25 Years of Milestones

From OSB and cordless drills to The Home Depot and HGTV, here's a look at how the past quarter-century has shaped the home-building industry

BY MATTHEW TEAGUE

1981

The Home Depot goes public

REMEMBER WHEN BUILDERS went to the lumberyard and homeowners went to the corner hardware store? The Home Depot's first public offering in 1981 marked the end of that era and the beginning of a do-it-yourself movement fueled by megastores across the country (see "Cross Section," p. 20).

The Home Depot started 1981 with four stores and 300 associates in the Atlanta area, and ended the year with eight stores and 650 associates in two states. The stock went public on September 22 and raised $4.093 million. The company's growth hasn't stopped since.

In 2004, The Home Depot had $73.1 billion in sales, with net earnings of $5 billion. In February 2005, *Fortune* magazine named it the most admired specialty retailer in America.

Lowe's is The Home Depot's only national competition. Lowe's went public earlier, in 1961, but it wasn't until the chain started serving do-it-yourselfers that its rapid growth began.

APA establishes OSB standards

UNLIKE THE WAFERBOARD on which it was based, oriented strand board (OSB) is made with long, cross-laminated strands that provide strength on a par with plywood. Although OSB hit the market in 1978, it was not until 1981 that the American Plywood Association developed performance standards for OSB. Immediately, the use of OSB began a steady climb: In 2000, OSB production overtook the production of plywood.

Performance improvements paved the way for the dominance of OSB as the universal sheathing material. Moisture resistance, dimensional stability, and (with preservative treatment) resistance to insects and fungal decay all contributed to OSB's success. OSB is less expensive than plywood and is free of voids and knots. And all U.S. and Canadian building codes now accept OSB for the same uses as plywood, and at the same thicknesses.

The environmentally minded prefer OSB to plywood because it's made of renewable lower-quality timber from smaller trees and previously underused hardwoods. "It's kind of like growing corn," says Robert Falk of the U.S. Forest Products Laboratory. "They're basically just growing fiber to glue back together."

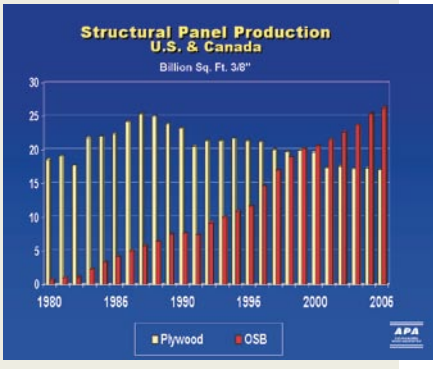
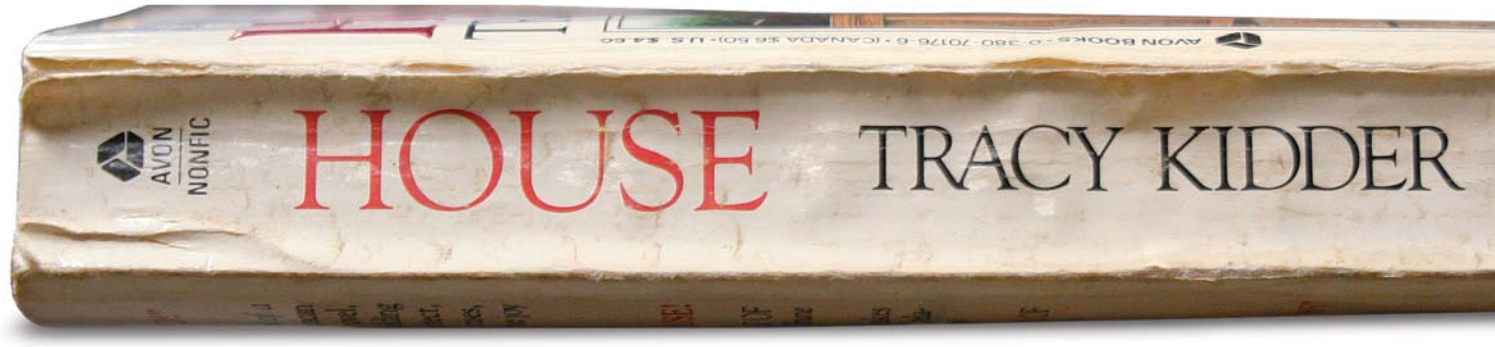


Photo left: Courtesy of The Home Depot. Chart: Courtesy of APA.



