GABLE-FRONTED SINGLE-FAMILY HOUSES

A Publication of The New Haven Preservation Trust



INTRODUCTION

During the past decade, interest in older houses in Connecticut's urban neighborhoods has experienced a great revival. Urban renewal programs of the 1950s and 1960s, which often ignored or categorized these buildings as obsolete liabilities best dealt with through demolition, have gradually given way to revitalization programs focusing on the rehabilitation of older housing stock. This change in attitude has been fostered by a number of factors, including an increasing recognition that (a) older houses make an important contribution to the special "historic" character of a city's residential neighborhoods; (b) older houses often exhibit a level of craftsmanship rarely found in their modern counterparts; and (c) rehabilitation of older houses is increasingly becoming an affordable and productive investment for homeowners.

This brochure has been prepared by the New Haven Preservation Trust in cooperation with the City of New Haven and the Connecticut Historical Commission in order to describe a few of the more distinctive architectural and historical characteristics of one of Connecticut's most common nineteenth century urban building types: the gable-fronted single-family house. It is also designed to provide owners of these build-

ings with some basic guidelines relating to effective maintenance and rehabilitation of their properties.

DESCRIPTION

In its purest form, the gable-fronted single-family house is a relatively small, 2 1/2 story rectangular wooden box topped by a simple gable roof. The gable ends of the house face the front and rear of its site. Typically, the house features a front with one or more attic windows in the gable, three symmetrically placed second-story window bays above two first-story window bays, and an offset doorway bay leading into an interior side hall.

Overall, the building type exhibits a broad range of variations on this basic theme. Some are 1 1/2 stories tall, others are 3 1/2 stories tall; some have four-bay-wide fronts, others have two-bay-wide fronts; some are only two rooms deep, others are three rooms deep; some are built of brick, others of cut-stone; some have narrow one-story front porches, others have front porches spanning the entire first story; some have cross-gable roofs, others have gable roofs topped by dormers; some have narrow projecting side wings, others have small rear wings.

HISTORICAL BACKGROUND

Built in widespread numbers in both urban and rural areas, the gable-fronted single-family house was the most popular form of residential architecture in 19th-century Connecticut. Despite its eventual popularity in rural areas, it initially emerged as a major house-type in developing urban areas such as New Haven, Hartford, Middletown and New London during the early years of the 1800s.

Prior to the 1800s, most of the state's modern cities nad relatively small populations. In fact, physically and visually most of these cities usually retained many of the characteristics which today are associated with small towns. Houses located in or near the center of the city were broad, one- or two-room deep "Colonial" timber-frame structures topped by gable roofs with large chimneys and gable ends facing the sides of wide lots with large street frontages.

As urban populations began to increase substantially during the early 19th century, so did the demand for more building sites within the core areas of these cities. Because land was in high demand and very valuable, many large lots associated with pre-1800 houses were subdivided. Most of the open lots resulting from these subdivisions were deep, but too narrow to build a "Colonial" type house on. The solution to building on these narrow and deep lots was both simple and highly practical: with a modified interior plan, the typical gable-roofed pre-1800 house could still be built by rotating its ends ninety degrees so that its gables faced the front and rear of the lot.

The gable-fronted house's popularity in rural as well as urban areas of the state throughout the remainder of the nineteenth century resulted from its practicality and adaptability. They were relatively quick and easy to build, especially with the advent of balloon-framing techniques in the later 19th century. The form was easily modified by the addition of wings, and it could be built in virtually any size. Perhaps most importantly, the gable-fronted house was easily adaptable to changing stylistic tastes by simply altering proportions slightly and/or altering the type of ornamentation applied to its exterior walls.

WHEN WAS IT BUILT?

Determining the approximate or actual age of a building can be important. If you know your building's date, a little further research will enable you to determine the physical properties of construction materials commonly used when it was built. This knowledge can prevent you from making costly repairs with inappropriate modern materials.

The first step to determine your building's construction date should be to call your local library, planning office, or the Connecticut Historical Commission in Hartford: the building's date may have already been included as part of the state's ongoing architectural survey program. If the building has not yet been "surveyed," the following may help you make your own assessment.

