
MIXED-USE ROW BUILDINGS

A Publication of The New Haven Preservation Trust



INTRODUCTION

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

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 the more distinctive architectural and historical characteristics of one of Connecticut's most common nineteenth- and early twentieth-century building types: the mixed-use row building. It is also designed to provide property owners with some basic guidelines relating to the effective maintenance and rehabilitation of this historic building type.

WHAT IS A MIXED-USE ROW BUILDING?

In its most basic form, a mixed-use row building is a rectangular, narrow and deep, three-bay-wide, 3-1/2 story structure topped by a shallow gable roof. It features a street-level first story designed for commercial use and upper stories designed for use as one or more apartments, which are accessed via front and rear stairwells.

As a group, nineteenth- and early twentieth-century mixed-use row buildings display a broad range of variations on this basic theme. Some have flat roofs, others have hip or shed roofs; some are 2 1/2-stories tall, others are 4 1/2-stories tall; some are built of brick, others of wood or cut stone; some have two-bay-wide fronts, others have four-bay-wide fronts; some are freestanding, others are arranged in rows of two or more continuous, unbroken units; some have projecting upper-story front window bays, others do not; some feature extensive exterior ornamentation, others have exteriors which are very plain.

HISTORICAL BACKGROUND

The practice of using individual structures for both commercial and residential purposes was well-established long before the advent of the nineteenth

century. However, before 1800, few buildings in Connecticut were actually designed for mixed use. Most were simply houses with a modified first story. In the nineteenth century, building types specifically designed for mixed use were developed. In urban areas, the most prevalent of these new building types was the mixed-use row building.

The mixed-use row building is essentially a hybrid building type. It combines the basic modular construction arrangement found in nineteenth-century urban row housing with the separately accessed ground-story space typically found in nineteenth-century urban commercial structures. In Connecticut, mixed-use row buildings emerged as a popular urban building form in the 1850s. By the early years of the twentieth century, they had been built in extensive numbers throughout most of the state's urban centers. Today, New Haven, Hartford, Bridgeport and Waterbury share the majority of these structures. In New Haven, they are found throughout the Fair Haven, Upper State Street, Dixwell, Dwight, and Hill neighborhoods.

Several reasons help to account for the popularity enjoyed by the mixed-use row building as an urban building type during the nineteenth and early twentieth centuries. First, its proportions were ideally suited for the narrow and deep buildings lots available in most urban areas by this period. Second, it was an highly adaptable building type. It could be built in either a freestanding or multiple-unit, row format. Third, mixed-use row buildings were both affordable and ideally suited to the needs of bakers, grocers, etc. In fact, most mixed-use row buildings were originally erected for such small businessmen in outlying commercial districts which developed amidst the city's outwardly expanding, nineteenth- and early twentieth-century residential neighborhoods.

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 the construction materials commonly used in the building. 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, and building department records kept on file by the city. Another approach 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 1895 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 nineteenth- and early twentieth-century row buildings share the same basic form, their architectural "style" is conveyed primarily through exterior ornamentation, most of which is usually located on the front of the building. Ornamentation found on nineteenth/early twentieth-century mixed-use row buildings usually reflects the influence of one or more of the following three architectural styles which dominated the periods noted below.

(1) Italianate style: 1860 to 1890 - Typical exterior features shared by brick, frame, and cut-stone buildings include prominent main cornices projecting outward over tall frieze panels embellished by scroll-sawn brackets and decorative moldings, and 2-over-2 pane double-hung windows. Typical features shared by brick and cut-stone buildings include cut-stone window and door sills and lintels and decorative bands of cut-stone trim spanning portions of walls. Typical features shared by frame buildings include clapboard siding and bracketed, projecting window trim.

(2) Queen Anne style: 1885 to 1910 - Typical exterior features shared by brick, frame, and cut-stone buildings include prominent main cornices extending outward over tall frieze panels embellished by scroll-sawn brackets and decorative moldings, 2-over-2 or 1-over-1 pane double-hung windows and/or decorative double-hung windows with upper sash featuring panes of differing size and color patterns, large projecting front gable dormers, and projecting, front upper-story window bays. Typical features shared by brick and cut-stone buildings include cut-stone window and door sills, arched window openings of decoratively detailed cut-stone or brick, and decorative bands of brick, cut-stone or terracotta spanning portions of walls. Typical features shared by frame buildings include clapboard and/or wood-shingle sidings.

