.



17) **Ceiling Medallion:** A large ornament, generally circular, which adorns the center of ceilings.

18) **Chamfer:** A beveled edge or corner.

19) **Classical:** A loose term to describe the architecture of ancient Greece and Rome and their later European offshoots -- the Renaissance, Baroque, and Rococo styles. In the United States classical embraced Georgian, Federal, Greek Revival, and Renaissance Revival (or Neoclassical).

20) **Colonial Architecture:** Architecture transplanted from the motherlands to overseas colonies such as Portuguese Colonial architecture in Brazil, Dutch colonial architecture in New York, and above all, English Georgian architecture of the 18th century in the North American colonies.

21) **Column:** Vertical shafts or pillars that support construction above; usually fabricated out of wood in residential buildings and often from iron or stone in commercial buildings.



22) **Corbel:** A projection (or building out) from a masonry wall, sometimes to support a load and sometimes for decorative effect.

23) **Corner Block:** A block placed at a corner of the casing around a wooden door or window frame, usually treated ornamentally.

24) **Corner Board:** One of the narrow vertical boards at the corner of a traditional wood frame building into which the clapboards butt.

25) **Cornice:** The top part of an entablature, usually molded and projecting, originally intended to carry the eaves of a roof beyond the outer surface.

26) **Cresting:** Decorative iron tracery or jigsaw work placed at the ridge of a roof.

27) **Dado:** A rectangular groove across the width of a board or plank. (In interior decoration it is the lower part of the wall that has been divided horizontally by the use of different materials or treatments).

28) **Dentil:** A number of small cubical members at the base of a classical cornice that resemble teeth.

29) **Downspout:** A pipe, usually of metal, for carrying rainwater from roof gutters.





30) **Eastlake Carving:** Heavily carved woodwork found on many Victorian houses, usually in scroll or floral motifs. It is three dimensional as if it was formed with a chisel and lathe.

31) **Eastlake Style:** The heavily carved woodwork found on many Victorian houses, usually in scroll or floral motifs.

32) **Escutcheon:** A protective plate, sometimes decorated, surrounding the keyhole of a door, a light switch, or similar device.

33) **Fascia:** A flat board with a vertical face that forms the trim along the edge of a flat roof, or along the horizontal, or “eaves”, side of a pitch roof. The rain gutter is often mounted on it.

34) **Festoon:** The same as a swag. The festive decoration of pendant semiloops with attachments and loose ends, especially a swag of fabric or representations of such decorations.

35) **Finial:** A formal ornament at the top of a canopy, gable, pinnacle, street lights, etc.

36) **Fluting:** A system of vertical grooves (flutes) in the shaft of an Ionic, Corinthian, or Composite column. Doric columns have portions of the cylindrical surface to the columns separating the flutes.

37) **Fretwork:** A geometrically meandering strap pattern; a type of ornament consisting of a narrow fillet or band which is folded, crossed, and interlaced.

38) **Frieze:** The intermediate member of a classical entablature, usually ornamented. Also, a horizontal decorative panel. A frieze is a feature of the Greek Revival style, but may be found in other types of architecture.



- 39) **Gingerbread:** Thin, curvilinear ornament produced with machine-powered saws.
- 40) **Gouged and Pierced:** Ornamental wood that has been grooved, channeled, or perforated through the use of a chisel called a gouge.
- 41) **Grain:** The direction, size, arrangement, appearance, or quality of the fibers in wood.
- 42) **Gutter or Eave Trough:** A shallow channel or conduit of metal or wood set below and along the eaves of a house to catch and carry off rainwater from the roof.
- 43) **Heartwood:** The wood extending from the pitch to the sapwood, the cells of which no longer participate in the life processes of the tree.
- 44) **Ionic:** Noting or pertaining to a Greek or Roman order of architecture typically characterized by a slender, fluted column with a low capital having projecting volutes, an architrave in three levels, a shallow frieze that is sometimes ornamented and a cornice that is sometimes supported by dentils.
- 45) **Knob:** A projecting round or oval decorative element simulating the shape of a functional knob.
- 46) **Lattice:** A network, often diagonal, or interlocking lathe or other thin strips used as screening, especially in the base of the porch.
- 47) **Lintel:** A horizontal member spanning an opening and supporting construction above; a beam.
- 48) **Modillion Cornice:** Cornice with classical bracket forming a molding.
- 49) **Molding:** A decorative band having a constant profile or having a pattern in low relief, generally used in cornices or as trim around openings.
- 50) **Newel Post:** A vertical member or post, usually at the start of the stair or any place the stair changes direction. Usually large and ornate, it is the principal support of the handrail.

- 51) **Ogee:** A double curve formed by the combination of a convex and concave line, similar to an S-shape.
- 52) **Panel:** A thin, flat piece of wood framed by stiles and rails as in a door or fitted into grooves of thicker material with molded edges for decorative wall treatment.
- 53) **Pedestal:** A base for a column or for a piece of sculpture or the like.
- 54) **Pilaster:** A flat or half-round decorative member applied at a wall suggesting a column, sometimes called an engaged column.
- 55) **Plinth:** The base block of a column.
- 56) **Quoin:** In masonry, a hard stone or brick used with similar ones to reinforce an external corner or edge of a wall or the like and is often distinguished decoratively from adjacent masonry.
- 57) **Quarter Round:** A small molding that has the cross section of a quarter circle.
- 58) **Rabbet:** A rectangular groove cut in the corner edge of a board or plank.
- 59) **Rake:** Trim members that run parallel to a roof slope and form the finish between the wall and a gable roof extension.
- 60) **Riser:** Each of the vertical board closing the spaces between the treads and stairways.
- 61) **Rosette:** A conventionalized circular (floral) motif, usually sculptural.
- 62) **Sawnwork:** Ornamentation in cut-out planking, formed with a bandsaw, popular in the 1880's and 1890's. This decorative detailing is flat.
- 63) **Soffit:** The exposed undersurface of any overhead component of a building, such as an arch, balcony, beam cornice, lintel, or vault.
- 64) **Surround:** The molded trim around a door, window, or fireplace opening.

- 65) **Swag:** A conventionalized motif resembling a drapery or heavy fabric; a festoon.
- 66) **Terra-Cotta:** Hard, unglazed fired clay used for ornamental work and roof and floor tile. Also fabricated with a decorative glaze and used as a surface finish for buildings in the Art Deco style.
- 67) **Tongue and Groove:** Boards having a tongue on one edge and a groove on the next for tight joining and surface alignment.
- 68) **Tread:** The horizontal board in a stairway on which the foot is placed.
- 69) **Trim:** The finish material on a building, such as moldings applied around openings or at the floor and ceilings of rooms.
- 70) **Vergeboard:** See Bargeboard.
- 71) **Veneer:** Thin sheets of wood made by rotary cutting or slicing of a log. Also, an outside facing of brick, stone, etc., that provides a decorative, durable surface but is not load-bearing.
- 72) **Volute:** The ornamental spiral at the ends of an Ionic capital.
- 73) **Williamsburg Style:** Of or pertaining to the styles of architecture and furnishings displayed in the restoration of colonial Williamsburg, an early 18th century town in Virginia.
- 74) **Winder:** Tapered treads in a staircase allowing the stair to turn as it climbs.
- 75) **Wrought Iron:** Iron that is rolled or hammered into shape and never melted.

D. Construction and Repair Concerns

Many of the architectural details found on early buildings are no longer available or are very expensive to reproduce. Those that are characteristic to particular buildings should be regarded as valuable antiques and treated as such. If a property owner is restoring the exterior of a building and is seeking to replace missing architectural details, it may be possible to find some of them in salvage yards or in antique shops. Before undertaking the replacement of details, it is wise to be completely familiar with the style and characteristics of the building so that the introduction of inappropriate details can be avoided.

E. Architectural Details: Guidelines

TO DO:

- 1) Add only details or features that are appropriate with the architectural style of the building and character of the historic district.
- 2) Retain exterior features and details when these are an essential part of a building's original character and appearance.
- 3) Retain historic architectural details when installing modern siding materials.

NOT TO DO:

- 1) Don't add any type of architectural or aesthetic detail, decoration, fixture, or ornament that is incongruous with the character of the historic property or with the special character of the historic district.
- 2) Don't add any decoration, fixture, ornament, or any type of architectural or aesthetic detail that is incongruous in nature, form, arrangement, or material with the historic property or with the special character of the historic district.

- 3) Don't remove original material or hardware except when essential for safety when originals are irreplaceable.
- 4) Don't remove exterior features, such as cornices, porches, brackets, railings, shutters, siding, window architraves, and doorway pediments when these are an essential part of a building's original character and appearance.
- 5) Don't cover, remove, or alter characteristic or historic architectural details when installing modern siding materials.







The Powell-Drake House (1999), 614 N. Main Street

V: Basic Shape and Form

A. Basic Shape and Form

The basic shape and form of a building generally can be seen by looking at its floor plans and elevations. The style of an early Wake Forest building usually dictated its shape. Buildings inspired by classical forms are generally four square or rectangular in shape while those inspired by Queen Anne forms or vernacular revivals can display complex or fanciful arrangements of shapes.

Surviving early Wake Forest buildings dating from before the advent of central heating usually display floor plans that allow individual rooms to be shut off. The styles of architecture from those years, including Georgian, Federal, and Greek Revival, suited themselves to the need to conserve heat through a symmetrical arrangement of rooms, each of which could be closed off and usually reflected a symmetrical arrangement of shapes on the exterior of the buildings.

An elevation is a drawing that show the vertical appearance of a building, including the number of stories and bays that it displays. Most early Wake Forest houses were one or two stories high and commercial buildings were rarely over three stories high. A bay is a repeated spatial element that helps to create a rhythm or flow in design, e.g. windows and doors.

B. Definitions

- 1) **Bay:** Within a structure, a regularly repeated spatial element usually defined in plan by beams and their supports, or in elevation by repetition of windows and doors in the building facade.
- 2) **Elevation:** A drawing showing the vertical elements of a building, either exterior or interior, as a direct projection to a vertical plane; that is, the vertical appearance.
- 3) **Story:** The space in a building between floor levels or between a floor and the roof above it.

C. Construction and Repair Concerns

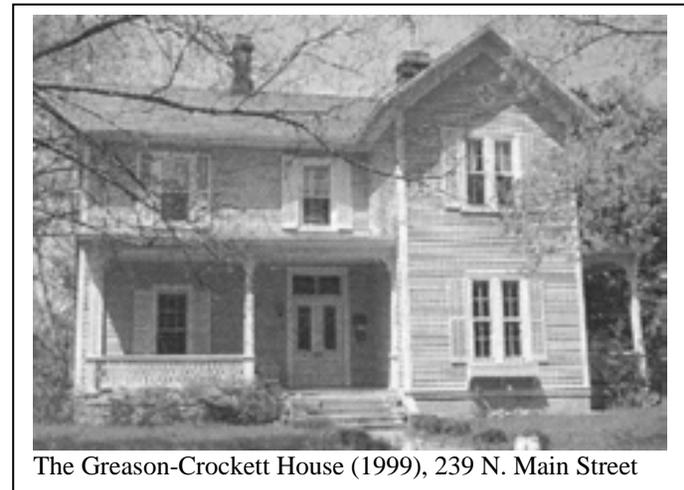
The relationships and proportions of shapes and forms make the basis for the character of a building. They are the anchor on which the other structural elements are applied. During a restoration or rehabilitation project, special note should be made of the shape and form of the building. If an addition to an early Wake Forest building is needed, it should reflect the proportions of the original design and complement the character of the building. A well designed, skillfully executed contemporary addition often can add an intriguing quality to a historic building. Where this has occurred successfully, the designer usually is completely familiar with the significant characteristics of the older building and respects them in the design of the addition.

The removal of an unsympathetic, poorly designed addition to an early Wake Forest building can greatly enhance its appearance. But the removal of the exemplary later additions in order to restore a building to its original or conjectured original appearance should be carefully studied. Just as a well-done contemporary addition can enhance a building, an accumulation of good earlier additions can add depth and quality to it. Before any addition is removed, it should be evaluated for its character, significance, and utility. It is wise to determine exactly what is being removed and retained by sketching floor plans and elevations.

D. Basic Shape and Form: Guidelines

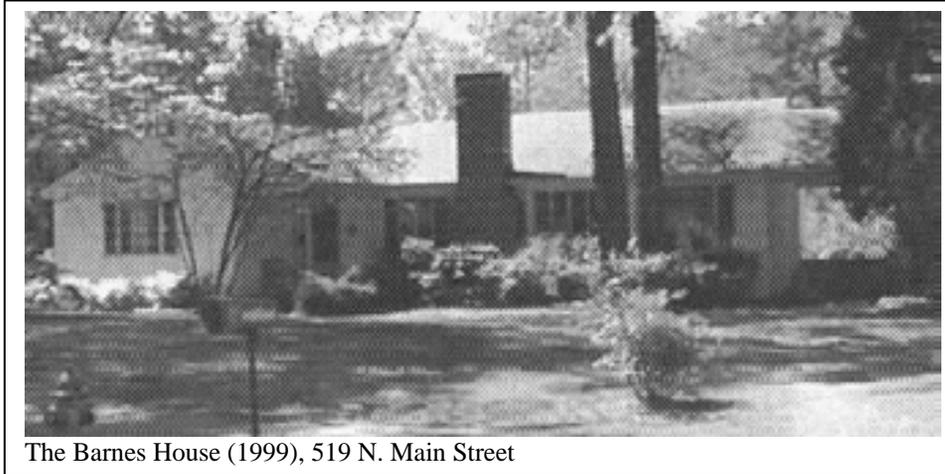
TO DO:

- 1) Additions should be consistent with and compatible to the original basic shape and form of the building.
- 2) Retain the basic plan of the building exterior, including principal walls, roofs, and fenestration pattern.



NOT TO DO:

- 1) Don't add or delete components that are out of proportion to the building, such as the addition of a low, horizontal wing to a tall, vertical building, remove of an original wing of an historic building, replace a tall roof profile with a low one, or remove an addition that has been determined to have historic or architectural significance.
- 2) Don't alter the basic plan of a building exterior by demolishing principal walls, partitions, roofs, windows, and stairways.
- 3) Don't enclose porches and steps that are elements of the design of the major facades or those visible from the right-of-way of the building in a manner that destroys their original intended appearance.
- 4) Don't unnecessarily alter the plan, materials, and appearance of the building.



The Barnes House (1999), 519 N. Main Street



The Bobbit-Mosier/Yobe House (1999), 222 N. Main Street

VI: Roofs

A. Roof Form and Pitch

The roof form and pitch are among the major distinguishing characteristics of different styles of architecture and can contribute significantly to the historic character of buildings. Roofs can be flat, pitched, hipped, curved, or arranged in various combinations of all of these forms. Certain architectural styles are distinguished by roof types -- for example, a Second Empire style building always displays some form of a mansard or curved roof. Buildings styled after classical forms usually feature simple hipped or pitched roofs while many Gothic Revival and picturesque adaptations display steep-pitched, complex arrangements of roofs and gables.

Roofing materials contribute to the character of early Wake Forest buildings. Depending on the ages and styles of the buildings, roofs can be covered with a variety of materials ranging from asphalt shingles to terne-plated metal. It is extremely important to install appropriate roofing material when conserving the character of early buildings. For example, a Mission style building that featured a terra-cotta roof should not be reroofed with asphalt shingles. This applies to shingle patterns as well. If a mansard style roof is decorated with polychromatic slates, their removal would subvert the designer's intention and damage the quality of the building. Roofing materials on early Wake Forest buildings were usually dark in color and included shingles, slates, clay tile, or metal. Sometimes the roofing material was cut into patterns such as half-round or triangular shapes in order to accent a turret or to compose an element of the building design.

B. Definitions

- 1) **Asphalt Shingles:** Shingles manufactured from saturated roofing felts (rag, asbestos, or fiber glass) coated with asphalt and having mineral granules on the side exposed to weather.
- 2) **Downspouts:** A vertical pipe, often of sheet metal, used to conduct water from a roof drain or gutter to the ground or cistern.

- 3) **Flashing:** A thin impervious material placed in construction to prevent water penetration, to provide water drainage or both, especially between a roof and a wall.
- 4) **Gable:** The vertical triangular piece of a wall at the end of a ridged roof, from the level of the eaves to the summit.
- 5) **Galvanize:** To coat steel or iron with zinc as, for example, by immersing it in a bath of molten zinc.
- 6) **Gambrel Roof:** A gable roof more or less symmetrical, having four inclined surfaces, the pair meeting at the ridge having a shallower pitch.
- 7) **Gutter:** A shallow channel of metal or wood set immediately below or built in along the eaves of a building to catch and carry off rainwater.
- 8) **Hipped Roof:** A roof without gables, each of whose sides, generally four, lies in a single plane and joins the others at an apex or ridge.
- 9) **Jerkin Head Roof:** A roof whose end has been formed into a shape midway between a gable and a hip, resulting in a truncated or “clipped” appearance, sometimes called a “clipped gable”.
- 10) **Lead Roof:** A flat roof covered with sheet lead.
- 11) **Mansard Roof:** A modification of the hipped roof in which each side has two planes, the upper being more shallow. This roof is characteristic of the Second Empire style.
- 12) **Pantiles:** A roofing tile that has the shape of an “S” laid on its side.
- 13) **Pitched Roof:** A roof having two slopes that meet at a central ridge, sometimes called a “gable end roof”.
- 14) **Roofing Tile:** A tile for roofing, usually of burnt clay, available in many configurations and types such as plain tiles, single-lap tiles, and interlocking tiles.

- 15) **Shake:** Any thick hand split shingle, usually edge-grained, formed by splitting a short log into tapered radial sections.
- 16) **Sheet Metal:** A flat, rolled metal product, rectangular in cross section and form, when used as roofing material, it is usually terne or zinc-plated.
- 17) **Shingles:** A roofing unit of wood, asphalt, slate, tile, or other materials cut to stock lengths, widths and thicknesses, used as a exterior covering on roofs and applied in an overlapping fashion.
- 18) **Slate:** A hard, brittle, metamorphic rock consisting mainly of clay materials, characterized by good cleavage along parallel planes, used in thin sheets as roofing or in thicker slabs for flooring.
- 19) **Tarpaper:** A roofing material manufactured by saturating a dry felt with asphalt and then coating it with a harder asphalt mixed with a fine material.
- 20) **Terne-Plate:** Sheet metal coated with terne metal which is an alloy of lead containing up to 20% tin.
- 21) **Terra-Cotta:** Hard, unglazed fired clay used for ornamental work and roof and floor tile.
- 22) **Tin:** (a) A lustrous white, soft, and malleable metal having a low melting point; relatively unaffected by exposure to air; used for making alloys and coating sheet metal; (b) to coat with a layer of tin.
- 23) **Zinc:** A hard bluish-white metal, brittle at normal temperatures and not subject to corrosion, used in making alloys and for galvanizing sheet metal.



C. Maintenance and Repair

The care and maintenance of the roof is one of the most important practices in preserving an early building. Generally, the roofing system also includes the controlled removal of rainwater through gutters and downspouts. Maintenance of the entire system, including elimination of moss or vegetation that compromises its surface material or drainage, is critical. A leaky roof that allows water damage to the structural elements of an older building can accelerate deterioration at a very rapid rate.



It is wise to inspect a roof for leaks at regular intervals, especially where changes in roofing planes or penetration of a chimney or dormer interrupts the roofline. The roof material should be checked for loose or damaged shingles, slates, or tiles and repaired immediately, as needed. The metal flashing around chimneys or flues and at the juncture of roof surfaces and any vertical surface such as dormer walls should be examined at the same time. Gutters and downspouts should be cleaned often and kept in good repair.

Metal roofs should have watertight seams and, except copper ones, should be maintained with an even unbroken layer of metal paint to avoid corrosion due to moisture. Introducing incompatible metal fasteners or flashing on a metal roof can result in galvanic corrosion and patching metal roofs with roofing tar accelerates the deterioration of the metal.

Slate and tiles are brittle but very durable roofing materials. They often survive the life of the original setting nails, flashing, or sheathing. Fortunately, they can be reset once other repairs are made, to provide long-lasting protection of the structure.

As asphalt shingles age, they lose their textured surface coating and begin to curl and buckle. The life of a good-quality asphalt shingle roof is 20-30 years. By contrast, a properly maintained metal roof will last about 70 years, and a slate roof more than 100.

