MARCH 2002

This Old House®

Classic & Creative

A Tour of Our Timeless Home

WWW.THISOLDHOUSE.ORG

Plus: Heating and Cooling at the TV Project

$3.99US $4.99CAN

03

0 72440 10160 9

DODGE CARAVAN. Come on. It's more like "pedal to the metal, go-go-go, remember to breathe Mom." And she drives a Caravan—the only minivan to offer dual power sliding doors and a power rear hatch. So, Mr. Catchphrase, take your little label and stick it—somewhere else. For more info, please call 800-4ADODGE or visit www.4adodge.com

GRAB LIFE BY THE HORNS

DODGE

RALPH LAUREN PAINT

RLHOME POLO COM


Memories are forever.
Frame them accordingly.
Why shouldn't your windows last
as long as your memories?
Andersen® windows and patio doors
are designed to endure beautifully
They feature our exclusive
Perma-Shield® exterior cladding,
and are built, backed and serviced
like no other. All to make your
home worryproof, timepro
Call 1-800-426-4261, ref#4174,
or visit andersenwindows.com
LONG LIVE THE HOME
Andersen
AW
Windows+Doors

VISIT *THIS OLD HOUSE* ONLINE AT
www.thisoldhouse.org

CONTENTS

MARCH 2002

At our project house in Atlanta, Georgia, traditional furnishings and multipaned windows in the living room complement the structure's contemporary design. For a look at the entire finished product, see "The Timeless Home," page 78.
BY TRAVIS NEIGHBOR WARD

features

RENOVATION, RENOVATION, RENOVATION, P. 106

GET A GRIP P. 102

NARROWED P. 70

cover Our Timeless Home project house in Atlanta, Georgia, features a first-floor living room cantilevered above the guest bedroom on the basement level. The room offers a splendid 180-degree view of wooded hillsides and a stream. Ground-up construction of this 4,200-square-foot structure took 12 months to complete. To take a look at the rest of the finished spaces, see "The Timeless Home," p. 78. PHOTOGRAPH BY JOSHUA McHUGH

PHOTOS, CLOCKWISE FROM TOP: JOSHUA McHUGH; DAVID CARMACK; JAMES WORRELL; MATTHEW BENSON

Predict seven birdies.

Brag about your handicap.

Proclaim yourself "The Putting King."

Pray you don't whiff.

The drive to Pebble Beach.®

On the wings of Goodyear.

GOODYEAR

OUR NEW FORTERA LUXURY SUV TIRES ARE EXTRA QUIET SO YOU CAN HEAR EVERY BIT OF TRASH TALK GOODYEAR.COM

WHAT A WORKSHOP! P. 30

"In a workshop the table saw and joiner should be facing in opposite directions; wood flows more smoothly, and the woodworker exerts less energy."
—NORM ABRAM, *TOH* MASTER CARPENTER

SCOPING OUT LIVING COSTS P. 54

departments

columns

WRING IN SPRING, P. 44

HARDWARE SHOW, P. 20

PHOTOS, CLOCKWISE FROM TOP LEFT: HANDLE/JOHN, ILLUSTRATION: GLEN

plus

WHERE TO FIND IT – SEE DIRECTORY – PAGE 112

CONTRIBUTORS

Photographer **RICK LEW** felt right at home in the Chappaqua, New York, wine cellar featured in "Wine and Dine" (p. 50). "The small, boatlike quarters reminded me of apartments I've rented over the years," says the New York City resident. Lew, whose food still lifes appear often in *Gourmet* and *Food & Wine* magazines, says that shooting the confined space was a challenge, but lauded it for its warmth and Old World rusticity, "right down to the charm of the antique table from France."

Working on the Timeless Home project (p. 78) gave Atlanta interior designer **KAY DOUGLASS** (left) and her associate, **KIM MICHAUD**, a rare opportunity to decorate a house sans client. "I've done single rooms in show houses before," says Douglass, who is also the proprietor of a local antiques shop, "but having free rein over an entire house as it was being built let me do exactly what I wanted." The creative team chose to complement the home's contemporary, sleek lines with "clean, simple furniture and solid colors," Douglass says, "but we also threw in a few crusty pieces to add texture and patina."

KAREN WALDEN chronicles the remake of her 1913 shingled cottage in "Third Time's the Charm" (p. 106). Walden, *This Old House*'s special projects editor, recounts how she and her husband transformed their weekend getaway in Buck Hill Falls, Pennsylvania, from a place with little more than "dramatic roof lines and great view potential" of the nearby Pocono Mountains into a spacious retreat perfect for entertaining guests. "It was incredible how one change followed another," Walden says. "I'm still amazed at the seamlessness of old and new in the final product."

HOW TO REACH US:

EDITORIAL OFFICES
- Write to us at *This Old House* magazine, 1185 Avenue of the Americas, 27th Floor, New York, NY 10036.
- Call our Editorial Query Line at 212-522-6015.
- Send us an e-mail at TOH_letters@timeinc.com

SUBSCRIPTIONS
- To order new or gift subscriptions, change your address, or ask about an existing subscription, call Customer Service at 800-698-7237.

BACK ISSUES
- To order, call 800-357-4466.

WEB SITE
- Visit us at www.thisoldhouse.org.

ADVERTISING RATES
- For rates and information, call 212-522-0910.

ADVERTISER CONTACTS
- To contact our advertisers for product information, visit homeownershelpline.com or call 800-424-0055.

BOOKS
- To order any of the *This Old House* books or for questions about an order, call Customer Service at 800-678-2643.

This Old House MAGAZINE

EDITOR-IN-CHIEF
Donna Sapolin

ART DIRECTOR
Diana Haus

EDITORIAL

SENIOR EXECUTIVE EDITOR
Ann Armbruster

EXECUTIVE EDITOR
Kathryn Keller

DEPUTY EDITOR
Thomas Baker

EDITORIAL OPERATIONS DIRECTOR
Carolyn Blackman

BUILDING EDITOR
Alex Cost

SENIOR EDITORS
Alexandra Bandon
Sam Maerin

STAFF WRITER/TECHNICAL EDITOR
Jefferson Kelle

CONTRIBUTING EDITOR
Mark Ferrer

CONSULTING EDITORS
Laura Goldstein
Sue Mollat Perry

COPY CHIEF
Lallie Monthan

COPY EDITOR
Kim Dubren

RESEARCH EDITORS
Mark Powers
Amy R. Hughes

ASSISTANT EDITORS
Jordan Reed
Nancy Lackman
Kathryn Townsend
Ryan Robbins
Dan D'Clerico

RESEARCH ASSISTANTS
Sara Lorimer
Paul McKaville

EDITORIAL ASSISTANT
Scott Schilling

ART

DEPUTY ART DIRECTOR
Caroline Bowyer

ASSOCIATE ART DIRECTORS
Anastasia Sajeen
John W. Taylor

PHOTO EDITOR
Anna Ademuyiwa

ART/PRODUCTION ASSISTANT
Robert Haulin

PRODUCTION AND TECHNOLOGY

DIRECTOR OF PRODUCTION AND TECHNOLOGY
Susan Power

PRODUCTION MANAGER
Jon Brulloths

ELECTRONIC PRODUCTION MANAGER
Susan Kawal

ELECTRONIC PRODUCTION ASSOCIATE
Leanda Bon Ilo

TECHNOLOGY MANAGER
Robert Mullins

SALES AND MARKETING

PUBLISHER
Richard Berenson

MARKETING

BOOK MARKETING MANAGER
Radhika Shenoy

MARKET RESEARCH MANAGER
Chris Gudeon

ASSISTANT PROMOTION MANAGER
Naomi Eisenstadt

NEW YORK SALES OFFICE
1185 AVENUE OF THE AMERICAS, NEW YORK, NY 10036

ADVERTISING MANAGER
Jennifer Levine Bruno (212-522-9814)

ACCOUNT REPRESENTATIVES
Maureen O'Connell (212-522-4231)
Andrea Otto (212-522-1904)
Liz Mesa (212 522-7147)

SALES & MARKETING ASSISTANT
Kristen Mell (212 522-6180)

SALES ASSISTANT
Benjamin Schmidt

DETROIT SALES OFFICE
39577 WOODWARD AVENUE, SUITE 300, BLOOMFIELD HILLS, MI 48304

DIRECTOR
Mary F. Nosley (248-338-7811)

SALES ASSISTANT
Debra Jacott

WESTERN SALES OFFICES
11766 WILSHIRE BOULEVARD 17TH FLOOR, LOS ANGELES, CA 90025

ASSOCIATE PUBLISHER
Kate Knox (310-268-7140)

SALES ASSISTANT
Pam Keller

2 EMBARCADERO CENTER, SUITE 1890, SAN FRANCISCO, CA 94111

ACCOUNT REPRESENTATIVE
Joe Petrille (415-434-5232)

SALES ASSISTANT
Kelli Quinlin

MIDWEST SALES OFFICE
360 EAST 22ND STREET, 22ND FLOOR, CHICAGO, IL 60611

ASSOCIATE PUBLISHER
Brian Quinn (312-321 7967)

MIDWESTERN SALES MANAGER
Todd Hollander (312-321 7942)

ACCOUNT REPRESENTATIVES
Yuwn Wenthal (312-321 7835)
Amy Lambrecht (312-321 7837)

SALES ASSISTANT
Bonnie Ratuk (312 321 7924)

RESOURCE/CLASSIFIED ADVERTISING
MEDIA PEOPLE INC.

DESIGNER
Jenn fer Izzo (800 719-0767)

TERRIFIED
Heather Roth (800-542 5585)

CONSUMER MARKETING

DIRECTOR
Beth H. Share

RETAIL SALES DIRECTOR
Robert Minen

SUBSCRIPTION BUSINESS MANAGER
Karen Schlesse

MARKETING MANAGER
Adam Feilni

ASSOCIATE MARKETING MANAGER
Kristin K vela

FINANCE AND ADMINISTRATION

ASSISTANT DIRECTOR OF FINANCE
Suzanne Reinhardt

FINANCE MANAGER
Janet Feeley

OFFICE MANAGER
Laurie A. Vargas

RECEPTION
Gary E. Morris

THIS OLD HOUSE VENTURES

PRESIDENT
Eric Thorkilsen

DIRECTOR OF FINANCE AND ADMINISTRATION
Lori Ann Perri

EDITORIAL DIRECTOR
Paul Spring

TELEVISION AND VIDEO DIRECTOR
Monica Mecnun

WEB PRODUCER
Antonella Severo

ASSISTANT TO THE PRESIDENT
Jean Simone

EDITORIAL BOARD, THIS OLD HOUSE

EXECUTIVE PRODUCER/HOST
Russell Morash

HOST
Steve Thomas

MASTER CARPENTER
Norm Abram

SERIES PRODUCER
Bruce Irving

PLUMBING AND HEATING EXPERT
Richard Trethewey

GENERAL CONTRACTOR
Tom Silva

LANDSCAPE CONTRACTOR
Roger Cook

WGBH BOSTON

VICE PRESIDENT, NATIONAL PROGRAMMING
Peter McGhee

PUBLISHING DIRECTOR
Betsy Gorbun

Time4 MEDIA

PRESIDENT AND CHIEF EXECUTIVE OFFICER
Mark Ford

SENIOR VICE PRESIDENTS
James F. Ellis
Steven Sharo
Vivian M. Sauerhoff

DIRECTOR, CORPORATE COMMUNICATIONS
Robin Shallow

THIS OLD HOUSE (ISSN 1084-2098) IS PUBLISHED TEN TIMES A YEAR BY TIME PUBLISHING VENTURES, INC. ©2002 TIME PUBLISHING VENTURES INC. THIS OLD HOUSE AND THE THIS OLD HOUSE WINDOW ARE REGISTERED TRADEMARKS OF THE WGBH EDUCATIONAL FOUNDATION, LICENSED WITH PERMISSION. SUBSCRIPTIONS: IF THE POST OFFICE ALERTS US THAT YOUR MAGAZINE IS UNDELIVERABLE, WE HAVE NO FURTHER OBLIGATION UNLESS WE RECEIVE A CORRECTED ADDRESS WITHIN TWO YEARS.

PHOTO: MARGULIES SUSAN MILLER

LETTERS

Split Focus

As a 74-year-old veteran of fixing up old houses, I thoroughly enjoy your program and magazine. The pleasure and meditative power of splitting wood mentioned in Talking Shop ["Splitting Wares," December 2001] with Roger Cook hit especially close to home.

When I built my log house 10 years ago, I decided to install a woodstove. I live on a mountainside, where I have been snowed or iced in for as long as a week with no power, and the little stove has given me winter warmth and added comfort. The woodshed is a shrine of sorts where I can spend time splitting and stacking. I find the activity feeds some primal need within me for survivorship. When I've tried to explain this to people they just looked puzzled, so it was very gratifying to read Roger's words: "Splitting wood ... is one of those activities I get lost in. It's easy for me to get into a rhythm...." I agree that this is "meditative activity at its best."

BETSY WILLIS, ZIONVILLE, N.C.

The Dimmer Did It

Norm may have been a few milliamps off of plumb in his answer to the reader with the halogen lights-related electrical interference problem [Ask Norm, December 2001]. Step-down transformers—by themselves—typically would not generate the type and quantity of electromagnetic interference needed to disrupt TV and AM radio reception. However, any electronic dimmer controls used with these lights could generate the kind of interference this reader was experiencing. Specifically, it is the type of electronic components used within these dimmers (SCRs or triacs) and their associated high switching speeds that create the interference. Should the reader be using a dimmer control with his under-cabinet lights, he might consider replacing it with one specifically labeled as being designed to reduce radio frequency interference.

Thanks for a consistently outstanding publication and great show—I've justified buying most of the tools in my workshop based on what Norm and Tommy can do with them!

LARRY FENNIMORE, MILWAUKEE, WISC.

Where's the Poster?

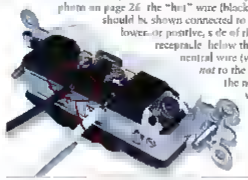
When I received my December 2001 issue, I was surprised to find there was no poster in it. As an avid reader of your magazine and faithful viewer of the program, I have enjoyed the posters very much. I have a wall in my shop dedicated solely to their display. Please tell me this was an oversight and they will return in future issues. My wall is not finished.

MIKE BECK, PLYMOUTH, MINN.

Fear not! The Poster was merely benched for a short while to make room for other articles, it returns soon in an upcoming issue.

punch list

***definition.** a list of items incorrectly done or remaining to be finished on a construction job*



• In Ask Norm, December 2001, in the top photo on page 26, the "hot" wire (black) should be shown connected to the lower, or positive, side of the receptacle, below the neutral wire (white), *not* to the left of the neutral wire.

• We would like to credit homeowners Hendrik Dijk, who is a photographer as well as a professional artist, and his wife Maria, for their photos (taken before and during their renovation *right*) used in the story "Firehouse Rescue," December 2001, p. 82.

Address mail to: Letters, *This Old House* magazine, 1185 Avenue of the Americas, New York, NY 10036, or e-mail us at TOH_letters@timeinc.com. Please include your full name, address, and daytime phone number. Published letters will be edited for clarity and length and may be used in other media.

PHOTOS: FROM TOP: KELLY SMITH; ANNA ARSENAYVA; AND HENDRIK DIJK

You've Got to Know When to Mold Them

BY JORDAN REED

On every renovation project, *TOH* general contractor Tom Silva tries to preserve as much of the house's original decorative trimwork as he can, but often he must replace a particular feature or produce more of it by replicating it. He can order special knives to custom-mill a wood profile an his shaper, but at the TV show's Manchester project, he had to consider other options to duplicate the study's beaded molding, which appeared to be made of plaster. To install more in the new dining room and upstairs hallway, the molding would have to be cast.

Tom talked into sending a sample of the pearl-necklace pattern to RasinArt East, a North Carolina company that could create a mold for $50 and cast a flexible, urethane-resin copy for $3 a foot. (RasinArt was already supplying Tom with some exterior molding.) But he ended up sending a sample to Decorators Supply Corporation, a Chicago-based ornamental-plaster company that had provided some capitals and brackets for the exterior columns. They have a large catalog of plaster molding that they sell for as little as $12 to $19 a foot, and Tom hoped he might find the original pattern among their stock.

However, when he chiseled off a section of the cornicework and shipped it to Decorators Supply, he learned that the beads were actually made from a composite of limestone, hide glue, resin, and molasses. (The formula dates to 16th-century Italy.) Unable to find a match among some 13,000 molds they keep for casting this material, Decorators Supply agreed to make a new one from Tom's sample for $150 and provide him with 300 feet of molding for $3.50 a foot. The news pleased Tom. "This stuff is great. It's easy to install—a light steaming to the back draws out the hide glue, and we just press it in place to get it to stick permanently—and it looks like and takes paint like plaster or wood," he says. "It's always exciting to find an exact replica of the original and keep alive what has always been there."

PHOTOGRAPH BY DAVID CARMACK

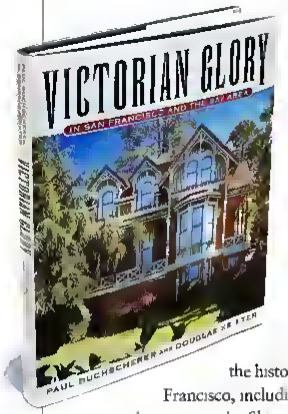
ON THE JOB

Tom's Technique: Modifying a Framing Hammer

***TOH* general contractor Tom Silva's tips for getting a better grip on his most-used hand tool**

Tom Silva is always coming up with ways to simplify and improve life on the job site, even if it means modifying his own hand tools to increase efficiency and performance. To improve his grip on wood-handled framing hammers, which he prefers over steel because they feel more comfortable and cause less vibration, he fits his drill with a ¼- or ⅜-inch spade bit and makes about 25 evenly spaced holes in the lower 6 inches of the handle. The ¼-inch-deep holes—and the ⅛-inch countersinks he creates around some of them with the flat part of the bit—wick away stick perspiration and provide a roughened surface for his slippery hand to hold on to without altering the tool's balance, weight, or leverage.

Tom spontaneously came up with the idea nearly eight years ago, when he grew tired of repeatedly rewrapping the wood in electrical tape. "I said, 'Oh, I'll just drill some holes in the end of the hammer and see if that does anything,'" he recalls. The trick worked so well he's been doing it ever since. To reduce the risk of splinters, Tom hand sands the freshly drilled wood with a 50-grit paper, which leaves a slight nap that increases friction. So far none of Tom's other wood-handled tools has received the same Swiss-cheese treatment, but only because he doesn't wield any other implement as frequently as he does a hammer. "If I used something else 75 percent of the day," he says, "I'd do the same thing to it."



Style Maven

When *TOH* producer Bruce Irving needed some advice on the decoration and architecture of Arts and Crafts houses while working on the 2000 Santa Barbara project, he consulted author and interior designer Paul Duchscherer. The information contained in Duchscherer's three books on the bungalow style helped to lend period accuracy to the remodel. The scholar also sketched out the plan for the house's most prominent Craftsman-style feature: the living room's oak mantel, which *TOH* master carpenter Norm Abram built for the house. Now Duchscherer has come out with a new book, *Victorian Glory in San Francisco and the Bay Area* (Penguin Putnam Inc., 2001), in which he addresses the history of the architectural styles found in and around San Francisco, including Gothic Revival, Italianate, and Queen Anne. His chapters on the Shingle and Colonial Revival styles have helped Bruce once again as he researches finish details for the current *TOH* project in Manchester, Massachusetts. "The book presents the West Coast interpretations of the styles," he says. "Comparing them to the East Coast versions helped me distinguish the regional features that we'd want to highlight on the show."

March 2002 Calendar

TOM SILVA

March 2 Southern New Jersey Home & Garden Show, Atlantic City Convention Center, 2001 Atlantic Blvd., Atlantic City, NJ 08401 Details: 877-663-6186 or www.showtechnology.com.

RICHARD TRETHEWEY

March 9–10 New Jersey Home Improvement & Furnishings Show, New Jersey Convention and Expo Center, 97 Sunfield Ave., Edison, NJ 08837. Details: 800-248-7469 or www.showoffice.com.

STEVE THOMAS

March 2–3 How-To Fair 2002, Alameda County Fairgrounds, Pleasanton, CA 94566. Details: www.sh.com.

March 23–24, How-To Fair 2002, San Mateo Expo Center, San Mateo, CA 94403 Details: www.sh.com.

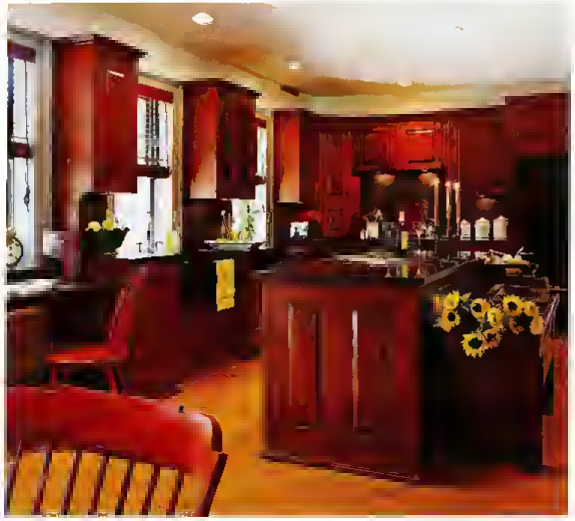
PHOTOS: DAVID DAHNACK (TOP); RAY O. HAMILEY (BOTTOM)

WHERE TO FIND IT – SEE DIRECTORY – PAGE 112

Trading Places

A kitchen moves to the back of the house and doubles in size to showcase fine craftsmanship

BY BO NILES



The old kitchen (ABOVE) *was frustrating to work in. Turning that area into a dining room and renovating three adjoining rooms into a bright and bountiful new workspace* (TOP) *afforded plenty of elbow room.*

When Nick and Chris Vincent bought the four bedroom brick house in Uniontown, Maryland, it appeared to suit their needs. For Nick, a blacksmith, that meant working at home from an outbuilding on the half-acre property. And for Chris, a reading specialist, the old place, originally built in 1810 as a one-room log cabin and expanded over the years, seemed to be the perfect backdrop for her collectibles and antiques. The fact that the side portion of the dwelling had been one of Uniontown's general stores for 90 years, from 1858 until 1948, only enhanced the home's appeal.

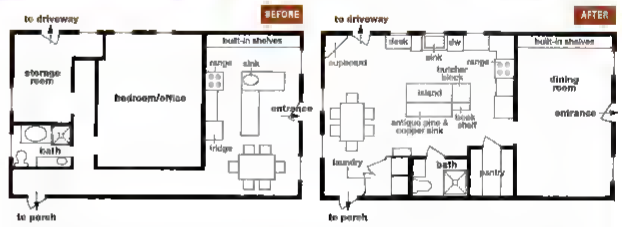
The kitchen, with its open shelving brimming with pantry staples, kept the flavor of the country store. "It looked pretty cozy," says Nick, recalling how the former owner had put a welcoming overstuffed chair in the dining area. Two hardware store cases were set up at right angles in the center of the 13-by-21-foot space (one housed the sink and dishwasher, the other held cookware), and their tops served as work surfaces. "It was not your everyday kitchen, but we were enchanted," says Nick. "We didn't realize the room's shortcomings until we lived there."

PROBLEM

Minimal storage was a drawback. The space included a wall of open shelves only 7 inches deep, a row of 15-inch-deep base cabinets beneath, a 35-by-42-inch wall hung cupboard, and a pot rack suspended near the stove. "Everything was exposed, so it always seemed dirty," says Nick. And there simply weren't enough work surfaces, nor was the layout efficient—the dishwasher, for example, was around the corner from the sink. "Not very convenient," says Chris. She was ready to remodel, but Nick, who was busy building his business, thought they should wait. It was a full 12 years before they could oversee such a project. "A kitchen is the sum of its parts, which means every detail has to be just right for the whole thing to work well," says *This Old House* host Steve Thomas. "If you don't have the time, energy, or money to focus on a total renovation, it's best to do what Nick and Chris did and wait."

PHOTOGRAPHS BY TIMOTHY BELL

PHOTO OF STEVE THOMAS: RACHEL ELKADOR. STYLIST: BARBARA ZATZOFF. FLOOR PLANS: DENISE SCHWAB



BEFORE: *Limited storage and work surfaces were confined between the wall with the range and fridge and a counter housing the sink and dishwasher.* AFTER: *Antiques and new storage cabinets mix in the L-shaped work zone, an island separates it from the pantry, laundry, and breakfast nook.*

SOLUTION

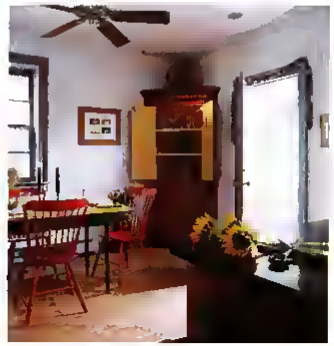
By June 1998 the Vincents were ready to begin. They wanted a much bigger space with plenty of cabinetry for storage, an informal eating area, and room to show off prized antiques. Nick insisted that the cabinets be of the same master quality as those made by the artisans he meets on the crafts-fair circuit. He also wanted a big pantry, "to hide all the stuff that used to be out in the open," he says.

For guidance, they went to designers and builders of handmade kitchen cabinetry, the Kennebec Company in Bath, Maine, whose work the couple had long admired. A tour of their house convinced Kennebec co-owner Jeff Peavey that the kitchen was not only inadequate but also inconveniently located. He and the Vincents devised a plan to transfer the room from the front of the house to the rear, to take advantage of the windows overlooking the backyard. And to commandeer enough space (from an area consisting of a spare bedroom used as an office, a storage room, a bathroom, and two hallways) the Vincents would make compromises. Nick would relocate his office and blacksmithing wares to the basement. The old kitchen would become a formal dining room.

The 522 square feet gained by ripping out the rooms created a kitchen with three zones. An efficient, L-shaped work space anchors one area; a breakfast nook stands between two windows opposite the dining room; and a walk-in pantry, a bathroom, and a laundry niche lie across from the sink. A centrally located island helps separate the zones and provides additional work and storage space.

Kennebec built the cabinetry from a ruddy toned stained cherry, "a material appropriate to the house's era," says Nick. The period feel is emphasized by the use of pegs instead of screws. "Compared with factory custom cabinets, these are not cheap," Steve says. "But quality, furniture-grade casework will last for generations."

The lower cabinets are topped with honed black granite counters, and all units feature surface-mounted rattail hinges that Nick created. "Handwrought hinges are a perfect complement to the finely built cabinets," Steve says.



ABOVE: *The main wing of the home functioned as a general store from 1858 until 1948.* RIGHT: *The kitchen's breakfast nook celebrates new American craftsmanship, with a tiger maple–topped table, Windsor chairs, and a vinegar-grained cupboard.*

FINISHING TOUCHES

Pushed up to the island across from the stove is an aged butcher block, as well as Kennebec's freestanding bookcase holding cookbooks. A vintage pine-frame sink with a tin-coated copper basin backs up to the island, but because it's not plumbed, "we only use it to hold ice and beer for parties," Nick says.

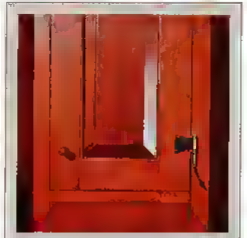
With their favorite things around them, Nick and Chris feel the project was worth the wait. "Craftspeople are known for taking their time," Nick says. Steve agrees. "The new kitchen is a celebration of handcraftsmanship, which is what *This Old House* is all about."

IDEAS NOTEBOOK

"The variety of old-time hardware now available is greater than ever before."
– This Old House host Steve Thomas

HISTORIC HARDWARE

1. Cast-iron "Windsor" Victorian patterned hinge by Crown City Hardware
2. Brass-plated steel ornamental hinge by House of Antique Hardware
3. Rusty-iron ornate hinge by Van Dyke's Restorers
4. Wrought-brass Hoosier cabinet hinge by Crown City Hardware
5. Hammered-steel Colonial hinge in antique-copper finish by Amerock
6. Brass Colonial hinge in antique English finish by Amerock
7. Forged-iron butterfly hinge by Horton Brasses Inc.
8. Hammered-steel Colonial strap hinge with black finish by Amerock
9. Polished cast-brass butterfly hinge by Crown City Hardware
10. Polished chrome-plated brass hinge with finials by Omnia
11. Cast-brass Mackintosh-style H-hinge by Horton Brasses Inc



Nick Vincent's forged-iron historic hinges can be found on all 25 cabinet doors in his new kitchen. Shown above, a rattail hinge—replicated from those made between 1750 and 1850 by artisans of southeastern Pennsylvania—complements the rich cherry wood of the cabinetry. "The hinge is surface-mounted, meaning the whole thing is visible," says Nick, "and it gives the cabinets a more furniturelike look."

PHOTO: DAVID HARLEY (STILL LIFE)

WHERE TO FIND IT – SEE DIRECTORY – PAGE 112

ASK **NORM**

Advice on leaky roofs, dry basement walls, and pull-down stairs

STOPPING VENT-PIPE SMELLS

We live in a two-year-old house with a septic system—and a problem. In the winter we get a septic smell from the second-floor linen closet, which shares a wall with a bathroom. The smell comes and goes, but it's strongest after the furnace, located in the attic right above the closet, turns on. The builder claims the problem is the result of water evaporating in the elbows of the toilet. The plumbing contractor who worked on the house claims the problem is most likely caused by wind forcing air back into the vent pipe. He suggests that we cap it with a charcoal filter. Any advice you could provide would be greatly appreciated.

SEAN TOBIN, SUDBURY, MASS.

Well, I doubt that your toilet is the problem, and the charcoal filter idea sounds dubious at best. Because of the age of your house, I assume that it's relatively airtight. When the furnace fires up, it pulls air from the easiest source, and it's quite possible that it's drawing foul-smelling gases out of the plumbing vent stack through a cracked pipe or a faulty joint.

I had a similar problem with a whole-house attic fan on my last house. When it pulled warm air out of rooms below, the draw was so powerful that it also pulled gases through pinholes in the furnace's metal exhaust stack. I solved the problem by replacing the pipe.

To solve your problem, get a plumber over to the house. Have him check the vent pipe and replace or repair any section or coupling that's cracked or leaking.

TRAPDOOR STAIRWAY

Currently I can get into my attic through a small hatch in a hall-closet ceiling, but I'd rather have a pull-down stair in the adjacent hallway. What should I keep in mind?

TED TUZ, CHALFONT, PA.

Pull-down attic stairs, which are concealed above a hinged trapdoor in the ceiling, come in a variety of widths and lengths, and can reach down from ceilings as high as 12 feet. There are two types: those that unfold and lock in place and those that slide down. Slide-down stairs are one piece, so they take up more attic floor space than fold-down models, which store neatly on top of the trapdoor. But slide-downs have the highest load capacities—some as much as 800 pounds.

Before you order an attic stair, you need to make sure the rough opening can be positioned so that the stair won't hit a door, a wall, or another staircase when it's extended. You should also investigate the framing in your ceiling. If the stair can be installed parallel to the ceiling joists, the job can be fairly easy, depending on joist spacing and the size of the stair's rough opening. You may have to cut only one ceiling joist, or none if you use one of the models designed to fit between 24-inch on-center joists. However, it's more common for joists to run perpendicular to a hall, which means you'll probably have to cut several.