CAD leaves the mainframe

1982

ERIC ODOR AT SALA Architects in Minneapolis says that everything about computer-aided design (CAD) programs has changed in the past 25 years. Prior to the 1980s, only a few architects used the mainframe-based versions of CAD programs, and most designers still were drafting house plans by hand. In 1982, though, AutoCAD released a program designed for the PC, and things started to change.

Over the years, CAD programs have become more intuitive. The end result has been programs that are easier to learn and that are much more client- and user-friendly. CAD doesn't improve your sense of design but does make expressing it possible for just about anyone. Now a wide range of affordable, easy-to-use design software has made visual communication profitable and fun for builders and armchair architects.

"CAD doesn't improve your sense of design but does make expressing it possible for just about anyone."

Tracy Kidder's *House* makes the bestseller list

1985

PRIOR TO TRACY KIDDER'S *HOUSE*, home building wasn't a subject for literary works. But if you've built a home—or had one built—there's no doubt you're familiar with the labor it takes and the emotional drama that plays out in the process.

***House* chronicles Massachusetts couple Judith and Jonathan Souweine's harried dealings with their rookie architect and often abrasive interactions with their builders. Following the couple's experience, from early sketches to alarming budget tallies to posing for pictures alongside the finished home, *House* takes you "to the heart of the American Dream."**

Who knew that writing about plumbing or masonry could be so compelling? As *Metropolitan Home* said at the time, this book should be "required reading for anyone with keys to a front door." The big surprise, of course, was that people listened, and it became a bestseller.

OUR STAFF ALSO RECOMMENDS

Renovations by John Marchese

The Most Beautiful House in the World by Witold Rybczynski

The Walls Around Us by David Owen

The Elements of Style edited by Stephen Calloway

A Field Guide to American Houses
by Virginia and Lee McAlester

The Company We Keep by John Abrams

This Old House wins an Emmy

1983

WHEN RUSSELL MORASH, in the midst of remodeling his farmhouse, conceived of a television series called *This Old House*, he had no idea what would become of how-to television and the entire do-it-yourself industry. The show premiered locally on WGBH in Boston in 1976, aired nationally one year later, and won its first Emmy in 1983 (photo left). Morash stepped down as the executive producer and director of *This Old House* in 2004, but he remains on the board.

Morash describes the early success of *This Old House* as surreal: "We knew we had a successful program. We didn't need an Emmy for that. But what was odd was [the way] we were thrown into the entertainment industry. We walked down the red carpet in frilled shirts and tuxedos, and people asked for our autographs even though they had no idea who we were. Our show was done with no makeup people, no costumes, no hair, no fireworks. The real testament to the program was the competition. We used to go on against *The Cosby Show*, and we still got decent numbers."

Top photo: Brian Pontolilo. Bottom photo: Courtesy of *This Old House*.

1986

Paslode introduces the Impulse

AS BOB BELLOCK, the president of Paslode, remembers it, "The world wanted a cordless nailer." Paslode delivered in 1986 with the introduction of the world's first cordless framing nailer, the Impulse. Driven by both a cordless battery and a fuel cell, Paslode's Impulse framing nailer was the first in a line of cordless nailers that now includes finish nailers, a brad nailer, and a stapler. Although there are other cordless nailers available today, there is still, 20 years after the technology was introduced, no direct competition to Paslode's framing nailer.

Paslode's original Impulse cost about $900. New models currently sell for less than $400, and they're lighter, more powerful, and more compact than the earlier tool. A single fuel cell drives about 1,200 nails, and the battery sinks about 4,000 nails on a single charge.

"Over the years," says Bellock, "the cost has decreased by 60%, and the reliability and durability have increased by multitudes."

