

Extreme How-To

The Enthusiast's Guide to Home Improvement

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CROWN MOLDING

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SLATE CHALKBOARD

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DONE RIGHT

RECONSTRUCTING
A ROOF

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FOR THE DIY'ER



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**Heavy Duty
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On **LIFESTYLE TALK RADIO NETWORK**

Saturday Dec 5th @ 3:30pm
On **GENESES COMMUNICATIONS NETWORK**

Saturday Feb 6th, 2016 @ 9:30am
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I am glad it's 2016, because last year was an extraordinarily hectic time for me. In addition to writing *Extreme How-To* articles, editing the magazine, and welcoming my second son to the family, I wrote a brand new home-improvement publication. I can now finally announce the availability of EHT's first book, *The Quick and Easy DIY Home Manual*.

Available from Weldon-Owen Publishing, the new book serves as a go-to guide for all sorts of around-the-house projects. Divided into four substantial chapters, we begin with an introduction to must-have tools and essential skills. The next chapter graduates to simple repairs and explanations of a home's critical systems, from plumbing to electrical. Chapter three ventures into weekend projects that are guaranteed make you a hero to the others in your home. Then, chapter four introduces the big jobs, like flooring installation, deck construction, fence building and more.

I'm proud of the finished product, and I think you'll like it, too. It offers 321 helpful tips that we mined from our magazine archives and repackaged with full-color photos and step-by-step illustrations. You can order now from Amazon.com, or pick up a copy at Target, Lowe's Home Improvement Stores, Barnes &

Noble, Books-a-million and many other fine book retailers.

Thanks in advance for checking it out, and happy reading,




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Q: My child has asthma. Is carpet a bad idea for flooring in our house?

A: Significant scientific and medical research demonstrates carpet is a suitable flooring choice for people with asthma as long as it remains well-maintained. Choose Green Label Plus carpets and cushions, plan

for good ventilation during the installation process and practice routine vacuuming with a Seal of Approval / Green Label vacuum. Carpet should always be cleaned the way the manufacturer specifies approximately every 12 to 18 months. Maintenance will not only improve the home's indoor air quality but will also add to the life of your carpet.

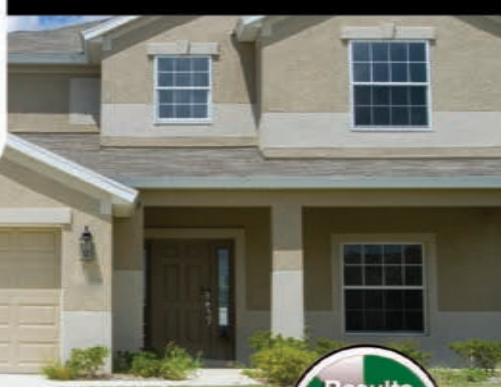
Q: How do I Fix a Leaky Outdoor Faucet?

A: First, try tightening the handle. If the faucet leaks from the handle, tighten the packing nut just beneath it with a wrench. If the leak is coming from the spout, then turn off the water supply at the shutoff valve, which is normally located in the crawl-space in the basement. Any faucets upstream of the home's shutoff valve will require you to close off the main water supply to the property, which is usually located in the ground near the street. This often requires a T-shaped water-meter key, which you can buy at your local hardware store. After closing the water supply, open the faucet handle and drain the water from the faucet. Remove the handle by removing the screw that holds it in place. Behind the handle, use a wrench to undo the packing nut. Slide off the valve-stem assembly and look for the rubber washer. Leaks are often caused by a worn-out washer at the base of the valve stem. Note: Older valve-stem assemblies may have two washers; one behind the

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packing nut and one at the base of the assembly. Remove the retaining screw that holds the washer in place, then take the washer to your local home-improvement or hardware store to ensure that you purchase the correct replacement. Put the new washer back inside the packing nut and screw it in place. Slide the valve stem assembly back into the faucet, and screw it clockwise with a wrench, but don't overtighten or you might damage the new washer. Tighten the packing nut and handle, then test to make sure the leak is fixed.

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Q: The plastic nuts that hold the seat onto our toilet keep breaking. I'm worried that if I use metal nuts and washers, the porcelain might crack when I tighten the connection. Do you have any advice on how to better fasten a toilet seat?

A: Try using well nuts, which have a flanged rubber bushing with a brass machine nut molded into one end. When you tighten it over a screw, the brass nut causes the insert to expand, making a secure connection. The rubber bushing will tighten against the porcelain with little risk of cracking it, and will also help isolate noise and movement of the seat.

Q: What are the advantages of marine plywood?

A: Marine plywood is manufactured from durable veneers and wood plies with minimal defects so it performs longer in humid and wet conditions, without delaminating or succumbing to fungal attack. All marine-grade ply will be free of voids in the core, which are prone to trap water and rot the product from the inside out. It is manufactured using a durable, exterior Water and Boil Proof (WBP) glue that has been subjected to boiling water for more than an hour without delamination of the plies. Marine plywood is also much more expensive than standard plywood, costing two to three times as expensive as standard plywood, depending on grade. **EHT**



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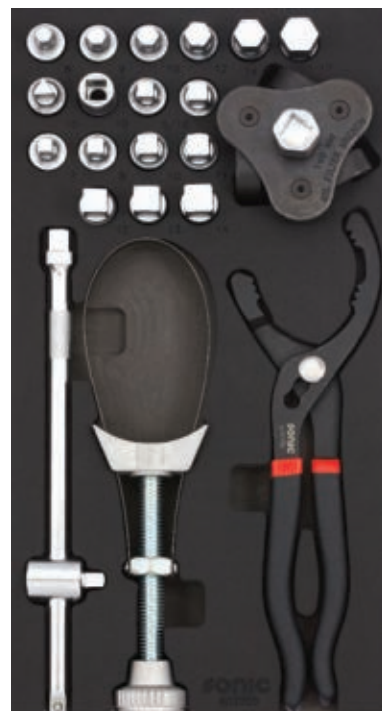
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By Matt Weber

Pliers, wrenches, screwdrivers and more ... You own them, you rely on them, and you know how to use them. And tool-makers are always striving to make them just a little bit better. Here's some of the latest advancements in hand tools for the DIY'er.

CRESCENT QUICK CONVERT NUT DRIVER SET

Crescent recently introduced its Quick Convert Nut Driver Set, which provides the speed of a straight handle driver with the torque of a T-handle driver, all in one tool. Users can easily convert

the Quick Convert Nut Drivers by pulling on the shaft, rotating the handle, and pushing it to lock in place. The set includes seven drivers, color-coded for easy identification. The universal socket design fits six fastener types (hex, square, 12-point, E-Torx, partially rounded hex, and spline) in both SAE and metric sizes. The hollow shaft



and fits precisely to provide better organization and quicker accessibility. The 1/3 setup, which separates each drawer into three sections, is the most versatile configuration available, with the ability to combine different tools (screwdrivers and wrenches, pliers and screwdrivers, etc.) into one drawer. Sonic Tools has a vast product

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CHANNELLOCK E388 BENT LONG NOSE PLIER

The Channellock E388 E Series 8-in. Bent Long Nose Plier has an angled nose designed to gain access in unique work situations.



Channellock's E Series line of combination, long-nose and diagonal cutting pliers have a sleeker design than the manufacturer's traditional pliers. Manufactured to the same quality standards as all Channellock pliers in Meadville, Pa., from North American high-carbon C1080 steel, the E Series presents a more of a stylistic option to the company's traditional pliers. Each of the 18 pliers in the E Series also feature Xtreme Leverage Technology (XLT), which positions the plier rivet closer to

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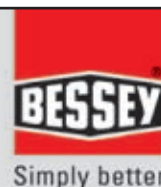


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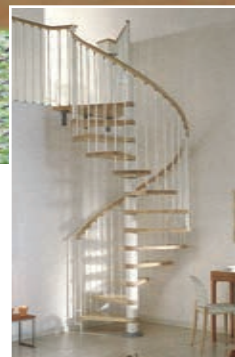
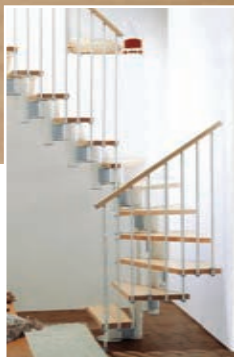


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converts to metric, too. Another feature is inside/outside measurement; which toggles between outside measurement of the blade length alone and inside measurement, which automatically adds the 3-in. width of the case to the readout—ideal for situations where the case runs into a wall and you have to mentally add its width to the length of the exposed blade. eTape16 has three built-in memories that retain readings even after the tape shuts off. For specialized functions like hanging a picture, the push of a button automatically calculates the center point of a measurement. Plus, the re-zero function lets you measure from a previously measured point without withdrawing the blade. Visit www.etape16.com.

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Fastener Hook: The hook also has a slot on the end. The slot is just the right size to grab the head of a nail or screw, so you can drive a fastener and anchor the tape anywhere you need to measure from.



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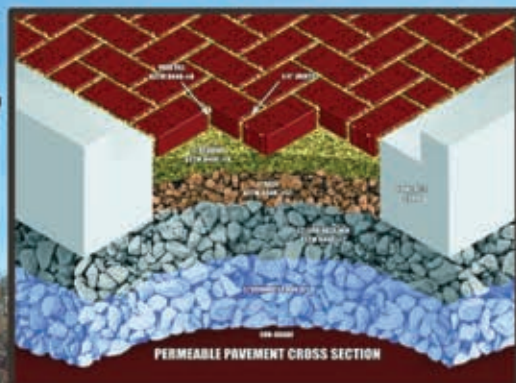
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WATER STORAGE BELOW

Window Guards

Building and Installing Easily Removable Window Fall Restraints



By Larry Walton Photos by Mark Walton

“Did you leave the windows open upstairs?” asked the bride of my youth.

“Yes,” I said cautiously.

“Don't you think Sunny (our dog) will jump out?”

“No, she seems happy to me,” I answered.

“That's not what I mean. I'm afraid she might see a squirrel and . . .”

End of conversation. Time to make some window guards to keep Sunny safe from our window-dive-inducing squirrels.

Parameters: small enough grid to keep the dog safe; large enough openings to provide maximum visi-

bility; strong enough to withstand pressure from the inside; easily removable for emergency escape route.

I considered breaking out the welder but then I spotted a fence with some mesh while on our dog walk (that's an outing where the dog sniffs and pees on everything, and I hear every detail about my wife's accounting project from hell). Anyway, I saw this fence and it made me wonder if they used concrete-reinforcing wire mesh.

Next thing I knew, I had some in the garage for the "Save Sunny" Project. Here's what I did with it:

STEP BY STEP



After measuring to overlap the width of the windows by a couple of inches, I cut the wire grids to width and height (about the top of the opening) with bolt cutters. I left a vertical set of wires along



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DO IT YOURSELF

the bottom about one inch long to act as dowels into the window stool.



I used an angle grinder to take the sharp points off the cuts left by the bolt cutters.



I used Prolong's SPL100 to remove the rust followed by Brakleen to remove the penetrating oil residue to prepare for paint.



Rust on the mild steel concrete-reinforcing wire was just on the surface and wiped off easily.