All the instructions I've seen for attic stairs are fairly complete, so follow them carefully, but in general every time you cut a joist, you'll have to make up for what you're taking away. In the case of a rectangular opening that's parallel to the joists, that might mean doubling the framing on both sides of the stair opening and installing a doubled header at each end of the opening. When the opening is perpendicular to the joists, sister the ones at the ends of the opening with pieces long enough to rest on the top plates of the hallway walls, and then nail a doubled header to the ends of all the cut joists on both sides of the opening. For either case, use joist hangers, if they won't interfere with the stair.

Understandably, most homeowners are nervous when they cut through a joist. But if the joists run at right angles to the hallway, they'll have plenty of support from the hall walls. If the joists you have to cut run parallel to the hall, you can support the cut ends temporarily by screwing a 2x6—one long enough to span the opening—to the top of the joists in the attic. Use 3½-inch screws, they'll be strong enough to hold up the joists while you do the rest of the framing.

One more thing. Don't cut any part of a roof built with trusses! If there isn't an available stair model that fits between the chords, the horizontal framing at the bottom of the truss, it's time to consult your building inspector and, possibly, an engineer.

SO LONG, ACOUSTICAL TILE

We're remodeling a home built in 1935. There is acoustical tile on the ceilings of several rooms, and I really don't like the look. Is there some product we could use to texture it, or should we just remove the tiles?

MARLENE LOVENGUTH, PASCO, WASH.

I don't know of any product suitable for texturing acoustical tile. If paint isn't enough of a disguise, you can probably scrape the tiles off the strapping or ceiling with a wide putty knife. But beware: Some old tiles and mastic manufactured before 1971 may

PHOTO: KELLER & KELLER

contain asbestos. Its microscopic fibers aren't much of a problem unless they become airborne, which is exactly what would happen if you scraped off the tiles. So have the material tested before you start taking them off. If the test shows asbestos is present, removal may have to be done by professionals, depending on the law in your state. There's a third alternative if the ceiling is fairly level and flat: Hide the tiles beneath a layer of ⅜-inch drywall. Then you can texture the surface all you want, or leave it smooth. Just make sure the screws are long enough to go through the tile and ¾ inch into the ceiling joists or strapping. (If the tiles contain asbestos, you'll first have to encapsulate them with a special penetrating sealant approved for this purpose.) To finish the ceiling perimeter, use tape and joint compound, or cover the joint with a scotia or crown molding instead.

DOWNHILL CABINETS

We live in a 1914 two-story four-square with floors that sag toward the center of the house. We'd like to install new lower cabinets in the kitchen, but from one end of the cabinet run to the other (about 10 feet), the floor drops about 1½ inches. It also slopes away from the wall, so that the cabinet fronts would be ½ inch lower than their backs. How do we install cabinets on such a floor?

SCOTT FICEK, MINNEAPOLIS, MINN.

Assuming you've stabilized the floor to prevent further sagging, here's what you need to know. There are two techniques for leveling cabinets on a sloped floor. You can shim them up from the floor or scribe and cut down their bottom edges to match the slope. (For more on shimming and scribing, see Homeowner's Handbook, March 2001, page 97.) To compensate for the relatively small slope from the back to the front of your cabinets, I'd use shims. For the length of your cabinet run, I'd both shim and scribe and cut so that the countertop is about 36 inches off the floor.

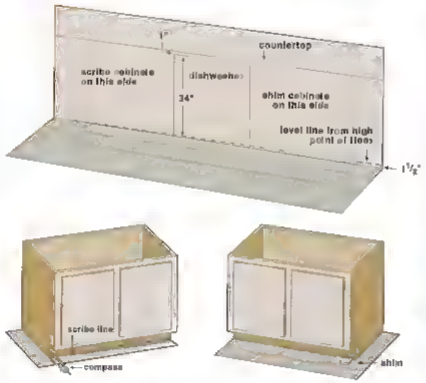


ILLUSTRATION: TRUDY BROUTTELET/TOP SHAR ILLUSTRATION

If you have a dishwasher, its placement will figure in prominently because you can shim one up, but you sure can't cut one down. If it's located on the low end of the floor, you won't have any trouble sliding it under the counter. But if it's toward the high end of the floor, you may have to raise the counter height to accommodate it. Mark the height of the appliance on the wall and draw a level line from there to both ends of the cabinet run. Then shim up the cabinets on the low side of the dishwasher. For the cabinets on the high side of the line, you'll have to level them with temporary shims, and then scribe and cut them.

If the latter is the case for you, having a counter slightly higher than the standard 36 inches may not be such a bad thing. More and more people are asking for counters to be set higher than the standard. Maybe the population really is getting taller.

SOFFIT VENTS

What is the most practical material for covering an exterior soffit? I'd like something that includes venting and lasts a long time. Can you recommend any particular type of screen?

JOHN H. CLARK, EVANSTON, ILL.

For soffits more than 10 inches wide, I like to use ¾-inch-thick medium-density overlay (MDO), an exterior grade plywood faced with plastic impregnated paper. (Those green interstate highway signs are made of MDO.) For narrower soffits, I use solid boards or vinyl soffit material with built-in venting.

If you're using MDO or solid boards, you can install them in two pieces across the width of the soffit, making sure to leave a gap between them wide enough for the the vent you've chosen. I recommend locating the vent as close as possible to the fascia, where it will be least conspicuous. Then insert a continuous vinyl strip vent into this gap. I've found these to be reasonably unobtrusive, much more effective than round button vents, more durable and better looking than screen, and less likely to bend and dent than metal strip vents. Just remember that you'll also have to add a baffled ridge vent to facilitate airflow through the rafter bays, or else your soffit vents will be useless.

NO MORE ROOF LEAKS

Our roof never leaks when it rains, only when it's covered with snow, and then the water comes in through the kitchen ceiling. We've had two different roofing contractors out to try to fix the problem, and both have failed. The latest one sealed all visible holes in the second-story roof and replaced the roofing over the kitchen with a torched-down membrane. When that leaked, he came back and slopped black roofing cement in the area where the roof meets the siding. The roof still leaks. We are prepared to do whatever it takes to stop this problem—but what?

JANET AND DAVID SCARROW, KALAMAZOO, MICH.

I've learned a few things in my life: Heat always rises, water always finds the weakest part of a house, and tar (roofing cement) isn't a permanent roof repair. Although your roof is complicated (see photo, above), the solution involves four simple components: flashing, insulation, a high-performance water barrier, and

new roofing. You'll also need an experienced roofer who doesn't scrimp on materials or workmanship.

Where the kitchen roof meets the sidewall, metal step flashing is the first and best line of defense. But to do this right, I'm afraid you'll have to rip off the torched down roofing, protect the roof sheathing with a bituminous waterproofing membrane, and have metal step flashing slipped under the siding at least several inches as the new shingle roofing is installed.

It's also quite possible that some of the leaks start on the main roof above the second floor bathroom addition, where the roof pitch is unusually shallow. The low pitch and the fact that the roof leaks only in cold weather point to ice dams. The water from snow melting on a warm roof will collect behind these dams (which form when the water freezes at the eaves) and can easily drip through walls and end up in your kitchen ceiling. To minimize damming, you'll need to keep your roof as cold as possible, that means insulating the roofs of the kitchen and the dormer to at least R-30. And wherever you insulate, be sure to ventilate above the insulation with baffles that connect the ridge and soffit vents. It would be a good idea, as a final step, to strip off the bathroom's roofing and apply more of the waterproofing membrane over its sheathing, particularly in the area where the roof changes slope. Then protect it from the sun with double-coverage roll roofing.

FRAMING (AND INSULATING) BASEMENT WALLS

I plan to finish the basement of my new home. The exterior of the poured concrete wall has sprayed-on waterproofing covered with 2-inch-thick sheets of rigid insulation. I'd like to put up 2x4 walls in the basement—around the perimeter and as partitions—but I just don't like the idea of nailing the plates into the concrete floor. Could I use construction adhesive instead? And will I need additional insulation in the walls?

TOM NORBEY, STEVENSVILLE, MICH.

Construction adhesive would work, but I don't see any harm in using fasteners—masonry nails or screws—every couple of feet to anchor the soleplates (which have to be pressure-treated, by the way). They're easy to install, a lot stronger than adhesive, and penetrate the concrete only about a half inch, so you're not likely to go all the way through the concrete. Lots of folks use hardened masonry nails driven with a hand sledge (they can damage the face of a regular hammer, sending dangerous chips of metal flying), but I prefer the masonry screws because of their holding power. You'll have to drill pilot holes for the screws with a hammer drill (which you can rent).

You will need to insulate the new perimeter walls with fiberglass. The 2 inches of foam sheets outside the foundation helps, but it won't be enough to ensure comfort. To make sure the insulation stays dry, first cover the concrete with two or three coats of cementitious waterproofing paint. (For a thorough look at basement waterproofing, see Silva Solutions, November 1999, page 45.) This barrier is necessary, even though most building codes require only that foundations be damp-proofed, which is not enough to stop water vapor from migrating through the concrete. The wall insulation, along with a waterproof paint, will also help keep condensation from forming on the foundation walls in the summer.

SEATING UP BRICK

The bricks in our fireplace look too new and uniform. Is there any quick way to age them?

DIANNE WILSON, SUDBURY, VT

Furniture makers who want a new piece to look like an antique will "distress" it by, among other things, spattering it with paint, beating it with chains, and belt sanding crisp edges into oblivion. The idea is to replicate the dings, stains, and wear that accumulate over generations of use. But as I've learned on some of the projects I've built for *The New Yankee Workshop*, it's not easy to make something new look old.

To get the characteristics you like in old brick—edges rounded by wear or weather, soot-stained surfaces near the firebox, paint lodged in crevices, irregular joints caused by past repairs and settling, random chips caused by fasteners applied and later removed—you'd have to give it some serious abuse. Sandblast it. Cover it with cheap paint and then scrape off what you can. Smear soot over it. Whack it with a heavy chain. Pound nails into the brick faces and then yank them out with a crowbar. In short, you'd have to ignore everything ever said about taking care of brick. I really wouldn't recommend that you do this, however. The chances of making the brick look authentically old are slim, and it could end up looking downright ugly.

Instead, you may want to consider concealing the brick under a veneer of plaster or thin brick held in place with thin-set adhesive or epoxy. Thin bricks, ½ to 1 inch thick, are available in tumbled, antiqued styles. Either of these options would be a lot less work and offer far more predictable results. ■

Send questions to Ask Norm: *This Old House* magazine, 1185 Avenue of the Americas, 27th floor, New York, NY 10036. Include a complete address and daytime phone number. Published letters will be edited for clarity and length and may be used in other media.

WHERE TO FIND IT ▸ SEE DIRECTORY – PAGE 112

ASK NORM

Weekend Workshop

A small space is designed for efficient action

To make good use of tight space, tools are mounted on a pegboard wall and small items are stored in a revolving organizer attached to the ceiling where they can be easily seen.

Like most weekend woodworkers, the New Hampshire businessman had spent a month of Sundays, and a lifetime of Saturdays, sawing boards in dingy corners of his house. "I've always had a workshop wherever I've lived," he says, "and it was usually in the basement." So when he bought a 1728 Colonial with a freestanding outbuilding along Portsmouth's waterfront, he knew he'd found the workshop of his dreams.

Well, almost. The outbuilding, a gable-roofed boatbuilder's shed on a dock along the Piscataqua River, had only 320 square feet of floor space for the shop and no room to expand (he turned the second-floor loft into a home office). "We're in a historic district," says the owner. "You can only go so big." Besides, he liked the cozy timber-frame building, cantilevered onto pilings over the water, as it was. But the tiny space would have to accommodate a band saw, table saw, miter saw, standing drill press, planer, jointer, grinder, and small sander, plus two workbenches, a compressor, wood, hardware, and paint storage—not to mention elbow room to get the job done. "A small shop forces you to be a lot more organized," he says. Indeed, structural renovations were minimal. The upgrades focused mostly on efficient placement of bulky tools and storage units.

It was a tough, but typical, challenge. "Most people don't have the space for a shop like we have on *The New*

BY MAX ALEXANDER PHOTOGRAPHS BY DAVID CARMACK

ABOVE. *The shop's rolling plywood workbench forms a central island that allows both sides to be used. Nearby stands a counter providing an extra work surface and storage beneath (A table saw, not seen, stands to its left.)* RIGHT. *Overhead racks, holding dowels, keep the floors clear of clutter, and a rolling caddy houses the planer and jointer so that they can be placed near any stationary tool*

Yankee Workshop," says host Norm Abram, "but they still want to do woodworking." An ideal shop, he says, should be arranged to maximize square footage and minimize extraneous motion, and tools should be grouped according to function He uses the example of the table saw and the jointer "Just about every piece of solid wood you run through a table saw, you're going to join the edge. So the table saw and jointer should be facing in opposite directions That way, the material flows more smoothly and the woodworker exerts less energy moving between the two You want about three feet of space between these tools." Norm also recommends that the workbench be the same height as the table saw When they're the same level, he says, "you can place the workbench behind the table saw, where it doubles as an extended support surface if you're cutting long stock"

Given that most woodworkers tackle a variety of projects, Norm says the best strategy is to build in flexibility The New Hampshire shop puts that principle to work Large tools, storage units, and even work surfaces are on wheels and can be rolled around to accommodate different tasks The centerpiece is a 3-by 6 foot workbench (36 inches high), custom made of plywood with tough oak trim The wheels are industrial rollers with locking brakes that keep the bench in place Underneath its counter, six plywood drawers hold plumbing and electrical components as well as some small power tools A

CONVENIENCE STORING

After admiring the shelf displays at a local hardware store, the workshop owner realized that owning a vast array of screws and nails was helpful only if he could see them. "I was heading to the store every time I needed a nail," he says. "I had hundreds of jars tucked away and no idea what was in them." His solution was to craft a handy rotating storage unit housing 128 twist-top glass jars full of "all the little stuff" (see photo, page 30)

He began construction by cutting eight 45-by-3-inch pieces of ¾-inch white pine, beveling their edges and gluing them together to form an octagon Then, using a Forstner bit, he drilled a series of recesses the size of the jar lids along each length of wood and bolted the tops to the planks. After reinforcing the ends of the cylinder with octagonal pieces of plywood and making circular cuts in their centers, he inserted a broomstick through the unit. The spindle rests on a plywood support suspended from a dado on the ceiling above his work surface. The eight rows of 10-inch-tall olive jars (from a mail-order bottle-and-jar company) ensure that small supplies are no more than an arm's length away. —*Nancy Lackman*

WHERE TO FIND IT – SEE DIRECTORY – PAGE 112

30-inch-by-10-foot counter holds a woodworker's vise and covers three rolling bins with drawers for safety gear, nail guns, and various supplies. And a portable plywood caddy on casters holds a planer and a jointer at two different levels. Boards can be ripped through the planer, which rests on a lower shelf, and then passed over the jointer to square the edges without moving either tool.

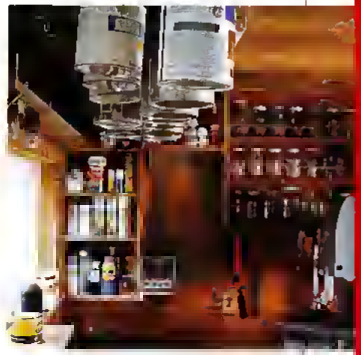
Structural overhauls dealt with basics. The shed was heated by a woodstove, which took up floor space. So the first task was burying radiant heat pipes (fired by a small wall-mounted gas furnace) in a new concrete slab that was poured over the existing concrete-and-wood floor. Then the building's decrepit exterior siding was removed, and new weathertight windows went in. Double doors replaced an old barn door. And an existing single door on the other side of the shop was moved to line up with the double doors so long boards could go in and out (a help in such tight quarters when the owner is working on larger furniture pieces). After new plywood sheathing went up, the exterior was finished with cedar shingles.

Inside, the open frame walls and ceiling were insulated and then paneled with rough-cut 1x6 pine. Before the walls were closed off, an electrician wired the shop for outlets 3 feet off the floor—more convenient for bench work than the standard residential height of 16 inches. Norm says workshops should have outlets spaced every 6 feet along walls, with power tools put on different circuits from lights. "If you're pushing a board through a table saw and you drop the power on it, you don't want to lose your lights at the same time," he says.

The owner mounted eight 4-foot double-bulb fluorescent lights on the ceiling. "You can never have too much light in a workshop," says Norm. He also likes a clip light for finishing tasks because "you can move it across the surface."

Hardware and stock storage make clever use of the space. A 4-foot-long screw organizer, mounted on the ceiling, stocks 125 jars on a rotating spindle (see "Convenience Storing," page 32). A shelf suspended above a doorway supports 30-inch sections of PVC sewer pipe, which hold wooden dowels. Other overhead racks keep lumber at bay; even paint cans hang from the ceiling on screw hooks. "Getting things off the floor saves space and makes cleaning easier," says the owner. That goes for the shop's air filter, too. A compact electric unit is attached to the ceiling, above the table saw.

About the only thing in the workshop that doesn't get much use is the wall-mounted 13-inch television, a good idea whose time hasn't come. ■



TOP: *The ceiling makes a convenient place for storing paint cans, which hang from screw hooks.* BOTTOM: *Double doors to the outside provide access for unwieldy materials and finished projects.*

Grease Is the Word

A little lubrication will keep your home running smoothly

Friction costs the United States $250 billion a year—that's a lot of grinding gears, overheating motors, and worn-out hinges. It doesn't take an expert to recognize the problem, but it takes a tribologist to figure out the solution. Tribologists study friction, and they know that the best way to keep things moving freely is with lubrication.

Regardless of the type of lubricant—from natural oils and greases to slick synthetic powders and solids—it's the tendency of these substances' molecules to form weak bonds with one another that makes them slippery. "Petroleum is a good example," says Robert Gresham, an educator for the Society of Tribologists and Lubrication Engineers. "Its molecules slip off one another like buttered spaghetti." This property, coupled with the fact that petroleum-based oil is plentiful and thus inexpensive, accounts for its presence in 97 percent of all lubricants sold.

Although petroleum oils dominate the modern market, the earliest lubricants came from plant oils or animal fats, like bear grease and seal oil. Until 1972, when the Marine Mammal Protection Act restricted whaling, most automobile transmissions were kept running smoothly with sperm-whale oil. While this practice has been outlawed, the use of renewable vegetable oils is making an encouraging comeback. Last year, the U.S. consumed more than 14 million gallons of lubricants derived from castor, soy, and similar seeds.

Plant oils tend to have a higher percentage of long molecular chains than petroleum-based oils, which makes them less susceptible to evaporation in outdoor uses, such as lubing a hose nozzle or the threads of a spigot. And their high biodegradability is ideal for total-loss applications in which a lubricant is released into the environment, such as oiling the bar of a chain saw. Unfortunately, the long molecular

BY RYAN ROBBINS PHOTOGRAPHS BY ERIC AXENE

chains have a tendency to clump together at low temperatures and must be "cracked" into smaller units or filtered to ensure their cold-weather effectiveness in products like diesel fuel—processes that add significantly to their cost.

Science has devised other ways to overcome the limitations of petroleum and plant oils, which in their natural state don't always work well in extremes of temperature or pressure. In 1929, Standard Oil developed synthetic hydrocarbons with predictable lubricity over a range of conditions. "For driving around the Yukon," says Gresham, "synthesized motor oils are mandatory." Another important advance in so-called synlubes was DuPont's accidental discovery of poly-tetrafluoroethylene (PTFE) in 1938; today we know it as Teflon, the coating on nonstick cookware.

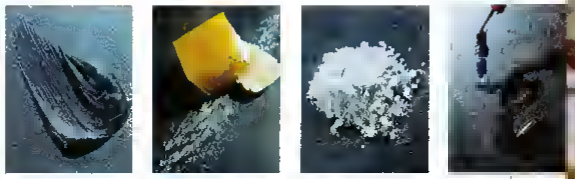
These days there is a synthetic lubricant for just about every need. Silicone, for example, is waterproof, nonreactive, and nontoxic, which makes it ideal for lubricating syringes and artificial body parts—as well as less critical structures like bathroom window tracks.

Regardless of its origin, a lubricant is only as good as its ability to reach an intended spot and stay there long enough to get the job done. The property that determines how likely an oil is to flow is its viscosity, or thickness; for any given application, an oil must be thin enough to flow to where it is needed yet thick enough to provide lubrication. But even the most viscous oils can get squeezed out of a trailer hitch or spun off a car's wheel bearings. Such high-stress scenarios require grease, which is an oil mixed with a thickener, often a lithium or calcium-based soap. The thickener acts like a sponge, slowly releasing oil as it is squeezed. And because grease tends to form a crust that seals in unused oil and keeps out moisture and dirt, these semi-solid lubricants are long lasting and resistant to water wash-off.

The most durable of all the lubricants are solids, such as graphite (sometimes called plumbago) and molybdenum disulfide (or moly). Because of their ability to endure extremes of heat and pressure—graphite stays slippery at temperatures of up to 1,250 degrees Fahrenheit, and moly can withstand loads of more than 100,000 pounds per square inch—they are often suspended in liquids, greases, or sprays to improve lubricity and load-carrying ability. Other solid lubricants are the silicates mica, used on spark plugs because it is stable at high temperatures, and talc, which sops up moisture, prevents rust, and helps paint spread smoothly. And nothing beats a bar of sweet smelling beeswax for unsticking sliding wood drawers.

In any environment where oils and greases would lose their grip—say, on the spinning blade of a circular saw—lubricants such as Teflon, graphite, and moly can be permanently bonded to a substrate in what is called dry-film lubrication. As little as 0.0003 inch thick, these coatings also excel in tight quarters like computer hard drives. Although many dry films are factory-applied, they are also available as quick drying sprays and paints for permanently lubricating photographic equipment, gears, and locks.

Although tribologists are concerned with such sticky issues as train track abrasion and premature wear in diesel engines, around the house they can solve most frictional problems with a few specialty lubes and a can of all purpose oil. One such lubricant, WD-40, resides in four out of five U.S. households and has been used for myriad purposes, from quieting squeaky attic fans to loosening the grip of bumper stickers. Ray Miles, technical director of WD-40 and guardian of its secret formula, has heard them all: "People have even called to say they rubbed out product on their aching joints to cure their arthritis," he says. Maybe the local hardware store was out of snake oil. ■

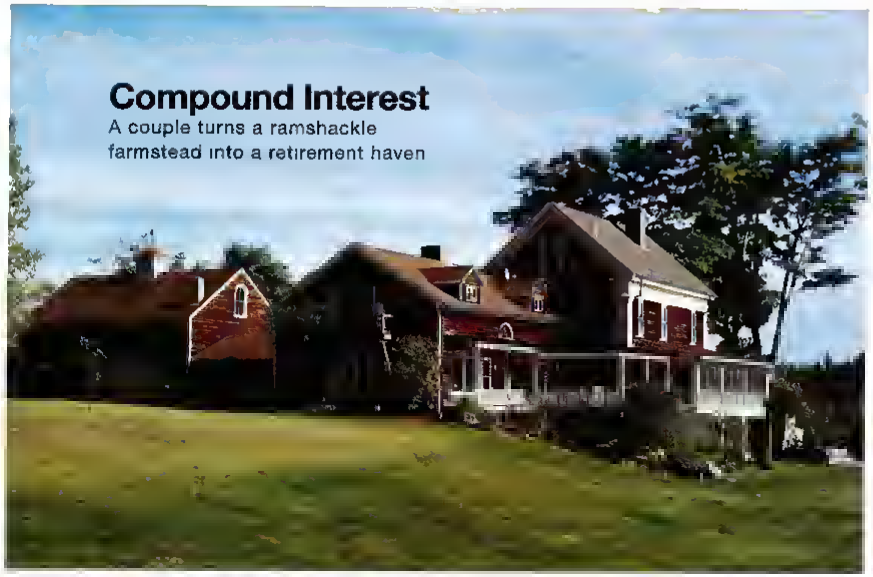


Lubricants come in forms to suit almost every need, from (ABOVE, LEFT TO RIGHT) *moly paste and cakes of beeswax to powdered Teflon, mineral oil, and sprays* (BOTTOM LEFT).

Friction Fighters

Lubricant and forms	Qualities	Common uses
Beeswax (cakes, pellets and powders)	Food-safe; nonstaining; deters corrosion; attracts dirt	Wood and metal: sliding drawers, doors, and windows; nails and screws, needles, thread, and rope
Graphite (liquid spray, grease, powder, and film)	Clings well to metals; doesn't attract dirt; conducts electricity; effective at up to 1,250° F	Metal on metal: locksets, door hinges, sliding doors and windows
Lithium (grease)	Water-resistant; works well in temperature extremes; messy	Metal on metal: automotive hinges; retractable antennas; garage-door hinges, tracks, and chains; marine uses
Molybdenum disulfide (liquid spray, grease, and film)	Works at extreme temperatures; doesn't conduct electricity; effective at more than 100,000 psi	High-load metal on metal: trailer hitches; lug nuts; lawn-mower blade shafts, gun bores and bullets
Petroleum (liquid, spray, and grease)	Inexpensive and readily available; may corrode or stain plastic, paint, or wood; messy	Multipurpose: combustion engines; garden tools; power windows; air compressors and air-driven tools
Seed or vegetable oil (liquid, spray, and grease)	Clings well to metals; slow-drying; low or no toxicity; renewable and biodegradable; messy	Total-loss applications: fuel additives; pipe lubricants; chain-saw bars and chains; sewing machines
Silicone (liquid, spray, and grease)	Food-safe; waterproof; doesn't conduct electricity; prevents corrosion	Wet environments: submersible pool and sump pumps; pipe threads; boating hardware; fishing reels
Teflon (liquid, spray, powder, and film)	Nontoxic; doesn't stain or attract dirt; doesn't conduct electricity	Multipurpose: bicycle chains, shift levers, and derailleurs; saw blades, routers and drill bits

HERE TO FIND IT — SEE DIRECTORY — PAGE 112



Compound Interest

A couple turns a ramshackle farmstead into a retirement haven

BY MAX ALEXANDER

The biggest question for many homeowners considering expansion is where to put a second bathroom. But when Dick and Audrey Plourd contemplated updates for their 1860 clapboard Greek Revival farmhouse in central Maine, the issues were more complex and unusual, and their labors spanned a quarter of a century. They had to figure out where to put the attached barn—and the connected wagon shed and woodshed—while adding a new great room, master bedroom, and a bigger garage. Over time, they transformed a primitive summer retreat into a sprawling retirement compound.

Like many northern New England farmhouses, the Plourd homestead began life as a modest Cape and kept on growing. Connected buildings allowed a farmer to access his barn (and his outhouse) without venturing through deep snow and driving rain. By the time the Plourds bought it in 1967, the farmstead had evolved into a rambling agglomeration of structures, including a second, even larger house. The Plourds knew that any serious renovation of the tired old property would involve detaching, moving, or repositioning many of those early structures. Demolishing them was never considered. "We love old stuff," says Audrey, who once ran an antiques shop, "and we save everything."

ABOVE: *The Greek Revival main house's screen porch, seen at right, was added over a completely reconstructed granite foundation.*

Such a job could require armies of contractors—or two frugal New Englanders aided by the local high school shop teacher. "I couldn't have done this without Nick," says Dick, referring to his neighbor Nick Miller, now retired from his teaching job at Carrabec High School. "When we needed extra help, Nick brought in some students and fellow teachers."

The property Dick and Audrey bought for $6,500 was meant to be a carefree summer escape from Connecticut suburbia, "a place where our kids could play in the woods," says Dick, a former deputy chief of the West Hartford, Connecticut, Fire Department. "We weren't even looking for a house, just some land."

PHOTOGRAPHS BY SCOTT DORRANCE

They got plenty of that. The buildings came with 145 acres of hayfields and forest. And the 1,900 square-foot main house itself was only a step above camping. It had no electricity or indoor plumbing. The kitchen had a propane-powered fridge and a woodstove; water had to be hauled from a pump in the woodshed. It made for adventurous summer vacations and Thanksgiving dinners.

But the march of progress was inevitable. Electricity came to their dirt road in the 1970s, and, during summers, Nick wired the house with the help of another neighbor. Threading wires without disturbing the old home's horsehair-and plaster walls was tricky. "It involved a lot of snakes, and long bits to drill down between walls," recalls Nick, "and we had to take some floorboards out." In 1977, they flipped the switch on their first lightbulb.

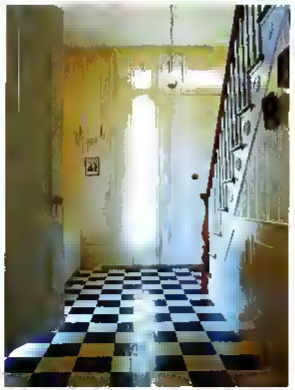
In the 1980s, with Dick's retirement approaching, Audrey recalls, "He asked me if I wanted to live here full time. I said, 'Yes—if you bring the toilet into the house.'" Dick had once worked as a master plumber, so he was able to turn two existing hallways into upstairs and downstairs bathrooms. "I used an old doorway space as a chase to hide the pipes," he says.

Then the couple decided to put a new garage in the cellar, reasoning that they could excavate an embankment on the south side of the house and break through the foundation for car access. That would also allow them to expose the exterior of the cellar's massive cut stone walls. But plans changed when the excavator cleared the ground and found that the outside of the cellar wall was not nearly as attractive as the inside. "The original builders cut the rocks in half and put the smooth side facing into the cellar," says Dick. "The outside was buried, so they left it rough. That was a disappointment."

Over 25 years, the seedy farmstead in 1969 (TOP LEFT) became a grand estate (TOP RIGHT), with a breezeway linking a three-bay garage to a great-room addition (BELOW LEFT). The main house foyer's redo (BELOW RIGHT).

The Plourds hired stonemason George Bottesch to construct a false exterior foundation wall from granite scavenged off old stone fences from their land. (Vermiculite poured into the space left between the original and new walls helped insulate the cellar.) But the stonework, which was executed during the summers of 1984 and 1985, looked too nice for a garage. Instead, the Plourds decided to erect an 11 by 38 foot covered porch over the area to better show off the handsome foundation. "I approached an architect," says Dick. "But he wanted $3,500 just to draw up plans. I wanted to build the whole thing for that, so I drew up my own plans."

Dick went back to his land, harvesting spruce trees for porch lumber. He hired the owner of a portable sawmill to cut the timbers into tough 8-inch-square beams. "Heavy timbers are in keeping with the house and barn," says Dick.



"The existing clearances determined the design," says Nick. "We needed to be below the second-floor windows, and we wanted nice sight lines when you were standing on the porch, so that set the roofline." Nick cut decorative corner braces—modeled after those of a nearby period house—on a bandsaw.

In 1986, Dick retired, and the Plourds moved into the Maine house. Their four kids were grown and starting families of their own; the farmstead was starting to feel crowded during reunions. So the couple decided to build a 2,160-square-foot two-story addition, featuring a great room below a new master bedroom suite. The addition would go up in the area between the house and barn then occupied by an attached woodshed and the 24-by-24-foot wagon shed. But first the Plourds had to remove the two structures. The ancient woodshed was too dilapidated to save. The wagon shed, however, was a keeper. Although sway-backed and sagging, it had historical value because it was the original house on the property. Dick believes it was built across the road (where a matching foundation rests) in the late 1700s and later hauled by oxen to the present site, where it was converted into a wagon shed when the large house was built around 1860. He and Audrey planned to restore it as a guest cottage (see "Cottage Industry," right), but for now he moved it to the backyard to get it out of the way.

