

Garage Remodel:

Building Traditional Casing For New Windows



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Skill Level: 3

Time Taken: 2 Hours Per Window

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Introduction:

In our garage makeover project we had to replace 3 windows. We wanted to re-create the window trim so it would look like the original, or at least look like the other old garages and houses in the neighborhood.

The Vinyl Window:

One of the windows I installed was a 24" x 36" vinyl new construction window (about \$70 at Home Depot).

While this double-pane single-hung window is sort of *overkill* for a garage, there really are not many options available for plain old-fashioned garage windows.



The window installation was basic:

- Prepare the rough opening, allowing for a 1/4" gap all around. Lay two shims on the sill.
- Apply some caulk to the back side of the window flange.
- Set the window in the opening.
- Drive one 2" roofing nail at the top right corner.
- Adjust the window position so it was level across the top.
- Drive another nail at the top left corner
- Measure the diagonals to make sure the window was square.
- Drive nails in the bottom, side and top flanges to secure the window.
- Smooth out any excess caulk that oozed out from behind the flange.

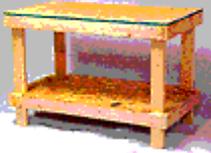


Carpentry On The Cheatin' Side Of Town:

I drove some deck screws into the siding, but I left the heads sticking out about 1/8" (red arrows). This is the **same thickness as the flange** on the vinyl window.

These screw heads will act as a **standoff**, to hold the casing away from the wall and prevent the casing from resting on an angle.

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More screw heads at the top.





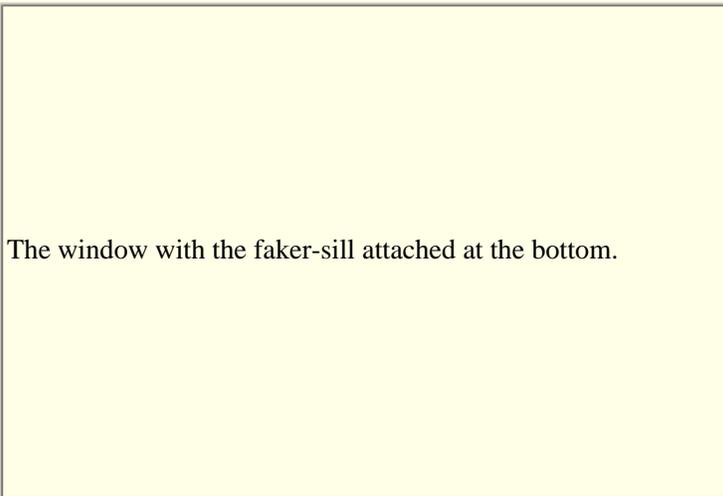
I made a **window sill** from treated pine. This was simply a piece of knot-free 2x4 that I ripped at a 10 degree angle on my table saw.

I installed the sill with the angled surface against the wall, so the entire piece sloped downward slightly. This will help shed water.

Note that the sill extends over 4 inches beyond the sides of the window, to accommodate the side casing.



Of course, this sill is a fake. In the old days the sill would extend back under the sash (the movable part of the window).



I installed 1x4 treated pine on the sides. The lower edge of this piece was cut at the same 10 degree angle, so it mated with the sloped sill.

I just nailed these boards with a 2-inch pneumatic finish nailer. Later I added some 2½" stainless steel ring-shank siding nails, which hold extremely well.

The side casing extends to the top of the vinyl frame.

Sometimes the best way to cut a board like this is to make the angled cut for the bottom end, set the board in place, and mark the top cut where the board meets the top of the vinyl.

After both side pieces of casing were installed, I installed the top casing, also 1x4 treated pine.



Note how there is primer behind the casing. Prior to installing these boards I scraped off the old paint in the scalloped grooves, sanded the wood clean, and applied primer. This is just a precaution in case water gets behind the trim someday. Primed wood is less able to absorb water.

Also, you can see some streaks of primer near the edges of these trim boards. I primed the backs and sides of these boards prior to cutting. This is another technique I employ to reduce the chances of water getting into the wood if the caulking fails someday. I know from experience (and from reading) that moisture going into and out of the wood is a major cause of paint failure. Sealing all sides of the wood (even pressure treated wood) helps reduce moisture absorption. I know this sounds **wacko**, but the extra time involved is trivial.

I nailed on the **top cap**. This is a piece of clear, straight-grained 1x4 treated pine that I ripped on my table saw, with a 10 degree angle on both edges.

I sanded all surfaces with a random orbital sander, and slightly rounded-off the corners so they wouldn't be so sharp.



The completed casing, ready for priming and painting.



Case 2: Aluminum Window, Full Sill



The east side of the garage, before the makeover. Those windows have been boarded up for years.

One of these windows wasn't even installed straight. All we could figure was... the original carpenters must have drunk a lot of liquor at lunchtime... nothing else could explain this pathetic sloppiness.





On the inside I pried off anything that looked related to the original window installation.

On the outside I carefully pried off the trim, thinking that I might want to reuse it.



I pried away the casing a bit and cut the nails with my reciprocating saw.

The casing was removed easily.

