Built-In Refrigerator on a Budget

by Rick Miner

There's nothing quite like the look of a custom-designed kitchen, with its nearly seamless, flush cabinetry and integrated appliances. However, there's nothing quite like the tab for one of these kitchens either. Often, when I design a new kitchen, my clients challenge me to give them that upscale, custom look, but without completely breaking the bank.

Figure 1. Recessing a side-by-side refrigerator with wood front panels gives the appearance of an expensive built-in unit (left). Even a less expensive refrigerator benefits from flush installation (right).

Battle of the Bulge

A major contributor to the sleek look of a high-end kitchen is the built-in refrigerator, yet thousands of dollars can be tied up in that appliance and the unique demands of its installation. Because these appliances are 24 inches deep, they install flush with the fronts of standard 24-inch-deep base cabinets. However, built-in refrigerators are not stand-alone appliances; they have no finished sides or fronts. These are furnished separately, at additional cost, to match the surrounding cabinets.

The cost of this look is expensive:

Refrigerator	$4,200
Custom panels	$1,200
Electrical & plumbing hookups	$250
Cabinet panel & trim installation	$150
Total	**$5,800**

Much the same look can be had for a fraction of the cost of a true built-in refrigerator. A few manufacturers have recently introduced free-standing cabinet-depth refrigerators that retail for about $1,500. If you have the necessary space in the cabinet layout to accommodate one of these 36-inch-wide appliances, this is a good and less costly option. However, in a remodeling situation, the client may wish to save even further by keeping their existing refrigerator. Or, there may not be enough space in the layout for a wider refrigerator.

The front-to-back dimension of a typical free-standing refrigerator measures anywhere from 30 to 33 inches. When it's placed in the lineup alongside standard base cabinets, the fridge may project as much as 9 inches beyond the cabinet face. It will look out of place among the new cabinets and encroach on good traffic flow within the kitchen.

Framing the Recess

The solution is to recess the refrigerator into the wall and "wrap" it in the surrounding cabinets. To create a recess in an interior wall, all you have to do is remove the necessary studs and glue paint-grade plywood directly to the backside of the drywall (see illustration, page 2). In a load-bearing wall, make sure you add a structural header as needed. Remember to provide enough width in the rough opening to allow for finishing materials — drywall or casing — and the appliance manufacturer's specified side clearances for ventilation.

When the refrigerator goes against an exterior wall, preserving as much insulation as possible is a top concern. If the wall is framed with 2x6 studs, you can pick up 2 inches by reframing the refrigerator opening with 2x4s and a properly sized header. Use construction adhesive to bond the new framing to the exterior sheathing. Re-insulate between the studs and replace the drywall, and you've gained a 2-inch-deep recess in the wall.

Upgrading from batts to rigid foam insulation will gain even more depth, especially if you remove the studs altogether and insert a header. Glue the insulation board to the inside of the sheathing with a foam-compatible adhesive, then adhere a cover-sheet of $^3/_4$-inch paint-grade plywood on the inside.

A word of caution. Before tearing into any walls, check the location of existing plumbing and wiring. A pipe may cost

too much to move, or multiple wire runs could spell trouble for the wall recess. One or two wires could be re-routed around the opening fairly easily, as long as they're spliced in permanently accessible device boxes. And watch the placement of your dedicated refrigerator outlet. You don't want the knuckle of the refrigerator plug to push the refrigerator back into the kitchen. If the back wall will accommodate it, I like to use a recessed clock outlet in place of a standard duplex outlet. You can also locate the receptacle in an adjacent cabinet sidewall, or even in the returns of the wall recess, provided you have enough framing depth to mount a rough-in box.