(3) Colonial Revival style: 1895 to 1925 - Typical features shared by brick, frame and cut-stone buildings include simply detailed main cornices projecting slightly outward over tall main frieze and architrave panels embellished by classically derived motifs (such as denticulated moldings, modillion brackets, or swag), column-like pilasters rising along the corners of the buildings, projecting front upper-story window bays, and 1-over-1 or 6-over-1 pane double-hung windows. Typical features shared by brick and cut-stone buildings include cut-stone window and door sills and lintels, arched window or door openings, and decorative bands of cut-stone trim embellishing portions of walls or storefront end piers. Typical features shared by frame buildings include clapboard siding and decorative window trim.



ITALIANATE STYLE



COLONIAL REVIVAL STYLE



QUEEN ANNE STYLE

MAINTENANCE AND REHABILITATION

Proper maintenance is essential to the long-term appearance, usefulness and value of any property. For older mixed-use row buildings, which have already been exposed to the ravages of time and weather for 70 years or more, maintenance is particularly critical.

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 such a checkup consist of a notebook and pencil (to record your observations), a penknife (to scrape and poke with), a flashlight (to help you see in poorly lit areas), and, if available, binoculars (to examine upper story walls and roofs from ground level). You can make your building's physical as detailed as you like. However, at a minimum, you should 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 surfaces; displacement of masonry materials.

Wooden sidings: 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 of 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 floorboards 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 insect infestations; cracked or severely deflecting structural members.

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

The extent and complexity of the work involved in rehabilitating any 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 older mixed-use row buildings 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 you are completely renovating or simply interested in limited repairs, the following information will 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 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 of unanticipated expenses.

(2) **Prioritizing** - List the necessary repairs in descending order of importance and schedule your work accordingly.

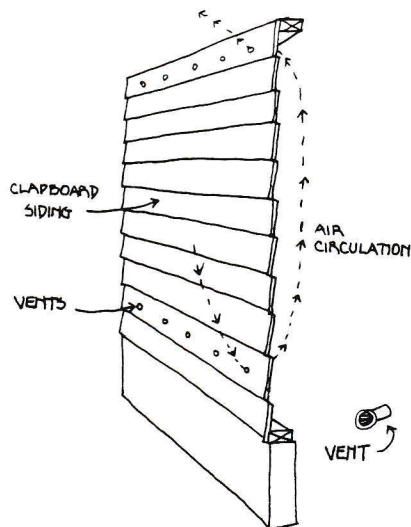
(3) **Preserving** - Try to retain or restore those architectural features which visually define the building's historic character. Buildings which retain original architectural features are more visually appealing, valuable, and marketable than those which do not.

(4) **Performing** - When performing repairs, always:
(a) Use quality materials which do not damage or deteriorate easily. Inexpensive materials will usually lead to more extensive future maintenance costs.
(b) Know your limitations. Even the most avid "do-it-yourselfer" has limited technical skills and physical abilities. Do not attempt to make repairs that exceed these limits. It could not only wind up costing you more money; but 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 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; painted with a high-quality oil-based primer; and repainted with latex or oil paint according to the manufacturer's specifications.



VENTING EXTERIOR WALLS

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/or 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 Siding -

Splitting, warping, and rotting of wood sidings can be caused by a variety of factors, including excessive moisture levels within wall cavities, excessive weath-

ering due to lack of paint, or the use of 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 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 the surface until smooth 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 lightly sand the joints smooth before priming and repainting.

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

REPAIRING CLAPBOARDS



CRACKED CLAPBOARDS

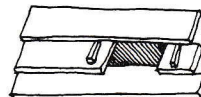
- GLUE CRACK
- NAIL CLOSED



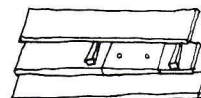
WARPING CLAPBOARD

- SCREW FLAT AT SLOW INTERVALS

REPLACING DAMAGED CLAPBOARD



- SAW EITHER SIDE OF DAMAGED SECTION
- INSERT WEDGES AND REMOVE DAMAGED PIECES



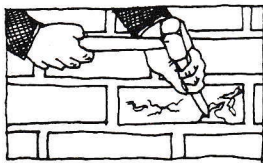
- NEW SECTION CUT TO SIZE AND GLUED OR SCREWED IN PLACE
- JOINTS ARE FILLED AND SANDED, THEN PAINTED
- WEDGES REMOVED