Like the porch, the new wing was a homemade design. The focal point was the big stone fireplace. Built by Bottesch, it has become the center of family gatherings. Its massive scale is echoed in the room's heavy ceiling beams, which were milled from hemlock trees on the property.

Inside the main house, the Plourds were adding decorative touches. Using 22 inch wide pine boards, again milled from the property, Nick and Dick crafted new paneled wainscoting for the front stairway. Audrey created a faux checkerboard-tile floor in the foyer by filling cracks in the pine floor with a commercial leveling compound, then snapping chalk lines to create the pattern and painting it by hand.

The renovations left the 27-by-36-foot barn freestanding. The Plourds wanted to convert it to a three-bay garage and connect it to the new wing with an arcaded breezeway. But first they had to lift the barn, fill in the cow cellar, pour a concrete slab, and shift the structure several feet on axis to align with the addition. "A professional mover wanted $7,000," says Dick. "Instead I bought four 12-ton jacks for $17 each and moved it myself."

In 1988, Nick built a cupola for the barn. It was a fitting capper to a do-it-yourself dream house that is still a magical retreat for suburban kids. The Plourds' grandchildren gather there every summer. When they tell ghost stories by candlelight, it reminds Dick of the days before electricity. But when the new generation gets ready for bed, no one has to carry in the bathwater. ■

COTTAGE INDUSTRY

(1) After bracing the wagon shed with diagonal supports, homeowner Dick Plourd, with neighbor Nick Miller and a crew of able-bodied friends, raised it with jacks and positioned four large logs under the sills. (2) With a bulldozer and two tractors they dragged what was left of the old structure—which was the original homestead, with a center chimney (now gone) and open floor plan—out to the backyard. (3) Then Nick, left, and Dick, right, poured the new foundation and dragged the house back onto it in the same way. (4) Converting the shed into a guest cottage required a lot of scavenging. The Plourds started by picking through boards salvaged from the demolished woodshed. Using the aged lumber saved money and helped retain a historically authentic look. The couple restored the center chimney, not only to have wood-burning fires to heat the cottage but to brace up the roof's sagging ridge beam. To construct the chimney, antique bricks were used in the exposed areas and above the roof line, and cinder blocks were employed in the attic run. (5) A local woodworking shop made exact copies of the old homestead's existing two-over-two window. The front and side doors came from other parts of the structure. So did the latch for an interior pantry cupboard that Nick built: It once graced the outhouse door. "Now could you throw that away?" says Dick.

Spring Cleaning

Ridding a house of built-up grime

BY JORDAN REED

When green buds begin poking through last year's brown leaves and the temperature warms, it's time to throw open the doors and windows and thoroughly clean the house. Ronny Gavish and Shai Menashe of New York-based All Bright Carpet Cleaning & Service Inc. arrive at a small Cape house in Fair Lawn, New Jersey, to do battle with the menaces—molds, mildews, and germs—that accompany spring's warm, wet months. Armed with machines, brushes, paper towels, rags, and an almost endless array of solvents, the two split up and go from room to room, taking on a variety of foes, some visible, some not. In many places, seemingly clean surfaces belie the presence of stubborn, multitudinous enemies. "A bathroom wall may look spotless," Gavish says, brandishing a gold spray can, "but if you don't use a disinfectant to kill the bacteria, they continue to reproduce."

In the kitchen, Gavish points the steaming wand of an extractor—a shop-vac-size cleaning machine—toward the stovetop and takes aim at some brown, caked-on grease stains. Later, in the living room, Menashe uses the machine to attack a spot on the wool area rug. "With the extractor, we can go over and over a spot until it comes clean, which is better than spraying something on and letting it soak in," he explains. "Leaving liquids to sit can wash out the color of a carpet and damage the floor beneath."

After the two men finish their methodical cleaning, the once dull interior shines. Dusted end tables, a disinfected bathroom floor, and spotless picture-frame glass catch the midday light; the musty smell of a home under wraps has given way to a crisp, fresh scent. Gavish and Menashe pack up their implements, content that the rooms are pristine. Outside, the April showers have begun. Hopefully, the next visitors will wipe their feet before entering.

PHOTOGRAPHS BY JOHN GRUEN

LIVING SPACES

To remove a stain in a **WOOL RUG,** Menashe adds powdered oxygen bleach to the water in a portable extractor (see "Tool Box," page 47). The chemical is gentler than chlorine bleach, which can discolor fabrics and weaken fibers. Even so, he's careful not to mix in too much—about 2 teaspoonfuls in 5 gallons of water—or the rug might still fade. "There's no way to fix a damaged carpet," he says, repeatedly drawing the 3-inch-wide wand over the spot. Later, he switches to a 10-inch head to clean the entire rug.

A MATTRESS absorbs body odors, germs, and dead skin cells from those who lie on there, so Menashe sanitizes both sides with a phosphate-free biodegradable detergent that he adds to the water in the extractor. He mists the mattress, then slowly vacuums the area again, applying extra pressure to remove the liquid. When he's finished, he tips the mattress against the wall to dry. "In a couple of hours, the bed will be ready for clean sheets," he says.

BATHROOM

Disinfecting a **BATHROOM FLOOR** prevents mildew buildup. Gavish mops the tile with a diluted chlorine bleach, a good antimicrobial agent that kills the mildew and removes most stains. He drapes the squeeze mop with a white cotton rag, changing it as it gets dirty. "That way, I can see when the floor is clean," he says. For particularly stubborn floor or grout stains, he scrubs around and between the tiles with a large hard-bristled brush and diluted bleach.

Gavish prefers a cleaner that contains diluted sulfuric and hydrochloric acids on tiled **SHOWER WALLS** because it doesn't leave a lingering smell. He never uses the solution where bleach has been used within a week lest he create toxic fumes, and he always works with windows and doors open. After spraying the cleaner directly onto the wall, he rubs vigorously along the grout line with a hard-bristled brush to get rid of mildew. If the brush can't get out all the stain, he digs in with a rag-covered finger.

KITCHEN

Grease and food stains around **STOVE-TOP** burners grip more tenaciously as heat glazes them into the surface. To remove such stubborn stains, Gavish sprays the enamel surface using the extractor. Its scorching mist softens crusted particles as the powerful spray blasts off the dirt. After the extractor's vacuum sucks away the excess liquid, Gavish wipes down the surface with a stainless steel cleaner containing isopropyl alcohol, which is gentle on the finish.

An oven cleaner that contains caustic soda is more effective against baked-on grease than solvent-heavy kitchen cleaners. Gavish sprays the cleaner on the **OVEN WALLS AND DOORS,** then sets the temperature to 225 degrees. The heat softens the stain, and after about 10 minutes, it wipes away with a paper towel. Gavish warns against using abrasive pads or steel wool on metal because they scratch off protective coatings and leave tiny striations, which trap grime. "You'll remove the stain once," he says, "but next time, you won't be able to get the dirt off."

TOOL BOX: PORTABLE EXTRACTOR

In today's marketplace there are many so-called deep-cleaning vacuums that use water and detergent to clean rugs, but these machines are descended from larger, heavy-duty portable extractors. Invented during the 1950s when miles of wall-to-wall carpet rolled their way onto American floors, the machine pros use sells mainly as a carpet cleaner but works well for numerous cleaning tasks. (It can be rented for about $40 a day.) The machine's two tanks hold up to 10 gallons—unlike consumer versions, which have room for only about a quart and a half—allowing an entire room to be cleaned without stopping to add liquid. The first tank heats up the cleaning solution, and an internal pump sheets the hot mist (at temperatures ranging from 75 to 200 degrees Fahrenheit, it's not technically steam) through a hose and cleaning head with a force of up to 200 pounds per square inch. A fraction of a second later, the vacuum sucks up the liquid, along with the dirt, and shuttles it through a second hose into a waste tank. At 220 inches of water lift, the extractor's strong suction power puts light-duty versions to shame. "Nothing has the power to remove stains like this machine," says Shai Menashe.

WHERE TO FIND IT ~ SEE DIRECTORY ~ PAGE 112

Voted Most Popular

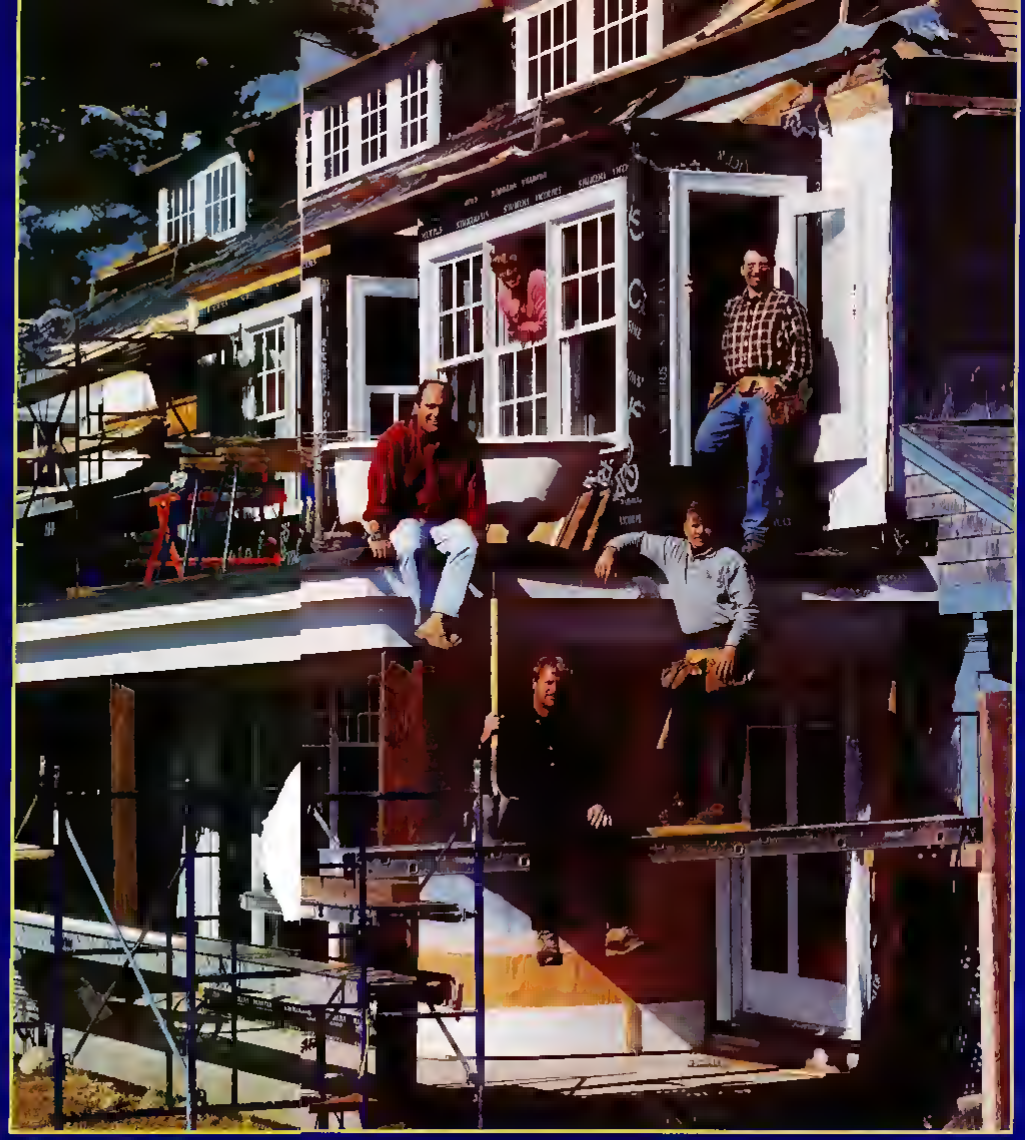
This Old House **is the highest-rated home improvement series in television history.**

Here are five good reasons why.

The all-new season only on PBS.

This Old House

www.pbs.org/thisoldhouse



Pictured clockwise from top: Steve Thomas, host; Norm Abram, master carpenter; Tom Silva, general contractor; Roger Cook, landscape contractor; and Richard Trethewey, plumbing and heating expert.

LEFT: *Floor-to-ceiling redwood racks surround an 1850s oak table in this 750-bottle wine cellar. Maple paneling and sandstone tile add to the 19th-century flavor of the room.* BELOW: *The homeowner's most prized labels are stored horizontally on fourteen 7-foot-long display racks made of clear redwood, which holds up well in moist conditions.*

Wine and Dine

A basement nook makes an ideal wine cellar and a cozy spot for entertaining

Five years ago, when David Breschel and his family moved into a 1940s Cape Cod in Chappaqua, New York, his wine collection was modest enough to keep on a couple of freestanding racks in the basement. But the labels steadily multiplied, thanks in part to the regular trips to Europe that he took with his wife, Joni, a fashion merchandiser; while she attended the shows, he trolled the local wineshops. Eventually the racks filled up, prompting the Manhattan-based attorney to turn a 75 square-foot storage room under the basement steps into a 750-bottle wine cellar.

David's first move was to call in John Cammarota, an old college friend and general contractor who works out of Rockville Centre, New York. Over the course of several conversations, the pair collaborated on a design strategy, which Cammarota spent two weeks executing. Though the main mission was to create a controlled environment for his wine collection, David wanted an inviting space that would function as a gathering spot for people as well. "We had a lot of fun with the design, thinking of ways to give the cellar a real vintage flavor, like something out of the 19th century," he says.

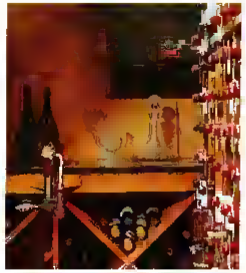
Wine cellars date back to the early 1700s, when vintners began using glass bottles with corks. "As soon as people discovered that wine improves with age in airtight bottles or containers, cool, dark cellars built specifically for long-term storage became commonplace," says Paul Wagner, who teaches a course in cultural wine appreciation at Napa Valley College in California. While cellar technology has come a long way since those early efforts, the conditions needed for wine to age properly haven't changed: temperatures

BY DAN DIOLERICO PHOTOGRAPHS BY RICK LEW

between 55 and 65 degrees Fahrenheit, with 60 percent humidity. High—or, worse yet, rapidly fluctuating—temperatures trigger chemical reactions in the wine, turning it to vinegar. Low humidity can shrink the cork, letting air into the bottle and prematurely oxidizing the contents. Too much humidity creates mold that can cause corks to decompose, which also leads to oxidation.

To bring the optimal conditions to the Breschels' basement, Cammarota first covered the concrete walls of the storage area with silicone-based water sealant, plastic vapor barriers, fiberglass insulation, and drywall (see "Climate-Controlled Cellar," below). He also hung exterior-grade insulated doors with magnetic weatherstripping at the two entryways, one leading to the main part of the basement, the other to the furnace room. Cammarota then installed a specialized cooling system, where normal refrigeration units dehydrate the air they cool, this one keeps it sufficiently humidified for wine. Cammarota factored the proximity of the furnace into the manufacturer's recommended formula of 4.5 Btu per cubic foot. "Our square footage put us in between two models, but given the location of the furnace we decided on the bigger one."

After finishing the walls with maple paneling, Cammarota meticulously hand built the individual racks out of decay-resistant clear redwood. Though prefabricated kits are available from racking manufacturers, David wanted more customization. On the wall to the left of the main entrance, Cammarota constructed fourteen 7-foot-long display shelves, each able to hold six prized bottles—including a 1990 Chateau d'Yquem and a 1992 Fonseca port, honoring the years the Breschels' sons were born. The bottles lie horizontally and at a slight upward angle so that the labels are visible. On the opposite wall and along the back, he added 400-plus 10-inch-deep individual racks, which offer a more economical use of wall space (approximately 126 bottles for every 11 cubic feet). In the back corner, under the cooling unit, he added a bank of diamond bins for oversize bottles.



The 67-pound cooling unit sits in an opening that was framed in an interior cellar wall. Underneath, four 18-by-18-inch diamond-shaped bins—each able to hold 10 standard size bottles—provide a base for the marble countertop. The cross panels are made from epoxy glued redwood strips.

Since the cellar was also intended for small-scale entertaining, David gave careful attention to decor. The sandstone tile floor adds an old-world rusticity, as do the Italian prints and brass sconces that adorn the walls. The mid-19th-century oak table, found at an antiques shop, actually stood in a French wine cellar from that era. Today, it serves as a tasting table and, on occasion, as the site of a candlelit dinner, featuring an entire wine cellar—not just a list—to choose from. ■

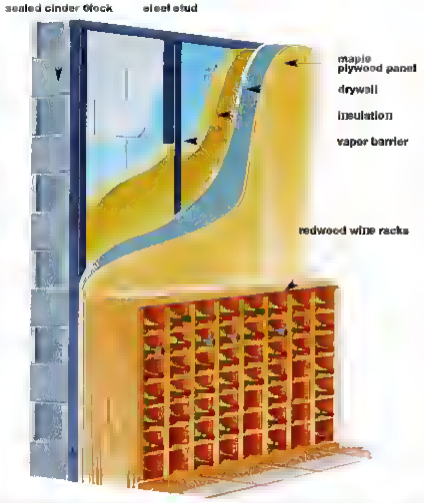


ILLUSTRATION: IAN WORPOLE

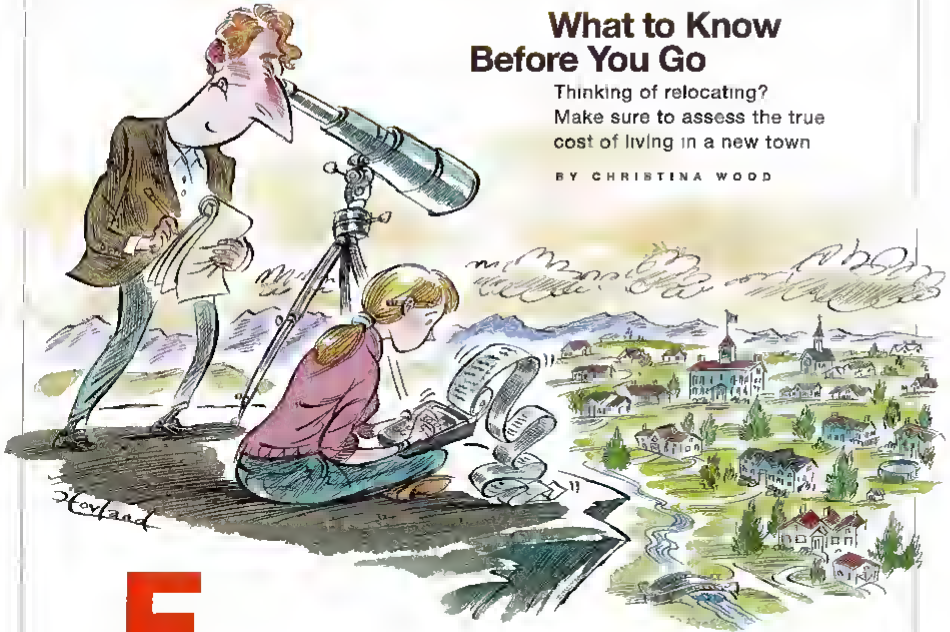
CLIMATE-CONTROLLED CELLAR

For a cooling system to be effective, the wine cellar must be properly prepped. After the room is swept and wet-mopped, two coats of silicone-based water sealant are brushed onto the walls and floor. To further prevent moisture transfer, a continuous sheet of 8-mil-thick polyurethane vapor barrier is glued to the foundation walls and ceiling. Called "warm side" installation, this keeps condensation away from the insulation and drywall. Batts of unfaced fiberglass insulation—R-factor 19 on the ceiling and 13 on the walls for maximum energy efficiency—then blanket the bays between the studs and joists. This allows the temperature at the cooling unit to hover between 55 and 65 degrees Fahrenheit.

"You're basically building a walk-in refrigerator," says general contractor John Cammarota, who successfully turned David and Joni Breschel's subterranean storage room into a climate-controlled wine cellar. He framed the walls with 2x4 studs of 20-gauge steel, which stand up to moisture better than standard lumber. After moisture-proofing and insulating the bays, he screwed the drywall into the studs and finished the cellar walls with ¼-inch maple plywood panels laminated onto ½-inch drywall. Finally, he built the racks out of clear redwood, which is compatible with humid conditions.

Besides keeping the cellar's temperature and humidity at an optimal level, the heavily padded walls and ceiling have an added benefit. "With all that insulation, this is the quietest room in the house," David says.

WHERE TO FIND IT – SEE DIRECTORY – PAGE 112



What to Know Before You Go

Thinking of relocating? Make sure to assess the true cost of living in a new town

BY CHRISTINA WOOD

Five years ago, Michael Desmond decided he'd had it with San Francisco. He, his wife, and their newborn son were living in a two-bedroom flat in a not particularly upscale part of town, paying $2,300 a month in rent. The couple planned on having more children, and even with their combined salaries—Desmond was a magazine editor and his wife, Anne, a nurse—buying a roomy house in a decent Bay Area neighborhood was out of the question.

To get the space they needed at a price they could afford, the Desmonds moved to Colchester, Vermont, a small town on the shores of Lake Champlain. They bought a four bedroom Colonial for $203,000, the monthly mortgage payment was only $200 more than their San Francisco rent. And because they traded the nation's second-highest cost of living (behind the New York metro area) for the less expensive confines of rural Vermont, Desmond has been able to support the family solely on the income from his new business developing Web content for high-tech companies. Anne, who is expecting a third child in May, stays home full-time with their two boys (ages 3 and 5), which eliminates childcare expenses.

In July 2000, the Desmonds moved into a 4,000-square-foot home that they had custom-built for $415,000. "We live in a beautiful neighborhood with a beach," Desmond says. "There are *bungalows* in San Francisco going for over a million dollars."

The Desmonds are not alone in their quest to afford a better way of life. Between 1990 and 2000, 3.5 million more Americans departed urban areas than moved to them from small towns and rural communities—a net loss more than double that of the prior decade, according to Kenneth M. Johnson, a sociology professor and demographer at Loyola University in Chicago. Early retirees are one group driving the trend. According to a 1999 report funded by the National Endowment for Financial Education, nearly 40 percent of retirees are 60 or younger, and many of them are choosing to stretch their gains from a decade of stock market advances by moving to an area where the quality of life is high and expenses are low. They are being joined by increasing numbers of young people with growing families who are tired of shelling out a large percentage of their income for housing and getting little in return.

ILLUSTRATION BY GARY HOVLAND

While relocating can reduce economic burdens, there are a host of factors to consider when assessing the true financial impact of a move. "Before making a decision, people have to calculate the full cost of living in the new area," says Wanda Urbanska, author of *Moving to a Small Town* (Simon & Schuster, 1996). Simply comparing real estate prices and salaries is not enough. To get the full picture, she says, it's important to take into account "everything from how open the town is to newcomers to the health-care system, the education system, the cost of housing, utilities, and groceries, as well as the availability of a good cup of coffee."

DOING YOUR HOMEWORK

Fortunately, there are plenty of ways to research cost-of-living issues, including local real estate agents and chambers of commerce. Some of the best resources are on the Web, at sites like Monstermoving.com and MSN's HomeAdvisor (www.homeadvisor.msn.com) that provide cost of living indices for cities and towns across the country. Users plug in what they earn, where they live, and where they plan to move; they get back an analysis of how much they would have to make in the new locale to match the buying power of their current income and the relative costs of everything from auto insurance to electricity. (For more on how different cities stack up, see "How Much Is Enough?" below.)

The key criteria for assessing the affordability of day to day living in different regions are local wages and taxes and the price of housing, utilities, insurance, and education. Of these, earning power is perhaps the most critical consideration. When people move from a high-priced housing area with a high cost of living to a region with less expensive real estate, frequently they're also giving up premium wages, so the net result could be a wash. For instance, a job with a median national salary of $60,000 would pay $71,220 in New York City but only $53,700 in Asheville, North Carolina, according to human resources consulting firm William M. Mercer Inc.

And while income and the price of some big ticket items may decline, the cost of such necessities as childcare may not. "Day care tends to be more expensive in small rural communities, where it is in short supply, and large urban centers, where it is in peak demand," says Ann Douglas, author of *The Unofficial Guide to Childcare* (Hungry Minds Inc., 1998). For example, a full day program for a 4 year old in a Wyoming city is $4,056, comparable to the average $4,858 in an urban area of California, according to the Children's Defense Fund.

The quality of local public schools is another important factor when it comes to figuring out expenses, because private institutions can quickly eat up the savings from lower housing costs. According to the National Association of Independent Schools, the median cost of a private day high school ranges from $9,000 to $16,000 a year, with the most expensive schools in New England and the cheapest in the Southeast. (For a wealth of data on the performance of private and public schools across the country, visit www.nces.ed.gov, the Web site of the National Center for Education Statistics.)

There are also less obvious drains on the pocketbook to consider, especially if moving means big changes in daily routines, such as commuting habits. Because he now works at home, Michael Desmond no longer has to pay for public transportation, but business travel has turned out to be an unexpected burden. A one way flight to see his partner in Boston from the quaint, little used airport in Burlington can cost upward of $300, and trips to the West Coast to meet with clients are typically more than double that.

The cost of health insurance and access to quality medical care are other key concerns. Previously, Desmond's employer picked up his health insurance, now he pays a whopping $750 a month to cover his family (the national average is $588). In some less populous states, the small pool of insured combined with strict mandates on what insurers must cover—alcoholism treatment, contraceptives, and clinical trials, among other things—can send rates soaring. What's more, in some areas it can be difficult to get adequate medical treatment without substantial travel, which adds to the cost of health care.

HOW MUCH IS ENOUGH? INTERPRETING THE COST-OF-LIVING INDEX

The cost-of-living index prepared by the American Chamber of Commerce Researchers Association compares living expenses in different places based on six criteria: housing, utilities, transportation, health care, groceries, and miscellaneous goods and services. The national average is 100, so a city with an index of 150 would be 50 percent more expensive than average. The chart at right lists cost-of-living figures for selected U.S. cities with a population of 50,000 or more. It also includes a salary comparison, indicating how much a person would have to earn in each location to have buying power equivalent to that of someone with a salary of $60,000 in Albuquerque, New Mexico, which has a cost-of-living index of 100.

Source: ACCRA

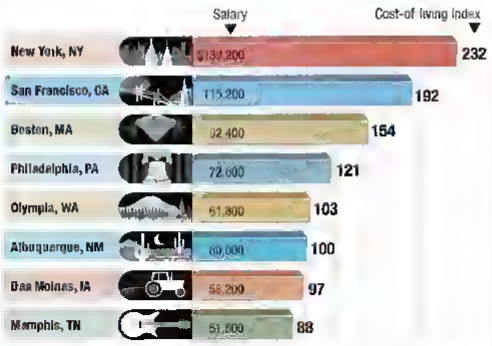


ILLUSTRATION BY STEVE HART

HIDDEN COSTS OF RELOCATING

Sometimes it's the local unavailability of simple amenities that people have come to take for granted that exacts the greatest toll, regardless of price. Die-hard theater- or museum goers may find themselves having to log many miles to pur sue those cultural tastes. And it's often impossible to purchase favorite foods, fine wines, cutting-edge fashion, and many other luxury items in a small town, which means ordering by mail or making a special trip to buy them.

That may not seem like a big deal, but it's a real issue for people like Barbara Weetman and her husband, Gil Johnson, who five years ago moved from Los Angeles to Wilmington, North

> "I have to have everything, from coffee to housewares, shipped in, which costs a small fortune."
> —BARBARA WEETMAN

Carolina, a seaside community of 90,000 people Weetman acknowledges that her more exotic L.A tastes are challenged by small-town living. "I have to have everything, from coffee and good bread to clothes and housewares, shipped in, which is an incredible hassle and costs a small fortune," she says. On more than one occasion, she has even flown to New York to shop

But because Wilmington's overall cost of living is about 30 percent lower than L A 's, that's a price Weetman can afford to pay. In California, the couple lived in tiny apartments and took second jobs ro supplement the income from their acting careers In Wilmington, where there is a thriving film industry—five feature films and four TV projects were shot there in 2000—and a small community of resident performers, Weetman and Johnson are constantly in demand (look for them in *The Divine Secrets of the Ya-Ya Sisterhood*, scheduled for release this July). Their steadier income, combined with the lower cost of real estate, has enabled them ro buy and restore a 1903 Arts and Crafts home with five fireplaces They've also opened two bars and a small play house, all of which are flourishing.

"I don't know anyone in L A who owns their own home, and I don't know anyone here who doesn't," says Weetman "But the best part of all is the theater. I wouldn't have dared to even dream about owning one in Los Angeles Here, things like that are possible." ■

HOMEOWNER'S
STEP-BY-STEP PROJECT SERIES
HANDBOOK

DETACH HERE

For the finishing touch on this new aluminum-clad window, Tom Silva fits the sash into its frame. Starting below the windowsill and working his way up, he overlaps strips of black waterproof membrane to protect the framing from the elements.

Installing a Window

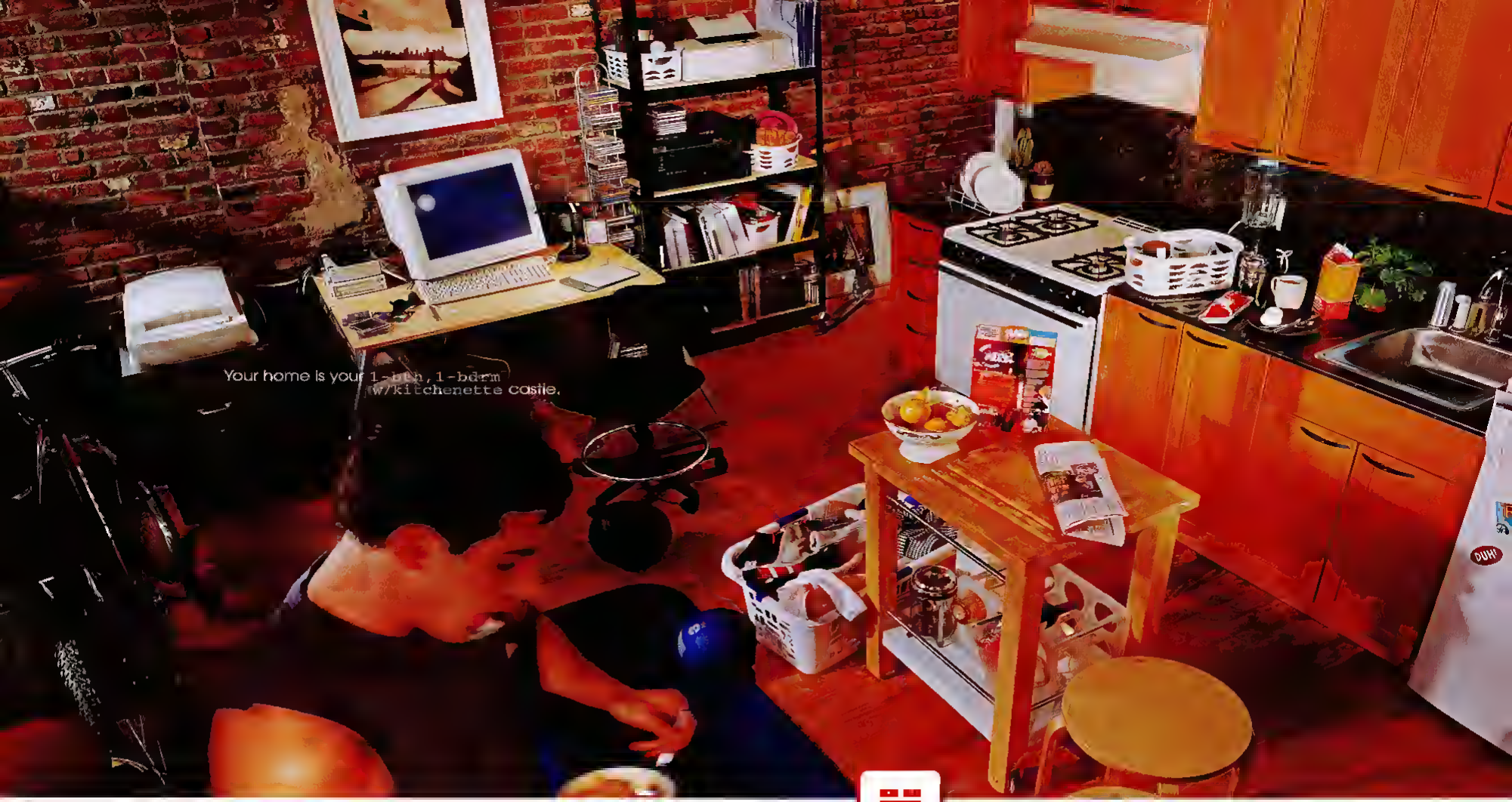
BY SCOTT GIBSON

Windows do a lot for a house, by helping to establish its visual character, letting in light and fresh air, and framing the views from inside. But if not installed correctly, they can also become unwelcome avenues for water and all its attendant problems. "Rot around windows, even in relatively new houses, is one of the biggest problems I see," says *This Old House* general contractor Tom Silva. "You can't depend on just the trim and the housewrap or building paper to stop water from reaching the sheathing or framing."

