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Carrots and Sticks
Preservation incentives and regulations

Commercial Paint Stripping
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Architectural Glass
Storefront design as seen through the evolution of glass technology, with notes on repair & maintenance

Our Old-House Office
Working in a converted residence

Streetscapes
Guidelines for Main Street, from period photos & a buyer's guide

Editor's Page

Letters

Ask OHJ

Restorer's Notebook

Good Books

Restoration Products

Emporium

Product Network

Ad Index

Remuddling

Cover: It's not OHJ headquarters, and those rascals milling about are not the editors. (See page 44). But the c. 1900 photo does capture the spirit of this special issue on commercial rehabilitation. (photo courtesy of The Bettmann Archive; hand-coloring by Bekka Lindstrom)
No, you haven't tuned in to the wrong magazine. This is still OHJ. As we enter our 15th year of publishing, we'll continue to edit practical articles for people doing residential work.

Offbeat as it may seem, this special issue on commercial restoration is actually in response to many questions from OHJ readers. (A third of OHJ subscribers are involved in the preservation of old buildings as a profession. The number is closer to half if we count people fixing and selling old buildings as a second career, and homeowners whose old-house interest has put them on historical commissions and zoning boards.)

Our emphasis in this issue is on small commercial work, not on large development projects. The articles on shopfronts and streetscapes are practical, accompanied by a useful buyer's guide that proves Main Street accoutrements don't all come from the same cookie cutter. I think you'll be struck by the dose of reality in the period photos of historic Main Streets. You'll find an article on commercial paint stripping, of interest even to the private homeowner who wants to get a messy job over with in a hurry. "Carrots and Sticks" uses plain English to outline preservation incentives and regulations.

Many commercial buildings have been subjected to quick fixes rather than maintenance and repair. Sometimes just peeling off the coverups restores architectural integrity. (Project: V. Romanoff & Associates, Ithaca, N.Y.)
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THE OLD-HOUSE JOURNAL
Regarding “Early Exterior Paints” in the May/June 1988 issue:
We’re asked, “How do you avoid the ‘latex look’ on early houses?”
We found there was virtually nothing published on the subject, so OHJ editor Gordon Bock researched it through scholars, chemists, manufacturers, archival references, specialized seminars, and the occasional item in a trade journal.

The result, as with many OHJ articles, is submitted as “groundbreaking” (and therefore not the last word) to readers, for your comments and addenda. We’re still hoping to hear from those who have experimented with early paints or simulated colonial finishes.

Historic Paint Colors
Dear OHJ,
I greatly enjoyed (and found very informative) your article on “Early Exterior Paints.” But I was surprised you didn’t mention Old Sturbridge Village paints in your historic-colors suppliers list. I have used them many times with pleasing results.
— Erik Schreiber
Berlin, Conn.

You’re right. Old Sturbridge colors are authorized by Old Sturbridge Village, and are manufactured by:
The Stulb Co.
PO Box 297, Dept. OHJ
618 W. Washington St.
Norristown, PA 19404
They’re available nationally and in Canada. For a distributor in your area, call (800) 221-8444. — ed.

More On Paint
Dear OHJ,
I want to commend you on the very good article on historic paints. As someone who has been working with historic paints for more than 18 years — first at Columbia University’s Historic Preservation program and, for the past 10 years, as consultant on historic colors to the Sherwin-Williams Company — I found it to be a useful precis of the best of the available work and literature on paints. However, I would like to make two comments.

I wish Mr. Bock had been more careful about listing Prussian Blue at the close of the article. Some of your readers may not realize that it was almost exclusively an interior color, and plan to paint the body of some lovely, pre-Civil War house Prussian Blue. Of those 18th- and 19th-century documentary materials I have reviewed at Columbia’s Avery Library, at the Philadelphia Athenaeum, and at Sherwin-Williams’ own extensive archives, I have never found blue of any kind to be recommended for exterior use — other than an occasional late-19th-century reference to porch ceilings. Prussian Blue, as Mr. Bock points out, was particularly fugitive. I must admit that on-site paint research has turned up two cases where blue was used for some trim or for shutters: one in Louisiana and one in South Carolina. However, I have found no case in which a painter’s manual, formula book, or even early color cards recommend blue for a building’s exterior. Certainly Hezekiah Reynolds, to whom Mr. Bock refers, does not.

In the same reference to Prussian Blue, the author says that it is “often cut with a little lampblack to mute vibrancy.” I assume this refers to the practices of the present day, for it was the very vibrancy of Prussian Blue which made it such a prized pigment in the 18th- and early-19th-century. Indeed, the joy was in using it in its pure form.

Finally, as a consultant to Sherwin-Williams, I wonder why our Heritage Colors were not on the list of Products/Suppliers. This is the color card which was documented meticulously and which was part and parcel of Century of Color by Roger W. Moss, which appears in the bibliography for the article. It remains one of the most authentic color documents available, and an important historic-color source.

Once again, let me commend Mr. Bock’s article and the consistent excellence of Old-House Journal.
— Patricia S. Eldredge
Archives & Historic Colors
Sherwin-Williams
Cleveland, Ohio

Dear Ms. Eldredge:
Thanks for your kind words on my article and the OHJ.
Your first point is well taken. Prior to 1860, painting a whole house with Prussian Blue would have been an eccentric decision:
1) It would have been an unlikely aesthetic choice in an age when subtler colors were the norm;
2) It would have been an expensive color that wouldn’t last.
I focussed my article on paint formulation, not color schemes, and didn’t mean to suggest Prussian Blue was a typical body paint.
continued on page 6
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continued from page 4

On your second point, I can only quote from paint research on the 1796 Harrison Gray Otis House in Boston:

"It is significant that the original painter of the Otis House deliberately grayed his blues and greens with lampblack. [His] blue pigment was overbrilliant, and a little lampblack made it soft ... (Morgan Phillips, Society for the Preservation of New England Antiquities).

Chances are, this was not an isolated incident.

— Gordon Bock

P.S. The "Heritage Colors" line from Sherwin-Williams, introduced in 1981, is still available in most parts of the country. This line of paint colors is appropriate for houses dating from about 1820 to 1920 — generally, a bit later than the period covered in the article.

More on Doorknobs

Dear Ms. Poore,

I was delighted to note the comments by Mark Walston, Historian, U.S. Customs Service, in OHJ's Letters page ['Government Doorknob,' March/April 1988]. Treasury Seal Emblematic hardware has been dear to my heart since I acquired my first such knob in 1977 (from a salvage dealer on La Cienega in Los Angeles). The knob and escutcheon — a grand design — illustrating Mr. Walston's letter are of Russell & Erwin manufacture. The escutcheon is one of several hardware offerings in R & E's "Real & Compression Bronze" Builder's Hardware, 1875, Volume 2. The knob completing the set is not illustrated there, yet can be identified through the perimeter design. Treasury Seal patterns were produced by several companies within virtually the same 1868-1885 period. The basic emblems of scales, stars, and key remained the same; differences occurred in the shield, perimeter design, and knob configuration. Eight different designs have come to light so far, four of them identified through company symbols or catalog illustration. Hopkins and Dickinson, an early hardware manufacturer catering to the hardware needs of the
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continued from page 6

elite and important, produced Treasury Seal sets with knobs of simple beaded perimeter, sometimes finished in gold and silver plate.

— Maudie Eastwood
Consultant, Antique Builder’s Hardware
Tillamook, Or.

Sales Aid

Dear OHJ,

The Old-House Journal has become invaluable in explaining and specifying restoration materials and methods to my clients. Often I simply copy an article and attach it to my proposal, as I did with “The Basics of Plaster Repair” by Patricia Poore in the March/April 1988 issue. My customer becomes my partner in understanding the “whys and ways” of the work we will perform to restore or upgrade his/her home, as

presented by an expert third party: OHJ!

I also use OHJ as a sales aid in showing clients why I recommend work to be performed in a specified method, based on the pertinent article(s). Thank you for helping lighten the ever-increasing load on us restoration contractors.

— Joseph J. Lacks
Essexcraft
Cincinnati, Ohio

Fiberglass Mesh

Dear OHJ,

Thanks for the most informative article on plaster repair (March/April 1988). I would like to share with your readers an alternative to canvassing or “starting over,” which was developed by Dick May of Matamoras, Pennsylvania, and was used on several historic buildings in our National Recreation Area. It’s a fiberglass-mesh-reinforced veneer-plastering system which uses the method of crack repair described in your article on a grander scale. Entire walls and ceilings are covered with 24-inch widths of fiberglass insect screen embedded in a thin coating of joint compound. Additional feather coats are later troweled on and smoothed out using a wet foam brush or sponge. The result is a crack-resistant surface suitable for painting or papering. The thin, reinforced veneer coating does not hide slight surface irregularities or undulations associated with early craftsmanship or the ravages of time, and thus preserves historic appearances.

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continued on page 10
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LETTERS

continued from page 8

Wire Cloth of Hanover, Pennsylvania. As for the leftover 5-gallon joint-compound containers generated by this process (an average of five per room), they sell very quickly at yard sales and flea markets!

— Tom Solon
Historical Architect
Delaware Water Gap National Recreation Area
Bushkill, Penn.

Wrong Door!

Dear Editors,

Working as we do in the early Federal museum house, the Boyhood Home of Robert E. Lee, we especially appreciated your article, "The Georgian & Federal Styles," in the March/April issue of Old-House Journal. James C. Massey and Shirley Maxwell are very good friends of Old Town Alexandria, but somehow there is an error in the attribution of a photo-

The real doorway of the Robert E. Lee Boyhood Home.

graph on page 25. The doorway shown as that of the Boyhood Home is actually that of the Edmund Jennings Lee House of Alexandria, dating from 1800. Of course there is considerable similarity, but for comparison, I enclose a view of our doorway.

— Juanita R. Miller
Curator, Boyhood Home of Robert E. Lee
Alexandria, Virg.

Dear Sirs:

It is unfortunate when people try to take advantage of us just because we are restoring old homes; and more unfortunate when they enlist Old-House Journal to help in their con game. That is the long and short of it with the product you described in your September/October 1987 is-

continued on page 12
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THE OLD-HOUSE JOURNAL
LETTERS

continued from page 10

The good news: Beyond the glitter, there is some truth to the claims, though for reasons of basic chemistry. If iron oxide (rust, in everyday English) is treated with phosphoric acid, it will be converted to iron phosphate. Those who blend these products claim iron phosphate is a stable base for painting and a moisture barrier.

The bad news: The Reading, Penn., con men would have us pay around $200 per gallon for phosphoric acid, about ten times its actual cost.

The best news is that at least one reputable manufacturer makes an essentially identical product. Ospho, from the Skybyte Co., 3125 Perkins Ave., Cleveland, OH 44114. (216) 771-1590. Ospho costs $4.50 per quart and $10.50 per gallon, and can be ordered direct from the manufacturer if you cannot find it locally.

I am not affiliated in any way with this product or its manufacturer and receive no remuneration from them for anything. I have never used Ospho and make no claims for its efficacy. I do own an old house and subscribe to OHJ.

— Robert Mooney
St. Paul, Minn.

Smoke Bells Source

Dear OHJ,

I have just read in your January/February 1988 issue the “Ceiling Soot” letter on page 16 [Ask OHJ], and your comments about not being able to locate any companies that still make “smoke bells.”

Brass Land, 5760 Northampton Blvd., in Virginia Beach, carries wall sconces with smoke bells that can be purchased separately. I believe Brass Land orders from Virginia Metalcrafters. The ladies at Brass Land are extremely helpful and friendly, and the smoke bells are beautiful!

— Ellen Cummings
Virginia Beach, Virg.

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THE OLD-HOUSE JOURNAL
Cottage Style

Q I realize that my home is probably a simple Victorian Cottage, but I have looked through various resource journals in search of this style to no avail. There is no house in my neighborhood (Grant Park) that has a porch styled with arches like this one. (There are also sunbursts in the corners of the arches.) I have noticed many houses in this style in Savannah and New Orleans, but not in Atlanta. Can you give me any insight?
—William Bailes
Atlanta, Ga.

A Victorian Cottage is a good name for the style of your house; it's also reminiscent of the "shotgun houses" of New Orleans. (See Vernacular Houses, "Shotguns & Camelbacks," in the March/April 1987 OHJ.) The sunbursts you describe were a very popular motif in the late Victorian period. And judging from the photograph, you've done a nice job with the house.

Knob-and-Tube

Q I have knob-and-tube wiring in my attic. I would like to insulate there, but I've heard the wires should be left in open air so they can dissipate heat. Electricians I've consulted, however, say the wiring shouldn't get hot at all. Who's right?
—Charles Cutler
Middletown, Conn.

A The wires should be left in the open, but your electricians are right — house wiring should not give off heat. If your wires are hot, you have an overload problem: They're carrying more amperage than they're designed to handle. That's a genuine fire hazard, and the system should be checked immediately.

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Advanced Materials, Inc. has made molds from Bacon's original design and now makes available to architects, builders, developers and to the general public an exact replication of this lovely post in cast iron. The Central Park Post is eminently suitable for use in office and mall surroundings and lends dignity and status to the approaches to private homes, condominiums and estates.

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THE OLD-HOUSE JOURNAL
Bandage Your Walls

To speed up my plaster patching, I've taken to using plaster-cast bandages in lieu of fiberglass tape. The bandages come in convenient rolls, offer a great variety of widths (I've used up to 6"-wide bandages), are of very sturdy stuff, and don't require prior bedding in joint compound. Just cut the roll to size while dry, soak the lengths briefly in a basin of water, then slap the wet strip on the wall (having dampened the wall beforehand to improve adhesion). A little smoothing with the hand or a plastic putty knife is all that's needed.

The strips dry quickly, and I've found them easier to feather in with top coats of joint compound than the fiberglass tape (the wide weave of which always wants to show through). The only requisite for this method is a friendly orthopedist or an understanding medical-supply house.

— Dale M. Hellegers Jenkintown, Penn.

[Art-supply stores are another potential source for plaster-cast bandages. — ed.]

Pigeon Problems

If you have trouble with pigeons roosting in every nook or cranny of your Victorian, the sure-fire way to end it is to put some large object — a brick, for example — right in the middle of their "nest" (usually just some twigs). It seems pigeons rely on a visual "imprint" of their nesting site to locate it, and such an object so confuses this picture that they abandon the nest at once. They may try again after a few years (when they're used to the brick), in which case just rearranging the brick — standing it on end, for example — will once again do the job. Naturally, one has to be able to reach the problem area, which can sometimes be difficult. But this is the only method I've found that really works at deterring those pesky and noisy birds!

Fortunately for me, my unwanted pets have always tried to use a spot right outside my bedroom window, so keeping them confused as outlined above has been easy. Before I stumbled onto this method, I lost many a good night's sleep. It sounds so simple that one might think it doesn't work, but it does!

— James B. Tyler
San Francisco, Cal.

Here's Looking at You

This tip will not help you get a queensize boxspring up a Victorian staircase. But it can help prevent your visitors from learning the hard way about something many of us have to contend with: the lack of headroom on old-house stairs. Just hang a mirror anywhere you bump your head.

We are still searching for the perfect-sized beveled-edge mirror, so we've mounted a temporary flat one. And have not bumped our heads since.