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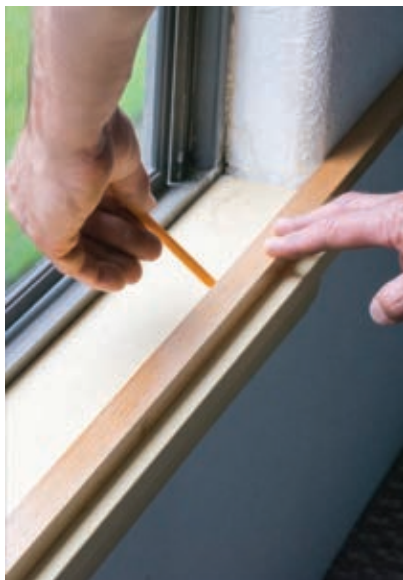
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DO IT YOURSELF



I used spray paint to color the wire. As you can see, more paint got on the newspaper than the steel!



I bridged across the window opening with a straight-edge and marked a line on the interior wall plane.



With the guard positioned above the window stool, I marked on the wall line where each vertical wire would need a hole.

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The holes drilled for each vertical wire are slightly larger than the wire gauge.

After positioning the guard in the window stool holes, I anchored the top corners with clips I made from hose clamps. Use whatever you want, but there should be a screw only in the bottom of the clip so the guard can be lifted out of place without using a tool.



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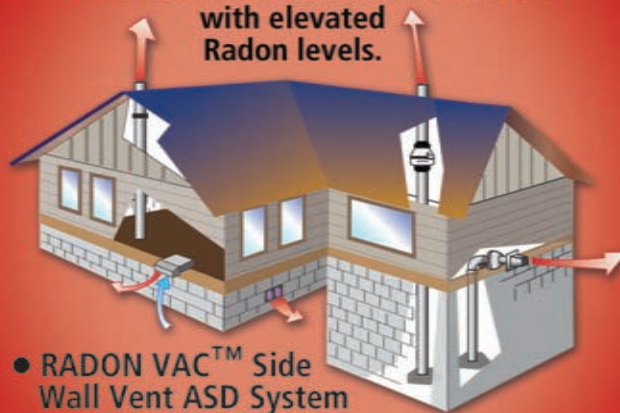


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DO IT YOURSELF

After installing the guard the first time, I lifted it out of place to make sure that it could be easily removed for emergency exits. Make sure all occupants of the home know how to do this.

The finished window guards provide fall restraint without overly obstructing the view. **EHT**



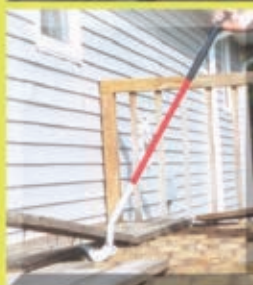
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Innovation can take many forms. For serious DIY'ers, innovation may mean a new project or a new way to solve a problem. For those who make the tools that are used for those projects, innovation could be a new type of tool, or the process in which they are manufactured. Innovation could also mean finding ways to manufacture products in the USA.

CHANNELLOCK® has long been synonymous with innovation. Throughout their 130-year history, they have had a laser focus on

quality, which means that research and development have become an important aspect for every tool they make—whether that's a new tool or an existing one that they can improve. Manufacturing has always been the enabler of innovation and a wellspring for new ideas.

"To be able to say that our world-famous pliers are still made in Meadville, Pennsylvania, USA is a source of pride to everyone at Channellock," says Chairman and CEO Bill DeArment. "Our company was founded in 1886 in northwest

Pennsylvania on the principle of making the highest-quality tools, and nothing has changed."

With new technological advances, Channellock, Inc. has made many improvements in their manufacturing practices. Process enhancements include site specific laser-heat treating operations for more durable products and the implementation of robotics in the forging, polishing and machining arenas.

The dies used to forge each tool are machined using high-speed precision CNC (Computer

Numerical Control) machining centers. This technology ensures consistent and precise milling of the die geometry so each tool forged can be held to strict quality standards for both forged tool strength and critical product dimensions. More consistent forge tooling also facilitates faster changeovers, minimizing downtime and maximizing productivity.

Another innovation that Channellock, Inc. employs is the use laser hardening that makes it possible to achieve the unmatched performance and durability of the pliers. The laser hardening allows the plier cutting edges and teeth to be incredibly durable, while maintaining the metallurgical structure in the handles and body of the tool to maintain the superior strength of the high carbon forged steel.

In recent years, the introduction of 3D printing has allowed Channellock, Inc. to develop prototypes for new tools and potential improvements to existing products. "It has been a welcome addition to our tool design process because it allows us to see how an idea would actually function before advancing too far along the process," said Jon DeArment, President and COO of Channellock, Inc.

A commitment to manufacturing quality products in the USA for 130 years has built Channellock, Inc.'s reputation as a leader in the hand tool industry. In a business that has seen its share of companies explore alternative manufacturing options that result in a loss of quality control, DeArment says that they stand committed to their history of American-made products.

"Quality is all about the manufacturing process," notes Bill DeArment. "Our customers choose CHANNELLOCK® tools over the

competition because we're deeply rooted in innovation, dependability, and performance."

Knowledgeable tradesmen and do-it-yourselfers know that a quality tool goes a long way toward getting a job done quickly and efficiently. They rely on them to hold up under a variety of grueling conditions and applications.

"We invented the tongue-and-groove plier in 1933, and it has been an industry-best tool ever since," said Jon DeArment. "Unlike our competition, we don't waste time constantly trying to design the latest gizmo or gadget to add to pliers. Instead, when we change something, we make sure it's a needed change for tool users that will make their jobs easier and add more value to the product."

DeArment said that CHANNELLOCK® tools are designed to fit both the job and the user. The CHANNELLOCK® E Series™ line of pliers features several sizes of cutting, long nose and combination

(linemen's) pliers. What sets the E Series™ apart, DeArment says, is that they're designed to be sleeker and more lightweight, and the slim design allows users to reach into tighter spaces. They are also equipped with what they call Xtreme Leverage Technology, or XLT™. The improved high-leverage design means it takes 40 percent less force to make clean, accurate cuts compared to other companies' high-leverage pliers.

Innovations like these have resulted in tools today that are generally better in design. They help the user access hard-to-reach areas while being more comfortable to use and more progressive in their appearance. This is what the end-user demands, and committed manufacturers are listening.

"Our pliers haven't changed drastically over the years," Jon DeArment said, "but each innovation we achieve is a measurable one that keeps Channellock Inc. positioned as an industry leader." **EHT**



4





TIPS FOR WINDOW REPLACEMENT

Brighten your home, enhance your décor, and conserve energy with new replacement windows. *Extreme How-To* offers 40 tried-and-true tips for surefire success when taking on this popular home-improvement project.

SELECTING NEW WINDOWS

1. For a low-maintenance window, select a vinyl window frame instead of wood. If you love the look of wood windows, consider a window with woodgrain laminate over vinyl.
2. Think about the type of cabinet hardware, lighting fixtures and other features of your home. Look for windows that have locks that can match those features, such as brushed nickel, brass or oil-rubbed bronze.
3. Consider choosing tilt-in windows for easy cleaning of the glass from the inside of the home.
4. Seek out manufacturers with warranties that cover the frame, sash and insulating glass units of the window.
5. Educate yourself on energy efficiency features of windows. Look for windows with Low E glass and fusion-welded vinyl corners. Gas-filled, double-paned windows will help cut down on heating and cooling costs. Select windows meeting Energy Star guidelines for your area.
6. Consider glass options. Not all glass is the same. Just as you have choices on Low E or gas-filled glass packages to maximize energy efficiency in your home, you have choices on the type of glass. Selections include clear glass, tempered, tinted (generally available in bronze or grey) or obscure glass.
7. Consider your surroundings. If you live in an area prone to severe storms, on a golf course or even in a noisy downtown area, then impact-resistant glass is a smart investment because it is extremely difficult to penetrate. Check with your insurance company to see if it offers discounts if you install impact-resistant windows in your home.
8. If you live around active children, consider ordering windows with laminated safety glass—at least for the first floor of the home. Two panes of glass are adhered to a durable plastic interlayer. If a stray baseball hits a window, the glass will shatter, but broken pieces remain adhered to the interlayer, preventing glass fallout inside the home. The plastic interlayer is also puncture-resistant, frustrating potential intruders.
9. If you currently hear too much outside noise—overhead planes, traffic, railroads—request laminated or impact-resistant glass in your replacement windows to reduce noise penetration into your home.

40 TIPS FOR WINDOW REPLACEMENT



First step is to remove any trim pieces that might interfere with the removal of the window.

WINDOW INSTALLATION

15. Most manufacturers offer standard size windows to closely match existing units. Once you have the new windows on site, double-check the measurements for fit before removing the existing units.

16. Most windows are “clamped” in place with stop molding on each side of the wall. Use hammers, putty knives and pry bars to dislodge the old stop molding. Exterior stops can be removed to install the window from the outside. For indoor installations, remove the interior stops. With the stops gone, carefully push the old windows out of the frame.

10. Review grid options. Many builders suggest standard white Colonial grid patterns. However, window manufacturers offer everything from brass to dark zinc as grid options.

11. Not every window requires a grid. For a window overlooking the lake or a mountain view, forgo the grid to preserve the view.

12. According to a checklist of home safety aspects available from the American Association of Retired Persons (AARP), ease of operation is tops on their list for window considerations for seniors. As you get older, you can’t “push and pull” on a Double Hung window the way you could in your 30’s. For older members of the household, consider easy-to-operate Slider or Casement windows.

13. If hiring a window installer, make sure to request paperwork that assures you that the entire installation team is bonded and insured.

14. Some manufacturers require you to fill out and submit warranty forms. Make sure to do that promptly and keep your window warranty information in a secure location.

Inspect and remove any damaged material. In this case the window sill was rotted.

Remove and dispose of all rotted wood, including casing and/or brick molding.





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40 TIPS FOR WINDOW REPLACEMENT

17. Remove and replace any rotted wood in the window's sill plate or framing prior to installation.

18. Refer to the window manufacturer's instructions for specifics on assembly, which may include accessory pieces, such as vinyl sill extenders to help fit the window into the opening.

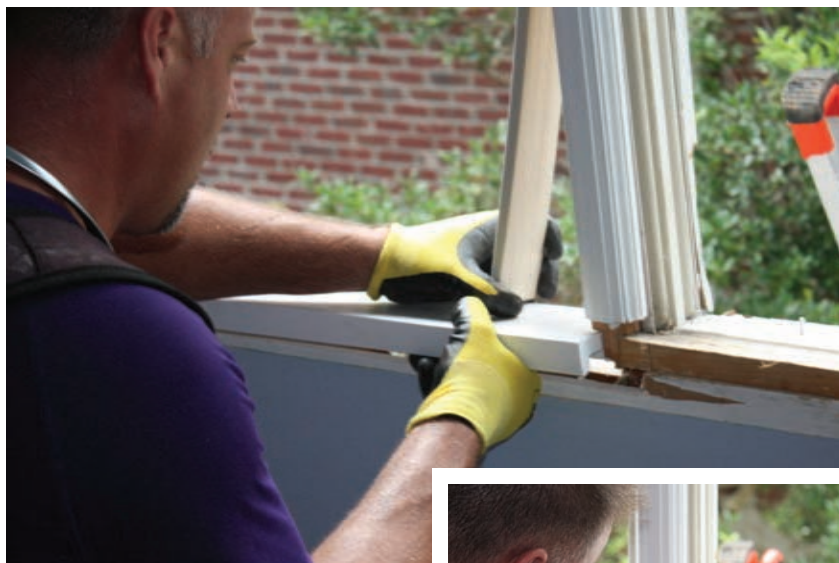
19. If installing the window on a sloped sill, use wood blocks along the sill to help level and support the unit from below.

20. Make sure the replacement window fits into the opening level, plumb and square, otherwise it won't open/close properly. Check both sides for plumb.

21. Adjustments can be made with shims, which should be installed at all anchor points and anywhere necessary to keep the unit correctly in place.