That's why whenever he puts in a new or replacement window, he makes sure to methodically seal the perimeter of the opening with sticky sheets of self-adhering waterproof membrane, strips of metal flashing, and judicious amounts of caulk. Any drop of rain that might get by one of these layers will be stopped by another. "Taking the time to do each step right means you won't have to do it again later on," Tom says.

His final step, once the opening is watertight and the window is set plumb and square, is to plug the gap between the window and the framing with foam insulation. Not too much, though. "If you bow the jamb, the sash won't work right and all your good work will be wasted," Tom says. —*Leslie Monthan*

PHOTOGRAPHS BY DAVID CARMACK



HOME
ORGANIZATION

Life is on ongoing project.

ACE
Your Everyday Project Place

Visit us at acehardware.com

"To stop leaks, you have to think about how water flows down a wall."
—TOM SILVA

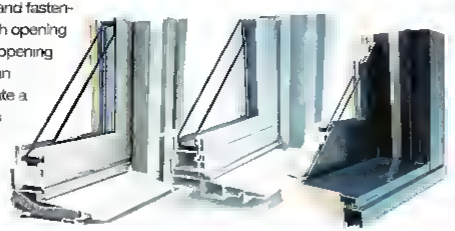
PLANNING AHEAD

- Check that the sheathing is nailed securely to the framing every 6 to 8 inches around the perimeter of the opening. If more nails are needed, use 8d for ¾-inch sheathing and 6d for ½-inch or ⅝-inch sheathing.
- In all but the smallest windows, remove the sash to make the frame lighter. Large windows are heavy and awkward even without sash, so get some help.
- For a window with thin stile, supplies may furnish a wood sill extender to give the sill a more traditional appearance. This trim should extend 1¼ inches past the outside of the casing on each side of the window.
- To find the size of a rough opening for an existing window that's about to be replaced, measure the window from the outside edge of the interior casing to the inside edge of the casing on the opposite side. Measure the opening's width at the top, middle, and bottom and its height on both sides and in the middle. The rough-opening dimension equals the shortest width measure by the shortest height measure.

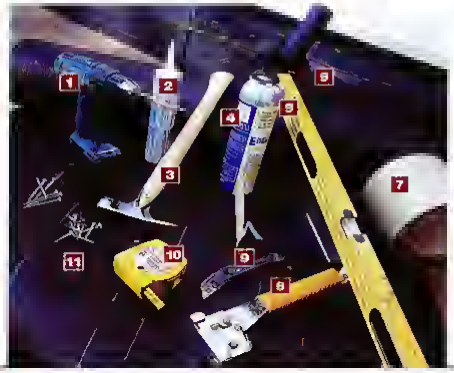
Materials

Once manufactured only out of wood, windows are now commonly made of materials such as aluminum, vinyl, or plastic composites that virtually eliminate exterior maintenance. "Painting casings and muntins is a lot harder, and therefore more time consuming and costly, than painting any other part of a house," says *TOH* general contractor Tom Silva. But because Tom still prefers the look of wood on the inside, he often installs clad windows, in which the wood is wrapped with an exterior skin of a maintenance-free material. He says that wood helps insulate interiors and creates a tougher product than one constructed entirely of hollow extrusions. They may cost a little more, but, as Tom says, "paying more for a better window is more efficient all the way around."

Clad or not, most windows are held in place by integral plastic or metal nailing fins. These make shimming and fastening the window into the rough opening fast and easy. If Tom has an opening that's square and level, he can install, waterproof, and insulate a window in 10 minutes. "Less time than it will take you to read this story," he predicts.



Tools



1. Drill-driver and 1¾-inch stainless screws (optional): for attaching sill extender to bottom of narrow aluminum sill
2. Tripolymer caulk: for creating a sill pan, installing flashing at the top of the window, and sealing any gaps around the window
3. 20-ounce hammer
4. Minimally expanding polyurethane foam: for insulating the window frame
5. 2-foot (not shown) and 4-foot levels
6. 15-pound builder's felt: an alternative to membrane for flashing the rough opening
7. Self-adhering waterproof membrane: for flashing the rough opening, sealing nailing fins to the wall, and making a waterproof sill pan
8. Hammer-tacker: for stapling builder's felt
9. Utility knife
10. Measuring tape
11. 1½-inch roofing nails: for fastening nailing fins to the sheathing

PHOTOS (WINDOW SAMPLES): JAMES WORRELL

STEP 1: CHECK THE ROUGH OPENING

- Measure the width of the rough opening at the top, middle, and bottom and the height at both sides and in the middle.
- If the difference between the three width measurements or the three height measurements of the rough opening is more than 1 inch, cut tapered filler strips from stud stock and nail them to the sides of the opening that are out of level or out of plumb.
- Make sure the outside dimensions of the window are at least ¾-inch narrower and ½-inch shorter than the smallest width and height measurements, respectively. If they're not, you'll have to either reframe the opening or order a new window.

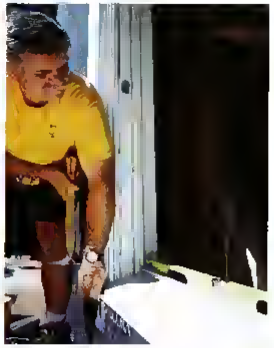
STEP 2: PROTECT AGAINST WATER INFILTRATION

- Cut a 6-inch-wide strip of self-adhering waterproof membrane (or a 9- to 12-inch-wide strip of 15-pound builder's felt) 12 to 24 inches longer than the window is wide. Center the membrane (or felt) under the rough opening and adhere (or staple) it securely to the existing builder's felt or house wrap. Make sure its top edge doesn't extend above the edge of the opening.
- Cut two more strips of membrane (or felt) 1 foot longer than the height of the opening. Center and attach them along each side of the opening (ABOVE), overlapping the strip under the window.
- Cut another strip of membrane (or felt) 1 foot longer than the window is wide; center and attach it across the top of the rough opening so that it overlaps the two side strips.

TIP: *When applying flashing, layer the material so that any water running down the wall is directed out. Seams should never face up.*

STEP 4: SEAL AND FLASH THE PERIMETER

- Cut a strip of 6-inch-wide waterproof membrane 1 foot longer than the window is wide. Center it under the window and adhere it to the wall so it covers the bottom nailing fin.
- Cut two more strips of membrane 1 foot longer than the height of the window and repeat the above process on both sides of the window (LEFT). Make sure each strip's lower end overlaps the strip under the unit.
- If the manufacturer has supplied snap-in metal flashing to cover the top of the window frame, apply a bead of caulk to the top edge of the window casing; then press the flashing in place (RIGHT).
- If no flashing has been supplied, cut and bend a piece of metal flashing so it overhangs the front and sides of the casing by ¼ inch and extends 3 inches up the wall. Fasten the top edge of the flashing to the wall with 1½-inch roofing nails and cover it with a strip of waterproof membrane long enough to cover the top ends of the two side strips.



STEP 3: INSTALL, LEVEL, AND SQUARE THE WINDOW

- Fold out the window unit's nailing fins so they are perpendicular to the sides of the window frame. Then set the window's sill into the bottom of the rough opening, and tip the frame into the opening until all the nailing fins are tight against the wall (ABOVE LEFT).
- Have an assistant stand inside and tell you when the gaps between the sides of the window and the jack studs are equal on both sides. Tack the nailing fin to the sheathing at one upper corner with a 1½-inch roofing nail, but do not drive it all the way in.
- Place a 2-foot level on the window sill, and note its high side. Then hold a 4-foot level against the window jamb on that side, and shift the sill left or right until the level shows the jamb is plumb. Tack a nail into the fin at the lower corner on the same side as the first nail.
- Next, lay a 2-foot level on the sill, and adjust the free bottom corner up until the sill is level (ABOVE CENTER). Tack the fin in this lower corner to the wall.
- Double-check that the window is square by measuring the frame diagonally from corner to corner (ABOVE RIGHT). Measurements should be within ⅛ inch of each other. If not, recheck the frame's side for plumb and the sill for level as before. You may have to pull out the last two temporary nails and adjust the frame.
- When the sill is level and the frame is square, drive home the nails at each corner. If the windowsill is level and corner-to-corner diagonal measurements are exactly the same, the sides of the window will be plumb.
- Holding a tape measure horizontally, measure the width of the window at several places to make sure the side jambs are not bowed. If they are, push the frame in or out at the center of the bow and nail the fin in place at that point. Then nail the sides, top, and bottom of the nailing fin or casing, driving one nail through every other pre-punched hole.

STEP 4: INSULATE AGAINST DRAFTS

- Fit the sash into the window frame.
- Inside the house, apply a single thin bead of minimally expanding polyurethane foam to the gap between the window and the framing (LEFT). Allow the bead to expand and cure for one hour before adding more. Repeat until the cavity is completely filled.

- When using fiberglass insulation, cut unfaced batting a little larger than the space between the window and the framing, and push the batting in with a putty knife. To prevent air leaks, cover the gap with aluminum tape.
- If the gap is too narrow for either foam or fiberglass insulation, seal it with a bead of caulk.

TIP *Do not fill the gap between jamb and framing with too much foam too quickly. Otherwise, the jamb could bow and thereby bind the sash.*

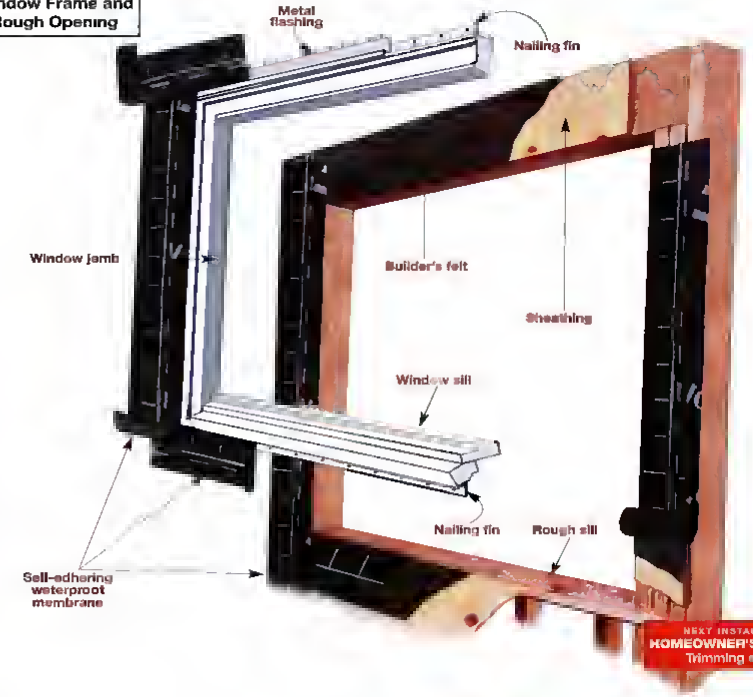
ILLUSTRATIONS: J. TAYLOR

Safe From the Hard-Driving Rain

In houses along the coast, where windblown rain can find its way through the tiniest flaws in a structure, *TOH* general contractor Tom Silva doesn't take chances when it comes to protecting the vulnerable sill that supports the window. He waterproofs it with a multilayered "sill pan" that prevents rain from sneaking into the house.

He makes the pan from strips of self-adhering waterproof membrane and a piece of 8-inch clapboard (1) cut to fit the length and width of the rough sill. First comes the clapboard, placed on the sill so its thick butt edge faces inside, creating a sloped surface to shed water away from the house should any find its way in. Once that's nailed in place with four or five roofing nails, Silva cuts a piece of 8-inch-wide waterproof membrane 1 foot longer than the width of the rough opening. He centers the strip on the wall below the opening, folds its top 1 inch over the edge of the sill (2), making a small cut where the strip meets each side of the opening, and presses it firmly on top of the clapboard. Then he applies a second 6-inch-wide strip, the same length as the first, that overlaps the edge of the first strip, covers the top of the clapboard, and extends 6 inches up both sides of the opening (3). But he doesn't press this strip's back edge onto the clapboard. Instead, he curls the last inch of membrane back on itself, sticky side up (4), to form a dam that, along with a wide bead of tripolymer caulk applied along the entire length of the sill (5), will adhere to the bottom of the window as it's being installed. "It's a two-dollar fix to prevent a thousand-dollar problem," says Tom.

Window Frame and Rough Opening



NEXT INSTALLMENT OF HOMEOWNER'S HANDBOOK: Trimming a Window

Home Schooled

BY STEVE THOMAS

My job as host of *This Old House* often requires me to play the professional observer, educating viewers by asking homeowners and contractors about designs and materials. But my colleagues and I learn from these segments as well, and bring these same techniques and technologies into our own homes.

My wife and I are planning to start building a house this summer on an island off the coast of Maine. This will be the first place we've built from the ground up (all our past homes have been renovated old houses), and we're experiencing firsthand something many of our viewers have already discovered—that starting from scratch presents unique challenges. Fortunately, with 13 years of *TOH* projects under my belt, I've gained a real sense of what does and doesn't work.

The show's current renovation, in Manchester, Massachusetts, provides a perfect test bed for our project, even though ours will be a smaller, summer-only cottage. Like the McCues' property, our land overlooks the water, so the Shingle Style—with its tight grained cedar siding and roofing, meant to endure the unforgiving coastal weather—will work for us, too. Our house, like theirs, has to have a wall of windows facing the ocean, with doors that lead to low, wide porches so we can easily move outdoors during the summer. We'll also keep the exterior low-maintenance by incorporating innovative products *TOH* has used at Manchester and earlier projects, such as waterproof membranes on the roof and around window and door openings, nylon mesh matting under the shingles that allow them to dry out, and no-maintenance, energy-efficient aluminum clad windows.

As TOH *host, Steve Thomas* (ABOVE, *on the site where he will build his new house,* LEFT) *has gleaned ideas from the TV show's many projects.*

The show has influenced our concepts for the interior as well. Like the McCues, we expect to entertain often, so we want an open plan downstairs—similar to the combined kitchen and family room in Manchester. And because there will be lots of guests, the floors will take a beating. So I've been particularly attentive to what flooring choices install easily and hold up best. The bamboo used in Charlestown is on my list of favorites, as is the old-fashioned linoleum in the Billerica and Belmont kitchens. (You can also see it in the magazine's Timeless Home project, on page 92.) For sheer beauty and toughness, though, it's hard to beat the river-recovered heart pine in Key West and Savannah.

One lesson we've learned over the years is that any project, whether new construction or renovation, must have an overarching objective that can help guide your decision making. For us, it's the fact that we're building on an island, accessible only by skiff (and, at certain stages of the tide, by small landing craft), and all materials and supplies must then be driven by Jeep up to the building site. As a result, I expect to do much of the work myself, forcing us to "KISS—Keep it simple, stupid."

The beauty of building—and of *This Old House*—is that there's always something to learn. With every show or magazine issue, we hope there's something you can take home. Because as long as the ideas keep coming, we'll keep covering them.

PHOTOGRAPH BY DAVID CARMACK

ILLUSTRATION: TOM BOUNDAS/HIRE; SEE UNL ® © 2005 STEPHEN A.M. STOHS ARCHITECTURE

Check out **www.thisoldhouse.org** for more information on the house's heating and cooling systems, including an article by Richard Trethewey about the new oil tanks.

A SYSTEMATIC APPROACH

Myriad new technologies keep the temperature steady, the air fresh, and the water flowing at the TV show's project house

Richard Trethewey, plumbing and heating expert for *This Old House*, ducks his head instinctively as he descends the stairs into the basement at David and Janet McCue's house, site of the latest TV show project. A 118-year-old stone foundation rises to his left, and the cellar dirt dusts his boots, but turning the corner he comes face to face with something that looks like the bridge of a Jules Verne submarine. Halogen work lamps throw a brilliant light onto a phalanx of shiny copper pipes and bronze valves, from which sprout sleek black tubes that fan out into the house.

Rich Bilo, the plumbing and heating contractor who installed this array, is kneeling in front of the titanium-colored boiler as Richard approaches. Bilo pulls out the boiler's concealed control panel. "All set?" Richard asks. "Full speed ahead," says Bilo, and begins punching the buttons on the panel's keypad. Numbers and letters flash across its LCD screen. The boiler kicks on. A quiet, powerful thrumming sound fills the room, as mixing valves and pumps whirr. "Let there be heat," says Richard, with a smile.

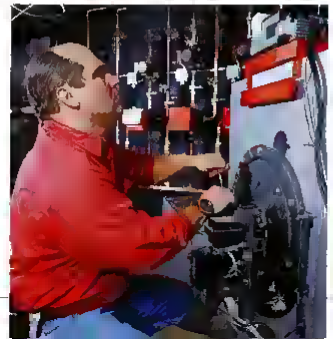
BY JEFFERSON KOLLE PHOTOGRAPHS BY DAVID CARMACK


The little stuff is big to us. Exhibit A: our whip antenna. You ever notice that annoying whistle some antennas make while driving? Well, our designers do. So they added this spiral design to smooth air resistance and reduce noise. It makes regular antennas just seem downright inconsiderate.
Drivers wanted

Rich Bilo opens a heating supply line to a radiant-floor manifold. Behind him, the boiler stands ready to send heat to the hot-water tank, right, and warmth to the house. BELOW: Richard Trethewey tests the efficiency of the boiler

Bilo and his crew have been working steadily for months in preparation for this moment, installing the components that produce and convey heat to every corner of the McCues' 7,000-square-foot house. The system is an eclectic mix that includes radiant-floor tubing on the first floor and part of the second, Euro style flat-panel radiators that warm the upstairs bedrooms, a mini duct system that blows hot air into the third floor; and old-fashioned cast-iron radiators, left over from the original heating system, that take the chill out of the basement and garage. Each element uses the hot water supplied by the boiler as its source of heat. "Water is far better than air at transferring and holding heat," explains Richard. "And it allows us to tailor the delivery methods to the specific heating needs in each area."

The oil-fired German-made boiler is the heart—and the brains—of this complex, finely tuned setup. Not only does it heat water that gets pumped throughout the house, as does any boiler, it also constantly monitors the temperature of the water going to each of 12 zones. The electronic control panel, programmed with temperature settings for particular times of the day and days of the week, signals the mixing valves to recirculate the return water from the rooms or to inject more hot water from the boiler if the returning water's temperature has dropped too far. "The homeowners never have to touch any of the controls," says Bilo, "but if they go on vacation or stay up late one night, they just press one button to change the settings." An outdoor sensor also informs the boiler of changes in temperature outside so that as the day warms up, the system circulates cooler water, then automatically heats up as nighttime temperatures drop.



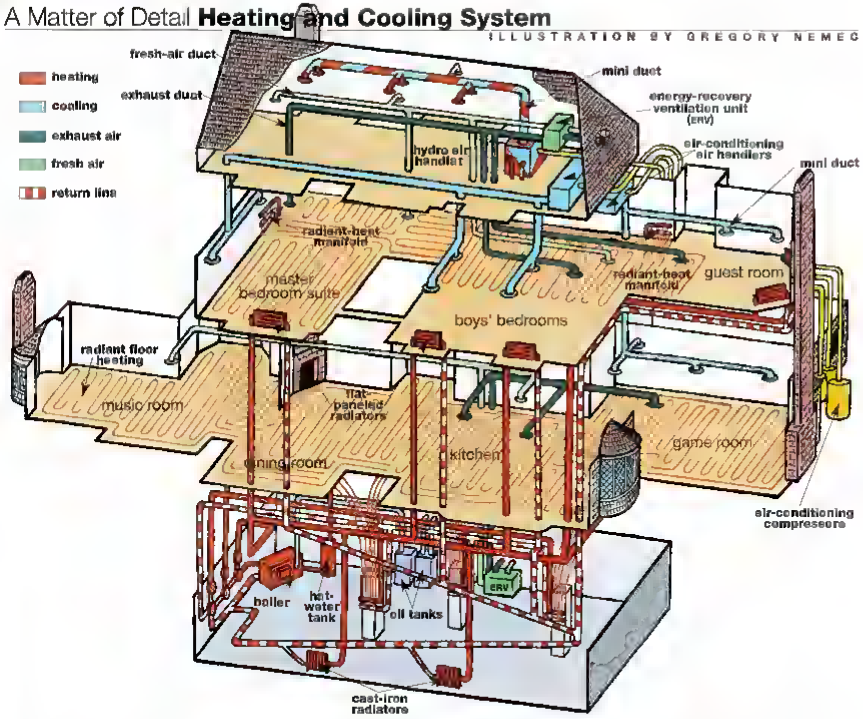
These tight controls have a number of benefits. They enable the boiler to run at lower temperatures, making it more fuel efficient and less prone to breakdowns. Bilo, who has been installing and servicing the boilers for 14 years, is so impressed by their reliability that "the number on my business card is my home phone, the one that sits on my bedside table," he says. "I can't remember the last time someone woke me up for a service call." They also eliminate the extreme temperature fluctuations common to most heating systems. "Our goal is to give the McCues the most comfortable

CLOCKWISE FROM TOP LEFT: Four delivery systems keep the McCues' house comfortable: Orange PEX warming tubes await finish flooring in the master bedroom, plumber Brian Bilo connects a reused cast-iron radiator in the basement, Bilo hooks up the mini ducts that will carry hot air on the third floor; he adjusts a flat-paneled radiator that will warm a bedroom.

PHOTO: BRIAN VANDEMARK (TOP LEFT)

A Matter of Detail **Heating and Cooling System**

ILLUSTRATION BY GREGORY NEMEC



system possible, one they shouldn't ever notice," says Richard. "This boiler, in concert with the control system, makes that happen."

Carefully modulated hot water is also essential for radiant in-floor heating. At the McCues', heated water runs from the boiler to a mixing valve, where it gets cooled down by the returning water. From there it goes to manifolds that distribute it to the six radiant-floor zones on the first and second floors. Each zone is served by long loops of cross-linked polyethylene (PEX) tubing that lead from the manifold and zigzag across the floor before returning to the mixing valve in the basement. The tubes reside under the bathrooms' wood floors and in the walls of the master bathroom's large steam shower. "The shower is on an outside wall," says Richard. "Tubing in the walls will make the space more comfortable—especially when someone in their birthday suit leans against the tile on a winter day."

PEX tubing is under the master bedroom flooring as well, but it's not meant to heat up the whole room. Because the McCues wanted wall-to-wall carpeting, Bilo didn't want to use radiant floor heating as he did in other parts of the house. "Carpet over radiant heating is like a sweater over a radiator," he says. "It takes longer for that heat to get through." What he did install, however, was "warming" tubes. With loops spaced 10 inches apart (instead of 7) and a low flow of water, the system releases only enough heat to make the rug toasty, not the room. "It's pure luxury," says Bilo.

Instead, radiators are the principal source of heat in the three south-facing family bedrooms. Not the heavy cast-iron jobs common in old houses, but narrow steel panels fastened right to the wall in stacked strips. The units are a personal choice of the McCues, who know of them from their frequent travels to England. The panels not only save space—projecting only 2½ inches from the wall—they boast five times the surface area of an equivalent length of baseboard elements. That translates into more-efficient heating at lower water temperatures. Each panel has its own thermostatic valve, so when the room temperature dips, the valve opens and hot water quickly fills the radiator, infusing the room with warmth.

On the third story, there's yet another way to warmth: hydro air. This marriage of forced-air and hydronic systems uses hot water that is pumped from the boiler up to a series of coils inside a hydro air handler (a blower) mounted in a third-floor utility closet. The coils heat the air, which the handler then distributes at a high velocity through a series of 2-inch-diameter mini ducts. Richard recommended this heat-delivery method because it's more cost effective to have a separate, quick-response system that the McCues can turn on and off as needed in the infrequently used space.

During the summer months, the same handler also air-conditions this top story through the same ducts. "Even when living on the ocean in New England, there are a couple of weeks every year that can be brutal," says Richard. Two more handlers cool, but do not heat, the second-floor bedrooms, mudroom, game room, and guest room.

Next to the third-floor air handler and in the basement, Bilo and crew also installed two energy-recovery ventilators (ERVs) to combat the problems that result when excess humidity and odors accumulate in a tight, well-insulated building. The ERVs' silent, low-volume fans—constantly on—pull in stale, humid air through 4-inch ducts leading from the kitchen and the bathrooms and expel it outside. At the same time, fresh air is pulled from the outdoors and fed through more mini ducts to central areas like hallways and the family room. The reason to use an ERV, instead of just opening a window, is that in the winter it captures up to 80 percent of the heat and humidity from the outgoing flow of inside air and transfers them to the incoming flow of fresh air. In the summer, humid outdoor air is cooled and dehumidified before entering the living spaces (though the McCues can still shut off the ERV and throw open the doors when there's a nice ocean breeze). The result: better air quality and comfort without significant energy loss. "There's no better way to get fresh air into the house," says Bilo. "It's all a part of good climate control," says Richard. "Just like Goldilocks and the porridge. Not too hot, not too cold, but just right."

ABOVE: *Brian Bilo installs the energy-recovery ventilator (ERV) for the upper floors. To the left is the air handler for heating and cooling the third floor. Beneath the ERV sits a second handler for cooling parts of the lower floors.*

PIPE DREAMS

There's no denying that the climate-control systems in the McCue home are high-tech wonders, from the microprocessor-equipped boiler to the energy-recovery ventilation units. But hung from the joists and woven through the walls is a web of domestic water lines that also utilizes the latest technology. Two materials—a flexible plastic pipe and an innovative coupling system for tried-and-true copper piping—have saved hours of installation time for Rich Bilo. "Our job isn't getting easier," he says, "it's just getting faster."

Bilo used the PEX tubing to run water from manifolds in the basement to the various fixtures: a first for a *TOH* project in Massachusetts. The material has been accepted for in-floor heating, but it has only recently received conditional approval from the state for domestic water supply lines. "This house is a test case," says Bilo. "The manufacturer will report on the system's success to the plumbing-code enforcement board before PEX gets approved statewide." The tubing comes in large spools, and plumbers can snake continuous lengths of it through the house in the same way an electrician pulls wires. "We can bend it around a tight corner or thread it through a small opening; there's no soldering," says Bilo.

As good as PEX is, there are situations where copper will continue to be king. "Because copper pipe doesn't sag," says Bilo, "we'll always use it for long horizontal runs." And now, due to a new connection method, it can be installed in less time. For years, plumbers have joined copper pipe by "sweating" joints—a time-consuming job involving cutting, burnishing, fluxing, heating, and soldering the joint. The copper industry has recently come up with a quick-connect system that works without torches and solder. A crimp fitting, equipped with an O-ring at each end, slides over each pipe. Then the plumber pulls the trigger on an electric tool that looks like a giant lobster claw. The tool squeezes the fitting around the pipe and seals the O-rings around the joint. "A couple of the guys timed it," Bilo says. "It took them ten minutes to solder a joint versus four seconds for the crimp fitting."

The time saved by using PEX tubing and crimped copper fittings ultimately means money saved. And the two innovations are changing the way a house is plumbed. "More and more often," says Richard, "we just leave out torches in the truck." —*J.K.*

ABOVE: *Copper's answer to easy-to-connect PEX is a system that crimps the pipe around an O-ring. Here, a cutaway of a sample joint.* BELOW: *Marrying copper to PEX is as easy as pulling a trigger on an electric tool.*

WHERE TO FIND IT – SEE DIRECTORY – PAGE 118

the timeless home

Our latest building project redefines an old neighborhood with its unique blend of modern design and traditional details

BY TRAVIS [illegible] PRODUCED BY ALEX [illegible]
PHOTOGRAPHS BY JOSH McHUGH
PROCESS PHOTOGRAPHS BY KURT WELLEFORD

Nestled into a wooded scrap of Atlanta hillside, the Timeless Home, with its steep gables, shed dormers, and mullioned windows, pays homage to simple farmhouse architecture while incorporating the latest features for modern living: a home office, a media room, whole-house audio, and wireless home-management software.

For the first time since the Timeless Home project started 12 months ago, no subcontractor vans or lumber piles block the view when builder Jason Yowell pulls up the steep drive in his 4x4 pickup. Stepping down from his truck, he stops to admire the freshly painted exterior of the house. "This was a challenging site to build on," says Yowell of the wooded hillside that the house is nestled into. Just figuring out where to put the house so its driveway wouldn't be too long and steep and its backyard wouldn't be hemmed in by retaining walls took some doing. "We all had to stretch our imaginations, but we made it happen."

Designed by architect Jeremiah Eck and built by Yowell's Metropolitan Design & Construction, the Timeless Home is the newest arrival in Atlanta's Buckhead neighborhood. This desirable community, close to Atlanta's city center, has seen its older housing stock steadily remodeled or replaced, often with colossal mansionettes ill suited to their surroundings. With this house, Eck and Yowell took another tack. "We wanted its scale and form to be steeped in the tradition of a more modest, more human-friendly design, one that is carefully adapted to its particular site," says Eck.

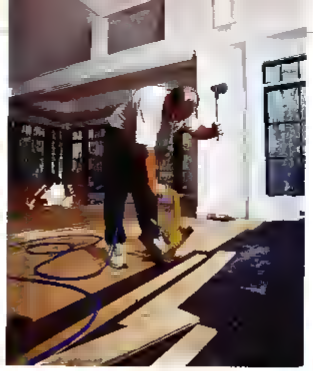
To realize Eck's vision, *This Old House* magazine joined with Yowell and the Masco Corporation (one of the world's leading manufacturers of consumer home-improvement and building products) to build a house that celebrates the features people love in older homes as it incorporates the latest in modern amenities that accommodate how people live today. The result is a distinctive, low-maintenance structure with easy-to-live-in spaces where classic materials are deftly integrated with the latest electronic home-management and entertainment technologies.