Descending people of all sizes see their reflections "walking toward them" and instinctively duck to avoid bumping into their own images. All of us enjoy a quick peek into the mirror (to make sure our tie is straight or our make-up is "just so").

— Robin A. Parker
Norwood, Mass.
**Beehive Blues**

When we moved into our Queen Anne it was early March and still quite cold out. So it wasn't until later that spring that we discovered our wrap-around porch's rail was populated with carpenter bees — the west side of the house looked like O'Hare airport!

We tried several methods to discourage them, and here is what worked: We cut strips of aluminum window screening the width of the underside of the porch rail and staple-gunned them into place. The bees can't chew through it and it is invisible and never needs replacing. Now we can enjoy our porch in peace and quiet!

— Martha Pendergraft
Lilburn, Ga.

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**TIPS TO SHARE?** Do you have any hints or short cuts that might help other old-house owners? We'll pay $25 for any how-to items used in this "Restorer's Notebook" column. Write to Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, N.Y. 11217.

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**THE OLD-HOUSE JOURNAL**
Heat guns and heat plates are often the best overall tools for taking paint off wood surfaces. Heat is a fast method because the paint bubbles and lifts as you go along. There is no waiting for chemicals to soak in, no multiple recoatings, and far less clean-up. Unlike stripping with chemicals, you can remove all layers of paint in a single pass. And because these tools are long-lasting, industrial products, their initial expense is made up in savings on the $18-to-$22-per-gallon stripper that you're no longer buying in quantity.

The Heat Gun is the most efficient paint-removal tool for heavily painted porch parts, mouldings, or other ornamental woodwork. The hot-air blast melts the paint so it can be scraped off. Some chemical stripper is needed for clean-up, but 95% of the paint comes off with the heat-and-scrape. Saving just 4 gallons of $20/gal. chemical stripper pays for the tool.

(Not recommended for hollow partitions, whole-house exterior stripping, or removing varnish.)

The Heat Plate is the most cost-effective and easy-to-use tool for stripping paint from broad, flat surfaces: doors, panelling, baseboards, and exterior wooden clapboards. It's safer for use on hollow partitions and exterior cornices because there's no blown hot air that could ignite hidden dust. (Not recommended for removing varnish.)

Both the Heat Gun and Heat Plate come with complete operating and safety instructions, and are backed by the Old-House Journal Guarantee: If your unit should malfunction for any reason within two months of purchase, simply return it to us and we'll replace it.

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THE OLD-HOUSE JOURNAL
Used to be the strongest motivation for restoration was a deep sense of appreciation for history or for architectural quality. To an eccentric few, a Queen Anne house in the old part of town was preferable to a brick ranch in the suburbs. Shopping on Main Street was more fun than going to the mall, working in the warehouse district more interesting than commuting to a modern office campus.

Guess what? During the past two decades, such sentiments have spread to a large portion of the general populace. Along the way, the development of historic buildings has become big business — a reasonable way to make money. Driven by the seemingly insatiable demand for "historic" places in which to live, work, and play, big-time developers as well as small-time entrepreneurs have joined the ranks of preservationists.

But good restoration work is expensive and labor intensive (OHJ readers can relate to this). Many commercial restoration projects are successful only because they’ve been able to tap into an array of preservation incentives which help defray the costs of major rehabilitation. We’ll list the major incentive programs, and also talk about preservation regulations that directly affect most commercial projects. But first, you gotta be eligible. . . .

Historical Designations

Virtually every incentive program requires that the building be officially designated as historically or architecturally significant. This designation might come from the Federal government, the various state preservation offices, or from local governmental agencies.

The best known historical register is the one maintained by the Federal government: the National Register of Historic Places (often referred to as simply the Register or NR). When first instituted in 1966, the Register was primarily intended as an honor roll of structures historically important to the country, offering them a limited degree of protection. Since then, listing in the National Register has become essential for eligibility for the popular Rehabilitation Tax Credit (RITC).

Getting a property listed in the Register is not an easy job. The eligibility requirements can be stringent and the application process long and arduous. You’ll probably need the help of an experienced preservation consultant.

Fortunately, most State Historic Preservation Offices (SHPOs) — which handle the initial Register review for the Department of the Interior — can give you a faster (and cheaper) preliminary determination of eligibility for a particular property.

The SHPOs are also responsible for conducting systematic surveys of historic resources. Check with your SHPO: Your property may already be listed as potentially eligible, as the result of survey work done in your county, city, or town. (More on working with your SHPO later.)

Historic-resources surveys also identify those properties that can be included on state or local historical registers. These registers may have less stringent requirements than the National Register. Yet it is usually local designation, not National Register listing, that provides the most protection and control over the fate of historic properties.

Whether in national, state, or local registers, historic properties can be listed two ways: either individually, or as part of a historic district. In the latter case, the property must be a “contributing element” of the district to qualify for the various restoration-incentive programs.

Remember, then, the first step in a restoration project is finding what level of historical designation the building has, or could have. This determines what incentives you’re eligible for, and what preservation controls you may have to obey.

The Investment Tax Credit

In 1981, as part of the Economic Recovery Tax Act, Congress passed tax legislation that has had a profound effect on the preservation/restoration movement in this country. It is known as the Rehabilitation Investment Tax Credit, or the RITC or ITC.

The RITC is a complex tax law, involving some perplexing rules and conditions. But, basically, it boils down to this: If the restoration of an eligible, income-producing, historic building qualifies for the RITC, then for every five dollars you spend on the restoration, the Federal government will give you back one dollar in the form of a credit on your income tax. (Note: This is a tax credit, a dollar-for-dollar reduction of your taxes due, not just a deduction taken from your taxable income.) It effectively reduces the costs of restoration by 20%.

The RITC was one of the very few tax credits to survive the 1986 Tax Reform Act (albeit with modifications that make it somewhat less useful for taxpayers in certain income brackets). Although unused credits can be carried over to future years, the ’86 Tax Reform now puts in essence a limit on the amount that can be taken in a particular year. The RITC’s survival through the recent reform is a testimony to its effectiveness and perceived importance. By turning the tide on demolition, it has promoted preservation and re-use, and raised the country’s awareness of historic buildings.
The restoration of Victorian-era buildings in downtown Charleston, South Carolina, has helped invigorate the local economy.

The RITC was the major reason for the explosive growth in the number of restoration projects. From huge projects running into the tens of millions of dollars to relatively small rental properties, the RITC has made the difference ... not only in whether the projects would be done at all, but also in the quality of restoration work. The facts are impressive. Since 1981, over 15,000 RITC projects have been completed. The total private investment in these restorations has reached over 10.4 billion dollars. In some cities, money spent on rehabilitation has outstripped investments for new construction.

Owners of comparatively small "Main Street" commercial buildings or of rental properties have been the largest group to use the RITC. Their rehabilitation projects might be in the 50-to-200-thousand-dollar range. Large projects — over a million dollars — are also good candidates for using the RITC, particularly those that are funded by large public offerings or corporate investments.

Remember, however, that the RITC is available only for income-producing properties. Owner-occupied residential buildings (private homes) don't qualify. Rental properties (including apartments), and those used in a trade or business such as stores, offices, industrial buildings, etc., do.

Here are the basic ground rules for using the RITC:

(1) The property to be restored must be a qualified building; that is, it must:
   ◦ be individually listed in the National Register of Historic Places, or
   ◦ be listed as a contributing element in a National Register historic district or certified local district, or
   ◦ have received a preliminary determination of positive eligibility.

(Note: A 10% RITC is available, too, for non-designated buildings built before 1936.)

(2) For the rehabilitation project (the restoration work itself) to qualify for the RITC, it must:
   ◦ be a substantial rehabilitation — that is, the amount of money spent on the rehabilitation must be greater than the depreciated (adjusted) value of the building (minus the value of the land) and be a least $5,000. Thus, for example, if the depreciated value of your building is $40,000 and you spend $39,999 to fix it up, you can't get the RITC. But if you spend $40,001, you're eligible for an $8,000 tax credit (20%);
   ◦ be rehabilitated according to The Secretary of the Interior's Standards for Rehabilitation (a.k.a. "the Standards").

The Secretary's Standards are, by and large, common-sense rules for appropriate and sensitive rehabilitation, guidelines very similar to the approach advocated by OHJ over the years. Those interested in restoration will want to do the rehab work the right way anyhow. (You should be familiar with the Standards — get a copy from your SHPO. The Standards is a ubiquitous document in this field. "Even if you decide not to use the RITC, you may find yourself dealing with the Secretary's Standards, because many communities use them to evaluate applications for building and repair permits in historic districts," advises preservation consultant Shirley Maxwell. "Interpretation at the local level may vary from that of the National Park Service," however.)

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**RITC**

One of the best publications explaining the ins and outs of the Rehabilitation Investments Tax Credits is Preserving America's Heritage: The Rehabilitation Investment Tax Credit. It can be ordered for $3 (less in quantity) from Touche Ross and Co. 1801 E. 9th St., Suite 800 Cleveland, OH 44114 Attn: Eileen Fallon

Another useful publication & Federal Tax Incentives for the Rehabilitation of Historic Buildings from Information Services National Trust for Historic Preservation

1785 Massachusetts Ave., NW Washington, D.C. 20036
The Review Process

Two agencies must review the project: your State Historic Preservation Office (SHPO) and the National Park Service (NPS). The SHPO is your strongest ally in dealing with the National Park Service, as it’s assumed that the state office, being closer to the property, is better able to evaluate your property in its context and to keep a closer watch on the project. Though not the last word, the SHPO’s recommendations carry a lot of weight with the Park Service. That’s why Shirley Maxwell warns, “It is very important to keep [the SHPO] informed if you decide to make any changes in the project. They are likely to react very badly indeed to last-minute surprises! Any changes must, of course, be approved through the same lengthy process.”

Three forms have to be filed with the SHPO. They are commonly known as Parts I, II, and III. Part I documents that the building is a qualified historic structure. (If the property is already individually listed in the Register, you don’t need to file Part I.) Part II explains the precise nature and scope of the rehabilitation work to be done; governmental reviewers will use the Secretary’s Standards as their guideline in reviewing your plans. Ideally, Part II should be filed before restoration work actually begins because the NPS typically requires some changes. Part III documents the finished work — in other words, have you done what you said you would do?

As you can see, undertaking an RITC project is a complex process, but one that has the potential for saving a significant amount of money, while still demanding quality work and conferring prestige. It is particularly valuable for large, adaptive re-use projects.

Still Worth The Hassle?

There’s no doubt that Federal income tax “reforms” of 1986 spelled trouble for those who hoped to benefit from rehabilitation tax credits. For many, restoration to meet the Secretary’s Standards seems hardly worth the effort, in the face of stringent “passive loss” income requirements, reduced tax credits, and substantially longer property depreciation terms. Then there’s the ever more rigorous interpretation of the Standards.

And in fact, the National Park Service (who administers the program) recently reported a 35% decrease in both the total amount of money invested in ITC projects and the number of such projects approved since 1986. The number of new projects initiated since 1985 has declined even more steeply. The Park Service thinks a lot of people have been scared off unnecessarily. Prodded by Preservation Action, the national preservation lobby, the NPS’ report evaluating the impact of the original tax act was intended to encourage Congress to rethink the more damaging provisions of the 1986 act. Bills have been introduced in both the House and Senate to do just that.

Legal and economic questions of who can qualify or benefit from an ITC have been raised. Decisions about the buildings themselves are also tougher now. The Standards and their accompanying guidelines are being more stringently interpreted by the regional offices and the Technical Preservation Services branch of the Park Service. Thus, complying with the Standards may cost more than it used to. Adapting any given building for commercial use may be unexpectedly difficult or impossible. Not only must the existing building and any additions or alterations be handled with great care, but adjacent new construction must also meet NPS approval. Not only must the exterior pass Park Service muster, but now the interior spaces must as well. Time is critical, because the sort of rehab likely to win NPS approval is rarely the fastest way to go about the job. Unanticipated delays in the state or Federal review process, which take several months at their speediest, may result in higher materials and labor outlays and lost rental income.

So why are owners still willing to go the ITC route? For one thing, it’s still a direct return — a tax credit, not merely a deduction — of 20% of qualified costs. Most rehabs for tax credits are under $100,000, tailor-made for groups of small investors who have only $25,000 or so qualifying for sheltering under the passive-loss rules. There is also a certain amount of prestige (often translatable into economic terms) attached to a certified historic property. And some people just like to know they’ve done right by an old building. Finally, although the rules are indeed stricter, chances of securing certification for a carefully planned and executed project are still very good. The NPS certification approval rate is still around 90%, down from about 95% prior to 1985.

— Shirley Maxwell & James C. Massey
**Preservation Easements**

Unlike the RITC, the benefits derived from donating a preservation easement are available to owners of both income-producing historic properties and non-commercial ones, including private residences. An easement tax deduction is one of very few preservation incentives available to private homeowners.

A preservation easement is a legal agreement between the property owner (donor) and an easement-holding organization (donee). In essence, property owners give up part of their "bundle of rights"—in this case the right to demolish or unsympathetically alter the building. Thus a historic structure is legally preserved in perpetuity.

What does this property owner get in return? Well, as you might imagine, placing these preservation restrictions on a property decreases its fair market value. The dollar-value difference be-

An 1888 firehouse became offices in Burlington, Vermont.

The c. 1885 Hotel Ponce De Leon in St. Augustine, Florida, is now the home of Flagler College.
between the fair market value of the property, and its value after deed restrictions are placed on it, is considered the same as a charitable donation by the IRS, and thus can be deducted from the owner’s Federal income tax. Typically, an easement ranges from 7 to 13% of fair market value, the exact figure established by a qualified real-estate appraiser. Thus a historic building worth $200,000 might have a potential easement value ranging from 14 to 26 thousand dollars, an amount fully tax deductible.

To be eligible for the tax deduction, the property must be listed in the National Register, either individually or as a contributing part of a historic district. There are some additional conditions. For example, the property owners must:

- own the property outright.
- give up forever their right to demolish the building.
- submit, for approval by the easement-holding organization, any plans to alter or improve the building. (This condition usually applies to the exterior only.)
- in some cases, restore the building to a more accurate historic condition (again, exterior only).
- maintain the property in good condition.

Generally, the easement-holding organization must:

- be a not-for-profit or governmental agency.
- be willing and able to enforce the easement, usually through yearly inspections. Sometimes the donee requires an endowment from the property owner in order to administer these inspections.
- review and approve requests for alterations or improvements to the property. (The Secretary of the Interior’s Standards are commonly used as the guidelines.)

Typically, easement-holding organizations are private, statewide preservation groups, local historical societies, or the SHPO. Some of the major regional easement-holding organizations are listed on page 25.

If you want to retain full control of your property, donating an easement is not for you. Remember, the preservation deed restrictions last in perpetuity, and subsequent owners must comply even though they can’t get any of the tax benefits. But if you’re motivated for altruistic or economic reasons — if you’d like to see the building preserved for future generations to enjoy, or if you could benefit from a significant tax deduction — it’s something to consider.

Other Incentives

RITCs and preservation easement donations are probably the best known and most widely used restoration-incentive programs. But there are others, offered mostly by the individual states and local governments through their preservation agencies. Some of them follow.