22. To check for square, measure both window diagonals from corner to corner to make sure they match.

23. Insert all installation screws that were included with the new window.



One option is to replace rotted wood with a sill made of cellular PVC, which won't rot.

Fasten all new framing and trim pieces securely.

24. Seal all joints on the interior and exterior with caulk/sealant.

25. Insulate gaps between the window and frame that exceed 1/8 inch. If using spray foam, select a low-foaming product designated for "windows and doors" that won't flex the window material, which could prevent proper operation.



LIVING WITH YOUR NEW UNITS

26. Practice operating the windows with older children and show them how to attach and use chain ladders.

27. Keep furniture, cribs, or anything children can climb, away from windows.

28. Before ordering windows, make sure to examine the unit's locking system and operations. Multi-point locks help provide more protection against intruders and make it more difficult for curious young children to operate.

Pry away the window stops (thin molding strips that surround the window and hold it in place).



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40 TIPS FOR WINDOW REPLACEMENT



With the stops removed, the old window should slide out of the pocket. Some replacement windows, such as the Simonton unit show, will have an accessory vinyl trim piece to close the gap beneath windows installed on sloped sills. Attach the vinyl flange prior to installation.

29. If you need to use window guards on the interior of your windows, make sure they are operable and can easily be removed. Practice detaching the guards with children in case they need to exit through a window in an emergency.

30. Lock your windows. Don't just close them, but lock them, which creates an airtight seal that keeps out air leaks and drafts.

CLEAN & STORE WINDOW SCREENS

31. To clean window screens, carefully remove the screens from the frame and follow the manufacturer's instructions.

32. Place screens on a flat surface (such as the driveway) and use mild soap and water with a soft bristle brush to remove dirt and grime. Clean both sides of the screen and around the interior and exterior of the frame. Rinse off the unit with lukewarm water.

33. Allow the screen to dry completely before placing it back into the window or storing it.

34. Never pressure-wash screens or windows because the force of the water can damage the units.

35. Use extreme care when cleaning screen mesh, since it can be dented or creased if too much pressure is placed on the screen.

36. While most window screens may remain in the windows year-round, some homeowners prefer to store screens during winter months. If you choose to remove your window screens, make certain to store them either in an upright or flat position.

37. Covering window screens with plastic or a sheet will keep them clean while in storage.

Remove the parting stop from the window's rough opening.





Some professionals form aluminum casing to wrap the window opening as an extra measure of weather-protection.

The installer shapes the aluminum on a metal-bending brake then cuts it to fit snugly around the window sill.





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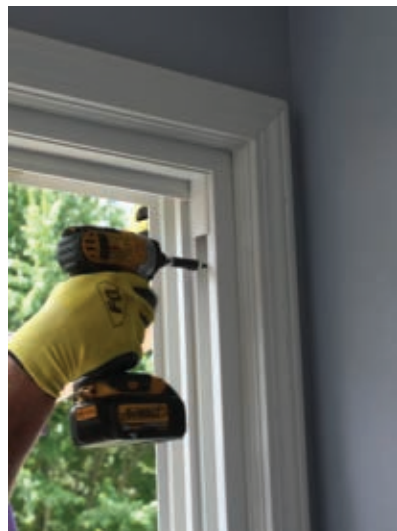
40 TIPS FOR WINDOW REPLACEMENT



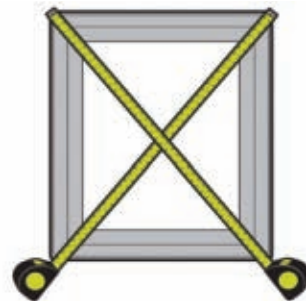
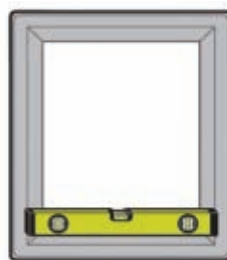
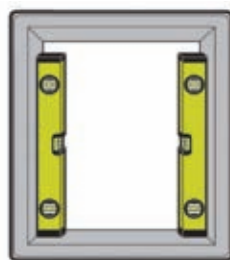
Tilt the window into the rough opening.

38. Make sure nothing sits on top of (or leans against) window screens to eliminate the chance of bending of the frames or poking a hole in the screens.

39. If a small hole or tear does occur in your screen, patch kits are available in most hardware and home stores.



Drive in all installation screws included with the window unit.



Level the window and check both sides for plumb. Check for square by measuring the diagonals to ensure they match.

40. Homeowners unhappy with the look of a patch (or who have a large gash in their screen) may choose to get the screen mesh replaced on the entire unit. Many cities have screen repair services where you can take your screen frame and have new mesh added to replace torn mesh. **EHT**

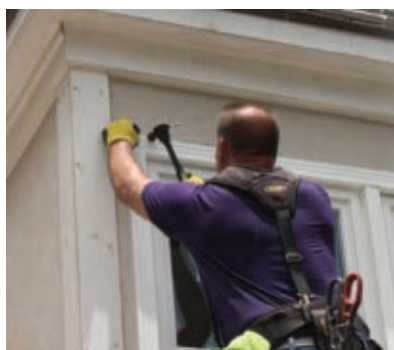
Editor's Note: Professional window installation courtesy Damon Gassaway. Special thanks to **Simonton Windows** for contributing to this article. Visit Simonton at www.simonton.com.



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Reinstall interior trim, including casing and window stools.



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DECK PRODUCT ROUNDUP

ECOLIFE STABILIZED WOOD

Real wood is the most sustainable, renewable and economical decking and fencing option you can use, and Viance offers improved wood treatment solutions that allow the beauty of real wood to shine through. Ecolife Stabilized Weather-Resistant Wood is fully protected against termite attack and decay, and the proprietary treatment also stabilizes the wood structure. Ecolife Stabilized Wood significantly reduces the problems of bending, twisting or warping that affect many other treated wood products, so Ecolife performs much better as the structural frame beneath any deck surface. Visit treatedwood.com.

OLYMPUS HORIZONTAL BAR RAILING

Horizontal bar railings for your home or office typically require onsite welding and fabrication. A new railing system from AGS Stainless changes that with a component-based horizontal bar rail system that is fabricated in its entirety at the factory. The



experts at AGS Stainless help you design the system; create all the installation drawings and do the welding, fabricating and even finishing. Installation is quick and easy, requiring only a few simple hand tools. Visit www.agsstainless.com.

QUICKCAPS

Available in aluminum, brass, copper or powder-coated finish, QuickCaps fit any 4×4 post to protect the end-grain from water damage while decorating a fence or handrail system and emphasizing the woodwork. To

install, just mark the center of the post, position the cap nail on the center mark, then use a rubber mallet to drive the QuickCap into the post. Visit www.hometops.com or www.kokille.com.



DECK PRODUCT ROUNDUP



POST SHIELDS

Post Shields are a simple low-cost solution to conceal and protect mailbox, deck, pergola and fence posts from unsightly damage caused by lawn equipment. Lawnmowers and grass trimmers damage the bottom of posts, and the exposed wood will deteriorate faster, look unsightly and attract insects. You can now affordably protect your posts and maintain the beauty of your home with Post Shields, which look great and are easy to install on new or existing posts with no tools necessary. If your posts have already taken a beating, you can use Post Shields to cover the damage and immediately stop further destruction. Post Shields provide a beautiful and sharp look to your landscape whether they are there to hide damage, protect, or just look great. They're available in multiple colors, post and height sizes. Visit www.PostShields.com.

IPE OIL HARDWOOD DECK FINISH

The Ipe Oil Hardwood Deck Finish from DeckWise brings out the natural wood color on hardwood decks. The finish penetrates

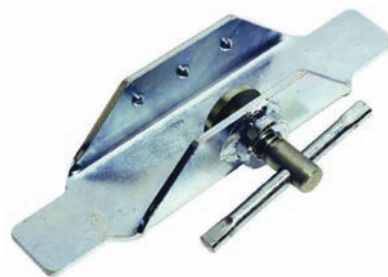
even the most dense exotic hardwoods to seal and protect deck boards while conditioning the wood fibers at the same time, maintaining a totally natural wood appearance. Apply Ipe Oil to Ipe, Massaranduba, Tigerwood, Cumaru and many other hardwoods to preserve the natural



exotic beauty of your decking. Ipe Oil Deck Finish is formulated as an oil-based natural wood finish with low VOCs and designed for exterior hardwood decks. It is specially prepared to inhibit splintering and warping of even the densest hardwood deck boards on the market and delivers a strong UV-protection barrier on the wood. Visit www.deckwise.com.

GRABBER JOIST JAW

The Grabber Joist Jaw is a handy accessory for professional wood framers that works like a second pair of hands. The Joist Jaw holds up rafters and joists, eliminating the need for two people. It automatically levels the cross-member with the rim joist or ledger, giving the framer a "hands free" position while installing the joist hanger or other connectors. With just a



couple of twists, the Joist Jaw clamps down on its target from the top or the bottom and holds the lumber tight. The Joist Jaw is reusable and made of durable zinc-plated steel. This tool saves time and increases accuracy whether you're building a deck, a roof or a floor. Visit grabberman.com.

LAST-DECK

Manufactured in the Midwest of all American-made structural-grade aluminum—the same as an aircraft—Last-Deck and Rail products require no staining or sealing, just mild soap and water for cleaning. The product does not split, crack, rot or mold. It's lightweight, fire-resistant and available in a multitude of options, allowing you to design your own luxury outdoor space. Last Deck and Rail customers have the freedom to mix and match railing, picket and deck board finishes in nine



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standard soft-touch colors and seven sublimated “woodgrain” finishes. If your deck is low to the ground with no need for a “dry space” below, choose the Last-Deck 100 Series. If you need a “dry space” for storage or a patio beneath the deck, choose the “watertight” 200 Series. With the “watertight” 300 Series get advantages of both; individual planks can be replaced or changed without taking apart all the planks that come before it. Visit www.lastdeck.com.

EVERFLASHING DECK LEDGER FLASHING

Failure of the house-to-ledger connections accounts for 90 percent of all deck collapses, mostly due to the lack of proper flashing. The joint between the deck and house should always be protected from water intrusion, which can lead to further issues such as dry rot, connector corrosion, mold and ultimately deck ledger failure. In response, Everflashing was developed as the “last deck flashing you will ever need” to greatly

reduce the possibility of water intrusion. What sets Everflashing apart from other deck-ledger flashing is the extra fin that covers the tops of the floorboards. This feature provides added protection against water-borne debris and allows the floorboards—especially



those made of composites—to expand and contract without unsightly gaps. Everflashing is available in G185 galvanized for use with treated lumber, color-matched aluminum for MicroPro or L3 Lumber, or stainless steel for salt-water applications. Visit www.ledgerflashing.info or www.qualityaluminum.com.

DECKORATORS VAULT DECKING

The new Deckorators Vault composite decking is marketed as having the industry’s best strength-to-weight ratio. The decking material is lightweight, easy to work with, yet virtually unbreakable. The patented Eovations manufacturing technology creates a powerful, lightweight fibrous composite that performs, feels and looks like wood—without any wood content. The result is composite decking with superior strength, stability and workability at a weight comparable to PVC decking. The decking is highly impact-resistant, yet it cuts, drills, shapes and fastens as easily as wood. Because it contains no organic material, Vault decking offers virtually zero moisture absorption and low

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DECK PRODUCT ROUNDUP



thermal expansion for superior weather resistance. Measuring 7/8-in. thick by 5-1/2-in. wide, Deckorators Vault boards are available in dusk and mesquite color options, with slotted or solid-edge profiles and is backed by Deckorators' 25-year structural, 25-year stain-and-fade and 25-year removal-and-replacement warranty. Visit www.deckorators.com/gobeyondordinary.