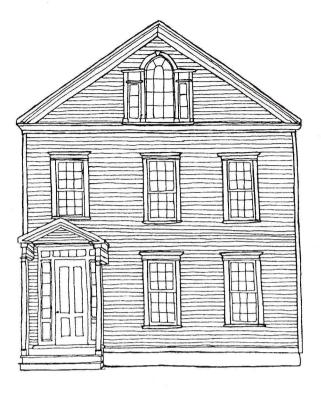
There are three dating methods commonly used by professional researchers. The first involves tracing the history of the property using city directories, land records, tax records, building department records and similar material kept on file by the city. Another ap-

proach is to look through old maps of your city which were compiled in different years and which have buildings drawn on them. For example, assume you have maps for your city from 1895 and 1911. If your building is not on the 1805 map, but is on the 1911 map, it is fair to assume it was built between these two dates. A third method is to date your building on the basis of its architectural style. The three methods may be combined to arrive at the most accurate date.

WHAT STYLE IS IT?

Stylistic terms are used to categorize the basic massing forms and ornamental features which visually distinguish a building as a product of its time. Since most 19th-century gable-fronted single-family houses as a group share the same basic forms, their architectural "style" is conveyed principally through exterior ornamentation. Ornamentation found on most of these houses usually reflects the influence of one of the following architectural styles which dominated the periods noted below.

- (1) Federal Style: 1800 to 1835 Typical exterior features include: clapboard siding; shallow gable roof: fanlight windows in gable ends or over doorways; cornices embellished with modillions and/or dentil moldings; cornice returns; fanlight or three-part gable windows; sidelight windows flanking front doorways; porches with no railings and relatively narrow columns and gable roofs; 6-over-6, 9-over-9, or 12-over-12 pane windows.
- (2) Greek Revival style: 1830 to 1860 Typical exterior features include: clapboard or flush-board sidings; shallow gable roof; rectangular or diamond-shaped gable windows; partial or full cornice returns on the gable ends; narrow rectangular sidelight and/or transom windows around front door; front porches with no railings featuring broad, smooth or fluted columns and flat roofs; 6-over-6 pane windows.
- (3) Italianate style: 1855 to 1885 Typical exterior features include: clapboard siding; prominent cornice returns on the gable ends; shallow gable roof with widely projecting, bracketed eaves; round-arch gable and stairwell windows; porches with flat or gable roofs, square posts with chamfered edges, heavy cornice moldings; projecting window heads and sills; 2-over-2 pane or 6-over-6 pane windows.
- (4) Queen Anne style: 1880 to 1910 Typical features include: clapboard and/or patterned wood-shingle sidings; steeply pitched gable roof; exposed rafter ends; bracketed bargeboards along gable rakes; porches with turned posts and ballusters and spindlework frieze panels; spindle work gable screens; 2-over-2, 1-over-1 or decorative windows with small multiple panes.



FEDERAL STYLE



ITALIANATE STYLE



GREEK REVIVAL STYLE



QUEEN ANNE STYLE

MAINTENANCE AND REHABILITATION

Proper maintenance is essential to the long-term appearance, usefulness and value of any property. For houses which have already been exposed to the ravages of time and weather for 100 years or more, maintenance is particularly key.

There are two basic approaches to building maintenance: reactive and preventive. In the reactive approach, minor repairs are put off until they have developed into major problems requiring immediate attention and major expense. Preventive maintenance, on the other hand, is designed to monitor the ongoing maintenance needs of a building by regularly identifying and repairing minor problems, thereby minimizing the need for major repairs and expenses in the future.

The most important diagnostic component of a good preventive maintenance program is the periodic "physical." The basic tools needed to conduct a house's yearly checkup consist of a notebook and pencil (to record your observations), a penknife (to scrape and poke with), a flashlight (to help you see poorly lit features) and, if available, binoculars (to examine upper story walls, roofs and other high places from ground level). You can make your building's physical as detailed as you like. However, it should definitely include an inspection of the following areas at least once each year.