TAX DEFERRALS. Local property taxes can increase dramatically when a major restoration project is completed because the property is usually re-assessed. To offset this disincentive, some municipalities are empowered to defer

over the years, certain practices have caused enough physical or aesthetic damage to historic buildings that they have become instant red flags in the preservation field. If you want certification, consider the following:

Abrasive cleaning of masonry surfaces — sandblasting by any name — is the hottest button you can push. The NPS notes that it isn’t happening nearly so often now that word has gotten out on its effects: harmful to the building and fatal to any hope of certification. Before you strip or clean masonry, even with plain water, discuss the method in some detail with your SHPO. Water pressure and addition of chemicals or grit raises questions that should be answered before you proceed.

Masonry pointing is another area of concern. New mortar joints must closely match the original in every respect. Grey portland cement is usually a no-no.

Windows and doors present sticky problems when you try to conform to the Standards. Yes, wooden sash deteriorates inexorably, single-thickness glass is an energy waster, doors are often in the wrong places (or not in the right places). Ah, but go slowly when you think to meddle. These are considered “design determining” features. Mess with them, and the Park Service will not fail to notice. If you’re convinced that windows must be replaced, be prepared to make a strong case and to provide exact reproductions of the originals in the same materials. So adamant is the Park Service on this point that they’ve taken to presenting highly technical workshops on window rehab to educate SHPO staff, developers, and architects.
property-tax increases. The deferral might be a freeze on increases for a set number of years — usually three to seven — or a gradual phasing-in of the tax increase. Tax deferrals are commonly targeted at large commercial buildings whose restoration and re-use will benefit the economy of the community.

TAX REBATES. Some preservation ordinances allow municipalities to reduce property taxes on properties listed as local landmarks. (North Carolina, for example, allows a 50% reduction of property taxes for landmarked buildings.) In exchange for the rebate, property owners are usually required to submit to preservation regulations that restrict their right to demolish or develop the property, or require adherence to design and maintenance guidelines for alterations and improvements.

RESTORATION GRANTS. Although less common than in years past, many SHPOs still administer a variety of restoration-grant programs. Often the grants are restricted to historic build-

Decorative details such as wood trim (cornices, brackets, window parts) are also design determinants, as are porches and rooflines. It is never wise to alter any of these without very good reason, and certainly not without the prior approval in writing of your SHPO. If any of these elements are to be replaced, it's essential that they be reproduced in form, size, location, and material. Remember, too, that these elements need not be as old as the original building to have acquired historical significance in their own right. (In other words, don't think you can tear it off just because it post-dates the building.)

New construction (whether a wing attached to the old building or something adjacent) must be readily identifiable as new construction — a confusing and, from the developer's point of view, an inconvenient aspect of the Standards. Design must meet the approval of the NPS. Talk to your SHPO, submit detailed plans, and don't stray from the plan.

The interior of the building is now scrutinized as well. Removing partitions (even relatively recent ones), changing the location of staircases, taking out trim or flooring, may get you in trouble. Obviously, it's often necessary to rearrange the interior of a building that is being converted to a new use. Don't count too heavily on your intended new use being a persuasive argument, however, as the NPS will also look at the appropriateness of use. Mechanical systems (heat, plumbing, electrical, air conditioning) are also subject to NPS approval.

If it sounds as if the Park Service holds the upper hand, that's because they do.
ings owned publicly or by non-profits. The grant amount usually must be matched by the property owner. Your SHPO is the best source for information on the availability of these programs.

Some states — New York and New Jersey are notable examples — have passed special bond acts to create funds for qualified restoration projects. Be forewarned, though: Competition for restoration grants is stiff, and the funds are usually restricted to certain kinds of projects.

COMMUNITY- & ECONOMIC-DEVELOPMENT PROGRAMS. Restoration is now recognized as a vital part of rebuilding the nation’s cities and towns. Therefore many Federal, state, and regional development programs subsidize or provide below-market-rate financing for restoration projects if they contribute to the economic vitality of the community, improve deteriorating neighborhoods, or relieve housing needs.

The Department of Housing and Urban Development (HUD), for example, has several programs that aid the rehabilitation of historic structures, including residential. They include urban homesteading, Community Development Block Grants (CDBGs), and Urban Development Action Grants (UDAGs). (See addresses on page 25.) As many rehabilitated historic buildings house low- and moderate-income families, they can benefit from Federal “Section 8” subsidies. Regional development agencies often have local versions of these programs as well.

Preservation Regulations

So far, we’ve addressed the various mechanisms that encourage owners to restore their historic properties — the “carrots” in preservation’s carrots-and-sticks equation. The “sticks” component is complex with various ordinances. Keep in mind that the stated purpose of these ordinances is to protect and preserve historic resources for the benefit of the public good. In that sense they’re akin to zoning regulations.

Most of the ordinances affect properties in local historic districts. Sometimes the commission’s role is advisory, and the municipality’s legislative body (e.g., city council) actually puts into law the commission’s recommendations. The other major role of a historic commission is to review applications for alterations and improvements to (or demolition of) historic buildings. The applications will be reviewed by a Historic Architectural Review Board, or HARB (are you getting all of these acronyms?).

The HARB will approve or deny the request based on its own guidelines. These are often based on the Secretary’s Standards, but there is a great range in the scope of the guidelines from one commission to another. Some HARBs are stringent and may dictate the proper exterior paint colors that are acceptable for historic buildings, or even the appropriate design for a fence. Other HARBs will do little else than try to stall demolitions.

More commonly, HARBs deal with such issues as the configuration of replacement windows, the design sensitivity of new additions such as porches, the removal of historic elements, or requests to allow aluminum siding (the response to this last is easy to predict).

If you are contemplating a major restoration, particularly of a large, income-producing building, you will likely encounter many of the issues discussed in this article. The project may need to be reviewed by a HARB. To make the project feasible, you may decide to use the RITCs, donate a facade easement, utilize one or more of the government subsidies, secure a preservation grant, and procure low-interest financing through an economic or community development program. As we said, restoration is now big business.

J. Randall Cotton is with the Philadelphia Historic Preservation Corp.: One East Penn Square, 22nd floor, Philadelphia, PA 19103. (215) 568-4210. This non-profit organization has a preservation-easements program, an historic-churches program, and an architectural-salvage warehouse, and does contract preservation work and construction management. Mr. Cotton was a consultant to the SHPO staffs in three states.

Shirley Maxwell and James C. Massey are the principals in a well-known preservation-consulting firm that manages National Register nominations and Tax Act projects: Massey-Maxwell Associates, PO Box 265, Strasburg, VA 22657. (703) 465-4566. Shirley Maxwell was a property administrator for the National Trust for Historic Preservation, James Massey was formerly the executive director of the Historic House Association, and for many years Chief at HABS.
**COMMERCIAL PAINT STRIPPING**

Sub-contracting Interior Jobs

by The OHJ Technical Staff

As there been a project yet that didn't involve paint stripping? This article, addressed to the architect or general contractor (and to the homeowner acting as his own GC), describes methods and materials used by stripping subcontractors on interior jobs. Whether the project is residential or commercial, the assumption is that the owner wants the job done quickly and efficiently. (Do-it-yourself stripping often saves tremendous out-of-pocket costs. But it is not quick.)

The methods and materials used by a stripping contractor are familiar to the amateur refinisher, but they are used on a different scale. D-I-Y methods stress homeowner safety, sometimes at the expense of the quick action that a better-equipped contractor can safely handle. For example, chemical stripper bought by the drum is usually more concentrated than what's in gallon cans at the hardware store. Ease in cleanup is important for homeowners working nights and weekends in occupied spaces — thus the popularity of heat methods that don't create long-lasting fumes and sludge. For the contractor working full days with a crew, however, chemical methods are favored; they require less skill (no scorching) and are labor saving (the chemical does the work, rather than a guy being paid by the hour to hold a heat gun).

Stripping paint has one of three goals: (1) exposing a primary surface such as hardwood or marble for a natural finish; (2) removing excessive paint buildup so that a high-quality paint job can proceed; (3) lead abatement (removal of all lead-based paint is required for public projects in certain states). The industry supports everything from the two-man crew that works with dental picks and carries the job through refinishing — boutique strippers, you might call them — to guerilla (gorilla?) crews that throw concentrated chemical stripper at large surfaces in unoccupied renovations.

**Spec'ing A Job**

Clearly, your choice of contractor will be done on a case-by-case basis. Stripping the wainscot beneath irreplaceable wallpaper calls for a crew with finesse and will cost more per square foot than big messy jobs. Some points:

- Always require a test patch with the methods and materials that will be used on the whole job. If a test is approved on which the contractor used solvent-based stripper, write that into the specification; you don't want him finishing the job with lye.
- It's a good idea to write masking techniques into the specifications. Anything you don't want ruined — floors, carpets, finished walls, painted surfaces — must be completely covered with impermeable materials. D-I-Y methods strive to reduce and contain the mess; on commercial jobs, stripper will fly everywhere and there will be a mess. Masking becomes a crucial part of the job, and may take as long as the actual stripping operation.
- Stripping is fairly dangerous for man and building. Use only licensed and insured contractors. Require safety practices such as ventilation, use of goggles and gloves, and containment of effluent.
- On the same subject, be aware that lead-based paint and methylene chloride are now classified as toxic wastes. The architect and/or owner will be held liable and heavily fined if the contractor is caught dumping liquid effluent. Many architects are writing proper waste handling procedures into the contract. (Reputable contractors who take stripping jobs of any size do legally dispose of the sludge as toxic waste through a licensed waste handler. Most say that the Department of Environmental Protection regularly inspects their procedures.)

*Besides full masking, the operator uses a shield to control overspray during pressure rinse. (Photos courtesy of Bix, except as noted.)*

THE OLD-HOUSE JOURNAL
A careful contractor can do extensive paint stripping in a finished house if masking is thorough.

Tape, plastic, particleboard, more tape, and newspaper mask carpeting on a staircase.

The chemical does the work if used in quantity.

Specify degree of finish. Do you just want paint buildup removed for repainting — or do you want the contractor to remove paint from wood pores, do stain removal or sanding, etc.? If a different sub-contractor is doing the refinishing, specs for both the stripper and the finisher have to be clearly spelled out to avoid finger-pointing later.

**Costs**

Contractors may work on a time-and-materials, hourly, or per-square-foot basis. Some give a fixed price for the job, based on one of the above. Our informal survey of East Coast strippers shows an average cost of $2.40 to $2.75 per square foot for stripping (refinishing not included).

Consider time costs, too. A larger crew will get in and out faster, which may make a difference in scheduling.

A reputable contractor will probably want to come in and test the surface before he quotes a price. (The number of finish layers, presence of an original varnish coat, and the type of paint all make a significant difference in the difficulty of the job, and thus the price.)

**A Comparison Of Two Systems**

Examining Peel-Away

In the past couple of months, we've gotten many dozens of requests for information about a chemical stripper called Peel-Away. During that time, we attended a seminar at which the manufacturer demonstrated the product. We bought their most-promoted product (Peel-Away I) and tested it. We have not panned the product — nor have we accepted the company's advertising. This article seems, finally, like a proper forum for OHJ to discuss the product.

Peel-Away has gotten a lot of attention because of their high-profile marketing to homeowners (see page 32). The product has also been used on some publicized commercial jobs. Their claim to uniqueness is the paper "blanket" which covers the stripper, keeping it moist and absorbing the softened paint so that it can be removed.

The product, as it turns out, is actually three products. Peel-Away I, the only one promoted, is a caustic (sodium hydroxide — lye — plus calcium and magnesium hydroxides). As such, it is not classified as a toxic waste (unless the paint removed contains lead). It's the one the manufacturer refers to when claiming, "Peel-Away ... was developed as an alternative to conventional methylene chloride based removers with their attendant hazards and their low effectiveness ... ."

Peel-Away III, used on many of the highly touted commercial jobs, is a standard solvent-based (methylene chloride) stripper. Peel-Away II is a beefed-up version of III (containing methylene chloride, methanol, and ammonia). The company's emphatic claims about "NO FUMES AND NO FLAMMABLE SOLVENTS!" do not apply, of course, to II or III.

Once we know what the products are, anyone with chemistry background or hands-on stripping experience can predict their effectiveness. All three formulations have
applications, and all are effective in stripping paint. None of them, however, makes paint stripping "as simple and easy" as "peel[ing] a banana."

The paper covering does have some benefit. The problem with it is that it is unwieldy and adds to the expense of what should be an inexpensive stripper. (Should be, but is not — five gallons of Peel-Away I costs $84.50 postpaid; and $80 buys two gallons of the solvent-based formulations.) Although the paper does contain most of the paint, it creates disposal problems of its own because of its size and weight.

Peel-Away I is recommended by its manufacturer for stripping water- and oil-based paints from "solid wood, metal, brick, plaster, stone, concrete, masonry, fiberglass and marble." It is non-volatile, but it is hardly benign, and it has strict limitations. It is caustic and will burn skin, pit aluminum, and discolor and raise the grain on hardwoods. Stripped surfaces must be neutralized with a mild acid wash or new coats of paint or varnish will fail.

Peel-Away I is not recommended for veneers, plywoods, aluminum, cellulose, urethanes, and epoxy paints. (That's the manufacturer's list; we would add oak and fine hardwoods.) The solvent-based products were developed for the above.

Our quarrel with Peel-Away is not with the effectiveness of the chemicals, but with their advertising. Everybody exaggerates (how else to get attention in a media-crazy world?). But, in our opinion, the claims made by the manufacturer cross the line of responsible marketing. What they do tell you is misleading; what they don't tell you is even more so. Specifically:

- The paste is "best left in contact for 24 hours," and even that may not be long enough.
- Laying down the fibrous cloth is an all-hands operation, as air bubbles must be forced out. Removing the saturated cloth is similarly clumsy.
- After stripping, washdown and cleanup with a hand-held pressure sprayer and wet vacuum is the method advocated by the manufacturer.
- The manufacturer also recommends neutralizing wood surfaces twice.
- Again, this is not the cheap way to buy stripper, either alkaline or solvent-based.

(That Peel-Away has gained acceptance in certain preservation circles is testimony to the effectiveness of positioning. OHJ once suggested that for some jobs — stripping poplar window surrounds, say, or pine balusters — $25-per-gallon stripper might be an unnecessary expense, as an alkaline stripper covered with Saran Wrap would work faster and cheaper. We were strongly criticized for our plain talk.)

Peel-Away also falls down on distribution. Small quantities of Peel-Away I are available by mail-order from the manufacturer. But try buying the other products, or buying in bulk, or buying retail. When we called the manufacturer to ask about Peel Away II and III, the rep told us that he was not at liberty to discuss them. The manufacturer tells potential customers that Sherwin-Williams paint stores are

- Competent Service

Compare the Peel-Away story with that of Bix, a chemicals manufacturer who also trains and licenses contractors. In an industry where service (not product brand) is what makes or breaks the job, Bix has a unique system and track record.

Bix Process Systems manufacture their own semi-paste and liquid paint removers, as well as a line of equipment. Their liquid removers are used primarily in company-designed flow-over tanks by businesses that strip furniture and small architectural pieces, while the semi-paste removers are for on-site stripping. All chemicals in the Bix system are methylene chloride-based. For interior work, the company supplies two gelled (semi-paste) products: Safety Strip and Power Off. Safety Strip, used for most projects, contains an effective mix of solvents, but with some of them chemically broken down to reduce their volatility. Generally, it suffices on surfaces with up to ten coats of paint. Power Off is recommended for projects of ten coats or more. This one contains a booster additive to give the stripper what the manufacturer calls a "higher pull." Bix products may also contain non-stripping agents, such as those to concentrate lead and other heavy metals in recovered paint for proper disposal.