Side Panels

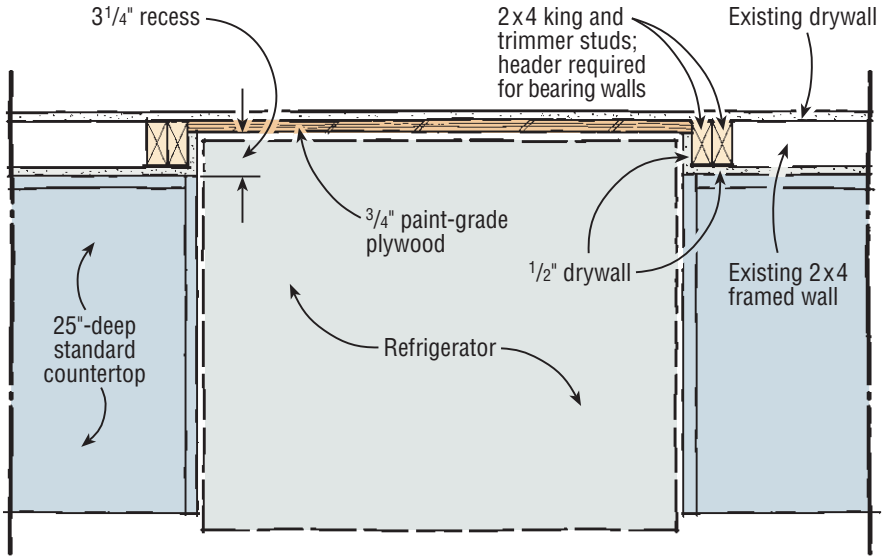
Although you may not have been able to gain more than a couple of inches by recessing the wall surface, the surrounding cabinets offer opportunities for enhancing the built-in appearance. Your cabinet supplier can provide you with 27-inch-deep matching side panels. The added depth gives you a sidewall to fully terminate the end of a standard 25 1/2-inch-deep countertop. When combined with a wall recess, the deeper panel can yield as much as 30 inches of total depth which, in most cases, leaves only the thickness of the refrigerator door exposed. Bring the wall cabinet above the refrigerator forward to match the depth of the side panels, add a basic trim kit and door overlay panels — commonly available from appliance dealers, even for units up to 12 years old — and you'll have achieved a total built-in look.

I've found these techniques to be quite simple to implement, while the cost savings is well over 50% of the true built-in. The visual appeal is just the same.

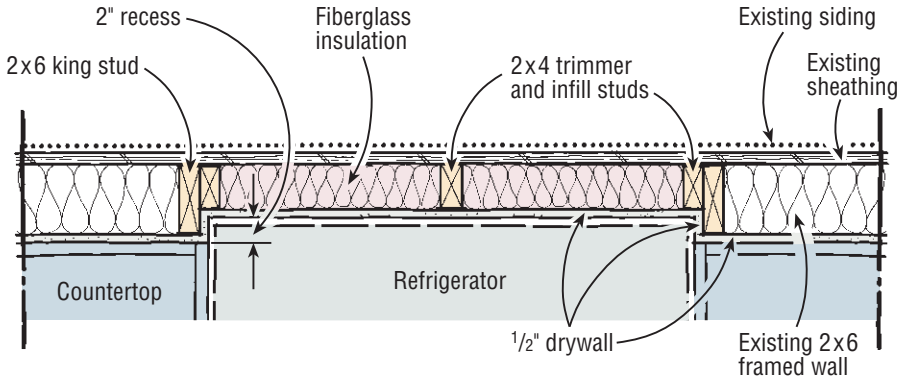
***Rick Miner** is a Certified Kitchen Designer and a former installer for Kitchens by Krengel in St. Paul, Minn.*

Recessing the Refrigerator

1. Interior Wall – Plan View



2. Exterior Wall With Fiberglass



3. Exterior Wall With Foam Insulation

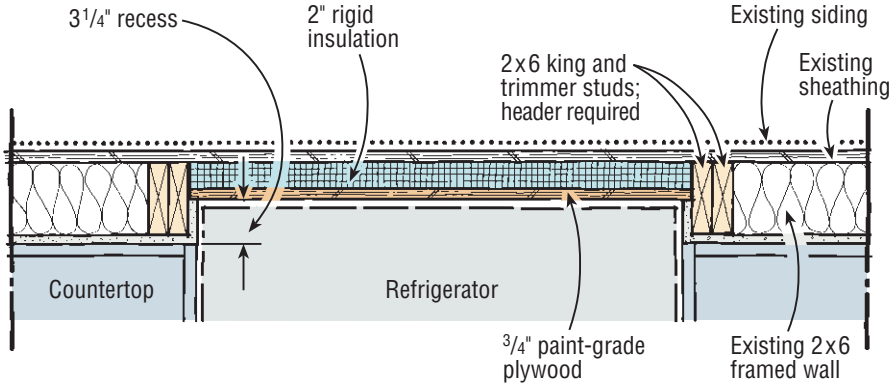


Figure 2. Framing a recess in an interior wall can pick up over 3 inches of depth (top). In an exterior wall, you can gain a couple of inches if you use fiberglass insulation (middle) or 3 or more inches with rigid foam insulation (bottom).