1988

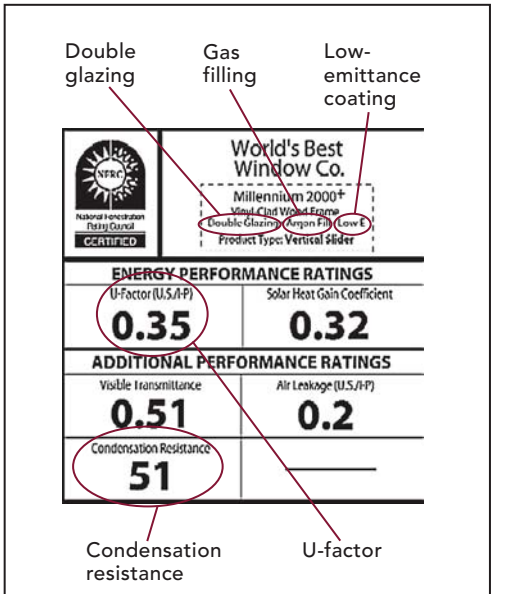
High-performance windows are clearly explained

TWENTY-FIVE YEARS AGO, windows offered little more than a good view. But after the energy crisis in the 1970s, the country got a lot more conservation-conscious. We improved insulation, applied weatherstripping, and caulked every crack we saw. Likewise, window manufacturers responded with a string of breakthrough technologies that significantly improve the energy efficiency of windows.

Modern windows may feature gas fillings between panes, double or triple glazings, low-condensation spacers, thermal breaks, and advanced frame technology.

The most notable technologies in window performance, however, are the low-emittance coatings: clear films applied either directly to glass or on a transparent sheet between panes. Low-e coatings can keep radiant heat in or out of the house. "Low-emittance coatings are one of the most monumental innovations in building in the past 50 years," says R. Christopher Mathis, a building consultant and former board member of the National Fenestration Rating Council (NFRC).

As technologies multiplied, however, comparing one window to another became difficult. As a result, in 1988, the NFRC was established to give third-party performance ratings to windows and doors, putting all the technologies on an even playing field. Now you can compare windows no matter the technology or the manufacturer. The technology might be invisible, but the sticker is not.



WHAT THE STICKER SAYS

1987

Construction Master adds up

BROTHERS KEN AND FRED ALEXANDER started Calculated Industries in the late '70s with a calculator designed to do simple real-estate calculations. Realtors loved it, but a lot of Realtors' husbands, it turned out, were homebuilders who borrowed the calculator for similar budgetary calculations. After developing a second calculator designed for steel detailers, the Alexander brothers turned to builders and set out to create a calculator that would meet their needs.

Their efforts resulted in the first Construction Master, a pocket-size calculator that simplified common building math like laying out stairs and rafters, figuring board feet, or working in fractions. For example, you can enter any two of rise, run, or pitch, and the calculator will generate the unknown measure for roof layout. The Construction Master was unveiled at the National Association of Home Builders' annual Builders' Show in 1987, where more than 500 calculators sold for $89.95. The latest Construction Master Pro sells for $79.95 and features stair and trigonometric functions unavailable on earlier models. A simplified version, the Construction Master V, sells for between $40 and $50 at home centers. If you need to do only simple foot/inch calculations, the Project Calculator Plus sells for around $20.

1987 2006

Photo left: Courtesy of Paslode. Bottom photo: Courtesy of Calculated Industries.

Safer, stronger, better tools

Miter saws slide into action

CHOPSAWS WENT A LONG WAY toward killing sales of radial-arm saws, but the invention of sliding compound-miter saws put the final nails in the coffin. Unless you are willing to dig through the classified ads, you'd have a difficult time buying a radial-arm saw these days, and with good reason: Sliders are safer, more precise, and more portable.

Although miter saws had been around for years, the first slider introduced was Hitachi's C8FB in 1988. (The second generation, the C8FB2, is still available today.) It ran an 8½-in. blade, featured nine preset miter stops, and made accurate crosscuts and compound miters in stock up to 2 9/16 in. thick and 12 in. wide. Almost overnight, other manufacturers came out with their own versions of the sliding compound-miter saw. Today, the saws come equipped with blades up to 12 in., assorted stops and fence systems, and laser-lit cutlines.

