

Green Building and Utility Management – Doing it Right Makes Sense

Manny Gonzalez, KTGy

William J. Greene, III, Wood Partners

David Woodward, CompassRock

Moderated by: Matt Miller, Yardi



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Learning Objectives

- Learn what LEED certification means for businesses today and how it has evolved.
- Identify trends in energy efficient devices and other green building tips.
- Better understand the importance of LEED certification by experts in the industry.
- Receive insight into what leading companies are planning in their new green buildings.
- More accurately predict how building green and utility management will impact your properties' future.



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Manny Gonzalez, AIA, LEED AP

Manny Gonzalez is the senior partner in KTGy's Santa Monica office. He is responsible for the design, land planning, and production of residential and mixed-use developments throughout the U.S., including active adult and affordable multifamily communities. In his more than 25 years of practice in residential development, Mr. Gonzalez has won numerous awards for his outstanding multifamily designs and received the LEED for Homes Multifamily Project of the Year for Primera Terra, a LEED Platinum certified condominium community in Playa Vista, Calif. He sits on the National Multi Housing Council Board, the NAHB Multifamily Leadership Board, PCBC Board and is the Multifamily Trends Forum Co-Chair. *Green Home Builder* recently awarded him 2012 "Architect of the Year" for his innovative NetZero ABC Green Home design and his outstanding contributions to the homebuilding industry.



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Green Conference

APRIL 15-17, 2013 | BALTIMORE, MD

Baltimore Marriott Waterfront Hotel



GREEN HOME BUILDER MAGAZINE RECOGNIZES

KTGY GROUP AS

“2012 GREEN ARCHITECT OF THE YEAR”



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Primera Terra – KB Home Playa Vista, California



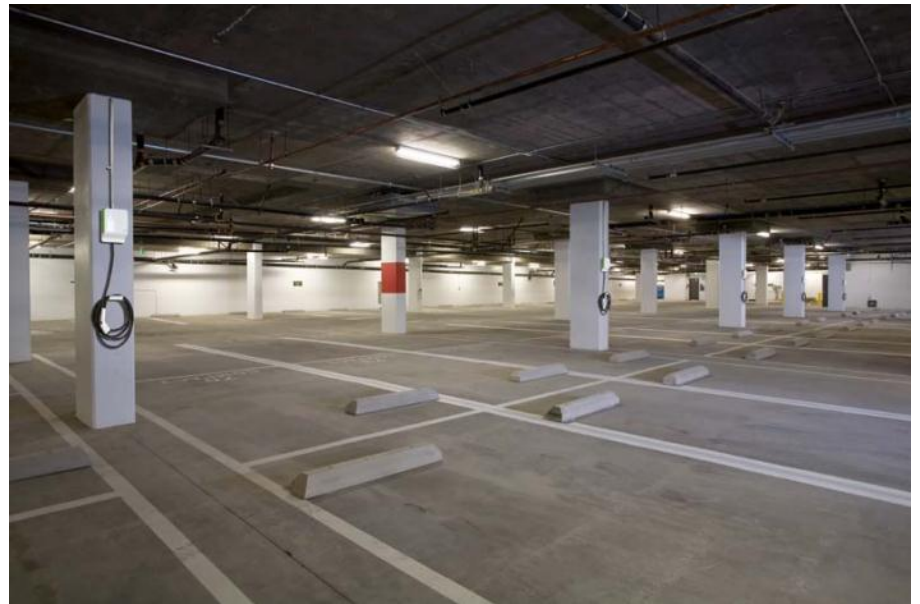
LEED For Homes Multifamily Project of the Year 2011



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“Setting the Standard in Multiple Areas of Sustainability”

Primera Terra Homes are 40 percent more energy efficient than the new home standards set by the State of California Title 24.



Innovation and Design

- Cool roof
- Living wall
- Bike storage
- Electric car plug-in

Location and Linkages

- Adjacent to community parks, walking trails and dog parks
- Nearby local community center
- Accessible transit and airport
- Highly walkable community

Sustainable Sites

- Urban infill location
- Built on land with existing drains to capture runoff

Water Efficiency

- WaterSense labeled toilets and faucets
- Ladybug water savers on all showerheads
- Use of reclaimed water in landscaped community
- Drip irrigation
- Timer-controlled watering systems

Energy and Atmosphere

- ENERGY STAR® appliances and lighting
- Tankless water heaters
- Tight construction and efficient building envelope

Materials and Resources

- Reduced waste from using panelized, modular and pre-fab construction
- Environmentally conscious products
- Reclaimed wood
- 95 percent of the construction waste diverted from landfills and recycled

