



Alliance Housing Innovation™
Live Round Table

Baltimore | Nov. (14) – 15

2018

Business Models for Pursuing Off-site Construction

Margaret Whelan - slides withheld
Alan Laing



**Sometimes You WIN,
Sometimes You LEARN!**

Pulte Building Systems, DiVosta + Pratte

Pulte 2002

- Building 25,000 homes/year
- 5-year plan to build 75,000 homes/year
- Bill Pulte: Strong belief in components & vertical integration



Pulte Building Sciences

- First large-scale R&D effort in the industry
 - SIP wall panels
 - Floor trusses & decks
 - Precast concrete foundations
- House weathered in 4 days
- Business Plan: Build 13 plants
 - \$250M in capital
 - Virginia production plant



The Washington Post

Home From the Factory

Pulte Says Its New Way of Manufactured Building Is Faster, Better

By Daniela Deane

Washington Post Staff Writer

Saturday, December 11, 2004; Page F01

The day is blustery, but at a new-home subdivision in Chantilly, no subcontractor for Pulte Homes Inc. is steeling himself against the wind trying to drive nails into wood studs. No one is pouring concrete for the foundation in bad weather, either.

Instead, a few miles away, a huge gray bridge is gliding overhead in a climate-controlled factory driving screws, cutting holes and marking wall partitions. Cutting machines are slicing wall panels into the shapes needed to go into the houses. Rather than wielding tools, workers are peering at computer screens for their next instructions.

Pulte Homes, the country's second-largest home builder and one of the top 10 in this area, has started experimenting with a new way of making houses. Instead of building on site, wooden stick by wooden stick -- the way most houses are made



JV & Purchase of Pratte Building Systems in SW

- Turnkey framer with lumber, truss, & trim
- Added:
 - Concrete
 - Post-tension
 - Plumbing
 - Insulation
 - Trash
 - Wall panels



Results

- \$800M revenue business
- 5,000 employees
- 10,000 closings per year
- Integrated design, engineering, starts & site supervision



FINANCIAL HIGHLIGHTS											
(2001 annual, except per share data)	2003	2002	2001 (a)	2000	1999						
Consolidated Results											
Revenue	\$5,648,926	\$7,471,819	\$5,394,261	\$4,266,977	\$3,768,223						
Income from continuing operations	417,532	644,001	302,425	218,364	178,287						
Net income	434,634	633,665	303,393	188,211	178,163						
Per share data: (b)											
Earnings per share - basic	3.68	3.68	3.18	2.64	2.06						
Continuing operations	5.11	5.15	5.07	2.25	2.06						
Net income											
Continuing operations	4.91	4.80	4.96	2.56	2.00						
Net income	4.97	4.97	5.09	2.24	2.00						
Cash dividends per share	.11	.05	.05	.08	.08						
Total assets	\$8,848,353	\$4,877,487	\$5,728,823	\$2,286,483	\$2,827,852						
Senior debt and subordinated debt	2,591,975	1,917,268	1,722,864	606,296	582,400						
Debt-to-capital ratio	28.25%	40.94%	28.89%	26.51%	20.48%						
Shareholders' equity	\$1,448,125	\$2,706,426	\$2,254,665	\$1,247,511	\$1,093,319						
Return on average shareholders' equity	28.85%	18.19%	18.11%	18.26%	17.99%						
Book value per share	\$ 27.85	\$ 22.56	\$ 19.22	\$ 13.81	\$ 12.46						
Number of employees	18,800	9,200	9,800	5,200	5,000						
Domestic Homebuilding Results											
Revenue	\$5,791,081	\$7,017,915	\$5,278,666	\$4,102,830	\$3,689,255						
Pre-tax income	398,432	178,010	114,674	83,231	106,130						
Segment assets	32,693	28,303	22,811	19,799	19,569						
Net new orders (units x)	16,900	16,850	22,641	19,844	19,367						
Working capital	13,993	10,405	8,473	8,477	9,432						
Total orders at year end	66	64	43	43	41						
Active contracts at year end	578	480	440	396	388						
Active orders per unit	\$ 289	\$ 342	\$ 222	\$ 206	\$ 187						
Gross profit margin from home sales (y)	28.6%	19.6%	19.1%	18.0%	17.9%						
<small>(a) The 1999 operations were merged effective July 31, 2001.</small>											
<small>(b) All share and per share amounts have been revised to consistently reflect the two-for-one stock split announced on December 31, 2001 and effective January 2, 2002.</small>											
<small>(c) Total new orders for the years ended December 31, 2001 and 2002, do not include 1,992 units and 2,971 units, respectively, of completed housing.</small>											
<small>(d) Domestic Homebuilding income per share, which represents the contribution of capitalized interest, has been included in home cost of sale.</small>											
<table border="1"> <thead> <tr> <th>Revenues</th> <th>Earnings Per Share, Continuing Operations</th> <th>Book Value Per Share</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>						Revenues	Earnings Per Share, Continuing Operations	Book Value Per Share			
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Lessons Learned

Pulte Building Science (PBS)

- Product selection matters: SIP were wrong choice
- Product variation was very difficult to manage

DiVosta®

- Near perfection: Leave it alone!

Pratte

- Paid for itself in year one
- Proved that integrated processes work and total costs and hidden costs become common language; resulted in better decisions
- Sized for 10,000 units; could not scale down with market downturn



DiVOSTA®