D. Roofs: Guidelines

TO DO:

- 1) Roofs on buildings featuring these effects should be preserved and maintained in their original conditions because to alter them would be to alter an interesting and vital element in their designs.
- 2) If a particular original roofing material is not readily available, every effort should be made to substitute a modern material that closely resembles the original in composition, size, shape, color, pattern, and texture.
- 3) Preserve the original shape, line, pitch, and overhang of historic roofs.
- 4) Preserve all architectural elements of the roof that define the character of the building, such as but not limited to cupolas, chimneys, dormers, and turrets.
- 5) The building code for the State of North Carolina requires that no more than two layers of roofing materials may be applied to a residence.
- 6) Low-profile ridge vents may be installed, provided they do not diminish the original design of the roof or destroy historic roofing materials and details.
- 7) New gutters and downspouts should be installed so that no architectural features are damaged or lost.
- 8) Replacement gutters and downspouts should be coated with paint or a baked-enamel finish in a color appropriate to the color of the house, unless they are made of copper.
- 9) Solar collectors used on early Wake Forest buildings should be attached to the rear or other nonpublic side of the building. Less than optimal orientation should be considered if this is necessary to protect the unique character of a significant building or streetscape. (Solar collectors are relatively uncommon in Wake Forest and possibly will remain so in early Wake Forest neighborhoods due to a heavy tree canopy that is one of the hallmarks of these areas.)

- 10) All solar collectors should be installed in such a manner as to cause the least damage to building elements.
- 11) Mechanical equipment such as antennas, exhaust fans, or air conditioning compressor units should be located so that they are as unobtrusive as possible and painted or covered to blend with surrounding materials.
- 12) Equipment should be installed in the attic spaces rather than on the roof whenever possible.

NOT TO DO:

- 1) Don't make use of any roof form, pitch, treatment, or material that is incongruous with the characteristics of the historic property or special character of the historic district.
- 2) Don't use shingles or other roofing materials that are incongruous with the special character of the historic district or the historic property.
- 3) Don't use exposed tarpaper rolls as roofing material.
- 4) Don't change the roof shape to one incongruous to the character of the historic property or to the special character of the historic district by such additions as oversize dormers, picture windows, or solar equipment in visible or undisguised positions.
- 5) Don't apply new roofing, drainage material, or other additions that are incongruous to the style and period of the historic property or the special character of the historic district.
- 6) Don't replace roof coverings with new materials which differ in composition, size, shape, color, or texture from the building roof so that it becomes incongruous to the historic character of the property or the special character of the historic district.
- 7) Don't strip the roof of architectural features such as crestings, bargeboards or quarter-round.

- 8)** Don't replace or remove gutters or downspouts that have been concealed in box eaves with exposed new materials and don't replace gutters with downspouts of a decorative nature with new material that would be incongruous with the historic character of the building or the special character of the historic district.
- 9)** Don't install light-colored asphalt shingles.
- 10)** Don't introduce new roof features, such as skylights, vents, and dormers, if they would diminish the original design of the roof or damage historic roofing materials or features.
- 11)** Don't paint or apply coatings to roofing material that was historically not coated.



The Powell-Blakeslee House (1999), 564 N. Main Street

VII: Doors and Windows

A. Fenestration Pattern

The fenestration pattern of a building is the arrangement of doors and windows in its facades. Builders can use these various arrangements, the sizes and proportions of openings, and the decorative elements associated with them to achieve stylistic effects on buildings. Many early Wake Forest buildings exhibit picturesque or romantic facades because of their fenestration patterns. There are many types of windows, doors, and decorative treatments employed in early Wake Forest buildings. Improper or insensitive treatment of the fenestration pattern of an early building can seriously detract from its character to the point that the building completely loses its original stylistic identity.

B. Doors and Windows

By their proportion, shape, positioning, location, pattern, and size, doors and windows contribute greatly to the character of an historic building and are particularly indicative of the stylistic period. These openings in a building's exterior also provide for natural light, ventilation, and visual connections to the interior.

Both solid paneled wooden exterior doors and combinations of wooden panels with fixed glazing are typical in the district. Many of the original front doors remain. Front entries with double front doors are found on several large residences.

Windows in the historic district primarily consist of wooden double-hung sashes, vertical in proportion, with a variety of pane subdivisions. The number and sizes of panes, or lights, in a window reflect the style and, sometimes, the age of the building and the state of technology in glass-making of the period.

In Colonial times, glass panes were manufactured by the crown method, a process by which a large sphere of molten glass was attached to an iron rod and spun until a large, flat disc was produced. The disc was then cut into panes and, many times, the section containing the "bulls-eye" where the rod was attached was placed in a transom or fanlight over a door. Early nineteenth century

architectural styles, late Georgian, Federal, and Greek revival, feature windows with small panes of glass, usually in a twelve-over-twelve pattern.

As the century advanced, glass manufacturing became increasingly sophisticated and designers were able to take advantage of the fact that larger sheets of glass could be produced. Thus, many late nineteenth and early twentieth century Wake Forest buildings display windows of a one-over-one or one-over-four pattern.



Colored or stained glass windows were popular design accents for many of the romantic styles of architecture such as the Queen Anne style. Stained glass windows, either alone or in combination with regular window lights, created subtle patterns of light and color on the interior of buildings and added interest to the exterior. Beveled glass and etched glass were other decorative treatments that found favor with Victorian-era builders, who also favored tall, narrow windows. Whatever the type of decorative glass used, however, it was an important part of an overall design scheme, not simply an add-on afterthought.

While many types of windows are found in early buildings, a majority of those found in early houses are wood double-hung windows. These are composed of two sections that can move independently, the first being an upper outside sash that slides downward and the second a lower inside sash that slides upward. Each sash, depending on the style and age of the house, is divided, usually by mullions that hold vertical panes in place. Generally, the older the window the smaller the panes and the more flawed the glass is. By the turn of the 20th century, technology had advanced enough to allow the use of larger panes, thus creating three-over-one or four-over-one window division patterns. Many mid to late 19th century vernacular houses feature two-over-two sash patterns, thus giving the entire window four panes.

C. Definitions

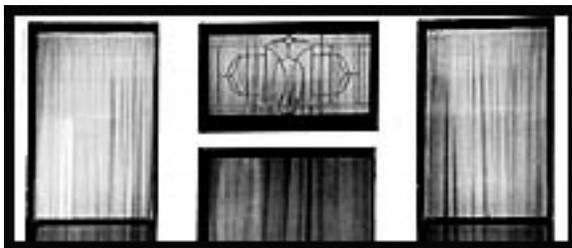
1) **Awning:** A roof-like covering of canvas, often adjustable, over a window, door, etc., to provide protection against the sun, rain, and wind. Aluminum awnings were developed in the 1950's.

- 2) **Bay Window:** A projecting bay with windows that usually extends floor space on the interior and generally extends to ground level on the exterior.
- 3) **Beveled Glass:** Glass panes whose edges are ground and polished at a slight angle so that patterns are created when panes are set adjacent to one another.
- 4) **Blinds:** External or internal louvered wooden shutters that exclude direct sunlight but admit light through a window or door. This feature is found on many southern houses since its exterior placement intercepts the sun's heat before it strikes a window pane, thereby helping to cool the interior.
- 5) **Bow Window:** A curved bay window.



- 6) **Casement Window:** A window which swings open along its entire length, usually on hinges fixed to the sides of the opening into which it is fitted.
- 7) **Casing:** The exposed trim molding, framing, or lining around a door or window; may be either flat or molded.
- 8) **Clerestory Windows:** Windows located relatively high up in a wall that often tend to form a continuous band. This was a feature of many Gothic cathedrals and was later adapted to many of the Revival styles.
- 9) **Corner Block:** A block placed at a corner of the casing around a wooden door or window frame, usually treated ornamentally.
- 10) **Double-Hung Window:** A window with two sashes which open by sliding up and down in a cased frame.
- 11) **Etched Glass:** Glass whose surface has been cut away with a strong acid or by abrasive action into a decorative pattern.

- 12) **Fanlight**: An arched overdoor light whose form and tracery suggest an open fan.
- 13) **French Window**: A long window reaching to floor level and opening in two leaves like a pair of doors.
- 14) **Glue-Chip Glass**: A patterned glass with a surface resembling frost crystals; common in turn-of-the-century houses and bungalows.
- 15) **Jamb**: The vertical sides of an opening, usually for a door or window.
- 16) **Lancet**: A narrow window with a sharp pointed arch typical of Gothic architecture.
- 17) **Lunette**: A semi-circular opening.
- 18) **Molded Surround**: A decorative molded frame around an opening such as a window or door.
- 19) **Mullion**: A vertical member dividing a window area and forming part of the window frame.
- 20) **Muntin**: A molding forming part of the frame of a window sash and holding one side of a pane.



- 21) **Oriel Window**: A projecting bay with windows, generally on the second story of a building. An oriel is adopted from Gothic forms.
- 22) **Overdoor Light**: A glazed area above a doorway and sometimes continued vertically down the sides; often decoratively treated. An overdoor light is a common feature of many 19th and early 20th century buildings.

- 23) **Palladian Window**: A window with three openings, the central arched and usually wider and taller than the others.
- 24) **Pane**: A flat sheet of glass, cut to size for glazing a window, door, etc.; often a small size, larger ones being usually called “sheets”. Once installed, the pane is referred to as a “light” or “window light”.

25) **Sash:** The moving part of a window.

26) **Shutters:** Small wooden “doors” on the outside (of windows), originally used for security purposes. In the 19th century, they were closed over windows at night or during storms.

27) **Sidelight:** A narrow window area beside an outside door, generally seen in the Greek Revival style.

28) **Sill:** The lowest horizontal member in a wall opening.

29) **Trabeated Entrance:** A standard classical entrance, featuring an overdoor light and sidelights.

30) **Tracery:** An ornamental division of an opening, especially a large window, usually made with wood. Tracery is found in buildings of Gothic influence.

31) **Transom:** An overdoor light, usually hinged to be opened for secure ventilation at ceiling level.

32) **Window Cap:** The uppermost part of a window frame.

33) **Window Glass:** A hard, brittle inorganic substance, ordinarily transparent or translucent; normally a soda-lime-silica compound fabricated in continuous flat sheets up to six feet wide and from 0.05 to 0.22 inches thick.



D. Maintenance and Repair

1) Doors and Windows

With routine maintenance and repair, original wooden windows and doors can be preserved. Windows become less weatherproof and energy efficient as the caulking and the glazing putty that seal the glass panes within the wooden sash dry and crack apart. Weatherstripping around a sash or a door can deteriorate over time and need replacement. Wood itself must be protected from moisture and ultraviolet light by paint or protective sealers.

Preserving original doors and windows is always more desirable and generally less expensive than replacing them. Frequently, repair or replacement of only the damaged portion of the frame, the sash, the sill, or the threshold will eliminate the problem. A number of wood consolidants on the market can restore a section of rotten or damaged wood. The guidelines for wood provide more information on wood repair.

2) Doors

Many times, the front door is the focal point of an early building. The original scale and detailing of it is consistent with the rest of the fenestration pattern and the repair and maintenance of these is more appropriate than replacement. If the front door of an old building or house is missing or has been replaced in the past, a suitable door might be obtained at a salvage yard. Broken panes in doors or sidelights can be replaced with salvage material or, if this is unavailable, panes fabricated by glass artisans. If a door must be replaced with a new one, every effort should be made to reflect the fenestration pattern of the rest of the building. For example, a hollow-core door with three vertical windows arranged on a diagonal would not be appropriate to a 1920's bungalow. A better solution would be to install a plain paneled door painted to complement the house. If the original hardware is intact, it can be cleaned and maintained to add special details to the building. Security can be strengthened by installing dead-bolts, either the type that operates with a key or the type that latches from the inside.

Historically, wooden screen doors were typical in the district. New storm or replacement screen doors should be similar in appearance to the original screen doors: constructed of wood or with a baked-on finish, sized to match the original door opening, and containing large panels of glass or screen so that the view of the exterior door is not obscured.

3) Windows

Usually, repairing the original windows in an older building is also more appropriate and cost effective than replacing them with new ones. During the rehabilitation or remodeling of an early building, the fenestration pattern should remain unaltered. If the details of a window, such as casing, mullions, or tracery must be replaced, it should be done with the original character of the building and window as a guide. Wooden-framed windows are generally easy and inexpensive to repair; replacement of original windows with aluminum ones should not occur unless absolutely no other alternative exists. If aluminum frame windows must be installed, the surrounds and other metal features should have a baked-on finish. The replacement window should also be the full size of the original window opening. This may have to be custom-made since today's stock-size windows are often smaller than typical ones in early buildings. Stock-size windows which look small and out of scale on early buildings can destroy the fenestration pattern as well as the decorative detail associated with it. Custom-made wood sashes resembling original sashes are not expensive and can be ordered at most lumber yards. The decorative wooden detail can and should be retained if a full-size aluminum replacement is installed.

Storm windows and screens are considered necessary modern additions to early buildings. Many property owners install ones that feature wooden surrounds painted to match or complement the colors of the rest of the house. If screens or storm windows with aluminum frames are used. A baked-on painted finish is far more complementary to an old building than raw aluminum and should be used.

Some property owners prefer to install storm windows on the interior of the window frame. This is appropriate in historic districts, but special care should be taken to make sure that moisture does not accumulate between the storm and original windows. This can cause damage to the wooden sills and surrounds.

4) Shutters and Blinds

Shutters and blinds were used on early buildings of many styles. These features originally functioned on hinges as security features or as solar control devices. They were full size to the window. This was not only necessary from a practical standpoint, but it also added balance and proportion to the fenestration pattern. If shutters or blinds are being considered as an addition to an early building, a determination should first be made as to whether or not the building originally featured them. Adding them to "restore" a building usually looks pretentious and awkward. If they were an element of the original design and have been lost or destroyed, the replacement should be wood rather than aluminum or plastic and they should be of a functioning nature, full-sized and properly proportioned. Narrow, shutter-like trim pieces anchored flat to the sides of the building detract from the appearance of early buildings.

E. Doors and Windows: Guidelines

TO DO:

- 1) Retain and preserve original doors and windows, including both their functional and decorative features.
- 2) Retain and preserve openings and details of windows and doors, such as trim, sash, glass, lintels, sills, thresholds, shutters, and hardware.
- 3) Retain and preserve the historic door and window materials and finishes.
- 4) Protect and maintain existing windows and doors in appropriate ways
 - Maintain caulking and glazing putty to prevent air or water infiltration around glass.
 - Weatherstrip windows and doors to prevent moisture and air infiltration.
 - Check sills and thresholds to ensure that water runs off and does not collect.
 - Maintain a sound paint film on all wooden windows and doors.
 - Monitor the condition of wooden windows and doors.

(Note: Both the peeling of paint and the widening of joints may create the false appearance of deteriorated wood.)

- 5) Repair original window, door, and frame features, surfaces, and details by patching, splicing, consolidating, or otherwise reinforcing deteriorated sections or by recoating previously painted or stained items in the original or other appropriate color.
- 6) Replace deteriorated or damaged door and window features, if they cannot be repaired, to match the original in material, design, subdivision, detail, and dimension. If feasible, limit replacement to only the deteriorated portion rather than the entire unit. Consider using a compatible substitute material only if matching the original material is not feasible.
- 7) Replace a missing door or window with a new unit based upon accurate evidence of the original or a new design sized to match the opening and compatible with the historic building in material, design, scale, and detail.

- 8) Introduce new window and door openings, if necessary, with care and only on non-character defining elevations and in locations that do not compromise the overall historic character of the historic building or damage distinctive wall materials or details.
- 9) Construct replacement shutters of wood, size them to window openings, and mount them so that they are operable.
- 10) If exterior storm windows are desired, select ones that are coated with paint or a baked-enamel finish in a color appropriate to the color of the building. Install them so that existing windows and frames are not damaged or obscured.
- 11) Select storm or screen doors that are consistent with the style of the building and stained in a natural wood color, painted to match the building or the trim, or have a baked-on enamel finish in an appropriate color. Incorporate full glazed panels in storm doors to maximize the view of the existing door. Install storm or screen doors so that the existing door and frame are not damaged or obscured. .
- 12) If fabric awnings are historically appropriate, install them in porch, door, or window openings so that architectural features are not concealed and historic materials not damaged. Select colors appropriate to the color of the building.

NOT TO DO:

- 1) Don't make use of any fenestration type, style, material, or arrangement that is incongruous to the character of a historic property, or the special character of the historic district.
- 2) Don't add any window or door materials to a structure that are incongruous with the historic property, or the special character of the historic district.
- 3) Don't use any detail material associated with fenestration patterns that are incongruous to the character of the historic property, or to the special character of the historic district, such as the installation of unfinished aluminum frame screens or storm windows.
- 4) Don't remove any detail material associated with door or windows, such as leaded glass, stained glass, beveled glass, transoms, shutters, or tracery except to restore a building.
- 5) Don't enlarge or reduce window or door openings to fit new window sashes or new door sizes.

- 6) Don't alter the size of window panes, sashes, or doors. Such changes destroy the scale and proportion of the building.
- 7) Don't remove original doors and door hardware when they can be repaired and reused in place.
- 8) Don't install shutters, blinds, or awnings that are anachronistic or that are incongruous to the character of the historic property or the special character of the historic district, such as but not limited to aluminum awnings.
- 9) Don't replace sashes or doors with those that are incongruous in size, configuration, and reflective qualities of which alter the setback relationship between window and wall.
- 10) Don't use snap-in muntins replacements for true divided-light window panes.
- 11) Don't replace transparent glazing in windows or doors with tinted glazing.
- 12) Don't, generally, paint transparent or translucent glazing.
- 13) Don't fill in existing window or door openings if it would diminish the historic character of the building.
- 14) Don't replace or cover glazing with plywood or other similarly incongruous covering.
- 15) Don't paint front doors or matching storm or screen doors that were historically stained or varnished unless they have been substantially patched.
- 16) Don't attempt to create a false historic appearance by adding conjectural window or door features or details to a historic building.





The Royall-Miller House (1999), 107 Juniper Avenue

VIII: Composition

A. Elements of Composition

The composition of a building is the arrangement or the bringing together of its parts or elements. Architectural compositions in early buildings can range from simple, straightforward designs to complex arrangements that create visual interest both in the building and in the surrounding streetscape.

While an architectural composition is made up of all the elements of the various styles -- materials, roof forms, fenestration patterns, and so on -- there are some elements of composition that are added to various architectural styles that do not fall under the various other categories. The following list describes some of those that are found on early buildings.

B. Definitions

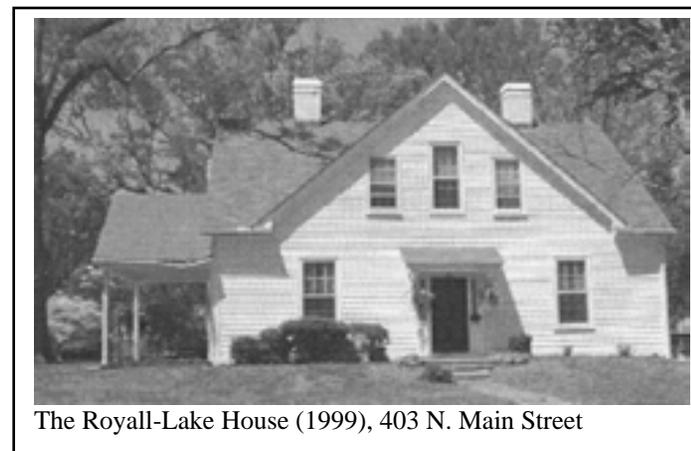
- 1) **Anta (pl. Antae):** A pier, square in plan and having a capital. This was sometimes used in Neoclassical architecture in place of a round column.
- 2) **Arcade:** A row of arches with their supporting columns or piers.
- 3) **Arch:** A structure formed of wedge-shaped stones, bricks, or other objects laid so as to maintain one another firmly in position. A rounded arch generally represents classical or Romanesque influence while a pointed arch denotes Gothic influence.
- 4) **Colonnade:** A row of columns which supports an entablature. This is a feature of Greek Revival and Neoclassical styles.
- 5) **Column:** A vertical shaft or pillar that supports or appears to support a load.
- 6) **Crenellated Pediment:** A triangular gable end with alternating indentations and raised portions.

