



# Designing Screened Porches

Give the porch a practical floor plan, and make it look like an extension of the house

by Bobby Parks

My approach to designing a screened porch is the same as my approach to designing a deck: The goal is to create an attractive space with a functional layout that blends in architecturally with the existing home. Even though screened porches are typically located at the back or side of the house, I think that they should still look like part of the original plan, not an “add on.”

Like a deck, the porch should be designed with travel routes in mind so that people can navigate easily from the house to outside without disrupting the porch’s living areas. I also take into consideration the home’s existing windows and doors, which dictate where the porch walls can intersect with the house, and where columns that support wall return

beams near the house can be located. Upper-level windows play a role in potential roof options and roof pitches for the porch, while the home’s existing roof pitches and types play into what will or won’t look like part of an original plan.

## Site Assessment

When there is an existing deck, the usual assumption is that this is where the new screen porch should be located. But as I assess a site, I try to get an overall sense of where the outdoor room would best fit. I also consider practical details, such as where the new porch roof can tie into the existing structure.

Even though the homeowners may believe that they know where the screen porch should go, my job is to determine

where the best location actually is. I’ve gotten many jobs because I came up with a different option and location from what other bidders proposed.

Because most clients want to dine out on their new porch, I always try to capture a breakfast-nook or dining room entry door in the design. It’s better to carry food and drinks directly from the kitchen to the dining table, rather than take a roundabout route through the living room. Even better are French doors that open out onto the porch area, a great look that allows for a seamless entry and true extension into another living space. Sometimes, it’s possible to provide access to the porch from both dining and living rooms by “capturing” one or both doors with a porch roof offset (**Figure 1**).



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In 90% of my builds, I designed the porch to be wider than its projection out from the house. This makes it easier to divide the area into zones and arrange furniture. There's a structural advantage too, as this configuration has more inherent lateral stability than a structure that projects out farther than its width.

The minimum suggested projection is 12 feet, though 14 feet or more is preferred (I can't recall anyone complaining about their project being too big). To create a truly functional sitting and dining space, I recommend a 20-foot porch width. If more than 20 feet is available, the space can be divided into two zones, providing plenty of room for both sitting and dining furniture. If less than 20 feet is available, a single zone for sitting or dining could work in the smaller space.

## Door Location and Travel Routes

As a general rule, I like to plan a porch so that people can exit from the house, then turn left or right to travel to a screen door that is located close to the house. This avoids encroaching on the outside perimeter of the porch, where furniture can be located without worrying about traffic through the furnished area. It's also easier to integrate a screen door into the design when it's located on a side wall than it is when it's located on an end wall, especially on a gable porch.



**Figure 1.** Try to locate the porch door away from seating areas, preferably on a side wall rather than an end wall. Sometimes the door can be located in an offset extension outside the main porch area.

Every rule has an exception, of course, and some homeowners prefer to locate furniture near a house wall, facing out. In this case, it makes sense to move the screen door out away from the house, though trimming it so that it doesn't stick out as an oddity can be a challenge.

## Vertical Structures

Undersized vertical supports result in a spindly look on any porch, so I typically

wrap support posts at the outer corners and back at the returns against the house with PVC trim. Wrapped columns are also usually located directly under the ridge beam (when the porch has a gable roof) and occasionally to break up side wall spans (**Figure 2**).

On many screened porches, you'll see 4x4 posts located on 3-foot centers to provide frames for the screen panels. But to provide an unimpeded view from inside



**Figure 2.** One way to blend a screen porch into the overall design of the home is to incorporate either front (above left) or side (above right) offsets into the design. Note too the use of fewer vertical supports, which opens up the view from inside the porch.



**Figure 3.** An open-style knee wall fitted with balusters (A) offers enhanced views and ventilation, while a solid knee wall (B) offers more weather protection and trim options. When upper-story windows create a clearance problem, either a low-slope gable roof (C) or a low-slope shed roof (D) is a good design solution.

the porch, I prefer to use larger—but fewer—vertical members. To make sure they are capable of supporting the loads from the longer spans, these columns are typically framed with 6x6s rather than 4x4s, and finished with PVC wraps.