BIG TIMBER CONSTRUCTION FASTENERS

Sure Drive USA / Pan American Screw offers a complete line of star-drive construction screws for the professional deck builder or weekend hobbyist. Big Timber fasteners meet the highest industry standards and have been thoroughly tested in independent labs, but more importantly they have withstood field-testing under



the toughest conditions by thousands of contractors for over 20 years. Big Timber construction fasteners are available in a wide variety of sizes and designs to meet your project demands. The BTX general purpose corrosion-resistant, exterior screws feature a deep star-drive recess offering twice the torque of Phillips and Square drive screws. A true flat-head design with self-counter-sinking nibs and a knurled shank make the BTX easy to drive, and the specially designed spiral notched thread with Type-17 cutter point works like a saw blade, slicing through even the toughest materials to prevent splitting and cracking. The Big Timber CTX construction lag screws have a built-in washer-head design as well as a deep star-drive recess that reduces cam-out and bit slippage. Available in lengths from 1 to 16 inches, these heat-treated and hardened structural lag screws are stronger and more durable than ordinary lag screws and are triple ceramic-coated for maximum protection against corrosion. Visit www.suredrive.com and www.wbsmontana.com.

NUDECK FROM UGL

Too many times the structure of a deck and patio are in very sound condition, but the surface appearance makes homeowners want to give up and pay the substantial price to replace the substrate completely. United Gilsonite Laboratory has developed a new coating that is designed to give new life to those tired surfaces. UGL NuDeck Wood and Concrete Restorative Coating extends the life of a deck and patio with a paintable solution. From the can



it creates a new, slip-resistant surface for decks, walkways and patios. The tintable color palette coordinates with UGL ZAR Solid Color Deck and Siding Stain to complement the color of surrounding vertical surfaces such as siding, railings, posts and walls. The product is ten times thicker than paint or stain and fills 1/4-in. cracks and nail holes. It locks down surface splinters and can be tinted in 30 different colors. Visit www.ugl.com.

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DECK PRODUCT ROUNDUP



NYLODECK

Making a splash in the deck-building industry, NyloDeck is lightweight, easy-to-use and contains no wood or PVC, giving it strength and durability superior to that of other decking composites. Made using 100-percent recycled carpet fiber, NyloDeck is impervious to moisture, mold, mildew and termites, making it an ideal decking product. A builder's dream, the product spans up to 24 inches O.C. and is available in lengths up to 24 feet. Its patented three-dimensional embossing process creates a beautiful and unique finish to each of the available six colors. Visit www.nylodeck.com

ENDURO STEEL SPIRAL STAIRCASE

The Enduro Steel is the spiral staircase for outdoors. It combines long-term durability with high standards of quality and craftsmanship in design. The kit from Arke Stairs includes hot-dipped galvanized steel for protection against rust and weather, stainless steel hardware, and an extruded black PVC handrail. The Enduro Steel also

offers a landing which can fit a square or rectangular opening, or adjoin a header/mezzanine. The handrail is a continuous length of extruded black PVC. Written instructions and a demonstration video or DVD are included.



Basic household tools are all that are needed for assembly. Visit www.arkestairs.com.

WOLMANIZED ERAWOOD

Wolmanized EraWood is the first decking product protected by a nonmetallic, carbon-based solution. The biocides used in the preservative are known to

degrade in soil, meaning they are not bioaccumulative. In an era when consumers want environmentally sustainable products, natural appearance, low chemical content, low corrosivity, and effective coverage with paint and stain—without giving up performance—Wolmanized EraWood deserves a close look. The wood is protected



with low-impact preservative, providing lasting resistance to termites and fungal decay and intended for out-of-ground applications. A proprietary stabilizer minimizes the effects of moisture and helps prevent warping, twisting and cracking. Visit www.wolmanizedwood.com.

DECK2WALL SPACERS

Deck2wall Spacers help prevent rot from occurring at deck-ledger connections. The spacers separate the ledger from the supporting structure, providing a path for water and debris to flow harmlessly through the assembly, while promoting circulation and drying. Stacked washers have often been used as spacers but Deck2wall Spacers have many advantages over standard washers. The Deck2Wall Spacers have attachment holes to keep spacers in perfect alignment for a faster and easier installation. They offer more bearing surface for better load distribution, and the plastic



spacers are non-corrosive. Plus, the one-piece design and installation method provides superior waterproofing. The Deck2Wall Spacers also provide a long-lasting solution for attaching shade structures, posts, stair stringers, landings, built-up beams or mechanical equipment. Made in the USA, the spacers are injection molded, glass-fiber reinforced polypropylene, and now available in two sizes. Visit www.deck2wallspacer.com.

PROWOOD DURA COLOR TREATED LUMBER

ProWood Dura Color is a new advancement in treated lumber, which is color-infused, so pigment is driven deep into the wood fibers, creating beauty that's guaranteed to stand up to the elements for years. The natural wood characteristics remain

visible, unlike with paint or solid stain. Dura Color is treated with an EPA-registered waterborne wood preservative system to protect against termite attack and fungal decay. It's also Building Code-approved for use in decking and above-ground applications, and the treatment is compatible with aluminum fasteners. Pro



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If your posts have already taken a beating, you can use Post Shields to cover the damage and immediately stop further destruction.

The four shields are easy to install and are available in multiple colors, post and height sizes. Check them out at postshields.com and ask for them in your local hardware store.



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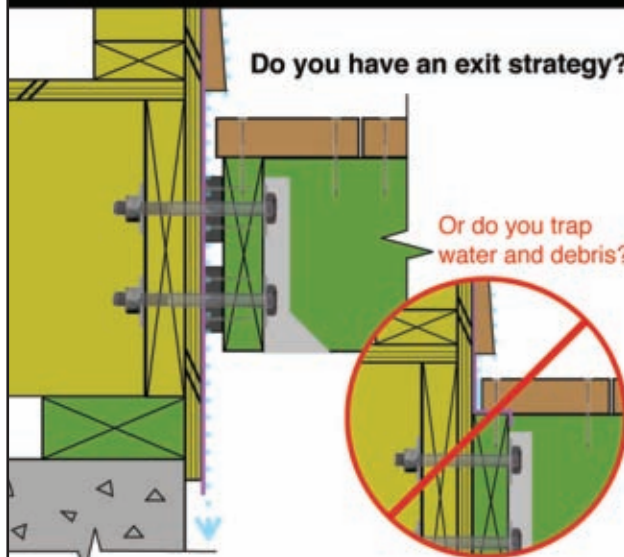
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DECK PRODUCT ROUNDUP

Wood Dura Color comes with a 2-year color assurance (no fade) limited warranty and a lifetime limited warranty against termite infestation and rot. Visit ProWoodLumber.com.

DECKORATORS RAILING PRODUCTS

Deckorators, a brand of Universal Forest Products, offers a new sleek and versatile cable railing system, "a minimalist system capable of giving any deck a modern feel." Additionally, the new Deckorators woodgrain cap rail offers a natural-looking finish without the maintenance of wood. The new Deckorators two-piece postcovers are perfect for fitting around existing posts or structures, turning ordinary pillars into natural-looking posts with



personality. Made of fiberglass-reinforced concrete, the 42-in. pieces are available in gray cobblestone and beige stacked stone. Visit www.deckorators.com.

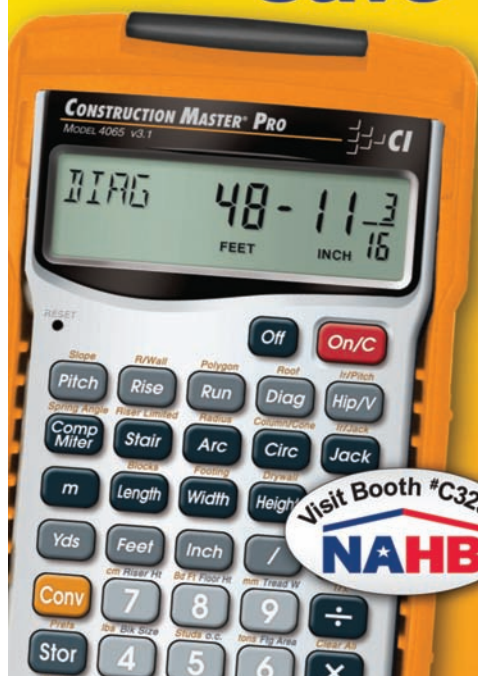
TIMBERTECH 3D DECK AND RAIL

TimberTech introduces a revolutionary approach to deck design with a realistic 3D iPad app that takes deck and rail visualization to a new level. Using groundbreaking, augmented reality technology, the new app, called TimberTech 3D Deck and Rail, allows iPad users to envision their deck and rail choices right in their own backyard. The app utilizes a "visualization marker," downloadable at the TimberTech website, to allow a



user to customize each design with various TimberTech Deck and Rail products, colors and even different baluster in-fill options. It then provides an accurate 3D image of what the future deck might look like—in the exact space it will be built. With TimberTech 3D, the iPad user will simply place the marker

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at the desired deck location on the back of their home or on any flat area. Then, launch the app and enter the Visualizer mode to scan the marker and activate the computer vision magic. Once activated, a user can add deck boards and railing profiles in any TimberTech color and with any TimberTech railing infill. When choices are complete, a realistic image is created that allows the user to visualize their deck as if they were viewing it in their own backyard. Visit www.timbertech.com/iPad.

SUPERDECK TRANSPARENT WOOD STAIN

SuperDeck Transparent Wood Stain was developed over 20 years ago to meet the demands of a variety of extreme climates found in California. From the highest peaks of the Sierra Nevada mountains to the low and damp northern coastlines to the dry heat of the valleys and deserts, Superdeck is a consumer and contractor favorite due to the ease of use and long-lasting results. The oil-based formula penetrates deep into wood fibers for years of enjoyment and protection against the elements in any climate. Superdeck is formulated to resist growth of mildew and algae on the coating's surface. The three-oil formula repels water, just like water off a duck's

back. Its easy-to-apply, one-coat coverage lubricates wood fibers to reduce cracking and checking, and the product is VOC-compliant with formulas as low as 100 VOC. The transparent finish highlights the natural wood grain, and iron-oxide pigments provide maximum UV protection. Visit www.superdeck.com.

ARMSTRONG-CLARK EXTERIOR WOOD STAIN

While most stain companies are moving to hybrid or water-borne formulas, Armstrong-Clark is experiencing significant growth with a natural looking, low-VOC, traditional penetrating oil formula. Why? Because it's long-lasting, easy to apply, and a breeze to

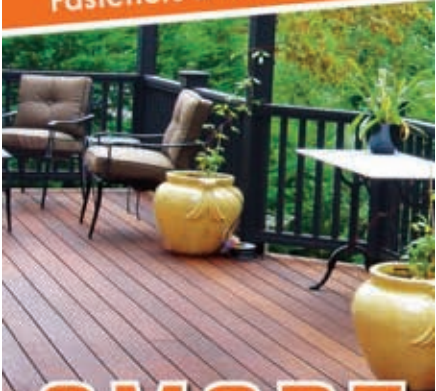


maintain. One formula is suitable for all applications, unlike many competing products. Apply the preservative no matter how hot it is, in direct sunlight, and even when rain is coming soon. You'll have no peeling, cracking or shiners to deal with. The two newest colors, Mahogany and Amber, have pigments specific for hardwoods that work exceedingly well on softwoods. A favorite application is Amber on redwood, cedar or treated pine. Sample cans are available in 4-oz. sizes. Visit www.armclark.com.