- 7) **Cupola:** A small vault on top of a roof, sometimes spherical in shape, sometimes square with a mansard or conical roof.
- 8) **Dormer:** A structure containing a window (or windows) that projects through a pitched roof.
- 9) **Eave:** The part of a sloping roof that projects beyond a wall.
- 10) **Entablature:** A horizontal member divided into triple sections consisting from bottom to top of an architrave (symbolizing a beam), a frieze, usually ornamented, and a cornice.
- 11) **Foundation:** The supporting portion of a structure below the first floor construction, or below grade, including footings.
- 12) **Frontispiece:** A decorated chief pediment or ornamental details on the bay of a building.
- 13) **Half-Timbered:** Descriptive of buildings of the Tudor style (16th and 17th centuries) which were built with strong timber foundations, supports, knees, and studs and whose walls were filled with plaster or masonry materials such as brick. In the United States, buildings in the Tudor Revival style of architecture feature half-timbered construction.
- 14) **Gable:** The portion, above the eave level, of an end wall of a building with a pitched or gambrel roof. Under a pitched roof this takes the form of a triangle.
- 15) **Lantern:** A structure raised above a roof or dome to admit light to a space below.
- 16) **Parapet:** A low wall along a roof, directly above an outer wall.
- 17) **Pediment:** A triangular gable bounded on all sides by a continuous cornice. This form is characteristic of classical architecture.
- 18) **Porte Cochere:** A roofed passageway large enough for wheeled vehicles to pass through.
- 19) **Rotunda:** A building or area of a building covered by a dome.
- 20) **Spandrel:** The space between an arch and the rectangle that encloses it.

- 21) **Stepped Gable:** A gable concealing the end of a roof with a stepped parapet.
- 22) **Turret:** A small tower, usually corbeled from a corner.

C. Maintenance, Repair, and New Construction

These elements of composition, whether singly or in combinations, are usually hallmarks of architectural styles. Where they occur, their maintenance and timely repair is essential to retaining the character of the building. They are also elements that can, in many cases, be translated into contemporary forms, providing a basis for continuity in contemporary additions to early buildings or in new construction in early neighborhoods.



D. Composition: Guidelines

TO DO:

- 1) Retain and preserve the integrity of the overall composition of the historic building, such as the architectural style, basic shape and form, type of roof, fenestration pattern, and scale.

NOT TO DO:

- 1) Don't add an architectural element that is incongruous with the original character and quality of the historic property or the special character of the historic district.
- 2) Don't remove or conceal any character defining element of composition (except for reasons of safety) important to the building or district.
- 3) Don't introduce a storefront or commercial installation on the ground floor, such as an arcade, which alters the architectural and historic character of the building and its relationship with the street or its setting.



The Brewer-Jackson House (1999), 421 N. Main Street





The Brewer-Mercer House (1999) 229 N. Main Street

IX: Materials

Materials are the substance or matter that are used to construct a building or from which elements of a building are fabricated. The following list of materials illustrates those most commonly found in early Wake Forest buildings and neighborhoods.

A. Wood

The variety of ways in which wood can be shaped and finished make it a typical material for creating a range of architectural elements and details that contribute to the character of historic buildings. Through carving, sawing, planing, and splitting, wood can be fashioned into such diverse elements as columns, balustrades, cornices, shingles, clapboards, panels, flooring, and brackets. Wooden features often add decorative or stylistic detail to historic structures while functioning in quite pragmatic ways.

Wood was the most commonly used building material in early Wake Forest neighborhoods. Most of the homes in these areas are of “balloon frame” construction, a Victorian era building innovation that set up all exterior bearing walls and partitions with single vertical studs and nailed the floor joists to those studs. This was an important advance in building technology as it allowed the rapid construction of larger numbers of houses by fewer men.

Before this, buildings exhibited “post and beam” framing; that is, a system in which the horizontal members rest on posts that were separate from walls. This method, while time-consuming, produced very sturdy buildings and occasionally one finds building contracts from the Victorian era that specify this earlier type of construction. Clapboard, flush siding, board and batten, or textured siding was then applied to the exterior and, depending on the styles of the era and the taste and financial conditions of the owner, decorative details were added.

B. Brick

Brick was a more expensive building material than wood and therefore is not as common in early Wake Forest neighborhoods. Old brick walls have certain characteristics which should be preserved and enhanced. Properly cared for, a brick wall develops a patina with age and possesses a definite maintenance advantage over wood siding.

Brick is laid in a pattern known as bond. Most buildings display the pattern called common bond that features a variety of stretcher / header ratios. Before the use of wire wall reinforcement became widespread, bond was an important element in the stability of brick construction. Today it creates a pattern of order and repetition that adds a pleasing element to the facade of a brick building.

C. Stone

Building stones vary in type from hard igneous rock such as granite to soft sedimentary types like sandstone. Many times stone will develop a protective skin or patina that is a desirable characteristic in an early building. Surface treatments for stones vary. Many times granite bears the tool marks that are left when the stone is dressed while marble may exhibit a honed, smooth, polished face. Stone has always been a favored medium for conveying architectural detail such as ornate carving.

Rusticated stone is a common detail treatment. This can give the face of the building a solid, durable look that complements the material. Stone is also used as an accent on early brick buildings in the form of sills, quoins, pediments, and other architectural elements. A small number of early Wake Forest residences are stone. These were intended to display rustic qualities and usually a random “fieldstone” application was used to give that effect.





The Carlyle-Mackie House (1999), 113 Juniper Avenue

X: Wood and Siding

A. Exterior Siding

Exterior siding is the most common architectural element traditionally fabricated from wood. There are a multitude of forms that wood siding can take. It can be clapboard, flush, textured, or board and batten. Many times the form of siding displayed on an early Wake Forest building is one of the hallmarks of its style. Textured wall shingles on early Wake Forest buildings were usually painted, sometimes the same color as the rest of the siding and sometimes in a complementary color to add emphasis. There also are many commercial imitations of wood siding of which one should be aware. Below is a list of siding definitions.

B. Definitions

- 1) **Aluminum Siding:** Sheets of exterior architectural covering, usually with a colored finish, fabricated from aluminum, a lustrous silver-white, nonmagnetic, lightweight metal which is very malleable, possesses good thermal and electrical conductivity, and is a good reflector of heat and light. Aluminum siding was developed in the early 1940's and became increasingly common in the 1950's and '60's.
- 2) **Asbestos Siding:** A dense, rigid board containing a high proportion of asbestos fibers bonded with portland cement; resistant to fire, flame, or weathering; and has a low resistance to heat flow. It is usually applied as large overlapping shingles. Asbestos siding was applied to many buildings in the 1950's.
- 3) **Asphalt Siding:** Siding manufactured from saturated construction felts (rag, asbestos, or fiberglass) coated with asphalt and finished with mineral granules on the side exposed to the weather. It sometimes displays designs seeking to imitate brick or stone. Asphalt siding was applied to many buildings in the 1950's.
- 4) **Board and Batten:** Closely applied vertical boards, the joints of which are covered by vertical narrow wooden strips, and usually found on Gothic Revival style buildings.

- 5) **Clapboard:** Horizontal wooden boards, tapered at the upper end and laid so as to cover a portion of a similar board underneath and to be covered by a similar one above. The exposed face of clapboard is usually less than six inches wide. This was a common outer face of 19th and early 20th century buildings.
- 6) **Composition Board:** A building board usually intended to resemble clapboard, fabricated from wood or paper fabric under pressure and at an elevated temperature, usually with a binder. This form of board is destroyed easily when penetrated by moisture and is not appropriate for exterior uses.
- 7) **Fiber Cement Siding:** A non-combustible exterior siding fabricated with portland cement, ground sand, and cellulose fiber (such as “Hardiplank”).
- 8) **Flush Siding:** Wooden siding which lies on a single plane. This was commonly applied horizontally except when it was applied vertically to accent an architectural feature.
- 9) **German Siding:** Wooden siding with a concave upper edge which fits into a corresponding rabbet in the siding above.
- 10) **Plywood Siding:** Laminated wood sheets fabricated of veneers bonded together with waterproof glue. The exposed surface is usually grooved to resemble vertical strip lapboards or board and batten in reverse relief.



- 11) **Vinyl Siding:** Sheets of thermal plastic compound made from chloride or vinyl acetates, as well as some plastics made from styrene and other chemicals, usually fabricated to resemble clapboard.
- 12) **Textured Siding:** Wood cut in various flat patterns, such as half-rounds or scallops, and applied to portions of facades to create a picturesque or romantic look. This treatment was generally used in Queen Anne style buildings. Surface textures are often found in the following designs:
- a) **Composite:** A design formed by two overlapping rows of scallop-shaped shingles overlapped by a row of diamond-shaped shingles overlapped by two overlapping rows of scallop-shaped shingles.

- b) **Diamond**: A design formed by overlapping rows of shingles shaped like vertical parallelograms.
- c) **Scallop**: A design formed by overlapping rows of shingles shaped like a rectangle with rounded ends; sometimes called “fish scale”.
- d) **Staggered Butt**: A design formed by overlapping rows of alternating small and large rectangular-shaped shingles.

C. Maintenance and Repair

Wood is a traditional building material with good insulating qualities. It will last indefinitely if it is kept properly caulked and painted. Adequate drainage, ventilation, and a protective coat of paint are all essential to preserving historic wood features. Because wood expands with the introduction of moisture, caulks and flexible sealants are typically used to seal wood joints and prevent the entry of water beneath the wood surface. Paints and coatings on the wood surface protect it from deterioration due to ultraviolet light as well as moisture. The guidelines for paint provide additional information on the preparation and the maintenance of painted surfaces.

Stains or evidence of mildew indicates that a wood surface is remaining damp, inviting insect and fungal attacks as well as wet rot. Wooden elements should be sloped to shed water, and roof and gutter systems should provide additional protection to the surface. Chemical treatment of wooden members either during manufacture or following installation can enhance wood’s ability to resist rot and insect infestation. Some chemical treatments result in an initial resistance to surface paint films, requiring a weathering period of a few months before painting. Chemical treatment is particularly advantageous if the wooden element is to remain unpainted or is in direct contact with the ground.

The repair of deteriorated wooden elements or details may require partial replacement of the original wood or the introduction of a wood consolidant to stabilize the deteriorated section and prevent further decay. Wood consolidants are appropriate when they are used to repair complex or unique wood elements that cannot easily be replicated or when replacement of the deteriorated section of a larger element would be difficult to achieve in place.

Wood siding and details on a building should be maintained and repaired in a manner that enhances its inherent qualities and maintains as much of its original character as possible. A regular maintenance program should include:

- Inspect wood routinely for signs of moisture damage, mildew, termites, and other insect or fungal infestation.
- Recaulk or seal vertical wood joints properly to prevent moisture infiltration. Do not seal horizontal joints in lap siding.
- Ensure adequate drainage to prevent water from collecting on flat, horizontal surfaces or decorative elements.
- Preserve protective paint films on wood surfaces to minimize damage from ultraviolet light and moisture.
- Clean painted wood surfaces routinely, using the gentlest effective method, and repaint when the paint film is damaged or deteriorated.

D. Use of Artificial Siding

1) Results of Use of Artificial Siding

Resurfacing a wooden building with synthetic siding materials, such as aluminum, vinyl, asbestos, or asphalt, is usually a contrived and short-sighted solution to a maintenance problem. It does grave damage to the character of most early buildings. Problems can be multiplied on wooden buildings covered with aluminum or vinyl siding. Indeed, such materials are rarely maintenance free as advertised. They tend to fade, dent, and scratch.

Many synthetic sidings destroy the aesthetic appeal of the building to which they are applied. At their best, they conceal the historic fabric of a building and at their worst, they remove or destroy with nail holes the materials and craftsmanship which reflect our cultural heritage. Owners are encouraged to avoid the use of such materials and maintain the wood siding of the buildings instead.

2) Negative Characteristics of Artificial Siding

The intent of regulations and guidelines for the Wake Forest Historic District and historic properties is to insure the exterior form and architectural integrity of buildings within its boundaries. There is considerable visual difference in the quality of wood siding compared with aluminum or vinyl siding. Therefore, the character and integrity of a building can be diminished when artificial siding is applied.

Other important characteristics of aluminum and vinyl siding are:

- The adding of aluminum or vinyl over wood siding may likely cause moisture to be trapped and wood to deteriorate.
- The insulation value of artificial siding may be lower than wood.
- If damaged, aluminum and vinyl siding must be removed and replaced.
- Colored artificial siding eventually fades and must be painted like wood siding.
- Vinyl has much lower melting and flash points than wood.

3) Use of Artificial Siding Meeting Standards

As a general policy, the Wake Forest Historic Preservation Commission discourages the use of artificial siding but will issue Certificates of Appropriateness for its use if the following standards are met:

- Corner boards for artificial siding should be the same size as the existing corner board.
- All new window and door trim should be the same width as the original trim.

- Drip caps or any other architectural features should be covered in a manner that will allow for the same curvature and proportion after coverage as before coverage.
- All artificial siding should be run in the same direction as the original siding.
- Frieze and soffit boards should be covered in the same width as exists on the structure.
- All detailing which is not flush with the siding or surface should bear the same proportion after coverage as before coverage.
- All exterior facade shingles should remain and not be covered or altered.
- All decorative porch posts, railings, brackets, cornices, and cornice trim should remain uncovered.
- All existing shutters should be returned to their original location after the artificial siding is applied.
- All masonry should remain uncovered.

E. Wood and Siding: Guidelines

TO DO:

- 1) Retain and preserve historic wood fabric, such as clapboards, trim, and details, as well as their paint colors and finishes. If replacement is necessary, use new wood that matches the original in dimension, shape, detail, and texture.
- 2) Retain and preserve all wood features that are important in defining the overall historic character of a building or site.
- 3) Protect and maintain wood surfaces and elements in appropriate ways:
 - Inspect wood surfaces and features regularly for signs of damage from moisture, insects, fungi, or mildew.

- Monitor the condition of wood surfaces and features. (Note: Both the peeling of paint and the widening of wood joints may create the false appearance of deteriorated wood.)
 - Keep wooden joinery adequately sealed to avoid water penetration.
 - Maintain a slope on horizontal wood surfaces, such as porch flooring or window sills, to ensure that water does not collect but runs off.
 - Maintain roofs, gutters, and downspouts to protect wood surfaces and features from water damage.
 - Use the gentlest method effective to prepare previously painted wood surfaces for repainting.
 - Prime all exposed wood surfaces before painting.
 - Repaint, as necessary, the wood surfaces of historic building exteriors in colors appropriate to the historic building.
 - Maintain a sound paint film or other coating on wood to prevent damage from ultraviolet light and moisture.
- 4) Repair wood features and surfaces, when deteriorated or damaged, through accepted preservation methods including patching, splicing, piecing, consolidating, or reinforcing.
 - 5) Use chemical strippers and heat guns with caution! They can be dangerous and harm wooden materials. Be sure to follow the manufacturer's directions in the use of any caustic substance or potentially dangerous equipment.
 - 6) If a chemical stripper raises the grain of the wood or roughens the surface texture, sand the surface before painting.
 - 7) Replace deteriorated or damaged wood features and surfaces, if they cannot be repaired, to match the original in material, design, detail, and dimension. If feasible, limit replacement to only the deteriorated portion rather than the entire feature.

- 8) Replace a missing wood feature with a new feature based upon accurate evidence of the original or a new design that is compatible with the historic building in material, size, scale, and detail.
- 9) When restoring or rehabilitation a building with siding, retain as many of the original wooden shingles as possible and replace lost or damaged ones with the same type and in the same design. Removing or covering original siding on early buildings can subvert the intentions of the original designer and harm the character and unique quality of the building.
- 10) If possible, remove synthetic or metal siding that covers original wooden siding and repair the original material as necessary. Remove later siding carefully so that the wood is not damaged.

NOT TO DO:

- 1) Don't install asbestos or asphalt siding or shingles for walls.
- 2) Don't use wood shakes or shingles that are incongruous with the design of the building.
- 3) Don't use different materials and textures on different parts or stories of the house unless one is faithfully restoring or reproducing the original facade treatment of a structure.
- 4) Don't use sheets of plywood siding.
- 5) Don't install siding which appears anachronistic to the historic property, building, or to the special character of the district.
- 6) Don't use clapboard siding with an exposed face exceeding six inches or replace siding with that of a drastically different width or form.
- 7) Don't make use of any texture, material, design, use, or arrangement incongruous with the historic structure, or the special character of the historic district.

- 8) Don't clean wood surfaces with high-pressure methods, such as sandblasting and waterblasting.
- 9) Don't replace or cover historic wood features or materials with contemporary substitute materials such as aluminum, vinyl, or masonite, unless care is taken to protect the original materials and important character defining details remain exposed.



The South Brick House (1999), 112 South Avenue

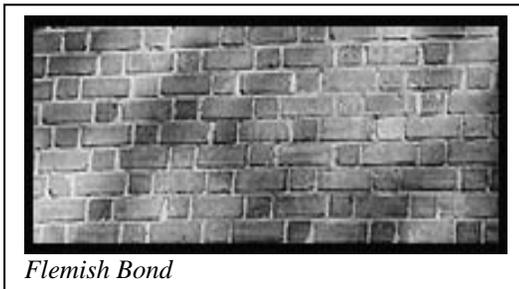
XI: Masonry: Brick and Stone

A. Masonry

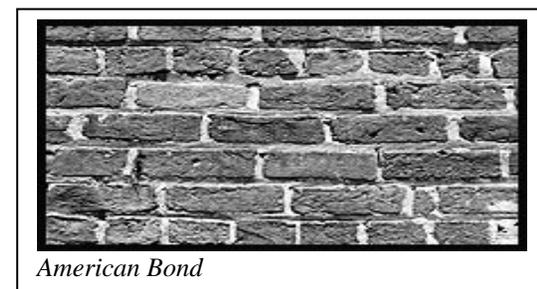
Brick, stone, tile, terra-cotta, slate, concrete, stucco, and mortar are all typical masonry materials found on the exterior of historic buildings. Whether used to face the exterior walls of a building, to construct a foundation, clad a roof, or surface a walkway, the applications and forms of masonry along with the texture, scale, color, bonding pattern, joints, and the detail of masonry surfaces all enhance the architectural character of the building and district as a whole. Brick and stone are important building materials in the district.

B. Brick: Definitions

1) **Bond:** The laying of bricks or stones regularly in a wall according to a recognized pattern for strength. Masonry bond is essential to brickwork when wire reinforcement is not used.



a) **Common Bond:** Also called American Bond; a brick wall pattern in which the fifth, sixth, or seventh course is a header course.



b) **English Bond:** Brick walling in which alternate courses are composed entirely of stretchers or entirely of headers.

c) **Flemish Bond:** Brick walling in which every course is composed of alternating headers and stretchers.

- d) **Running Bond:** A common contemporary pattern of continuous stretcher courses with no headers. Used only with single wythe walls or reinforced masonry.
- 2) **Bond Course:** A course of headers.
- 3) **Brick:** In temperate climates, bricks are made of clay mixed with coarser materials such as silt or sand and burnt, not baked, in a kiln. The common standard brick is now about 7-3/4 X 3-5/8 X 2-1/4 inches, but many other sizes exist.
- 4) **Brick Veneer:** An outer covering, usually for a timber building, consisting of a single wythe brick wall attached to the supporting wall with ties.
- 5) **Courses:** Parallel layers of bricks, stones, blocks, slates, tiles, shingles, etc., usually horizontal, including any mortar laid with them.
- 6) **Header:** A brick laid across the thickness of a wall to bond together different wythe of a wall; the exposed end of a brick.
- 7) **Hydrated Lime:** Quicklime which has been submerged in water to make lime putty.
- 8) **Joints:** The mortar between adjacent bricks or stones.
- a) **Concave Joint:** A durable mortar joint, hollowed out by drawing a 1/2 inch diameter bar tool along it before the mortar has cured (i.e. while green). This is the most common joint used today.
- b) **Flat Joint:** A mortar joint whose surface is flush with the brickwork, usually used for concealed or unfinished surfaces.
- c) **Grapevine Joint:** An archaic joint similar to a concave joint with a groove scribed into the center of it; rarely used after Colonial times.
- d) **Keyed Joint:** Concave pointing of a mortar joint.
- e) **Weather-Struck Joint:** A mortar joint smoothed off by pressing the trowel in at the upper edge so as to throw rain out to the face of the brick.

9) **Mortar:** A mixture of Portland cement, lime putty, and sand in various proportions used for laying bricks or stones. Until the use of hard Portland cement became general, the softer lime-clay or lime-sand mortars and masonry cement were common.

10) **Pointing:** Raking out deteriorated mortar joints and filling into them a surface mortar to repair the joint.

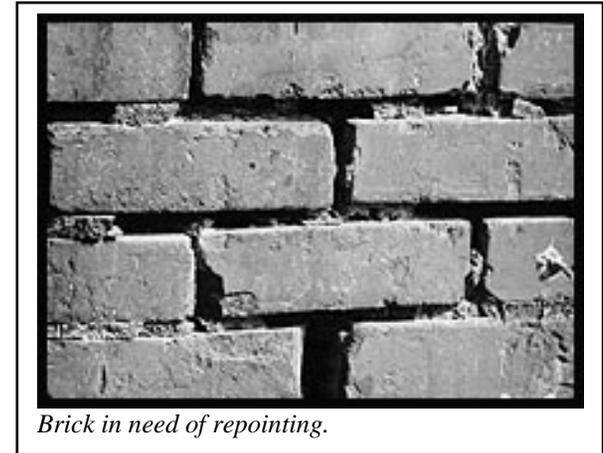
11) **Portland Cement:** A very hard and strong hydraulic cement (one that hardens under water) made by heating a slurry of clay and limestone in a kiln.