Indoor Environmental Quality

- Engineered to maximize fresh indoor air
- Effective ventilation systems keep out toxins and pollutants
- High-efficiency exhaust fans

Awareness and Education

- TED 5000-standard electricity monitoring system
- One-on-one walk-through and demonstrations with KB Home team members
- Increased awareness through website and public education



Features:

- 3-story building
- 52 single-level units, 3 floor plans
- 2 parking spots per unit
- bicycle storage
- landscaped courtyard, water fountain, fireplace and BBQs
- community gardens
- living wall
- private patio or balcony



Playa 775 – KB Home

Playa Vista, California



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Solaris at Daybreak – Garbett Homes

South Jordan, Utah



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Terra Sol – Garbett Homes

South Salt Lake City, Utah



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TerraSol

Garbett Homes
 South Salt Lake City, UT

Eco-Living in South Salt Lake



Geothermal

Geothermal Heat Transfer uses the constant temperature of the Earth's crust at 200 to 300 feet to remove or add heat to the home as needed.



Solar Power

Photovoltaic Solar arrays on the roof to convert sunlight into electricity.

Also, the Builder uses the thermal energy to convert sunlight into heat which is then transferred to the hot water supply in the home to reduce the need for gas heating.



Tight Building Envelope

Controlling Air Flow, Thermal Flow and Moisture Flow using advanced framing techniques, sophisticated insulation, air sealing, tight ducts and air barriers to keep your utility bills as low as possible. A leaky home is an expensive and wasteful home.



Renewable Energy Sources

Photovoltaic (PV) Solar / Solar-Thermal Hot Water and Geothermal. Using advanced renewables to heat and cool your home, heat your water and generate electricity means you save up to 70% on your monthly utility bills, and it's great for the planet!



Water Conservation

Using less water for everyday uses: Low-Flow Faucets and optional Dual Flush Toilets save up to 60% of this precious resource and help to keep your costs low.



Energy Efficient Equipment

CFL (Compact Fluorescent) light bulbs use 70% less power, emit less heat and last 15 times longer than incandescents (traditional light bulbs). Energy Star® appliances are 20% more efficient and use 20% less energy than traditional appliances.



Materials & Waste Management

Engineered framing members, pre-cut floor joists and pre-built bio-engineered trusses use less resources and are stronger than traditional materials and are SFI (Sustainable Forestry Initiative) certified. All construction wood waste is 100% recycled at local facilities.



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WE RECYCLE

THE GARBETT HOMES ENVIRONMENTAL PLEDGE



All construction wood waste is 100% recycled at local facilities using a local workforce.

This is the Garbett Homes pledge to not only build energy efficient, high-performance homes, but also to build environmentally responsible homes.

BLOWN-IN FIBER INSULATION

R-24 RATED SUPERIOR THERMAL ENVELOPE



We use blown-in fiberglass insulation in the exterior walls to achieve an R-24 thermal rating (versus standard R-19). This means reduced utility bills due to better insulation.

Blown-in fiberglass is resilient, non-flammable, non-setting, eco-friendly (35% recycled glass & sand), non-absorbent, pest resistant and time-tested.

INDEPENDENTLY TESTED

YOU KNOW WHAT YOU'RE GETTING



All Garbett Homes are 3rd party independently tested by certified Energy Raters that audit and rate the energy performance and the building envelope. Items rated include insulation, HVAC (Heating, Ventilating, and Air Conditioning) and air quality.

Our high-performance homes consistently receive HERS (Home Energy Rating System) scores that prove our homes are 60% to 80% more energy efficient than other new homes built today. This means you are guaranteed to save money on your monthly utility bills.

95% EFFICIENT FURNACE

USING LESS & SAVING MONEY



A 95% efficient furnace means that 95% of the energy in the fuel becomes heat for the home and the other 5% escapes up the chimney and elsewhere.

This is a high-efficiency heating system which includes sealed combustion technology. This means you will spend less money on your monthly natural gas bill.

R-24 EXTERIOR WALLS

INSULATION EFFICIENCY RATING



The R-value is a measure of thermal resistance. The higher the R-value, the greater resistance to thermal flow and the better insulation you have. R-24 exterior walls (R-19 Standard Building Code) gives the home superior insulation and low energy costs, significantly reducing your utility bills.

With high-performance insulation your building envelope is tight and your home is efficient.

DRYWALL CLIPS

LESS STUDS, MORE INSULATION



Drywall Clips/Fasteners eliminates the need for wood/stud blocking where drywall is attached to studs. Garbett Homes is able to eliminate over 100 studs per home and therefore increase insulation by over 60 cubic feet.

Increased insulation makes for a tighter Building Envelope and therefore saves you money on your utility bills as you will use less energy to heat and cool your home.