All of which goes to show, Yowell says, that a good house depends more on careful planning and exacting attention to details than on enclosing giant volumes of space. "From top to bottom, this house is precisely what it was intended to be: timeless."

SOURCES

BRICK. **Boral**
DOOR HARDWARE. **Baldwin**
GARAGE DOORS. **Clopay**
LIGHTING. **Rejuvenation**
ROOFING. **Crowe Building Products**
SIDING. **James Hardie**
WINDOWS and DOORS. **Marvin**

Carefully considered details, like the cornice, gracefully connect the elements of the living hall.



In the living room (OPPOSITE), *an elegant sofa with high arms and slender legs typifies the sleek decor that interior designer Kay Douglass incorporated into Eck's design. To temper the snowy expanse of the walls and ceilings, she specified that the windows and the cabinets in the corners of the dining area* (RIGHT) *be a charcoal color.* ABOVE. *Flooring installer David Webster staples down dense, fragrant planks of longleaf pine reclaimed from 19th century textile mills.*

Down the corridor from the vestibule-size entry, at an opening flanked on one side by the limestone-clad fireplace, the Timeless Home dramatically opens up. A steeply pitched ceiling soars 20 feet above the floor of the dining area, drawing the eye to the three narrow windows punctuating the arrowlike gable. This is one ceiling that measures up to the term "cathedral."

The room reaches horizontally for 24 uninterrupted feet to two adjacent window walls, each 17½ feet long and rising 10 feet from the floor to a low-pitched ceiling. Standing in this part of the room, with its wide, 180-degree view of the wooded hillside above, is like being on a majestic second-story veranda, sans bugs.

This is the breathtaking space that Jeremiah Eck likes to call the "living hall"—part living room, part dining room, part library. "The open layout reflects the more informal way people live today," he says. To highlight the window muntins and casings and the built-in bookcases and cabinets surrounding the dining area, interior designer Kay Douglass had them painted a deep charcoal color, to contrast with the expanse of white walls and ceilings.

Eck's open floor plan offered builder Jason Yowell some interesting challenges. To shoulder the roof loads over each of the 17½-foot-long window walls, he installed doubled headers made of laminated veneer lumber (LVL), a multiple-ply beam capable of bridging long spans with minimal deflection. Likewise, 17-foot LVLs support the base of the tall gable at the end of the dining area. And the gable in turn holds up one end of a massive beam made of two 2x12 LVLs in the peak of the cathedral ceiling, eliminating the need for visually intrusive collar ties. Yowell is effusive about the performance of this engineered material. "It's so incredibly stiff, it's almost like steel," he says. "But because it's all wood, you can still nail it."

In contrast with all the modern-day lumber incorporated into the framing, and with the crisp new windows, walls, and ceilings, the floors in the living hall are covered with real antiques: planks of longleaf heart pine nailed from beams salvaged out of 150 year-old textile mills. "We randomly selected widths so that there wouldn't be any set pattern, just like on an old floor," explains wood flooring contractor Scott Banks, of Pacific Hardwoods. "And we didn't fill in any of the cracks or nail and knot holes because it makes the floor look more rustic."

After Banks's crews installed and sanded the wood, they got down on their knees and rubbed in a dark walnut stain. "You have to do this with pine to make the color consistent," says Banks. Then they sealed the wood with tung oil and two coats of satin polyurethane to protect it and make it look softer and older.

SOURCES

CABINETRY: KraftMaid
DECORATIVE ACCESSORIES: HomeGoods
FLOORING: Southern Wood Floors
LIVING ROOM FURNITURE: Harden
RECESSED LIGHTING: Thomas
WINDOWS: Marvin

Traditional Shaker-style cabinets are made modern with a dramatic charcoal stain and satin nickel hardware.

OPPOSITE. *With its dark cabinetry, built-in plate rack, copper apron sink, and stainless steel appliances, the kitchen blends old world charm and modern convenience* THIS PAGE. *Mike Lobdell, who cast and installed the concrete countertops, scrubs them down at his shop with a brush dipped in muriatic acid* (FAR LEFT) *The acid etches the surface, exposing some of the special shale and clay aggregate he mixed in and imparting a pleasing texture. After the etch comes a coat of carnauba wax that seals the surface* (LEFT) *The crew* (BELOW) *muscles one of the slabs into place*

Not just a place devoted to cooking and cleaning up, today's kitchen is the hub around which modern home life revolves. Every gathering of friends and family naturally gravitates there for the food, the conversation, and the cheerful warmth. Recognizing this central role that kitchens now play, Jeremiah Eck created an 18½-by-13½-foot room that is literally at the crossroads of all the public activity in the Timeless Home.

From the kitchen, one can pass through the screened-in back porch to the backyard, into the mudroom, laundry, and pantry area off the garage, or through a pair of pocket doors into the dining area. "It's a sociable, informal space, so we didn't wall it off by itself," says Eck.

Douglass used color to visually connect this focal-point room with the rest of the house. She chose maple cabinets stained the same charcoal color as all the windows. The cast-concrete counters are tinted the same flannel gray as the limestone that clads the fireplace. And to unite the elements within the kitchen—the copper apron sink, the stainless-steel appliances, and the pumpkin-toned backsplash tiles—she chose marble floor tiles: big 16-by-16-inch squares that range in color from rich brown and gray to terra-cotta. "The finishes end up complementing each other incredibly well," says Yowell.

The kitchen's 1¾-inch-thick countertops are all cast from concrete. Mike Lobdell, who poured all seven at his Killercrete shop, etched their top surfaces with a dose of muriatic acid. "Etching peels away some of the active lime on the surface to give it a coarser texture and improve its resistance to scratching and staining," Lobdell explains. To enhance that resistance even more, he hand-buffed the etched surface with carnauba wax.

It took six men to carry the slabs, two of which weighed 450 pounds apiece, from the truck into the house and rest them on top of the cabinets. In contrast with all the hard work involved to get these counters in place, Lobdell says, "the final result is very laid back."

SOURCES

APPLIANCES AND COOKWARE	**KitchenAid**
CABINETRY	**KraftMaid**
COUNTERTOPS	**Killercrete**
DECORATIVE ACCESSORIES	**HomeGoods**
FAUCET	**Delta**
HARDWARE	**Liberty**
PENDANT LIGHTING	**Rejuvenation**
RECESSED LIGHTING	**Thomas**
SINK	**Stone Forest**
STOOLS	**Milling Road**
TILE IN BACKSPLASH AND FLOOR	**Walker Zanger**

Every master bedroom ought to be a sanctuary. That's why Eck thoughtfully located the 345-square-foot room in its own wing, at the end of a short corridor off the entrance foyer. "This is a private and elegant space that deserves to be separated from the main living area of the house," says Eck.

"As far as master suites go, this one isn't huge," Yowell admits. "But the windows make the space seem expansive." Indeed, the bank of 6-foot-tall casement windows provides a splendid view of the property's wooded slopes. "You feel like you're in a tree house," says Douglass.

The bed facing these windows is flanked by a pair of walk-in closets, each with the necessary complement of shelves, clothing rods, and cabinets. In one closet, a 170-pound safe stands ready to secure any valuables from theft or fire. Small casement windows in each walk-in face the front yard and can let in a pleasant breeze or plenty of natural light—very helpful when trying to match socks.

Daylight also floods into both ends of the 7½-by-20-foot master bath, gleaming with a matching pair of pedestal sinks, chrome-plated fixtures, a luxurious 6-foot whirlpool tub, and a shower stall equipped with four body sprays and an oversized, ceiling-mounted showerhead. Every inch of the stall, including the ceiling, is covered with glass tile tinted a cool greenish-blue: ½-inch squares on the floor, 6-by-6-inch and 3-by-6-inch on the walls. The same material, cut into 1-by-3-inch mosaics, surrounds the tub. "It looks like old-fashioned bottle glass," says Douglass. "The color is fun, and because of its transparency and light tone it makes the space seem bigger."

For the bathroom floor as well as for the deck around the tub, she chose 12-inch square tiles made of pale honed limestone. "What we wanted to do in this room—as with most of the house—was to keep it simple," she says. "The limestone and the glass tile lend a very spare, refined look."

ABOVE *Set apart from the rest of the house, the first-floor master suite is a quiet spot to curl up with a book or have a soak in the whirlpool tub.*

TOP *In the master bath, chrome faucets complement a pair of pedestal sinks and a porcelain whirlpool tub set into a limestone-covered deck. The mosaic glass tile lining the tub well is the same material used in the shower stall* (ABOVE LEFT), *where a ceiling-mounted showerhead* (ABOVE RIGHT) *helps wash away stress. After setting and leveling each course in white mastic, tiler Sixto Rodriguez filled the joints with antique-white grout, working very carefully to avoid cracking the glass.*

SOURCES

Bedroom—FURNITURE **Milling Road** DOOR **Masonite** HARDWARE **Baldwin** PAINT **Behr** Bathroom—ACCESSORIES **Ginger** FAUCETS **Delta** PEDESTAL SINK **Lowe's** SHOWER FITTINGS **Alsen's** STONE and GLASS TILE **Walker Zanger** TUB **Aqua Glass**

"We can access the whole world from our homes now," says Eck, "so we need something different from the old-fashioned desk tucked into the corner." For the Timeless Home, therefore, he designed an office that occupies a central spot on the first floor, just off the main entrance hall, befitting its role as the place where important business is accomplished. Eck incorporated 8-foot-tall interior windows on one wall and a glass door flanked by full-length sidelights on the other. These admit light from the entryway, and give the room a transparency that emphasizes its connection, both physically and visually, to the rest of the house.

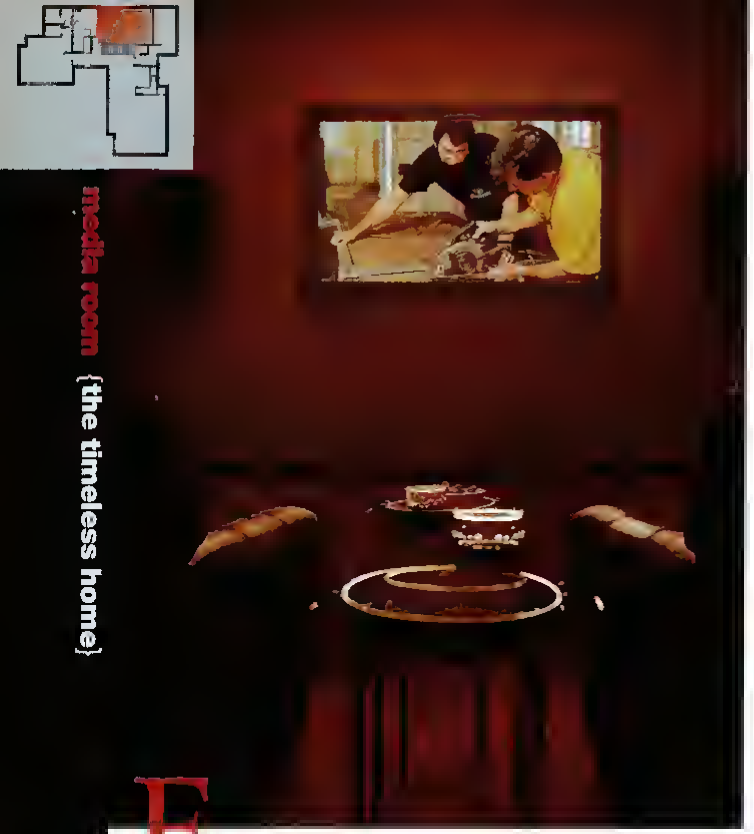
Equipped with a high-speed Internet hookup and lines for phone and fax, the cozy 10-by-10-foot room is the high-tech, digital nerve center of the house, where e-mail messages and online schedules can be easily updated or accessed. "This should make obsolete the chaotic refrigerator-magnet, sticky note system most households use," says Yowell.

A bank of whitewashed maple cabinets provides filing and storage for all the paperwork needed to manage a home; a 1¾-inch thick concrete slab, like the counters in the kitchen, serves as the desktop. The wall overlooking the courtyard is graced by a triangular bay window that echoes a similar window in the kitchen. "The striking fenestration is just one of the features that makes this home office distinctly different," Yowell says.

ABOVE: In the home office, a floor-to-ceiling triangular bay illuminates the marble floor tiles and maple cabinets. RIGHT: To install these cabinets, finish carpenter Kevin Black simply set the upper cabinets on the acid-etched concrete desktop and screwed the face frames together with his cordless drill.

SOURCES

CABINETS: **Merillat**
CABINET HARDWARE: **Liberty**
COMPUTER: **Gateway**
COUNTERTOP: **Kilfenrete**
FURNITURE: **Milling Road**
STONE: **Walker Zanger**



LEFT: *The electronic equipment is hidden inside a bank of maple cabinets near the floor, so all that's left to see from these Art Deco–style recliners in the media room is the 50-inch flat screen TV and a good movie* BELOW: *Structured-wiring contractor Jesse Crossley feeds yellow Cat 5e wire and black RG-6 coaxial cable through a subfloor in the upstairs guest room. The coaxial cable enables the DVD player in the media room to deliver movies almost anywhere in the house*

Even the most cursory visitor to the Timeless Home will note that Jeremiah Eck loves windows. He's used them everywhere, to open up rooms to sunlight and fresh air, to frame views, and to highlight certain architectural features. Everywhere, that is, except the media room, a 12½-by-26-foot space in the basement that lies next to the high foundation wall. Says Eck, "When we redesigned the house to accommodate the slope, it seemed appropriate to drag the TV out of the living room and put it where we couldn't have windows anyway."

Douglass decorated this room with vintage movie posters and six reclining leather club chairs. The floors are covered with wall-to-wall carpeting to improve the acoustics; the five speakers (plus subwoofer) produce cinema-quality sound.

Electronics specialist David Pierce hooked up these and the other state-of-the art components, including a 50-inch flat screen television (a high-definition, wall-mounted unit), a progressive scan DVD/CD player that can hold up to 301 discs, and a multichannel receiver housed in the cabinets below the TV. The video components can be linked to the rest of the house via a network of RG-6 coaxial cables that will allow satellite TV programs or DVD selections to be viewed simultaneously from televisions elsewhere in the house. The media room also functions as the main hub for the distributed audio system: a separate network of wires that pipes music from the media room's DVD/CD player and receiver to speakers throughout the upstairs.

SOURCES

AUDIO/VIDEO EQUIPMENT: **Pioneer**
CABINETRY: **Quality Cabinets**
HOME MANAGEMENT SYSTEM: **Listman Home Technologies**
RECLINING CHAIRS: **Lane**

Making efficient use of the 1,000 square feet on the Timeless Home's second floor, Eck neatly tucked three bedrooms and three full baths beneath steep gables and shed dormers. ABOVE: *The girl's room takes full advantage of the nooks and alcoves in this upstairs hideaway. A trundle bed fills a corner recess, reserving ample space beneath the sunny gable for a homework and play area.* BELOW: *In the guest room, located above the master suite, white beaded panels highlight the sloped ceilings and contrast with the rich wall color. The floors in each bedroom are laid with planks of newly harvested longleaf heart pine, a less costly but equally beautiful alternative to the reclaimed pine used downstairs.*

SOURCES | BEDDING: Kingsdown FLOORING: Southern Wood Floors FURNITURE: Broyhill LINENS: Garnet Hill PAINT: Behr PANELING: Georgia-Pacific

The finished 1,100-square-foot basement in the Timeless Home is a bright place meant for guests to sleep, children to play, and parties to spill indoors from the back deck. Families can also enjoy the latest Hollywood releases in the media room (see p. 83). "I expect this part of the house is going to be a very social place," says Yowell.

This is no dank, cobwebbed cellar. The site's slope leaves one side open to ground level, and the house's irregular footprint, in combination with numerous windows and the French doors leading to the outdoor deck, ensures that plenty of natural light reaches into this space. At the foot of the heart pine staircase—under which is one of two powder rooms in the house (the other is just off the front entry hall)—the big 21-by-40-foot playroom overlooks the deck and the wooded side yard. Next to the stairs is a jewel of a kitchenette, stylishly fitted with such amenities as maple cabinets, stainless steel and butcher-block countertops, a microwave oven, and even an undercounter wine cellar. It's ideally located to make popcorn for media-room movie fans or supply snacks (and drinks) to playroom and back-deck partygoers.

The 350-square-foot bedroom located at the end of the basement under the living room is the largest in the house and enjoys abundant daylight through its 9-foot wall of double-hung and fixed windows. Attached to that room is a full bathroom with a bathtub-shower surrounded with white ceramic tile and a vanity topped with a solid-surface counter and integral sink. The bathroom floors are tiled, as well, with the same marble found in the first-floor kitchen. "When you add together the kitchenette, sleeping quarters, outdoor access, and all the storage space in the closet next to the

ABOVE: *The fully equipped kitchenette in the basement playroom, with its microwave oven, wine cooler, and ice maker, is perfectly situated to serve snacks and drinks to media-room moviegoers or guests partying on the back deck. The cabinets are maple, the flooring is durable, low-maintenance linoleum.*

ABOVE: *The 350-square foot guest bedroom in the basement is covered with linoleum, a 139 year old product made largely from linseed oil.* BELOW LEFT: *Installers Michael Pullman and Fred Seagraves lay wide linoleum sheets onto a layer of adhesive applied directly to the sealed concrete slab.* BELOW RIGHT: *Using a 150-pound roller, Seagraves presses the contrasting linoleum border firmly into place.*

media room, this entire downstairs could easily be turned into independent living quarters," says Yowell.

In this room as well as the playroom and kitchenette, linoleum flooring contractor Fred Seagraves covered the concrete slab with colorful sheets of linoleum. This durable, easy-to-clean flooring, a marbled mix of linseed oil, rosin, wood "flour," and limestone on a jute backing, comes in 6 foot 7 inch wide rolls or 13-inch square tiles. He laid tiles in the playroom and kitchenette, rolls in the bedroom. Here, Douglass chose sepia for the central field of color and surrounded it with a blue and ivory border, simulating the look of a large throw rug.

Before Seagraves could install the flooring, he first had to coat the concrete with a latex sealant that stops any moisture from migrating through the slab. After waiting 48 hours for it to cure, he troweled out a synthetic rubber adhesive and laid down the tile and sheets. Linoleum cuts with such ease—Seagraves uses just a straightedge and a utility knife—that preparing and installing the basement bedroom flooring took only 6 hours. "One of the great things about this material is how simple it is to make colorful custom patterns," he says ●

SOURCES

Basement Bedroom
BED **Mitchell Gold**
CHESTS **Container Store**
FLOORING **Forbo Marmoleum**
TABLE **Oly**

Basement Kitchen
APPLIANCES **KitchenAid**
CABINETRY **Quality**
DECORATIVE ACCESSORIES **HomeGoods**
FAUCET **Delta**
FLOORING **Forbo Marmoleum**
STEEL COUNTER **Just Mig**
WOOD COUNTER **Boos Block**

WHERE TO FIND IT – SEE DIRECTORY → PAGE 112

We would like to thank the following companies whose products are being used in The Timeless Home Showhouse.

1 **Alsons** Tropical Rain™ showerhead features a heavy, full spray yet uses only 2.6 gallons of water per minute. The solid brass showerhead has 43 spray orifices, weighs nearly 6 lbs., and is perfect for standard or overhead shower arms.

2 **American Shower & Bath Corporation** The Heavy Duty Utility Tub is ideal for home laundry or utility room needs. Includes convenient, self-draining soap dishes and injection-molded legs that won't bend or buckle, and can be wall mounted.

3 **Aqua Glass** Aqua Glass whirlpools are unsurpassed in quality and now with the new Draindown system, a pure, clean bath is possible every time.

4 **Baldwin Hardware** From locking products to lighting and bath accessories, Baldwin provides the discriminating decorator with numerous options to accent a home with distinction, taste, and detail.

5 **Behr Princess** Behr Premium Plus Interior Flat wall paint provides the ultimate durability! This traditional matte finish has improved hiding for greater coverage and is exceptionally scrubbable.

6 **Brass Craft®** For quality plumbing products from stops, risers, connectors and everything in between, choose the professional plumber's choice, Brass Craft®. For more information, call 248-305-6000.

7 **Delta Faucet** Delta's new Victorian collection includes lavatory sink faucets, tub and shower faucets, roman tub faucets and a hand shower. Victorian bath accessories such as towel bars, towel rings, lotion dispensers, and toilet paper holders are also available.

8 **Forbo Linoleum** Marmoleum is made from natural ingredients. Warm, allergen-resistant, biodegradable. Choose from 200+ colors to design unique home environments. Marmoleum... Seriously fun floors. Naturally.

9 **Franklin Brass Mfg. Co.** Stainless Steel Designer Towel Shelf adds a luxurious look to any bathroom, while greatly increasing usable space to hang towels. Easy to install and clean.

10 **Ginger®** Hand-finished, solid forged brass lighting, mirrors, bathroom accessories and decorative hardware — over 20 collections and finishes, from traditional to art deco to modern.

11 **Harden Furniture** Since 1844, Harden has offered high quality solid wood furniture and upholstery in a variety of styles that you can share with your family for generations.

12 **HomeGoods** HomeGoods offers an ever-changing collection of brand name home fashions for up to 60% less than department and specialty store prices, every day.

13 **James Hardie Siding Products** A durable, low-maintenance alternative to wood and vinyl siding. A variety of designs are offered, warranted against rotting, cracking and delaminating.

14 **KitchenAid** In an expansion of its Architect Series Pro Line™ Cooking Appliances, KitchenAid has introduced a 48-inch gas cooktop with sealed burners and griddle or grill option.

15 **ArchMetal Cabinetry** FREE [illegible] kitchen with design ideas and [illegible] cabinet industry leader. Outstanding [illegible] custom look without the custom price. FREE.

16 **Lennox Industries** Lennox offers a complete line of energy-efficient air conditioners that utilize innovative technology to save energy while delivering outstanding comfort. Visit us at www.lennoxcom. 800-9-Lennox.

17 **Liberty Hardware** Customize your cabinetry with style using Wood Hill™ cabinet hardware. Designs range from traditional, contemporary, whimsical, or rustic. Triple lacquered for extra durability.

18 **Marvin Windows and Doors** A wide range of products were used in The Timeless Home including Clad Basements and Clad Ultimate Double Hungs. The clad aluminum featured Marvin's Arctic White finish for a durable and low maintenance exterior to protect the beautiful wood interior.

19 **Masonite International Corp.** Masonite International is a world leader in the design and manufacturing of doors, door components and entry systems. The Timeless Home features interior doors from the Premdor Collection of Premium Quality Doors and Masonite Wainscot.

20 **Mill's Pride** Mill's Pride offers a wide range of storage solutions, from closets to garage to laundry rooms. Each system can be customized to meet specific storage needs while maximizing space.

21 **Pioneer** PRO-1000HD 50" High Definition Wide Screen PureVision Plasma Monitor 4" thin, reproduces incredible movie images and stunning XGA computer graphics. Comes with elegant high gloss frame.

22 **Quality Cabinets** [illegible] Cabinets' Shaker-Nutmeg [illegible] cabinet layout features a super lazy susan, [illegible] compartment recycling center, a stem glass holder, and wall organizer.

23 **Rejuvenation** The Wilson, an Old-English style lantern, illuminates the exterior of the Timeless Home in Atlanta. Its sturdy brass construction makes it an ideal choice for outdoor lighting.

24 **Southern Wood Floors** Southern Wood Floors harvests buildings, not trees, to make Antique Heart Pine. Reclaimed beams and timbers of historic wood from 18th- and 19th-century buildings are meticulously milled for floors, walls and cabinet stock.

25 **USPL** No sanding, sawing or painting. Cashmere Xtenor™ Hope Composite and Structural Lumber make decking easy, and maintenance practically obsolete. Made from recycled material. No special tools required.

26 **W/C Technology** Quiet PF/2® Suburban™ Flushes Gerber® Maurice™ Toilet. A new generation power flush system now flushes Gerber's low silhouette, one-piece Maurice Toilet. Flushes only 1.0 gallons. Check wctc.com, for info.

27 **Weiser Lock** The Powerbolt 1000 keyless entry system provides safe, quick home entry for homeowners and their families, with the touch of a four-to-eight digit access code.

28 **Whirlpool** The front-loading Duet pair from Whirlpool provides outstanding cleaning and gentleness while using 65% less water and 67% less electricity than standard washing machines.

{thetimelesshome}

the perfect potting shed

An avid gardener envisions the ideal workspace

Leigh Rye was excited about gardening in the Northeast. She and her husband, Peter, along with their children, had just moved from the tropical surroundings of Orlando, Florida, to the four season climate of Wyomissing, Pennsylvania. "I couldn't wait to plant bulbs in the fall," she says, recalling her enthusiasm.

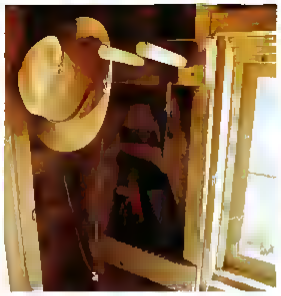
But during the renovation of their new home, a 1926 brick Colonial Revival, Leigh could barely find her gardening tools under a mound of construction materials in the garage. She vowed that when the house was done, she would build a potting shed. Leigh envisioned not only a place where she could locate her things with ease but also a gardener's retreat, a spot to start seedlings or relax while reading up on planting techniques. Her concept included tool racks and cubbies, a perfect height work table, and shelves for her gardening books.

She also wanted a structure that would complement her house's classic architecture. Ruling out a custom-built shed as impractical and too expensive, Leigh bought a 6-by-10 foot prefabricated structure from Gardensheds, a Web-based company in Lancaster, Pennsylvania. Local Amish craftsmen built it with walls of specially milled full-dimension 2x4s and a floor of 2x6 tongue-and-groove fir. They installed a hip roof to give the interior a more spacious feel, topped it with a cupola for ventilation, and dressed up the outside with red-cedar roof shingles, window boxes, fish-scale sidewall shingles, and paint colors to match Leigh's house.

The company shipped the structure assembled, but before it could be installed, the site had to be prepared. A contractor excavated a 9-by-10-foot area and filled the hole with an 8 inch-deep level bed of gravel. For stability, he put an 18 inch-square, 2 inch-thick concrete paver at each corner, on which he set the shed.

It didn't take long for Leigh to stock the shelves and plant the window boxes. Her backyard refuge, visible from the breakfast room, is a focal point of the yard. "It's a unifying element," says Leigh. "And now that I have all my tools in one place, I'll spend more time in the garden doing what I enjoy."

BY PETER WALSH PHOTOGRAPHS BY RICHARD WARREN



ABOVE RIGHT: This tiny interior stays uncluttered because there is a place for everything. Long-handled shovels, rakes, brooms, hand tools, or hats and jackets go up on wall racks; smaller items go on shelves or inside the potting bench. TOP LEFT: The gap between studs is the perfect spot to store hand tools, spray bottles, or little peat pots. The shelves are made by sliding a 13-inch length of 2x4 between the studs and securing it with 2-inch #8 brass square-head screws inserted at an angle. A 17-inch-long 1x4 front plate screwed to the face of the studs holds items securely. ABOVE LEFT: Cary Ahl of Gardensheds (helping out the Amish builder, who would not be photographed for religious reasons) shows how a tool rack, positioned to allow space above for the ten of a rake or the blade of a shovel, attaches to the face of the interior studs with 3½-inch #10 brass screws. The rack consists of ¾-inch-diameter ash dowels, paired 2½ inches apart and mounted in holes drilled into a 2x4. Each pair is separated by 10½ inches to accommodate tool heads and secured in the holes with latex wood glue.

HOW BIG SHOULD IT BE?

A backyard shed can serve many purposes, from a snug gardener's workroom like Leigh Rye's to a sizable shelter for lawn tractors and snowblowers. The important thing is to have enough space for the items you want to store. "A tool that you can't get to is a tool that you won't use," says Russ Morash, executive producer at *This Old House* and *The Victory Garden*. "With a shed you have a dedicated place where you can reach everything you need quickly, without fishing around behind the croquet set."

To figure out how big a shed you need, says Nellie Ahl, designer and owner at Gardensheds, first consider what you'll use the building for. "Leigh wanted a potting shed, so she didn't need to squeeze anything bigger than a wheelbarrow through the door," she says. "But if you plan to house a tractor, then you want one at least 8 by 14 feet."

Once you determine what you're going to put in the shed, break out the yardstick and measure the larger items. For example, a 6-foot opening is usually big enough for a lawn tractor, but check the width of its blade too. Ahl offers this suggestion: "Lay out all your stuff, and that will tell you how much space you need." —*P.W.*

BELOW LEFT: Leigh Rye pots at her workbench, built from two 2x8 tongue-and-groove fir planks, it forms the focal point of the shed. Its drawers keep gloves, tools, pots, and other gardening necessities close at hand, while its counter serves as the main work surface. NEAR RIGHT: Ahl shows how two 24½-inch-wide drawers slide into place, riding on gliders screwed to the inner face of the sides and to the center partition. FAR RIGHT: Ahl double-checks the 10½-inch-deep pine bookcase for level. The builder set it under the windows flush with the ledge and attached it to the studs with #8 brass screws. BELOW RIGHT: This sunny spot is currently providing extra storage, but it will be a great place for Leigh to start trays of seedlings come spring.

WHERE TO FIND IT – SEE DIRECTORY – PAGE 172

gardening gizmos

Whether you keep your landscaping tools in a potting shed, a storage shed, or the garage, here are some new items designed to ease the burden of yard care

BY URBAN REED

DRIP, DRIP, HOORAY

Drip irrigation systems provide steady nourishment for plants and conserve water while eliminating the need for garden hoses. The 50-foot, ½-inch plastic tubing in this vegetable garden kit from Toro connects to a standard hose. Drip emitters spaced 12 inches apart distribute about ½ gallon per hour during every 30-minute period. Couplers, elbows, and tees allow for numerous configurations, and as much as 100 feet of pipe can be added with little loss of flow.

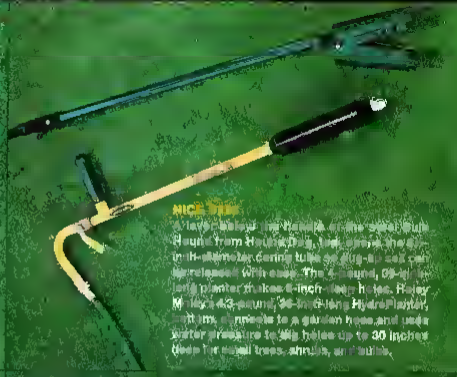
PHOTOGRAPHS BY JAMES WORRELL

PRUNING PRUNERS

Thanks to dual pivot points, the cutting-edge pruners on Fiskars' new Power-Light shears require 20 percent less effort to cut branches and twigs than standard bypass models. The shears make quick work through branches up to ¾ inch in diameter. Anvil-type pruners, left, have a single cutting blade and a broad, flat surface that helps them hold up to heavy use.

TRIMMED

The new 18-inch trimmer from Ryobi packs a 24-volt battery-driven motor that's more powerful than many gasoline-powered models. The 12-pound unit runs for 30 minutes on a single charge and takes only 1 hour to fully recharge. In the 4-in-1 multi-head model, shown, a head swivels for edging, while a blade, metal line guide, and plastic line guide are interchangeable for varying yard tasks.