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DECK PRODUCT ROUNDUP

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engineering is a single system, eliminating 'add-on' underdeck gutter systems or drainage sub-structures. This 100-percent

waterproof decking solution also comes with an industry-leading leak-proof guarantee. Visit wahoodecks.com. **EHT**

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How Can I Fix My Coolant Leak?

Before we get to how to fix your leak, let's talk about why it is important to fix a coolant leak quickly. If your car is leaking coolant, it will run normally until the coolant level gets too low. Once it is low, there will not be enough coolant to keep your engine at the normal operating temperature and the engine will over heat.

Fixing your coolant leak quickly will ensure your vehicle has the proper coolant level to stay cool and safe. Coolant leaks can come from a variety of places in your vehicle and where the leak is will dictate the best solution. Possible coolant leak locations include hoses, thermostat, the heater core, a radiator or the head gasket

There are at least 4 hoses associated with the cooling system in your vehicle, but possibly many more. There will be a hose that carries coolant from the bottom of the radiator into the water pump and another hose that carries coolant from the top of the engine back to the radiator. There will also be hoses that carry coolant to and from the heater core, which is most likely located under your dashboard so the hoses will travel from the motor back to the firewall, or the rear of the engine bay. Overtime due to heat and age the ends of those hoses can become brittle and begin to crack where they are attached causing small leaks. In this case, the best thing to do is purchase a new hose and clamps and replace the broken hose.

The thermostat is usually on the top on the engine, but in cases, as in many Subarus can be located on the bottom of the engine. It's likely near the water pump and is closed in a housing that is near one of the hoses going to the radiator at the front of your vehicle. This housing is usually bolted on so that it can be easily removed if you need to replace the thermostat. It is possible that the thermostat housing can develop a leak where it is bolted together. In this case, consider replacing the thermostat housing gasket. Since you already will have it apart, consider replacing the thermostat as well since it is a relatively inexpensive part.

As discussed above, your heater core is located under your dashboard near the cabin ventilation fan. Warm coolant from your engine is pumped through the heater core, then your cabin ventilation system uses that to heat the air in the cabin of your vehicle. If the heater core is leaking you will find coolant on the floorboards of your vehicle, most likely on the passenger side. Removing the heater core can be an expensive and tedious job requiring the removal of a significant portion of the interior of your vehicle. To repair the leak in your current heater core use BlueDevil Pour-N-Go Head Gasket Sealer. BlueDevil Pour-N-Go is a non-particulate chemical based leak sealer that reacts at the temperature differential created at the leak point in your cooling system. BlueDevil Pour-N-Go will create a chemical weld at the leak permanently sealing the leak in your heater core without expensive removal.

If you discover a radiator leak you can repair it by using BlueDevil Pour-N-Go to seal that leak in just the same way. Since your radiator is in the front of your vehicle and a relatively fragile piece of equipment it is no unusual for it to get holes from rocks or road debris. BlueDevil Pour-N-Go can save you from the costly repair of purchasing a new radiator.

You can tell if you have an external leak from your head gasket if you discover coolant leaking from below your exhaust or intake. External head gasket leaks must be sealed very quickly as they will expand overtime if they are left untreated. If you have an external head gasket leak use BlueDevil Head Gasket Sealer. BlueDevil Head Gasket Sealer can seal the head gasket leak even in vehicles with large cooling capacities, like V8 engines or truck engines, and is powerful enough to stop even large leaks.

BlueDevil Pour-N-Go Head Gasket Sealer is guaranteed to seal your cooling system leak easily and permanently without costly replacements or mechanics bills. BlueDevil is a permanent repair, Guaranteed

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DEAD- END LEFT, COPE RIGHT:

HOW TO CUT & JOIN CROWN MOLDING

By Mark Clement

***Get-started
Advice for
First-timers and
Idiot-proofing
for Pros.***

I adore crown molding. I like installing it, too. I've also been lucky enough to share demonstrations all over the country on installing crown and other trim and have noticed that people have almost the exact same questions everywhere I go.

The first assumption many people make is that it's 'easy.' Yeah. No. If you bite on that hook, you're gonna be another fish flappin' on the DIY boat to Why-doesn't-this-work-ville.

See, the thing about crown is that unlike flat stock, it needs to be addressed in several planes of space throughout the entire process, including upside down.

It's enough to confuse anybody. And while I know how to do it, which is what this article is about, I don't do it every day so I get confused, too. To keep things as simple as possible, I've made up a couple of idiot-proof practices that work for me and that I can share with you. (My personal idiocy, I'll keep to myself.)

This show-and-share, as they say in my son's classroom, will help you earn gold stars for cutting and joining crown's inside corners—the most befuddling part of the process.

DEAD-END LEFT, COPE RIGHT: HOW TO CUT & JOIN CROWN MOLDING



The name of the game for me is a bench (I call mine, which I made myself, a cut station). It supports the work on either side of the saw. One that enables you to do other operations, like support the crown in position to cope while also holding your coffee, can be pretty productive.

FIRST THINGS FIRST

There are a few skills you need to have before you try to whack out a primo, non-caulk-caked crown job. Namely, you need to be able to cut and measure accurately. Very accurately. And you have to be a king of copes.

The other thing I like is a smart tool setup. Crown molding requires precision and concentration to do well, and one place to take your game up a notch is with your saw and material support. As you dial in your rig you can also practice before installing anything.



I like to take a 'real life' measurement. It's a helpful idiot-proof practice for me. I fasten a test piece in the corner and measure from it to the opposite corner. Tip for working alone: Pinch the hook of the tape measure against the molding with a screw.

TOOL TIPS

I'm not saying my setup is the best for crown, but it works for me. The main thing is this: Infeed and outfeed support for the molding on either side of your saw must be 'in plane' with your saw

deck. The second thing is to attach a cleat to hold the crown in position while cutting. An accurate saw kinda helps, too. A lot. And a sharp blade is a thing of beauty.

You'll also need a coping saw, clamps, a pneumatic nailer (I like a 15-ga. angled finish nailer for this), and the ability to sharpen a pencil. Plus, you'll need a bunch of other stuff I won't list because I'm guessing you have tools if you're reading this.

My cut station, which I make myself, is my center-of-universe for crown because I can do everything I need to do to the molding in the same place.

First thing I do on any crown project is buy an extra piece or two. I use one as a safety in case I screw up. I cut pieces from the



I always test things out before wrangling big pieces up a ladder. If you're new to the crown game, this is how you practice and become a crown whisperer.

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DEAD-END LEFT, COPE RIGHT: HOW TO CUT & JOIN CROWN MOLDING

Don't judge me. Going through this little idiot-proof practice has saved me entire pieces when I'm tired or brain cramping. Mark an X on the bottom right of a piece to help orient yourself on the journey of upside-down cutting.

other to set up the saw and lay out the room.

Start by cutting a piece of crown about 30 inches long. This is our 'test piece', one of two we'll use. Make sure it's nice and straight. Then, flip it upside down and use it to lay out the cleat location on your saw.

On the back of the molding are two flat surfaces. Get each one dead flat against the saw deck and saw fence. Once in place, draw a line to mark the front of the molding on the saw deck.

So far so good? Next, take a straight 1-by and place its rear edge along the line. I use a piece about 5-feet long, which gives me about 30-inches on either side of the blade to support the work. Next, secure it in position. I hold mine down with screws. The 1-by is 'sacrificial' so I cut through it as I cut the crown. The screws on either side hold it in place.



This may seem like a crap-load of work, but the time and aggravation it saves later is titanic.

GET ORIENTED

I don't hang crown molding all the time so I get out of practice. And all the mental gymnastics are, well, gymnastics. So the next step is getting control of the floor routine.

I literally walk into the room, hold my test piece in the air right side up. ('Right side up' almost always has the detail on the bottom, with big swoops on top.) You can install crown upside down using the techniques here, but it is technically still upside down.

Next, I make an X on the bottom-right of my piece. When it's



Crown is cut upside down and at its spring angle. It's important to mark the cleat position on the saw exactly. Note that both back flats on the crown are dead flat against the saw.

KNOW YOUR CORNERS

Cuts have names. If your room is a square or rectangle, all the cuts are 'inside corners'. An 'inside' cut wraps the inner concave edge of an L. Conversely, an outside corner wraps around the outside or convex lines of an L. For a quick visual reference, you can make corner templates for crown molding, as shown here, to help keep your angles correct when cutting.



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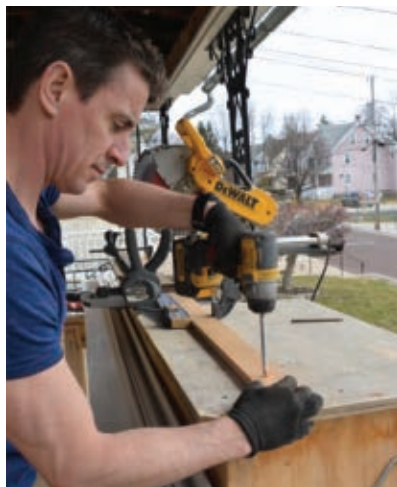
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DEAD-END LEFT, COPE RIGHT: HOW TO CUT & JOIN CROWN MOLDING



The cleat I use keeps all my molding in position without me having to think about it again for the rest of the project. This takes time up front, but is also the equivalent of making a family sedan into a Tesla once you start cutting.

upside down in the saw, the left is right and right is left. If you've read about "upside down and backwards," this is the backwards they're talking about; I could never understand that.

Since I barely understood what I just typed, the X helps keep me oriented. We cut that next.



COPE AND TEST

At the saw, the molding is cut upside down with the little swoops on the fence, the big swirls on the deck. This is called cutting in the 'nested' position; now you, too, are a tool dweeb like me. This also means the X on the right in real life is on the left as you cut. Turn your saw to 45-right and cut a miter off the end of the piece.

Next, with the coping saw, cut a cope. If you're using pre-primed molding, a cope removes all the un-primed wood exposed by the cut. The way I cut the cope is by first aligning my coping saw with the miter so they form an X. To

Here I'm cutting an inside miter before coping, using the cleat to hold the molding in place.

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cut into all the nooks and crannies, you have to cut from various approaches, removing the saw from the work and starting again at a new angle as the saw bottoms out. When you're done, all that remains is the leading edge of the primed wood. It only takes a minute or two once you get the hang of it.

Important note: There is only one piece you cut off squarely when coping crown: The little triangle tip at the bottom of the piece. The rest you cut out. This is an important distinction. You'll know if you miss it.

Since it can be difficult to understand the technique by reading, the next step is to practice coping. Plan to do 10 of them until you feel yourself becoming a cope whisperer.

WHY COPE?

Few things say "I don't really know what I'm talking about yet I will talk like I do" than someone who complains with an air of authority: "There are no square corners in this house!"

The reason is because NO houses have square corners. Framing is nowhere near that precise and even if it were, joint compound or plaster will "un-square" those corners.

As DIY Network's Million Dollar Contractor, Stephen Fanuka puts it: "In a perfect world mitering is the perfect solution. Problem is, it's not a perfect world. Ceilings are out of level, and walls are out of plumb."

The advantage of coping is that it eliminates the square-corner fallacy because corners don't have to be square for a cope to sing out its awesomeness.

While not all moldings can be coped (outside corners have to be mitered; it's just geometry), coping is superior to mitering. If you're still not on board, realize that changing the miter angle to 46 on one piece and 44 on the other doesn't really work, because it changes the face-length of both miters, and you trade one problem for another.

