

# Building Sustainably

Challenges in the Home Renovation Industry

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# Facts

- Carbon Footprint of Buildings
  - 39% CO<sub>2</sub> emissions
  - 40% energy consumption
  - 13% water consumption
- 1992 - DOE and EPA initiated the ENERGY STAR Program
- 1993 - U.S. Green Building Council founded
  - 1998 launched LEED



# Residential Construction

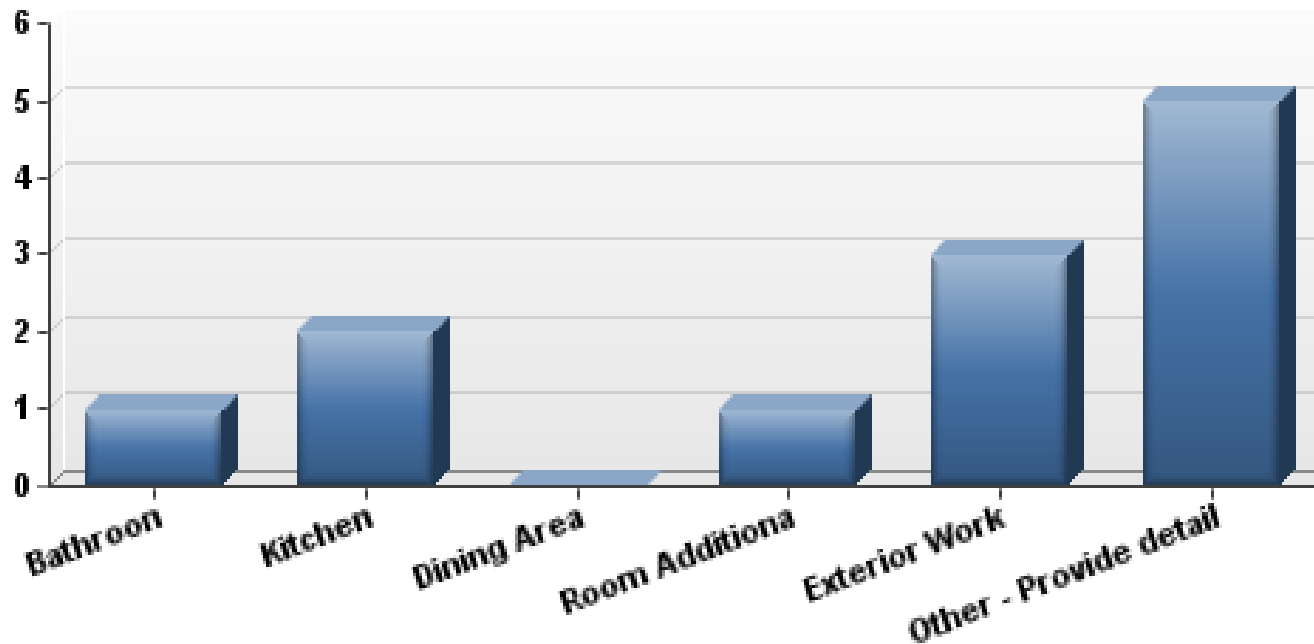
- Conventional construction still constitutes the majority of homes built today
- Green homes limited to a few major developers and boutique architectural firms
- 80 times more LEED Certified Commercial Space than LEED Certified Homes

<http://www.usgbc.org/ShowFile.aspx?DocumentID=2683>

<http://www.usgbc.org/Default.aspx>

# Survey Findings

- Purpose – to determine what influences peoples' decisions during home renovations



# Survey Findings

- Energy savings are important to homeowners
  - 44% of respondents said energy was a criteria in their project
- Homeowners are most familiar with Energy Star program, less so with LEED
  - All respondents had at least heard of Energy Star
  - 6 were completely unfamiliar with LEED
- Architects and General Contractors do not drive sustainability
  - 2 respondents said architects proposed sustainable options and 3 respondents answered same for general contractor.