1988

12v cordless drills let builders unplug

FOR THOSE OF US who couldn't (and still can't) roll up an extension cord without twisting it into a knot, the cordless drill/driver was a welcome innovation. A few cordless drills were on the market prior to 1989, but with only 7v and 9v batteries, they were little more than glorified screwdrivers that didn't pack the power homebuilders needed. Porter-Cable changed that.

Porter-Cable's 12v cordless drill, model 850, delivered the power and the battery life that builders needed. Today, there are even cordless hammer drills and impact drivers that pack enough punch to warrant their own parking place on the job site. And as manufacturers compete to develop batteries that are lighter, more compact, and more powerful than ever before, cordless versions of every portable power tool are now available. (See *FHB* #176, p. 60.) The cordless revolution hasn't showed signs of slowing down, and that's good news for builders.

Random-orbit sanders get electrified

RANDOM-ORBIT SANDERS combine an orbital sanding motion with rotation to remove stock aggressively, creating a smooth, swirl-free surface far more refined than the surfaces created by earlier orbital machines.

Although air-powered random-orbit sanders had been around auto-body shops for years, it was not until 1989 that Porter-Cable introduced an electric model, the 7334, which quickly became a must-have tool for anyone involved in woodworking. Random-orbit machines soon replaced belt sanders as the sander of choice, and earlier orbital machines appeared antiquated almost overnight.

Only three years after their introduction, when *Fine Homebuilding* first reviewed random-orbit sanders, 17 models already were available, with all the major tool manufacturers offering a variation on Porter-Cable's design.

1989

"Today, there are even cordless hammer drills and impact drivers that pack enough punch to warrant their own parking place on the job site."

Photo: Brian Pontolilo

The Clean Air Act brushes out some finishes

1990

BY LIMITING THE AMOUNT of volatile organic compounds (VOCs) allowed in consumer products to 450 g/L (grams per liter), this landmark legislation altered many finishes that homebuilders had relied on for years. Most oil-based products, including clear varnishes and polyurethanes, were forced to change. Their prices rose, performance suffered, and the new products smelled.

Fortunately, most manufacturers responded by improving the performance of their water-based finishes. "I don't miss [oil-based finishes] at all," says Jeff Jewitt, who owns Homestead Finishes in Cleveland, Ohio. "I can't stand to be in the same room with that stuff anymore."

The reduction of acceptable VOCs was a federal ruling, but states were free to create stronger restrictions. California lowered the limit to 350 g/L, forcing many finishes, caulks, sealants, adhesives, and other products off shelves, leaving builders to find alternatives. Because federal standards often follow those of individual states, we can expect even tougher federal rules in 2006.

"Their prices rose, performance suffered, and the new products smelled."

Synthetic decking lasts

1991

PRIOR TO THE 1990s, man-made decking came in any color that you could dream of, as long as your dreams were all in various shades of gray. But no sooner did Trex hit the market in 1991 than an insurgency of synthetic-decking manufacturers emerged and a host of revolutionary new products came to the market. Now, you can buy synthetic decking in just about any color or texture, and you have to look closely to discern the better synthetic products from the woods that they mimic. (See *FHB* #172, p. 44.)

With some 60 manufacturers making wood-plastic composites or wood-free plastics, the price and availability of synthetic decking is beginning to compete with pressure-treated lumber. From 2000 to 2004, synthetic-decking sales grew by almost 200%. A product that won't rot and doesn't have to be painted surely will be a favorite. With many of these products boasting 25- and even 50-year warranties, we expect to see them for quite a while.

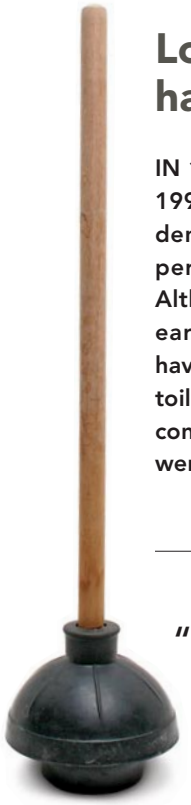
Top photo: Lance Davies. Decking photos: Scott Phillips.

1992

Energy Star shines

IN HOPES OF REDUCING energy consumption and greenhouse-gas emissions by power plants, the Environmental Protection Agency started a voluntary labeling program identifying products that were energy-efficient.

