Customized Railing Combinations

Mix and match products from different manufacturers to meet your customers' needs

by Bobby Parks

If you were to list off the manufacturers whose components make up my company's rail systems, you might think Azek, Deckorators, Fiberon, Fortress, Maine Ornamental, TimberTech, and Trex had formed a conglomerate. They haven't, of course, but I do treat their products as if they all came from the same factory.

When manufactured railing systems first became available, I didn't find any that were exactly what I wanted; rather, I found that I liked parts and pieces from several lines. It occurred to me there was no reason not to select my favorite components and combine them to create high-quality, low-maintenance hybrid railings in a range of prices for my customers. Although manufactured railings have since matured and there are now several on the market we use in their entirety, mixed systems still account for 80 percent of the railings we install.

Figure 1. Azek rail caps, painted cedar posts, locally sourced welded railing sections, and Maine Ornamental post caps form a railing designed to meet a specific height requirement.

On our railings, the balusters or welded rail sections (upper and lower rails joined by balusters) may come from one manufacturer, the post sleeves or post caps from another, and the top rail cap from still another. Locally sourced wood can be a component as well. The versatility that mixing and matching provides is a great sales asset — I can create custom looks, match colors, and build rail systems that serve customers in specific ways.

When you're designing combination rail systems, it's important to keep in mind what works in your area. For example, sun and humidity wreak havoc on pressure-treated–wood rail caps in my region, so I use PVC or a composite when a flat rail cap is required. And because my customers tend to like the low-profile, low-maintenance, and see-through features of metal balusters, most of my hybrid railings incorporate them.

Address Unique Requirements

Creating your own railing gives you flexibility in a number of areas, including height and rail span. For example, I had a customer who wanted the rail to be higher than the 36 inches code requires — she was concerned about her children climbing over it — but lower than 42 inches, so it didn't obstruct the view from her favorite chair (**Figure 1**). It turned out that the railing height needed to be exactly 40½ inches.

She also wanted the clear view that welded systems provide, along with a rail cap, large rail posts, and post caps. By combining painted cedar 6x6 posts, a site-made Azek rail cap, and locally sourced welded rail sections, I was able to provide her with exactly what she wanted.

Yes, We Can Match the House Color

Combining locally sourced wood with manufactured components opens the door in terms of color options, and we often paint our rails to match existing house trim colors (**Figure 2**). A side benefit to using wood and painting it is that the customer isn't locked into a color forever. Now, painted finishes do need to be maintained. But if you prep properly and use a premium paint, homeowners should have to paint the railings only when they have the rest of their house painted, except in areas that collect a lot of leaves or where trees drip. Premium paints such as Sherwin-Williams' Duration or Benjamin Moore's Aurora semi-gloss perform and clean up well.

A few tricks minimize potential problems. We often use cedar 6x6 posts (with aluminum post caps) or pressure-treated 4x4 posts and 2x4 horizontals. We precut any wood pieces and allow them to air dry under cover for 2 weeks or longer. Before priming and painting, we sand all the components to provide better paint adhesion (most paint manufacturers recommend no finer than 80-grit abrasives), and we coat any cuts. To keep the posts dry after installation, we pull garbage bags over them if rain is expected, and we cut temporary caps from PVC trim and tack them atop the posts — to keep the end grain from absorbing water — until the real caps are installed.

Many customers are fine with painted components, but you need to have options for those who are not. One elderly customer didn't want to even think about painting his railing or trim, ever, so I combined Fortress Railing and Trex post sleeves to make a custom, very low-maintenance system (**Figure 3**).

Views With Traditional Looks

Still another customer preferred an all-black aluminum or welded-steel rail system, because it's visually unobtrusive. However, he didn't like the slender, 2-inch factory rail posts normally provided. Instead, I used black TimberTech rail posts and caps and a welded rail system that went well with the Trex Escapes decking used on his project (**Figure 4**).

In a similar case, an owner wanted a traditional post-and-rail look with fairly clear views in the field, so we used heavier materials for the frame, with thin, hollow

Figure 2. Although painting a wood railing system to match the home's colors might seem to invite frequent maintenance, proper preparation and high-quality paint can create a long-lasting job.

Figure 3. Combining Trex post sleeves and Fortress railing makes for a low-maintenance system.

Figure 4. To create a traditional-looking railing that blends into the scenery, the author used TimberTech posts and a black welded aluminum railing.

Figure 5. Heavy 6x6 cedar posts, a traditional Deckorators PVC rail cap, and Maine Ornamental post caps frame a view kept relatively unobstructed by the use of thin aluminum balusters.

Figure 6. The added height and hard-to-grip surfaces on this railing are meant to keep cats on the deck and out of the reach of local coyotes.

balusters (**Figure 5**). On railings like this, the balusters are held in place by being set either in drilled holes or in collars attached to the railing. Particularly with longer rail spans, I'm concerned about the top and bottom railing being able to move apart, so sometimes we insert threaded rods to keep tension between the top and bottom rails (see "Tips for Installing Aluminum Balusters," January/February 2008; free at deckmagazine.com).