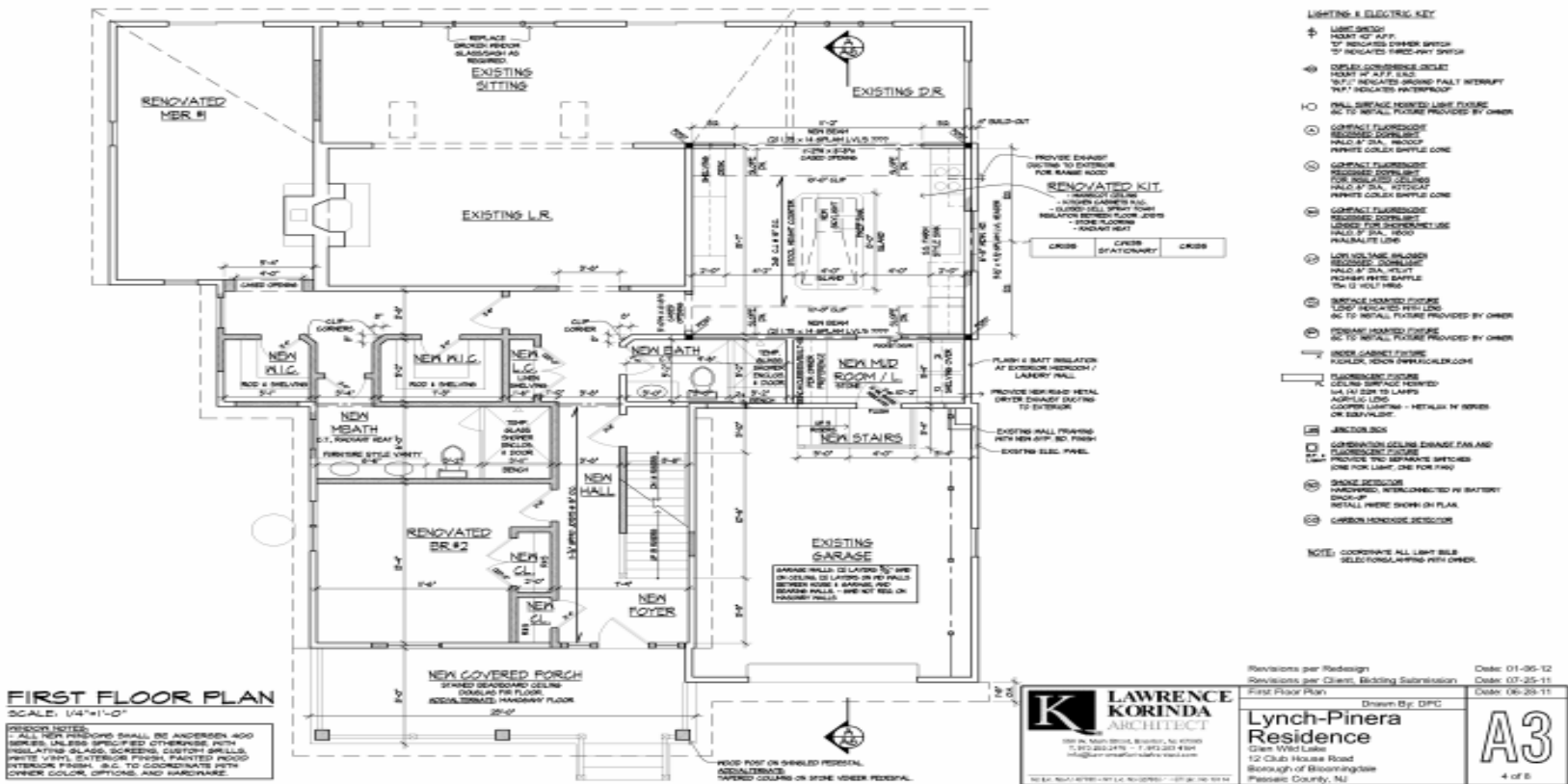
# Industry Experts Comments

- “Industry resistant to change”
- “Why take on risk?”
- “Clients are only interested in the upfront cost”
- “Green means more Green (\$)”
- “All that glitters is not gold”
- “Why install low flow faucets when you don’t pay for water”

# Case Study



# Walking the Walk Renovating Sustainably



**OWNER NOTES:**  
1. ALL NEW FINISHES SHALL BE ANDERSEN 400 UNLESS UNLESS SPECIFIED OTHERWISE WITH INSULATING GLASS SCREENS, CUSTOM SHIELDS, WHITE VINYL, EXTERIOR FINISH PAINTED MEDIUM INTERIOR FINISH, S.C. TO COORDINATE WITH OWNER COLOR OPTIONS AND HARDWARE.

<p>LAWRENCE KORINDA ARCHITECT</p> <p>1001 N. WEST STREET, SUITE 201, ASHLEY, NC 27515 TEL: 919.285.2476 • FAX: 919.285.4784 WWW.LAWRENCEKORINDA.COM</p> <p>NO. 24, NORTH STATE STREET, GREENSBORO, NC 27401</p>	Revisions per Redesign _____ Date: 01-26-12 Revisions per Client, Bidding Submission _____ Date: 07-25-11
	First Floor Plan _____ Drawn By: DFC
	<b>Lynch-Pinera Residence</b> Green Wild Lake 12 Caledon House Road Borough of Bloomingtondale Pasquotank County, NJ

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# Home Renovation

- Objective – Renovate sustainably using green materials and processes
- Areas of Focus
  - Contractor and Architect Selection
  - Construction Waste
  - Energy Conservation and Efficiencies
  - Material Selection

# Conclusions and Recommendations

- Architects and General Contractors need more exposure to Sustainable Building practices
  - USGBC should reach out to conventional practitioners
  - Governmental organizations need better outreach programs
  - Architects and energy experts need to partner

# Results

## Successes

- General Contractor
- Energy Audit
- Energy Efficiencies
- Building Envelope
- Energy Star Appliances
- Donations

## Challenges

- Architect
- Other Contractors
- Cabinet Selection
- Construction Debris Recycling



# Contact Information

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