Although the Energy Star program (www.energystar.gov) started by identifying computer products, it quickly expanded to include major appliances, lighting, almost all forms of electronics, and eventually houses. In 2004, almost 1 out of every 10 homes built qualified to receive the Energy Star label. By 2005, almost 2,000 buildings and more than 350,000 new homes in the United States had earned the Energy Star label. In 2004 alone, only a dozen years after its inception, Energy Star estimated that the program saved around $10 billion in energy costs.



Low-flow toilets use half as much water

1994

IN 1994, the National Energy Policy Act of 1992 took effect, stipulating that all residential toilets use only 1.6 gal. of water per flush (instead of 3.5 gal. as before). Although there were some problems with early entrants on the market, redesigns have surpassed the performance of earlier toilets, not to mention the savings in water consumption. In 1997, the same standards were required of commercial toilets.

"There were some problems with early entrants on the market."

1994

Habitat for Humanity named the 17th-largest homebuilder in the U.S.

IN 1976, Millard and Linda Fuller set out with the ambitious notion to aid those stricken by poverty. In an open letter to friends of Koinonia Farm—a small Christian farming community in Georgia—the Fullers wrote:

"What the poor need is not charity, but capital, not caseworkers but co-workers. And what the rich need is a wise, honorable and just way of divesting themselves of their overabundance. The Fund for Humanity will meet both of these needs. Money for the fund will come from shared gifts by those who feel they have more than they need and from non-interest bearing loans from those who cannot afford to make a gift but who do want to provide working capital for the disinherited ... The fund will give away no money. It is not a handout."

Their work led to Habitat for Humanity International and a huge volunteer community to build homes for those in need. Habitat recently built its 200,000th house. To date, the group has sheltered more than a million people in more than 3,000 communities worldwide.

A BRIEF HISTORY OF HABITAT FOR HUMANITY

1984 Former President Jimmy Carter and his wife, Rosalynn, host the first Jimmy Carter Work Project in New York City.

1989 At a Timber Framers Guild conference, two houses are built with predressed pieces made by guild members (photo above).

1990 Bo and Emma Johnson, the first housing partners, pay off their mortgage.

1991 Habitat's 10,000th house is built.

1993 Habitat completes its 20,000th house.

1994 Congressman Jack Kemp helps build a Habitat house in a record 5 hours, 57 minutes, and 13 seconds.

1999 The home-building time record is broken by a crew in New Zealand. The house had appliances installed, sod laid, and an inspector satisfied in 3 hours, 44 minutes, and 59 seconds.

Top photo: Brian Pontolilo. Bottom photo: Kevin Ireton.

HGTV goes on the air

1994

IN 1992, architect turned broadcasting executive Ken Lowe presented an idea to his employer, Scripps Howard. It was a simple concept: a house in which every room has its own TV show. Scripps loved the idea and allotted $75 million to the cause. Two years later, on December 30, 1994, Home & Garden Television (HGTV) launched in 44 markets to more than 6.5 million viewers. Since then, HGTV estimates that it has broadcast more than 9,600 hours of programming, bedecked 15,000 homes, applied 28,000 gallons of paint, and stopped to smell 1,300 roses.

With the success of HGTV, Scripps saw that the market for home-related television was far from saturated and also saw that HGTV viewers constantly were asking for more how-to. Those requests led to the September 1999 launch of the DIY Network, says Bob Baskerville, the network's president. DIY launched with between 2 million and 3 million subscribers. To the network's surprise, its viewers are markedly younger (with an average age of 44) than expected, and divided almost equally between males and females.

Currently, the DIY Network is available in more than 34 million homes and gets more than 2.5 million individual visitors to its Web site every month. And the growth is not slowing, either. "Our plan," says Baskerville, "is to superserve our audience. We're expanding the Web site constantly, and you'll see DIY-branded books in 2006."

Technology and home building collide

1995

SawStop nicks a hot dog and makes safer tablesaws

IT'S QUITE A CONCEPT: a tablesaw that can tell the difference between wood and flesh. With SawStop technology, when human skin (a stray finger, for instance) touches the spinning blade of a tablesaw, the blade stops spinning and retracts below the saw table. It takes about 1/200 of a second and prevents significant injuries (amputation, for instance).