The Bix approach gives us a rundown of good procedure for indoor stripping. Contractors who work with the system develop their own techniques and refinements, but the average job proceeds as follows.

First, they heavily mask all surfaces not to be stripped. The underlying masking procedure is impressive. Low-

Some contractors pressure rinse after stripping, removing water with a wet vac.
When chemical stripper is given time to work, paint can be scraped down to bare wood in one pass.
further treatment to prepare it for finishing, and complex pieces are detailed with a brass brush.) Vacuumed-up paint and washdown effluent are contained in filter tanks for legal disposal.

Bix markets its products nationwide through more than 500 licensed dealerships (call the Bethel, Conn., office to locate one). Some dealers will sell Bix stripping chemicals and equipment to knowledgeable retail customers, but most are contracting enterprises. Bix trains all dealers and supplies them with equipment and materials, but they are independent contractors who may also use other chemicals and other methods.

Individual dealers handle business in individual ways. For instance, Randy Berno of Stripping Unlimited in Moretown, Vermont, quotes most paint-removal projects on a fixed-price basis, but he’s also worked jobs on a hourly basis ($35/hr.).

Our conclusions? Well, there still is no miracle stripper. Peel-Away and Bix are noteworthy, but certainly not the only options. Many reputable contractors are out there, and many stripping chemicals are effective (see below). Experienced applicators have learned tricks that make jobs go more quickly with less damage, but it is still a messy operation.

**SOURCES OF COMMERCIAL STRIPPER**

The following companies are major manufacturers of stripping chemicals for commercial jobs. Most sell a full line of products, including restoration cleaners and exterior strippers, but the information below is confined to products recommended for interior use.

**American Building Restoration Chemicals, Inc.**
9720 So. 60th Street, Dept. OHJ
Franklin, WI 53132
(414) 761-2440

Manufacture stripping chemicals for interior use, including several methylene-chloride-based formulas and a newly developed line of caustics called Grip & Strip. These are alcohol-based products with potassium hydroxide content of 0% to 65% (classified as non-hazardous waste). Applied by trowel, they form a skin that contains sludge and facilitates removal. Also stain removers and other solvent-based refinishing products. Sell through suppliers and direct. Training videos and regional seminars available. Technical catalog, $1.25. Commercial-scale customers may call for technical assistance: (800) 946-7532.

**Bix Process Systems, Inc.**
P.O. Box 3091, Dept. OHJ
Bethel, CT 06801
(203) 734-3263

Sell their own stripping chemicals direct or through extensive network of distributors (for Tuff-Job only) and dealer/applicators (for commercial products). Independent contractors are licensed by Bix and trained at their facility in Bethel. Excellent sytems for masking finished surfaces, and hazardous-waste containment and disposal. Also sell commercial-scale stripping equipment of their own design.

**Diedrich Chemicals-Restoration Technologies, Inc.**
7373 So. 6th Street, Dept. OHJ
Oak Creek, WI 53154
(414) 766-0088

Manufacturer of both solvent-based and alkaline (caustic) stripping chemicals. Nationwide, 700 distributors sell the products to contractors. Most of these industrial-strength paint strippers are not recommended for do-it-yourself jobs. Patent pending on "Rip-Strip," promised as the next generation of the concept introduced by Peel-Away. Rather than employing a paper covering, the material itself forms a film to which paint adheres. Manufacturer claims it is more economical and not as caustic as Peel-Away.

**SOURCES OF COMMERCIAL STRIPPER**

ProSoCo, Inc.
P.O. Box 15776, Dept. OHJ
Kansas City, KS 66117
(913) 281-2700

Best known for their strippers and cleaners for interior masonry, ProSoCo also sells methylene-chloride-based strippers for interior woodworking. They are not standard products, but rather specially manufactured to the architect’s or contractor’s specifications for the job. (Call for the number of your district or regional manager or sales representative.) ProSoCo does not generally recommend their caustic formulations for interior use.

QBB Industries
3139 U.S. 31 North, Dept. OHJ
Niles, MI 49120
(616) 683-7908

Although this company’s Standard Remover (solvent-based, but non-methylene-chloride and non-caustic) is available by the gallon, their expertise is specially formulated strippers for commercial projects. Multi-solvent-based, methylene-chloride-based, and combination caustic-plus-solvent-based formulations are available to spec for graffiti removal, dipping or flow-over stripping, water-rinsable, etc. Custom orders by the 55-gal. drum (a test gallon will be prepared for client approval). Consultation and audio-cassette tapes available.

**CONTRACTORS**

The editors wish to thank the individuals listed below who provided us with technical tidbits and informed opinions. The list of stripping contractors is, of course, not comprehensive.

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(914) 342-1200

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Craftsmen
21 Clover Hill Pl.
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(201) 783-4519

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Boston, MA 02118
(617) 738-9121

**Peel-Away**

Real-life latex-paint removal with Peel-Away.
A storefront is a sales costume — no other building type has been so dominated by fashion. Trends changed with technology, from storefronts made of wood to those of cast iron, embossed sheet metal, and marble.

But the critical design determinant has always been the glass.

T amper with the size or shape of a shop window and you're tampering with the heart of a storefront's period character, as the photo at left makes all too clear. From the many-paned windows of the late-18th century shopfront to the Art Deco and Streamline Moderne facades of the 1930s and '40s, storefront design was repeatedly transformed by breakthroughs in glass technology.

There are two good reasons why glass has been so essential in storefronts. The larger the windows, the more daylight can stream into a store — no small concern in the days before electric light. And the larger the windows, the more wares a shopkeeper can display to lure passers-by.

Nevertheless, glass has been the one storefront material most often overlooked by scholars and restorers.

Residential Stores

Glass manufacturing was America's first industry — but one of the last to succeed. Under the direction of Captain John Smith, America's first "glass-house" — and first factory of any kind — was built in Jamestown in 1608. It apparently lasted all of a year. In a 1769 edition of the Pennsylvania Gazette, Caspar Wistar advertised "between 300 and 400 boxes of Window Glass" in five different sizes. But it apparently wasn't until 1792, when the Boston Crown Glass Company began operations, that an American company was able to consistently produce glass at a profit.

The "Crown Glass" of the company's name referred to the kind of glass most
commonly made at the time. A blob of hot glass was gathered at the end of a pipe and blown into a bubble. A pontil iron, or “puny,” was then attached to the opposite end of the bubble and the blow pipe was cut away, creating sort of a fishbowl shape. This was exposed to intense heat, with the open side toward the furnace, and spun rapidly until centrifugal force produced a flat disc, or “crown,” of glass four or five feet wide. The crown was removed from the punty, put in an annealing oven where it was gradually cooled, then cut into pieces.

**Crown Glass**

The earliest storefront, a crown-glass shop window, was essentially an oversized house window. Both shared the same construction — multiple panes (or “lights”) set in a wooden sash. Individual panes were installed, much as they are today, by 1) backputting the sash opening; 2) securing the pane with glazing points (or pegs); 3) finishing off the exterior in a bead of putty bevelled between the sash edge and the glass surface. Glazing putty was made from linseed oil and chalk, points were snips of either zinc or steel, and pegs were whittled from wood.

Authentic replacements for crown glass are not to be had, so retaining cracked or split panes is a better choice than reglazing with sound but visually different glass. These defects can be stabilized with some success by cementing with cyanocrylates (such as Crazy Glue), or special glass adhesives (ACME Maraglass No. 658 resin and No. 558 hardener, Talas’ Bond-All). Cementing glass has its shortcomings, such as yellowing and tricky application, but it’s still a better option than losing a pane.

It also pays to disturb existing glass as little as possible, to avoid breakage. Old putty that is flaking only in places is best gently removed and then touched up with new — even if it means an uneven look in the final job. Where putty has become cracked and loose and complete removal is necessary, some methods for cleaning out the old work become too risky. In prying or chiseling out defective putty, the glass may accidentally be broken through impact, softening with heat tools such as torches or irons invites thermal cracks. The slower but safer technique is to work chemically. Alkali preparations (such as poultices of lye or tri-sodium-phosphate) will break down the linseed-oil binder. They should be applied carefully to minimize contact with glass (which might become etched) and wood (where the grain will be lifted). Methylene chloride paint strippers and solvents such as lacquer thinner also work in some cases.

For situations where new glass has to be supplied, there are alternatives. Hand-blown cylinder glass (sometimes marketed as “restoration” glass) lacks the distinctive semicircular waves of true crown glass, but shares aspects of the pre-industrial look. It is often sold in two grades, the less refined of which matches crown the best. Today, only the crown-glass bulls-eyes or “bullions” are produced (for decorative uses such as door lights), and true panes are unavailable. Bulls-eye glass, though not historically accurate, also may be an acceptable stand in. It is sometimes possible to select new individual panes with less pronounced waves and punty marks, which will blend adequately.
Early Commercial

The cylinder method of glass production had been around as early as the 11th century. But it wasn’t until the 19th century that it was widely adopted, as a small assembly line of skilled workers was required.

Cylinder glass began with the usual glass-blower’s bubble, but instead of blowing the bubble into a wide globe, the blower let it hang down from his pipe and swung it over a pit as he worked, creating an elongated shape. From time to time, a “gatherer” added additional glass, increasing the size of the long bubble until it became a slender cylinder. Once the blowpipe was detached and the cylinder cooled, it was slit top to bottom with a hot iron, laid on a smooth slab, and reheated. As it softened, it opened and flattened out from its own weight. Another worker ironed it with a sort of wooden hoe. But the outer surface of the cylinder, always larger than the inner one, inevitably wrinkled and puckered as the ironer worked, and the finished product was often more suitable for a funhouse than a storefront.

The author of an 1883 handbook described one cylinder “blown under an evil star.” This sheet of glass had “imbibed ... every possible defect. The founder, skimmer, gatherer, and blow have all stamped their brand upon it. It is seedy — the vesicles elongated by the extension of the cylinder; it is stony, disfigured with gatherer’s blisters and blisters from the pipe — badly gathered — badly blown — thin here, thick here ... entirely worthless.”

The big attraction of cylinder glass was that there was no bulls-eye, so it was possible to make larger panes. One cylinder now at the Corning Glass Museum is an impressive 7’ tall and 20” in diameter. Indeed, cylinder glass became so popular that by 1850, no crown glass was being made here.

Meanwhile, the industrial revolution was moving industry away from the craft shop and to the factory. The city store was quickly becoming a retail outlet for the new factory-produced goods, and frontier trading posts were being replaced by general stores.

The large cylinder-glass window-pane was a godsend for the hoards of new retailers in new commercial space: The old, many-paned shop window with its imposing wooden grid didn’t let in much light, and was more a barrier than an enticement to shoppers. Sure enough, between about 1830 and 1860, the size of the panes used in shop windows inexorably increased, appearing two-over-two or three-over-three on either side of the shop entrance. Storefronts were beginning to look less like oversized houses and more like the glass-laden facades we know today.

Shop-window evolution in a Boston storefront: a plate-glass retrofit, left, and an earlier two-over-two design, right (c. 1900)
Cylinder Glass

Cylinder glass was the technological bridge between the small, wavy panes of the crown method, and large, optically clear plate glass. When it first came into its own as storefront glass in the 1840s, cylinder glass was a hand-blown product glazed two-over-two or three-over-three into wooden sashes. By the time it was eclipsed for commercial work by plate glass, sheets were being produced on the order of four by six feet for use in the new cast-iron storefronts.

The glazing methods used for cylinder glass changed along with storefront construction, but were never elaborate. Wooden sashes used the same system of putty- and points (usually wooden) described for crown glass, and can be maintained the same way today. Cast iron employed a wooden frame to hold the glass and take up the differences in expansion and contraction between the two materials. The frame typically was cut with a deep inset or rabbet on one side to receive the glass (much like the smaller window sash), and was anchored to the iron framework. The glass was usually set from the inside, and held in the rabbet by substantial strips of wooden moulding either nailed or screwed into the frame. Putty or asphalt compounds were occasionally used to bed the glass, but in many cases it was set dry. A coat of exterior paint provided the final seal.

The details of cylinder-glass installations vary from storefront to storefront, but some common points are worth mentioning. Old glass is, again, very prone to breakage, in part because the cylinder method produces imperfect annealing. New glass is tricky to cut for the same reason, and must be worked on the surface that once was the inside of the cylinder (distinguished by raised bumps and pimples). The thickness of the glass is not uniform, and it must be supported on a bailed cloth or piece of velvet to distribute the pressure of scoring when making a cut. When setting glass in a cast-iron-type frame, care should be taken not to toenail (or "toescrew") the securing moulding into the frame and put pressure on the glass. Instead, fasteners should be oriented vertically.

Replacement cylinder glass is available from several manufacturers and importers. (See sources, page 43.) In some instances, it can also be purchased from large-volume picture-framing companies who take it out of old pictures. Insulating sandwishes of cylinder glass and modern window glass are also manufactured by some firms. These are special order products for use where the look of historic glass is desired, but a high R-value is also necessary.

Bent Glass

Bent or slumped glass is any kind of sheet glass that is reformed into curves of varying degrees. Although evidence suggests that this process was used (probably with cylinder glass) as early as 1843, bent plate glass truly came into vogue in the late-Victorian storefront. Later, its popularity reached a high point (in both plate and structural glass) when it was used to form the aerodynamic surfaces of Art Moderne storefronts.

Bent glass is a special-order product, still custom made by a small number of firms. To make it, a flat glass sheet is placed over an iron mold corresponding to the desired curve, and both are heated gradually in a kiln. When the glass is a little above red heat it becomes plastic and takes the form of the mold through its own weight. Once mold and glass are slowly cooled, the finished product can be removed.

The maximum curvature for the bent-glass process is 180 degrees; acute bends do not stand up well. Irregular contours, though, are readily manufactured, as are compound curves like ogees. Bent glass cannot be cut once it is formed, so measurements must be accurate.
Plate Glass

It took a full-blown industrial revolution to bring about the next dramatic change in storefront design—the shift to wide, plate-glass display windows, set in cast-iron skeletons capable of supporting them.

Plate glass had been around since the late-17th century, when the French developed it—or rather rediscovered and refined an old Roman method. But making plate glass was a time-consuming and costly undertaking, so for almost two centuries it was used exclusively in mirrors for the wealthy.

Molten glass was poured onto an iron casting table, rolled smooth with a large iron roller, and slowly cooled until it emerged as a sheet of very hard glass of uniform thickness. However, contact with the table and roller left the surface ruffled and not very transparent. So the plate glass was painstakingly ground and polished until it was brilliantly shiny and almost optically perfect.

By the mid-1800s, polished plate glass imported from Europe was being used in an increasing number of city storefronts. Ordinary window glass was already being made all over America. But only a few domestic glassmakers had attempted to make the more expensive, more beautiful plate glass—and they’d failed miserably, and quickly.

The one man most responsible for reversing this situation was Captain John B. Ford. In 1880, after several failures, Ford built a new glassworks in Creighton, Pennsylvania, and, using low-cost gas as fuel, finally was able to produce plate glass at a profit. This operation became the Pittsburgh Plate Glass Company in 1883.