So what about all those high-end jobs where big crowns are mitered and look great? Here's Fanuka again: "The molding is mitered, but then the drywall or plaster guys come back and feather the walls and ceilings to close up the gaps."

Who's gonna do that who's not a movie star or captain of industry? Most of us will caulk it closed and call it a day. There's nothing magic here but there is a ton of work required to make perfect miters match an imperfect world.



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To make it easier, I clamp the piece onto my table (two clamps work better than one) and get to work. Then, I cut a second test piece and use it to see how good (or bad) my cope is. Sometimes

you have to clean out a little more behind the cut. The saw can work for that. For getting into really tight areas I use a small triangular shaped file and a couple of chain-saw sharpening files.

One other thing: Know which way the teeth face on the coping saw can make life easier. For example, I point the teeth toward me, which causes the saw to cut on the pull-stroke, which I prefer.

Finally, on your real pieces, pre-cut all your copes. So for a rectangular room, cut four copes on four full-length pieces.

TEST AND MEASURE

Grab your two test pieces and head into the room. Put them up in a corner and see how they fit together on the wall. Once they fit, mark lines top and bottom. Do this in each corner. Your full-length pieces probably won't hit these lines exactly, but they should be close. It's a reference point.



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There's a lot happening here. The work is supported on the bench to make cutting more accurate and easier. The bottom 'tip' of the molding has been cut off. The remainder is being cut out. The crown cleat on the bench helps stabilize the molding, too.



Remove the bottom tip of the coped molding before taking final measurement.

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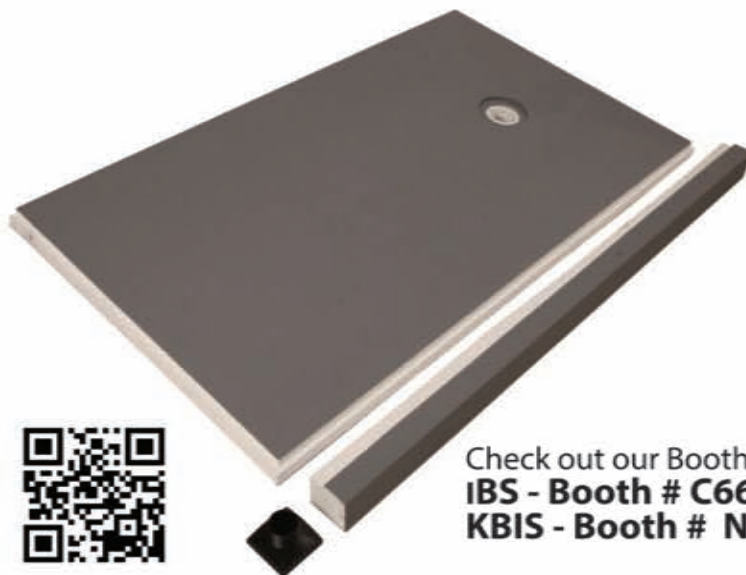


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DEAD-END LEFT, COPE RIGHT: HOW TO CUT & JOIN CROWN MOLDING

Match up the cope to the test piece (right) and nail. Stop nailing about 30-inches from the end, so you can wiggle the test piece out and fit the next full piece in. Once they match, nail them together and repeat in the next corner.

Pro trim guys measure this differently than I do. They usually measure the whole room and make their cuts all at once. I need to go slower because I don't do it enough. So, to guard against my own ineptitude, I fasten a dead-end test piece to the wall on my layout lines made earlier. I then measure to it.

Did I also mention I do this alone? Instead of a helper, I simply use a few screws along the wall to support my tape. I pinch the tape to the test piece with one, then run one or two more



along the wall to support the tape measure blade as I extend it out to the opposite corner.

You can measure from the test piece to the corner, as shown here. Or, measure from the corner to the test piece. It's actually easier to measure to the test piece because you can roll the tape underneath it and see the measurement a little easier. (I brain-cramped that on the job.)

CUT AND NAIL

Now, to slam some pieces in place.

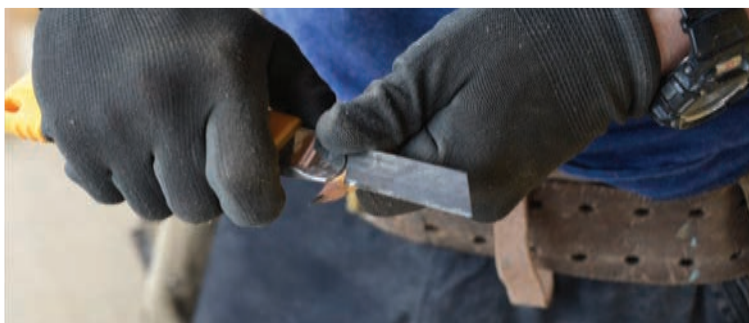
With measurement in hand, I go to the saw, hurl a piece on my cleat. Then I hook my tape on the bottom of the cope (where we cut the triangle off earlier) and simply measure to the dead-end. From here forward in our hypothetical rectangle room, I'm only cutting dead-end, square cuts. Isn't that easier than agonizing over matching up TWO



Installing crown requires flexing the material quite a bit. Here, I'm flexing it to fit in on the left without scraping the wall on the right. If there's just a tiny bit of flex when you install it that pressing the wood gently to the wall relieves, that's about as good as it gets.

SHARP TOOLS INCLUDE PENCILS

I've seen guys with pencils so dull that my kid might as well be using his Crayons to mark a cut. Sharpening a pencil is a minor art. For trim like crown molding, just use a schoolboy pencil (#2 style; swipe one from your kids). If you can't find one, make a carpenter's pencil sharp by using a good knife like this OLFA with a sharp blade then polish the graphite to a point. As I say, there's an art to it.



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DEAD-END LEFT, COPE RIGHT: HOW TO CUT & JOIN CROWN MOLDING



miters at every corner, then nailing them?

Note that even 1/16-inch off in crown molding is a lot. And, 1/8-inch is a mile. Even caulk and paint (which makes a carpenter what he ain't), doesn't do enough for me. Go easy, use a sharp pencil, and when in doubt, cut it long and see if the piece fits.

Nail. I leave the screws I used to measure in the wall (I usually install them 1/8-inch below the bottom of the crown location). These help hold the piece as I install it. For really wobbly pieces, popping one in the ceiling can help keep it from tipping.

I stand toward the center-right of the piece, gently place the dead-end left in position, and then see if the cope lays over my test piece.

In the best case scenario, I still have to flex the middle of the crown outward, slide the cope inward and gently press the center back to the wall. I call this a 'snap fit' and if it works, that's great. Go back to the dead end, make sure it's on your layout lines, then nail toward the cope. Stop about 30-inches away so the piece can still flex, otherwise the test piece will be stuck and you can't fit your new piece in.

Now, remove the test piece, move it to the next corner, repeat

the cut-and-install process, then, work the corner.

WORK THE CORNER?

Yes, work the corner. Ceilings, especially in old houses, undulate, sometimes imperceptibly, and you have to convince the crown pieces to mate up: Press, pull, shim, tweak; twist by pressing up on the top and shimming out the bottom. We're not talking much here—1/16 or 1/8 inch maybe—but it can close the joint beautifully. One of my favorite tools for this is my mighty Hyde 5-in-1 (or painter's tool). Always handy in my tool pouch, it won't break like a wood shim. And when I nail around it, I can still remove it easily. Once the corner is where you want it, nail it off, then repeat on the other three corners.

OUTSIDE CORNERS AND DETAILS

Outside corners are cut as miters but they can still be tricky. The molding lengths for outside corners are usually much shorter, like a chimney bump-out or something. When they're just a few feet long, I still make test pieces and see how they fit. Outside corners are notorious for having a bulge in the walls past the corner that opens your miter if you don't account for it. To check it, take

If installing by yourself, a nail or screw driven partially into the wall can support one end of the molding while you work on the other.



Cuts have names. I often jot down what the cut is in my own shorthand. It doesn't matter what the shorthand is, as long as you can understand it. This one is 125-inches to a left-return.

two mitered test pieces (outside right and outside left miters) and see what the outside miter looks like when assembled. Chances are there's a gap at the bottom point to which you would have otherwise measured.

Returns. For rooms that are missing a terminus, like this one where one wall continues up a stair, using returns show that you are a home-improvement hero. A return is simply an outside corner that terminates at the wall instead of traveling somewhere, like around that chimney bump-out. They are sensational little details.

However, they're hard to fasten. Your 15-gauge finish nailer will probably blow one up. Pros, myself included, often use a micro-pinner. I also use caulk. Sometimes the piece can be wedged in place.

CAULK AND PAINT

For all this sturm and drang, once you ramp up, the actual carpentry doesn't take as long as the

painting. Since hiring a painter for a single room isn't worth it (at least to me), I often do the painting myself, which means the next step is caulk.

Good caulk is worth its weight in oohs and ahhs when you're done. It fills bigger gaps and lays down more smoothly. I used DAP Dynaflex 230 here as I have with success on many jobs from molding to windows.

As for paint, I prefer a top-notch paintbrush. If you're using a throw-away brush you may end up with a throwaway job. Shur-Line's HydroGlide brushes are top drawer and affordably priced, ideal for someone like me who doesn't paint often but wants professional results. When I paint, I paint the molding first, then cut in the ceilings and the wall. Other people do

it in a different sequence. The point is to have a sequence. And a clean brush. If you clean out the brush a few times a day, it'll work better.

A question I get asked a lot: Will pre-painting the molding help me later? An answer I give a lot: No. It'll just waste your time. Between caulk and nail holes, smudges and fingerprints, two coats of paint are required to clean it up and make it all nicey nice. And that can only be done once it's nailed up.

I could go on, but that's for another article. **EHT**

.....
Mark Clement is the carpenter and co-host of the MyFixitUpLife show. Subscribe to the podcast, watch live on Blab.im/MyFixitUpLife or subscribe to the MyFixitUpLife YouTube channel.



This molding ends with a 'return' where the room transitions to a staircase. Backing the molding off from the edge 2-inches leaves room for paint and looks intentional. Running it flush to the corner has an amateurish look. Returns can be held with pins or brads (not finish nails) and a good adhesive caulk like DAP Dynaflex 230.

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MAKE A CUSTOM SLATE CHALKBOARD

A Classic Kitchen Accessory Mounted with a French Cleat

By Rob Robillard

In this article I cut a 100-year-old, recycled slate chalkboard and create a custom-sized frame to hang it in. A client of mine came across an old slate blackboard that was salvaged from a boarding school. This blackboard was originally installed in the French classroom of the school more than a century ago and was recently replaced with a whiteboard during a remodel.

Our client loved the antique look and feel of the slate and wanted to make a smaller chalkboard for their kitchen. They had a small space in mind, approximately 20 x 54 inches, in front of an exposed brick chimney.

Salvaged slate chalkboard has a beautiful, aged look to it. It's a creative alternative to traditional chalkboards, and the look complements many designs and home projects.

DESIGN THE FRAME

The first step in many projects like this is to determine the size of the chalkboard. Remember that width and measurement will be the frame edges, and the slate will be cut smaller to fit into this frame, similar to a picture frame.

We decided that a 2-1/2-in. wide frame was not only a nice proportion but looked similar to the surrounding trim and cabinet styles. We also wanted to include a 3/8-in. radius bead along the inside edge of the frame for aesthetics and to complement the existing bead-board backsplash in the kitchen.

Real slate chalkboard is heavy, and we figured that we would need to mount this on the brick chimney with masonry screws and a French cleat.