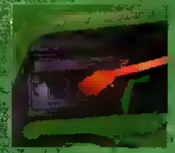


NICE TRY

A lawn sprinkler from Rainpik is one of the most fun models from Hozelock. The 4-inch-diameter, multi-directional spinner turns as it sprays, creating rainbows in the water. The 4-pound, 09-inch-tall plastic unit takes 6-inch-deep holes. Raley Manufacturing's 43-pound, 36-inch-long HydroPlanter, at left, connects to a garden hose and uses water pressure to dig holes up to 30 inches deep for small trees, shrubs, or bulbs.

REEL SIMPLE

The Ames Swivel Hose Reel from Hyde Industries uses hose water pressure to activate a motor that gathers up to 200 feet of ½-inch hose in about 2½ minutes. To keep the hose from moving dangerously fast, a valve in the unit reduces the pressure to about 40 pounds per square inch (psi) from the household average of 60 to 75 psi. An automatic reset shuts the motor down when the hose is fully retracted.



PLUG-IN POWER

From lawn-mowing tasks for models with electrical outlets, Black+Decker has added two models to its 32-volt lawn trimmer family. The Lawnsweeper, at left, features a 13-inch-wide vacuum unit that collects grass clippings and leaves in a 1½-bushel bag. The Lawnsweeper Plus, at right, has a 15-inch-wide vacuum and a 1½-bushel bag. Both models have a quick-mounting system for the trimmer head, which can be swapped for a grass-shear or brush-cutter attachment.


SOMEDAY AN EXECUTIVE WILL HAVE THIS VIEW. BUT DID HE EARN IT?
IF YOU WANT PEOPLE'S RESPECT, BUILD IT RIGHT THE FIRST TIME.
THAT'S THE WORK ETHIC BEHIND EVERY TUNDRA — THE TRUCK THAT
THE TOYOTA TUNDRA. BETTER FROM THE GROUND UP.
GET THE FEELING TOYOTA.

third time's the charm

After two renovations, a couple finally have the house of their dreams

Serial renovators. That's what my husband, Harold, has called us since we remodeled our small house in Buck Hill Falls, Pennsylvania, and then renovated it again when we wanted more space.

In 1913, our cottage—as homes are called in this Quaker community—was a modest 1,500-square-foot structure. By 1993, when we bought it, a large screened porch had been added to the back, but, for the most part, previous owners had elected to put their money into such modern inventions as fake-wood paneling, vinyl accordion doors, and industrial carpeting. Translation: The place was a dump. But it had potential, an attractive price tag, and a view of the mountains—just the sort of project that my husband and I thrive on.

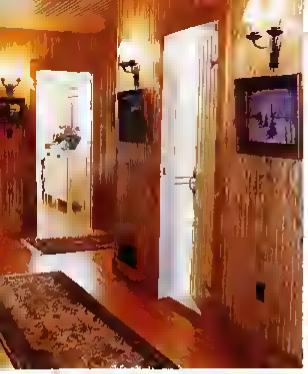
For me, fixing up a house is in my genes. By the time I was 10 years old I had been pressed into apprenticeship by my do-it-yourself dad, and I knew what a ratchet screwdriver was before I could use lipstick. On the other hand, my husband grew up in an apartment with his concert pianist mother and didn't know until


ORIGINAL


FIRST RENOVATION

BY KAREN WALDEN PHOTOGRAPHS BY MATTHEW BENSON

OPPOSITE, FAR LEFT: *The cottage in 1993, as it had looked for years.* NEAR LEFT: *After the first renovation in 1996.* THIS PAGE: *The final answer: an addition, with its low roof, row of white columns, and shingle siding—just what the homeowners wanted.*



An expanded front hall connects the new living room to the kitchen and dining room. The door on the right opens into an enlarged bathroom.

recently that screwdrivers had been electrified. But surprisingly, when it comes to home improvement, we're a solid team.

Six years ago, during the first big renovation, we reclad the exterior, remodeled the kitchen, and bumped up the roof to add a master suite. As successful as those upgrades turned out, we were still missing a living area cozy enough for two but spacious enough for entertaining friends and family. After engaging in the usual renovator's debate—can we afford it? what should it look like?—we forged ahead on our biggest construction project with a beautiful design in hand and a terrific contractor, Paul Gravel, and crew on board.

When we first met with architect Doug Pfendler, of Architectural Insite in Stroudsburg, Pennsylvania, we presented him with a set of absolute parameters for the house—which, it turned out, weren't so absolute after all. Priorities changed as we went through the design process. We traded off one gable for another, a half-round window for an oval. The nonnegotiable mandate: Make it blend in with the original, make it look old.

My husband and I love Shingle Style houses, and Pfendler's designs captured the look and feel of the style brilliantly. The one that utterly captivated us had a row of columns defining a new front porch. "The short columns lend a more human scale to the facade of the house," Pfendler says. "Their girth makes the roof seem heavy, as if it hugs the ground—a whimsical illusion that makes a cottage a cottage."

Because we had to raze a small first-floor bedroom where the new 22 by 25-foot living area would be sited, Pfendler added a larger one, 16 by 18 feet, to the second floor above the living room. He included a companion bathroom with beadboard wainscoting, a pedestal sink, and mosaic tile floors. And heck, we said, while we're at it, let's enlarge the main-floor bath, foyer, and back deck, too. This would be a major renovation, with a budget to match.

Work began after Labor Day 2000. In many home renovations, there is potential for disaster lurking behind every beam and foundation wall. For us, it was realized during the first week. "Ledge rock" is a term you definitely don't want to hear from the crew excavating your new foundation. Because a shelf of the stuff ran through the front section of our basement, we had two choices: Blast it to smithereens or build around it. The second was the more practical and economical course: We simply raised the floor in that portion of the basement by 4 feet and ultimately put the oil tanks, lying horizontally, on top.

We were fortunate that our next big challenge didn't come until several weeks after the addition started to take shape. This one, however, had financial consequences. We had asked Pfendler to design a shed-roof dormer for the new bedroom to eke out the maximum square footage and provide plenty of windows to capture the view. Once Gravel and crew had erected the skeleton, with ridge beams and rafters in place, it was obvious that the dormer looked odd because it was very similar in size and shape to one that already existed on that side of the house. We put Gravel on hold and placed a panic call to Pfendler. The resolution: Tear it down and put two 3½-foot-wide doghouse (gable) dormers in its place. Boom, another $2,500. That change not only cost a bundle, it also put us a week behind in our building schedule. But we knew we couldn't live with this design flaw, the right thing to do was to do it right.

SETTING COLUMNS

On the front of the house, five 7-foot-tall, 18-inch-diameter hollow columns support the new porch roof. They're made from 2-inch thick tongue-and-groove white pine staves and were finished on a lathe to smooth the exterior. At 200 pounds each, they're both decorative and load-bearing. Shipped in three pieces—column, capital, and plinth—they were assembled on-site.

1. To prep the site for the columns, mason John Anderson sets flagstone pads where the columns will rest on the porch. Normally, the entire flagstone terrace would be set, but scheduling has forced this interim step. He will complete the porch after the columns have been installed.

2. General contractor Paul Gravel drills holes in the column bottom and plinth, then uses four 6-inch screws to attach the components; the capital is secured to the column body in the same manner.

3. With the column turned right side up and set in place, Paul's son Todd Gravel applies copper flashing over the capital, securing it with copper nails. The weight of the roof will hold the columns in place.

RIGHT: *Exposed Douglas fir ceiling joists complement the rustic look of the stone fireplace in the new living room. French doors lead to a backyard deck.*

In addition to tales of woe, however, there were moments of pure delight. When Gravel installed the special-order (and special price) Douglas fir ceiling joists, 4 by 12 inches and 22 feet long, in the living room, they met our expectation perfectly (see "Exposed Beams," below). The heavy timbers lend importance and a depth of color to a room that is virtually a wood cocoon: tongue-and-groove 2x6 pine board ceiling between the fir beams, 10-inch wide pine flooring, and pine V-groove walls.

This new living room is the centerpiece and raison d'être of the addition. To have it blend seamlessly with the original structure, we used similar windows, paneling, and beadboard; matching stains, and identical finish details, such as 3¼-inch flat casings around windows and 5¼-inch tall baseboards. Holding center stage in the room is a hefty stone fireplace based on a Rumford design. A double set of French doors leading to the deck affords a panoramic view of the mountains. The room is ample but not overwhelmingly large, and in scale with the rest of the house.

To link the new living room to the existing dining room, kitchen, and foyer, Pfendler enlarged a connecting hall, from 3 by 11 feet to 7 by 11 feet, which seems to be a perfect size for both separating and uniting the spaces.

On the exterior, the trim dimensions were beefed up to complement the columns' heft. Pine ripped to 3½ inches surrounds windows and doors, and the fascia boards measure 6½ inches. A 36-inch wide Dutch door was specified to give prominence to the entry. Typical of the Shingle Style, a 5 foot bumpout was added to break up the façade of the new living room; inside, it houses a window seat with storage beneath. Also conforming to style, the exterior was clad in cedar shingles, but instead of using individual pieces, Gravel hung labor-saving 2-by 8 foot shingle-covered panels. Since shingles don't naturally weather well in this part of the country—they turn very dark brown instead of a pleasing gray—they're covered with one coat of oil-based primer and two of hunter green latex stain.

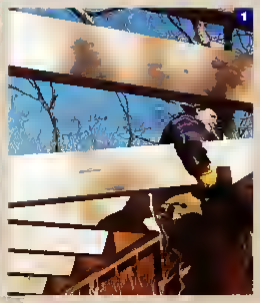
The old house sits on a two foot thick solid stone foundation. Because the cost of duplicating such a feature today would be prohibitively high, we took the next-best approach: laying a concrete-block foundation and covering it with a stone veneer. Mason John Anderson executed this task, as well as building a stone fireplace, new stone columns that support the back deck, and a low stone wall that marks the property line. My husband insisted on this abundance of stone, and it's perfectly in sync with elements of Shingle Style houses. When asked to name his favorite part of the renovation, Harold just smiles and says, "The stone, the stone, and the stone." Don't even ask what the mason's bill totaled. (All his work came to just under $40,000.)

As money got tight, we had to make trade-offs. (Note: There were no cutbacks in stonework.) But they were always based on this premise: Put the money into anything that is a permanent part of the structure rather than just a cosmetic feature. Thus, we installed wide-board floors, radiant heat, and the ductwork for a future cooling system we wanted, but we held off on the wall sconces and ceiling fixtures in the living room, new furniture, and window treatments, knowing they could easily be added later, once our coffers were replenished. We still don't have all our lighting fixtures. And we're living with slightly faded and worn furniture—which fortuitously is barely noticeable due to the lack of good lighting.

Work was completed this past July. Despite our cost saving measures, we spent more than anticipated—which did not come as a big surprise to us. But we love how the renovation turned out. We got exactly what we wanted—a room that looks old but is true to its roots, and a space that feels cozy when just the two of us are there but grand enough when friends and family visit. We wouldn't change a thing. At least for now. ■

ABOVE: *"It was a usual disaster, but soundly built," said contractor Paul Gravel when he toured the original house.* LEFT: *The stone-veneer foundation and new fireplace anchor the cottage to the site and blend with the original foundation. Next to the chimney, a covered doorway leads to the new basement workshop. On the roof, two doghouse dormers look out on the mountain view from a new bedroom.*

EXPOSED BEAMS



Eleven custom-milled Douglas fir beams, weighing in at more than 250 pounds apiece, are used as both structural ceiling joists and decorative elements in the new living room. (1) Lifted into place, the beams rest on the doubled 2x8 top plate. Gravel and crew installed fillet pieces between the joists, easing them into place with a 2x4 buffer block and a sledgehammer. The fillers are cut from the same stock as the beams and serve to keep the beams plumb. The beams are toenailed to the fillers with 3¼-inch coated box nails, used to avoid splitting the wood. (2) The crew fastens the beams to the top plate with one 16d common nail before bringing in the big guns: three 5-inch-long ¾-inch lag bolts screwed through the top plate into the beam.

MATCHING STONEWORK

NEAR RIGHT: To blend the old stone foundation, laid in 1913, with the new stone-veneer-on-concrete-block wall for the living room addition, mason John Anderson removes stones from the old foundation in a staggered vertical line, a process called eswtoothing. Using a hammer and a mason's chisel, he chips out mortar and loosens the rocks. To ensure a good bond, he brushes away all the old mortar and debris. Since rock just 8 inches deep is needed for the veneer, he chips off the back side of each piece to the proper thickness. After final fitting, requiring more hammer and chisel work, he butters the new wall and the stone with fresh mortar and taps them in place. Anderson repeats these steps along the line until the wall is complete. FAR RIGHT: The result is a nearly invisible zigzagged line between old and new. Rock harvested from the site during excavation for the living room addition is geologically in sync and blends in with the old foundation.

WHERE TO FIND IT — SEE DIRECTORY — PAGE 142

DIRECTORY

TV CLASSICS, PAGE 113 • PROGRAM SCHEDULE, PAGE 128 • WHERE TO FIND IT, PAGE 114

Over and Out

Key West winds up, sending TOH to Watertown, Mass.

BY DAN DIGLERICO

Key changes: A pair of bi-fold French doors open out onto the renovated rear porch, which benefits from a fresh, high-gloss finish and raised ceiling.

PHOTOS: PASCAL BLANCHIN (TOP LEFT); WILLIAM HUBER (BOTTOM RIGHT)

Week 8 (March 2–3)

In the penultimate episode of the Key West project, *TOH* master carpenter Norm Abram helps window contractor Charles Mallis replace the house's louvered metal units with six over six double hung sash; handblown glass panes give the new windows a historical look. After the installation, the two talk sash balancing options: front weights and pulleys to spring latched tubing to good old-fashioned prop sticks. Cabinet installer John Mele outfits the kitchen with Italian made, freestanding upper and lower cabinets. Norm inspects the case work of trim carpenter Steve Roth, whose material of choice is a moisture- and insect-resistant poly urethane foam; then sees how flooring contractor Howard Yeager inlays the quartersawn heart pine floor with a diamond pattern of flat sawn reclaimed pine. *TOH* show host Steve Thomas looks on as roofing contractor Seamus Heany covers the sawtooth roof with heavy gauge metal panels, capping them w th a 14-inch ridge roll.

Watch and Learn: Installing metal roof panels

Resources: Closet system installer: Mele Contracting, Brooklyn, NY; 718-852-5061. Flooring manufacturer: Goodwin Heart Pine Co., Micanopy, FL; 800-336-3115. Flooring contractor: Keys Floors, Marathon, FL; 305-294-4453. Roofing contractor: Chodzin Roofing, Key West, FL; 305-294-8888.

Week 7 (March 9–10)

Steve and *TOH* plumbing and heating consultant Richard Trethewey inspect the pool's supply and return lines, which hook up to a new filtration system located at the side of the house. In the front hallway, Steve admires the craftsmanship of tiling contractor Tom Lapp. Painting contractor Perry Fergus shows Steve how he'll sand the clapboards with 50-grit paper and then hit them with an oil based primer and two coats of latex finish paint. In the great room, lead carpenter Bev Horlick hangs a pair of laminated mahogany French doors on polished brass h nges. Landscape contractor Mari Blair takes Steve through the new walking garden, which features a winding brick path and lush vegetation, including blue sage and green thatch palms. Norm and homeowner Michael Miller admire the heart pine floor and raised panel doors on the cabinetry in the library. Norm then gets a lighting tour from electrical contractor Will Benson: some 400 low voltage incandescent bulbs light up the great room, while a hanging antique lamp softly illuminates the refurbished poolside porch. Finally, Steve inspects the kitchen as home-owner Helen Colley prepares hors d oeuvres for the wrap party.

Watch and Learn: Custom building shutters

Resources: Landscape architect: Craig Reynolds, Key West, FL. Landscape contractor: Mari Blair Plant Creations Inc., Homestead, FL, 305 248-8147. Landscape lighting supplier: Kim Lighting, City of Industry, CA; 626-968-5668. Mill worker: Hansen & Bringle Shutter Makers, Key West, FL; 305-294-4279. Tile supplier: Wholesale Tiles and Accessories, Tampa, FL; 813-248-0455. Tile installer: Tiles Etcetera, Key West, FL; 305-293-9601. Pool heat pump: Aqua Cal, St Petersburg, FL; 800-768-7751. Shutters: Hansen & Bringle Cabinets, Key West, FL; 305-294-4279.

Week 1 (March 16–17)

Steve and Norm introduce the new project house, a motley 1886 three-story Victorian located in Watertown, a Boston suburb. Norm's cursory in-spection of the exterior reveals some obvious problem spots, namely the water logged porch roof and paint encrusted clapboard siding. Inside, he and Steve praise the quartersawn white-oak floors and the fireplace mantels, but are less impressed with the tangled floor plan: 5,000 square feet spread over 18 rooms, with three staircases on the first floor alone. Homeowners Christian Nolen and Susan Denny agree and during their walk through discuss with Steve and Norm ways to improve the layout. *TOH* general contractor Tom Silva conducts a more thorough inspection of the exterior water damage, iden tifying a shoddy gooseneck between the gutter and leader pipe as the culprit behind the rotted wall and corner board. For the porch roof he suggests trading in the slate shingles for something less brittle, given the frequency with which icicles fall from the eaves above. In the basement, his sharp eye homes in on an illegal sump-pump system and trash incin-erator as well as traces of asbestos insulation around the ductwork, a rusty heating plant...and an antiquated electrical panel.

Watch and Learn: Inspecting slate shingles

Week 2 (March 23–24)

Norm and Tom test out different methods of removing the house's stubborn exterior lead paint...from traditional paint scrapers to heat plates to state-of-the-art power sanders. Steve visits a renovated house in the nearby town of Cambridge to appraise the work of Sandra and Toby Fairbank, the designer/architect team hired by Christian and Susan. Richard's assessment of the house's mech anical systems reveals sound pping, but the oversize heating plant and twin hot water tanks are ready for an upgrade. While Sandra and Christian take Steve through their ideas for the renovation, a beleaguered Norm and Tom continue stripping paint, which prompts them to consider a total ad ng replacement.

Watch and Learn: Stripping exterior paint

Resources: Arborist: Matthew R Fort Landscape & Tree Service, 781-861-0505. Architect: Fairbank Design, 617-497-0693. Paint strapp ng tool: Metabo Tools, 800-638-2264.

Week 3 (March 30–31)

Steve catches up with Norm and Tom as they prepare to disassemble a first-floor grand staircase, which will be moved from the rear of the house to the center. After Steve helps them get started—by busting through the plaster lath to reveal the undersides of the stair—he goes for a computer generated 3-D tour of the prospective floor plan with Sandra and virtual-reality designer Diane Davis. Then it's back to the staircase to help take down the top rise. A professional asbestos-removal crew has sealed off the basement and prepares to strip away asbestos-impregnated wrap insulation from the ductwork. Upstairs, Norm carefully disconnects the final section of the staircase.

Watch and Learn: Removing asbestos

Resources: Asbestos removal: Dec Tam Corp., 800-832-8261. Asbestos testing lab: Covino Environmental Associates Inc., 781-933-2555. Dumpster service supplier: James G. Grant Co., 617-361-2716. Technical support for virtual-reality walk through: ICAS, Integrated CADD Services, 617-576-6778.

TOH hopes to bring back the re fined beauty of this 1886 Victorian located on a quiet, tree-lined street in Watertown, Mass.

ON THE JOB
pp. 16–16

"You've Got to Know When to Mold 'Em," page 16—The Decorators Supply Co., Chicago, IL, 773-847-6300; www.decoratorssupply.com. Resmart East, Ashville, NC; 800-497-4376, www.resmart.com.

"Style Maven," page 18—*Victorian Glory in San Francisco and the Bay Area*, by Paul Duchscherer and Douglas Keister, 2001, Viking Studio, published by the Penguin Group, Penguin Putnam Inc., New York, 800-788-6262, www.penguinputnam.com.

Our thanks to: Stephen Grage, vice president, The Decorators Supply Co. Jeff Hamrick, office manager, Resmart East.

NOUSE CALLS WITH STEVE
pp. 20–22

Kitchen designer and cabinetmaker: Jeff Peavey, The Kennebec Company, Bath, ME, 207-443-2131.

Hinges, page 22—*(sidebar)* Handforged rat tail hinges: Nick Vincent, blacksmith, Nathan's Forge, Ltd., Umontown, MD, 410-848-7903, www.nathansforge.com. 1) Windsor Victorian hinge #339Q, Crown City Hardware, Pasadena, CA; 800-950-1047, www.crowncityhardware.com. 2) Brass-plated hinge #R 08BM 1560, House of Antique Hardware, Portland, OR, 888-223-2545, www.houseofantiquehardware.com. 3) Rusted-iron hinge #AH-02005292, Van Dyke's Restorers, Woonsocket, SD, 800-558-1234; www.vandykes.com. 4) Hoosier cabinet hinge #327B, Crown City Hardware. 5) Hammered Colonial hinge #3404 AC, Amerock, Rockford, IL, 815-969-6308, www.amerock.com. 6) Brass Colonial #1670 AE, Amerock. 7) Butterfly hinge #HF-12, Horton Brasses Inc., Cromwell, CT, 800-754-9127, www.hortonbrasses.com. 8) Colonial strap hinge #1600-CB, Amerock. 9) Butterfly hinge #199A, Crown City Hardware. 10) Hinge with finials #350F, Omnia Industries Inc., Cedar Grove, NJ, 973-239-7272; www.omniaindustries.com. 11) Mackintosh hinge #AD-4086, Horton Brasses Inc.

ASK NORM
pp. 24–26

Attic ladders: Werner Co., Greenville, PA; 724-588-8600, www.wernerladder.com. Bessler Stairway Company, Memphis, TN; 901-795-9200, www.bessler.com.

Soffet vents: Certainteed Corporation, Valley Forge, PA, 800-233-8990; www.certainteed.com.

Bituminous waterproofing membrane: Grace Construction Products (WR Grace & Co.), Cambridge, MA, 800-444-6459, www.na.graceconstruction.com.

Roofing contractors: National Roofing Contractors Association, NRCA, Rosemont, IL, 847-299-9070; www.nrca.net.

Cementitious waterproofing paint: Drylok by UGL, Scranton, PA;

House Calls, pp. 20–22. Check out this sampling of finely crafted historic hardware for kitchen and other cabinetry in the "Ideas Notebook."

800-272-3235, www.ugl.com. Masonry screws: Tapcon; ITWBuildex, Itasca, IL, 800-284-5339, www.itwbuildex.com. Thin brick: Castaic Brick & Clay, Santa Clarita, CA, 800-227-8242, www.castaicbrick.com. Brick info: The Brick Industry Association (BIA), Reston, VA, 703-620-0010; www.bia.org.

Our thanks to: Robert Clark, Home Care Services, Alexandria, VA, 703-765-4595. John Terry, technical services, York International Corp., Norman, OK, 877-874-7378, www.yorkupg.com.

MATERIALS: GREASE IB THE WORO
pp. 36–36

Aerosol: Aerokrol, Kano Laboratories, Nashville, TN; 800-311-3374; www.kanolabs.com. Beeswax: J. & N. Sales, Inc., Kokomo, IN; 765-459-4589, www.jandnsales.com. Lundmark Wax Co., Addison, IL, 800-586-3627. Liquid mineral oil: 3 in-One Oil, WD-40 Company, San Diego, CA, 619-275-1400. Molybdenum disulfide (moly) paste and powdered Teflon: Hoppe's, Coatesville, PA, 800-962-5757, www.hoppes.com.

For additional information: Independent Lubricant Manufacturers Association (ILMA), Alexandria, VA, 703-684-5574, www.ilma.org. Institute for Local Self-Reliance (ILSR), Washington, DC, 202-232-4108; www.ilsr.org. National Petrochemical & Refiners Association (NPRA), Washington, DC, 202-457-0480; www.npradc.org. Society of Tribologists and Lubrication Engineers (STLE), Park Ridge, IL, 847-825-5536; www.stle.org. United Soybean Board, Chesterfield, MO, 800-989-8721; www.unitedsoybean.org.

Our thanks to: Jeffrey L. Streator, associate professor, George W. Woodruff School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA, 404-894-2742. George R. Gavalas, professor of chemical engineering, California Institute of Technology. John A. Koch, JTM Products, Inc. (alternatives to petroleum-based lubricants), Solon, OH; 800-229-6744; www.jtmproducts.inc.com. Serge Pakhomou, Paramount Corporation (mica), New York, NY; 212-247-4677, www.micasales.com.

UPKEEP: SPRING GLEANING
pp. 44–47

Housecleaning service: Ronny Gavish and Shai Menashe, AllBright Carpet Cleaning & Service Inc., New York, NY, 866-247-0700. Portable extractor: Comanche Model 3, Prochem, A Castle Rock Industries Company, Chandler, AZ, 480-899-7000, www.prochem.com.

Cleaning Products

Wool rug: Rx for Browning, Chemspec Manufacturing Corp., Baltimore, MD, 800-638-7370; www.chemspec.com. Mattress: Biodegradable Powdered One-Clean, Chemspec. Bathroom wall: Restore4, Miracle Group Inc., Torrington, CT; 800-333-9325, www.restore-4.com. Bathroom floor: Mildew Stain Remover, Zep Manufacturing Company, Atlanta, GA, 877-428-9937, www.zepmfg.com. Kitchen: Stainless steel cleaner, Zep.

Our thanks to: Chuck Coffee and Scott Fish, Prochem.

BY OESIGN: WINE AND DINE
pp. 50–52

General contractor: John Cammarota, John Cammorata Construction, Rockville Centre, NY, 516-766-2086.

Refrigeration unit: WhisperKool 4200, Vinotheque Wine Cellars, Stockton, CA; 800-343-9463.

Our thanks to: Julie Lanning, Apex Sauna and Wine Cellars, St. Petersburg, FL; 800-870-2739; www.apexwinecellars.com.

NOMEOWNER'S NANDBOOK: INSTALLING A WINOOW
pp. 61–67

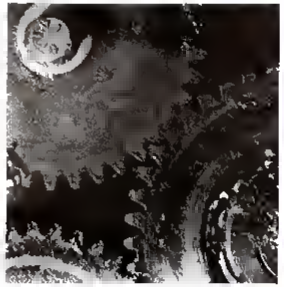
Window cross-sections

Wood: POZZI, Bend, OR, 800-922-6222, www.pozzi.com. Aluminum-clad: MARVIN Windows and Doors, Warroad, MN; 888-537-8268, www.marvin.com. Vinyl: Harvey Industries, Waltham, MA; 800-942-7839, www.harveyind.com. Fiberglass: ComfortLine, Inc., Toledo, OH; 800-522-4999; www.comfortlineinc.com.

Bituminous waterproof membrane: Vycor Plus, Grace Construction Products (WR Grace & Co.), Cambridge, MA; 800-444-6459, www.na.graceconstruction.com.

Mildew Stain Remover, Zep Manufacturing Company, Atlanta, GA, 877-428-9937, www.zepmfg.com. Bathroom floor: Mildew Stain Remover, Zep Manufacturing Company, Atlanta, GA, 877-428-9937, www.zepmfg.com. Kitchen: Stainless steel cleaner, Zep.

Our thanks to: Chuck Coffee and Scott Fish, Prochem.



"Grease Is the Word," Materials, pp. 36–38. A host of lubricants, from natural oils and greases to slippery synthetics, help minimize friction and keep your house and tools running smoothly.

PHOTO: DAVID HAMBLEY

PHOTO: ERIC AXENE

MANGNESTER TV PROJECT: A SYSTEMATIC APPROAGN
pp. 70–77

Architect: Stephen Robert Holt, AIA, Manchester, MA, 978-526-1281. Plumbing and heating contractor: Richard Bilo, Bilo Plumbing and Heating, Hamilton, MA; 978-468-4389. Oil tanks: The Roth Safety Tank, Roth Industries, Forest Park, IL; 708-488-1511, www.roth-usa.com. Radiant floor panels & PEX piping: Stadler Viega, Bedford, MA, 781-275-3122, www.stadlerviega.com. Hydro-Air system, air conditioner, and mini duct systems: Unico, St. Louis, MO, 800-527-0896, www.unicosystem.com. Boiler & hot-water tank: Viessmann, Warwick, RI, 401-732-0667, www.viessmann-us.com.

ERV unit. Venmar, Drummondville, Quebec, Canada, 800-567-3855, www.venmar-ventilation.com. **Copper Crimped System** The Rigid Tool Company, a subsidiary of Emerson, St. Louis, MO, 888-743-4333, www.ridgid.com. **Radiator** Vasco-Hydronic Alternatives, North Hampton, MA, 413-582-1303

THE TIMELESS HOME
pp. 78–94

Architect: Jeremiah Eck, Jeremiah Eck Architects Inc., Boston, MA, 617-367-9696. **Builder** Jason Yowell, Metropolitan Design & Construction Inc., Roswell, GA, 770-402-6368. **Civil engineer** Terry Boomer, BH&D Engineering Inc., Woodstock, GA, 678-445-9489. **Interior designer** Kay Douglass, Kay Douglass Interiors, Atlanta, GA, 404-995-0802.

SUBCONTRACTORS

Demo and site work: Ron Springer, Springer's Construction, Dawsonville, GA, 770-887-0168. **Excavators.** Ricky Bennett, Midway Grading & Hauling, Alpharetta, GA, 770-475-0024. **Foundation contractor** Billy Bennett and Gary Bennett, Rite Way Foundations Inc., Alpharetta, GA, 770-475-0024. **Waterproofing contractor:** Matt Veazey, Rub-R All Corporation, Alpharetta, GA, 770-569-1188. **Framing contractor:** Dennis Schrenk Jr., Hallmark Building Group, Lawrenceville, GA, 770-231-0257. **Housewrap contractor:** Rex Nelson, Correct Housewrap Inc., Suwanee, GA, 404-867-3918. **Masonry contractors** Marian Purvu, Sunrise Stucco Inc., Atlanta, GA, 404-867-9220. **Siding contractor:** Martin Shackelford, Shackelford Construction, Flowering Branch, GA, 770-932-1426. **Roofing contractor:** Felipe Vela, Felipe Vela Roofing, Marietta, GA, 404-213-5491. **Copper:** Masco Contractor Services d.b.a. Quality Insulation, Norcross, GA, 770-448-7005. **Plumbing contractor:** Michael Millwood with Joe Addison, Millwood Plumbing, Acworth, GA, 770-974-3950. **HVAC contractor** Ron Jones and Dewey Neese, Neese-Jones Heating & Cooling, Alpharetta, GA, 770-751-1850. **Electrical contractor:** William Just, Jaillet Electric Inc., Cartersville, GA, 678-721-0123. **Structured wiring and home automation** Jesse Crossley, Masco Contractor Services, Atlanta, GA, 770-448-7005. **Insulation.** Masco Contractor Services d.b.a. Quality Insulation, Norcross, GA, 770-448-7005. **Drywall and stone contractor:** Ray Ziani, Tile Contractors, Atlanta, GA, 678-410-1605. **Painting contractor:** Guillermo Pacheco, G.A.P. Painting Co., Atlanta, GA, 404-213-4105. **Wood floors:** Scott Banks, Pacific Hardwood Floors, Marietta, GA, 770-421-9848; www.pacifichardwoods.net. **Wood trim & cabinet:** Michael Beversdorf, Classic Design and Trim, Woodstock, GA, 770-924-7763. **Concrete countertops:** Mike Lobdell, Killercrete Precast Concrete, Atlanta, Ga., 404-219-8363. **Solid-surface countertop fabricator:** Wayne Jobson, Solid Surface Designs Inc., Decatur, GA, 404-499-0300; www.solidsurfacedesignsinc.com. **Linoleum:** Fred Seagraves, Seagraves Flooring Inc., Woodstock, GA, 770-966-9466. **Fireplace installation.** Chimney Solutions, Atlanta, GA, 770-753-0165.