THE BUILDING "PHYSICAL": WHAT TO LOOK FOR

Exterior -

Roof: tears; cracks; surface bubbling; warped, cupped, missing shingles, or similar deterioration; cracks, holes, or other signs of flashing deterioration around chimneys, vent pipes, etc.

Masonry walls (including foundations): missing or deteriorating mortar; cracked or spalling bricks; excessive bowing or cracking of wall surface; displacement of masonry materials.

Wooden sidings/trim: loose, split, rotted, or warped shingles, clapboards or trim; blistering, peeling, or cracked paint; mildew on paint surface.

Gutters and downspouts: damaged or missing sections, blockages caused by accumulation of debris (such as leaves); displacement.

Chimneys: deterioration mortar or bricks; cracking; excessive leaning.

Windows and doors: debris (such as dirt or leaves) along sills which may lead to mildew or wood rot; lack of weatherstripping and caulking; rot, mold, or mildew on wood; broken sash weight cords; deteriorating glazing putty; loose or broken glass; blistered, peeling, or cracked paint on sash or casings.

Porches and steps: rot, mold, or mildew on wood surfaces; broken railings, floorboards, or stair treads; blistering, peeling, or cracked paint; excessive settlement of porch base or columns.

Yard plantings: excessive overgrowth of trees and shrubs along sides of building; creeping vines on masonry surfaces; growth of fungus and moss in damp areas.

Interior -

Walls, ceilings and trim: water stains or streaks which may indicate leakage; buckled plaster or wall-paper; buckled floor boards; misaligned door and window frames; blistering or cracking paint.

Attics: water stains on rafters and floor boards or around chimneys, vent pipes, etc. which may indicate leakage; insect damage.

Basement: water stains or puddles which may indicate leakage; extensive condensation on walls; mold or mildew along joists and sills which may indicate excessive moisture levels; excessive bowing or cracking of foundation walls; signs of termites or similar pest infestations; cracked or severely deflecting structural members.

Once you have established your systematic review program, and begun to identify necessary repairs, you are ready to tackle rehabilitation.

The extent and complexity of the work involved in rehabilitating any older building depend on a variety of interrelated factors, including the overall condition of the building, its projected use, the financial resources of its owner, and the owner's physical and technical abilities. In this brief brochure, providing a detailed description of the full range of repair problems and solutions associated with 19th century houses would be impossible: for detailed and comprehensive information on repair techniques, consult one or more of the publications listed at the end of the brochure. However, whether completely renovating or simply interested in limited repairs, the following information may help you get started.

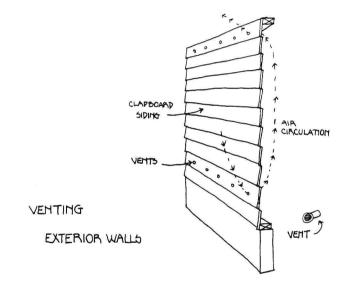
REHABILITATION: SOME GENERAL GUIDELINES

- (1) Planning Before a hammer or saw is lifted, make sure you have determined all major repair issues, such as: work to be undertaken; how to finance it; requirements of current zoning ordinances, building and fire codes; work you can do on your own; and work to be done by professional contractors. Thorough planning greatly helps in minimizing the risk unanticipated expenses.
- (2) Prioritizing List the necessary repairs in descending order of importance and schedule your work accordingly.
- (3) Preserving Try to retain or restore those architectural features which visually define the building's historic character. Older houses which retain historic features are more visually appealing, valuable and marketable than those which do not.
- (4) Performing When performing repairs, always: (a) Use quality materials which do not damage or deteriorate easily. Inexpensive materials will usually lead to more rapid and major future maintenance costs. (b) Know your limitations. Even the most avid "do-it-yourselfer" has limited technical skills and physical abilities. Don't attempt to make repairs that exceed these limits; it could not only wind up costing you more money; it could also lead to dangerous accidents.