12) **Sandblast:** An abrasive method of cleaning bricks, masonry, or wood that involves directing high-powered jets of sand against a surface. Sandblasting damages wood or masonry surfaces.

13) **Stretcher:** A brick or stone laid with its length parallel to the length of a wall.

14) **Waterblast:** Similar to sandblast except that water is used as an abrasive. Like sandblasting, high pressure water jets can damage wood and masonry surfaces.

15) **Wythe:** Parallel vertical layers of masonry units that make up the thickness of a wall.



C. Stone: Definitions

1) **Ashlar:** A squared building stone.

2) **Dressed:** Descriptive of stone, brick, or lumber which has been prepared, shaped, or finished by cutting, planing, rubbing, or sanding one or more of its faces.

- 3) **Granite:** A crystalline silicate rock having visible grains. In the building stone industry this includes gneiss and igneous rocks that are not granite in the strict sense.
- 4) **Honed Finish:** A very smooth stone surface, just short of polished, imparted by a rubbing process, either by hand or mechanical.



- 5) **Limestone:** Rock of sedimentary origin composed principally of calcite or dolomite, or both, and used as building stone or crushed-stone aggregate or burnt to produce lime.
- 6) **Marble:** A metamorphic rock composed mainly of calcite or dolomite that will polish. The commercial term includes many dense limestones and some rock dolomites.
- 7) **Rustic:** Descriptive of rough, hand-dressed building stone, intentionally laid with high relief, used in modern structures of rural character.
- 8) **Rusticated:** Cut stone having strongly emphasized recessed joints and smooth or roughly textured block faces. This style is used to create an appearance of impregnability in public buildings, banks, and the like.
- 9) **Sandstone:** Sedimentary rock composed of sand-sized grains naturally cemented by mineral materials. In most sandstone that is used for building materials, quartz grains predominate.

D. Maintenance and Repair

1) Masonry (In General)

- a) **Deterioration:** Masonry surfaces are relatively long-lasting and require little maintenance. Moisture is the most common cause of deterioration in masonry. If water can enter the wall, the roof, or the foundation through loose masonry joints or cracks, it will cause additional damage as it works its way through the structure. Typically, mortar joints slowly deteriorate over a period of years because of exposure to the elements. The deterioration allows moisture to penetrate brick

walls or foundations. Consequently, the life of a brick or stone wall depends on proper maintenance of its mortar joints.

b) **Cleaning:** Heavy soiling or vegetation that allows moisture to remain on a masonry surface contributes to the deterioration of masonry elements. If cleaning is necessary, the gentlest method possible should be used. Periodic cleaning with simple techniques, such as steam cleaning or low-pressure water washing with or without a mild detergent, complemented by scrubbing the surface with a natural bristle brush where needed, is generally all that is necessary.

If these techniques are not successful, chemical masonry cleaners may be used. Chemical cleaners should always be tested on an inconspicuous area well in advance to determine if they cause any discoloration or damage to the masonry.

High-pressure cleaning techniques, such as sandblasting and waterblasting, because of their abrasive nature, permanently damage the surface of historic masonry and accelerate its deterioration. Consequently, such techniques are not appropriate in the historic district.

c) **Pointing:** The process of replacing deteriorated mortar joints with new mortar is called repointing. All loose and deteriorated mortar is carefully raked out of the joint by hand and new mortar is inserted. To maintain the historic character and the structural integrity of the wall the original mortar should be matched in composition, color, texture, and strength. The dimension and the profile of the original mortar joint should also be duplicated.

2) **Brick**

a) **Replacing or Adding Brickwork:** In replacing and adding brickwork to a structure, the bond should be the same as the rest of the building. The new brickwork should match as closely as possible the brick size, color, and mortar strength and color, in addition to the type and width of joint. The attention to details recommended previously under uses and arrangements of wood apply to brick.

b) **Cleaning Brick:** Many owners of early brick buildings have discovered that sandblasting or waterblasting brick surfaces or cleaning them with harsh chemical solutions causes rapid deterioration; hence, the advice given above on using the gentlest method possible. The best way to clean brick masonry is with low-pressure water and natural bristle brushes. Common paint removal chemicals may discolor brick masonry. However, if chemicals must be used, they should be a type that will not harm vegetation and that can be thoroughly removed with clear water and soft bristle brushes.

c) **Pointing:** Pointing, the removal of old mortar to replace it, occasionally is necessary for the maintenance of a brick building. It is a process that should be undertaken with the utmost care to match the composition and color of the mortar joints. Historic buildings should not be repointed with mortar containing a high content of Portland cement. This can create a bond that is stronger than the original material and cause deterioration because the difference in the porosity and hardness of the brick and mortar will cause differences in expansion and contraction.

Pointing is the accepted way to maintain masonry. Application of waterproof coatings and sealers is harmful since these products can trap moisture in the surface of the brick and cause erosion of the brick face.

Widening the joints or replacing old mortar with a stark, pure white material can give the facade of a building a strange, mottled appearance. When pointing a building, the rule is to make every effort to match its original appearance. A good, solid building usually displays good, solid reasons for its original design and arrangements of materials. Colored sands or mineral pigmented mortar mixes can be used to help match new mortar to original mortar. Organic or chemical pigments should be avoided since they may fade.

3) **Stone**

a) **Cleaning Stone:** Although it is considered a durable material, stone should also be cleaned gently. Sandblasting and other abrasive methods of cleaning are especially detrimental to stone surfaces because they erode the surface coat or patina. All stone surfaces should be cleaned by the gentlest means possible. Soap and water with natural bristle brushes are the best, though time consuming. Limestone and marble are vulnerable to cleaners containing acid. The surfaces of some stone buildings are starting to display the detrimental effects of acid rain, an increasingly common phenomenon that returns sulfuric acid, a product of burning fossil fuels, to the earth in rainfall. Exposure to this can cause staining and discoloration on some buildings and can dissolve the surfaces of certain vulnerable stones.

E. Masonry: Guidelines

TO DO:

- 1) Retain and preserve historic masonry fabric on walls, foundations, and roofs, such as brick, stone, terra cotta, stucco, and concrete, as well as their pattern, bond, form, texture, color, and detail.
- 2) Retain and preserve all masonry features that are important in defining the overall historic character of the building or site.
- 3) Retain and repair masonry features and surfaces, when deteriorated or damaged, through accepted preservation methods, including patching, piecing-in, or consolidating.
- 4) Replace deteriorated or damaged masonry features and surfaces, if they cannot be repaired, to match the original in material, design, detail, color, pattern, texture, and dimension. If feasible, limit replacement to only the deteriorated portion rather than the entire feature. If replacement of bricks is necessary the original bond should be used.
- 5) Replace a missing masonry feature with a new feature based upon accurate evidence of the original or a new design that is compatible with the historic building in material, size, scale, and detail.
- 6) Consider substitute materials only if the original materials are not technically feasible.
- 7) Maintain and protect masonry features and surfaces through appropriate traditional methods:
 - Monitor masonry for cracks and signs of moisture damage.
 - Ensure that water does not collect at the base of a masonry foundation or chimney.
 - Clean masonry only if necessary to remove heavy soiling or prevent deterioration.
 - Eliminate any vegetation that may cause structural damage or hinder ventilation and surface drainage of a masonry element.
 - Use the gentlest effective method to clean historic masonry features and surfaces. Cleaning with a low-pressure (500 pounds per square inch or less) water wash, using detergents and natural bristle brushes, is preferred over harsher methods.
 - Test any proposed cleaning method on an inconspicuous sample area first.

8) If cracks in mortar joints, crumbling mortar, loose brick, damp walls, or damaged plaster indicate deterioration, repoint mortar joints of masonry surfaces in appropriate ways:

- Carefully remove deteriorated mortar by hand-raking the joints. Using electric saws or hammers can damage the masonry.
- Repoint the joints with new mortar to match the original mortar in composition, strength, color, and texture. Replacing a softer mortar with one high in Portland cement content can cause serious damage to existing masonry.
- Match the appearance of the original mortar joint in dimension and profile.



9) Repaint, as necessary, previously painted masonry surfaces of historic building exteriors in colors appropriate to the building.

NOT TO DO:

- 1) Don't apply paint or other coatings to unpainted historic masonry surfaces that were not painted historically.
- 2) Don't remove paint from masonry surfaces unless the brick is of high quality and was intended to be exposed. Undertake removal only with a chemical paint remover specifically formulated for masonry. ***Always test the remover on an inconspicuous area or a test panel first.***
- 3) Don't use any type of stone material that is incongruous with the historic property or the special character of the historic district.
- 4) Don't repoint with mortar or stucco mixes of Portland cement content which are harder than the existing building materials.
- 5) Don't sandblast or waterblast a brick, stone, or other masonry surface. Such cleaning techniques permanently damage the

masonry surface and accelerate deterioration.

- 6) Don't use chemical cleaning products which have an adverse chemical reaction with the brick or stone.
- 7) Don't apply waterproofing or water repellent coatings or other treatments unless required to solve a specific technical problem that has been studied and identified. Use such coatings only if masonry repairs have failed to eliminate water penetration problems.
- 8) Don't use brick or stone laid in a pattern or bond incongruous with the historical characteristics of the property or with the special character of the historic district.
- 9) Don't replace or cover historic masonry features with contemporary substitute materials.
- 10) Don't use oversized brick, terra-cotta, or glass bricks unless the building is of a style that exhibits these materials.
- 11) Don't use colored brick or brick material, such as broken tile or stone material that is incongruous with the historic property or the special character of the historic district.
- 12) Don't use any type of siding material or shingles with a repetitive design that seeks to imitate brick or stone.
- 13) Don't use mortar joint widths, profiles, textures, or colors which do not match existing brick, stone, or other masonry joints.



The Mackie-Lake House (1999), 528 N. Main Street

XII: Architectural Metals

A. Metals

Cast iron, wrought iron, copper, tin, sheet metal, terneplate, aluminum, steel, and bronze are all traditional architectural metals that contribute to the architectural character of historic buildings through their distinctive forms, finishes, and details. Architectural metals that have been cast, wrought, pressed, or rolled, are used to fabricate storefronts, streetlights, fences, gates, columns, balustrades, hardware, cornices, gutters, downspouts, railings, grills, pressed-metal shingle roofs, and standing-seam roofs.

B. Definitions

- 1) **Cast Iron:** A commercial alloy of iron, carbon, and silicon that is cast in a mold and is hard, brittle, nonmalleable, and incapable of being hammer-welded, but is more easily fusible than steel.
- 2) **Terneplate:** Sheet iron or steel coated with an alloy of about four parts lead to one part tin.
- 3) **Wrought Iron:** A commercial form of iron that is tough, malleable, and relatively soft. Due to its workability it is often fashioned into artistic forms and used for decorative purposes, as well as functional items such as fences, railings, and gates.

C. Maintenance and Repair

Recommended methods for maintaining and protecting architectural metal surfaces and features through traditional approaches include:

- Inspect metal routinely for signs of moisture damage, structural failure, corrosion, galvanic action, and paint film failure.

- Ensure adequate drainage to prevent water from collecting on flat, horizontal surfaces and decorative elements.
- Keep metal roofs, gutters, and downspouts cleared of leaves and debris.
- Clean metal surfaces to remove corrosion and to prepare for repainting using the gentlest effective method.
- Repaint previously painted metal surfaces as necessary to prevent corrosion.



As with all building materials, moisture is a major cause of deterioration of architectural metals. Although some metals, including copper and brass, create their own protective patina, ferrous metals corrode when exposed to the atmosphere, making a protective paint coating essential to preserve them. Consequently, routine maintenance of painted metal surfaces includes prompt attention to any signs of deterioration of the paint film and subsequent corrosion. If the metal surface has begun to flake and rust, it must be thoroughly cleaned before repainting. Because the corrosion continues as long as the metal is exposed to air, immediate painting with a metal primer after cleaning is essential to prevent deterioration of the metal.

Cleaning techniques vary according to the specific metal. Nonabrasive chemical solutions should be used on soft metals such as lead, tin, copper, zinc, and terneplate. It is always best to test any chemical cleaner on an unobtrusive area to see if it will discolor or damage the metal surface. Copper and bronze surfaces develop a protective greenish patina over time and it is generally desirable to maintain that patina and the protection that it provides.

Wire brushing and sanding by hand are appropriate techniques for cleaning hard metals, such as steel and cast or wrought iron. A more abrasive technique, such as low-pressure dry-grit blasting, should be used only if gentler techniques are unsuccessful and if a test area reveals no damage to the metal surface.

If repair of a deteriorated metal element requires replacement of a metal section, it is important to match the original metal in kind to avoid corrosive galvanic reactions where the metals join.

D. Architectural Metals: Guidelines

TO DO:

- 1) Retain and preserve original architectural metals, as well as their finish, pattern, form, detail texture, and color.
- 2) Retain and preserve architectural metal features that are important in defining the historic character of a building or site, including fences, gates, cornices, rails, roofs, gutters, downspouts, and hardware.
- 3) Retain and preserve historic metal fabric whenever possible. If replacement is necessary, use new metal that matches the original in composition, dimension, shape, detail, and texture. Consider substitute material only if the original material is not technically feasible.
- 4) Protect and maintain historic architectural metals in appropriate ways:
 - Monitor metal for cracks and signs of deterioration or corrosion.
 - Clean metal when necessary to remove corrosion before repainting or coating.
 - Maintain a sound paint film or other coating on metals that corrode.
- 5) Use the gentlest effective method to clean historic architectural metals, including appropriate chemical solutions for soft metals and wire brushing or hand sanding for hard metals.
- 6) Repair original architectural metal features and surfaces, when deteriorated or damaged, through accepted preservation methods including patching splicing, consolidating, or otherwise reinforcing deteriorated sections.
- 7) Replace deteriorated or damaged architectural metal features and surfaces, if they cannot be repaired, to match the original in material, design, detail, and dimension. If feasible, limit replacement to only the deteriorated portion rather than the entire feature. Replace with compatible substitute materials only if replacement in the same material is not feasible.

- 8) Replace a missing architectural metal feature with a new feature based upon accurate evidence of the original or a new design that is compatible with the historic building in material, size, scale, and detail.
- 9) Repaint, as necessary, previously painted architectural metal surfaces in colors appropriate to the historic building and the historic district.

NOT TO DO:

- 1) Don't clean soft metals, such as lead, tin, copper, zinc, and terneplate, using a high-pressure technique like sandblasting. If wire brushing and handscraping prove ineffective in cleaning hard metals, such as steel, cast iron, and wrought iron, use low-pressure dry-grit blasting if it will not damage the metal surface.







The Vann-Dowda House (1999), 316 N. Main Street

XIII: Vernacular Forms

A. Vernacular Forms

Some vernacular forms, or native local forms, are more commonly found in nineteenth and early twentieth century buildings and neighborhoods than in newer construction. Other vernacular forms, such as decks, are very contemporary. The presence of vernacular forms lends distinction and character to early buildings. Because travel, commerce, and communication was more limited when these buildings and neighborhoods developed, their forms honestly reflect the needs and tastes of their local builders. One of the major needs was to adapt homes to the climate. While Wake Forest enjoys an overall temperate climate, it experiences some intense summer heat. In order to accommodate this, early home builders tried, whenever possible, to situate buildings to catch breezes. Many times early farm houses are found on knolls and oriented so that their fenestration patterns take full advantage of cooling breezes. In urban settings, the finer, more expensive neighborhoods and homes are found on ridges and high ground.

Many homes in early Wake Forest neighborhoods feature roomy porches and similar structures that function as outdoor living rooms. There are several types of porches and outdoor spaces that lend character to early buildings.

These structural elements (i.e. vernacular forms), combined with landscaping techniques, were used in the late nineteenth and early twentieth centuries, as today, to incorporate comfortable living into the regional climate. However, early forms seem to indicate different social attitudes than those existing today. Verandas and other outdoor living spaces in early neighborhoods tend to be found on or near the building's street facade. This apparently encouraged neighborly dropping-in and visiting. Today, most builders of new homes situate outdoor living space to the rear of the structure and present a formal facade to the street.

B. Definitions

1) **Arbor:** An open structure of trees or shrubs closely planted, either twined together and self-supporting or supported on a light, lattice-work frame.

- 2) **Balcony:** A projecting platform on a building, sometimes supported from below and sometimes cantilevered, and enclosed with a railing or balustrade.
- 3) **Deck:** An uncovered porch, usually at the rear of the building, popular in modern residential design.
- 4) **Florida Room:** A glass enclosed porch, usually placed in order to obtain maximum advantage of the winter sun and usually furnished with potted plants; a conservatory.
- 5) **Gazebo:** A summer house situated to take advantage of a view.
- 6) **Patio:** An open, paved court enclosed on three sides by elements of a building.
- 7) **Porch:** A covered outdoor area attached to the house, usually roofed and generally open sided with a floor and balustrades.
- 8) **Portico:** A small entrance porch or covered walk consisting of a roof supported by open columns.
- 9) **Screened Porch:** A porch or veranda space that is enclosed with woven wire cloth, or screening, to keep insects out while allowing maximum ventilation.
- 10) **Significant Landscaping:** Vegetation that is character defining to the property, to the historic district, or to the character of the town as “The Forest of Wake”, including any tree designated as a “Champion”, “Landmark”, “Meritorious”, or “Historic” tree by Wake County or the Town of Wake Forest or that would likely qualify for such designation. Non-tree vegetation is also included in this definition, such as, but not limited to, large shrubs or an historical formal garden.
- 11) **Summer House:** A garden house of light, airy design used in the summer for protection from the sun.
- 12) **Veranda, Verandah:** A covered porch or balcony, extending along the outside of a building, planned for summer leisure.

C. Landscaping and Trees

1) **Landscaping:**

Landscaping, a site element most affected by regional climate, is an important part of vernacular forms. Most early neighborhoods are shaded by a heavy deciduous tree canopy that adds great aesthetic appeal while providing a distinct cooling function. During the 19th and early 20th centuries, trees and arrangements of vegetation were often placed in such a manner as to have the greatest possible impact in cooling the structure. Many major streets were also lined with large, overhanging shade trees that made pedestrian travel more pleasant in the summer.



Mature gardens and shrubs are one of the assets that usually comes with a home in an early Wake Forest neighborhood. During the 19th century, many varieties of Oriental flowers and shrubs like camellias or flowering quince were imported to the United States and found to flourish here. Today, they are common to the area and in Wake Forest neighborhoods, are usually found in loose, informal arrangements that were preferred by Victorian-era gardeners. This preference was influenced by the “picturesque” or “Romantic” movement that originated in Great Britain and that advocated a natural, rather than stylized garden typical of the 18th century. This natural look complements the quality of early Wake Forest neighborhoods, that is, comfortable, settled, and peaceful.

2) **Trees:**

The large mature trees found throughout the Wake Forest Historic District are an important element in the appearance of the properties. The Town of Wake Forest is known for its extensive areas of stately trees and has had the distinction of being named as a Tree City annually since 1979. Homeowners should be aware of the value of these trees as a visual statement of the Town’s commitment to maintaining shaded, pleasant streets and greenways.

Tree Maintenance: Responsibility for the maintenance of trees on public property is shared by the Town of Wake Forest and the Tree Board. Homeowners are responsible for the trees on their own property. Every effort should be made to keep mature trees in good condition. Dead limbs should be promptly trimmed. New construction should be undertaken only after proper precautions have been taken to avoid damage to existing tree root systems and limbs. Consideration should also be given to the future growth patterns of existing trees. Dead trees should be promptly removed and replaced, whenever possible, with new trees. The Wake Forest Tree Board should be consulted for suggestions for appropriate types of trees for replanting in the Historic District and around historic properties.

D. Decks

The contemporary deck is a modern outdoor living space that is similar in function to the more traditional patio or terrace. Typically, decks are constructed of wood and also differ from patios in that they are usually raised above grade to align with the first floor level of a residence. Decks often are located on the rear elevation of a house and may lead down to the backyard with a series of steps.



Given the contemporary character of decks, it is a challenge to add them to historic houses in a way that does not compromise the character of the building or site. Designing a compatible deck for a historic house requires careful attention to appropriateness of size, location, finish, and detailing. In terms of size, it is important to keep the size of the deck modest in scale, so it does not overwhelm the historic house or yard. Location is equally critical. A deck that is discreetly located in a back yard, screened from public view, can often be added to a historic property without diminishing its character. It is also important to locate decks so they do not damage or cause the removal of an important site feature, such as a mature tree, back porch, or archaeological feature. In terms of finish, a stained or painted finish that complements the exterior colors of the historic structure is a more compatible selection for a new deck than the uncoated wood finish so common with contemporary decks.

