MEMO TO FILE

Manufacturer's Instructions as Code

The residential building code contains almost 300 references to manufacturer's instructions.

The National Association of Home Builders and the International Code Council, through surveys and studies, keep track of the most common code violations. For example, overdriven fasteners – especially on sheer walls – is a common reason for GC's to fail a rough framing inspection. This is not a surprise. We can all picture the rookie framer tasked with nailing off sheathing, who turns into Rambo with a toolbelt and a Hitachi framing gun. Maybe we were that guy, in our youth. Overdriven nails significantly reduce panel strength. R602 (Wood Wall Framing) of the 2021 International Residential Code contains an incredibly detailed fastening schedule (Table R602.3(1)) devoted to many framing connections, yet not a word about nail depth or overdriven nails.

So why do so many GCs fail rough framing inspections? Because the GC (or the sub's guys) failed to follow the sheathing manufacturer's instructions. In the case of ZipSystem™ sheathing, it is a 62 page instruction manual (covering many critical installation details beyond just fastener depth).

The IRC is chock full of references (almost 300) to manufacturer's instructions. When your lumberyard drops stacks of Advantech and Zip at your site, they don't come with an instruction manual. The GC is presumed to know what the manufacturer's instructions specify for the components the GC is installing – like how Zip tape needs to be applied with a roller, not pushed into place by hand (a trained eye can easily tell the difference), for full effectiveness.

Composite decking is another common building product with many safety and structural implications, yet, per code (R507.2.2.5), is governed largely by manufacturer's instructions. Indeed, the Trex decking installation guide is over 30 pages. A GC can't be surprised if a building inspector wants to see compliance with these instructions, which set out many procedures that are contrary to some common decking practices seen in the field. Manufacturer instructions for cable rail systems must also be top of mind for a GC. Specifically, proper tensioning of cable (and thus the spacing of the cable) to satisfy the code's 4" sphere rule.

Before GC's fret over reading page after page of instruction manuals at the start of every workday, the state building code grants building inspectors a fair degree of discretion in deciding what matters and what can slide (see, for example, R104.10, Modifications, and R104.12, Matters Not Provided For). Just remember that many manufacturer instructions are, in fact, as good as building code.

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