REHABILITATION: POSSIBLE PROBLEMS, CAUSES, REMEDIES

(1) Paint Deterioration -

On wall surfaces, blistering and peeling often result from either a buildup of excessive moisture within the wall cavity behind the paint or from using an incompatible paint type. For example, if oil paint is applied over latex, peeling of the top coat can sometimes result. Some possible remedies which may help to alleviate moisture problems include: repairing leaky roofs; repairing and sealing walls and floors in damp basements to reduce or eliminate moisture penetration into wall cavities from this source; painting or wallpapering interior sides of the affected walls with products designed to act as vapor barriers; and, in extreme cases, installing a system of louvered upper and lower wall plugs designed to vent exterior wall cavities through natural convection. Once the problem has been remedied, the affected area should be thoroughly cleaned, scraped and/or sanded, primed with a high-quality oil-based primer and repainted with latex or oil paint according to the manufacturer's specifications.



Excessive cracking of surface paint is usually caused by improper application techniques, such as painting a surface which is dirty or greasy or painting when it is too cold or damp. Cracking can also result when paint that is several layers thick becomes excessively hard and brittle with age and is no longer able to expand and contract with the wood siding in response to temperature and humidity changes. Cracking can usually be dealt with by thoroughly cleaning and carefully sanding the affected area, removing sanding residue, and repainting under weather conditions specified by the manufacturer. Remember, sanding should either be done by hand or with an orbital or reciprocating power tool. Avoid using rotary sanders; they can dig into the wood and leave marks which remain visible after painting. Stripping old paint completely should only be undertaken when the problem is extreme. If stripping is necessary, avoid using blowtorches, chemical strippers and abrasive methods such as sandblasting; these methods can cause severe damage to the siding. Paint should be removed by hand with a wide putty knife or scraper and heat plates or guns designed for this purpose. When using this method, always take adequate precautions against fire and toxic fumes.

For mildew problems, trim back trees or shrubs which may be inhibiting the evaporation process and repair leaky gutter systems. To remove mildew, scrub the affected area with a soft brush and a solution containing a cup of non-ammoniated detergent, a quart of household bleach, and a gallon of water (for stubborn spots, use an extra quart of bleach). Once the mildew is removed, thoroughly rinse the siding with a direct stream of water from a spray nozzle. After the surface is completely dry, repaint with primer and paint which are designed to be "mildew resistant."

(2) Wood Sidings -

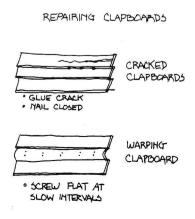
Splitting, warping, and rotting of wood sidings can be caused by a variety of factors, including excessive moisture levels within wall cavities, excessive weathering due to lack of paint, or poor-quality materials. A buildup of mildew or mold on siding surfaces is often caused by leaky gutters, or plantings which reduce air circulation along a wall.

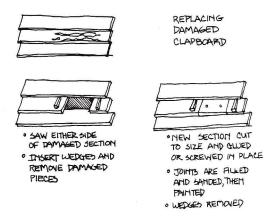
Split clapboards can often be repaired by gently spreading the two edges of the split slightly apart, applying wood glue along each edge and then forcing the two edges back together. The two sections can be held in place with finishing nails set above and below the split. After the glue has completely dried, remove the finishing nails, fill the holes with wood putty, and lightly sand the area smooth prior to priming and repainting.

Warped clapboards can sometimes be straightened by drilling several holes through the board and inserting wood screws. Then tighten the screws until the warp flattens out. Caution: to avoid splitting the board, always tighten the screws in gradual stages over a period of several days. Wet the board as thoroughly as possible prior to tightening the screws. Putty over the screws and sand surface lightly before repainting.

For rotted or damaged clapboards, make a vertical cut on each side of the affected section with a small saw. Using a hammer and chisel, pull the nails which hold the top and bottom of the section in place and remove the section in pieces. Replace the section with a new piece, fill any joints with wood putty, and sand the surface smooth before priming and repainting.