Because decks are contemporary features, it is best to use simple details that are compatible in scale and proportion to the historic house instead of imitating the exterior detailing of the historic house for the rails, steps, and posts of a new deck. Traditional foundation screening techniques, such as shrubbery or lattice work, can soften the exposed framing of decks and visually tie them to the building's foundation.

When physically connecting a new deck to a historic house, it is important to limit any damage or loss to the structure. It is best to inset a deck from a building corner, to minimize the damage to building fabric as well as to diminish its visibility. Ideally, the deck should be constructed to be self-supporting and connected only in a minimal way to the house. Such an approach also provides for the removal of the deck, if so desired in the future, with limited damage or impact on the historic house.

E. Porches, Entrances, and Balconies

For both commercial and residential building, the front entrance is usually a prominent feature of the street facade. Typically Wake Forest's historic houses incorporate a front porch as well. The stylistic detailing of porches and front entrances usually accent the architectural character of the building. Features such as columns, pilaster, railings, brackets, balustrades, and architraves provide opportunities for stylistic details. Transoms, sidelight, and recessed entrances often draw attention to the front entrance as well. In addition, side porches and balconies add to the character of some historic houses.

The addition of a new entrance, porch, or balcony to a historic building must be carefully considered and added only if it can be done without compromising the building's architectural character. Such changes should be unobtrusively located on a secondary elevation, usually the rear.



The enclosure of a side or back porch also requires thoughtful consideration and should only be done if it will not diminish architectural character of the building and if the new design still retains the character of the porch.

F. Maintenance and Repair

Given their exposure to the elements, decks, porches, and balconies are especially vulnerable to weathering and their preservation requires diligent maintenance. If deterioration or damage of elements of these vernacular forms requires replacement, it is best to replace historic features in kind. Often, replication of the original feature is not difficult either through custom millwork or even combining readily available stock elements.

Appropriate cleaning and repair methods will follow the guidelines for the specific surface material or finish described elsewhere in these design guidelines.

G. Vernacular Forms: Guidelines

TO DO:

- 1) Every effort should be made to place decks and swimming pools to the rear of the building, or other location not visible from the street, and screen them to reduce the possible intrusive effect on the character of the neighborhood, as well as for reasons of safety and privacy. Decks should be incorporated into the facade of the house by screening under them with an architectural element such as lattice or with vegetation that displays a good screening quality.
- 2) Install decks in locations that do not compromise the overall historic character of the building, its setting, and significant site features.
- 3) Locate the deck so that it does not damage, obscure, or diminish significant features of the building or site.
- 4) Design and detail decks and their related steps and railings to be compatible with the historic building in terms of materials, scale, proportion, and color.
- 5) Attach decks so that damage to the historic fabric of the building as well as its significant details and features is minimized. Construct decks so they are structurally self-supporting and could be removed in the future with minimal damage to the historic building.
- 6) Limit damage to significant site features, such as mature trees, by minimizing any site grading or excavation related to the construction of a deck. Protect the site during construction from damage due to the use of heavy equipment or other construction related activities.
- 7) Retain and preserve porches, entrances, and balconies that are important in defining the overall historic character of a building, including their functional and decorative features.

- 8) Maintain and protect features, surfaces, and details through appropriate traditional methods. Recoat, as necessary, previously painted or stained features in colors appropriate to the historic building.
- 9) Repair features and surfaces, when deteriorated or damaged, through accepted preservation methods.
- 10) Replace deteriorated or damaged features and surfaces, if they cannot be repaired, to match the original in material, design, detail, and dimension. If feasible, limit replacement to only the deteriorated portion rather than the entire feature. Consider using a compatible substitute material only if matching the original material is not feasible.
- 11) Replace missing features with new features based upon accurate evidence of the original or a new design that is compatible with the historic building in material, size, scale, and detail.
- 12) Introduce new features with care and only on non-character defining elevations and in locations that do not compromise the overall historic character of the historic building or damage distinctive wall materials or details.
- 13) Consider the enclosing of a historic side or rear porch only if the visual character of the porch can be retained.

NOT TO DO:

- 1) Don't install balconies, porches, porticos, verandas, decks, patios, or steps to a building that are incongruous with the historic character of the building or the special character of the historic district.
- 2) Don't install a deck if it will require the removal of a significant building or site feature, such as a porch or mature healthy tree.
- 3) Don't remove or alter balconies, porticos, patios, porches, verandas, or steps that are appropriate to the building's development and style.
- 4) Don't strip porches, verandas, or steps of original material (unless it is essential for safety) and architectural features, such as hand rails, balusters, columns, brackets, and roof decorations of wood, iron, cast iron, terra-cotta, tile, and brick, without replacing them with the same material.
- 5) Don't make substantial changes to the appearance of the site by removing major landscape elements such as open spaces, swales, vistas, or mature healthy trees; or by failing to provide screening elements for swimming pools and decks.
- 6) Don't enclose front porches or other prominent entrances, porches, or balconies.







The Wait-Smith House (1999), 315 N. Main Street

XIV: Foundations

A. Purpose of Foundations

The foundation ties the building to its site, usually raising the body of the structure well above ground level. The height, materials, features, and details of a building's foundation can contribute to its historic character.

Foundation walls are often solid brick or stone perimeter walls or spaced masonry piers with nonstructural masonry panels between the piers. Often, decorative metal vents or pierced brickwork provide ventilation. Sometimes exposed pier foundations are used with wooden lattice panels to fill in between the piers.

B. Definitions

1. **Pier:** A vertical structural support for a building, usually of brick or stone in historical buildings and often with concrete blocks or other reinforced masonry in contemporary construction.
2. **Water Table:** A horizontal line of brick, or similar member, often worked into a decorative pattern and projecting so as to shed water.

C. Maintenance and Repair

Moisture due to improper drainage or inadequate ventilation is the most typical cause of deterioration in foundations. Another common problem is the cracking of a foundation along mortar joints due to the gradual settling or shifting of a structure over time. Tree roots or major site alterations can also damage foundations. Routine inspections of the foundation perimeter can identify such problems at an early stage.

Improper drainage results from insufficient sloping of the ground away from the foundation, allowing water to collect and gradually to erode the mortar joints in the foundation wall. Vegetation growing against the foundations wall can lead to premature deterioration of the mortar joints because it holds moisture against the foundation and its roots may begin to push into or under the foundation.



Vents and openings in the foundation wall allow ventilation of moist air that might be trapped in the foundation or crawl space and cause additional moisture damage to both the foundation itself and the structural system that it supports.

In addition to eliminating the cause of moisture problems, repairing deteriorated mortar joints is essential in preventing further foundation problems. Such repair involves removal of loose, crumbling, or cracked mortar and repointing the mortar joint with new mortar of comparable strength, color, and composition. The new mortar joint should match the original joint in appearance and dimension. Proper repointing will

extend the life of a foundation wall and prevent serious damage that might require replacement of brickwork. The guidelines for masonry offer more information on this process.

D. Foundations: Guidelines

TO DO:

- 1) Retain and preserve the original form, pattern, color, and texture of historic foundations.
- 2) Retain and preserve all architectural features that are character-defining elements of the foundation, such as decorative vents and grilles, access doors, lattice panels, water tables, and steps.
- 3) Retain and preserve historic foundation materials whenever possible. If repair or replacement is necessary, use new materials that match the historic materials in composition, size, shape, color, pattern, and texture. Consider substitute materials only if the original materials are not technically feasible.

4) Protect and maintain a historic foundation in appropriate ways:

- Provide adequate ventilation of the crawl space to prevent moisture problems.
- Provide adequate drainage of surface water by grading the site away from the foundation.
- If necessary, install drains around the foundation to eliminate surface water problems.
- Maintain foundation plantings so that they do not hinder adequate ventilation and drainage of the foundation.
- Eliminate any vegetation that may cause structural damage to the foundation.
- Follow the guidelines for maintenance of foundation materials, where applicable.

5) Locate new utility and mechanical connections through foundations on noncharacter-defining foundation walls or inconspicuously on side or rear walls where they will not be visible from the street.



6) Paint previously painted foundations in dark colors that best reflect the foundation materials.

7) If spans between masonry piers are to be filled in, recess and detail the panels so that the original piers are still prominent.

8) If additional foundation ventilation is deemed necessary, vents and access doors of appropriate design should be chosen.

NOT TO DO:

- 1) Don't apply paint or other coatings to unpainted foundation material that was historically not coated.
- 2) Don't remove paint from painted masonry foundations unless the brick is of high quality and was intended to be exposed. Undertake removal only with a chemical paint remover specifically formulated for masonry. Always test the remover on an inconspicuous area or a test panel first.
- 3) Don't introduce new foundation features, such as vents or access doors, if they would diminish the original design of the foundation or damage historic foundation features or materials.





The Corner (1999), 106 North Avenue

XV: Storefronts

A. Nature of Storefronts

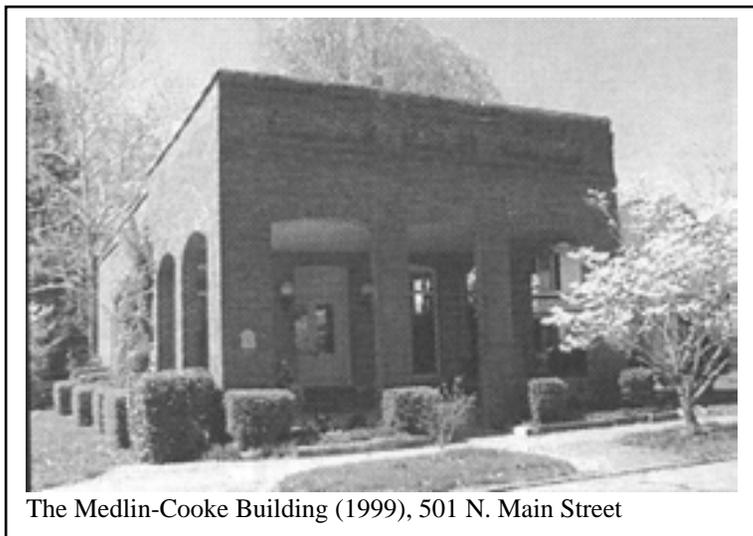
The storefront is the most prominent architectural feature of most commercial buildings. It is generally more elaborate and stylized than the rest of the building but still relates to the upper stories of the front facade. Storefronts typically include large display windows and a door with full or three-quarter glazing and often incorporate a transom, mid-cornice, recessed entrance, projecting awnings, and signage. There are only two commercial buildings in the Wake Forest Historic District, each of which demonstrates examples of these features.

B. Maintenance and Repair

Storefronts are especially vulnerable to the elements and require ongoing maintenance. The appropriate cleaning and repair methods for storefronts will follow the guidelines for the specific surface material. Likewise, the painting of storefronts should follow the procedures outlined in the guidelines for paint.

Recommended methods of maintaining and protecting storefronts and their features through traditional approaches include:

- Inspect routinely for signs of moisture damage, cracked glass, structural settlement, corrosion, and other insect or fungal infestation.
- Ensure adequate drainage to prevent water from collecting on flat, horizontal surfaces or decorative features.
- Recaulk joinery and reglaze display and transom windows, as necessary, to prevent water penetration and wind infiltration.
- Clean surfaces regularly, using the gentlest effective method and repaint, as necessary, to maintain a sound paint film.



It is important to understand that commercial buildings, like residences, have often been remodeled to meet the needs and desires of various owners, which may not be compatible with the goal of historic preservation. Over time, storefronts were frequently altered to reflect changes in ownership or aesthetics. If such alterations conceal original features and details, it may be desirable to remove those modifications. For example, later signboards or aluminum canopies may conceal original storefront transoms. If the storefront has been enclosed or unsympathetically altered, the property owner may want to consider the introduction of a new storefront based on documentation of the original or a new design compatible with the architectural character of the facade. It is not appropriate to remodel and incorporate materials or style of a period incongruous to the building, such as covering the facade with aluminum or adding a cedar shake awning (mock mansard roof over the first floor).

C. Storefronts: Guidelines

TO DO:

- 1) Retain and preserve storefronts that are important in defining the overall historic character of the building.
- 2) Retain and preserve historic storefront materials, features, and details through appropriate traditional methods.
- 3) Recoat, as necessary, previously painted or stained storefront surfaces in colors appropriate to the historic building and district.
- 4) Repair historic storefront features and surfaces, when deteriorated or damaged, through accepted preservation methods.

- 5) Replace deteriorated or damaged storefront features and surfaces, if they cannot be repaired, to match the original in material, design, detail, and dimension. If feasible, limit replacement to only the deteriorated portion rather than the entire feature. Consider using a compatible substitute material only if matching the original material is not feasible.
- 6) Replace a missing storefront feature with a new feature based upon accurate evidence of the original or a new design that is compatible with the historic building in material, size, scale, and detail.

NOT TO DO:

- 1) Don't paint exterior masonry walls that were not painted historically.
- 2) Don't remove a distinctive storefront feature, such as a transom or mid-cornice, rather than repair it.
- 3) Don't replace or cover historic storefront materials, such as wood panels, ceramic tiles, or masonry, with contemporary substitute materials, such as vinyl or aluminum panels.
- 4) Don't remodel to incorporate materials or style of a period incongruous to the building, such as covering the facade with aluminum or adding a cedar shake awning (mock mansard roof over the first floor).



The Lanneau-Newhouse House (1999), 328 N. Main Street

XVI: Paint

A. Purposes of Paint

Paint serves two important purposes -- protection and decoration.

1) **Protection:** Proper preparation and application of paint films is critical in preserving most historic exterior wood and metal surfaces. Although copper, bronze, and stainless steel surfaces are intended for direct exposure to the elements, paint protects all other metal surfaces from corrosion due to exposure to air and water. Also, paint helps protect wood surfaces from the effects of weathering due to moisture and ultraviolet light. Consequently, maintaining a sound paint film on most metal and wood surfaces is essential to their long-term preservation. In addition to its protective role, paint provides an opportunity to reinforce a historic building's architectural style and accentuate its significant features through the appropriate selection of paint color.

2) **Decoration:** Color was an element of the original design intent of an architect or builder. However, because early photographs are black-and-white only tones and contrasts can be determined. If an individual wishes to reproduce accurately the original color scheme of an early building he can sometimes obtain written documentation describing it. If this is not available paint scraping samples can be made. Professional preservationists, such as those on the staff of the North Carolina Division of Archives and History can assist in this process.

If the original color scheme of an early building is not pleasing to its new owner, then it is appropriate to choose a different combination while bearing in mind the architectural style of the building, the surrounding streetscape, and the climatic conditions of this region.

It appears through historical research that late nineteenth and early twentieth century builders and homeowners tended to be rather conservative in choosing exterior color schemes. Exceptions include some flamboyant Queen Anne style houses that bear documentation of exotic color combinations. Favored exterior colors seemed to be creams, tans, yellows, greens, and similar earthy tones. Again, the style of the building is the major guideline for colors. A simple 1910's-era vernacular house looks contrived if painted in the combinations found on a flamboyant Queen Anne style house.

Most of the classical-revival style early buildings were painted light colors such as yellow, tan, pale-blue, or cream. Promoters of the Greek Revival style or architecture popular in the early to mid-nineteenth century made the understandable mistake of thinking that the ancient Greek temples on which they patterned their designs were glistening white marble. That the temples were marble painted in polychromatic designs was not known because archaeological research had not advanced enough to discover the fact. So these styles were presented in light colors and have become a part of our architectural tradition as such.

Designs inspired by Gothic revival forms were usually more colorful and the degree of intensity of color probably varied from region to region. Victorian-era neighborhoods in San Francisco, for example, have developed a reputation for exotic combinations of many contrasting colors.

House colors were also affected by events or social conditions. Many older homes were painted white during the Depression. It is said this happened because real estate agents found that they could market a house more quickly if it was white. It has also been said that during this time inexpensive white paint, or whitewash, became available in many areas and this was used because people could not afford more expensive pigmented paint. So, if an older individual remembers a house as “always being white”, it is still wise to make paint scrapings or look for documentation describing the original colors.

A good, appropriate exterior color combination can alter the entire appearance of a building. This has been demonstrated on many early buildings. Several that were perceived as mediocre buildings or streetscapes have become points of interest because of good color combinations and paint jobs. In all these cases, property owners have avoided using garish, bright colors that are inappropriate to the buildings or neighborhood. The Wake Forest Historic District Commission does not rule on paint color; however, recommendations are made.

B. Definitions

- 1) **Alkyd Resin Paint:** A common modern paint using alkyd (one of a group of thermoplastic synthetic resins) as the vehicle for the pigment; often confused with oil paint.
- 2) **Caulk:** To fill a joint, crack, etc. with caulking.

- 3) **Caulking:** A resilient mastic compound, often having a silicone, bituminous or rubber base, which is used to seal cracks, fill joints, prevent leakage and/or provide waterproofing.
- 4) **Chalking:** The formation of a powder surface condition of a painted area from the disintegration of a binder or elastomer in a paint coating and caused by weathering or otherwise destructive environment.
- 5) **Checking:** Small cracks in a film of paint or varnish which do not completely penetrate to the previous coat. The cracks are in a pattern roughly similar to a checkerboard.
- 6) **Latex Paint:** A paint having a latex binder (an emulsion of finely dispersed particles of natural or synthetic rubber or plastic materials in water).
- 7) **Mildew:** A fungus that grows and feeds on paint, cotton and linen fabrics, etc. which are exposed to moisture. It causes discoloration and decomposition of the surface.
- 8) **Oil Paint:** A paint in which a drying oil is the vehicle for the pigment and is rarely used since the mid-20th century.
- 9) **Paint:** A liquid solution of pigment in a suitable vehicle of oil, organic solvent, or water. It is a liquid when applied, but dries to form an adherent, protective, and decorative coating.
- 10) **Paint Stripper:** A liquid which is applied to a dry paint to cause it to soften or lose adhesion so that it may be removed easily.
- 11) **Pigment:** A finely ground inorganic powder which is dispersed in a liquid vehicle to make paint. It may provide, in addition to color, other essential properties of paint, such as opacity.
- 12) **Primer:** A paint, applied as a first coat, which serves the function of sealing and filling on wood, plaster, and masonry.
- 13) **Sanding, Flattening Down, Rubbing:** Smoothing a surface with abrasive paper or cloth, either by hand or by machine.

- 14) **Sandblast:** An extremely abrasive method of cleaning brick, masonry, or wood that involves directing high-powered jets of sand against a surface.
- 15) **Waterblast:** Similar to sandblast except water is used as an abrasive. Like sandblasting, high pressure water streams can damage wood and masonry surfaces.

C. Maintenance and Repair

Recommended methods of maintaining and protecting painted or stained features and surfaces through traditional approaches include:

- Inspect routinely for signs of mildew, moisture damage, discoloration, and dirt film.
- Clean painted or stained surfaces routinely to extend the life of the paint film and prevent unnecessary recoating. Always use the gentlest effective cleaning method.
- Remove any deteriorated paint layers prior to repainting using the gentlest effective method but avoid removing intact paint layers. Only consider using heat guns or plates selectively if hand scraping and sanding are not effective.
- Ensure that all surfaces are clean and dry and that any exposed wood or metal surface has been primed prior to repainting.
- Recaulk vertical joints in wood surfaces prior to repainting.
- Recoat previously painted or stained surfaces when necessary with compatible paint systems.



Maintaining wood surfaces that were previously painted requires routine cleaning of the surface. Often the perceived need to repaint may be eliminated with the removal of the surface dirt film through conventional washing. However, repainting is called for if the paint film itself is deteriorated or damaged. Adequate cleaning and preparation of any surface prior to repainting is essential to ensure that the new paint film will successfully bond to it. Usually scrubbing the surface with a natural bristle brush and a mild detergent solution, possibly adding an anti-mildew agent, will suffice. Proper preparation includes removal of all loose or detached paint down to the first sound paint layer. It is unnecessary and undesirable to remove additional sound paint layers to expose bare wood, particularly if the wood will remain uncoated for any length of time. It is always best to remove loose paint layers with the gentlest methods possible. Hand scraping and sanding are the safest techniques for removing peeling or deteriorated paint layers and often all that is needed. High pressure water washing is not

advisable as it can damage the intact paint films and even the substrate material. Destructive methods such as sandblasting or waterblasting and the use of propane or butane torches are never appropriate for historic wood surfaces because of the permanent damage that they will cause to the wood surface itself. Electric heat plates, hot air guns, and chemical paint strippers are appropriate only if gentler techniques have failed. Alkaline based strippers should be avoided because they are so damaging to wood.