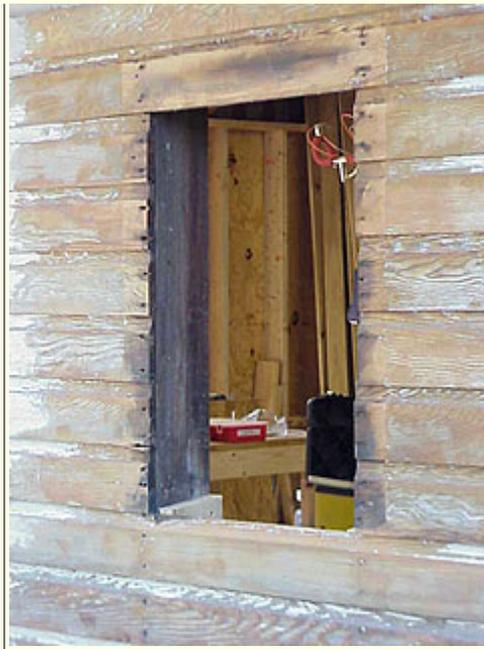
Only the original window sill remained. I decided to reuse the sills on these two windows



I pried on the sill to see how it was nailed in place.

They had nailed through the vertical face of the sill, into the studs on either side of the window.

I removed the paint from around the window opening. I used the Metabo power paint remover for the flat surfaces, and a scraper for the grooves.



After the sill was stripped and sanded, I installed two angled blocks for the sill to rest on. I was careful to make sure that the sill would end up level, because the window will rest on this sill.

These were just 2x6 scraps cut at a 10 degree angle and screwed onto the studs.

The sill had not been fastened down yet.

I coated the back sides of the sill with primer, installed it, and then painted the remaining surfaces with primer.

I also dabbed some primer on the bare surfaces around the window opening. Just in case.





I installed the window.

After applying a bead of caulking all around the back of the flange, I just set the aluminum-framed window into the opening, resting it on the sill.

I installed one screw in a top corner, then I measured the diagonals to make sure the frame was square.

Then I drove in screws all around the perimeter.

Where possible I used screws with a low-profile head, so they wouldn't interfere with the casing.

Note how this metal window frame has a channel shape. This may be intended to act like vinyl siding J-channel, to cover the ends of vinyl siding..



I also caulked all the gaps where the scalloped part of the siding met the window flange. This will deter leaks and discourage bugs from nesting in there.



Using a brad nailer, I attached some 1/4" thick strips of wood around the perimeter of the window.

These are spacers, but they will also be visible, so I laid them out carefully so they would line up with the edges of the 1x4 trim boards.

I installed the side casings and then the top casing.



The bottom end of the side casings were cut at a 10 degree angle to match the window sill.

There were some small pits in the old sill, which I later filled with polyester resin (essentially Bondo) followed by the final coat of paint.

I installed the top cap.

(Okay, I cheated... this picture is from the other window, but it's the same idea)



Where Siding Meets Casing:



I applied caulking all over the place, especially between the window frame and the wood casing.



The red arrows point to seams that I later caulked with siliconized acrylic latex caulk.

The top seam is critical. Ideally I would install an aluminum Z-flashing over this gap, with one leg of the Z-flashing going under the next higher siding board.

But... that wasn't possible.

Where the scalloped siding met wood trim, I applied a liberal dab of caulk and smoothed it with my finger. But often one application isn't enough.



I just let the caulk harden for an hour and then applied more to fill in any holes.



Finally...



The completed project. These are the two aluminum windows that I installed over the original sills.

That's the vinyl window with the fake sill, to the right of the red door. It's a bit bigger than the aluminum windows.



Some notes about using treated wood:

Pressure treated yellow pine is an inexpensive and very durable wood. If the paint ever fails, I'm certain the wood will last many years before it begins to rot. But treated yellow pine is a tricky material to work with, especially for finish carpentry, because it can warp very badly. They don't call it "Banana Wood" for nothing.

Since pressure treated wood is soaked in a water-based chemical solution, the boards are often very wet when purchased. Boards that appear straight at the store often look like hockey sticks or airplane propellers in a few days.

Thin lumber can usually be forced to lay flat, and it will stay there if fastened well. I don't consider common nails to be good fasteners. Ring-shank nails or deck screws are good fasteners for holding warp-prone wood in place.

But my usual approach is to just **be lazy**. I often buy the materials far ahead of time and store them in a warm, dry place. It always seems to take a couple of weeks longer than planned before I get around to using the wood, so the wet pine ends up drying out. If the wood is going to warp, it will warp while it's drying in my shop. Then I can choose the best boards for the most critical trim pieces. Of course, this means that I usually need to buy extra materials, because some boards won't be usable for visible trim, but even the worst boards get used somewhere.

Yes guys, there is **a good side to procrastination**. Letting the lumber dry makes good sense.

Tools Used:

- Cordless Drill/Driver
- Basic Carpentry Tools
- Miter Saw
- Table Saw
- Finish Nail Gun

Materials Used:

- Lumber, Pressure Treated, 1x4x8'
- Lumber, Pressure Treated, 2x4x8'
- Ring-Shank Siding Nails
- Deck Screws
- Siliconized Acrylic Latex Caulking

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