Letters

Realistic Scheduling

To the Editor:

Thank you for the great "real world" article ("Realistic Scheduling for Remodelers," 2/03). I have tried many types of schedules, and the calendar seems to work for everyone. I have had customers who posted the job calendar we gave them on the refrigerator (wherever it may land during a kitchen remodel), and it just serves as another reminder to all of us working on the job that we have agreed to a time commitment for these people. I am amazed at how many contractors do not give their customers a schedule, and also at how much my customers appreciate it and use it to plan their lives around our project. I have also noticed that when construction management students I've met in judging NAHB-sponsored competitions are asked to produce a construction schedule, computer-generated bar graphs are the norm — even for small projects. Hopefully, your article will encourage the use of alternative schedules for smaller projects and better customer relations.

Pam Anderson
Anderson Construction
Chambersburg, Pa.

Okay With Diversity

To the Editor:

I just read the letter from Ted Newman regarding his requirement that his workers speak English (*Letters*, 2/03). For many years I shared some of the same concerns. Then, a few years ago, a former customer asked if I had work for a man from Rwanda. He spoke almost no English but had worked as a mason in Africa. His family had come over as refugees from the terrible war there. I had my doubts but decided to give him a shot. I had a 12-inch block wall to lay at our shop, and it was looking like I was going to be doing it myself until Laurent showed up. Holding both hands out as if grasping a stick and moving his hands slightly back and forth, he gave me the message that he needed a 4-foot level. We used drawings and sketches to convey detail.

Laurent got that wall laid and has been with us since. He takes English classes on Saturdays. His problem-solving attitude and dedication to doing the best work possible have proved to be more important than being able to chat around the water cooler. I wonder if the forefathers Mr. Newman speaks of had to wait until they learned English to start work? With a wife and two children, that wasn't an option for Laurent. And I question the assertion that a diverse crew "creates substandard workforces and promotes cultural cliques." I believe just the opposite is true.

D. H. Criner
Criner Brothers, GC
Nashville, Tenn.

I-Beam Repairs Engineered, Guaranteed

To the Editor:

As a building inspector, over the years I have seen hundreds of these I-beams — so-called soldier beams — installed, as Mr. Cunningham provides ("Stabilizing Basement Walls," 1/03). Unfortunately, every soldier beam I have ever inspected has failed, and movement was still noted in those foundation walls. The weakness is using the floor joists. I have seen floor joists pushed out of plumb and damaged with this method. Floor joists are not designed for lateral pressure.

James F. Cornish
Building Inspector
Cornish Home Inspections, Inc.
Via e-mail

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Dave Cunningham responds:

It seems that Mr. Cornish may not have read the entire article but merely glanced over it. I too have seen hundreds of failed beam repair jobs. These I-beams and the ones Mr. Cornish has seen were not installed correctly.

I consult with a highly reputable engineering firm here in Kansas City for these foundation designs. I have run into many "inspectors" who are not educated in foundation repair, and who certainly never actually warranted a foundation repair job, as I do. On the contrary, most inspection reports I see include disclaimer language, such as "This report is intended to provide an overview of the existing conditions and should not be used as an indicator of future performance; no expressed or implied warranties or guarantees of any kind are given."

*For an article by an engineer describing I-beam repair of basement walls, see "When a Block Foundation Cracks" (*Practical Engineering*, 3/95).*

—The Editor

Helical Screws Can Work

To the Editor:

Steel I-beams used by themselves do not fix the problem. It is true that they will stiffen the basement wall, but they will also transfer the active earth pressures that caused the basement wall to crack and bow into the structure itself. This can lead to other problems, such as pushing the floor sideways or compressing the floor members so much that it buckles.

Helical screw anchors are not "deadmen" located at or near the surface. They are anchorages specifically designed to transfer earth pressure loads back into competent load-bearing soils well beyond the problem area near the basement wall.

The author states that "the soils in our area continually move, which means the anchors move, too." This is incorrect for properly installed helical screw anchors, which are located deep enough to be below the depth of [shrinking and swelling soils].

Gary L. Seider, P.E.
A.B. Chance Company
Via e-mail

Dave Cunningham responds:

To clarify, the "deadman" system commonly used in my market, which I referred to in my article, is not an engineered helical pier installation but a series of "tie-backs" — pieces of 1/4-inch steel buried 2 to 3 feet deep and connected through the basement wall to similar plates inside the basement using heavy threaded rod.

The engineered helical screw system that Mr. Seider describes is different because it extends farther from the house and deeper into the soil. I agree that this would work when anchored into solid earth. The biggest obstacle to using engineered helical screws is cost: They run about $700 to $1,000 per screw, including excavation and other related work, compared with about $200 to $300 apiece to solve the problems with I-beams. Most of my customers want a quick, inexpensive, and engineer-designed solution, and that's what I provide.