Before it is repainted, any exposed wood should always be primed with a compatible primer coating. If a surface is damp or soiled, the new paint film will not adhere correctly, and the wet surface may take up to two weeks to dry out completely. Once the surface is clean and dry, the application of a compatible paint coating will result in continued protection of the wood surface.

Painted metal surfaces require similar inspection and routine cleaning before repainting. However, for metals, it is critical that all corrosion be removed and a primer coat be applied immediately to protect the surface from additional corrosion. If cleaning loose paint and corrosion from hard metals such as cast iron, wrought iron, and steel by handscraping and wire brushing is unsuccessful, low-pressure grit blasting may be necessary. It is always best to test such techniques in an unobtrusive area first to determine if there will be any damage to the metal surface.

Although painting of unpainted masonry surfaces is not recommended, repainting of previously painted masonry and stucco using compatible paint coatings after proper cleaning and preparation is recommended. Preparation procedures are the same as those for wood.

While it is possible to work with preservation specialists to determine the actual paint history of a property, most property owners take a less technical approach to the decision and select their paint colors from palettes identified as historically appropriate for the building's architectural style and age. The commission staff can provide information and advice on historic paint color and palettes to interested property owners.

D. Paint: Guidelines

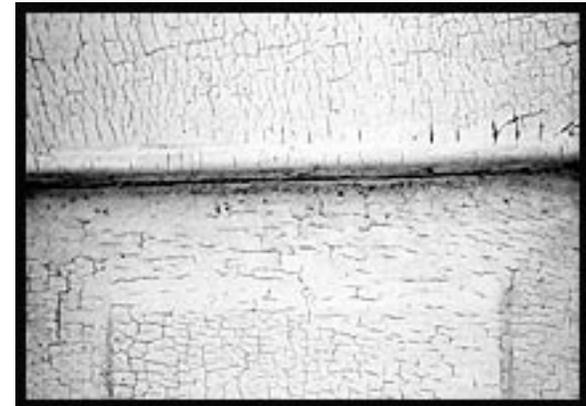
(Recommended Only, Not Enforced)

TO DO:

- 1) Retain and preserve painted finishes on exterior features and materials that are important in defining the overall historic character of a building or site.
- 2) Retain and preserve intact historic exterior painted finishes, such as stains, paints, lacquers, marbleizing, and graining.
- 3) Maintain and protect painted and stained finishes through appropriate traditional methods.
- 4) If it seems repainting is called for, inspect painted surfaces to determine if repainting is really necessary or if cleaning the surfaces will suffice.
- 5) If repainting is truly necessary, properly prepare the surface for painting. A good, long lasting paint job depends on the quality of the surface preparation and the paint. Before painting, all loose, peeling paint should be removed. Use the gentlest effective method to clean or prepare previously painted surfaces for repainting, such as handscraping wood or brick and wire brushing metals, to be followed in all cases with handsanding until smooth. A building should never be sandblasted or waterblasted to remove paint because this will pit the surface and raise wood grain. Employ electric heat guns, heat plates, and chemical paint strippers only when gentler methods are not successful and use them with caution (see "Not To Do").

- 6) Preserve or enhance the exterior appearance of a historic building through the appropriate selection and placement of paint colors.
- 7) Apply compatible paint-coating systems, including priming all exposed wooden surfaces.
- 8) Apply new paint only to clean, dry surfaces to ensure that it will properly adhere.
- 9) Once the surface is scraped, sanded, repainted, and caulked, it should be washed with a mildew killer. Mildew can ruin the new paint job, so it is very important to eradicate it. A home-made solution of 3 quarts warm water, 1 quart liquid bleach (sodium hypochlorite), 2/3 cup borax, and 1/2 cup detergent is effective. Another good solution includes a similar mixture of bleach and water plus TSP. These mixtures should be used by a person wearing rubber gloves and applied to the surface with a soft scrub brush, then thoroughly rinsed off the house and allowed to dry before painting. If a commercial preparation to eradicate mildew is used, it should contain 5% calcium hypochlorite solution.

10) If the old paint is chalking or checking, a base primer should be applied after washing the surface. The primer will provide a good surface for the top coat. Although many preservationists feel that oil base paint is more appropriate to older buildings because that was originally used, it is difficult to obtain now. Most modern “oil” paints are actually alkyd resin paints and are very different in composition from early paints. Whether modern oil base or latex paint is used, a good quality is worth the money, especially if a lot of effort has been expended on surface preparation. In most cases, latex “gloss” paints or alkyd “semi-gloss” paints are similar in appearance to historical oil paints. “Flat” looking paints often provide an appearance that is different from the character of the original paints and should generally be avoided on houses built prior to 1930.



- 11) Coat replacement gutters and downspouts with paint or a baked-enamel finish in a color appropriate to the color of the house, unless they are made of copper.
- 12) Coat exterior storm windows with paint or a baked-enamel finish in a color appropriate to the color of the house, usually the same color as the window sash or trim.

NOT TO DO:

- 1) Don't remove paint and finishes down to the bare surface by using methods such as chemical paint strippers, sandblasting, high pressure waterblasting, etc. that adversely effect the surface of the building.
- 2) Don't use chemical paint strippers if any alternative exists. Stripping down to bare wood can damage it and this also destroys any evidence of earlier color combinations.
- 3) Don't remove paint from a masonry building that was intended to be painted or from one that will suffer deterioration if paint is removed. Masonry buildings that have been painted should usually remain so because the paint was often intended as a protective coating over inferior-grade brick. The process of removing the paint can damage otherwise sound brick. Stripping paint to "restore" a building is often a mistake that can lead to later problems.
- 4) Don't apply paint to a masonry building which would be incongruous with the historic building or to the special character of the historic district.
- 5) Don't paint unpainted brick or stone and don't paint copper or bronze.
- 6) Don't apply paint or other coatings to unpainted foundations, walls, or other masonry or metal surfaces that were not historically painted or otherwise coated.





The Cullom-Duvall House (1999). 427 N. Main Street

XVII: Fences and Walls

A. Purpose of Fences and Walls

Fences and walls are important constructed features of the landscape that help define the context of the site for a historic building. Within a historic district the repetition of fences or walls also provides a strong sense of continuity to the streetscape. Wood, cast iron, and wrought iron were all traditional fence materials, just as stone and brick were popular wall materials. The selection of material and design often relate to the architectural style of the house.

Whereas low retaining walls, low hedges, and open fences are appropriate for front yards, privacy fences and taller walls in rear side yards and backyards can provide desirable visual screening of parking areas or mechanical equipment from the street. Traditional materials such as wood or brick are recommended for privacy walls and fences. It is not appropriate to use contemporary fence or wall materials, such as vinyl or chain link fencing, in the district.

B. Use of Fences

Fences, like other elements of the 19th and 20th century built environment, were usually products of the technology of the Industrial Revolution. Fence types can be divided into two categories -- decorative and utilitarian. The decorative category includes fences made of lattice, brick, cast iron, machine-shaped wooden pickets, low walls of stone or brick, and hedges. Utilitarian fences include woven wire mounted on wooden posts, vertical wooden slats (or plait pickets), and, in some cases, barbed wire. Decorative fences were reflections of designs in architecture, and often were an integral part of the site plan. Utilitarian fences served to mark boundaries, to confine animals, or to protect planted areas and should be limited to rear yard enclosure and screened from street view as much as possible.

Cast iron fences became a status symbol for the middle-class Victorian homeowner. The method of casting iron to mass produce decorative work was perfected during the Industrial Revolution. Before this time, ironwork had to be fabricated by a blacksmith and consequently could be afforded only by the wealthy.



Victorian domestic cast iron fences followed the same general proportions as older, more common picket fences. A popular standard height was 36 inches. Rows of vertical members were held together by horizontal channel bars and were mounted between line posts. Many times the tops of the vertical members and the line posts were ornamented. Most iron fencing was a standardized Florentine design, however “rustic” motifs also were popular cast iron fence designs, especially in cemeteries.

Photographs of houses in Wake Forest made during the early part of the 20th century show picket fences with plain wood uprights that have either shaped or squared-off tops. Most of them appear to have been around 36 inches high. They were used either in a decorative or utilitarian manner and

show up in the black and white photographs as a dark tone. Whether this means they were painted dark tones or they were left to weather naturally is uncertain.

C. Maintenance and Repair

The preservation of traditional walls and fences is often closely tied to sound maintenance procedures. Recoating with a protective coat of paint extends the life of iron and wooden fences, as does the repointing of stone or brick walls. If neglected too long, deterioration may necessitate their replacement. Fortunately, replacement materials for most traditional fences or walls are still readily available today.

To prevent rust and corrosion, iron fences should be cleaned with a wire brush to remove all loose paint and rust, then primed immediately with a high-quality metal primer before the finish coat is applied. Corrosion will begin whenever the iron is left unpainted, even in a few hours. Traditionally, iron fences are painted dark green, brown, or black. Typically, picket fences are painted white or occasionally a trim color related to the house. Stone and brick walls require maintenance similar to that required for exterior building walls. Retaining walls are particularly susceptible to cracking due to uneven settling and damage caused by moisture and vegetation.

D. New Fences and Walls

Sometimes a desire for increased security or privacy may lead to the need for the addition of a fence or wall within the historic district. Simple wooden privacy fences constructed of wooden slats or vertical pickets are traditional solutions for enclosing rear yards. More contemporary utilitarian fences of vinyl or metal chain link construction are not compatible with the character of the historic district. Consequently, they are not considered appropriate fences to add in front yard locations. Through the selection of compatible colors and landscape screening, the impact of such utilitarian fences in rear yard locations can be minimized.

E. Approval Criteria

Property owners in early Wake Forest neighborhoods are advised of the provisions affecting replacements of fences. The construction of any fence requires a building permit which can be obtained at the Wake Forest Planning and Inspections Department.

The Wake Forest Historic District Commission utilizes the following criteria in reviewing applications for Certificates of Appropriateness for fences:

- Visibility from the street and location;
- Review of old photographs and early records as to the types of fences used at earlier time periods; and,
- The proposed use of the fence.

F. Fences and Walls: Guidelines

TO DO:

- 1) Retain and preserve fences and walls that are important in defining the overall historic character of a building, site, or district.

- 2) Retain and preserve the materials, features, and details of historic fences and walls, including gates, pillars, hardware, decorative pickets, and rails, through appropriate traditional methods.
- 3) If replacement of a fence or a wall element is necessary, replace only the deteriorated element to match the original in size, scale, proportion, material, texture, and detail.
- 4) Use appropriate style, size, and material for a new fence, based on records of the property or, if not available, similar properties in style and age in Wake Forest or based on the historic character of the building.
- 5) Retain and preserve historic wall and fence materials, such as wrought iron, cast iron, stone, brick, stucco, concrete, and wood, that contribute to the overall historic character of the building or site.
- 6) Protect and maintain fences and walls in appropriate ways:
 - Inspect fences and walls regularly for signs of deterioration or moisture damage.
 - Keep all joinery adequately sealed to avoid moisture damage.
 - Maintain a sound paint film on all elements that were traditionally painted.
 - Follow the guidelines for maintenance of masonry, wood, or architectural metals, where applicable.
 - Remove any vegetation that is uprooting posts or causing other structural damage.
 - Maintain hedges by trimming them and eliminating vegetation that threatens their health.
- 7) Keep new wooden fences in the front or side yards substantially open in character and paint them white or a color appropriate to the color of the building.
- 8) Generally, construct new fences or walls to follow property lines and not to abut existing buildings.

- 9) Whenever possible, screen existing chain link fences with vegetation, such as climbing vines, ivy, or shrubbery.

NOT TO DO:

- 1) Don't construct any fence, wall, or barrier whose location, size, height, or material is incongruous with the historic property or with the special character of the historic district.
- 2) Don't construct any wall or barrier of cinder block or cement block or a similar material that is not painted, stuccoed, or veneered with brick.
- 3) Don't construct any wall or barrier of artificial siding that seeks to resemble brick, stone, or wood.
- 4) Don't construct any wall, barrier, or fence that features plastic panels, corrugated metal, or any similar material.
- 5) Don't construct any metal chain link or other fence of a material not historically available and inconsistent with the character of the district unless it is specifically placed in such a manner as to support vines or vegetation in the rear yard, such as a grape vine or ivy, and is integrated into a landscape plan.
- 6) Don't apply paint or other coatings or coverings to unpainted wall or fence materials that were not historically coated.
- 7) Don't construct new fences or walls over 42 inches in height in front yards or 6 feet in height in rear yards. For rear yard fences, don't extend a fence higher than 42 inches in front of the rear corner of the house.
- 8) Don't add elements or details to a fence or wall in an attempt to create a false historical appearance.



The Brewer-Bates House (1999), 409 N. Main Street

XVIII: Driveways, Walkways, and Parking Lots

A. Need for Driveways, Walkways, and Parking Lots

Driveways, walkways, and parking lots are contemporary conveniences that often exist in early neighborhoods, but sometimes must be added within them. In order to be compatible with the densely developed quality of late 19th and early 20th century neighborhoods they, driveways and parking lots in particular, should be as unobtrusive as possible.

B. Driveways and Private Parking Areas

Gravel or base dirt driveways are usually found in early neighborhoods. Occasionally a brick one will be installed as an accent or as a part of an overall landscape plan. Aggregate patterned concrete or gravel ribbons with a center strip of grass were also popular, possibly because this style of driveway reduced the size of the paved surface, thus reducing heat and glare near the house. If it is necessary to add or change driveways and parking areas associated with an early building, they should be incorporated into an overall site design that combines architectural and landscaping elements with the driveway and parking areas. Many times a carefully planned site design of this type can help reduce maintenance time as well as accenting the architectural quality of the building.

C. Walkways

Walkways serve the important function of providing pedestrian access between the building and the street, parking areas, outbuildings, and other areas of the property. In addition, they can be an important element in the design and historic character of landscaping and garden spaces. Walkways provide an all-weather surface for foot travel and may be constructed of concrete, asphalt, brick, stone, slate, gravel, or wood chips, although asphalt, gravel, or wood chips are not appropriate for use for walkways between the building and the street in historic districts.

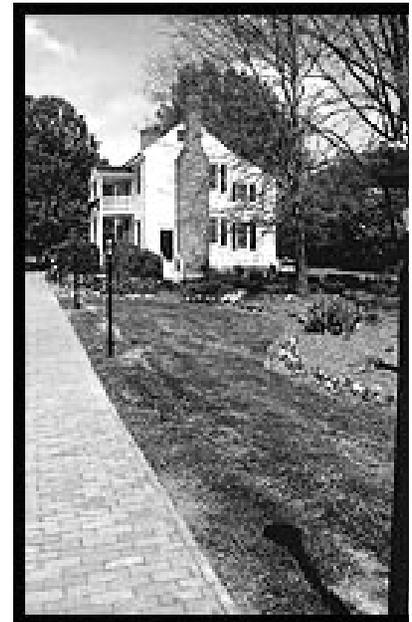
D. Parking Lots

Parking lots are defined as areas designed to store five or more vehicles. They should be gravel, brick, or paved with an aggregate patterned concrete. The Wake Forest Zoning Ordinance requires that parking lots be screened from view of the street. (Good screening reduces horizontal view from adjoining streets by at least 75%.) Appropriate walls or fences can be used together with plant materials to block the view of a parking lot from the street. If a parking lot must be located in an early neighborhood, as many of the existing trees as possible should be saved and new trees planted in order to maintain and enhance the tree canopy. This not only helps to integrate the lot into the streetscape, it also helps reduce unpleasant heat and glare associated with parking lots and keeps the interiors of parked vehicles cooler.

E. Driveways, Walkways, and Parking Lots: Guidelines

TO DO:

- 1) Site new driveways, walkways, and parking areas so that the topography of the site and significant features, such as mature trees, are maintained.
- 2) Construct driveways and parking lots so as to be as inconspicuous as reasonable, including adequate vegetative screening. Whenever practical, site parking lots in the rear yard or out of sight from the street.
- 3) Install at least an eight foot wide planting strip between parking lots and the right-of-way, containing plant material meeting the requirements of the town zoning ordinance or containing appropriate walls, fences, or berms combined with landscape material. These screens are to reduce horizontal views from adjoining streets by at least 75%.
- 4) Whenever possible, retain and preserve the design, configuration, topography, materials, features, and dimensions of existing driveways, walkways, parking areas, and alleys that are important in defining the historic character of the individual site, streetscape, or district.



The Wake Forest College Birthplace

- 5) Construct new driveways to conform with the spacing, width, configuration, and materials of existing driveways.
- 6) Use interior planting strips to subdivide large parking areas.
- 7) Screen all new parking areas from adjoining properties with vegetation, fencing, or walls.
- 8) Design lighting for a balance between safety and a minimum incompatibility with the historic nature of the area. Use unobtrusive, directional lighting fixtures with a 90 degree cutoff to avoid spilling light onto adjacent properties or into the space above the specific area needing light. For nonresidential parking lots use lighting fixtures that turn off automatically after business hours, if possible.
- 9) Replace a missing driveway or walkway with a new feature based upon accurate evidence of the original or a new design that is compatible with the historic site and district in location, configuration, pattern, material, dimension, scale, and detail.
- 10) Replace deteriorated or damaged sections of driveways, walkways, and parking areas to match the original in materials, design, dimension, texture, and color. If feasible, limit replacement to only the deteriorated portion rather than the entire feature. Consider using a substitute material only if matching the original material is not feasible.
- 11) If mature healthy trees cause damage to walks, drives, or parking areas, try to repair them without damaging the trees.

NOT TO DO:

- 1) Don't use any driveway or parking lot arrangement, location, treatment, or material incongruous with the historic property or with the special character of the historic district.
- 2) Don't use continuous expanses of concrete or asphalt without appropriate vegetative screening.
- 3) Don't site offstreet parking in the front yard or the side yard, if visible from the street.



The Powell-Ford House (1999), 546 N. Main Street

XIX: Lighting

A. Electricity in Wake Forest

The arrival of electricity in Wake Forest on November 12, 1909 historically changed its residents' way of life forever. Residents had voted 88-1 in April of that year to build a power plant. (*No one knows who the single opponent was!*)

“There was great cheering by the students of Wake Forest College when the lights were turned on and they had an informal celebration tonight”, said a November 12, 1909 article in the News and Observer. “Cheers of ‘Hurrah for electric lights’ could be heard repeatedly.”

Wake Forest was ahead of its small-town neighbors in getting power. Although Raleigh got electricity in 1885 and Carolina Power and Light Company began business in 1908, it took a while for most small towns to catch up. According to CP&L records, Zebulon got power in 1916, Apex and Cary in 1917, Fuquay-Varina in 1920, and Garner in 1926. Some became customers of CP&L while others, like Wake Forest, started their own power systems.

B. Lighting Styles

The styles of early exterior lighting fixtures often reflect the architectural styles of the buildings they illuminated. If stylized lighting fixtures were originally a part of the building facade or site, it is always desirable to preserve them. More typically, exterior lighting fixtures as well as streetlights were added later, especially in residential neighborhoods. For example, front porch lights, so prevalent today, were rare in the early 20th century.

If the owner of an early building is fortunate enough to possess the original fixtures of the building, he should treat them as valuable antiques. If fixtures must be replaced or added, he has several appropriate options. He can obtain antique fixtures of like design and scale; he can choose reproduction fixtures that reflect the design of the building; or, he can choose contemporary fixtures that complement the style and character of the building. Property owners who are familiar with the style of their building usually have

no difficulty choosing fixtures appropriate for them. An Eastlake cottage, for example, would indicate a porch fixture, either a pendant or bracketed fixture, with a motif of stylized scroll work or flowers. Bungalows, because they evolved during the time that the Craftsman movement and Art Deco design became popular, should display fixtures exhibiting those qualities. If the property owner prefers contemporary lighting, simple discreet styles and materials usually are more successful. If more illumination than is provided by an antique fixture is desired, recessed lights can provide it unobtrusively.

C. Lighting in the Historic District

The residential character of the historic district can be reinforced and even enhanced by the selection of appropriate exterior lighting. Warm spectrum light sources and unobtrusive lighting fixtures are recommended. Lighting levels should provide adequate illumination for safety concerns, but not detract from or overly emphasize the building or the site.



