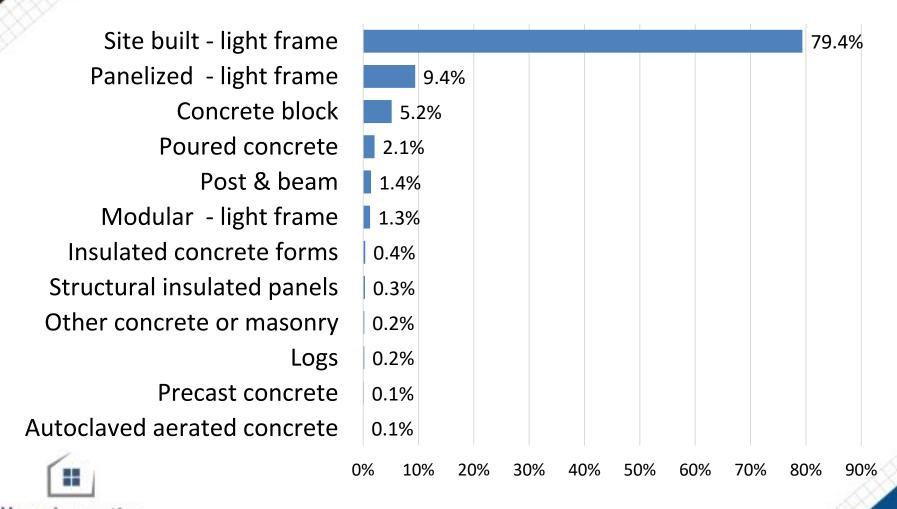


SURVEY FINDINGS: BUILDER PLANNED USAGE OF COMPONENTS AND OFFSITE HOUSING TECHNOLOGIES

Summary of Findings

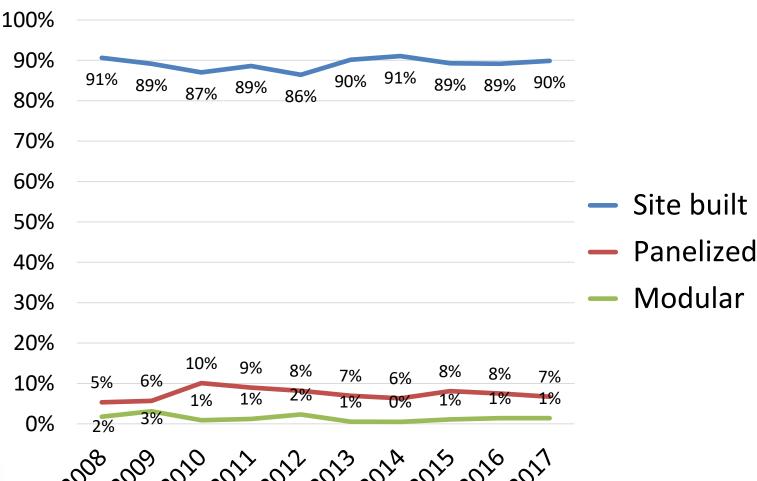
Finding Innovation a Home

Residential Above-Grade Wall Construction, 2017



Source: Annual Builder Practices Reports

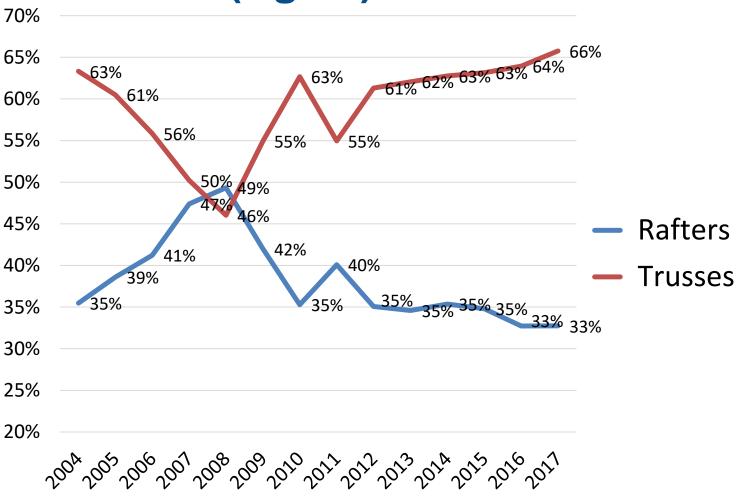
Trend in SFD Above-Grade Light Frame Wall Construction





Source: Annual Builder Practices Reports

Wood Trusses Trending Upward (Again) in New SFD Homes





Source: Annual Builder Practices Reports

Questions on Offsite and Components Use in Builder Survey

Q14

Considering only the new homes your company builds, which of the following do you plan to use less often, about the same, or more often in the coming year compared to last year?

