

INTERVIEW

Best Laid Plans - Thoughts of a Framing Crew



The view from the trenches on stock plans, architects, and getting the job done right

Few names are taken in vain more often on job sites than architects' and designers'. And more often than not, these works are spoken while staring at a set of blueprints. So we turned to experienced framing contractors for their views on plans and the people who draw them.

The wide-ranging question-and-answer session below features the comments of Enfield, New Hampshire's Fitzgerald Brothers (Jody, John, and their foreman, Wayne Findholt), who bring over 25 years experience to the job.

Plans

JLC: What percentage of plans that you deal with are free from error and can be built as drawn?

Fitzgerald Brothers: "No plans are ever free from error. Can't be."

JLC: What kinds of errors do you see the most?

Fitzgerald Bros: "There are always dimensioning errors—things don't add up. But there's rarely anything you can't figure out."

"A lot of dimensions won't scale off the plans properly, but you shouldn't scale anyway. It's a last resort. Use the dimensions first."

"Also, the detailing isn't always consistent. You know, one page calls for stain while the other calls for paint; that type of thing. But the differences are usually minor, and you should always go by the detail with the larger scale."

JLC: What improvements would you like to see in how wall framing is drawn?

Fitzgerald Bros: "One of the things that gets to be is wall heights that make you put in 2-inch cripples above your headers. It's just not a good building technique. The architect or designer should either upsize the header to fill the space or drop the walls in height."

JLC: How about floors?

Fitzgerald Bros: "We see a lot of deflection on some spans. It's a matter of trying to get too much out of the lumber; taking acceptable tolerances right to the limit."

"Yeah, everybody's going to 5/8-inch plywood now, too. Two of the last five houses we've done have been 5/8. They're putting hardwood down on top and saying it's good enough, but I don't think so."

"I don't know why, either. Five-eighths CDX is more money than the 3/4-inch t&g oriented-strand board, and I'd much rather have the OSB."

JLC: Any problems with how sheathing is usually spec'd?

Fitzgerald Bros: "As far as we're concerned, architects and designers don't require OSB enough."

"It's a better material, more uniform."

"And flat. When you snap a bundle open it stays flat. It doesn't spring out of shape."

JLC: Are there other materials or hardware you'd like to see spec'd more often?

Fitzgerald Bros: "I'd like to see a lot more floor trusses."

"It seems like architects and designers just don't keep up with materials. I think TJJs [wood I-beam joists] should be used in every house. It's a little more money, but it's a lot better floor."

"No question. People are spending a half million on a house, and then they put knotted-up 2x12s in the floor system. And when the plumbers and electricians are done with them..."

JLC: How about problems with the roofs you see?

Fitzgerald Bros: "We often get cathedral ceilings with structural ridges that are fine once you've got them together—but doing it is no easy task. We spent an ungodly number of hours on an L-shaped, double LVL ridge that was all unsupported except for the rafters."

"We used a screw jack to keep the ridge in place while we were framing, but it still fell down. We screw jacked it back up, sheathed it and it's still there. But we left a hidden post where the plans didn't call for one."

JLC: Are these kind of complications, that is, "simple" plans that are actually very difficult to frame as drawn, common?

Fitzgerald Bros: "Common enough. We had a job last year with a 12/12 main roof with a 4/12 shed dormer off the back that was a good example (see illustration on next page)."

"I think when the lumber for this job was ordered, the only drawings avail-

able were the floor plans and one or two elevations. The lack of detailing by the designer caused an error in the take off when the material was ordered. That meant the corner rafters wouldn't span across the rafter pairs (a 16-footer would have), but just spliced into one side."

"Not only did that cause us fits in setting the ridge—we had to put up a whole series of temporary rafters—but it put a lot of the roof load on the 2x8 collar ties. These rest on a wall beneath, but it's not designed to be load-bearing. We put our interior walls in afterwards, and had to raise the collar ties a good 3/4 inch to get that wall underneath."

"They probably thought they were saving money, but it ended up costing them a lot more in labor and it created some structural problems as well."

JLC: Did you call this to the attention of the architect or general contractor when you bid it?

Fitzgerald Bros: "It was one of those jobs where we were finishing up with the walls before we were given the roof framing plan. We explained how the 160foot 2x12s would be better, but at that late date it would have been too costly to stop everything and get the new material."

JLC: In general, which are better, stock or custom-drawn plans?

Fitzgerald Bros: "Stock plans are usually inferior structurally, and often have no consideration of the site. How about

that job we did last year? The owners took a stock design and just said 'Ah, here's a lot, let's put it here'. What did they bring in for fill on that one? Ten feet in the front yard?"

"What region of the country they're from makes a big difference too. We were getting some stock plans that were all 2x4 exterior walls with wimpy roof systems. We had to modify the roofs and go to 2x6 walls, which of course changes all the interior dimensions."