Boosted by the commercial-building boom already underway, the American plate glass industry, led by Pittsburgh Plate Glass, took off. For shopkeepers, plate glass was like a dream come true. It was optically perfect, and it could be produced in unprecedentedly large panes; panes made from the slender hand-blown cylinders, remember, were usually no more than four feet wide.

Simultaneous advances in the manufacture of architectural cast iron made it possible for shopkeepers to order cast-iron storefronts directly out of catalogues from the early 1850s on. The new iron created storefronts that were much lighter in appearance than, say, masonry or stone, and it produced lintels capable of spanning greater distances—and accommodating larger windows—than ever before.

The first cast-iron storefronts were plain post-and-lintel constructions. But before too long, Victorian buildings turned ornate, and storefronts were, if anything, even more extravagant than most constructions.

During this period of handsome new storefronts with large, invitingly transparent plate-glass windows, the modern display window was born. Often quite elaborately decorated, the display window soon became critical to success in the competitive downtown environment. To create even more display space, shop windows began to slant inward toward a recessed doorway.

The strikingly luminous windows of the cast-iron storefront pictured on the facing page make perfectly clear why Victorian merchants loved the new plate glass.

The owner of the above storefront knew "something" looked wrong and called in design consultants V. Romanoff & Associates. What a difference the glass makes!
Plate Glass

Plate glass provided the means to build a new breed of storefront. As window size grew, changes in installation came about. Bigger windows tended to have moisture-condensation problems inside, so small vent holes along the bottom edge were introduced that helped equalize the temperature on either side of the glass. Larger cast-iron storefronts and the appeal of even bigger windows led to placing two sheets of plate glass in a single frame, supported and divided by a vertical rail. By the turn of the century, the wooden frames of the cast-iron era could no longer tolerate the moisture and weight that came with all this glass, and new methods were sought. The solution was a system of rolled metal frames and clips that is still in use today.

The actual replacement and maintenance of plate glass is best performed by professional glaziers. The first point to be made is that it is very desirable to preserve existing vintage plate glass. The highly polished glass of past decades is, once again, no longer made, and float glass (the unpolished successor) cannot duplicate the luminosity of the original product.

Where a plate-glass display window has to be replaced, a strong effort should be made to match as closely as possible the size, color, and reflective quality of the original glass. Truncating the proportions of a display window in an attempt to save on glass or heat destroys the original design of a storefront — often with ludicrous results. Conversely, peeling back misguided "remodeling" attempts and restoring plate-glass windows to their original large dimensions is very often a dramatic (and suprisingly modern-looking) improvement. Tinted glass is inappropriate for storefronts in most cases, and should never be used as a replacement for clear plate. Use of safety glass is a legal requirement for public-access areas (Federal regulations demand it for all glass doors and sidelights adjacent to doors). Where these codes apply, tempered safety glass is closer to the look of plate glass than plastic-laminated types. Like bent glass, tempered glass is custom ordered and cannot be cut.

Concern about heat loss through large display windows has doomed much plate glass in the past — without justification. Large display windows typically contribute only minor amounts to total losses. The real culprits are usually uninsulated roofs (as much as 50% loss) and sealing problems in doors, moving windows, etc. Resorting immediately to thermal-pane conversions may mean an irreplaceable loss to gain, at best, a 50% improvement in the minor heat loss through the window.
Expanse of Glass

By 1900, technological improvements in plate-glass manufacture were slashing production time. Most important was the development in 1897 of the first continuous cooling process, which reduced annealing time from three days to three hours. While all this was taking place, stronger (and longer) steel I-beams were making cast-iron lintels obsolete and window openings even larger. According to a 1902 building manual, “In the principal retail stores of large cities it has become the custom to make the entire front of the store one large window, with lights of plate glass from 6 to 10 feet wide and 7 or 8 feet high, with other lights about 3 or 4 feet high above them.” These latter “lights” were transom windows, which had begun appearing in storefronts around 1880.

Around the turn of the century, an entrepreneur named Francis Pym was experimenting with a method of setting heavy plate-glass display windows in metal instead of wood, which was subject to rot. In 1906, Pym founded the Kawneer Company to market his new metal mouldings. At first, the fledgling company made only the moulding, later doors and windows, and still later entire storefronts (see photo on this page).

This early-20th-century shift from a wood to a metal glass-setting system ushered in the era of the “disposable” storefront, which has lasted to this day. Storefronts, always subject to the whims of fashion, were henceforth mere wrappers that could be discarded and replaced in response to the slightest change of taste.

In the early decades of the 20th century, the flat-roofed, one-storey commercial block made its appearance on Main Street. This construction consisted of the merest frame of masonry and metal around its real raison d’être—a large sheet of polished plate glass. Meanwhile, larger plate-glass display windows were being retrofitted in buildings erected during the preceding decades. In these retrofitted storefronts, as in the new, one-storey commercial blocks, metal strips replaced cast iron or wood as framing.

Around 1910, glass started playing an even more prominent role in storefronts as the new transparent expanses of plate glass began to be topped by fancy transoms. Often, these transoms were made of prismatic glass, which was not only decorative but also diffused light as it entered the store. One of the most popular manufacturers, the American Luxfer Prism Company, claimed in a 1926 ad that its prismatic glass tiles, used in transoms, “were the only method ever devised for the perfect daylighting of dark stores.” Transoms, like the one at right, suddenly began appearing in storefronts across the country. It was no coincidence that stores were staying open later and later, and that electric lighting was new and still relatively expensive.
Lens and Prism Glass

By the 1920s, specialized transom glass that redirected daylight into buildings was a part of modern storefront design. With several firms in competition, each tile manufacturer claimed his product was “scientifically designed.” Tiles of the American Luxfer Prism Company operated in a dual mode. Their outdoor prismatic surfaces caught the near-vertical rays of sunlight and refracted them horizontally into the store. Inside, the backs of the tiles had small lenses intended to collect ambient light and broadcast it around the room. Manufacturers’ Glass Company’s tiles had a similar purpose. The pressed-glass lenses formed on both sides were meant to evenly distribute daylight around rooms, but operate as an obscure (and thus private), translucent window.

While the Press Prism Plate Glass Company manufactured sheet ornamental prism glass, Luxfer and Manufacturers made 4 x 4-in. tiles that had to be built up into leaded transom panels. The Luxfer design even used jointed edges to simplify assembly. Whole panels could also incorporate ornamental prism tiles (such as spiral) for decorative effects, transom windows for ventilation, or advertising signs made from art glass.

Neither Luxfer nor any competitor is in business, but the look of lensed or prism glass is still highly appropriate for early-20th-century storefronts. At its peak popularity, the Luxfer transom was a design element as much as it was a lighting device. To satisfy this market, the company produced complete pressed glass panels of tile look-alikes for strictly decorative use.

Today, many a storefront can regain its prismatic transom simply by unearthing it. After decorative transoms became passé in the 1920s, most were not removed, but just covered over with signboards, new facade materials, or paint. Restoration can be as straightforward (and inexpensive) as removing these elements, stripping paint, and cleaning off years of accumulated dirt. Where repairs are needed to lead came or art-glass signs, craftsmen with a background in stained glass can usually be found to do the work. Exact replacements for lens or prism tiles are usually unavailable, but glazing in squares of textured glass (such as cathedral), ribbed “bathroom” glass (such as Reedlyte), or even frosted glass will approximate the effect.

Glass Block

Glass blocks see use in making light-transmitting panels, decorative accents, and other non-structural applications. They are made from two clear, pressed-glass halves sealed together. They are installed with cement mortar, much the same as brick, but often require additional materials (such as expansion strips or reinforcing bars) for large panels.
20th-Century Glass

In the ideal storefront of the post-World War One era, transoms were even more whimsically ornate. Sometimes the name of the store was made out of stained glass and incorporated into a prismatic-glass transom. Entire stained-glass canopies appeared (see below).

In the meantime, street frontage in many big cities was becoming ever more expensive, so designers created narrower and deeper store entrances. By deeply recessing doorways and adding vestibules and canopies, they gave the illusion of space and depth. Bent glass (plate glass reheated and reformed into curves of varying degrees) was used to enhance the funnelling effect — and provide merchants with display space that was even more alluring.

By 1923, plate glass was being made in continuous sheets, from furnace to cooling tunnel. The Age of the Machine had truly arrived, and it was epitomized in the Art Deco and Streamline Moderne storefronts of the 1930s and '40s.

Pigmented structural glass, better known by the tradename Carrara Glass, became the favorite material of storefront designers, and storefronts like Ray's (page 40, bottom) became all the rage from coast to coast. Jewelers and confectioners were particularly enamored of the Deco look.

Manufactured by a number of glass companies, pigmented structural glass was available in a range of colors, including black, white, grey, "tranquil green," "Rembrandt blue," even "mottled agate." The glass consisted of a mass of colored crystals in a glass matrix, yielding a depth of color impossible in a material with a simple color-coated surface. Structural glass was made much the same way as plate glass, except that it was generally ground and polished on one side only.

On shop exteriors, structural glass first appeared in place of marble on the bulkheads below display windows, then as cladding for the the rest of the store. Glass took over the entire storefront.

Carrara Glass could be sculpted into squares, circles, and other geometric shapes. Fluting could be etched onto it, as could store names and other designs. Structural glass was also amenable to the curves and rounded corners leading to stylish, deeply recessed entries. Glass blocks, meanwhile, made glowing, translucent windows.

As Chester H. Liebs points out in *Main Street to Miracle Mile*, Art Deco and Streamline Moderne storefronts were a kind of commercial medicine concocted by the new industrial designers. With the country in the throes of the Great Depression, shopkeepers desperately needed to stimulate sales. So they constantly jackhammered into the public consciousness, through Art Deco geometrics and Streamline Moderne curves, that good times — prosperous, technologically advanced, up-to-date — were right around the corner.
Structural Glass

Never meant to be truly structural or load-bearing, structural glass is the broad term for opaque, pigmented glass used as a sanitary and decorative surface covering. One of the first versions was Sani-Onyx or Sani-Rox (Marietta Manufacturing Company, 1900). Best known, however, are the two major manufacturer's trade names: Carrara (Pittsburg Plate Glass Co.) and Vitrolite (Libby-Owens-Ford Glass Co.).

Like marble, structural glass is installed by cementing it to any hard, stable, wall surface. While masonry is ideal, building codes often prohibit installations on wood sheathing or lath because of its movement and vulnerability to fire. Asphaltic masonry mastic is used, applied to the wall hot in daubs of sufficient size to cover 60% of the back area of each panel. Panels must be spaced, cushioned, and supported with clips according to precise specifications (see illustration on this page).

Maintenance and repair of structural glass is critical. Open joints between panels should be regouted with silicone sealant (preferable to the older cement method). It is also wise to preserve cracked panels by caulking with silicone. The cement seems to have a life of 30 to 40 years, letting go of the glass when the mastic loses adhesion. Water that gets in open joints and then freezes also works the glass loose. Besides requiring replacement, falling panels are a serious personal injury liability that can influence insurance.

cases of failing mastic, loose panels should be completely removed, cleaned (along with the wall), and then reattached. Traditional asphalt mastic is still an effective cement, despite its finite life, but silicone can also be substituted here.

The original structural glass is out of production, but there are alternatives. Glass shops that specialize in storefronts may still have small inventories, though these are usually limited to black and white (the only colors that always match). European structural glass is sometimes imported, but its metric dimensions (less than 1½ in. thick) and different coloring make blending with old work difficult. Spandrel glass (plate glass with a ceramic colored backing) can be employed as a pseudo-structural glass. Colored sheet plastic and plate glass that is carefully back-painted also can work as substitutes, but both are prone to the fading effects of sunlight. Relocating existing panels can also be an option. This tricky technique requires carefully removing the glass by first softening the mastic with solvents or heat.

SUPPLIERS

Shovitz Bros. Distributors, Inc.
1565 Bergen Street
Brooklyn, NY 11213
(718) 774-9100

Viracon Inc.
800 Park Drive
Owatonna, MN 55060
(800) 533-2080

Glass Bloc
Glasshaus Inc.
P.O. Box 517
Elk Grove Village, IL 60007
(312) 640-6910

Pittsburgh Corning Corp.
800 Presque Isle Drive
Pittsburgh, PA 15239
(412) 327-6100

Salamandra Glass Ltd.
133 Market Street
Portsmouth, NH 03801
(603) 431-4511
(Bull's-eye glass)

BENT GLASS

ACME Bent Glass
10211 Armand Laverne
Montreal North, P.Q. H1H 3N7, Canada
(514) 327-5064

California Glass Bending Corp.
320 East B Street
Wilmington, CA 90744
(800) 223-6594

EFCO Corp.
P.O. Box 609
Monett, MO 65708
(800) 221-4169
(Insulating period/modern glass sandwiches)

Energy Sealants Inc.
461 S. Morgan
Chicago, IL 60609

(312) 263-3129
(Systems to retrofit existing windows with insulating second lights)

GLASS ADHESIVES

ACME Chemical & Insulation Co.
Division of Allied Products Corp.
P.O. Box 1404
New Haven, Ct 06505
(203) 562-2171

(Maraglass No. 658 resin and No. 558 hardener)

Sommer & Maca
5901 West Ogden Avenue
Chicago, IL 60650
(800) 323-9200

(Palmer Structural Glass/Mirror Mastic)

Talas
213 West 35th Street
New York, NY 10001
(212) 736-7744
(Bond-All)

STOREFRONT DESIGN

Norman Mintz Design Assoc.
417 Sixth St.
Brooklyn, NY 11215
(718) 768-8149

(Design consultants for facade, storefront, and sign improvements)

V. Romanoff & Assoc.
112 W. Marshall St.
Ithaca, NY 14850
(607) 273-5756

(Storefront restoration and design consultants)
I didn’t have to look far to find a business operating from a converted residence. Where else would OHJ’s Brooklyn office be, but ensconced in the local vernacular? Our brownstone, on the main avenue of a historic neighborhood called Park Slope, was converted to commercial use about 80 years ago. That’s when the sheet-metal and glass extension was added to the front façade. Lots of small businesses have operated behind those big windows: a tailor shop, a dentist, Democratic headquarters. On the very floor where my desk now sits was the Chocolate Drop Pillow Shop, a strange place with black lights and incense and skinny long-haired girls. They sold pillow furniture. I’ve been in the neighborhood long enough to remember it.

OHJ began interior renovations in 1978. The decades-ago conversion hadn’t been very sensitive, and changing uses had substantially altered the first two floors. We salvaged a decorative tin ceiling (c. 1910), but only after many hours of scraping, patching, caulking, and priming. The decor and ambiance is not at all standard, but it’s functional: custom-built oak furnishings, reproduction ceiling fans and schoolhouse lamps, and newly commissioned stained glass in the transom windows.

It took us years to get around to the facade. The brownstone of the upper storeys was fine; the cornice needed repair. The sheet-metal storefront façade was in poor shape . . . rusted, filthy with grime and mastic from old signage, peeling and leaking, missing a couple of its column capitals. A notable local restoration contractor, Edson Construction, took on the job of restoring the facade. They kept at it even after the Mushroom Factor set in: wire-brushing turned into metal patching, caulking turned into welding, every task mushrooming beyond budget.