There are some other drawbacks to using helical screws. One is that you have to drill holes through the walls, which makes them more susceptible to leakage. And when the houses are close together, as they are in the neighborhoods where I work, it's difficult to screw far enough without going onto an adjoining property, hitting an underground sewer or utility line, or even reaching a neighbor's foundation. And if excavation has to be done, there's the added cost of dealing with existing patios, drives, and landscaping.

Radiant-Floor Study Skewed

To the Editor:

The PATH "study" comparing radiant and hot-air heating systems in a Habitat for Humanity home in Schenectady, N.Y., is literally not worth the paper it's written on ("Radiant-Floor Study Sparks Controversy," *In the News*, 2/03). As a mechanical contractor who designs, installs, and services forced hot-air and all manner of hydronic systems (including radiant), I was shocked to see the dramatic claim that the radiant installation is 22% less efficient than the hot-air furnace.

The PATH study was flawed in the very beginning, when it was dictated that both sets of equipment had to be "similar" in costs and "builder grade quality." Infusing material costs is hardly an effective approach when attempting to compare efficiencies between such diverse products. Furnaces are cheaper than boilers of equal efficiencies; therefore, they got off on the wrong foot before starting. The furnace in question is not "approximately 90% efficient" — it's rated to be 92.1% efficient if installed properly. The boiler in question is rated to be 85.6% efficient — again, if installed properly. So, right off the bat, they're skewed 6.5%.

Let's take a closer look at how these two systems were placed into service. The hot-air furnace operated as a single zone, with relatively long running cycles, which would enable it to operate at peak performance ratings. The boiler, on the other hand, was given two zones, with each underutilizing the boiler's capacity, causing short cycles and killing efficiency by as much as 10%. We now have a boiler operating in the mid 70% range, not the 85.6% stated.

The hot-air system also reaped efficiency benefits due to the operating characteristics inherent with radiant heating systems. Radiant heating systems gently warm all objects within the room, and they, in turn, release this energy to the room. The heated materials often retain this heat for hours or days (depending on their density), and the forced-air heating system would have seen less run time during this time period. On the opposite end, the air warmed by the furnace very quickly gives up its heat, and the radiant system once again is faced with a large start-up load. My guess is that this unseen boost in effi-

ciency further skewed the numbers.

The PATH study also did not permit proper controls to be added for optimum performance. Losing sight of comparing efficiencies, they concentrated on costs. The number and scope of radiant heating controls that can be added to tweak efficiency and comfort are virtually endless. When properly designed and installed, a radiant system will outperform virtually any other form of heating. In some cases, radiantly heated spaces will save as much as 30% in overall system-wide efficiencies. But there are times when hot air is the best choice, too, and that's our job as heating professionals, to know the difference and present the options to our customers.

The most telling comment of all was that the homeowners requested that the radiant heating remain turned on. They've experienced the radiant comfort factor, which trumps all other factors in the final analysis.

If PATH wants to do this right, they should let both industries put their best foot forward regarding the design and installations, then concentrate on the operating efficiencies, if that's the premise for comparing divergent systems. Anything less does a disservice to the trades, consumers, builders, and architects who rely upon others to be objective in their reporting of "facts."

Dave Yates, President
F.W. Behler Plumbing,
Heating & Air Conditioning
York, Pa.

Masonry Chimneys & Gas Appliances

To the Editor:

Some misinformation may have slipped into the article "Venting Gas Appliances" (2/03). The text reads, "Because a draft-hood appliance creates a large volume of exhaust, it needs a taller or larger-diameter vent than a fan-assisted unit of the same Btu rating. Oversizing, however, isn't a problem: A vent serving a draft-hood unit can only be too small, not too large." Yet experts I interviewed for a *JLC* article on orphaned water heaters (*Trade Talk*, 6/01) agreed that an oversized flue for an atmospherically vented water heater (an appliance with a draft hood) can contribute to condensation problems and the potential for chimney deterioration.

Martin Holladay
Via e-mail

Martin Holladay is editor of Energy Design Update *and a former* JLC *associate editor.*

JLC *senior editor Ted Cushman responds: The sentence you refer to was introduced in the editing process and did not come from the authors. You are correct: When we said that a vent can't be too large for a NAT appliance, we should have distinguished between B vent and chimneys. Unlike B vent, chimneys do have a maximum as well as a minimum size specified in the table, even for NAT installations. In fact, the table excerpt that we provided does show that. A chimney that is too large for a water heater could be (and often is) prone to condensation. It's common for someone to take the furnace off of a masonry chimney that serves both a furnace and a water heater without resizing the vent to be proper for the water heater alone, with resultant damage to the masonry.*

We tried to get the point across that masonry chimneys are just not well suited to venting modern gas appliances at all. The tables reflect that: You have to consult three different tables to size a chimney for a gas appliance (or vice versa), and most often what the tables tell you is that you just can't do it. The key issue is materials, not sizing: B vent is always more reliable than masonry to vent non-condensing ("mid-efficiency") gas home heating and hot water equipment, and it should be the preferred choice for those units. If you do leave a water heater alone on an existing chimney that used to handle two appliances, you should resize the vent — but what that really means is you should line the chimney with an approved insulated metal liner that is sized appropriately. You should change the vent materials, not just the sizing. And really, with today's technology, the smart thing to do in that situation is to direct-vent both the furnace and the water heater — for instance, with a combo-air system like Lennox CompleteHeat.