ADVANCED WALL FRAMING

BUILD EFFICIENTLY, USE LESS MATERIAL & SAVE ENERGY



Advanced framing refers to a variety of framing techniques designed to reduce the amount of lumber used and waste generated in the construction of a wood-framed house.

Your Garbett Home uses these Advanced Framing Techniques including spacing wall studs up to 24 inches on-center and using drywall clips for drywall backing instead of studs.

BUILDING SCIENCE

HOW TO BUILD A BETTER HOME



The practical purpose of Building Science is to provide predictive capability to optimize building performance and understand or prevent building failures.

Your Garbett Home uses advanced Building Science to build a home that is stronger, healthier and more energy efficient than standard building codes require.

2"x 6" EXTERIOR WALLS

ENGINEERED FOR SUPER-INSULATION



Garbett Homes uses 2"x6" studs in the exterior walls (2"x4" walls are traditional) to increase insulation and maintain a tight building envelope. This keeps the utility costs low and the home uses less energy for heating & cooling.

PROGRAMMABLE THERMOSTATS

WHY YOU WANT ONE?



Heating and cooling losses from a building become greater as the difference in temperature increases. A programmable thermostat allows reduction of these losses by allowing the temperature difference to be reduced at times when the reduced amount of heating or cooling would not be objectionable, thus saving money on utility bills.

ECO-SEALING SYSTEM

WATER-BASED ELASTOMERIC SEALANT



EcoSeal™ dries to a flexible but tough film that forms an effective, continuous air barrier in the penetrations and joints of your building envelope, including exterior walls, attics and floors. This keeps the utility costs low and the home uses less energy for heating and cooling.

ECOSEAL

24" ON CENTER FRAMING

ADVANCED FRAMING TECHNIQUES



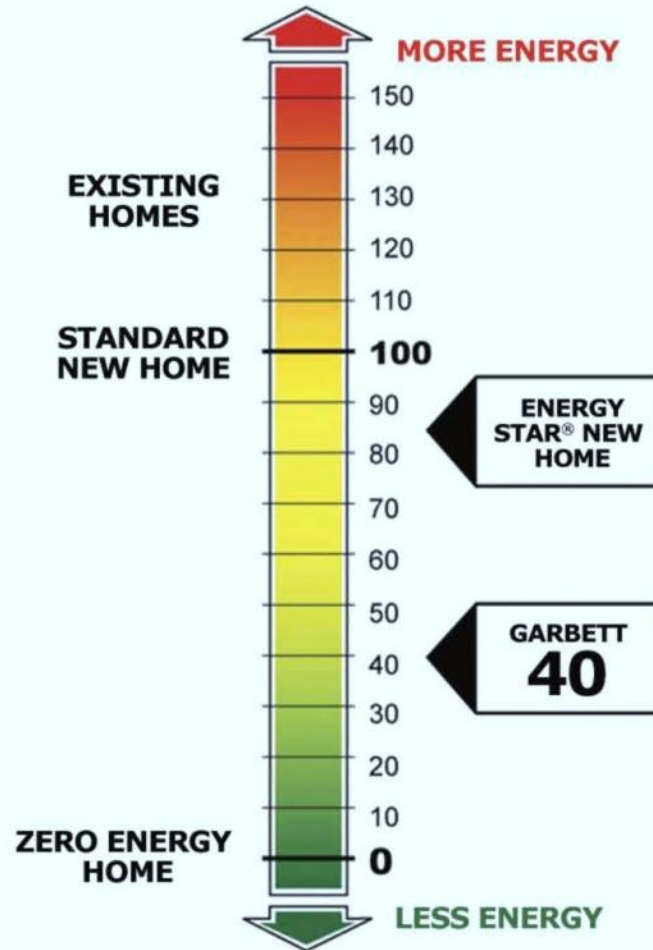
The Advanced Wood-Framing Technique of setting wall studs 24 inches on center (rather than the standard 16 inches apart) uses 20% less lumber, and allows for increased insulation (there is more room in the walls for insulation and less cold spots). Increased insulation means lower utility bills.

Structural Engineering is used to ensure the Advanced Framing Techniques maintain the structural integrity of the home.