Rotted, cracked, or warped wood shingles can be replaced on an individual basis in the same manner outlined for clapboards, except there is no need for making cuts with a saw.





(3) Masonry -

Most mortar deterioration results from the combined effects of weathering and air pollution. Excessive spalling and cracking of bricks usually result from the combined effects of deteriorated mortar or improper repointing. Water gets inside cracks and joints. It expands and contracts with temperature changes, cracking and displacing the surrounding masonry. Air pollution contributes greatly to the buildup of dirt and deposits on brick wall surfaces. Mixed with water, these deposits often stain brick.

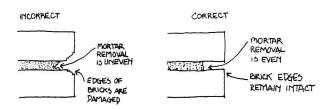
Deteriorated mortar should be repointed. Loose mortar should be removed from the joints by hand with a hammer and chisel to a uniform depth of 1/2-1". To ensure a good bond, thoroughly flush chiseled joints with water prior to refilling them with new mortar. Important Precautions: When removing old mortar, don't chip the edges of the surrounding bricks. This will accelerate the deterioration of the brick. Make sure that new mortar matches the color and composition of the original mortar. Most older buildings have bricks designed for use with soft lime mortar; hard cementbased mortars can lead to damage to the surrounding bricks. If you're unsure of what type of mortar to use, have some of the original analyzed at a high school or college chemistry laboratory to determine the proper mix. Finally, never refill a joint completely. Finished joints should always be slightly recessed.

Minor cracks in bricks can usually be repaired by filling them with tinted sealant designed for that purpose. Severely cracked, broken, or spalling bricks should be replaced by chiseling out the damaged brick and surrounding morter, laying a shallow mortar bed on the top, bottom, and sides of the cavity, and inserting a brick "buttered" on all but the finish side with mortar prior to final pointing. The new brick should match the orignial brick in size, color, and texture as closely as possible.

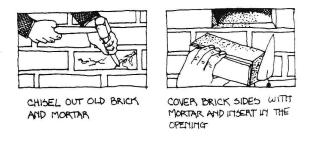
Proper removal of dirty deposits from brick can be accomplished in two ways: a) hand scrubbing with soft bristled brushes and rinsing with water sprayed under low to moderate pressure; or b) chemical cleaning. Chemical cleaning is a highly technical and poten-

tially dangerous procedure which should be undertaken only by competent and knowledgeable professionals. Never utilize abrasive cleaning methods such as sandblasting on exterior brick; they can irreparably damage brick. Also, never coat brick with clear "waterproof" sealants such as silicone; it's an unnecessary expense which can result in major maintenance problems in the future if moisture gets trapped beneath the sealant.

REPOINTING : REMOVING OLD MORTAR



REPLACING A DAMAGED BRICK



(4) Roofs -

Exposure to rain, sunlight and air pollution eventually lead to the deterioration of roof surfacing and flashing materials and leakage. Your first step toward curing these problems should be to assess the existing condition of the roof. (You may want to contact a reputable roofing contractor to help with this.) If deterioration is extensive, complete replacement may prove more effective and economic than piecemeal patching. However, under certain circumstances, patching can be useful and cost-effective. For example, as a temporary measure, existing leaks should be repaired immediately to prevent water damage in the rest of the building until the new roof is installed.

For roof systems in which the bulk of the surface fabric and/or flashing is essentially sound, selective repair can often provide a long-lasting roof at moderate cost. For example, assume your house has a roof surfaced with asphalt shingles which are in good condition. However, the flashing which seals the edge of the roof at the juncture of a chimney stack has deteriorated and is leaking. It may be possible to carefully remove the shingles immediately around the chimney stack, replace the deteriorated flashing and reset or replace the removed shingles, thereby effectively solving the problem without replacing the entire roof.

(5) Energy Conservation -

Excessive infiltration (flow of air into and out of a building), inefficient heating/cooling systems, and lack of insulation are among the most typical reasons for high heating and cooling costs.