	Didn't use and don't plan to use	Plan to use it less often	Plan to use it about the same	Plan to use it more often
Roof trusses	0	•	O	O
Pre-cut framing package	O	•	O	O
Factory-built open wall panels	•	O	O	0
Factory-built closed wall panels	•	O	O	0
Panelized, pre-assembled floors	•	O	O	O
Modular	O	•	O	O
Turn-key framing	O	O	O	O
Precast floor, wall, or roof panels	O	O	O	0



Questions on Offsite and Components Use in Builder Survey

Q15

Considering only the new homes your company builds, which of the following do you anticipate using less often, about the same, or more often 5 years from now compared to the current time?

	Didn't use and don't plan to use	Plan to use it less often	Plan to use it about the same	Plan to use it more often
Roof trusses	•	•	O	O
Pre-cut framing package	O	O	O	O
Factory-built open wall panels	O	0	0	•
Factory-built closed wall panels	O	0	O	O
Panelized, pre-assembled floors	O	O	0	•
Modular	O	O	O	O
Turn-key framing	O	0	O	O
Precast floor, wall, or roof panels	O	•	O	O



SUMMARY: Builder Plans for Coming Year

	Didn't use		Plan to use it	
	and don't	Plan to use it less often	about the same	Plan to use it more often
ROOF TRUSSES	19%	4%	65%	11%
PRE-CUT FRAMING PACKAGE	65%	6%	22%	8%
FACTORY-BUILT OPEN WALL PANELS	73%	4%	13%	10%
FACTORY-BUILT CLOSED WALL PANELS	78%	3%	13%	6%
PANELIZED, PRE-ASSEMBLED FLOORS	77%	4%	15%	4%
MODULAR	80%	6%	10%	4%
TURN-KEY FRAMING	59%	5%	32%	4%
PRECAST FLOOR, WALL, OR ROOF PANELS	77%	4%	14%	5%

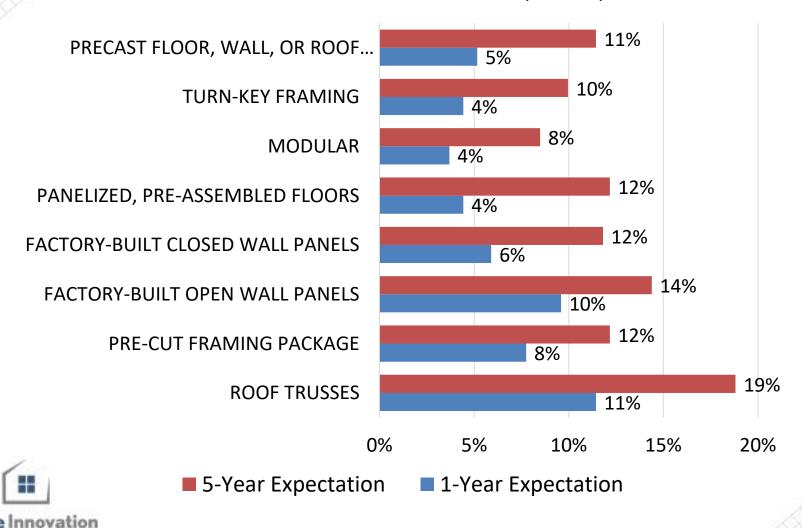


SUMMARY: Builder Expectations for Coming 5 Years

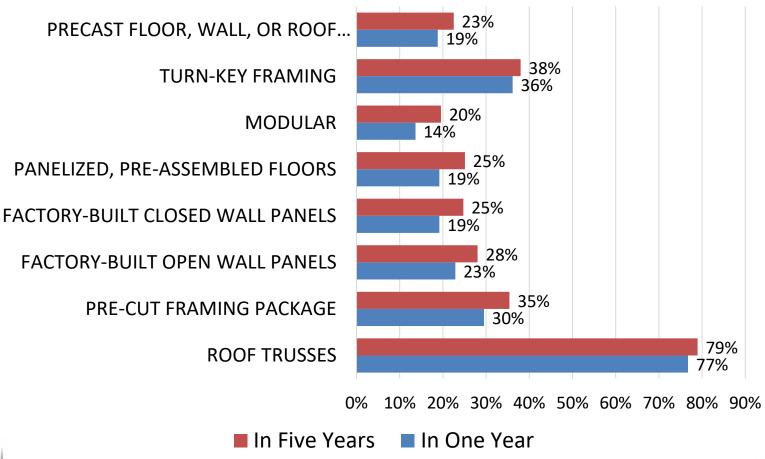
A. X. Y				
	Didn't use and don't plan to use	Plan to use it less often	Plan to use it about the same	Plan to use it more often
ROOF TRUSSES	18%	3%	60%	19%
PRE-CUT FRAMING PACKAGE	59%	6%	23%	12%
FACTORY-BUILT OPEN WALL PANELS	66%	6%	14%	14%
FACTORY-BUILT CLOSED WALL PANELS	71%	4%	13%	12%
PANELIZED, PRE-ASSEMBLED FLOORS	71%	4%	13%	12%
MODULAR	77%	3%	11%	8%
TURN-KEY FRAMING	56%	6%	28%	10%
PRECAST FLOOR, WALL, OR ROOF PANELS	73%	5%	11%	11%