A French cleat is a sturdy way to secure a heavy item to a wall. It involves using two 'cleat' boards, each with an opposing 30-45 degree bevel. One cleat is mounted to the wall and the other to the item you want to hang. The bevels interlock and secure the item to the wall. Because no fine maneuvering is required, even a relatively heavy cabinet can be hung this way.

CUT THE FRAME

This was a paint-grade project so we used clear, select pine for the frame, because it has little to no





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MAKE A CUSTOM SLATE CHALKBOARD

knots. We could have also used Poplar species, which is a cheaper alternative and is also known for its “knot-free” qualities. I took our materials into my “Concord Carpenter” shop and began construction.

The first step was to cut the chalkboard frame sides (long parts) to the exact height of our project. Next, I cut the top and bottom pieces to the exact width. Because we were mitering the frame corners, all four parts could be cut to the final length and width.



First, source all materials. The frame was built with No.1 pine.



Sketch the dimensions of your frame design to use as a reference.

The rear of the frame is routed with a groove (rabbet) to provide a recess to hold the slate.

After choosing the “best face” of the wood, I routed a bead along one entire edge of all four-frame parts. I used a 3/8-in. radius router (with ball bearing bit) mounted in a router table. The ball-bearing guide on the router bit ensures that you get a consistent bead along the entire length. I used a router table fence only because I wanted to use my dust-collection system. I’m a huge fan of collecting dust at the source during long-term sanding applications.

Once the routing is complete I used a block plane to remove the mill marks that the router bit leaves behind. I then used 100-grit sandpaper to sand the bead and lightly break (round off) the sharp routed edges.

MAKE THE RABBET

The next step is to cut a rabbet to recess the slate into. A rabbet is a recess or “one-sided” groove cut into the edge of the frame. The purpose is to hold the slate and allow a back cover to attach flush to the frame. This allows you to “lock” the slate securely into the frame.

I measured the slate in numerous locations and found it to vary

in thickness. The average thickness was 1/4 inch but there were some thicker spots so I made the rabbet 5/16 inch deep and wide. I figured a secure fit was better than a loose fit, and knew the 1/4-in. plywood backing board would span over any areas larger, further holding the slate in place.

Using a 1/2-in. rabbet router bit and a router fence, I set the width and depth the cut a rabbet on the opposite face of the newly routed 3/8-in. bead.

ASSEMBLE THE FRAME

I cut 45-degree miters on the frame parts and dry-fitted them and the slate to see how things were fitting. Once satisfied with the fit I used a Festool DF500 Domino cutter to cut slots in the miter joints.

Dominos provide a mortise-and-tenon joint, which is super strong, and durable. A biscuit joiner and biscuits can also be used for this purpose but are not nearly as strong a joint.

I then glued the dominos and miters together and clamped it overnight. The next morning I removed the clamps, then cleaned up the face frame with a random orbital sander and





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some hand sanding. I then cut the 45-degree beveled French cleat out of some scrap plywood. Plywood does not split like regular wood when installing fasteners.

I cut additional strips of pine to

line the sides and bottom of the frame in order to hide the French Cleat hanging system. Doing this adds an additional 3/4-inch to the depth or projection of the chalkboard on the wall but it's needed.

Personally, I like the added depth and think it gives a nice, sturdy look to the frame.

CUT SLATE TO SIZE

We then measured our slate opening and reduced the measurement by 1/8 inch off the width and length.

I set up sawhorses outside and used 2x4 slats to support the slate. I also made sure to support the area beneath the cut line. I measured and marked the slate with a permanent marker and a straight edge.

Compared to other stones, slate is fairly soft. You can cut it using a grinder, wet saw, or a circular saw—all equipped with a diamond blade. On this job I used a Bosch grinder with a diamond-cutting



The frame also receives a decorative bead routed along the front.



Remove any mill marks from the router with a block plane.

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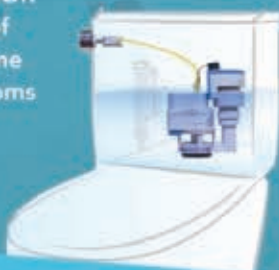
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blade and paired it with a Festool HEPA vacuum to collect the dust while cutting. I also used a dust-collection hood for the grinder that had a nice flat cutting plate to guide the grinder along the slate.

I set the grinder to cut through the slate and into the 2x4 wood 1/8 inch deep to account for irregularities in the slate thickness. I then slowly cut "free hand" through the slate (easy cutting).

If desired, a straight edge can be clamped to the slate to assist the cut application.

ADD SLATE AND BACKER

After cutting the slate I checked the fit in our frame, then cut a

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Cut miters to join the frame components.



The frame was joined at the miters using a domino cutter, which is similar to a biscuit cutter.



Insert the domino in the slot to bridge the joint.



Glue and clamp to create a very strong corner joint. Repeat for each corner.



Place the slate on a sturdy work surface and make sure to support the area directly underneath the cut line.

1/4-in. plywood backer-board 2 inches larger in both the width and length of the slate. The extra material overlapped the slate by an inch on all sides. The backer-board is fastened with 1/2-in. crown staples through the overlapping edges.

Once the backer-board was applied, I added the pine side strips to the rear of the chalkboard frame using glue and brad nails. I also glued and screwed our 45-degree bevel French cleat to the top section of the frame back.

MAKE THE CHALK SHELF

Once the frame, slate and backer-board were assembled,



Cut the slate with a grinder or circular saw equipped with a diamond blade.

Cut the slate slightly smaller than the recess so it fits snugly into the frame.



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MAKE A CUSTOM SLATE CHALKBOARD

I had a good idea of how this project was going to look and decided to add a chalk shelf. This would add 3/4 inch to the overall length of the project, but we had the extra room.

I took a 3-in. piece of pine the same width as the chalkboard frame and added a chalk-holder slot to it with a thumbnail router bit. I wanted the shelf slot to start approximately 1 inch in from the

sides, to prevent the chalk from sliding onto the floor.

The key is to carefully mark out the slot on the board as a visual reference during the design phase, and more importantly, mark the backside of the board for the routing application. When routing on a router table, the groove will be face down, and you will not be able to see it.

I placed center-mark reference on the router fence, where the router bit was located. This allowed me to drop the shelf

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Fasten the backer-board over the rear of the slate.



Attach the French cleat, as well as the side pieces that enclose the edges of the frame and hide the cleat.

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MAKE A CUSTOM SLATE CHALKBOARD



Fasten, glue and clamp the side pieces flush.

down onto the router bit, one inch inward from the edge, and then stop it one inch from the opposite edge. The resulting groove looks similar to a fluted column.

In the final step of construction, I filled nail holes or imperfections with wood filler, sanded, wiped off the dust and applied primer and two topcoats of quality paint.

This step can actually be done before the slate is installed, but I chose not to do so.

HANG THE CHALKBOARD

After installing the plywood cleat to the chalkboard frame,



Align the chalkboard shelf and mark the position of the chalk slot.

the opposing cleat is installed to the brick masonry with Tapcon masonry screws. Leave the masonry cleat slightly smaller in width so you can fine-tune the left/right placement for perfect positioning.

I measured and marked the location of the cleat, leveled it and then used a rotary hammer to drill pilot holes into the masonry.

Tip: Drill and install one masonry screw first, then recheck the level and drill the second and any subsequent screws.

On a regular wall you would install this cleat to span across



Use a thumbnail router bit to cut the slot.

wall studs, then use screws to fasten to the studs. Otherwise you will need wall anchors or toggle bolt to mount it between studs.

SLATE FINISH TIPS

I used a beater chisel and later a razor blade to remove old caulking and paint buildup around the slate edges. Although these edges were going to be hidden by the frame rabbet, I wanted to remove it for a better fit.

For deep scratches and the removal of surface grime, use a random orbital sander with fine grit sandpaper. Wet the abrasive



Attach the chalk shelf with screws and glue.



Mount the cleat to the wall.



If mounting to a masonry wall, attach the first concrete screw, level the cleat, the drill for the next screw.

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MAKE A CUSTOM SLATE CHALKBOARD

and use a little water to keep dust down.

In the end, the slate proved to be a strong choice for a number of reasons. It's easy to cut, making it simpler to work with than many might expect. The slate will last for decades unlike MDF or other imitations, it serves as a useful kitchen accessory, and in this case it tied the house to the history of the region. **EHT**

Hang the frame's cleat over the wall cleat and slide from side to side to make adjustments.



A French cleat is a reliable method to hang a heavy item on a wall and keep it level.



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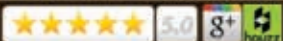


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Treated Decking Done Right

DIY Installation Advice



Photo courtesy
Wolmanized Wood

The most widely used material for deck boards is treated lumber. There is, however, a right way and wrong way to install treated deck boards to achieve the best results. The experts at Wolmanized Wood offers the following tips to get the most from your material.

During installation, separate the deck boards as follows to allow for expansion and contraction. If they're heavy and wet, separate boards no more than 1/16 inch as some shrinkage will occur, and you don't want the gaps to appear to

large and unsightly. If the deck boards are light and dry, separate boards about 1/4 inch to allow for swelling.

Shorter spans between joists will help to minimize warping and twisting of deck boards as they dry. Also avoid designs with long cantilevers unsecured at one end; check with your local building code department on maximum cantilever allowed. On decks with unsecured cantilevers, consider fastening a rim joist along the ends or blocking between them to prevent the joists from twisting.

Lumber wider than six inches should not be used as a flat surface. Wide, flat boards are subject to ponding of rain water, which can lead to cupping problems.

Always install the deck boards bark side up. This side will be more likely to have treated sapwood on the exposed face. To determine which side is the bark side, inspect the ends of the boards and judge by the direction of the growth rings.

If a board is bowed, install it with the crown up. Gravity and

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If a deck board is bowed, install it with the crown on top. Gravity combined with the weight of people and furniture will flatten the board and prevent sagging.

the weight of people and furniture will flatten it.

For above-ground treated wood, make sure there is good underdeck ventilation, allowing airflow around the entire deck so the wood can dry, which inhibits mold growth. All above-ground treated members must remain off the ground and free of leaves or other debris.

Proper flashing or spacers should be used between all adjacent structures and the deck. The ledger connection to the house requires especially careful attention to prevent water intrusion, because it is the most common cause of deck collapse.

Cover upper ends of railing posts with post caps or cut them at angles to shed water. Before capping or after cutting, apply topical preservative solution to all ends, holes, or other intrusions in the wood. Exposed end-grain that is left unprotected will absorb water and contribute to rot.

Use two fasteners across a 2x4 and three across a 2x6. Drive nails at a slight angle toward each other. Use 3-1/4-in. long nails on nominal decking and 3-in. nails for 5/4-in. decking. Check fastener boxes to make sure you are buying fasteners that meet standards. Fasteners should be hot-dipped galvanized meeting ASTM A 153

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or equally protected material. Connectors should be made from galvanized steel sheet conforming to ASTM A 653 class G185.

Remember that although screws

take longer to drive than nails, they hold boards more securely and will allow for easier removal if necessary. If a board has a slight bend to it, it sometimes can be straight-

ened as it is fastened in place.

To reduce splitting, especially near the ends of boards, drill a pilot hole about three quarters the diameter of the nail. For dense or brittle wood, grind sharpness from nails or blunt the points by striking them carefully with a hammer. Blunt nails cut through; sharp ones pry apart. **EHT**

Learn more about working with treated wood at www.wolmanizedwood.com.

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- To revitalize a dingy appearance caused by dirt, mildew and mold, use a deck brightener to clean the wood.
- Check with the experts in the store's coatings department for recommendations on water repellent, stain and cleaner.