(3) Masonry -

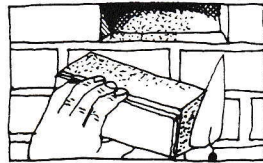
Most mortar deterioration results from the combined effects of weathering and air pollution. Excessive spalling and cracking of bricks usually result from the combined effects of deteriorated mortar or improper repointing. Water gets inside cracks and joints. It expands and contracts with temperature 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 affected area by hand with a hammer and chisel to a uniform depth of 1/2-1". To ensure a good bond, flush chiseled joints with water prior to refilling them with new mortar. **Important Precautions:** When removing old mortar, do not 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 cement-based mortars can eventually damage the surrounding bricks. If you are unsure of the 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.

REPLACING A DAMAGED BRICK



CHISEL OUT OLD BRICK AND MORTAR

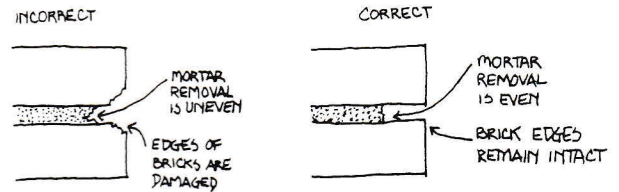


COVER BRICK SIDES WITH MORTAR AND INSERT IN THE OPENING

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 mortar, laying a shallow mortar bed on the bottom, top, and sides of the cavity, and inserting a brick "battered" on all but the finish side with mortar prior to final pointing. The new brick should match the original brick as closely as possible in size, color, and texture.

Proper removal of dirt 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; and b) chemical cleaning. Chemical cleaning is a highly technical and potentially 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 is an unnecessary expense which can result in major maintenance problems in the future if moisture gets trapped beneath the sealant.

REPOINTING: REMOVING OLD MORTAR



(4) Roofs -

Exposure to rain, sunlight, and air pollution will 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, replacement may prove more effective and economical 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 new life to an older roof at moderate cost. For example, assume that the asphalt roll roofing of a mixed-use row building is in good condition. However, the metal flashing at the juncture of a chimney stack and roll roofing has deteriorated, and a leak has developed. Sometimes this problem can be cured by carefully raising the sections of roofing immediately around the stack, carefully pulling out the old flashing, and installing new flashing under the roll roofing. The raised sections can then be lowered and resealed.

(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 older buildings. To reduce infiltration, make sure that all door 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.

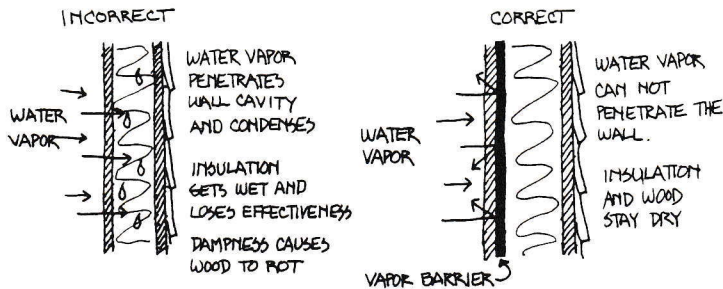
Like infiltration, inefficient heating/cooling systems are a leading cause of high energy costs in older buildings. Have your system serviced at least once a year to ensure peak operating efficiency. Consider upgrading old heating equipment with more efficient units. Automatic thermostats which lower temperature levels when a building is vacant are also helpful. On days which are not too hot, turn air conditioners off and open the windows instead.

Most owners today recognize the potential benefits of insulated walls and roofs. However, many are unaware of the potential dangers posed by improperly installed insulation, especially in older buildings.

A safe and effective way to insulate a side wall with interior wall surfaces that 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 masonry buildings, interlocking rigid-foam insulating panels applied directly over furring strips attached to the inside faces of outside walls can be used in place of fiberglass batts.

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 cannot circulate through the wall, moisture may become trapped and cause masonry deterioration, rot in frame walls, or peeling exterior paint.