The big window downstairs presented a challenge. This is a publishing office, not a store. We didn’t have a seasonal display of wares for the shop window — nor did we want to attract browsers. But we did want to offer something to the street. And we need the light that comes in. The answer was the full-scale cornice section you see in the window. It gives passersby something to look at, and it allows light over the top. It’s built in, glazed between cornice and ceiling at the rear and with an access door to the vitrine area. So the single-glazed window is now insulated. The cornice and the commercial facade are polychrome-painted to complement each other in shades of maroon, beige, and tan, all to harmonize with the ubiquitous brown of old Brooklyn neighborhoods.

A c. 1880 brownstone, converted to commercial use around 1910, is home to the Old-House Journal’s editorial and publishing offices.
What's it really like to work in a converted building, one that wasn't designed for the efficiency of conducting a business? There are disadvantages, of course, some attributable to the age of the building and some to the conversion. Plumbing and hardware and wood floors are residential quality, not designed to take quasi-commercial abuse. The spaces are long and narrow, and vertical (four floors, each with limited square footage). As time goes by, though, apparent disadvantages turn into advantages: We're not subjected to every department's phones; dashing up and down stairs all day keeps people alert and lends a sense of bright activity to the office.

Maybe I'm biased, I thought. So I got some staff opinions of our rather homey workplace. Gordon, a contributor for years but new to the staff, can still remember his first impressions. "Hey Gordon, what did you think of this building as an office when you got here?"

"Well, I had a hunch OHJ wasn't going to be in a five-year-old office complex full of Sheetrock and rented furniture. When I came upstairs, it was more than I expected. I was a little surprised — it didn't feel like an office, but then again, I'd never been in a narrow row house.... There's nothing better than an idiosyncratic work space — barns are great; why not a brownstone?"

Bekka's our art director. I know she cares about the aesthetics of her work space — but I wasn't sure that came close to her feelings about neatness, organization, efficiency, and having enough room. I was about to find out: "Hey Bekka, what's the most inconvenient thing about working in an office that was meant to be a house?"

"It's too tempting to take a bath after you've been sunning on the roof." (Aesthetics winning so far....) "No, really, I don't find any disadvantages. I think there's a calmness because this used to be a house. Tensions don't mount here — the scale of the rooms keeps you thinking 'family.' Plus, most people have to go home to escape from ugly. And my workplace is prettier than my home!"

Cole's an old-timer of seven years. His desk has moved all around the building. "Cole, what's the biggest disadvantage of this building?"

"Chester knows where to find us." (Chester is the office cat, a five-year veteran.)

Janet's an editor who's worked in several editorial offices. "Janet, do you think there are any disadvantages to working in a brownstone instead of a more standard office?"

"Hmmm.... I'd have to think about it." (No backed-up complaints there, I guess.)

The moral seems to be that working in an old building can be as happy an experience as living in an old house. Converted or not, the building's idiosyncrasies, worn edges, detail, and human scale contribute to quality of life. Minor inconveniences fade away.
Some revitalized Main Streets present a tidied-up version of history. Period photographs show us a more unvarnished truth — before regulated signage, pedestrian malls, brick sidewalks, and florid cast iron became ubiquitous symbols of the good old days.

The accompanying Buyer’s Guide proves there are plenty of options available to specifiers who want to revitalize downtown, without giving history too high a gloss.

**SIGNAGE**

Few components of the commercial streetscape make their presence known with quite the same, er, insistence as the storefront sign. Period photos, like the one of lower Manhattan c. 1865 (page 51), are proof that shop signs have been outshouting each other on Main Street for well over a century. By the mid-1800s, when commercial buildings were replacing the oversized houses that had once lined business thoroughfares, signs covered windows and spandrels, were painted on exposed walls, stuck out from facades, crowned rooftops, were even strung across the sidewalk or street. This kind of commercial chutzpah has been a sign of a thriving business district ever since.

If you’re in the market for a new sign, you might want to take the advice of Norman Mintz, the author of a 28-page monograph called *Main Street Guidelines: Signs for Main Street*. Mintz says the worst place to look for a sign is the local sign shop. There’s no need to settle for a stamped-out plastic box, the usual off-the-shelf sign-shop fare, he says, since a custom sign will often cost you less. Mintz suggests that you study signs in your area, choose...
one you like, then find a signmaker who can reproduce it. (Often, the sign will have its maker's name in the lower left- or right-hand corner. Or you can ask the store owner where it was made.)

In any case, make sure you check local regulations first. In some historic districts, signage is regulated strictly, and you may have little choice about types of signs, not to mention size, shape, color, and placement.

If the choice is entirely up to you, keep the following guidelines in mind: Signs should take their cue from a building's materials, colors, and period character. They should not cover important architectural details like cornices and transoms. And neither should they be so large that they dwarf a building and its neighbors. Here's more on the various types of period signs and how they can be repaired or reproduced.

**Wooden Signboards**
The most common sort of sign throughout the 19th century was the long, narrow, wooden signboard flush-mounted on the lintel above the shop window and below the storefront cornice. By the 1830s, signpainters had at their disposal a wide range of hand-mixed colors, including chocolate browns, bottle greens, and vibrant blues. Traditional serif lettering was by far the most common until well into the 20th century, and these letters were often picked out with gold and silver leafing. Letters were also carved from wood, painted or gilded, then attached to the signboard or mounted directly on the building. Sometimes gold-leaf lettering was painted over a luminous background of crushed and heated colored glass, called smalt.

As advertising began taking over entire facades, signboards were mounted between upper storeys, and often on rooftops. Plywood is probably the most readily available and inexpensive material for reproduction signboards; marine-grade plywood, available from boat lumber suppliers, is expensive but the most durable choice. One face of whatever plywood used should be as smooth and defect-free as possible. Glue should be waterproof to withstand the onslaught of the elements. Redwood and hardwoods are ideal for carved signs but are, of course, more costly than pine.

When you install a sign on a historic structure, take care...
not to damage the facade. On masonry buildings, bolts or screws should be set into sleeves, and the sleeves should be set into masonry joints. Secure the bolt using mortar as close in composition to the original mortar as possible. Using lead sleeves also helps protect against rust.

**Projecting Signs**

Signs hung perpendicularly to commercial facades have been around for centuries. Sometimes they were simple signboards, less commonly symbols or logos; the shoe repairer’s black boot, for example, is a classic trade symbol traditionally used as a projecting sign. The first projecting signs were made of wood and often hung from fancy cast-iron brackets. In the 1920s and ‘30s, projecting neon signs joined the thicket of commercial messages on Main Street (more on these later on).

**Painted Walls**

From the mid-1800s through the early-20th century, signs painted directly on exposed building walls were a favorite form of signage. Bold lettering advertising the name of a hotel or restaurant, for example, was often painted between the upper storeys of the establishments. These often fading commercial artifacts can be repainted if the business still exists. Otherwise, they should be allowed to fade gracefully with age.

**Etched and Painted Windows**

At the turn of the 20th century, signs were often painted directly onto the inside of display windows or office windows on upper storeys. Window signs were typically gold-leafed. They were also etched onto the shop window.

Flaking gold-leaf signs can be carefully cleaned, regilded, and varnished for protection. Cracking etched glass can often be repaired with clear silicone sealant. Gold-leafers and glass etchers for either new signs or repair work generally are listed in the local phone book. Sign painters who specialize in trucks or boats can be recruited, too.

**Awning Signs**

Awnings have been used extensively since the 19th century to shade shop windows and shelter pedestrians. They've also provided a convenient space for signage. The business's name or logo was often painted, silk-screened, or sewn onto the valance, side panels, or sloping surface of the awning.

**Transom Signs**

During the early decades of the 20th century, the names of commercial establishments, as well as other designs, were often done in stained glass and incorporated into transom windows, which at the time were often made of prismatic glass (see page 34). Craftspeople who make and repair stained glass can usually be found in the local yellow pages.

**Etched Structural Glass Signs**

In the late 1950s and ‘60s, industrial designers seeking sleek new materials that epitomized the Machine Age began covering storefront facades with lustrous sheets of pigmented glass, technically called structural glass but better known by the tradenames Carrara Glass and Vitrolite. The resulting storefront style is known as Art Deco (see page 34). Shop names in jazzy typefaces like Ultra-Modern, Broadway, and Futura were etched into the Carrara Glass using a controlled form of sandblasting.

Structural glass is no longer being made in this country. However, stocks small enough for a replacement sign sometimes can be found at salvage yards or through building suppliers. Cracks in existing signs can be filled with clear silicone sealant.

**Neon Signs**

Neon signs first made their appearance on Main Street in the 1920s and became extremely popular during the next 20 years. Neon signs are made of slender glass tubes illuminated by electrified gas. The hand-crafted glass tubing usually was attached to a shaped, sheet-metal structure projecting from the facade; sometimes neon signs were hung inside display windows. Neon signs were made in a variety of colors and intricate shapes. Experienced neon fabricators can replace broken glass tubing, repair or replace transformers and rusted sheet-metal backing, and refill signs with gas.

**Tile and Terrazzo Signs**

In the 1930s and ‘40s, shop names were often spelled out in ceramic tiles on the bulkheads beneath display windows. Shop names in both tile and terrazzo were also incorporated in the paving of the deeply recessed storefront entrances fashionable at the time. (Terrazzo is made of ground marble or granite set in mortar and polished.)

Ceramic tiles usually are easy to replace, and loose tiles can be removed and reset with mortar. Terrazzo is a disappearing art, but it's worth checking the yellow pages. (Look under “terrazzo,” or “floors — materials & laying,” or “mason contractors.”)

**TRASHCANS**

Garbage pails, municipal or private, are the one thing you definitely don’t find in early streetscape photos. The reason is simple: They didn't exist. Our colonial ancestors had no Chippendale-style containers in which to deposit unsightly

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**BUYER'S GUIDE**

**SIGNAGE**

**National Main Street Center**

National Trust for Historic Preservation
1785 Massachusetts Ave., NW
Washington, D.C. 20036
(202) 673-4000.

(Main Street Guidelines: Signs for Main Street, a 28-page monograph) ($10)

**SignCraft**

P.O. Box 06031
Fort Myers, FL 33906
(813) 939-4644

(Bimonthly magazine on signs & signmakers: $21 per year; $3.75 per issue)

**M.L. Condon Co.**

260 Ferris Ave.
White Plains, NY 10603
(914) 946-4111

(Marine-grade plywood & hardwoods suitable for wooden signs. Ships nationwide)

**Max-Cast**

R3, Box 126
Iowa City, IA 52240
(319) 351-0708

(Custom letters in brass, bronze, aluminum, iron)

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**Ryther-Purdy Lumber Co., Inc.**

P.O. Box 622 Elm St.
Old Saybrook, CT 06475
(203) 388-4405

(Hand-carved, routed, & sandblasted wooden signs, painting, gilding)

**Shelley Signs**

109 Park Place
Lithaca, NY 14850
(607) 272-5700
trash. There weren’t any Gay 90s-style receptacles with cast-iron flourishes for camouflaging refuse. And moulded-plastic models in screaming day-glo colors are strictly a contemporary development.

Until late in the 19th century, the streets were considered perfectly legitimate receptacles for trash. More meticulous types might cart their rubbish to the nearest empty lot. Otherwise, when people weren’t throwing their garbage out the window, they were dumping it in backyards, basements, and air shafts. “The filth of the streets,” complained Popular Science Monthly in March 1875, “gathers in rats and other vermin, all rooted busily through the wastes for a meal — even at the fanciest addresses.

The steel-mesh litterbasket wasn’t invented until the 1920s. It soon became a fixture on American streetscapes; but what did earlier litterbaskets look like? Well, around the 1880s, Ladies Action Leagues from coast to coast began organizing clean-up days, lobbying furiously to make littering illegal, and placing discreet rubbish baskets on the streets (see the photo on page 50, upper left). Indeed, one female journalist boasted in 1897 in the Atlantic Monthly that this army of lady volunteers would “sweep this globe from pole to pole and neatly dust every continent.” In 1907, New York City started putting out municipal litterbaskets — apparently the first city of any size to do so. These cans were painted black and red and warned litterbugs that “It is against the law to throw litter on city
Canco's biggest seller was a corrugated metal trashcan with a removable top — still a standard today. In 1914, 2,000 new trashcans made by DeZouche, Hanson & Co. appeared on the streets of Philadelphia (see illustration below). Constructed of heavy sheet iron with vertical metal braces and half a hoo d, they were painted green, with the inscription "For paper and fruit skins" stencilled in silver letters on the front. The Butler Manufacturing Co., meanwhile, was marketing an "Improved Street Can" — in fact, the official street can of Minneapolis (below right). Its product, a 38"-high flip-top box, looked remarkably like a birdhouse. But the cutest garbage cans of the period were probably those made by The Steel Basket Company of Cedar Rapids, Iowa, for the New York Zoological Park (better known as the Bronx Zoo): imitation tree stumps, with ordinary garbage cans inside that could be easily removed.

A look at many revitalized Main Streets suggests that cast-iron benches have always been with us, but that is not the case. Until after 1800, casting with iron was a pricey process (smelting ate up forests of firewood), so early benches were made from materials less dear. Wood undoubtedly led as the plentiful favorite, but stone and wrought iron also were used.

After 1850, though, new furnaces brought such improvements in the economics of cast iron that it became the plastic of the 19th century. It could be made so ornamental (and was so affordable), Victorians went giddy producing every kind of outdoor fountain, urn, statue, gazebo — and bench. Styles ranged from spartan frame-and-rail types, to florid motifs of intertwined plants or animals. One famous design was the Four Seasons that depicted the planting-
harvesting cycle of a man farming.

Benches were cast in a dozen or so pieces that could be shipped knocked-down to anywhere in the country and then reassembled. Cities that had a heritage of ironwork (such as Savannah and New Orleans) might favor a particular model; otherwise the only trend was simpler styles up north, more involved ones down south.

By 1890 the sun was setting on cast-iron benches and iron in general. Steel proved better for structural purposes, and the public was bored with seats made of ferrous grapesvines. New methods had made cement an inexpensive commodity by the turn of the century, and benches partly or wholly cast from concrete became standard municipal furniture. They were durable, they didn’t rust, and they had that clean, “modern” look.

Today’s historic-district guidelines regulating signage try to legislate good taste. But that ain’t necessarily historic.

(New York City, c. 1865)

Today, cast-iron benches are in the midst of a comeback. The 1939 World’s Fair saw the introduction of a hooped-arm design that soon was adopted as the bench for New York City parks. Most models in current production are copies of old styles, many in non-rusting metals such as aluminum or brass. Clearly mid-to-late-19th-century designs, these benches may look out of place in surroundings that predate 1850 (where wood benches are probably more appropriate), or antique in many 20th-century settings that call for concrete. They are ideal, though, for streetscapes that match their era.

Bench prices are governed by size, type of materials used in construction, quality of casting, and country of origin (many are imported). Many models, both aluminum and cast iron, are available for under $500 per unit.
TREES, GRATES, & GUARDS

City life has taken its toll on many tree species that used to be planted along Main Street. Under daily assault by pollutants, pets, and vandals, today's street trees don't live very long, certainly not as long as the stately trees on East Main Street in Nantucket in 1897 (see photo opposite). Some species will survive longer than others, though. Your regional U.S. Forest Service (see addresses below) can tell you which ones are best for your area.