Excessive infiltration can account for 40 percent of the heating and cooling costs of old houses. To reduce infiltration, make sure that all doors and window openings are properly weatherstripped and caulked. Storm windows and doors should be installed and functioning properly. Cracks and crevices along foundation walls (especially where they meet wooden sills) should be sealed with appropriate caulking materials.

Like infiltration, inefficient heating/cooling systems are a leading cause of high energy costs in older buildings. Have your system serviced at least once a year to ensure peak operating efficiency. Consider upgrading heating equipment with more efficient units. Automatic thermostats designed to raise or lower temperatures when a building is vacant are also helpful. In weather which is not too hot, consider turning air conditioners off and opening windows.

Most owners today recognize the potential benefits of insulated walls and roofs; however, many are unaware of the potential dangers posed by improperly installing insulation in older buildings. A safe and effective way to insulate a side wall with interior wall surfaces which are already in need of replacement is to remove the interior wall surface, install fiberglass batt insulation between the exposed studs, cover it with an appropriate vapor barrier material such as polyfilm, and install a new interior finish surface directly over the vapor barrier.

In order to avoid ripping out plaster, many property owners decide to have insulation blown into the wall cavities. Be careful! Blown-in insulation techniques rarely include provisions for effective vapor barriers. Without them, when warm water vapor from the interior comes in contact with cold insulation during the winter it will condense into water. The result is soggy and ineffective insulation. Since air can't circulate through the wall, this moisture may become trapped and cause rot in the walls or peeling exterior paint.

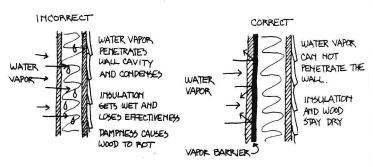
Remember, if you're going to go to the trouble and expense of insulating, make sure it's done right. Otherwise, you may wind up spending a lot and gaining little.

(6) Exterior Paint Color -

From a visual standpoint, exterior paint color is one of the most important character defining features of a building. Often, well-intentioned owners who have worked hard to repair, retain, or replace historic exterior trim or sidings realize too late that the new paint color scheme they've used on a building is inappropriate for one or more of the following reasons: too many colors were used; not enough colors were used; the colors chosen are from the wrong historical era.

You can usually avoid this problem if you take the following steps. First, try to determine the original color scheme of the building; carefully scrape off the

INSULATING SIDE WALLS



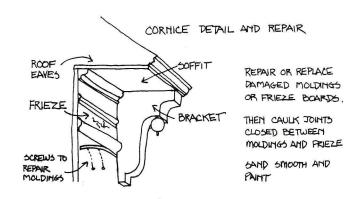
paint along the edges of sidings and trim features at several locations on the north side of the building until the bottom paint layer is exposed. When scraping, angle your knife slightly; this will help to make the color of each layer of paint more visible. Then wet the scraped area; this will allow you to determine the original base color more accurately.

If this method proves unsuccessful, or you do not like the particular color scheme you have uncovered, consult publications which describe appropriate color schemes for the period in which your building was built. You can also refer to charts published by various paint manufacturers which describe documented historic colors and color schemes. Since some of these publications can be expensive to purchase, you may want to call a local or state historic preservation organization. Often, these oganizations keep such information on file as a public service. These groups can also provide invaluable assistance if you have questions or want further guidance.

(7) Exterior Trim -

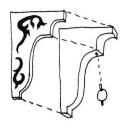
Like paint color, moldings, brackets, porches, and other ornamental trim features give special character to the exterior of a building. Whether you do the work yourself or have it done, retaining, repairing, or replacing these features will be a worthwhile investment in the total value of your property.

For loose trim features such as moldings, carefully refasten the feature by drilling holes and countersinking and screwing the trim back on. Before scraping and repainting, fill the screw hole depression with putty and sand lightly.