INSULATING SIDE WALLS



Remember, if you are going to go to the trouble and expense of insulating, make sure it is done right. Otherwise you may spend a lot and gain 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, replace, or retain trim, siding materials, or other historic features on a building realize too late that the new paint color scheme they have used 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 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 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 organizations keep such information on file as a public service. These groups can also provide invaluable assistance if you have questions or want further guidance.

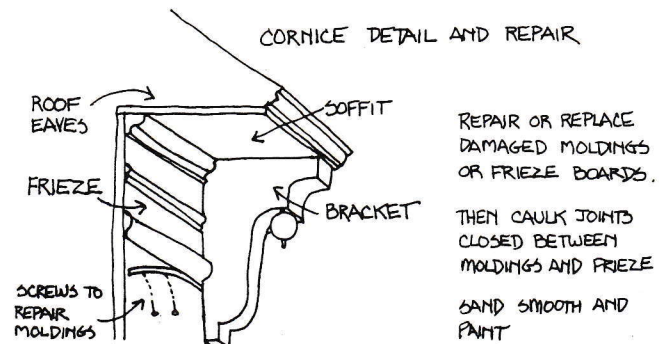
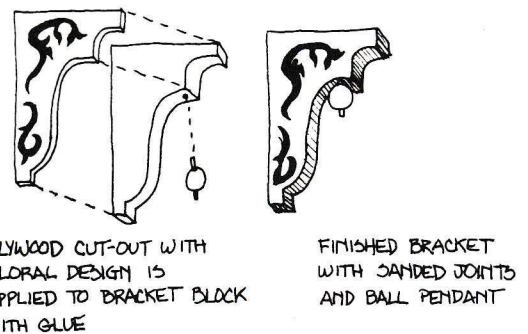
(7) Exterior Trim -

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.

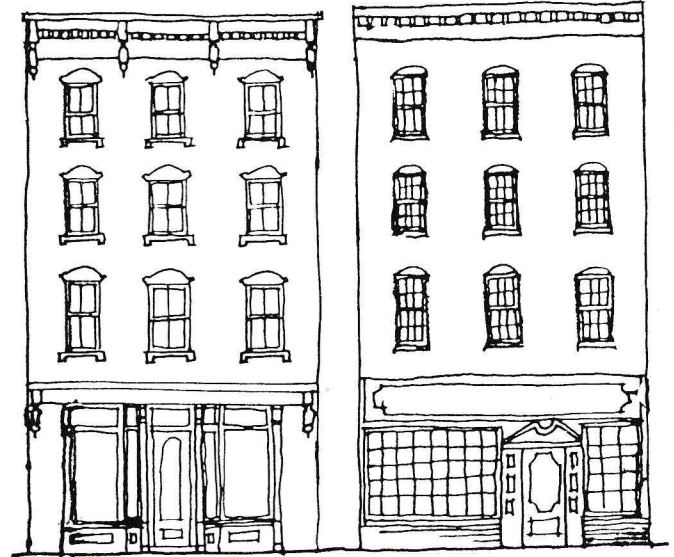
Epoxies, polyesters, and synthetic resins available on the market today often allow for repair rather than replacement of partially rotted or broken features such as porch posts and railings. With the use of such materials, rotted sections can often be cut out and refilled; and broken or cracked brackets, 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 you can.

DUPLICATING A BRACKET



(8) Storefronts -

Nineteenth/early twentieth-century mixed-use row building storefronts are characterized by display windows featuring large panes of glass. Often, these large display windows are topped by rectangular transom windows. When repairing storefronts, many well-intentioned owners go too far in attempting to make this feature look "historic." The most common error most owners make is to "Colonialize" the front by installing multiple-pane display window grids. This treatment is not only historically inappropriate; often, it makes the store less desirable to potential tenants seeking large unbroken window areas in which to display their wares. An old photograph of the building showing an intact original or early storefront is usually the best design guide on which to base your repairs. If such a photograph is unavailable, you can use the drawings found on the previous pages as a general guide. You may also find it helpful to contact a local or state historic preservation office for design assistance.



APPROPRIATE

INAPPROPRIATE

RESOURCE PUBLICATIONS

(1) The following publications can be obtained upon request from the U.S. Superintendent 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 J.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.

(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, Massachusetts 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.