Cathedral Can Suggestions

To the Editor:

I was surprised by your answer to the "Ice Buildup Problem" (*Q&A*, 2/03). If that homeowner wanted track lighting, he probably would have started with track lighting. It seems that the builder is taking responsibility for what amounts to a product failure. IC-rated cans are supposed to work when in contact with insulation. Somewhere out there is a manufacturer's rep who wants to defend the product's reputation by helping the builder figure out what is wrong. It may be as simple as the fact that certain can-bulb-trim combinations require socket extensions to move the bulb farther down in the body of the can. Or perhaps the cans are overlamped. Many IC-rated cans are rated at only 50 watts, and the maximum lamp rating depends on the particular trim used.

It would be nice to see the cans working as designed and, with the insulation back in place, not creating roof ice. If that fails, I'd be tempted to go with a much more expensive but more satisfying solution — a cold roof design.

Mike Parker
Via e-mail

To the Editor:

Regarding the question about recessed ceiling lights losing heat: We install hundreds of recessed lights every year, many of them in cathedral ceilings. The first thing to check is that you have the appropriate bulb in the fixtures, or it may be possible to lower the bulb

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toward the room a little. The best solution is to use Icynene foam insulation in the cathedral space. This eliminates almost all insulation problems and needs no air space — so no venting problems. I have seen many cathedral ceilings insulated with fiberglass insulation that had air flow and venting problems. Foaming these spaces produces dramatic results. To simply say, "don't use recessed cans" is not the only solution.

Peter Rees
Rees & Company
Via e-mail

Insulating Living Space Over an Unheated Garage

To the Editor:

Regarding the answer "Insulating a Floor Over an Unheated Garage" (*Q&A*, 1/03): I have installed a bath over almost every garage I've built, and the critical element is the perimeter. Blown insulation settles and allows an air layer under the subfloor. If the water pipes extend through that cold air layer, they will freeze, as cold air will get in around the perimeter and will actually blow across that space (assuming the eaves were vented, but even if not, air can penetrate). If batts are used and installed without due care, the same thing can occur. The only way to ensure a tight perimeter is to blow insulation that is held in place with glue — either spray foam or damp-spray cellulose, which we use more commonly. Once the perimeter is sealed, the insulation below the pipes will hold the heat from the heated space in the floor system and the pipes will not freeze. Sometimes I also box in the piping with properly placed batts and seal the box with caulk.

Joe Bates
Bates Fine Homes
Noblesville, Ind.

To the Editor:

I agree totally with Mr. Uniacke's response to the question about insulating a floor over an unheated garage (*Q&A*, 1/03), and would add the following. I install a layer of 1-inch-thick rigid foam insulation board (preferably aluminum-faced) on the underside of the joists before the sheetrock is installed. That creates an R-7 for the joist as well as the cavity and lessens the need for perfect insulation work (though I sure encourage it).

Les Deal
Cedar Rapids, Iowa

The Shadow Knows

To the Editor:

There is an odd shadow line in the photo on page 67 of the January issue (see below). It's the gable

end of a house with metal shingles. The shadow line from the gable shows that there is a Victorian type trim at the peak. But the gable peak has no trim?

James B. Pomy, R.A.
Via e-mail

Reducing Nail Pops

To the Editor:

Another way to prevent or eliminate drywall nail pops (*Q&A*, 1/03) is to use drywall adhesive, which can reduce the number of mechanical fasteners by as much as 50%. Because the adhesive holds the stud tight to the drywall, the drywall will maintain its contact with the stud as the stud shrinks.

Bill Longo
OSI Sealants Inc.
Via e-mail

Deadbolts Should Allow Safe Egress

To the Editor:

The article "Choosing Entry-Door Hardware" (2/03) was well written. I applaud the author's cautionary note that double-cylinder keyed deadbolts on required egress doors may not comply with code due to possible entrapment in an emergency. The comment that deadbolts with interior thumb turns are "vulnerable to break-ins when glass side-lights flank the entry..." may be true but reflects the thinking of an honest man, not a potential thief. The reality is that a criminal who is willing to break glass can enter most houses easily, whether through a door or a window. With the possible exception of high crime areas, I believe the average person is safer having an interior thumb-turn deadbolt for emergency egress, side-light or not.

Joe Basilone
Chief Building Inspector
James City County, Va.

Fence Post Repair

To the Editor:

I've had poor luck setting in posts with the technique noted in the article "Repairing Wooden Fences" (2/03). I prefer to use a 4x4 angle iron driven or dug down to the frost level, keeping all the wood above grade.

Fred Gralenski
Pembroke, Maine

KEEP 'EM COMING!

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