When the technology was pitched to major tool manufacturers, however, they all passed. As the folks at SawStop explain it, if none of the manufacturers used the technology, then none of them could be liable for not using it. So inventor Stephen Gass and some associates decided to manufacture their own saws and sell them directly to the public.

SawStop now makes a cabinet saw that sells for $2,799, and this year plans to introduce a new contractor-grade saw that will sell for $799. Although the company hasn't made a huge dent in tablesaw sales, SawStop may well make a significant difference in the future market: Now that safer saws exist, manufacturers may become liable for not using the technology. "At first we only wanted to license the technology," says Gass, "but now that we manufacture the saws ourselves, there's less incentive to license it." If you haven't seen SawStop in action, it's worth a visit to www.sawstop.com.

Lasers find the job site: Some are useful; others are not

1998

INTRODUCED IN 1992, Porter-Cable's model 7700 miter saw boasted a laser line that identified the path of the blade. But the technology was young. Most users found the saw a novelty, and Porter-Cable discontinued the model.

In 1998, Zircon introduced the Laservision Level 7.0, the first reliable and affordable laser level. Shortly after that, Craftsman revisited the use of lasers on miter saws with more refined technology. Lasers now guide circular saws, drill presses, and cordless drills. Although we're still not sure how useful laser-guided power tools are, laser levels and measuring tools have proved to be accurate and handy.

"Lasers now guide circular saws, drill presses, and cordless drills."

Photos this page: Courtesy of SawStop

Susanka sparks a not-so-small movement with *The Not So Big House*

1999

SARAH SUSANKA'S *The Not So Big House*, with its plea for homes "built better, not bigger," garnered praise from architects, builders, and homeowners alike, and set off a movement in residential architecture (www.notsobig.com). Her second book, *Creating the Not So Big House*, published in 2000, was ranked among the top-15 books in *The New York Times* Advice & How-to bestseller list. There are now five books in the series; the first two alone have sold more than 500,000 copies.

What makes Susanka so palatable to such a broad audience? Perhaps it is her notion that a house is more than the outgrowth of a floor plan. A Susanka home (top photo), while architecturally stunning, feels familiar, comfortable, and inviting. We won't pretend that McMansions have disappeared, but when you look at the better homes being built today, it's clear that her ideas are reaching the public. Architects and builders, after all, design and build what clients want. In Susanka's own words:

"A house that favors quality of design over quantity of space satisfies people with big dreams and not so big budgets, far more than … those characteristics in reverse."

Netscape launches the first Internet browser

1994

WHETHER YOU'RE AN ARCHITECT, a builder, a plumber, or the guy who hires them, the Internet has changed the home-building process. With the touch of a button, drawings and product catalogs can be emailed from person to person. You can keep in touch with clients around the world at any time of day. "We ended up broadening our practice as the Internet came about," remembers architect Sarah Susanka, "just because we could."

Aside from email, the World Wide Web has brought copious amounts of information to our fingertips. Not long ago, you'd spend hours standing in line at code offices and digging through stacks of catalogs to find fixtures, but today with a simple Google search, you can find these items and a lot more online.

You even can find aerial photographs of almost any plot of land in the world. And if you lose the owner's manual for a power tool, Adobe Acrobat's pdf file (introduced in 1993) allows you online access to all the information you need.

WHAT DID WE FORGET?

2006

AT FIRST, this article seemed like a no-brainer: Everyone loves a list, and *FHB* is turning 25, so let's look back at the milestones that occurred on our watch. As it turned out, assembling the list was more difficult than we expected. We started with plenty of ideas from editors, authors, architects, and builders. Researching dates trimmed the field, but we still had to narrow a huge list. Ultimately, we eliminated items that couldn't be nailed to a date in the past 25 years and those that we thought hadn't yet had their full impact. When we celebrate 50 years, we hope some of those innovations—structural insulated panels, for instance—will make the list.

So what did we forget? What has changed or inspired the way you've built in the past 25 years? Join the discussion at www.finehomebuilding.com.

Photo: Jeff Krueger. Inset photo: Delia Hanks.