JLC: Are the plans better for modest houses or upscale houses?

Fitzgerald Bros: "Upscale houses usually have more attention to detail in the drawings. There's usually less left out."

"I think it's because the architect is more involved; you know—pride, reputation. Ordinary houses are often what an architect is doing while he's waiting around for his next upscale house."

Handling Problems

JLC: When you spot a problem with the plans as drawn, how do you normally handle it?

Fitzgerald Bros: "As a rule we just do what's necessary to build it right and inform the owner or contractor that we had to make a change."

JLC: Know any good stories about being sued for not building the plans as drawn?

Fitzgerald Bros: "Not yet, thank the good Lord...knock on wood."

JLC: Under what circumstances do you get permission first from the general contractor, architect, or engineer?

Fitzgerald Bros: "Really the only time we want someone to say, 'Yeah, go ahead' is when we have to make a change and it's going to cost us time and cut into our profits. If it's no skin off our back to do it right, then we just do it right."

JLC: How do you go about explaining to the architect?

Fitzgerald Bros: "Right up front. We tell them what we're going to do, when we're going to do it, and how we're going to do it."

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We get along well with architects. We've got experienced personnel, and most of the architects and engineers we work with respect that. They know we're dealing with this stuff every day and they're not.

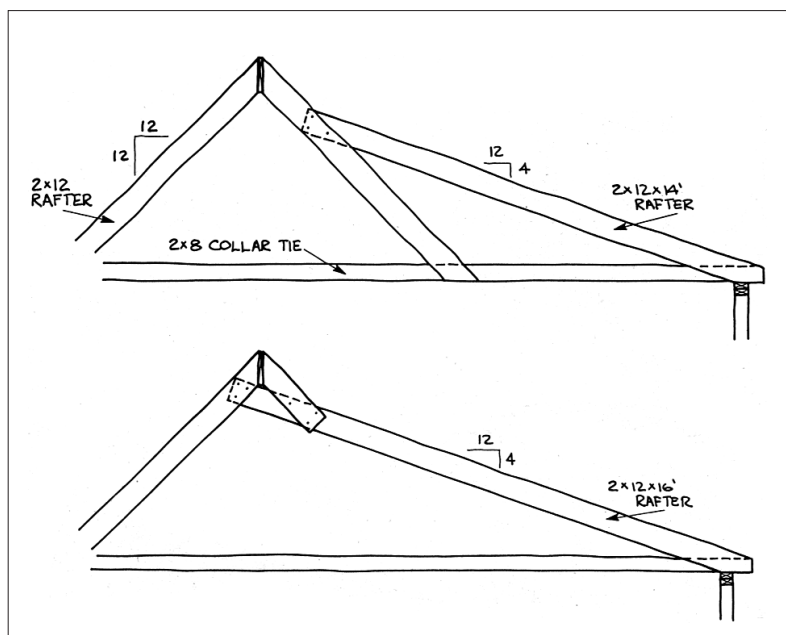
We've got experienced personnel and most of the architects and engineers we work with respect that. And they know we're dealing with this stuff every day and they're not."

"Besides, around here if the end product looks something like what they wanted, there usually isn't a problem."

JLC: What if the architect doesn't listen?

Fitzgerald Bros: "At that point we make it a problem between the general contractor and the architect."

JLC: Do you ever go around the architect



Using 14-foot rafters for the dormer made the collar ties load-bearing and complicated the roof assembly (top). Sixteen-foot dormer rafters (bottom) might have been a better choice structurally, and saved some labor.

or general contractor to the owner?

Fitzgerald Bros: "Definitely. Owners know what they want, and they get the final say, anyway."

"And it definitely heats things up. On one job we tried presenting our

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options to the general, who got back to the owner. Then the owner decided, got back to the general, and eventually the general got back to us—we're talking a couple of days here. When the owner started to show up at the job on his lunch break every day, we decided it was much easier to just present everything to him. The only changes he questioned were things that might cost him extra. He'd go back to the general himself on these."

JLC: How did the general contractor feel about the arrangement?

Fitzgerald Bros: "I don't think that he was real excited about how well we got along with the owner."

JLC: How often have you seen your profit affected by problems that crop up in the plans?

Fitzgerald Bros: "We're lucky in working with architects and general contractors who generally take care of us."

"Although we don't always manage to catch things early, the only reliable way to avoid problems is to recognize them when you're bidding. You've got to look those plans over and picture exactly how everything will come together. Then if what you're looking at has problems, you can propose a solution with the cost attached."

Architects and Designers

JLC: What do you think the role of an architect or designer should be in the

design and construction of a building?