BUILDING MATERIALS

Foundation waterproofing membrane: Rub-R-Wall "Plus," Rubber Polymer Corporation, Akron, OH, 800-860-7721. **Foundation drainage system:** J-Drain by JDR Enterprises Inc., Alpharetta, GA, 770-442-1461, www.j-drain.com. **Engineered lumber:** I-beams, laminated veneer lumber, Georgia-Pacific Corp., Atlanta, GA, 800-284-5347, www.gp.com/englumber. **Trim and interior panels:** PrimeTrim, and Ply-Bead wood panels, Georgia-Pacific Corp. **Housewrap:** Pink Wrap by Owens-Corning, Toledo, OH, 800-438-7465, www.owens corning.com. **Siding:** James Hardie Shingle Siding, Hardiplank and Harditrim for the board-and-batten, James Hardie Building Products, Mission Viejo, GA, 888-542-7343, www.jameshardie.com. **Brick.** Normandy/17th Century Collection, Boral Bricks, Inc., Atlanta, GA, 770-645-4500; www.boralbricks.com. **Roofing:** Authentic Roof 2000, in Galway Green, Crowe Building Products, Ltd., Hamilton, Ontario, Canada, 905-529-6818, www.authentic-roof.com. **Copper materials:** Copper Development Association, 212-251-7200; www.copper.org. **Ridge vents:** Certainteed, Valley Forge, PA, 800-782-8777, www.certainteed.com. **Windows and doors:** Casemaster casement and French casement windows, Clad Ultimate double-hung and picture windows, awnings, corner windows, and inswing French doors all by Marvin Windows and Doors, Warroad, MN, 888-819-2470, www.marvin.com. **Insulation:** UltraTouch, Bonded Logic, Chandler, AZ, 800-528-8219, www.bondedlogic.com. **Paint:** Grayling #PPWC-32 (siding) and Ultra Pure White (trim), Behr Process Corporation, Santa Ana, CA, 800-854-0133; www.behrpaint.com. **Door hardware:** Blakely Series #5360 in oil rubbed bronze, Baldwin, Reading, PA, 800-566-1986, www.baldwinhardware.com. **Garage doors:** Reserve Collection SemiCustom Design #4, with smooth panels, Clopay, Cincinnati, OH, 800-225-6729; www.clopaydoor.com. **Lighting:** Wilson #W236 with plain frosted glass in black enamel finish, Rejuvenation Lamp & Fixture Co., Portland, OR, 888-401-1900, www.rejuvenation.com. **Structured wiring technology:** Listman Home Technologies, Atlanta, GA, 678-441-9887, www.smarterhomesystem.com.

HVAC systems: Lennox Industries Inc., Richardson, TX, 800-953-6669; www.lennox.com. **Fireplace and chimney system:** Isokern North America Inc., Jacksonville, FL, 800-642-2920, www.isokern.net.

WALK-THROUGH

● *Living Room, pp. 80–81*

Flooring: Antique Heart Pine Select #AHPS in random 4-, 6-, and 8-inch widths, Southern Wood Floors, Augusta, GA, 888-488-7463; www.southernwoodfloors.com. **Recessed lighting:** Thomas Lighting, Gen-lyte Thomas Group LLC, Louisville, KY, 502-894-2400, www.thomaslighting.com. **Paint.** White #1052 *(walls)* and Slovepipe #3B40-6 *(window trim)*, Behr, 800-854-0133. **Furniture:** Normandy Sofa with Sagamore finish #8561-076 and Arm Chair in Sagamore finish with black nailhead trim, #9432, Harden Furniture Inc., McConnellsville, NY, 315-245-1000, www.harden.com. Coffee table, side table, and antique toy bowling pins, South of Market, Atlanta, Ga., 404-995-9399. Leather box side tables, HomeGoods, Framingham, MA, 800-614-4663, www.TJX.com. **Curtains, pillows, and throw:** Custom designs through Kay Douglass Interiors, 404-995-0802. **Curtain fabric:** Pindler & Pindler Inc. (to the trade), Moorpark, CA, 805-531-9090, www.pindler.com. **Drapery workroom:** Connoisseur's Choice (to the trade), 404-876-5572. **Drapery hardware:** Palace Forge, Atlanta, GA, 404-237-3825.

● *Dining Room, p. 81*

Cabinetry: Amherst in Charcoal on Maple, KraftMaid Cabinetry, Middlefield, OH, 888-562-7744, www.kraftmaid.com. **Chairs:** Hermosa #522-20, Norwalk Furniture, Norwalk, OH; www.norwalkfurniture.com. **White ceramic vases in cabinets:** Scandinavian series from Oly, Berkeley, CA, 510-644-1870 x205, www.olystudio.com. **Lantern, dinnerware, antique street signs and rug:** South of Market, 404-995-9399.

● *Home Office, p. 82*

Consulting designer: Lisa VanSickle, Merillat Industries, Adrian, MI, 800-575-8763; www.merillat.com. **Cabinetry:** Manor in Oatmeal on Maple, Amera by Merillat Industries, 800-575-8763. **Hardware.** Cup pull #PN0601V PEW-C, knob #PN0293V PEW C, Liberty Hardware, Winston-Salem, NC, 800-542-3789, www.libertyhardware.com. **Club chair:** #575.33.9, Milling Road Furniture, High Point, NC, 800-592-2537, www.millingroad.com. **Desk chair:** South of Market, 404-995-9399. **Concrete countertop:** Killercrete, 404-659-5736. **Desktop computer:** Gateway, 800-428-3929, www.gateway.com. **Flooring:** Camino del Inca, Walker Zanger, Sylmar, CA, 800-540-0235, www.walkerzanger.com. **Desklamp:** Elizabeth #T707 brushed nickel with shade #172-QP, Rejuvenation, 888-401-1900. **Drapery hardware:** Palace Forge; 404-237-3825. **Custom curtains and pillow:** Kay Douglass Interiors; 404-995-0802. **Accessories:** The Container Store, Dallas, TX, 800-733-3532, www.containerstore.com.

● *Media Room, p. 83*

Audio and video equipment: Pro-1000 HD high-definition widescreen plasma monitor, Pioneer; 800-421-1404, www.pioneerelectronics.com. **Distributed sound system.** Listman Home Technologies, 678-441-9887. **Cabinetry:** Shaker style Natural on Maple by Quality Cabinets, Duncanville, TX, 972-298-6101, www.qualitycabinets.com. **Reclining chairs:** Crawford #2976 covered in leather #84, color #21, Lane Furniture Industries, Tupelo, MS, www.lanefurniture.com. **Paint:** Elk Tan #3A9-4, Behr, 800-854-0133. **Side tables:** Victoria Albert, Atlanta, GA, 678-547-0222.

● *Kitchen, pp. 84–85*

Consulting designer: Janice Pattee, CKD, Kraftmaid, 888-562-7744. **Cabinetry:** Amherst (Shaker-style) in Charcoal on Maple, KraftMaid, 888-562-7744. **Hardware:** Cup pulls, #PN0602-SN-C Knobs, #P84061-SN C, Liberty Hardware; 800-542-3789. **Pendant light:** Scholl's Ferry #C473 in Brushed Nickel with shades #12312, Rejuvenation, 888-401-1900. **Recessed lighting:** Thomas Lighting, 502-893-4690. **Appliances:** Superba fully integrated dishwasher #KUDS01FKSS, Architect Series Pro Line gas cooktop #KGCP462KSS, and Pro Line Wall Canopy hood #KWCU-360JSS, mixer and coffeemaker all by KitchenAid, 800-422-1230, www.kitchenaid.com. **Faucet:** Stratford Classic in polished nickel, Delta Faucet Co., 800-345-3358, www.deltafaucet.com. **Concrete countertop:** Killercrete Precast Concrete, 404-219-8363. **Sink:** Copper Farmhouse #CP-04, Stone Forest, Santa Fe, NM, 505-986-8883, www.stoneforest.com. **Stools:** Federal #18-999-1181, Milling Road Furniture, 800-592-2537. **Tile:** Ceramica Alhambra, color Cebolla (backsplash), Camino del Inca (floor), Walker Zanger, 800-540-0235. **Accessories:** HomeGoods, 800-614-4663. **Anoque rice measures:** eZiba, North Adams, MA, 888-404-5108, www.eziba.com.

● *Laundry Room*

Equipment: Duet washer and dryer in Dove Gray, Whirlpool, 800-253-1301; www.whirlpool.com. **Utility tub:** Dura-Foam #102005, American Shower & Bath Corp., 800-355-2721, www.asbcorp.com. **Countertop:** Gibraltar Aspen Melange solid surface material, Wilsonart; 800-433-3222, www.wilsonart.com. **Faucet:** Chrome pull-out spout #750, Delta Faucet Co; 800-345-3358. **Towels:** Grand Patrician, WestPoint Stevens, West Point, GA; 800-533-8229, www.martex.com. **Laundry sorter:** The Container Store, 800-733-3532. **Flooring:** Camino del Inca, Walker Zanger, 800-540-0235.

● *Master Bedroom, p. 86*

Furniture: French Empire Bed #18-254-1 and Tufted Club Chair #629-31-9, Milling Road Furniture, 800-592-2537. **Sleep system:** Sleeping Beauty Victoria Collection, Kingsdown, Inc., Mebane, NC, 800-800-1353, www.kingsdown.com. **Ottoman:** HomeGoods, 800-614-4663. **Framed art:** Artasap, New York, NY, 800-821-4717, www.artasap.com. **Interior door:** 4-panel, 8-foot smooth, Masonite, Mississauga, Ontario, Canada, 800-461-1989, www.masonitecanada.com. **Door hardware:** Estate Collection (egg knob) and hinge in oil rubbed bronze finish, Baldwin, 800-566-1986. **Curtain fabric:** Pindler & Pindler, 805-531-9090. **Paint:** Footpath #3A7-5, Behr, 800-854-0133.

The Timeless Home. The laundry room stylishly tackles a demanding chore with low-maintenance melamine cabinetry, a utility tub, counter space for folding, and a super-high-efficiency front-loading washer

● *Master Closet, p. 86*

Cabinetry: Mills Pride, West Palm Beach, FL, 800-441-0337; www.millspride.com. **Safe:** Cannon Series #4 in blue enamel finish by La Gard, Torrance, CA; 800-242-1055; www.cannonsafe.com. **Accessories:** The Container Store, 800-733-3532.

● *Master Bath, pp. 86–88*

Lavatory faucet and tub faucet: Victorian Collection in polished chrome, Delta Faucet Co., 800-345-3358. **Shower fittings:** Shower Spa System with Tropical Rain Showerhead, Alson's, Hillsdale, MI, 800-421-0001, www.alsons.com. **Mirrors and accessories:** Empire Collection in pol

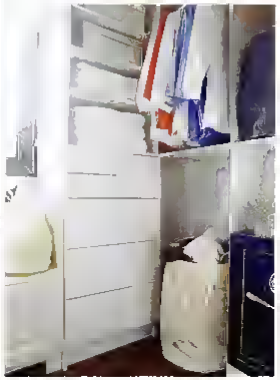
PHOTO: BURT WILLEFORD

ished chrome, Ginger, Fort Mill, SC, 803-547-5786, www.gingerco.com. Pedestal lavatory, Lowe's Companies, Inc., North Wilkesboro, NC, 800 445 6937, www.lowes.com. Wicker hamper: eZiba, 888-404-5108. Bathtub: Bergamo #667244A, Aqua Glass Corp., Adamsville, TN, 731-632-2501, www.aquaglass.com. Apothecary jars: Oly, 510-644-1870 x205. Water supply fittings and connectors: Brass Craft, Novi, MI, 248-305 6000, www.brasscraft.com. Towels: Grand Patrician, WestPoint Stevens, 800 533 8229. Tile: FusionGlass series, Walker Zanger, 800-540 0235. Stone: Porto beige honed limestone, Walker Zanger, 800 540 0235.

● *Second Floor: Children's Room, p. 90*
Furniture: Pleasant Isle #4960-53 panel headboard and #4960-93 panel footboard, with trundle; desk #4960-60; and #4960-75 bookcases all by Broyhill Furniture Industries, Lenoir, NC, 800-327 6944, www.broyhillfurn.com. Sleep system: Sleeping Beauty Ingenue Collection, Kingsdown Inc., 800-800-1353. Paint: Oregano #2A1-5, Behr, 800-854 0133. Custom bedskirt: Garnet Hill, Franconia, NH, 800-870-3513, www.garnethill.com. Pillows: Kay Douglass Interiors, 404-995 0802. Beaded paneling: Georgia Pacific Corp., 800 284 5347. Flooring: Heart Pine Preferred #HPP in 4-, 6-, and 8-inch widths, Southern Wood Floors, 888 488 7463.

● *Second Floor: Guestroom, p. 90*
Furniture: Spindle headboard #4194-56, spindle footboard #4194-96 and nightstand #4194-92, Broyhill Furniture Industries, 800 327 6944. Bedlinens: Garnet Hill, 800 870-3513. Custom pillows, bedskirt, shade: Kay Douglass Interiors, 404-995 0802. Sleep foundations: Kingsdown Inc., 800 800-1353. Beaded paneling: Georgia Pacific Corp., 800 284-5347. Door: Masonite, 800-461-1989. Door knob: Blakely series, Baldwin, 800-566-1986.

● *Basement Kitchen, pp. 92–94*
Cabinetry: Shaker style Natural on Maple, Quality Cabinets, 972-298-6101. Stainless integral sink/counter: Just Manufacturing, Franklin Park, IL, www.justsinks.com. Faucet: Providence Classic in Venetian Bronze finish, Delta Faucet Co., 800-345-3358. Butcher-block counter: Rock Maple, Boos Blocks, Effingham, IL, 217 347-7701, www.johnboos.com. Appliances: Microwave #KGCP462KSS, wine cooler #KUWS246ESS, and icemaker #KUIS185JSS, all by KitchenAid, 800-422-1230. Flooring: Sepia #3143 (border); Lapponia #3182 (stripe), and Ivory #608 (field), Marmoleum by Forbo, Hazleton, PA, 800 842 7839, www.themarmoleumstore.com. Paint: Alpine Lace #PPWC 16, Behr, 800 854 0133. Accessories: HomeGoods, 800 614 4663.



The Timeless Home: A pair of walk-in closets in the master suite organizes linens, clothing, and accessories with open shelves, rods, and drawers. Tucked into one compartment is a small safe.

● *Basement Bedroom, pp. 92–94*
Bed: Soho Queen #705T Q in Jade Neptune fabric, Mitchell Gold, Taylorsville, NC, 800 789 5401, www.mitchellgold.com. Sleep system: Sleeping Beauty Victoria Collection, Kingsdown, Inc., 800 800 1353. Bedlinens: Grand Patrician Scroll, WestPoint Stevens, 800-533-8229. Flooring: Lapponia #3182 (border), Ivory #608 (stripe), and Sepia #3143 (field), Marmoleum by Forbo, 800-842-7839. Window coverings: Vignette Windowshadings #B6-104, Hunter Douglas; Upper Saddle River, NJ, 800 437-4233, www.hunterdouglas.com. Paint: Alpine Lace #PPWC 16, Behr, 800 854 0133. Table: Jessie, Oly, 510-644-1870 x205. Bedside chest: The Container Store, 214-654 2000.

THE PERFECT POTTING SHED
pp. 99–101

Shed design: Gardensheds Web, Lancaster, PA, 717 397-5430, www.gardensheds.com

GARDENING GIZMOS
pp. 102–103

Page 102— *(opener)* Irrigation system: Vegetable Garden Drip Kit #53670, The Toro Company, Bloomington, MN, 800 595-6841, www.toro.com.

Page 103— *(clockwise from top left)* Pruning shears: FreshCut pruner with replaceable blade, Ames True Temper, Parkersburg, WV, 800 624 2654, www.ames-truetemper.com. Power-Level Hand Pruners, Fiskars Consumer Products Inc., Madison, WI, 800 500-4849, www.fiskars.com. Planters: Bulb Hound Garden Planter, Hound Dog Products Inc., Edina, MN, 800-694 6863, www.hound-dog.com. Holey Moley HydroPlanter #HP1200, Snake River Tool Company, Lewiston, ID, 877 372-7782, www.holey-moley.com. Hose reel: AutoRewind Hose Reel #200, Hydro-Industries, West Chester, PA, 866-493 7638. Lawn and garden tractor: Electric outlet-equipped #GT235E, John Deere, Moline, IL, 800 537-8233, www.johndeere.com. Cordless trimmer: The Toro Company, 800-595 6841.

THIRD TIME'S THE CHARM
pp. 106–111

Architect: Doug Pfendler, Architectural InSite, Stroudsburg, PA, 570-424-4980. General contractor: Paul Gravel, Canadensis, PA, 570-595-7862. Mason: John Anderson, Cresco, PA, 570 839 0890.

SAVE THIS OLD HOUSE
p. 136

Our thanks to: Mary Kate Myer, Historical Society of Kent County, Chestertown, MD, 410-778-3499. Jennifer Nesbitt and Jane Whomsley, Washington College, Chestertown, MD, 800-422 1782. The staff of the *Kent County News*, Chestertown, MD, 410-778-2011.

PHOTO: JOSH MCHUGH

HOMEOWNER'S HELPLINE

TECHNOLOGY

BOSE 1

Enjoy exciting sound for movies and music with less clutter. Get equipment less complicated. The latest from Bose®. Call 800-ASK BOSE, ext. 502 or visit ask.bose.com/na502.

KITCHEN AND BATHS

KOHLER CO. 2

A complete set of full-color product catalogs covering baths and whirlpools, showers, lavatories, toilets and bidets, kitchen and entertainment sinks, faucets and accessories. 800-4-KOHLER, Ext. SC3. Kohler Co. $15.00.

MOEN 3

Moen Inc. offers a complete line of stylish, reliable kitchen and bathroom faucets and shower products. Call 800-BUY MOEN or visit www.moen.com.

WHIRLPOOL 4

For more information on the full line of innovative Whirlpool home appliances visit our website at www.whirlpool.com or call 800-254-1301.

HOME/BUILDING PRODUCTS

ACE BRAND PRODUCTS 5

Ace Brand products are manufactured in the same quality standard of leading national brands in arsenals you with great value and selection. Visit www.acehardware.com.

CABOT

For over a century, Cabot has been committed to manufacturing premium-quality wood care products for virtually every interior and exterior application. Call 800 US-STAIN, ext. 399.

CALIFORNIA CLOSETS

California Closets provides a complete range of quality closets, pantry garage, home office and other storage solutions custom designed to simplify your life. Call 888 336 9702 or visit www.calclosets.com.

DOW CHEMICAL COMPANY

Great Stuff insulating foam sealant fills leaky gaps and cracks around the home to improve energy efficiency. For more information, visit www.greatstuff.com or call 800-800 FOAM.

DUPONT CORIAN

The inviting beauty of DuPont Corian® solid surfaces. Over 100 enticing colors. Seamless ink options. All backed by a 10-year limited warranty. For retailers, visit corian.com or call 800-4CORIAN.

FOUR SEASONS SUNROOMS 6

Free color catalog features North America's largest selection of beautiful and dramatic sunlit rooms and conservatories. Exclusive MC² Wonderglass™ keeps out summer heat yet provides maximum sunlight against winter cold.

HARDEN FURNITURE 7

Our 20-page color brochure provides a rich sampling of solid wood furniture and upholstery in a variety of styles and finishes.

HOME/BUILDING PRODUCTS

LENNOX 8

Since 1895, Lennox has provided heating/cooling products that make your home a better place. Whether you're building, remodeling, or replacing, please call 800 9LENNOX for free literature.

REJUVENATION 9

Authentic period lighting and house parts. Over 300 styles made to order. Call 888-401-1900 for a free catalogue or visit www.rejuvenation.com.

DRYLOK® BY UGL 10

Protect your home with DRYLOK® products by UGL. Call 800 272 3235 or visit www.ugl.com. Ask for DRYLOK® Masonry Waterproofer, DRYLOK Floor Paint or DRYLOK® Masonry Treatment.

USPL 11

No sealing, sanding or painting. Caraforce Xteriors Composite and Structural Lumber make decking easy and maintenance practically obsolete. Made from recycled material. No special tools required.

WELLBORN CABINET, INC. 12

Order The Essence of Cabinetry Catalog Collection today. This colorful packet features new ideas for the kitchen, bath or any room of your home. Let us create the kitchen of your dreams at any point on the pricing spectrum. $3.00

WIRSBO 13

Wirsbo offers quality radiant floor heating systems providing the most comfortable and efficient heating available. For more information and literature call 800-321-4739 or visit us at www.wirsbo.com.

LIFESTYLE

POST® SHREDDED WHEAT

With Post Shredded Wheat cereals you will never run out of ways to have a great tasting healthy breakfast. There are plenty of choices to keep you coming back for more. Visit us at www.postcereals.com.

FINANCIAL SERVICES

NFIP 14

Be Flood Alert. Everyone lives in a flood zone. Fortunately, you can protect your home and belongings with National Flood Insurance. Find out more today 888-379-9502.

WELLS FARGO

Get a Wells Fargo Home Equity Loan or Line of Credit at some of the lowest rates in years. Apply online: www.wellsfargo.com.

AUTOMOTIVE

CHEVY SILVERADO

The most powerful V8 available in any pickup. Silverado. The Truck. From Chevrolet. Call 877 The Truck or visit www.chevrolet.com/silverado.

PHONE 800-424-0055
FAX 413-637-4343

www.homeownershelpline.com
MAIL fill out postage paid card

AUTOMOTIVE

DODGE CARAVAN

For more information on call 800-4 A DODGE or visit www.4adodge.com.

HONDA

For more information regarding Honda's lineup of cars, sports utility vehicles and minivans, call 800 33-Honda or visit us at honda.com.

SUBARU 15

Only Subaru gives you the superior traction of full time all wheel drive. Subaru. The beauty of all-wheel drive. For more information, call 800 WANT AWD or visit www.subaru.com.

TOYOTA TUNDRA 16

Toyota Tundra. Because the things that matter to you are the things that matter to us. For more information on the full line Toyota Tundra call 800 toyota or visit Toyota.com.
GET THE FEELING. TOYOTA.

VOLKSWAGEN OF AMERICA 17

On the road of life there are passengers and there are drivers.

TOOLS AND EQUIPMENT

QUICK-GRIP® HANDI-CLAMP™ 18

Squeeze to adjust and lock. Click to release. Use it wherever you need an extra hand. For more information, visit www.quick-gripclamp.com.

KWIKSET 19

The New Kwikset is built for you. Three levels of easy-to-install security, quality and value protect what you treasure most. Call 800 327 LOCK or visit www.kwikset.com.

SEARS CRAFTSMAN TOOLS 20

Craftsman tools are available at Sears and Sears Hardware Stores or call 800 377 7414, 24 hours a day, seven days a week, to order your free copy of the "Craftsman Power and Hand Tool" catalog.

SEARS HOMECENTRAL PARTSDIRECT 21

Sears HomeCentral PartsDirect has over 4.2 million parts for appliances, lawnmowers, heating and cooling systems and lawn equipment. Call 800-4 MY HOME or visit us at www.sears.com/partsdirect.

WINDOWS AND DOORS

ANDERSEN WINDOWS AND DOORS 22

FREE! The "Long Live The Home™" idea book from Andersen Windows. Get room ideas, inspiration and more. Call 800-426-4261 or visit andersenwindows.com.

MARVIN WINDOWS AND DOORS 23

Marvin offers a 30 page catalog featuring their wood and clad wood windows and doors, beautiful color photographs and information on Marvin's standard and custom products.

24	AA ABBINGTON AFFILIATES, INC. *The Original Tin Ceilings & Walls*	718 258 8333
25	ACORN MANUFACTURING CO. *Hardware · Decorative Forged Iron & Stainless*	800-835-0121
26	ALBANY WOODWORKS *Antique Heart Pine Flooring & More*	225 567 1155
	AMERICAN INTERNATIONAL TOOL IND., INC. *Dust Free Sanding Indoor and Out*	800 932 5872
27	ANDERSON MANUFACTURING CO., INC. *The world's most advanced bed*	800-851 9213
28	ARCHITECTURAL PRODUCTS BY OUTWATER *Your Decorative Building Product Source!*	800-835-4400
29	BATHS FROM THE PAST, INC. *Elegance in Porcelain and Brass*	800-697 3871
30	CINDER WHIT & COMPANY *Porches Stairways Wood Turnings*	800-527 9064
31	CLASSIC GUTTER SYSTEMS *"Olde World" Style Gutters & Downspouts*	616 382-2700
32	CONNECTICUT COUNTRY CUPOLAS *Cupolas Weathervanes & Garden Vanes*	866-4CUPOLA
	CROWNPOINT CABINETRY *Handcrafted to the Finest Quality*	800 999-4994
33	ENDLESS POOLS *Swim At Home*	800 732 8660
34	F & S MANUFACTURING *Concrete Construction Tube Footing Forms*	800 934 0393
35	GORILLA GLUE *Bonds Wood Stone Metal & More*	800-966 3458
36	GRANVILLE MFG. QUARTERSAWN CLAPBOARD *Siding Trim Flooring & Roofing*	802-767 4747
37	THE IRON SHOP *Spiral Stair Kits*	800-523 7427
38	NATIONAL BLINDS AND WALLPAPER *Blinds Wallpaper Area Rugs*	800-477 8000
39	NU-WAL *Restoration Products*	800 247 3932
40	RADIANT FLOOR COMPANY *Affordable "Do it Yourself" Radiant Heating*	802 525 1132
41	RED LAKE CUSTOM DOORS *Custom Handcrafted Wooden Garage Doors*	866-733 5253
42	THE REGGIO REGISTER CO. *Cast Iron Grilles and Registers*	978 772 3493
43	RENOVATOR'S SUPPLY *Renovation Supplies Catalog*	800 659 0203
44	RESEARCH PRODUCTS/FLAMEKEEPER *Incinolet First Ever Incinerator Toilet*	800-527 5551
45	SALTER INDUSTRIES *Spiral Stair Kits*	610-631 1360
46	SLIPCOVERS BY MAIL *Ready-made Slipcovers in Quality Fabrics*	888-SURE FIT
47	SPACEPAK *Central Air Anywhere*	413-564-5530
48	SPIRAL STAIRS OF AMERICA *Spiral Stairs*	800-422 3700
49	STAIRWAYS, INC. *Stairways*	800 231-0793
	SUN-PORCH STRUCTURES, INC. *Convertible Sunroom*	WWW.SUNPORCH.COM/HSE
	TIMBERLANE WOODCRAFTERS *Handcrafted Shutters*	800 250-2221

HGTV
HOME & GARDEN TELEVISION

DREAM HOME GIVEAWAY

February 1 - March 15, 2002

Get A Different Angle On Life.

Life looks great from every viewpoint of HGTV's 2002 Dream Home, surrounded by the waters of Chesapeake Bay in Maryland. Enter to win this beautiful home plus an all-new Chevy TrailBlazer and merchandise from sponsors nationwide. Total national prizes are valued at more than $1.2 million!

Enter online at hgtv.com or send a handprinted postcard with your name, address & telephone number to

HGTV 2002 Dream Home Giveaway • P.O. Box 52148 • Knoxville, TN 37950

Entries must be postmarked by March 15, 2002 and received by March 22, 2002

Presented by

TRAILBLAZER

Also sponsored by

SHERWIN WILLIAMS ETHAN ALLEN BISSELL COASTAL LIVING Georgia-Pacific HunterDouglas Office DEPOT Beneful Whirlpool

This Old House

Where and when to watch This Old House and This Old House Classics

Visit www.pbs.org and link to your local affiliate to up to the minute TOH program listings or visit our *This Old House Classics* listings pbsarts.org/thisoldhouse on commercial airlines

ALABAMA

BIRMINGHAM
WBRC Tue 7 p.m., Sat. 9 a.m.
● KOVR*

MONTGOMERY
WAIQ, Sat. 8 p.m.
● WAIA*

MONTGOMERY
WAIQ, Sat. 8 p.m.
● WAKA*

MOUNT CHEAHA
WCHA, Sat. 8 p.m.

ALASKA

ANCHORAGE
PAKN Thu. 8 p.m., Sat. 9:30 a.m.
KMTX Thu. 8 p.m. Sat. 11 a.m.
KYUK, Thu. 8 p.m., Sat. 10 a.m.
● KIMO

FAIRBANKS
KUAC, Thu. 8 p.m., Sat. 10 a.m.
KNATN

JUNEAU
KTOO Thu. 8 p.m., Sat. 10 a.m.
● KJUB*

ARIZONA

PHOENIX
KAET Sa 2 p.m.
● KTVK/KSAW

TUCSON
PUAS, Thu. 8:30 p.m. Sat 10 a.m. and 9:30 p.m.
KUAT Thu. 8:30 p.m., Sat. 1 p.m., and 1:30 p.m.
● KTTU/KMSB

ARKANSAS

BIG DELTA/FOR
KETG Sat 9 a.m. and 12:30 p.m.

FAYETTEVILLE
KAFT Sat. 8 p.m. and 12:30 p.m.

FORT SMITH
● KFSM/KFSM*

HARRISON
KTHS, Sat 9 a.m. and 12:30 p.m.

LITTLE ROCK
KETS, Sat. 9 a.m. and 12:30 p.m.
● KWBF*

PINE BLUFF
KEMV Sat. 9 a.m. and 12:30 p.m.

CALIFORNIA

BAKERSFIELD
● KUVI

CHICO
● KRCR*

EUREKA
KEET Sun. 2:30 p.m., Sat 10:30 a.m.
● KAEF

FRESNO
KVPT Sa 11:30 a.m.
● KPSN

HUNTINGTON BEACH
KOCE, Tue 10 p.m. Wed. 1:30 p.m. Sat. 1:30 p.m.

LOS ANGELES
KCET Sat. 9:30 p.m.
● KABC*

MONTEREY/SALINAS
● KCBA/KSBW

PALM SPRINGS
● KPSP*

SANTA BARBARA
● KSBY*

WEST PALM BEACH
KVCR Sat. 1:30 p.m.
● WMQF*

SACRAMENTO
KVIE Tue 7 p.m., Sat. 9 a.m
● KOVR*

SAN BERNARDINO
KVCR, Mon. 4:30 p.m.

SAN DIEGO
KPBS, Sat. 5:30 p.m.
● KGTV

SAN FRANCISCO
KQED Sat. 8 p.m.
● KNTV*

SAN JOSE
KTSF2 Wed. 9 p.m.

SANTA BARBARA
KCSM Sun. 10 a.m

SANTA BARBARA
● KSBY

COLORADO

DURANGO
KRDO Wed. 2:30 a.m. and 4:30 p.m.