### Knee Walls and Railings

On a screened porch, I prefer knee walls rather than railings, typically building them with vertical or horizontal aluminum balusters or solid PVC panels. Baluster-style knee walls provide a better view for those who are seated and better airflow compared with solid panel options. On the other hand, solid panels offer more trim detail alternatives and can be designed to look like wainscoting or frame-and-panel trim (**Figure 3**).

Many PVC manufacturers offer 4x8

panels that are perfect for building knee walls. Unlike traditional materials such as cedar or pine, which can stain, bleed tannins, and sometimes rot, PVC doesn't wick moisture, making it a great option for porch applications.

### Roof Types

Roof types are determined by the style of the existing roof, by what can be practically tied into the home's structure, and by the budget. For example, if the home has a 12/12 pitch gable roof, I avoid putting a low-slope gable roof on the porch. In this case, a shed roof might be a better design option, especially if the budget is tight. That's because a 12/12 porch and ceiling will cost significantly more than a low-slope or shed roof.

Low-slope roofs can be challenging

too. For example, if you try to tie in to an existing 5/12 pitch roof with a shed roof, you would end up "chasing the slope" with your porch rafters, potentially building more roof over an existing one than over the porch area. On the other hand, tying a shed roof into a wall is relatively simple and economical.

Sometimes both a shed roof and a gable roof can be incorporated into the design. Regardless, most of the time, the roof type won't limit the floor footprint or size options for the porch, though if you're trying to match another pitch, keep in mind that a wider footprint can lessen the slope compared with a narrower one.

When tying in the new roof, existing overhangs will have to be addressed and (usually) modified, whether it's a soffit underneath rafter tails, or a second-floor





**Figure 4.** When planning ceiling finishes, keep in mind how light fixtures and ceiling fans may affect the design (A). It may be necessary to incorporate structural features of the existing house, such as this second-floor cantilever, into the porch ceiling (B). Shown here is the author's standard sill plate, chair rail, and column detail, all executed with PVC trim (C).

cantilevered soffit under a framed floor system. For example, if you were on a new porch and looked up to see fascia and soffit that was part of the original house, that would be a tip-off that the porch was not an original part of the house. Cornice overhangs, which are typically nonstructural, can be removed and reworked with siding or trim, while second-floor cantilevered floor structures can be modified by simply resurfacing the soffit area to match the porch ceiling material.

### Interior Finishes

Regardless of the roof type, the key to interior ceiling design is to maintain balance with whatever you use to finish the ceiling. If the rafters are exposed or if there will be a beadboard treatment, determine in advance where lighting fixtures and ceiling fans will be located so that the panels and breaks are oriented properly. It's also a good idea to check existing electrical panel capacities to make sure there's room for expansion before pricing

and contracting a project (**Figure 4**).

Popular ceiling finishes include cedar with exposed rafters, beadboard underneath rafters, and even cypress. In addition to these traditional materials, homeowners can now choose from newer products, such as Versatex's Canvas series PVC boards, a traditional-looking T&G profile with a natural-looking woodgrain laminate finish.

Finally, don't forget the trim details, which all work together to give any porch that custom look. These include trimmed-out sill plates and bottom outer band, wrapped wall beams, chair rail, wrapped columns, and ridge beam. And while this is custom work, over time these details became standard practice for my company. We learned how to build them efficiently and price them so that we were competitive with other builders while remaining profitable. Building these types of jobs separated us from the porch builders who kept it standard and simple. Although markets vary, virtually all markets have customers that will pay for these types of jobs. ♦

### Screen Options

Like most contractors, I used a local fabricator to produce my screen panels (see "Screen Options for Porches," Jul/Aug 2015). These typically have extruded powder-coated aluminum frames fitted with fiberglass or polyester screening. Other options include purchasing frame stock and assembling the panels on site or installing a base-and-cap-type system (shown here is the ScreenEze system). Motorized retractable screens are an interesting—but more expensive—alternative; these disappear entirely, so that the porch can be left open or closed off when mosquitos and other flying creatures become a problem. Regardless of the system, I recommend high-visibility screening, such as Phifer's BetterVue or UltraVue products, which allow more light and air into the room. —B.P.



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