Epoxies, polyesters, and synthetic resins available on the market today often allow for repair rather than replacement of partially rotted or broken features such as porch posts and railings. With the use of such materials, rotted sections can often be cut out and refilled; and broken or cracked brackets, balusters, moldings, doors, and other wooden features can often be reglued. Features beyond repair can be reproduced with a jig or sabre saw and drill and stock lumber, using an intact, similar feature as a model. Intricate features such as brackets can often be made in sections and then glued together with waterproof epoxies. If exact reproduction of a feature such as a molding is not possible, approximate the size and shape of the original as closely as possible. If a major feature such as a front porch is missing entirely, try to locate an old photograph on which to base the design of the new porch. If you cannot find a photograph, look at similar nearby houses which retain old porches; these may help to give you an idea of the size, shape and details of the porch which was removed from your own house.

DUPLICATING A BRACKET





PLYWOOD CUT-OUT WITH FLORAL DESIGN 15 APPLIED TO BRACKET BLOCK WITH GLUE

FINISHED BRACKET WITH SANDED JOINTS AND BALL PENDANT

Resource Publications

(1) The following publications can be obtained upon request from the U.S. Superintendant of Documents, Government Printing Office, Washington, D.C. 20240. Most are available for a minimal charge,

Condensation Problems in Your House: Prevention and Solution. By L.O. Anderson and G.E. Sherwood, 1974.

Principals for Protecting Wood Buildings From Decay. By T.C. Sheffer and A.F. Verrall, 1973.

Wood Siding: Installing, Finishing, Maintaining, 1973.

Preservation Brief # 1: The Cleaning and Waterproof Coating of Masonry Buildings. By Robert C. Mack, 1977.

Preservation Brief # 2: Repointing Mortar Joints in Historic Brick Buildings. By Robert C. Mack, 1976.

Preservation Brief #4: Roofing for Historic Buildings. By Sarah M. Sweetster, 1978.

Preservation Brief # 3: Conserving Energy in Historic Buildings. By Baird M. Smith, 1978.

In the Bank... Or Up the Chimney. By U.S. Department of Housing and Urban Development, 1975.

The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. 1983.

Subterranean Termites: Their Prevention and Control in Buildings. By H.R. Johnston, 1975.

 $\ensuremath{\text{(2)}}$ The following are privately printed publications which are available from the sources noted.

A Field Guide to American Houses. By Virginia and Lee McAlester, 1984. Available from Alfred A. Knopf, Inc. New York, NY.

American Architecture Since 1780: A Guide to Styles. By Marcus Whiffen, 1969. Available from The MIT Press, Massachussetts Institute of Technology, Cambridge, MA 02142.

How to Date a House. 1976. Available from The Old-House Journal, 69-A 7th Ave., Brooklyn, NY 11217.

How to Date a House. By David M. Hart, 1975. Available from the Society for the Preservation of New England Antiquities, 141 Cambridge St., Boston, MA 02114.

The Eight Most Common Mistakes in Restoring Historic Houses. By Morgan W. Phillips, 1975. Available from the Society for the Preservation of New England Antiquities, 141 Cambridge St., Boston MA 02114.

Inspection Checklist for Vintage Houses. 1977. Available from The Old-House Journal, 69-A 7th Ave., Brooklyn, NY 11217.

Old House Woodwork Restoration. By Ed Johnson, 1983. Available from The Old-House Journal, 69-A 7th Ave., Brooklyn, NY 11217.

The Care of Old Buildings Today: A Practical Guide. By Donald Insall, 1974. Available from the Preservation Bookshop, 740 Jackson Pl., N.W., Washington, DC 20006.

How to Buy and Fix Up An Old House. 1976. Available from Home-Tech Publications, 7315 Wisconsin Ave., Bethesda, MD 20014.

Century of Color. By Roger Moss. Available from J.D. Dewell and Company, 1010 State Street, New Haven, CT 06511.

American Shelter. By Lester Walker, 1981. Available from The Overlook Press, Lewis Hollow Road, Woodstock, NY 12498.

Illustrated Dictionary of Historic Architecture. Edited by Cyril M. Harris, 1977. Available from Dover Publications, 180 Varick Street, New York, NY 10014.

Insulating the Old House. Edited by Sally E. Nielson, 1977. Available from Greater Portland Landmarks, 165 State Street, Portland, ME 04101.