COLORADO SPRINGS
● PPDO

DENVER
KRMA, Sun. 5:30 p.m., Sat. 8:30 p.m.
● KCNC*

DURANGO JUNCTION
KMAU Sun 1:30 p.m., Sat 8:30 p.m
● KJCT*

NORTH
KTSC, Sun. 9:30 p.m., Sat 4:30 p.m.

PUEBLO
KTSC, Sun. 9:30 p.m., Sat 4:30 p.m.

CONNECTICUT

FAIRFIELD
WEDY Tue 10:30 a.m., Thu. 11 p.m., Sun. 7 p.m.

HARTFORD
WEDH, Sun. 10:30 a.m., Thu. 11 p.m., Sat. 7 p.m.

NEW HAVEN
WEDY Sun. 10:30 a.m., Thu. 11 p.m. Sat 7 p.m.

NORWICH
WEDN Sun. 10:30 a.m. Thu 11 p.m. Sat 7 p.m.

DISTRICT OF COLUMBIA

WETA Sa 1 p.m. and 9 p.m
WHUT Sat. 1:30 p.m.
● WRC*

FLORIDA

ARCADIA/PUNTA
WGCU Sa 6 p.m.

DAYTONA BEACH
WCEU Tue 10 p.m., Sat 5 p.m.

FORT MYERS
● WEVU

GAINESVILLE
WUFT Sat. 8 a.m. and 1:30 p.m.

JACKSONVILLE
WJCT Sat 10 noon and 12:30 p.m.
● WTLV/WJXX*

MIAMI
WLRN, Sat. 8 p.m.
WPBT Sun. 12 a.m.
● WBZL

ORLANDO
WMFE, Sat., 5:30 p.m.
● WKCF*

PANAMA CITY
WFSU Sat. 1:30 p.m.

PENSACOLA
WSRE, Sat. 12:30 p.m.

SARASOTA
● WWSB

TALLAHASSEE
WFSU, Sat. 1:30 p.m.

TAMPA
WEDU Sun. 5:30 p.m., Sa 11:30 a.m.
WUSF Sun. 9:30 p.m., Sa 11:30 a.m.
WUSI Sun. 9:30 p.m., Wed. 9 p.m.
● WMOR*

WEST PALM BEACH
WXEL Sat. 1:30 p.m.
● WPTV*

GEORGIA

ALBANY
● WPST*

ATLANTA
WETV Sun 12 noon, Sat. 11 a.m. and 8:30 p.m.
WPBA, Mon. 8 p.m. and 8:30 p.m. Wed. 2 p.m., Sat. 6:30 a.m. and 9 p.m.
● WXIA

AUGUSTA
WPBA, Sat. 9 a.m.
● WRDW

CHATSWORTH
WCLP Sun. 12 noon, Sat. 11 a.m. and 1:30 p.m.

COLUMBUS
WJSP Sat 12 noon, Sat. 11 a.m. and 1:30 p.m.

DOUGLAS
WAYS Sun 12 noon, Sat. 11 a.m. and 1:30 p.m.

SAVANNAH
WVAN Sat. 11 a.m. Sat 11 a.m. and 1:30 p.m.
● WJCL*

WAYCROSS
WXGA, Sun. 11 a.m., Sat. 11 a.m. and 5:30 p.m.

WRENS
WCES, Sun. 12 noon, Sat. 11 a.m. and 1:30 p.m.

HAWAII

HONOLULU
KHET Sat. 9:30 p.m.

WAILUKU
KMEB*

IDAHO

BOISE
PAID Sun. 4:30 p.m
● KTRV

COEUR D'ALENE
KCDT Sun 1 p.m.

IDAHO FALLS
● KPVI

MOSCOW
KUID Sun 1:30 p.m.

POCATELLO
KISU Sun 8:30 p.m.

TWIN FALLS
KIPT Sun 8 p.m.

ILLINOIS

CARBONDALE
WSIU Thu 1 p.m. Sat., 2:30 p.m.

CHAMPAIGN/URBANA
WILL, Sun. 9:30 p.m. Sat 6 a.m. and 9:30 p.m.

DECATUR
● WAND*

CHARLESTON
WEIU Fri. 10 noon

CHICAGO
WTTW, Sat. 12 noon and 9 p.m.
WYCC, Sat. 6 p.m.
WYIN, Thu. 7 p.m.
● WCIU

JACKSONVILLE
WIEC, Sat. 1:30 p.m.

PEORIA
WCPT Tue. 7 p.m., Sat. 5:30 p.m.

QUINCY
WQEC, Sat. 1:30 p.m.
WMEC, Sat. 1:30 p.m.
● WGEM

ROCKFORD
● WTVO

INDIANA

BLOOMINGTON
WFIU Sat 10:30 a.m.

EVANSVILLE
WNIN Sun 9:30 p.m.
Sat. 9 p.m. 10:30 p.m., and 6 p.m.
● WFIE

FORT WAYNE
WFWA, Sat. 10 a.m.
● WKJG

INDIANAPOLIS
WFYI Sa 10 a.m. and 9 p.m.
WTBU, Tue 8 p.m.
● WALV
● WTHR

MORRISVILLE
WYIN Tue 8 p.m.

MUNCIE
WIPB Sun. 1:30 p.m.

NOTRE DAME
WNIT Sun 12 noon, Sat. 11 a.m. and 1:30 p.m.

SOUTH BEND
WSBT Sun 12 noon, Sat. 11 a.m. and 1 p.m.

TERRE HAUTE
● WTHI

VINCENNES
WVUT Sa 1:30 p.m

IOWA

CEDAR RAPIDS
● KFXA*

COUNCIL BLUFFS
KPIN Wed. 8:30 p.m., Sat 1:30 p.m.

DAVENPORT
KLJB Tue. 8 p.m., Sat. 2:30 p.m.
● WQAD

DES MOINES
KDIN Wed. 6:30 p.m., Sat. 1:30 p.m.

FORT DODGE
KTIN Wed. 1:30 p.m., Sat 1:30 p.m.

IOWA CITY
KIIN Wed 6:30 p.m., Sat. 1:30 p.m.

MASON CITY
KIIN, Wed. 6:30 p.m., Sat. 1:30 p.m.

SIOUX CITY
KSIN, Wed. 6:30 p.m., Sat. 1:30 p.m.

WATERLOO
KIIN, Wed. 6:30 p.m. Sat 1:30 p.m.

KANSAS

BARNES HILL
KOOD Sat. 12:1? p.m

LARNED
KSWK Sat 10:30 p.m

MINEOLA
KTWU, Sat. 7:30 a.m.
● KTMJ

WICHITA
KPTS, Sun. 11 a.m., Sat. 10 a.m.
KOCK, Sat. 12:30 p.m.
● KWCH*

KENTUCKY

ASHLAND
WKAS, Sun 1 p.m.

BARBOURVILLE
WKGB, Sat 1 p.m
WKYU Sun. 12:30 p.m., Tue 9 p.m. and 11 p.m

LEXINGTON
WLVN Sun. 1 p.m

LOUISVILLE
WKLY Sat 1 p.m.

ELIZABETHTOWN
WKLY Sat 1 p.m.

HAZARD
WLKH, Sun 1 p.m

LEBANON
WFTE Sun 5 p.m.
KETS, Fri 1:30 p.m
WLLP Sun. 8 p.m.
● WTVQ

LOUISVILLE
WKMJ Sun. 5 p.m
WKPC, Sun. 1 p.m.
● WLEX/WTTE*

MADISONVILLE
WLJH Sun 1 p.m.

MOREHEAD
WKMR, Sun 1 p.m.

OWENSBORO
WKLI Sun 5 p.m.

OWENTON
WKON Sun 2 p.m.

PADUCAH
WKPD Sun. 1 p.m
WSIU Thu. 7 p.m. Sat 12:30 p.m.
● WDKA/KBSI

PIKEVILLE
WKPI Sun 1 p.m

SOMERSET
WHLN, Sun. 5 p.m

LOUISIANA

ALEXANDRIA
KLPA Sat 10:30 p.m.

BATON ROUGE
KLPB/KLPB, Sat. 12:30 p.m
● WGMB/WBRK

LAFAYETTE
KLPB, Sat 12:30 p.m
● KADN/KLAF*

LAKE CHARLES
KITU Sat. 12:30 p.m

MONROE
KETM, Sat. 12:30 p.m
● KNOE

MORGAN CITY
● TWBJ

NEW ORLEANS
WYES Sa 1:30 a.m.
● WVUE

SHREVEPORT
KLTS, Sun 11:30 p.m
● KTBS

MAINE

BAR HOR
WMEB, Sat. 1:30 p.m.
● WBGR

CALAIS
WMEB, Sat. 1:30 p.m.

LEWISTON
WCBB, Sat. 1:30 p.m.

MORELAND
WMEA Sat. 1:30 p.m

PRESQUE ISLE
WMEM Sat 1:30 p.m

MARYLAND

ANNAPOLIS
WMPT Sun 11 a.m. Sat 1 a.m

BALTIMORE
WMPB, Sun. 11 a.m., Sat 11 a.m
● WMAR

CHURCH
WETA Sun 11 a.m. Thu 9 p.m
Sat 11 a.m
● WJAC

HAGERSTOWN
WMPB Sat 11 a.m. Thu 9 p.m
Sat 11 a.m
● WJAC

SALISBURY
WCPB, Sun. 11 a.m., Sat. 11 a.m
WHUR, Sat. 8:30 a.m. and 9 p.m.

MASSACHUSETTS

BOSTON
WGBH Mon. 9:30 p.m. Thu. 1 p.m., Sat. 1:30 p.m.
Salem 14, Sun. 3:30 p.m. and 1 p.m
● WHDH

SPRINGFIELD
WGBY Thu. 8 p.m., Sat 2:30 p.m.

MICHIGAN

ALPENA
WCML Sat 2 p.m.

ANN ARBOR
WUCX Sun. 3 p.m., Thu 8 p.m.

BARAGA
WCMV Sat 8 p.m.
● WWTV/WWUP

BIG RAPIDS
WTVS, Thu. 8:30 p.m., Fri. 1:30 a.m., Sat. 10 a.m.
● WOTV

EAST LANSING
WKAR Sun. 1 p.m., Sat. 1:30 p.m

FLINT
WBRI/WBHQ Sun. 8 p.m
WFUM Sat. 1:30 p.m
● WJRT

GRAND RAPIDS
WGVU, Thu. 8:30 p.m., Sat 1 p.m.
● WOOD/WOTV/WXMI*

KALAMAZOO
WCVE Thu. 8:30 p.m., Sat. 1 p.m

LANSING
● WHTV

MARQUETTE
WCMU Sat 8 p.m

PARQUETTE
WNMU, Sat. 1:30 p.m
● WBKP*

MOUNT PLEASANT
WCMU Sat 8 p.m

UNIVERSITY CENTER
WUCM Sun 1 p.m., Thu 9 p.m.

MINNESOTA

APPLETON
KSMN, Sat. 12:30 p.m.
KWCM, Fri. 1 p.m. Sat 12:30 p.m.

AUSTIN
KSMQ, Sat. 12:30 p.m.

BEMIDJI
KAWE, Thu. 7:30 p.m., Sat. 10:30 p.m.

BRAINERD
KAWE, Thu. 7:30 p.m., Sat. 12:30 p.m.

DULUTH
WDSE, Sun. 9:30 a.m. Tue. 9 p.m Sat 4:30 p.m

MINNEAPOLIS/ ST. PAUL
KTCA, Sat 6 p.m
KTCI 21, weekdays 8 p.m. and 11 p.m.
TPT, Tue 1:30 p.m., Sat 9 p.m.
● KSTP/KSTC

ROCHESTER
● KXLT

MISSISSIPPI

BILOXI
WMAH, Sat 6:30 p.m.

BOONEVILLE
WMAH Sat 6:30 p.m

BOOK
WMAU Sa 6:30 p.m

COLUMBUS/TUPELO
● WCBI

GREENWOOD
WMAH, Sat 6:30 p.m

JACKSON
WMPN Sat 10 p.m.
● WDBD/WJKS

MERIDIAN
WMAW Sat 6:30 p.m

MISSISSIPPI STATE
WMAH, Sat 6:30 p.m.

OXFORD
WMAW Sa 6:30 p.m.
*CHECK LOCAL LISTINGS.

MISSOURI

COLUMBIA
● KMIZ/KQFX

JOPLIN
● KOZJ Sat 12:30 p.m

KANSAS CITY
KCPT, Sun. 6:30 p.m., Sat. 12:30 p.m.
● KMBC

ST. LOUIS
KETC, Wed. 8:30 p.m. Sat 9:30 p.m
● KMOV

SEDALIA
KMOS, Sat 10:30 p.m

SPRINGFIELD
KOZK, Sat 12:30 p.m
● KOZK

MONTANA

BILLINGS
● KHMT

BOZEMAN
KUSM Sat 11:30 a.m

BUTTE
● KBTZ/KXLF*

GREAT FALLS
● KFBB

MISSOULA
KSEC, Sat 11:30 a.m.
KUSM, Sat 11:30 a.m.
● KMSH/KPAX*

NEBRASKA

ALLIANCE
NETV Sat 5:30 p.m.

BASSETT
NETV Sat. 7 p.m. and 5:30 p.m.

HASTINGS
NETV Sat 10 a.m. and 5:30 p.m

LEXINGTON
KLNE Sat 10 a.m. and 9:30 p.m.

LINCOLN
KHNE/KMNE, Sat 10 a.m. and 1:30 p.m.
KUON, Sat 10 a.m. and 2:30 p.m.
NETV Sat 10 a.m. and 9:30 p.m.
● KHAS*

MERRIMAN
NETV Sat. 10 a.m. and 9:30 p.m.

NORFOLK
NETV Sat. 9 a.m. and 5:30 p.m.

NORTH PLATTE
KPNE, Sat 9 a.m. and 5:30 p.m.
NETV Sat. 10 a.m. and 5:30 p.m.
● KNOP

OMAHA
KHNE Wed. 6:30 p.m., Sat 1:30 p.m
KYNE, Sat 10 a.m. and 9:30 p.m.
NETV Sat. 10 a.m. and 9:30 p.m.

NEVADA

LAS VEGAS
PLUS/KLVX Sat 9 a.m. and 11:30 p.m.
● KTNV*

RENO
KNPB, Sat. 10:30 a.m.
● KAME/KRXI

NEW HAMPSHIRE

DURHAM
WENH Sun. 10 a.m., Sat. 2:30 p.m

KEENE
WKBT Sun. 10 a.m., Sat. 2:30 p.m

UTICA/ROME
WUTI Sun 11 a.m., Sat 2:30 p.m

NEW JERSEY

CAMDEN
WNJS, Sun. 5 p.m. and 6:30 p.m., Fri. 8 p.m. and 8:30 p.m., Sat. 10 a.m

MONTCLAIR
WNJN, Sun. 2 p.m. and 7:30 p.m., Fri. 8 p.m. and 8:30 p.m., Sat. 12 noon

NEW BRUNSWICK
WNJB, Sun. 8 p.m. and 8:30 p.m. Fri. 1 p.m. and 2:30 p.m., Sat. 12 noon

TRENTON
WNJT Sun. 2 p.m. and 5:30 p.m., Fri. 8 p.m. and 8:30 p.m., Sat. 12 noon

NEW MEXICO

ALBUQUERQUE
KNME Sun. 1 a.m., Sat 10 a.m
● KRIK

LAS CRUCES
KRWG Sat. 11:30 p.m

PORTALES
KENW, Wed. 10:30 p.m., Sat. 8 p.m.

NEW YORK

ALBANY
● WXXA

BINGHAMTON
WSKG, Sat. 8 a.m. and 3:30 p.m
● WBNG

BUFFALO
WNED Sat 8 p.m
WNED Sa 4:30 p.m.
● WIVB/WNLO

BURLINGTON
● WPTZ*

ELMIRA
● WENY*

LONG ISLAND
WLIW Sun 1 p.m. and 8:30 p.m
Sat 10:30 a.m. and 11 a.m

NEW YORK CITY
WNET, Sat. 5:30 p.m
WLIW, Sat. 7:30 p.m.

OSWEGO
WNPI, Sat 10:30 a.m.

PLATTSBURGH
WCFE, Sun. 11:30 a.m.

ROCHESTER
WXXI Sun. 3:30 p.m., Sat 10:30 a.m
● WHEC

SCHENECTADY
WMHT Sat 10:30 a.m
WMHQ, Sun. 9:30 a.m

SYRACUSE
WCNY/WNPE/WY2 Sat 10:30 a.m
● WTVH

UTICA/ROME
WPBS, Sat. 10:30 a.m.

NORTH CAROLINA

ASHEVILLE
WUNF, Sun. 8 a.m., Sat. 9 p.m.

CHAPEL HILL
WUNC, Sun. 9 a.m. Sat 2 p.m

CHARLOTTE
WTVI Sun. 10:30 a.m., Thu 9 p.m., Sat. 8 p.m.
WUNG, Sun. 8 a.m. Sat 1 p.m.
WNSC, Sat. 9 p.m.
● WCCB

COLUMBIA
WUNG Sun. 8 a.m. Sat 9 p.m.

DURHAM
WUNC, Sat. 5 p.m.

GREENSBORO
● WFMY/WGHP

GREENVILLE/NEW BERN/ WASHINGTON
● WITN

GREENVILLE/SPARTANBURG
WUNG, Sun 8 a.m. Sat 9 p.m
● WYCW/WNSC

JACKSONVILLE
WUNM Sun. 8 a.m. Sat 9 p.m

LINVILLE
WUNF Sun. 8 a.m., Sat 9 p.m

LUMBERTON
WUNG, Sun. 8 a.m., Sat 1 p.m.

RALEIGH
● WTVD

ROCKY MOUNT/ WILSON
WUNP Sun. 8 a.m. Sat 9 p.m

WILMINGTON
WUNP Sun. 8 a.m. Sat 9 p.m

WINSTON SALEM
WUNG Sun 8 a.m. Sat 1 p.m

NORTH DAKOTA

BISMARCK
KBMY Sat 9:30 p.m

DICKINSON
KPMS Mon. 8 p.m., Sat 1:30 p.m

ELLENDALE
KDSU Sat 9:30 p.m

FARGO
KFME, Mon. 8 p.m., Sat 4:30 p.m
● KXJB

GRAND FORKS
KCPT Mon 8 a.m. Sat 9:30 p.m

MINOT
KSRE, Sat 1:30 p.m.
● KMOT/KMCY

WILLISTON
KWSE, Sat 9:30 p.m.

OHIO

AKRON
WEAO Sun 10 a.m., Sa 1? noon

ATHENS
WOUB, Sat. 1 p.m

BOWLING GREEN
WBGU, Sat. 1:30 p.m., Mon. 8 p.m

CINCINNATI
WCET Sat. 9 a.m. and 8:30 p.m.

CLEVELAND
WVIZ, Sun. 1:30 p.m. Sa 9:30 a.m.
● WEWS

COLUMBUS
WOSU, Thu 9 p.m Sat 9 a.m and 9:30 p.m.
● WSYX/WTTE

DAYTON
WPTD, Sat 9 a.m.
● WHIO*

LIMA
● WOHL/WLQP*

OXFORD
WPTO Sun 12:30 p.m

PORTSMOUTH
WPBO Thu. 8 p.m., Sa 9 a.m and 4:30 p.m.

TOLEDO
WGTE Sun. 1 p.m., Sat 1 p.m
● WTVG

YOUNGSTOWN
WNEO Sun. 10 a.m. Sat 10 noon
● WFMJ

OKLAHOMA

CHEROKEE
KWET 9 p.m., Sa 8:30 a.m and 12:30 p.m

ENID
KOFT Sun 1 p.m. Sat 9:30 a.m. and 12:30 p.m

OKLAHOMA CITY
KETA Sat 1 p.m. Sun. 9:30 a.m and 1:30 p.m
● KTVY

TULSA
KOET, Sun 9 a.m., Sat. 9:30 a.m and 2:30 p.m

OREGON

BEND
KOAB, Fri 8 p.m. Sat. 1 p.m

CORVALLIS
KOAC, Fri. 8 p.m. Sat. 2 p.m.

EUGENE
KLPB, Fri. 8 p.m. Sat 2 p.m
● KATU

KLAMATH FALLS
KFTS, Sat 10:30 a.m.

LA GRANDE
KTVR, Fri. 6 p.m., Sat. 5 p.m.

MEDFORD
KSYS Sa 10:30 a.m.
● KOBI

PORTLAND
KOPB, Fri. 8 p.m., Sat 5 p.m
KRDM Fri. 8 p.m., Sat 1 p.m
● KPTV

PENNSYLVANIA

ALLENTOWN
WLVT Sun. 1 p.m., Sat 12:30 p.m

ERIE
WQLN, Sat. 11 a.m.
● WJET
● WFXP*

HARRISBURG
WITF Sa 9 a.m. and P.m.
● WHTM

PHILADELPHIA
WHYY Sat 11 a.m. and 6 p.m.
WNJN Sun 8 p.m. and 5:30 p.m.
Fri. 8 p.m. and 8:30 p.m., Sat. 12 noon
● WCAU

PITTSBURGH
WQED Sun. 11 a.m., Sat. 11 a.m.
WQLN Sat 9 p.m
WQED Sat 9 p.m.
● KDKA

PITTSTON
WVIA Sat 1 p.m and 5:30 p.m.

UNIVERSITY PARK
WPSX Tue 10 p.m., Sat. 9 a.m and 11 p.m

WILKES-BARRE
● WYLN*

RHODE ISLAND

PROVIDENCE
WSBE Mon 7:30 p.m Sat 3:30 p.m.
● WLNE

SOUTH CAROLINA

ALLENDALE
WJPA Sat 9 a.m.

BEAUFORT
WJSI Sat 9 a.m

CHARLESTON
WCSC Sat 9 a.m

CONWAY
WHMC, Sa 9 a.m

FLORENCE/MYRTLE BEACH
WJKM, Sat 9 a.m
● WPDE/WFXB

GREENVILLE
WNTV Sa 9 a.m.
WNJH Sat 9 a.m.

ROCK HILL
WNSC Sat 9 a.m

SPARTANBURG
WRET Sa 9 a.m

SUMTER
WJPA Sat 9 a.m.

SOUTH DAKOTA

EAGLE BUTTE
KDSD Sa 1 p.m

MARTIN
KZSD, Sa 9 a.m

MITCHELL/CHAMBERLAIN
KUSD, Sat 1 p.m

PIERRE
KTSD Sat 9 a.m

RAPID CITY
KBHE, Sat. 9 p.m.
KBHE, Sat. 12 a.m. and 1 p.m.
● KEVN/KEVN

SIOUX FALLS
KCSD Sat 4 p.m
KDSD Sat 9 p.m.
KSMN Fri. 1 p.m., Sat. 12:30 p.m
● KTTW

VERMILLION
KUSD Sat 1 p.m

TENNESSEE

CHATTANOOGA
WCLP Sun 11 noon, Sat 11 a.m. and 5:30 p.m.
WTCI, Sat 1 p.m
● WDSN

COOKEVILLE
WTTF Sat 12:30 p.m

JACKSON
● WAITU

KNOXVILLE
WKOP Sat 1:10 p.m
WSJK, Sat 1:10 p.m

LEXINGTON-MARTIN
W FT Sat 11:30 a.m

MEMPHIS
WLNO Sat. 9:30 a.m.
● WLMT*

NASHVILLE
WDN N Sat 4:30 p.m
WNPT Sat 1 p.m
● WTVF*

TEXAS

AMARILLO
KACV Sat. 11 a.m. and 10 p.m
● KCIT/KCPN

AUSTIN
KLRU, Sat. 8:30 a.m.

WACO/TEMPLE/BRYAN
KAMU Tue 10 p.m., Sat. 12:30 p.m.

BEAUMONT
KFDM Sa 11:30 a.m. and 5:30 p.m.

CORPUS CHRISTI
KEDT Sa 3:30 p.m. and P.m

DALLAS/FORT WORTH
KERA Sat. 8:30 p.m.
● KDFW/KXTF*

EL PASO
KCOS Sat. 4:30 a.m.
KSWG, Sat. 10 a.m.

HARLINGEN
KMBH Sa 11 a.m.
● KVEO

HOUSTON
KUHT Sun 11:30 a.m.
● KTRK

KILLEEN
KNCT Sat. 12:30 p.m

LAREDO
● KPCN5

LUBBOCK
KTXC Thu 12 noon Sat 12:30 p.m

ODESSA
KDCN, Sat 12:30 p.m.

SAN ANTONIO
KLRN Sat. 1:30 p.m.
● KSAT

TYLER
● KLPN/KTXK

WACO
KCTF Mon. 12:30 p.m., Sat 6:30 p.m.
KWBU, Mon. 12:30 p.m. Sat 6:30 p.m.
● KXXV*

UTAH

PROVO
NPVU, Sa 8:30 a.m. P.m. and P.m.

SALT LAKE CITY
PUB 11, Sa 1 a.m., 1:30 a.m., P.m., and 7:30 p.m.
● KTVX

VERMONT

BURLINGTON
WETK Sa 8 a.m
● WCAX

RUTLAND
WVLT Sat 1 a.m.

ST. JOHNSBURY
WVLT, Sat 1 a.m.

WINDSOR
WVTA Sat 1 a.m.

VIRGINIA

CHARLOTTESVILLE
WHTJ Sa 8:30 a.m

FALLS CHURCH
WNVT Sa 1:30 p.m

HARRISONBURG
WVPT Sat 8:30 p.m
WVPT Sat 1:30 p.m

MARION
WMSY Sat 1 p.m

NORFOLK
WHRO Sat 11 a.m
● WVEC

NORTH
WHRO, Sat 11 a.m
● WVEC

NORTH
WHRN, Sat 1:30 p.m

RICHMOND
WCVE Sat 9:30 a.m
WCVW P.m. P.m.
● WTVR*

SALEM
WBRA, Sat. 1:30 p.m.
● WSLS

WASHINGTON

CENTRALIA
KCKA Thu. 7 p.m. Sat. 12:30 p.m. and P.30 p.m

PULLMAN
KWSU Sat 1:30 p.m.

RICHLAND
KTNW Sat 1:30 p.m.

SEATTLE
KCTS, Sun. 8 p.m.
KCTS/9, Sa 10:30 a.m
● KING/KONG*

SPOKANE
KSPS, Sun. 5:30 p.m., Sat. 8:30 a.m.
● KXLY*

YELOMA
KSTC, Thu 7 p.m., Sat 12:30 p.m. and 2:30 p.m.

YAKIMA
KYVE
● KAPP/KVEW, Sun. 2 p.m.

WEST VIRGINIA

BECKLEY
WSWP Sat. 1:30 p.m

CHARLESTON
WOUB, Sat. 8 p.m.
WPBO, Thu. 8 p.m. Sat 9 a.m and 4:30 p.m.
● WCHS/WVAH

CLARKSBURG
● WBOY

HUNTINGTON
WPBY Sat. 1:30 p.m

MORGANTOWN
WNPB, Sat. 1:30 p.m.

WISCONSIN

EAU CLAIRE
WPNE, Sun. 8 p.m., Thu. 8 p.m.
● WCBA/WAQP*

LA CROSSE
WLSA Sun. 8 p.m., Thu. 8 p.m
● KQLC

MADISON
WHA Sun. 8 p.m., Thu. 8 p.m
● WHO/CNTV*

MILWAUKEE
WMVS Thu 7:30 p.m., Sat 9 a.m
● WITI/WMVT

PARK FALLS
WLEF Sun. 8 p.m. Thu 8 p.m

WAUSAU
WHRM, Sun. 8 p.m., Thu. 8 p.m.
● WJFW*

WYOMING

RIVERTON
KCWC Sat 11:30 a.m. and P.m.

STERVENSPETERSBURG
KTNI Sat 10 a.m. and 8:30 p.m

*CHECK BOOK LOCAL LISTINGS.

save THIS OLD HOUSE

BY RYAN ROBBINS

PRICE
$10,000

LOCATION
Mount Pleasant Farm
Chestertown, Maryland

This 1876 farmhouse deserves its Folk Victorian label both for its architectural features—paneled corner pilasters, squared porch columns, and gingerbread trim—and for the cast of characters who long inhabited it, among them the spinster sisters Miss Marian and Miss Anna, who still inspire Chestertown chatter. And then there was Wilbur Ross Hubbard, a wealthy gentleman who acquired the property in 1960. Until his passing at the age of 97, he was the oldest active Master of Foxhounds in North America, and he ran his home bred horses and hounds across the estate's 293 acres while renting out the house. (He was also a founding member of several state and local historical societies, including the Maryland Historical Trust.) Hubbard apparently had a soft spot for cows, too. At his urging, Connie and David Gsell moved their dairy farm to the property in 1973; they purchased it in 1994, shortly after Hubbard's death.

The first floor of the L-shaped house has two front parlors—one with a bay window and a slate mantled fireplace—a bath, a kitchen, and a dining room. During cold months, the Gsells have relied on the latter room's wood-burning stove, which exhausts through a stone-capped corbeled brick chimney. The second floor has three bedrooms, a summer porch, and a powder room; three additional bedrooms in the attic round out the residence's approximately 4,500 square feet. An unused and dilapidated ell that dates from the early 1800s slouches against the rear of the house.

The home has been vacant since 1998. Connie thinks the house "needs the sound of children running up and down the stairs again." It could also use a new roof. But first the otherwise habitable structure must be moved so that the Gsells can build a smaller home on the site. They would like to begin by midsummer.

CONTACT
Connie and David Gsell
410-778-4862

TOP: *Hot summer weather inspired the design of one-room-deep homes, like this 19th-century Maryland farmhouse, to maximize cross breezes.* ABOVE LEFT: *Double doors with a frosted-glass transom and sidelights lead into a central hall and a doglegged walnut-railed staircase.* ABOVE RIGHT: *This surround fireplace surround includes one of four wood mantels. There are pine floors, ogee-edged baseboards, and beaded window and door trim throughout.*

PHOTOS: TIMOTHY BELL

If you know of a house that should be saved, please write to: Save This Old House, 1185 Avenue of the Americas, 27th floor, New York, NY 10036.

THIS OLD HOUSE (ISSN 1086-2633) is published monthly except for the January/February and July/August issues by Time Publishing Ventures, Inc., 1115 Avenue of the Americas, New York, NY 10036 (U.S.P.S. 127-109-545). Canada Post Interna-tional Publications Mail (Canadian Distribution) Sales Agreement No. 31435440 GST 881271698RT. Principal officer: Rockefeller Center, New York, NY 10020 (212) 522-8463. Jim Nelson, Chairman and President; Richard Atkinson, Treasurer; Robert E. McCarthy, Secretary. © 2002 Time Publishing Ventures, Inc. Vol. 7 No. 2. All rights reserved. Reproduction in whole or in part without permission is prohibited. Periodicals postage paid at New York, NY, and additional mailing offices. Postmaster: Send address changes to THIS OLD HOUSE, P.O. Box 53376, Tampa, FL 33662-3768, 1-800-898-7237. Subscription price: 1 year, $34.95. THIS OLD HOUSE and the THIS OLD HOUSE Window are registered trademarks of the WGBH Educational Foundation. Used with permission. Printed in the U.S.A.


Available Allison Transmission
UNSURPASSED HD HORSEPOWER. NO DISCLAIMERS.
SILVERADO HD
LIKE A ROCK