Today, the demand for greater quantities of exterior lighting has generated a wide range of fixture and streetlight designs that can accommodate a variety of lighting sources. As exterior lighting is added to landmark properties or within historic districts, it is important to ensure that the fixtures themselves and the nature and amount of light they provide does not compromise the historic character of the district. The compatibility of new lighting fixtures in historic contexts should be reviewed in terms of materials, design, scale, size, color, finish, location, and lighting brightness. Owners of early Wake Forest buildings should avoid light fixtures that seek to imitate colonial Williamsburg motifs. These reproductions became popular in the 1950's. Such fixtures are stylistic anachronisms and do not complement early building styles. However, factors such as security, safety, visibility, and the problems of light pollution also must be taken into account as lighting needs are evaluated.

Indiscriminate lighting of outside spaces and the overzealous illumination of building facades creates an after dark character that is particularly inconsistent with the character of residential historic districts and landmarks. For these properties, low-level lighting introduced through discreetly placed footlights, recessed lights, directional lights, and low posts are much more appropriate. Consideration should also be given to whether new lighting will affect neighboring yards or public areas.

D. Definitions

- 1) **Incandescent Light:** A form of illumination that is produced when a filament in a glass bulb is caused to glow by an electric current.
- 2) **Foot-Candle:** A unit of illumination produced on a surface, all points of which are one foot from a uniform point source of one candle. Foot-candles are calculated by dividing the lumens by the distance squared ($F=L/D^2$).
- 3) **Gas Lighting:** A form of illumination, especially popular during the mid to late 19th century, that is produced when gas is ignited and burned in a small controlled flame.
- 4) **Globe:** A transparent or translucent enclosure (usually of glass) to protect a light source, to diffuse and redirect the light, or to change the color of the light.
- 5) **Light, Cutoff:** An artificial outdoor lighting fixture, or luminaire, designed to ensure that no light is directly emitted above a horizontal line parallel to the ground.
- 6) **Light, Non-Cutoff:** An artificial outdoor lighting fixture, or luminaire, that is designed to allow light to be directly emitted above a horizontal line parallel to the ground.
- 7) **Lumen:** A unit of light emitted from a light source; used by commercial lighting manufacturers.
- 8) **Luminaire:** A complete lighting fixture consisting of a light source and all necessary mechanical, electrical, and decorative parts.
- 9) **Mercury Vapor Lamps:** Lighting element characterized as a high intensity discharge lamp that utilizes the arcing effect of electricity through argon gas, vaporized mercury gas, thereby emitting a blue-white light. These lamps require 5 to 7 minutes to warm up.

- 10) **Recessed Lights:** Lights that have been placed into a surface so that their faces project no further than flush with the surface of a ceiling or wall.
- 11) **Sodium Vapor Lights:** Lighting element characterized as a high intensity discharge lamp that utilizes the arcing effect of electricity through neon gas to heat and evaporate sodium vapor, thereby emitting a yellow-brown light while low pressure sodium gives a warm white light. These lights require 2 to 7 minutes to warm up.
- 12) **Street Lights:** Large lights mounted on poles and used to light outdoor areas for reasons of safety or aesthetics. Turn of the century street lights often displayed ornate cast iron details.

E. Lighting: Guidelines

TO DO:

- 1) Retain and preserve exterior lighting fixtures that are important in defining the overall historic character of a building, site, or the district.
- 2) If new light fixtures are needed either replace with antiques of like design and scale or select reproductions that reflect the design of the building, or choose unobtrusive lighting fixtures that are compatible with the style and character of the building and site. Any contemporary fixtures should be discreet in design and materials and use a 90 degree cutoff.
- 3) Introduce new exterior lighting fixtures, if needed, that are compatible with the human scale and the historic character of the building or site. Compatibility of exterior lighting and lighting fixtures is assessed in terms of design, material, location, size, scale, color, finish, and brightness. Motion sensor and other security lights should be as unobtrusive as possible.
- 4) Use lighting levels that provide adequate safety, yet do not detract from or overly emphasize the structure or the property.
- 5) Use directional lighting to avoid spilling light onto adjacent properties. If contemporary fixtures are utilized, use those with a 90 degree cutoff to minimize spillover of light.

- 6) Screen facade lights from public view.

NOT TO DO:

- 1) Don't use any lighting fixture or arrangement of lighting fixtures incongruous with the historic property, or the special character of the historic district, because of its style, size, scale, or material.
- 2) Don't add or remove any lighting fixture or arrangement of lighting fixtures, except where essential for safety, that distinguishes or alters the character of the historic property, the style of the building, or the era of the historic district or that are anachronistic to the building or era of the historic district.
- 3) Don't install tall security lights in locations that are visible to the public.
- 4) Don't attempt to create a false historic appearance by adding lighting fixtures whose style predates the period of the building or site.
- 5) Don't use outdoor lights that are too bright. No more than 0.2 foot-candles should reach the property line or street right-of-way if a fixture with no cutoff is used. No more than 1 foot-candle of light should reach the property line or street right-of-way if a fixture with a 90 degree cutoff is used.





The Patterson-Eppes House (1999), 605 N. Main Street

XX: Signs

A. Signs in a Historic District

Appropriate signage in the historic district can enhance its historic character and residential scale. Signs citing the name and the year of construction of residential buildings are fairly common. Although the district is primarily residential, there are also some commercial properties with signs.

New signage should be kept unobtrusive by selecting traditional materials such as wood, metal, or stone and carefully placing signs in locations that do not damage or conceal architectural features and details. New signs should be sized to be consistent with the pedestrian scale of the district. Graphics should be kept simple and legible. Generally, free-standing signs should be no larger than necessary and should be mounted fairly low to the ground to avoid blocking the pedestrian's view. An appropriate location for free-standing signs is close to the front walk and near the public sidewalk. For commercial properties, graphics painted on windows or applied to fabric awnings are also appropriate.

All new signs must meet the requirements of the Town's Zoning Ordinance as to number, type, location, and size.

B. Signs: Guidelines

TO DO:

- 1) Retain and preserve signage that is important in defining the overall historic character of a building, site, or streetscape.
- 2) Replace deteriorated, damaged, or missing signage with new signage that is either similar to the original in material, appearance, and scale or compatible with the building, site, or streetscape in its shape, material, design, scale, and color.

- 3) Use unobtrusive signage in the historic district that is simply designed and easily read.
- 4) Limit the amount of signage added to historic buildings and locate it so that it does not compromise the building's architectural character. Mount flush signboards on commercial facades in appropriate locations. Graphics applied to windows or awnings of commercial structures are also appropriate, according to the requirements of the Zoning Ordinance.
- 5) Introduce new signage, if needed, that is compatible with the human scale and the historic character of the building, site, or streetscape. In considering the compatibility of proposed signage, review its location, material, design, scale, size, color, and finish.
- 6) Construct new signs out of traditional materials, such as wood, stone, metal, or brick.
- 7) Keep identification signs for residential buildings small in size, generally under 3 square feet or as allowed by the Zoning Ordinance, so that architectural features and details are not concealed.
- 8) Introduce freestanding signs on low standards or ground bases in appropriate locations.
- 9) Make lighting for signs compatible with the residential atmosphere and the historic character of the district.

NOT TO DO:

- 1) Don't install any sign with a style, size, or location that is incongruous with the historic property or with the special character of the historic district.
- 2) Don't install any sign that is fabricated out of a material or contains components or elements that are incongruous with the historic property or the special character of the historic district.
- 3) Don't install internally illuminated signs, plastic signs, flashing signs, or portable signs in the district.
- 4) Except for certain commercial uses, as allowed in the Zoning Ordinance, don't install large signs directly on facades or porch roofs.

- 5) Don't attach new signage on a historic building if it will obscure or damage important architectural features or details.





The Purefoy-Swett Cottage (1999), 126 South Avenue

XXI: Energy Retrofit and Utilities

A. Traditional Design

Contemporary concerns with rising energy costs have led to a renewed appreciation for the traditional energy-conserving features of many historic properties. Features such as projecting front porches, strategically placed shade trees, raised foundations, foyers, vestibules, and recessed entrances all reflect an understanding of climate. Traditionally, operable windows and transoms, shutters and blinds, and fabric awnings also provided the opportunity to control the amount of daylight and fresh air allowed into these buildings.

B. Maintenance for Energy Efficiency

Recommended methods of maintaining or improving the energy efficiency of historic buildings through traditional approaches include:

- Weatherstrip windows and doors.
- Recaulk joints and reglaze window sash as necessary to ensure that door and window units are weather tight and resistant to water and wind.
- Control desired ventilation by utilizing existing operable windows, shutters, louvered blinds, and screen doors.
- Install insulation in basements or crawl spaces and attics, if feasible, to improve energy efficiency of the mechanical system.
- Retain shade trees, windbreaks, and other site features and plantings that moderate climatic factors for the historic building.

C. Improving Energy Efficiency



The addition of storm windows or doors can also increase the energy efficiency of a historic building. It is important to choose storm units that are sized to fit the existing openings and that do not diminish or obscure the existing windows or doors. Low-profile storm windows and full-light storm doors finished in colors that are compatible with the window sash or doors are usually the least intrusive. If the windows are operable, selecting operable storm units with aligning sash divisions will allow their continued operation. In some situations, especially if the window contains stained glass, tension mounted interior storm windows may be preferable to the more typical exterior units. In either case, it is critical to keep the ventilation holes in the storm units open to prevent condensation and water damage to the sills or sashes.

When adding new mechanical, electrical, or communication systems and related lines and meters to historic buildings, it is important to locate and install them so that they do not damage or diminish the historic character of the building or site. Usually installing such elements in the rear yard or along the rear elevation, or in other less visible locations minimizes their visual impact. Screening units or equipment with plantings or fences can make them even less conspicuous.

D. Energy Retrofit and Utilities: Guidelines

TO DO:

- 1) Retain and preserve the energy-conserving features of historic buildings and their sites, including porches, vestibules, awnings, operable windows, transoms, shutters, blinds, and shade trees.
- 2) Install narrow profile exterior or interior storm windows, if desired for energy efficiency. Select storm windows that are finished in a color compatible with the existing window sash color. For double hung windows, install operable storm windows with dividers that align with the existing sash division.

- 3) Install full-light storm doors, if desired for energy efficiency. Select wood or aluminum storm doors finished in a color compatible with the color of the existing door.
- 4) Install fabric awnings if historically appropriate and desired for energy efficiency over store fronts, windows, entrances, or porch openings.
- 5) Install new mechanical systems, if needed, so that alteration or damage to the historic building is minimized.
- 6) Locate mechanical and utility equipment, transformers, meters, lines, and pipes inconspicuously on rear elevations or other non-character defining elevations and screen them from view.
- 7) Locate portable window air-conditioning units in inconspicuous locations such as rear or side elevations, if possible.
- 8) Protect significant site features, including mature trees, from damage if installing underground utility lines.



NOT TO DO:

- 1) Don't install storm windows that obscure or damage the existing sash or frame.
- 2) Don't install storm doors that obscure or damage the existing door or frame.
- 3) Don't install awnings that obscure or damage significant features of the historic building.
- 4) Don't install mechanical systems in such a way that they obscure or damage significant features of the historic building.
- 5) Don't install mechanical or utility equipment or elements on distinctive roofs or on roof planes that are visible from the street.



The Powell Lake House (1999), 340 N. Main Street

XXII: Accessibility and Safety Considerations

A. Need for Special Modifications

Many historic buildings do not meet contemporary standards for accessibility or life safety. However, a substantial rehabilitation, a change in building use, or the need for public access to a historic building may trigger the application of those standards. Fortunately, the North Carolina State Building Code, Volume IX -- Existing Buildings and the Americans with Disabilities Act (ADA) of 1990 provide some flexibility for compliance when dealing with a historic property. The goal is to develop design solutions that meet or exceed the pertinent standards without compromising the overall historic and architectural character of the historic property.

B. Modifying a Building for Accessibility or Safety

For property owners seeking to modify a historic property to meet ADA requirements, the federal legislation calls for the owner to consult with the State Historic Preservation Officer, as well as the local preservation commission, to determine if the proposed changes will threaten or destroy the historic significance of the property.

Because most historic buildings have raised foundations, access to first floor entrances for persons with disabilities often requires the installation of a ramp or lift. Life safety codes may also require the addition of fire exits or fire stairs for some buildings. More modest changes might include the addition of handrails, railings, or other safety features. The challenge for property owners is to preserve the overall character of the historic building, its setting, and any significant site features while sensitively accommodating the accessibility and/or life safety standards. The Historic Preservation Commission can often provide assistance to property owners facing these challenges.

C. Accessibility and Safety: Guidelines

TO DO:

- 1) Evaluate proposed new uses for historic properties to determine whether the life safety or accessibility requirements necessitated by the change in use are compatible with preserving the overall historic character of the building, its setting, and significant site features.
- 2) Collaborate with code officials in exploring alternative ways to meet or exceed the pertinent code regulations without compromising the overall historic character of the building, its setting, and significant site features.
- 3) Consult with local disability groups and preservationists in developing viable solutions to accessibility.
- 4) Develop solutions to meet life safety and accessibility requirements in ways that do not compromise the overall historic character of the building, its setting, and significant site features.
- 5) Develop solutions to meet life safety and accessibility requirements in ways that do not compromise the character-defining elevations, finishes, features, and details of the historic property. Design such alterations to be compatible with the historic property in terms of materials, proportion, scale, and finish.
- 6) Incorporate the addition of life safety features, such as fire doors, fire stairs, and elevators, on rear elevations or other non-character defining elevations of the historic property.
- 7) Design and construct any alterations to meet life safety and accessibility requirements so that, if feasible, the alteration is reversible and does not compromise the overall historic character of the historic property.

NOT TO DO:

- 1) Don't install modifications that damage or destroy character-defining features or details of the historic building or site.





The Calvin Jones House/Wake Forest College Birthplace (1999), 414 N. Main Street

XXIII: Moving Buildings

A. Moving Early Buildings

Moving early buildings or historic properties is usually undertaken in order to save them from demolition or to fulfill the objectives of a revitalization plan. Often these two objectives can compliment each other. A significant building threatened with demolition or surrounded by an environment not compatible with an adaptive use to which it could be put, can be relocated into a compatible environment. This activity can result in multiple benefits -- saving the building, enhancing the environment, and increasing the real estate value of the buildings.

The possible relocation of a building within the historic district should be considered carefully and undertaken only when other options may result in the loss of the building or when the integrity of the district will be enhanced. Relocation often results in a loss of integrity of setting and environment that compromises the significance of the relocated building. Such relocation of a historic property may result in its removal from the National Register of Historic Places, if listed. However, relocation of a building or a portion of a building may be a desirable alternative to demolition.

Moving buildings into the historic district or relocating them within it should be based on thorough planning and meet the guidelines for new construction with regard to architectural compatibility, siting, orientation, and landscaping.

B. Issues to be Considered

Therefore, because moving a building is a complicated and time consuming process it should not be undertaken until every aspect of the project has been considered and evaluated. Both architectural and environmental issues must be addressed. If the proposed building-moving project affects a locally designated historic property or a building located in a locally designated historic district, these architectural and environmental questions must be considered:

1) **Architectural Questions**

- Is the building threatened with demolition, either deliberately by the owner or by neglect?
- Is the building significant enough architecturally or historically, or both, to warrant the cost of moving it?
- Is the building structurally sound enough to stand a move and to make it economically feasible to adapt it to its new site and use?
- Is moving the building the only alternative to demolition?

2) **Environmental Questions**

- Is the building sited in an historic district?
- If so, what is the proposed use for the site once it is removed?
- Is there an appropriate and practical new use for the building on its new site?
- Is it proposed to relocate the building in an historic district?
- If so, does the building fit into the era of the district and is its style, architectural quality, size, and scale congruous with the district?

C. Moving Buildings: Guidelines

TO DO:

- 1) Consider the questions stated above.
- 2) Document the building's existing setting prior to relocation through photographs and other written or graphic means.
- 3) Prevent or minimize damage to the historic building during and after relocation by:
 - Determining its condition prior to the move,
 - Taking any preventive measures necessary to avoid damage during the move,
 - Ensuring that the contractor has the expertise and experience to undertake the relocation, and
 - Protect and secure the building from damage due to weather or vandalism during and after the move.
- 4) Select a new site for the historic building that is compatible in character with the original site. Consider the compatibility of the new site in terms of the relocated building's original orientation, setback, and spacing from other buildings. Consider the compatibility in terms of the surrounding buildings and, if applicable, district character.
- 5) Ensure that the relocation will not damage existing historic buildings or the character of the district.
- 6) Protect significant site features, such as mature trees and archaeological resources from damage during the relocation.
- 7) Protect the building from weather damage and vandalism during the relocation.
- 8) The foundation at the new site must be visually compatible with the original and must be structurally sound and ready for placement prior to the move.

NOT TO DO:

- 1) Don't introduce any building or part of a building or object with material, texture, or style that is not in character with the historic property or with the special character of the historic district.
- 2) Don't move or remove any building or part of a building or object that is pivotal or contributing to the special character of the historic district or is an historic property unless it would otherwise be demolished.





The Purefoy-Swett House (1999), 138 N. Main Street

XXIV: Demolition of Buildings

A. Demolition of Early Buildings

Demolition, the total destruction of historic properties and significant buildings within historic districts, is not encouraged and is actively discouraged when no subsequent use has been proposed for the site. The ordinance and State enabling legislation set out a 365 day waiting period from the time a written request is presented to the Commission until the time the demolition may occur. The purpose of this period is to give the Commission adequate time to explore every alternative to destruction of the building.

B. Issues to be Considered

Demolition of a historic building is an irreversible act of destruction. In considering demolition, the property owner and the Commission, when determining whether or not to invoke a legally mandated 365 day delay, should give careful thought to the following questions:

- Are there other potential property owners willing and financially able to restore the building?
- Is it structurally feasible to save the building?
- Can the building be adapted to the owner's needs at a cost less than new construction?
- Can the building be moved to another location in the historic district and/or Wake Forest?
- Does the building contribute to the historical character of the historic district and/or Wake Forest?
- Will the proposed demolition adversely impact other historic buildings in the district or the overall character of the district?

C. Denial of Authorization to Demolish

An application for a Certificate of Appropriateness authorizing the demolition or destruction of a building, site, or structure determined by the State Historic Preservation Office to have statewide significance, as defined in the criteria of the National Register of Historic Places, may be denied except when:

- The Commission finds that the owner would suffer extreme hardship or be permanently deprived of all beneficial use of or return from the property by virtue of the denial; or,
- The Town has ordered the demolition.

D. Demolition by Neglect

Sometimes a property owner may allow a historic building to deteriorate past the point of reasonable repair. This demolition by neglect is in violation of the town Historic Preservation Ordinance and the town may take appropriate action to prevent such destruction.

E. Site Plan Required

An application for a Certificate of Appropriateness authorizing the demolition or destruction of a building in the historic district must be accompanied by a site plan showing the treatment of the site following demolition. At a minimum, the plan should indicate that any below grade openings will be filled, the site cleared of debris, and the site seeded (if new development is not imminent). Also, significant site features, such as mature trees and archaeological resources, should be protected from damage during the demolition.

If demolition is inevitable, the Commission may require the property owner to document the historic building and its setting through photographs and a site plan. These records will be kept by the commission. Additionally, the property owner is encouraged to salvage reusable architectural features and materials prior to demolition.

F. Delay of Demolition

A Certificate of Appropriateness authorizing the demolition of a building may be delayed for up to 365 days from the date of approval. During the delay the Commission should actively seek to negotiate with the owner or other interested parties to find a viable alternative to destruction of the building or site. The Commission should also make it widely known that a significant building is threatened with demolition and that alternatives are sought. Local and statewide preservation organizations, private civic groups, public boards and agencies, and any interested citizens should be contacted for advice and assistance.

If the Commission finds that the building is of little historic or architectural value to the district, then it may waive or reduce the delay period. Also, the Commission may reduce the maximum period of delay when it finds that the owner would suffer extreme hardship or be permanently deprived of all beneficial use of or return from the property by virtue of the delay.