The street tree has been called America's chief contribution to city-making. Andrew Jackson Downing, the influential Victorian architect and horticulturist, declared that street trees were the "outward mark of education, moral sentiment, love of home and refined civilization which makes the main difference between Massachusetts and Madagascar."

In New England, street trees have been planted since Colonial times, and the graceful, arching canopies of basswood, elm, sycamores, and maples have always been a part of the region's vernacular style. In the mid-19th century, interest in street trees began spreading to other areas of the country, and by the 1870s, it was something of a national obsession. Arbor Day became a national observance. Thousands of trees were planted along once-barren Main Streets for the nation's centennial. Street trees were also a big concern of the subsequent "City Beautiful" movement, whose influence lasted well into the 20th century. Amidst all of this planting, tree grates and guards in cast iron or wood became a form of public art. Guards in particular ran the gamut in style, from utilitarian wood (see photo of the Bronx streetscape on page 49) to decorative cast iron.

Aesthetics aside, Victorians saluted trees as "guardians of public health," believing that they could, among other things, purify polluted air. And modern science has confirmed that trees do indeed help trap airborne pollutants.

STREETLAMPS

Streetlamps have a long history as star players downtown. Besides their commanding size and dramatic illumination, they are strong design elements that "change costume" every few decades. Today, it's very popular to install old-fashioned lamps that are more in keeping with the existing architecture. They can be very complementary, provided they really do match the building period, and not some Disneyland interpretation of Main Street. (The buying guide that starts at the bottom of page 53 shows that there are plenty of reproduction models from which to choose.)

Lamp style should not be a glaring anachronism, too new or too early for their context. And they also have to provide adequate, cost-effective lighting. The following guidelines should help.

HISTORIC STYLES

Oil

© COLONIAL TO 1860: Whale oil streetlamps were used in major cities and most towns from before the Revolution to the early 1800s. Early lanterns typically took the form of a four-sided glass box, usually with individual keystone-shaped panes (for economical replacement.) The lantern top could be either a metal reflector, or a second set of four panes. In some municipalities backpainted glass panels were added above the panes that showed street names when illuminated. The lamp posts (upright poles that supported lanterns) were wood, often turned or otherwise finished.

© 1860 TO 1900: After the first petroleum well was drilled in 1859, kerosene became the dominant illuminating oil. The Dietz style lamp saw use a streetlight in rural areas up to the 20th century, and was a fixture in many towns of the early West.

Gas

© 1820 TO 1890: In 1817 Baltimore became the first American city to use gas street lights, with other towns following suit through the 19th century. Gas burners at this time were the simple batswing or fishtail types, modified tube ends that produced naked flames roughly 1½ in. wide. The
There's no missing the impact of mature street trees in this 1897 view of Nantucket, Massachusetts. Can you spot the gas and arc streetlamps? The gas streetlamp grows out of a horse trough.

Lanterns for this new light were also glass boxes (larger to shed more light) and often sported a decorative finial or streetname panels. Theaters, dance halls, and saloons sometimes installed their own large twelve-paneled units as advertising. Posts were made of cast iron, and sprouted distinctive pegs under the lantern for supporting the ladders of lamplighters.

© 1890 TO 1918: Perfected in 1887, the Welsbach mantle revolutionized gas lighting and signaled a change in streetlamp design. Gas was now burned in an incandescent cone instead of an open flame, producing a brilliant white light. Its increased output made a cylindrical globe more practical for cleaning and less likely to be cracked by heat. A white glass dome was added to reflect light downward. Welsbach units were usually mounted on existing cast iron posts as retrofits for earlier lamps. Later designs, such as those with multiple globes, were attempts to compete with electric light by increasing the number of mantles and thus the light output.

**Electric**

© 1870 TO 1910: Electric arcs were the first practical source of electric light, and proved so intense that their most popular application was as outdoor lighting. The lamps had distinctive chimneys to vent gasses produced by the burning carbon electrodes, and clear glass globes to protect the arc from the elements. It was common practice to suspend arc lamps by wires over every other major street intersection, but standards (assemblies of a base, shaft and bracket for supporting a lamp) were also employed, such as those designed for the Brooklyn Bridge.
In the course of two hundred years, streetlamps have come in many forms. Some changes in appearance were motivated by fashion, but the evolution largely resulted from innovations in lighting technology. These eight styles represent landmark design changes in the history of streetlamps, each design tied strongly to its era.

○ 1911 TO 1940: The invention of the tungsten bulb ushered in modern electric street lighting by surpassing all other light sources. "White way" lighting of business avenues became fashionable early on, and made much use of cluster lamps. These were units with three to six luminaires (complete lighting fixtures) on a single ornamental standard. After 1916, the individual luminaire took hold again, and took the form of a ball, "acorn" (GE Novalux-type), or eight-paned lantern. About the same time, suspended refractor globes allowed greater spacing between standards and created their own lamp style as well. Many cities commissioned unique designs that became classics, such as the New York City "Bishop's Crook" and the Salt Lake City "Indian Head." These styles, though widely available, still carry strong associations with their home towns.

MODERN CONSIDERATIONS

Period streetlamps are available through three sources: reproduction manufacturers, custom manufacturers, and dealers marketing the original, recycled units. New lamp construction is more varied than ever.

Posts

Cast iron is still a very popular (and durable) post material for gas era and later lamps, but there are other alternatives. Cast aluminum lacks the strength of iron but weighs substantially less, making shipping costs (if not the units themselves) more economical. Steel shafts are often combined.
It's Ridgewood, New Jersey, c. 1930, but it could be anywhere. The diagonal parking is long gone on this now-busy thoroughfare, but the Novalux lamps are still there.

with decorative cast-iron bases to achieve the strength needed for posts over twenty feet high. Reinforced concrete has been used since the 1910s and is still available. Recently, casting with polymers (such as fiberglass reinforced polyester and plastic/steel composites) have been developed and see use in low-stress installations.

Luminaires
The wealth of period luminaire styles available (both historically accurate and interpretive) makes choosing an appropriate design simple, but lighting today's streets with "antiques" involves special considerations. Oil, gas, and even early electric lights do not meet the modern municipal standards in most communities, so authentic-looking luminaires usually have to employ light sources that are aesthetic compromises (i.e. incandescent, mercury vapor and metal halide lamps). In the same way, the clear glass globes that initially appeared with some units (such as pre-1920 electric lights) are now produced in frosted plastics — both for longer life and to reduce the glare of contemporary lamps. Use of taller-than-traditional posts (to increase the lighted area) is also a concession to modern needs, as is the closer spacing of posts than was originally intended.

Streetlamp prices vary widely according to design and construction. Stock reproduction and recycled lamps usually come in under the $1,000 per unit, while the cost for custom casting of posts alone may start at this figure. Casting involves a start-up charge as well, but some foundries will absorb this overhead if they are allowed to keep the mold.

A.F. Schwerd Manufacturing Co.
3215 McClure Ave.
Pittsburgh, PA 15212
(412) 766-6322
(Wood posts, lanterns, colonial)

Sentry Electric Corp.
185 Buffalo Ave.
Freeport, NY 11520
(516) 379-4660
(Cast-aluminum lamps, colonial and early 1900s)

Southern Accents Architectural Antiquities
312 Second Ave. SE
Cullman, AL 35055
(205) 734-4799
(Antique lamps)

Spring City Electrical Mfg. Co.
P.O. Drawer A
Spring City, PA 19475
(215) 948-5577

(Extensive line of period cast-iron posts, luminaires, all eras; catalog includes post histories)

Trimble House
4658 Old Peachtree Rd.
Norcross, GA 30071
(800) 241-4317
(Aluminum posts, luminaires, colonial through early 1900s)

Union Metal Corporation
P.O. Box 9920
Canton, OH 44711
(216) 456-7653
(Steel, concrete posts, luminaires, early 1900s)

Welshbach Lighting, Inc.
240 Sargent Drive
New Haven, CT 06511
(203) 789-1710

(100-year-old street light company; cast-iron, steel, aluminum posts and luminaires, all eras)

Otto Wendt & Co.
217 Main
Spring, TX 77373
(713) 288-8295
(Cast-aluminum lamps, early 1900s)
These two books are reprints of old trade classics — one of a 1902 manual for professional woodworkers and the other a 1929 reference on sheet-metal work of all kinds. They're invaluable — and rare — sources of information on traditional designs and construction techniques.

Modern Practical Joinery

If you have a serious interest in finish carpentry, Modern Practical Joinery may just end up on your night table for cover-to-cover reading. A facsimile edition of the 1902 English classic, this book is an exhaustive explanation of the joinery trade. It covers traditional hand techniques, turn-of-the-century power-tool methods — and lots of timeless practical information.

As with many antique or foreign books, you'll have to periodically remind yourself of Ellis' time and place. Britishisms abound, particularly in nomenclature (a rebate over here is a rabbet over there), and there are patches of obsolete advice ("Gaslights in the Workshop"). Some tools and practices are strictly European, and all of the machinery is pre-OSHA.

Still, the bulk of the book is a gold mine for woodworkers, architects, and preservationists. The chapters on wood joints, doors and panels, and windows and lights are excellent. Three superb sections are devoted to stairs and handrails, covering both the theory and construction of complicated curved designs. Other discussions include general plans for period bank counters, library bookcases, cupboards and Gothic "church fittings."

All drawings are detailed, and the writing is comprehensive. There's even a chapter entitled "Shop Fronts and Shop Fittings" — in case a client asks you to build a cheesemonger's store.

1929 Standard Practice in Sheet Metal Work
768 pages with black-and-white technical drawings and photographs throughout. Published by Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA), 8224 Old Court House Rd., Tysons Corner, Vienna, VA 22180. (703) 790-9890. $75 ppd.

Recently, while reading through the new edition of the Architectural Sheet Metal Manual (well-illustrated and invaluable to preservationists), I unearthed an even greater treasure. Buried way in the back of this book was a modest announcement of a new reprint of the classic 1929 Standard Practice in Sheet Metal. Accompanying the announcement were several illustrations, including one of an onion dome just like the one on an old church my office was restoring. I just about broke the phone calling for a copy. As anyone in the old-buildings business knows, information on this subject is extremely hard to get a hold of.

I was a bit daunted by the $75 price, thinking the book might be full of obsolete graphs, charts, and diagrams. But when it finally arrived, my fears were laid to rest. The 768-page, 12¼" x 9½" hardbound book is as heavy as a bowling ball, and it even has the same beautiful two-color, embossed cover as the original.

Inside the architectural section you'll find every imaginable illustration — gargoyles, domes, cornices, spun balusters, storefronts, metal ceilings, and flashing designs for shingle, slate tile, and composite roofing, to name a few. There are 33 pages on decorative metalwork for Colonial, English Gothic, and Italian Renaissance churches, and many of these details apply equally to old houses. There are interesting sections on heating and ventilation, exhaust systems, metal-clad fire doors, hollow metal windows, and furnace designs for houses and commercial buildings. There's an entire section on kitchens. And at the end of the book is a good section on painting metals, as well as a set of recipes for coloring and oxidizing copper.

All drawings are detailed and clear, parts are labelled, and there's plenty of text explaining how items were built and why a particular construction technique should be used. This is valuable information indeed for those of us trying to figure out how missing elements on historic structures were designed and constructed, and who must often turn to modern sheet-metal firms unfamiliar with traditional techniques to have them reproduced.

Most old standards like this one make great coffee-table books. But they're also indispensable today. As one retired sheet-metal man once told me, "Son, there's only two kinds of buildings — those that got sheet-metal flashings and gutters and those that need it."

— Larry Jones
Robert E. Meadows, PC, Architect
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Theatre Seats
The folks at Country Roads can reel off the history of public seating as far back as ancient Greece and Rome, and they ought to know: The company has restored the seats of public places as diverse as the National Theatre in Washington and Busch Sta-
dium, home of baseball's St. Louis Cardinals.
Although they're partial to the splendidly detailed chairs found in performing-arts houses of the 1920s and '30s, the firm can repair or reproduce any kind of public seating. According to Country Roads' Bill Van Dore, restoring old seats is generally cheaper than buying comparable new ones. And it's impossible, he says, to reproduce the intricate detail of some of the more ornate period seats.
At its 60,000-square-foot plant in Belding, Michigan, Country Roads refinishes wood and metal seats and reupholsters them, custom manufactures missing parts, and maintains a large stock of period seats for resale. The firm also handles removal, shipping, and reinstallation. Country Roads will custom build new chairs suitable for historic properties.

Elcanco Goes On
Dear Editors:
I am writing to let you and our other friends in preservation know that we are still in business.
I doubt if anything can be as devastating to a small business as a fire. You hope you have the presence of mind to get out of the building. Still, you think you’ll be able to go back soon and make some minor repairs with “no business interruption,” right? Wrong!
You stand there in the parking lot—sunny day, but wind-chill factor of minus 8 degrees—and watch firemen unable to open the hydrants. You watch one of these brave men standing on the roof, 2½ storeys up, cutting a hole through the roof with a huge fire axe, and pray that he won’t fall. You watch while police cordon off the street and reroute traffic.
And suddenly it comes to you, slowly at first; the mind has a way of protecting itself. Only the intangibles will remain. Good name, good will of our customers, and, we hope, our own courage and some more determination! You face the fact that you won’t even be able to salvage your Rolodex with the customers’ telephone numbers. How will you let them all know that you are still in business?
This letter is one way! Elcanco is back in production for Candlecovers, and by mid-May our candle moulds for Starlite and Morelite Candles will be ready for us.
Elcanco would like to thank OHJ for providing this format.
— Marcia Linton
Elcanco
P.O. Box 245
Chelmsford, MA 01824

Country Roads, Inc., Dept. OHJ, 1122 South Bridge Street, Belding, MI 48809; (616) 794-3550.

Steeplesjacks
Dan Quinn and his crews restore steeples the old-fashioned way: They use traditional rigging — blocks and tackle and bos’n chairs — instead of modern scaffolding. Suspended from their chairs, Quinn and company, Skyline Engineers of Maryland, Inc., also restore domes and towers. Among their projects have been seven state capitol domes and the gold-leafed dome and famous grasshopper weathervane at Boston’s Faneuil Hall.
Skyline Engineers handles all phases of restoration: carpentry, painting, gold leafing, waterproofing. Repair of slate roofs is another specialty. Suzanne Quinn, the company’s vice president, says restoration of the typical small-town church spire costs about $15,000.
Skyline Engineers of Maryland, Inc., Dept. OHJ, P.O. Box 671, 5405 Beall Drive, Frederick, MD 21701; (301) 831-8800.

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Steeples & Cupolas

Campbellsville Industries, Inc., is the company that invented the prefabricated steeple. Campbellsville steeples are made of lightweight aluminum and come in a variety of exterior coverings, including stainless steel, copper, and anodized aluminum. They can be made according to your specifications, or you can choose from a variety of stock designs. The company can also handle installation. According to Jerry Bennett, president of the company, replacing a steeple 20 to 40 feet high generally costs $20,000 to $25,000.

Campbellsville Industries also makes prefabricated aluminum cupolas, cornices, columns, louvers, and spun balustrades, as well as clocks and towers. The company reproduced the cupola, balustrade, and roof railing for Bibb Graves Hall, above, at Troy State University in Alabama.