Builders Anticipating <u>Using More Often</u> in One and Five Years (n=300)

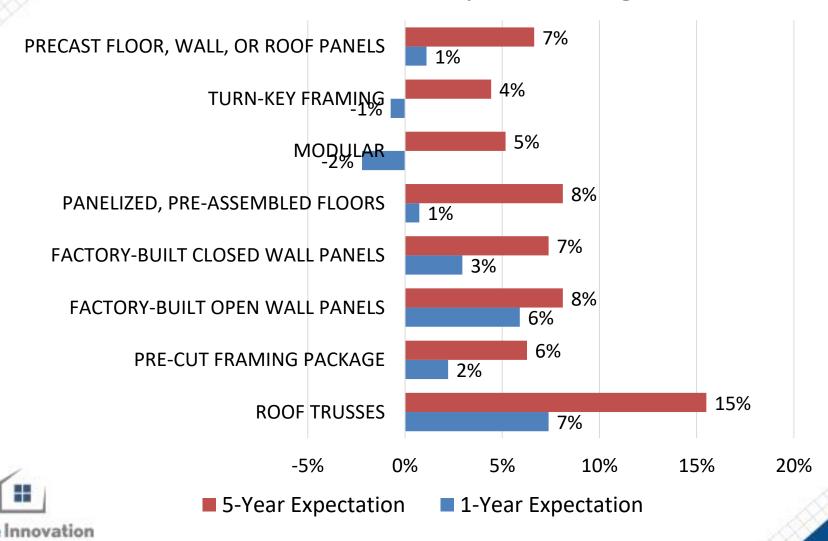


Builders with 1 and 5 Year Plans/Expectations of Using Each System the Same or More Often (n=300)





Net Increase (or Decrease) in One and Five Year Planned/Anticipated Usage (n=300)



	All Builders	Small Builders (1-24)	Large Builders (25+)
ROOF TRUSSES	15%	15%	19%
PRE-CUT FRAMING PACKAGE	6%	3%	19%
FACTORY-BUILT OPEN WALL PANELS	8%	5%	19%
FACTORY-BUILT CLOSED WALL PANELS	7%	6%	14%
PANELIZED, PRE-ASSEMBLED FLOORS	8%	4%	22%
MODULAR	5%	4%	10%
TURN-KEY FRAMING	4%	4%	7%
PRECAST FLOOR, WALL, OR ROOF PANELS	7%	4%	15%



	Northeast Builders	Midwest Builders	South Builders	West Builders
ROOF TRUSSES	21%	14%	16%	11%
PRE-CUT FRAMING PACKAGE	-5%	12%	6%	5%
FACTORY-BUILT OPEN WALL PANELS	-7%	19%	4%	11%
FACTORY-BUILT CLOSED WALL PANELS	2%	14%	2%	11%
PANELIZED, PRE-ASSEMBLED FLOORS	-5%	17%	4%	14%
MODULAR	5%	4%	4%	11%
TURN-KEY FRAMING	2%	9%	1%	5%
PRECAST FLOOR, WALL, OR ROOF PANELS	-2%	12%	6%	5%



	All Builders	SFD Starter Builders	SFD Move-up Builders	SFD Luxury Builders
ROOF TRUSSES	15%	13%	17%	17%
PRE-CUT FRAMING PACKAGE	6%	4%	7%	11%
FACTORY-BUILT OPEN WALL PANELS	8%	9%	11%	9%
FACTORY-BUILT CLOSED WALL PANELS	7%	6%	10%	9%
PANELIZED, PRE-ASSEMBLED FLOORS	8%	6%	12%	11%
MODULAR	5%	4%	7%	7%
TURN-KEY FRAMING	4%	3%	6%	7%
PRECAST FLOOR, WALL, OR ROOF PANELS	7%	4%	10%	11%



	All Builders	Custom Builders	Semi-Custom Builders	Production Builders
ROOF TRUSSES	15%	16%	15%	20%
PRE-CUT FRAMING PACKAGE	6%	8%	0%	0%
FACTORY-BUILT OPEN WALL PANELS	8%	6%	4%	11%
FACTORY-BUILT CLOSED WALL PANELS	7%	6%	9%	6%
PANELIZED, PRE-ASSEMBLED FLOORS	8%	5%	9%	9%
MODULAR	5%	7%	3%	-6%
TURN-KEY FRAMING	4%	6%	9%	-11%
PRECAST FLOOR, WALL, OR ROOF PANELS	7%	9%	4%	-11%





THANK YOU

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