Fitzgerald Bros: "As far as construction goes, I think once it leaves the architect's office it should be up to the general contractor and the subs to make the building work, as long as it doesn't affect it aesthetically. If he draws a lousy detail, that's his problem until it gets to us, and then it's our problem. We should deal with it. We shouldn't go ask him how to fix it, because he obviously doesn't know or he wouldn't have drawn it wrong in the first place."

"But I do think architects should have control of the design part, because they often have good ideas. They just don't know how to build, as a rule."

JLC: Architects often claim that today's carpenters can't handle complex details, and that they're always whining that things can't be built as drawn because they're in over their heads. What do you think?

Fitzgerald Bros: "There are a lot of those guys out there."

"We get a lot of them showing up on our frames saying they're carpenters because they know which end of the hammer to hang on to. The way help has been around here, we've had to hire some of them, but I think it's going to slow down and we're going to see some weeding out."

"I think you also see the small-time guy who does one spec house, then several, and then steps up to something with some complication and finds himself in over his head. That's then the whining starts."

JLC: Who would you rather build for, older architects or younger ones?

Fitzgerald Bros: "That one goes either way."

"You can get an older architect who's gone through the ranks architecturally, and who now thinks he's next to God."

"But you can also get them fresh out of college where they've skipped everything and gone straight to God. They think they're going to build nothing but upscale houses right from Day One. And they've never even learned how to do modest houses. They have no concept of what it takes to build the things they draw."

JLC: Designers versus licensed architects?

Fitzgerald Bros: "Designer is such a broad term; a lot depends on training

and professional level. You've got these developer/general contractor/multipurpose people who design their own stuff, and it's usually trash."

"We're framing a spec house like that and the plans don't have anything you need on them. There isn't a detail. It's kind of design and build as you go."

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come to us and say, 'Well, you know how we build'. And then they complain if we ask for an extra 50 cents a foot for being the only ones around who know 'how they like it.'"

JLC: How about other designers?

Fitzgerald Bros: "Designers seem to have more field experience than architects."

"Yeah. We see a lot of designers coming out of technical colleges, which seems to include a better background in construction."

JLC: It's been suggested that architects should spend some time in the trades; in fact some schools require it. What do you think?

Fitzgerald Bros: "I'd love to see architects in the field."

"Yeah, a big open field. Let them build a house by themselves. Just get six architects together and say 'Here's the bulldozer, and the shingles are over there. You fill in between.'"

"Seriously though, it would be great if they could spend more than just a summer building a couple of houses. I just don't think that cuts it. You really need time as a carpenter before you can start relating to the details. I'd like to see them spend two years in the field—although it's probably impractical—and attain the level of apprentice, or apprentice contractor, or carpenter's helper or something before practicing."

It Takes Teamwork

by Brett Simison

I grew up with an architect—my father—and I have a healthy respect for the hours it takes to create even a simple, well-planned design on paper. But I'm also a framing contractor with 15 years of experience in making designs work, and I know how valuable this practical input can be. Too often architects, engineers, and builders compete, which really discourages the flow of information. It's unfortunate, because a design is seldom successful as a structure if these three professionals aren't willingly and fully contributing their skills to the project.

The architects I've worked with have always been eager to explain their designs. But there's one little rule I keep that helps a lot: I don't

try to change their art. The concept they have of how the building should look is, in a sense, personal. They seldom want help or suggestions in this aspect of the design, and probably already feel compromised by client suggestions, cost limitations, and engineering restrictions. Besides, when it comes down to it, I don't want anybody telling me how a frame goes together.

If I have a question, suggestion, or criticism I direct it toward cost or efficiency, not the look of the thing. If I feel the design went the hard way around, I simply ask for an explanation, and then discuss the way I perceive it. Nine times out of ten, the architect allows me the freedom to construct a detail the way I suggest. And if the change is structural, I make sure the approval comes from the engineer—it takes the pressure off the architect and me.

Brett Simison is a framing contractor in La Verne, California.

"But even if they were required to take a course in college that got them into some basic building, framing roof systems, whatever, it would help."

JLC: *What things can tradespeople and contractors do to lessen the tension between themselves and architects and designers? Or is that just kind of the way it's always going to be?*

Fitzgerald Bros: "It doesn't have to be that way. Tradesmen have the preconceived idea that architects think they're gods. Architects can feel this hostility and it all goes downhill from there. We all have to be more open and receptive to each other; work with each other as equals instead of each of us feeling superior or trying to get the

upper hand. We have to realize that we're trying to achieve a common goal and the less static between us the better that product will be."

"It might help if tradespeople at least took some courses in design. I'd also like to see all contractors licensed. I think it would help a lot."

"In a lot of ways it boils down to better understanding what the other one does and why. If the tradesman could do a little drawing and the architect could do a little building..." ■

John D. Wagner is features editor of The Journal of Light Construction.