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Reconstructing a Roof

A Project for the Pros



By Matt Weber

Our mission at *Extreme How-To* is to cover professional-grade home improvement projects for the do-it-yourselfer—but we have our exceptions. Roof construction, for example, is definitely a job for a professional, and it takes a professional many years of experience on the job to become a knowledgeable roof builder. A smart homeowner won't enlist just any random contractor to alter the structure of their home; they'll research their options and choose a reputable professional with verifiable references. This is one of many reasons why even the most savvy

DIY'er should leave a project as complex as roof framing to someone who knows what they're doing.

Nevertheless, DIY homeowners are often interested in how a job is done, even if they aren't going to do it themselves. This article looks at the complicated nature of roof remodeling and shows just why this area of the home is best left to the experts.

ENGINEERING & DESIGN

Just like floor joists, roof rafters must be selected according to joist span. The larger rafter size of a 2x10 will have a longer allowable span than a 2x8. Unlike floor

A new roofline can make a dramatic difference in the appearance of a house, as shown with these before and after photos of a total roof reconstruction.

joists, however, the rafters are installed at an angle, which also affects allowable span. A low angle (closer to horizontal) places more strain on a rafter than a rafter of a steeper pitch. Also, distances between rafters affect allowable span. Plus, the grade

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of the lumber affects allowable span; No. 1 grade lumber will have a greater span than No. 2 lumber. All these factors must be calculated when designing a roof to ensure structural integrity and to satisfy local building codes.

And the variables of design don't stop there ... The builder must determine the pitch or slope of the roof, and use that measurement to figure the total rise from the wall's cap plate to the roof ridge. With the total rise they can calculate rafter length and the total number of rafters needed, accounting for any overhang along the eaves.

Next, the builder carefully calculates the location of the bird's mouth cut or mounting apparatus (don't forget to subtract the ridge-board thickness!). Then, you can



Ever wondered how a house changes hats? In this case, the contractors essentially built a new roof on top of the old one.

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move on to installation of the ridge-boards and rafters, using locally code-approved fastening techniques.

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layment, flashing and the material used as your finished roofing.

LOGISTICS

Assuming you don't have a crew of skilled roofers at your

assistance, the physical challenge of simply moving your construction materials into place will be a huge obstacle to overcome.

The heavy rafters arrive on a truck and require more than one person to move each of them. In fact, it may be easier to load the long 2x framing boards onto the roof than to load the roof decking—the cumbersome 4x8 sheets that tend to catch wind like boat sails when you try to convey them



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The old shingles are visible inside the framing of the new roof.



When necessary to tie the new rafters into the house framing, the workers cut into the old roof to make the secure connections.



This knee-wall was constructed to raise the eave of the new roof and give the home a taller, grander design.



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PROJECT NEXT

up a ladder. This task can not only be difficult but dangerous, and it's one of many reasons that pro builders dedicate an entire crew and often an entire day to set up and organize a worksite. Roofing contractors also have specialized

equipment that saves them time and effort when moving materials on the job.

HELPING HANDS

Similar to the logistical problems of moving materials, the

construction of a roof—from positioning and supporting the ridge beam to placing and fastening the rafters—requires more than one person (and often more than two) working in simultaneous cooperation. Not only are multiple people required to lift the weight of the framing members, but the helpers must be familiar with roof-building techniques in order to make the proper connections while the principal builder (or another worker) holds the opposite end of the board. A roofing crew will typically

The home's simple gable roof was redesigned as a hip-and-valley roof with multiple ridge lines.



The extra height gained from the new roof allows room for a gable window vent on the front of the home.



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The next step is to "black in" the framing with sheathing material.



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SAFETY FIRST FOR ROOF WORK

Roofing is consistently listed as one of the Top 10 Dangerous Jobs. CNN Money stated that the "fatality rate per 100,000 workers equaled 40.5." This means 2,469 roofers die annually due to complications with the heat, electrocution, falls, chemical exposures and a host of other potential dangers—and these are the professionals. When it comes to the general public, the statistics only get more alarming. The American Journal of Preventive Medicine's published study revealed that, "2.1 million people sought emergency treatment in the United States for ladder-related injuries." Point being, while it may appear simple to lean a ladder up against a roof and climb up, there are many other complications to consider. Roof work is best left to professionals, but anytime you do climb onto your roof, make sure to wear an appropriate fall-restraint harness with the lanyard firmly attached to the roof ridge with multiple wood screws.

have a routine installation procedure they practice on all their roofs, which streamlines this cooperative process.

Furthermore, to hold the ridge beam and other roof components in place during construction, roofing crews usually erect temporary framing structures. These temporary structures typically involve 2x4 support posts, diagonal bracing, and cleats at the floor level to

secure the bracing. The support structures are nailed or screwed together and, depending on method of construction, may or may not be removed later if the roof is strong enough to stand independently.

CALL A CONTRACTOR

For a treehouse or small out-building, an "extreme" DIY'er might be able to frame their own roof



Some roof projects involve new additions to an existing roof. In this case the homeowners wanted a covered porch added to the rear of their house.



Roofing requires multiple workers to lift heavy materials and make proper connections in all the right spots.



Temporary support braces are used to keep framing components in place while the roof-build continues.

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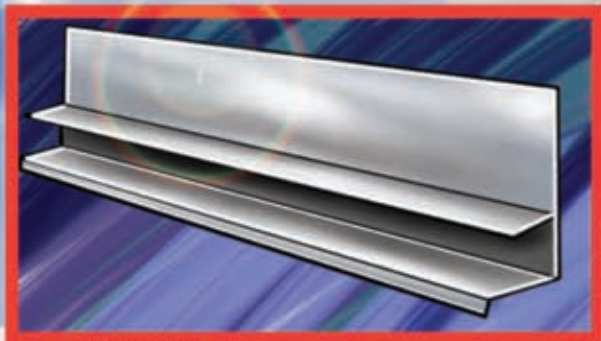
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PROJECT NEXT

because the size and quantity of material, height of the structure and scope of the project will be much more workable than the roof of a house. However, since you can't be in multiple places at

once, you don't have a crew of workers at your disposal, or years of on-the-job training under your belt, we highly recommend calling a contractor when it's time to reconstruct the top of your home.

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The new ridge will tie into the existing roof as a hip-and-valley offshoot.



Shown is the new rafter system of the porch.



The roof is erected over a deck that will be screened as an outdoor living area.



Here's the completed porch roof addition.



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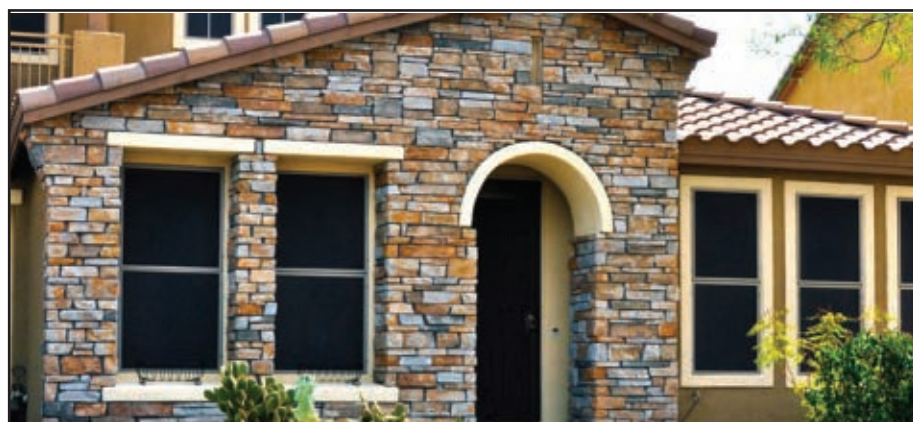
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Big Job for a Little Wagon



By Walt Steele

Wilda Watson can tell you exactly how many Pine Hall Brick Company standard clay pavers it takes to fill a 1990s-vintage Little Tikes toy wagon.

Eighteen.

In October, Wilda hauled her last load of 18 pavers in that wagon, taking them from the spot where they were delivered and pulling them close to where her husband, Matthew “Clark” Watson, was waiting. He took them out and laid them in the last stretch of a herringbone pattern for a driveway project

at his home in Worth Township in rural Pennsylvania, north of Pittsburgh.

It was the last of 25,000 pavers in a driveway that measures 263 feet long from garage to roadway, varying in width from 33 feet to 13 feet. By the garage, there is a 26-by-21-ft. turnaround for vehicles. Closer to the road, there’s a planter and a flagpole with American and Pennsylvania flags.

It’s remarkable enough that a married couple would take on a do-it-yourself project of this size, which is far beyond the normal

patio or walkway that most homeowners are willing to tackle; and would indeed be a challenge even for professionals.

Even more remarkable is the couple themselves: Wilda’s 84 years old and Clark is 86. She did the project, pulling the bricks in the wagon that was originally a grandchild’s toy 25 years ago, on two artificial knees; he laid more than a few pavers while battling pneumonia.

Spend a few minutes talking with Wilda and Clark and you get the idea that something in Pennsylvania is different—maybe it’s the water. Maybe it’s the cold every winter that makes you tougher and more resilient. Maybe it’s living in a rural area, long associated with being self-reliant. Or, maybe it has to do with wanting to be productive, to get something accomplished with your days.

Clark certainly seems to feel that way. After careers with National Fuel Gas and others in insurance, plumbing, heating and being an electrician, Clark was searching about to find something to do; something, that is, besides the ‘honey do’ list that he says his wife started minutes after their wedding 66 years ago. He says that it’s a list which he still hasn’t finished.

It turned out his answer was just outside. The blacktop that he had installed atop the original driveway decades ago was unsightly and had begun to erode because of the harsh winter climate. He had repaired it dozens of times. Clay pavers, he reasoned, would be tougher. And besides, as Clark puts it, you could start on it, stop to go see one of your 37 grandchild-

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dren or take a vacation, and then go back to it.

Clark hired a work crew to strip away the blacktop and gravel underneath and dig 500 feet of ditches to provide proper drainage. The area for the driveway was excavated three inches deeper, and an underlayment of crushed stone, topped with sand to a depth of about 1-1/2 inches. They used a hand tamper to level the underlayment and sand, and used a wet saw to cut the pavers.

Wilda Watson says they bordered the driveway in brown pavers, and then laid a soldier course outside of that. She said the key to laying pavers for a driveway is in the sand. "If you

get the sand just right, then there is no problem in laying the pavers," she said.

The Watsons worked on the driveway from June 2014 until September 2014 and from May 2015 until October 2015. The first year, work had to stop both because of the weather and because Clark's health worsened, requiring hospitalization. He had recovered by the spring and restarted the project.

But during last winter, one of the harshest on record, they kept a close eye on the driveway and were particularly pleased to see that there was no heaving and no movement whatsoever of the

portion that they had paved.

Now that the driveway is finished, Clark seems ready to embark on a new adventure. Some recent storms have dropped some trees on his property, and he really needs to get to work on them. He's still working on the light posts near the new driveway, trying to find ways, maybe even heat-lamps, to keep them from freezing up. And his shop, out back, could use a cleaning. He has a new, four-wheel drive John Deere snow blower with a closed cab and a heater, so he's ready for the winter, this time.

But given that he has had motorists stop and admire his work and ask who put in his driveway, we did suggest that he might have found a new career path for himself. Maybe he should start a business installing clay paver driveways and walkways and patios.

For the record, he didn't say no.

EHT

Editor's Note: Walt Steele is a recognized expert on clay pavers. He is paver business manager for Pine Hall Brick Company, America's largest manufacturer of genuine clay pavers. The company has plants in Madison, NC and Fairmount, GA. Visit www.PineHallBrick.com



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