G. Demolition of Buildings: Guidelines

TO DO:

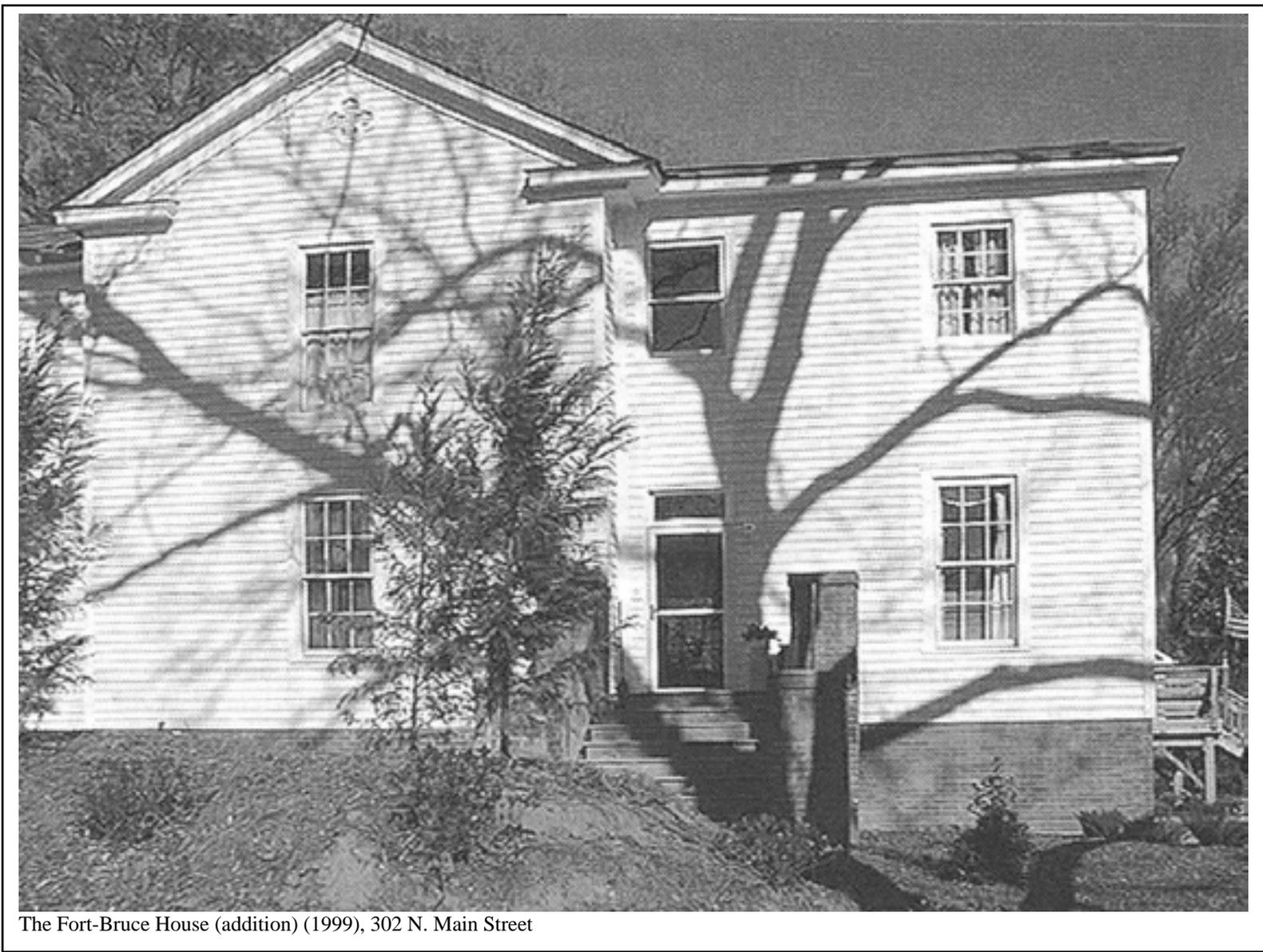
- 1) Consider the questions stated above in section “B”.
- 2) Work with the Commission and any interested parties to find acceptable alternatives to demolition.
- 3) If all alternatives have been exhausted, follow these guidelines for demolition:
 - Document the historic building and its setting prior to demolition through photographs, both color and black and white, and other graphic means, such as a site plan or other drawings that describe the architectural character and the special features of the building. Submit these records to the Historic Preservation Commission before initiating the demolition. These records are to be retained by the Town.
 - Submit to the Commission, prior to review of the application for a Certificate of Appropriateness, a post-demolition site plan illustrating the proposed site treatment.

- Work with the Commission to identify salvageable materials and potential buyers or recipients of salvaged materials. The removal of all salvageable building materials before demolition is encouraged and may be required depending on the significance of the building.
 - Protect significant site features from damage during the demolition.
- 4) Plant the site or appropriately maintain it until it is reused. If the site is to remain vacant for over one year, it should be improved to reflect an appearance consistent with other open areas in the district.
 - 5) Clear the site of hazards and debris promptly following the demolition.

NOT TO DO:

- 1) Don't demolish any building or object within the historic district prior to approval of a Certificate of Appropriateness.
- 2) Don't demolish any building or wing of a building that is noncontributing or is intrusive to the special character of the historic district without the approval by the Commission of a building or landscaping plan that treats the void created by the proposed demolition.





XXV: New Construction and Additions

A. New Construction

As a residential historic district revives it becomes increasingly attractive for the development of new housing. Many potential residents will desire the ambiance of life in Wake Forest but will also prefer the compactness and efficiency of contemporary construction.

Most new homes in and around the historic district will occur on vacant lots, otherwise known as “infilling”. Wake Forest’s homes represent a variety of architectural styles constructed over a period of 150 years. Therefore, infilling will not necessarily conflict with the historic image of the district but, at its best, could provide opportunities for the continued evolution of excellent architecture adapted to contemporary conditions.

It is not necessary to reproduce an historic architectural style in order to make a new building compatible with its older neighbors. While new construction should reflect its contemporary period, its compatibility within the historic district must be assessed in terms of building height, scale, form, materials, massing, proportion, and roof form. New designs which reflect an understanding of the district context will enhance rather than detract from the historic character of the district. The designers of these new structures must be very sensitive to the subtleties of the existing historic buildings.

Successful siting of a new building within the district also relies on understanding the character of the district. Consistency of setback, building spacing, orientation of the front facade, and spacing between building should be maintained. In more urban settings consistency of siting is more critical.

Particularly in the case of new construction, applicants for a Certificate of Appropriateness and their architects are urged to meet with the Historic Preservation Commission staff very early in the design process. Inappropriate designs or development decisions can waste a great amount of time and money and, also, create adversary relationships with existing property owners. It is far easier to modify a mental concept than it is to redraw a set of construction plans.

These design guidelines are applicable to all architectural styles proposed for the Wake Forest Historic District.

B. Additions

Over time, most buildings are added to or altered to accommodate changes in use or the need for more space. Through the years, such changes become part of the building's history and, thus, become significant to retain. Likewise, it is anticipated that the ongoing use of a historic building may necessitate changes and additions in the future as well. When needed, the design of compatible additions to historic buildings should not compromise the character of the historic building or site.

It is critical that additions do not damage, conceal, or diminish the significant materials, features, and details of the historic building. Their success is contingent on locating them discreetly, usually on a rear addition, and keeping their size and scale appropriately deferential to the historic building itself.

The overall massing, proportion, and roof shape, of an addition must be sensitively designed to ensure its compatibility with the historic building. Beyond these initial decisions, the placement, shape, size, scale, pattern, and proportion of the window and door openings are also important opportunities to relate the addition to the original building. The selection of compatible window and door units, surface materials, and exterior details is critical as well. In designing a new addition, the challenge is to make it compatible in key ways but, also, to differentiate it enough that it does not appear to be part of the original design.

As with any new construction, it is important to protect the site and its significant features, including mature trees and archaeological features, from damage or loss.

C. Architectural Design Components for New Construction and Additions

Architectural design components are the design aspects for individual buildings. In order for these aspects to be found appropriate, they must be compatible with the building (proposed new construction) as a unit as well as with the surrounding structures. Additions must meet the same compatibility requirements. Although it is not necessary to attempt to duplicate the style and materials of the existing building, it is necessary to use a design and materials that are sensitive to the design, materials, and era of the existing structure. Design components provide a sense of unity and coherence with the Wake Forest Historic District.

1) Exterior Building Materials, Roofing Materials, and Surface Textures

In the historic district, the existing dominant building materials for a given streetscape may be wood siding, brick, or a combination of these materials. Also, other materials such as stone may be utilized. Roofing materials may be asphalt shingles, tin, or slate. Again, the roofing materials as exhibited are varied.

In some cases a mixture of building and roofing material adds variety to the area. However, it is essential that these mixtures not become chaotic. Surface textures result from the nature of the materials used, such as the horizontal regularity of wood siding or the roughness of brick with tooled joints. The actual surface texture effect of building materials is an additional factor which determines the relatedness of structures for the historic district and of historic properties.

2) Proportion of Width to Height of Doors and Windows

In a sequence of building forms the use of similar proportioned openings establishes the relatedness of structures. Openings which vary significantly for proposed new construction or those openings which vary significantly from that which exists in surrounding areas will have a disruptive effect on the character of the entire historic district.

3) Shape and Form

It is important that the basic shape and form of the proposed new construction be compatible with existing shapes and forms of structures in the district. Proposed buildings with unusual or unorthodox shapes may not be in harmony with existing structures. Additionally, this may cause undue amounts of attention to the new structure.

4) Roof Form and Pitch

Roof forms can take a number of shapes whether gable, hip, gambrel, mansard, or flat. Additionally, roof pitch may vary. New construction should be compatible.

5) Expression of Architectural Detailing

Details, such as lintels, cornices, foundation materials, and chimneys, provide identity for a building or a group of buildings. This is an important factor in considering a sequence of buildings.

6) Orientation of the Building to the Street

Orientation of buildings to the street refers to the structure's placement upon a lot and its position to the street.

7) Scale

Scale is the size of units of construction and architectural details in relation to one another and to the size of man. Scale is also determined by the relationship of a building mass to open space.

D. New Construction and Additions: Guidelines

TO DO:

- 1) Site new construction so that it is compatible, in setback from the street, spacing and distance between buildings, and orientation, with neighboring buildings that are important in defining the overall character of the historic district.
- 2) Design new construction and additions so that the overall character of the site, including topography, important site features, and distinctive views, are retained.
- 3) Design and construct an addition so that the important features of the historic building are not obscured, damaged, or destroyed. Ensure that the loss of historic materials is minimized.

- 4) Minimize site grading and plan construction so that mature trees and other significant site features, including archaeological features, are protected from damage during construction.
- 5) Design a new building so that it is compatible, in height, form, massing, roof form and pitch, proportion, scale, and size with neighboring buildings that are important in defining the overall character of the historic district.
- 6) Locate an addition on the rear elevation or an inconspicuous side elevation of the historic building.
- 7) Design an addition so that its size does not visually overpower the historic building or substantially change the historic site's overall proportion of built area to unbuilt area.
- 8) Design a new building so that the proportion of the height to width of its front facade is compatible with the facades of neighboring buildings that are important in defining the overall character of the historic district.
- 9) Design an addition so that it is compatible in roof form and pitch, massing, and proportion with the historic building. Limit the visual scale and size of the addition so it does not overpower or minimize the historic house.
- 10) Design a new building or addition so that the placement, shape, size, scale, pattern, and proportion of its window and door openings are compatible with neighboring buildings (in the case of a new building) or the historic building to which it is attached (in the case of an addition).
- 11) Select surface materials and finishes that are compatible with the historic materials and finishes of the historic house (in the case of an addition) or that are found in the historic district (for a new building), in terms of their composition, module, pattern, texture, detail, and color.
- 12) Design a new building or addition so that it is compatible with the district, or with the historic house to which it is attached, but also differentiated from them. It is not appropriate to design a new building or addition so that it creates a false historic appearance. Details should reflect a similar level of detail as exhibited in existing buildings.

NOT TO DO:

- 1) Don't use inappropriate building and roofing materials, such as artificial brick or stone, plastic, or aluminum or vinyl siding, for new construction or additions in the historic district.





The Powers-Arrington House (1999), 268 North Avenue

Appendices



The Simmons-Bridges/Neely House (1999), 228 N. Main Street

Appendix A: Lead-Based Paint¹

Lead-Based Paint and Lead Poisoning

Lead-based paint was commonly used in buildings well into the twentieth century. Consequently, most buildings constructed prior to 1950 contain it. Although its use has been prohibited since the 1970's, the presence of lead-based paint in most houses, including historic houses, is an ongoing concern. Lead is a toxic substance, which poisons the human body and attacks both its organs and systems. Because lead poisoning is especially harmful to the early development of the brain and nervous system, the critical health concern with lead is for children under the age of six and pregnant women. Lead dust is the source of almost all lead poisoning. This dust is transmitted in two ways: inhalation and ingestion. Inhalation, the breathing in of lead dust, is the primary way that adults are poisoned. Ingestion, the eating of lead dust, is the main way that children are poisoned.

Lead Paint as a Health Hazard

Although the presence of lead-based paint by itself does not constitute a health hazard, there are several ways lead from paint can become a hazard: lead in surface dust, lead in adjacent soil, surfaces with lead-based paint whose condition is a source of lead dust, and surfaces with lead-based paint that are accessible and chewable. There are three key ways in which the condition of lead-based paint creates one of these hazards. The first is if it is applied to an impact surface. For example, a painted baseboard or door surround may be struck repeatedly during routine occupancy releasing lead dust into the air. The second means is through friction: an operable door or window that is coated in lead-based paint may discharge lead dust each time the painted surface rubs against another surface as it is open or shut. The third source of lead dust is from surfaces with deteriorated lead paint. As the paint flakes off, lead particles are emitted into the air or soil.

¹ Taken from “South Greensboro Historic District Design Guidelines”, 1997.

Mitigated Lead Paint Hazards

The two basic approaches to mitigating lead paint hazards are 1) eliminating the lead paint source through complete abatement or 2) taking steps to control the hazard and create a lead-safe building or site. Different abatement steps include removal of the painted component, stripping the paint from the surface, enclosing the surface, or encapsulation the surface with a new coating. Measures recommended to ensure a lead-safe environment include controlling all dust through specialized cleaning procedures and ongoing maintenance, maintaining paint surfaces and monitoring them for signs of deterioration, and special treatment of friction and impact surfaces.

During the rehabilitation of a building, many interior and exterior surfaces coated with lead-based paint are disturbed resulting in the release of lead dust. Property owners should always alert contractors to the potential presence of lead-based paint. In turn, it is the contractor's responsibility to follow all applicable laws for safe work and clean-up practices. For example, deteriorated lead paint surfaces might be wet sanded or chemically stripped to control the release of lead dust into the air. While additional safety precautions and technical procedures are necessary, historic properties can be made lead-safe without removing significant decorative features, trimwork, and finishes that contribute to the building's historic character.

Property owners should be aware that federally assisted loan guidelines require that the rehabilitation of older homes include measures to render houses lead-safe. Current and future Department of Housing and Urban Development (HUD) lead paint abatement regulations may have an impact on which rehabilitation guidelines are appropriate.

Additional Information

For additional information on the safe treatment of lead-based paint, contact:

Children's Environmental Health Branch
Division of Environmental Health
NC Department of Environment and Natural Resources
Raleigh Regional Office
3800 Barrett Drive
P.O. Box 27687

Raleigh, NC 27611
Telephone: 919-571-4700
FAX: 919-571-4718

Restoration Branch
State Historic Preservation Office
NC Division of Archives and History
109 E. Jones Street
Raleigh, NC 27601-2807
Telephone: 919-733-6547

Environmental Protection Agency
Free Booklet: "Reducing Lead Hazards When Remodeling Your Home"
Telephone: 1-800-424-LEAD (424-5323)



The Parker House (1999), 527 N. Main Street

Appendix B: Resources

Local Resources

Wake Forest

To obtain information on the application of these guidelines and the Wake Forest Historic District contact:

Wake Forest Planning and Inspections Department
221 S. Brooks Street
Wake Forest, NC 27587

Telephone: 919-554-6140
FAX: 919-554-6607

Wake County

Wake County Historic Preservation Commission
URL: www.co.wake.nc.us/planning/historic/default.htm
Telephone: 919-856-6327/6322

Wake County Environmental Information and Referrals
Telephone: 919-856-6788

State Resources

State of North Carolina

To obtain information on state programs, the National Register program, technical restoration assistance, and preservation tax credits contact:

State Historic Preservation Office
Division of Archives and History
North Carolina Department of Cultural Resources
109 East Jones Street
Raleigh, NC 27601-2807

URL: www.hpo.dcr.state.nc.us
Telephone: 919-733-6545

For technical assistance to owners of historic properties contact:

Restoration Branch
State Historic Preservation Office

URL: www.hpo.dcr.state.nc.us/rebranch.htm
Telephone: 919-733-6547
FAX: 919-715-4801

North Carolina Office of State Archaeology
State Historic Preservation Office

URL: www.arch.dcr.state.nc.us/fosa.htm
Telephone: 919-733-7342
FAX: 919-715-2671
Email: archaeology@ncsl.dcr.state.nc.us

North Carolina Division of Archives & History
109 East Jones Street
Raleigh, NC 27601-2807

URL: www.ah.dcr.state.nc.us
Telephone: 919-733-7305
FAX: 919-733-8807

Other Statewide Resources

Preservation North Carolina
P.O. Box 27644
Raleigh, NC 27611-7644

URL: www.presnc.org
Telephone: 919-832-3652
FAX: 919-832-1651
Email: presnc@mindspring.com

North Carolina African American Network on Historic Preservation

URL: www.slis.nccu.edu/ncaanhp
Email: ncaanhp@slis.nccu.edu

North Carolina Archaeology

c/o Office of State Archaeology
State Historic Preservation Office

URL: www.arch.dcr.state.nc.us
Telephone: 919-733-7342
FAX: 919-715-2671
Email: archaeology@ncsl.dcr.state.nc.us

Archaeology & Historic Preservation in North Carolina -- County Fact Sheets
URL: www.hpo.dcr.state.nc.us/facts/facts.htm

National Resources

Federal Government

Advisory Council on Historic Preservation
Old Post Office Building
1100 Pennsylvania Avenue, NW, Suite 809
Washington, DC 20004

URL: www.achp.gov
Telephone: 202-606-8503/8505
FAX: 202-606-8647/8672
Email: achp@achp.gov

Environmental Protection Agency

Many publications are available, including on asbestos (“Asbestos in the Home”, “Asbestos Fact Book”, and “Asbestos in Your Home”)

URL: www.epa.gov
Telephone: 1-800-490-9198
National Hotline: 1-800-368-5888

Historic Preservation Services

National Center for Cultural Resources Stewardship & Partnership Programs
National Park Service
1849 C Street, NC, NC330

Washington, DC 20240

URL: www2.cr.nps.gov
Telephone: 202-343-9583
Email: hps-info@nps.gov

National Archives & Records Administration
700 Pennsylvania Avenue, NW
Washington, DC 20408

URL: www.nara.gov
Email: inquire@nara.gov

National Register of Historic Places
National Park Service
U.S. Department of Interior
Mail Stop 2280, Suite NC400
1849 C Street, NC
Washington, DC 20240

URL: www.cr.nps.gov/nr/nrhome.html

National Park Service
Other web pages of interest:

Electronic Rehab
An interactive web class on the Secretary of the Interior's Standards for Rehabilitation

URL: www2.cr.nps.gov/e-rehab

Federal Historic Preservation Tax Incentives

URL: www2.cr.nps.gov/tps/tax

Secretary of the Interior's Standards for Rehabilitation

URL: www2.cr.nps.gov/tps/tax/rehabstandards.htm

Technical Preservation Services for Historic Buildings

URL: www2.cr.nps.gov/tps/briefs/presbhom.htm

Other National Organizations, Publications, and Web Sites

American Association for State and Local History

Lots of information on organizations nationwide and reference materials, including videos, a newsletter and other printed materials on a wide range of topics.

1717 Church Street

Nashville, TN 37203-2991

URL: www.aaslh.org

Telephone: 615-320-3203

FAX: 615-327-9013

Consumer Product Safety Commission

Asbestos information on specific appliances and products

Telephone: 1-800-630-CPSC (630-2772)

National Trust for Historic Preservation

1785 Massachusetts Avenue, NW

Washington, DC 20036

URL: www.nthp.org
Telephone: 1-800-944-6847
202-588-6000

Preservation Books

URL: www.nthpbooks.org

Oldhouse.Com

An interactive oldhouse network

URL: oldhouse.com

Old House Journal

Editorial Offices:

Two Main Street
Gloucester, MA 01930

URL: www.oldhousejournal.com

Telephone:

Subscriptions: 1-800-234-3797

Editorial Offices: 978-283-3200

FAX: Editorial Offices: 978-283-4629

This Old House Online

URL: www.pbs.org/wgbh/thisoldhouse

This Old House Magazine

1185 Avenue of the Americas
New York, New York 10036

URL: www.pbs.org/wgbh/thisoldhouse/magazine
Email: letters@toh.timeinc.com

The Old House Revival Company

URL: www.oldhouserverival.com

The Old House Web

URL: www.oldhouseweb.com

Society of Architectural Historians

Charnley-Persky House
1365 N. Astor Street
Chicago, IL 60610-2144

URL: www.sah.org
Telephone: 312-573-1365
Email: info@sah.org



The Holding-Anderson House (1999), 613 N. Main Street