Campbellsville Industries, Inc., Dept. OHJ, Taylor Blvd., Campbells-ville, KY 42718; (502) 465-8135.

Imitation Ornaments

For the past 12 years, Merv Larson and his staff have sculpted and tinted thousands of tons of concrete to make rock pools for hippos and steel cores and are laminated with decorative woods, including red oak, ash, walnut, mahogany, and cherry. They also include such period details as sidelights, fanlights, and decorative hardware.

About 80 different designs are currently available using different combinations of components, including six-panel doors, four-panel doors, bevelled glass, leaded glass, sidelights, and transoms. More designs are in the works. The door pictured below, center retails at about $5,000.

American-Standard, Dept. OHJ, 9017 Blue Ash Road, Cincinnati, OH 45242. (513) 745-6400.

Security Doors

American-Standard, one of the world's largest manufacturers of residential steel doors, recently introduced the Grand Perma-Door, a line of security doors suitable for old houses. The doors have structural

waterfront ledges for lounging seals, penguins, and penguins at zoos across the country. They've also made naturalistic rock outcrops for resorts, golf courses, and botanic gardens. Recently, Larson decided to get into the architectural ornaments business, too.

The Larson Company can reproduce virtually any kind of interior or exterior architectural ornament, from mouldings to columns to window and door surrounds, using glass fiber-reinforced concrete. Glass fiber-reinforced concrete can substitute for terra cotta, stone, plaster, pre-cast concrete, and other traditional materials and, according to Larson, has a better strength-to-weight ratio. It also costs less and doesn't corrode.

The Larson Company, Dept. OHJ, 2555 N. Jack Rabbit Ave., Tucson, AZ 85745; (602) 622-1934.

Man-Made Mouldings

In 1970, after two years of experiments in a garage, using an egg beater to mix materials, the founders of Focal Point settled upon polyurethane as the best substance for making durable, lightweight alternatives to traditional architectural ornaments made of plaster or wood. Today, the company's product line includes historically accurate cornice mouldings, ceiling medallions, domes, window and door treatments, niches, stair brackets, and more. These pieces need no sanding, come factory-primed, and can be sawed, nailed, painted, or stained to look like wood or plaster.

Earlier this year, Focal Point introduced the National Trust Collection, which includes reproduction mouldings, chair rails, and window treatments from Trust properties. The cornice above, for example, was reproduced from the one in the hallway of Oatlands, the Classical Revival Mansion in Leesburg, Virginia, and retails for $22.95 per foot.

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**Lincrusta & Anaglypta**

Embosed wallcoverings were all the rage in late Victorian houses, shops, and public buildings. Lincrusta, developed in England in 1877, is the embossed precursor of linoleum, commonly used as a wainscoting or as a wallcovering in dining rooms. Anaglypta, an embossed wallpaper, is lighter than Lincrusta, so it was used for freizes and ceilings (where it mocked expensive plasterwork — see photo below) as well as walls.

Lincrusta and Anaglypta were usually finished with a variety of glazing techniques.

Both wallcoverings are still being made by the English firm Crown Decorative Products Ltd. They’re sold in $3.00 × 20\(\frac{1}{2}\)$ double roles for about $4.50 per square foot for Anaglypta and $1.96 per square foot for Lincrusta. Sizes and prices for pelmets, dadoes, borders, and freizes vary.

The Crown Decorative Products line is distributed throughout the U.S. by: Bentley Brothers, Dept. OHJ, 918 Baxter Ave., Louisville, KY 40204, (800) 824-4777; Classic Ceilings, Dept. OHJ, 902 E. Commonwealth, Fullerton, CA 92631, (800) 992-8700; and Mile Hi Crown, Inc., Dept. OHJ, 1925 Blake St, Suite 100, Denver, CO 80202, (800) 422-2099.

**Metal Ceilings**

If you were a shopkeeper around the turn of the century in the market for a new ceiling, chances are you’d have chosen metal. Metal ceilings were available in a variety of styles — Classical, Rococo, Gothic, and later Art Deco. In addition to sheets formed of small and large tiles, there were medallions in many sizes, moulded borders, square centers, and rosettes. At the height of stamped metal’s popularity, c. 1895-1915, you might have done your entire shop or office in the material — ceiling, cornice, dado, walls, and all. (In homes, it was used mostly in bathrooms and kitchens.)

Using 80-year-old dies, the W.F. Norman Corporation makes center, corner, filler, border, and cornice plates — more than 140 components in all. The Colonial Revival design pictured below comes in $2′ × 4′$ panels and costs $19.25 per panel.

Send for their $3 catalog. W.F. Norman Corporation, Dept. OHJ, P.O. Box 323, Nevada MO 64772. (800) 641-4038.

**Pre-Finished Flooring**

Talk about commercial landmarks: Bruce Hardwood Floors has been around for over 100 years.

The company makes prefinished oak planks in $\frac{3}{4}′′$, $\frac{1}{2}′′$, and $\frac{1}{2}′′$ thicknesses, in a variety of widths and colors. Some have wrought-iron nails or wooden pegs. The planks can be glued or nailed; prices range from about $3.50 to $9 per sqft.

Bruce also sells prefinished oak parquet flooring in 14 patterns, in $\frac{3}{4}′′$, $\frac{1}{2}′′$, and $\frac{1}{6}′′$ thicknesses. The “Herringblok” (about $4.50 per sqft.) and "Monticello" (about $6 per sqft.) patterns are pictured above right. Bruce parquets come in butt-edge or tongue-and-groove constructions and foam back, self-stick, or standard dry back.

Both planks and parquets are finished with either a penetrating stain and wax finish or with a polyurethane or European acrylic finish. Bruce also makes unfinished flooring.

Bruce Hardwood Floors, Dept. OHJ, 16803 Dallas Parkway, P.O. Box 660100, Dallas, TX 75266; (214) 951-3100.

**Ornamental Plaster**

C.G. Girolami is a Tuscan sculptor who’s been making architectural ornaments for the past 50 years. Ornamental plaster is a big part of his business.

Girolami’s 20-page catalogue of plaster castings includes cornices, ceilings and ceiling trim, rosettes, and medallions — in enough designs to make your head spin. The 6\(\frac{1}{2}\)"-high cornice below costs $7.50 per foot; the 26"-diameter medallion above, $45. Girolami, which casts pieces for the Frank Lloyd Wright Home and Studio, also does custom designs and reproductions. All castings are made of hard plaster and reinforced with hemp fiber.

C.G. Girolami & Company, Dept. OHJ, 944 N. Spaulding Ave., Chicago, IL 60651; (312) 227-1959.
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THE OLD-HOUSE JOURNAL
Biltmore, Campbell, Smith

For over a century, Campbell, Smith & Company, Ltd., has been decorating and restoring British landmarks, from Buckingham Palace to Westminster Abbey to Big Ben. In 1982, the company entered into a partnership with The Biltmore Company of Asheville, North Carolina, whose projects have spanned the United States and the Middle East.

The combined firm, Biltmore, Campbell, Smith Restorations, specializes in designing and restoring historic color schemes and all kinds of painted decoration, including stencilling, graining, gold leafing, and marbleizing. The company cleans and restores murals and paintings, statuary, all types of interior stonework, and large textiles like tapestries and rugs. And it handles all sorts of related projects — plasterwork, metalwork, wood- and stoneworking, and repair of stained glass, to name a few. The restored ceiling mural in the Dining Hall of Flagler College in St. Augustine, Florida pictured below, is one example of the firm’s work.

Biltmore, Campbell, Smith Restorations, Inc., Dept. OHJ, One North Pack Square, Asheville, NC 28801; (704) 255-1776.

Conrad Schmitt Studios

Established in 1889, Conrad Schmitt Studios is one of the nation's oldest interior restoration and decoration studios. The company, based in New Berlin, Wisconsin, has restored churches, theatres, hotels, banks, courthouses, and other public buildings all across the country. Recent renovation projects have included the opulent Juliet, Illinois, Rialto Theatre, pictured above, and a line-by-line, color-for-color replication of the original 1879 decor of Milwaukee’s famous Grain Exchange.

In addition to general restoration and decoration, the studio specializes in murals and mosaics, lighting, sculptures, screens, and furnishings. It’s also one of the largest stained-glass-restoration firms around.

Conrad Schmitt Studios, Dept. OHJ, 2405 S. 162nd St., New Berlin, WI 53151; (414) 786-3030.

Evergreene Studios

Decorative painting of all types is the specialty of Evergreene Painting Studios. Stencilling, trompe l’œil, marbleizing, mural painting, gilding, graining, polychrome painting, glazing, and scagliola are all part of the repertoire of this group of artists, designers, and craftsmen. Evergreene creates and executes new designs, and also does cleaning and conservation work.

Among Evergreene’s recent commissions: a series of murals in the lobby of the Crown Building on Fifth Avenue in New York City, one of which is shown above. These murals were designed by artist Peter Saari and painted by the Evergreene staff. Restoration of the former office of the Navy Secretary in the Old Executive Office Building, an ornate Second Empire building next to the White House, was another recent undertaking. At least 10 layers of paint were removed from elaborate Victorian stencilling, which was then painstakingly restored.

Evergreene Painting Studios Inc., Dept. OHJ, 365 W. 36th St., New York, NY 10018; (212) 239-1322.

Rambusch

This 90-year-old firm has designed, executed, or restored work in more than 18,000 buildings, including 36 state capitols and some 100 cathedrals. (It’s even been commissioned to restore its own work from years past!)

Rambusch started as a painting and decorating studio and has since moved into art metal, lighting, and stained glass. Though the company works mostly on large public spaces, it does domestic dwellings, too.

Rambusch, Dept. OHJ, 40 West 13th St., New York, NY 10011; (212) 675-0400.
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2ND ANNUAL SUMMER PROGRAM at the Stoneyard Institute of the Cathedral of St. John the Divine in NYC: An intensive 2-week workshop/seminar program in stone cutting, carving, & construction from July 17 to August 5. For information, contact Summer Program, 1047 Amsterdam Ave., New York, NY 10025. (212) 316-7600 or 316-7455.

FIRST-ANNUAL NEW ENGLAND VICTORIAN ANTIQUES SHOW: July 16-17, Eastern CT State University, Willimantic, CT. Also 19th-century conference, Victorian worksho, and a Victorian trade show. Contact Andrew Gibson, 10 Windham Center Road, Windham Center, CT 06260. (203) 456-4221 or 569-0140.

HISTORIC ALAMO SQUARE Victorian House Tour in San Francisco, July 17, 10 to 5 P.M. The tour will feature gloriously restored interiors, some never before open to the public. Tickets, $12 advance; $15 day of the event. For tickets or further information, contact Alamo Square House Tour, 3315 Sacramento Street #110, San Francisco, CA 94118. (415) 863-1328.

ARCHITECTURAL-CONSERVATION STUDIES at the Campbell Center: Historic-Site Management, July 9-13; Maintenance Repair of Concrete Structures, July 23-24; Masonry Conservation, July 25-27. Contact Campbell Center for Historic-Preservation Studies, PO Box 66, Mt. Carroll, IL 61053. (815) 244-1175.

THE 3RD ANNUAL "Meridian In Bloom: A Home & Garden Tour" on Saturday & Sunday, July 9 & 10 from 1 to 6 P.M. The tour will feature 7 residences on Meridian Street between 40th Street & Westfield Boulevard in Indianapolis, IN. For more information, contact Historic Landmarks Foundation of Indiana, (317) 926-2301.

"MOTORING MEMORIES: An Antique Vehicle Meets" at Codman House, Codman Road between Route 117 & Route 126, Lincoln, MA, on July 17, 10 A.M. to 3 P.M. All antique (1963 or earlier) vehicles welcome: cars, trucks, motorcycles, bicycles, carriages. $2 registration fee per vehicle; all passengers admitted free to the day's activities. Codman House, an historic house museum, will be open, 10 A.M. to 5 P.M. Live Dixieland music, 10 A.M. to 2 P.M.; silent movies at 11:30 A.M.; refreshments available; & more! Admission is $3 for adults, $1 for children. For further information, contact Michele Order Litani, (617) 259-8843.

VICTORIAN WEDDING CELEBRATION, August 5 & 6 in Jim Thorpe, PA. A weekend of festivities centering on the 1874 wedding reenactment. The whole town is decorated for a wedding, with fashion shows, lectures, a ball, and finally the wedding & reception. For more information, contact Harry Packer Mansion, Packer Hill, Jim Thorpe, PA 18229. (717) 325-8566.

THE BENNINGTON MUSEUM ANTIQUES SHOW, July 8-10, Bennington, VT, at the Monument Elementary School, Route 9, opposite the Museum.

HOUSE TOUR in Naples, ME, to benefit the restoration of the old Union Church. Wednesday, August 3, 10 A.M. to 4 P.M. $8 per ticket. Tickets available 9:30 to 1:30 at the Union Church, Route 302, center of Naples Village. For information call (207) 693-5285, 685-6682.

SOUTHWOLD RESTORATIONS 13th Annual Antiques & Collectibles Show, in conjunction with the South Bend Ethnic Festival. At Howard Park, Jefferson Boulevard and St. Louis Boulevard, South Bend, IN. July 2 (rain date July 3) from 10 A.M. to 5 P.M. Free admission. Food available.

Classified ads in The Emporium are FREE to current subscribers for one-of-a-kind or non-commercial items, including swaps, things wanted or for sale, and personal house or property sales. Free ads are limited to a maximum of 50 words. B&W photo or drawing also printed free when space permits.

For commercial ads, rates are $70 for the first 40 words, $1.15 for each additional word. Photographs will be printed for an additional $40. Ads are reserved for preservation-related items: restoration products and services, real estate, inns and B&Bs, books and publications, etc.

Deadline is the 1st of the month, two months prior to publication. For example, January 1st for the March/April issue. Sorry, we cannot accept ads over the phone. All submissions must be in writing and accompanied by a current mailing label (for free ads) or a check (for commercial ads).
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The Catalog is crammed with important NEW information: There are 110 NEW companies that didn’t appear in the previous edition. Also, hundreds of the other listings contain NEW products, prices, literature, addresses, and phone numbers that were added or changed since the previous edition.

Another great feature: A State Index that groups companies by city and state, so you can locate old-house suppliers near you. And for companies that aren’t nearby, the OHJ Catalog gives all the information you need to do business by mail or phone. The Company Directory lists full address, phone number, what literature is available (and the price, if any).

The Catalog Index is meticulously cross-referenced. For example, if you are trying to find “porticoes,” the Index directs you to the heading “Overdoor Treatments.”

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THE OLD-HOUSE JOURNAL 79
Photographic superimposition? No — just a wacky, myopic, perhaps cynical commercial remodelling.

What goes on behind that windowless, alumicided front ... photo developing? Mushroom farming? A bat dormitory, maybe?

You might be tempted to think that this job was done by someone who hated historic buildings. On the contrary, such architectural collisions are usually the products not of malice but of ignorance — a lack of education about architecture and options, a lack of responsibility toward the streetscape that belongs to all. However, neither ignorance nor greed (the kind that inclines people toward pre-packaged, fast, and cheap conversions) is a good-enough excuse anymore.

The only long-term preventative for such lapses is heightened awareness — which is why OHJ has featured a Remuddling Award for the past seven years.