Animal Control

One of the more interesting requests I've had was from a customer who had lost a cat to a coyote and wanted a railing that would keep the remaining six cats safely on the deck (**Figure 6**). The solution took some thinking and several cat-head measurements.

We ended up using vertical Deckorators balusters on a tighter spacing. The upper rail was a narrow piece of Azek PVC rail cap. Above that were two horizontal pipe rails spaced 3 inches apart and close to the inner edge of the cap. The overall height was 48 inches, and even if the cats managed the leap, they had nothing to grip or walk on. It was understood the design was a prototype, and I didn't warranty against any breaches. My belief was that one of the cats would eventually manage to jump the upper pipe rail; however, to this day no escapes have been reported.

Drink Ledges

Another feature we've incorporated into our railings is a wide rail cap (**Figure 7**). Extending the PVC material over the deck and locating bar stools accordingly is an easy way to create a dining and drinking area without the typical infringement that comes with dining tables. I've

Figure 7. The wide ledge on this railing creates a bar and seating space away from the table area, which improves a deck's ability to host parties. Note the routed profile (inset).

Factory Rails

My company does sometimes use factory rail offerings, depending on the situation and the product. Fiberon's co-extruded systems assemble easily and look great. We've also used Fortress's railing systems and aluminum welded panel systems with 2-inch posts, for customers who prefer the railing to disappear. Trex's rail systems allow an easy mix of aluminum balusters with its Traditions top and bottom low-maintenance rails. Azek's vinyl railing (formerly Composatron) is very well made.

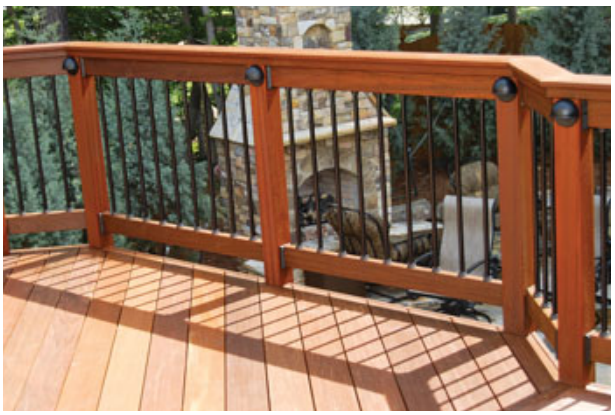

Figure 8. Simply combining metal balusters with a wood railing creates a special look at a lower price.

Figure 9. Factory railings can be a great option if a particular design suits a customer's needs.

been invited to cookouts by previous customers, and the seats by the railing with the drink ledge are always at a premium.

Making a drink ledge is simple — it's just a 1-inch-thick by 12-inch-wide piece of PVC mounted as the rail cap. We rout a profile on our rail caps and bar tops; it's good to rout the underside as well as the top so that no one gets cut on a sharp edge when spinning around in a chair. Some customers also find a ledge next to the grill area handy, for food preparation.

Cost

You don't need to break the budget to incorporate custom touches into railing designs. For example, adding a second material — such as metal balusters — can set a wood railing system apart (**Figure 8**). The example shown is an ipe railing, but we've done similar designs with painted pressure-treated railings. My company also sometimes uses factory rail offerings (**Figure 9**).

To speed up cost estimating for your rails — or any other option you offer — you should create pricing models. Determine what your cost of materials and labor will be and apply your margin accordingly. I've found that it's better to create a linear-foot price for each of the rail offerings and keep rail-post options as a separate line item, because the post count varies widely with the deck design.

Code and Common Sense

It scarcely needs saying, but I'll say it anyway: Always design rails to meet or exceed code. Additionally, keep the basics in mind. Allow enough space to sweep debris off the deck under the rail; seal all cuts and notches in wood rail posts before installation; and explain to customers that a rail bar top is for drinks and plates, not planters or butts.

Sources of Supply

Azek Building Products
877/275-2935
azek.com

Benjamin Moore
benjaminmoore.com

Deckorators
800/332-5724
ufpi.com/product/deckorators

Fiberon
800/573-8841
fiberondecking.com

Fortress Iron Railing and Fence Systems
866/323-4766
fortressiron.com

Maine Ornamental
ufpi.com/product/postcaps

Sherwin-Williams
800/743-7946
sherwin-williams.com

TimberTech
800/307-7780
timbertech.com

Trex
800/289-8739
trex.com

I think rail failures are a more likely cause of liability than deck collapses are, and it's important that railings not weaken at the post connections with age and exposure. I look for heavy-gauge metal brackets that mount with long, large-diameter screws that penetrate the post sleeves into the inner wood 4x4. That way, the connection remains solid even if the post sleeve deteriorates. I like the brackets for 2x4s made by Deckorators and the brackets that come with some railing systems, including Fortress's CB line, Fiberon's railings, and Azek Premier. Don't always trust the screws that come with the railing, as they may not be long enough to go through a sleeve and bite into the underlying wood post. If a railing is wood, connecting it to the post using a bracket is solid and reliable and doesn't rely on a typical toenailed connection. ❖

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