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HERS® Index



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Puerto del Sol – ACC University of California Irvine



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Camino del Sol – ACC University of California Irvine



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Camino del Sol Lodge – ACC

University of California Irvine



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NATIONAL APARTMENT ASSOCIATION
AMERICA'S LEADING ADVOCATE FOR QUALITY RENTAL HOUSING
WWW.NAAHQ.ORG

Dana Strand – ROEM Corp

Wilmington, California



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Heritage Oaks – CVCAH

Oakdale, California



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Guy's Garage

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The Crossing – Sares-Regis Anaheim, California



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Park Viridian – BRE Anaheim, California



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The Arbors – Somerset Const Baltimore, Maryland



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The “Duh” Award Winner



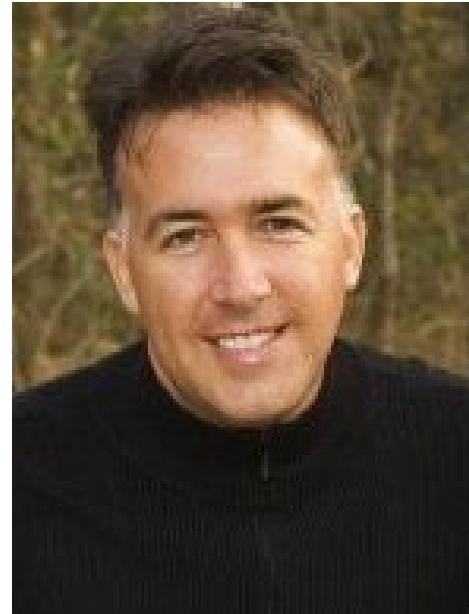
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William J. Greene III, LEED® AP BD+C

William “Bill” Greene is a licensed Architect in the State of Texas with over 15 years of multi-family design and construction experience and is currently the Design Manager for Wood Partners Central Region.

Wood Partners is leading the industry in green development. In 2009, the company committed that all of its new multi-family developments would meet federal ENERGY STAR® standards or the energy efficiency standards of the Leadership in Energy and Environmental Design (LEED) program from the U.S. Green Building Council whenever possible. Many of their communities also incorporate construction waste recycling, transit orientation and other techniques to reduce their environmental impact.

Wood Partners focuses on making their buildings better and listens to their residents that have concerns about environmental issues. Their experienced and creative construction team developed a detailed strategy to achieve the standards of ENERGY STAR or LEED that they believe is the most comprehensive and effective in the industry. Wood Partners is comfortable with green building, and confident that they can deliver the lowest cost, highest quality green communities of any high-volume builder in the country.



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About Wood Partners

- National real estate company that acquires, develops, constructs and property manages high density and mixed-use communities.
- Development of more than 36,000 homes with a combined value of almost \$5 billion nationwide.
- 16 regional offices in major markets throughout the U.S.
- To learn more about Wood Partners, please visit our Web site at www.woodpartners.com.



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Wood Partners Energy Policy ENERGY STAR for New Homes

- As of March 2009, Wood Partners has executed an ENERGY STAR Program Policy as their “Energy Policy Standards.”
- Wood Partners employs this initiative as a minimum standard for all designs and construction projects.



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Wood Partners Energy Policy ENERGY STAR for New Homes

- We have made a firm commitment to providing a better value to our residents by saving as much as 15% on their energy bills, estimated by the U.S. EPA.
- As energy costs rise, the savings increase, sustaining and growing our developments' long-term value for our investors.
- We have taken the lead in reducing the impact of our developments on the environment.



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- Integrate sustainability into our overall business strategy to optimize the value of investments across the entire life cycle of our properties.
- Acquisition, development programs, site identification and selection through underwriting due diligence including new projects and redevelopment.
- Our approach will assist our consultants in both strategy and tactics through all phases of executing their projects:

entitlement
pre–construction
turnover
management

design
construction
retrofit/reuse



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- EPA-projected energy savings of 15% or more
- Marketing materials support from ENERGY STAR
- Differentiation, goodwill in the marketplace
- Relevance, given consumers' heightened awareness of energy and environmental issues and sensitivity to energy costs
- Potential neighborhood and municipal support during development
- Recognition from institutional investors of higher quality product



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Wood Partners Resident Green Survey

July 2007, WP Resident Survey:

- Approx. 1,000 respondents of 6,600 occupied units.
- Over 60% of our residents agree or strongly agree with the following environmental issue questions.
- Nearly 90% of our residents would consider paying more for environmentally designed units.



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Wood Partners Resident Green Survey

Environmental issues are a concern for me.

1. strongly disagree	3.79%
2. disagree	2.17%
3. neutral	14.23%
4. agree	46.61%
5. strongly agree	33.20%



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Wood Partners Resident Green Survey

My concern for environmental issues affects my purchase decisions.

1. strongly disagree	3.93%
2. disagree	9.21%
3. neutral	26.15%
4. agree	40.65%
5. strongly agree	20.05%



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Wood Partners Resident Green Survey

I believe that my actions do not have an impact on the environment.

1. strongly disagree	39.84%
2. disagree	35.77%
3. neutral	9.89%
4. agree	9.35%
5. strongly agree	5.15%



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Wood Partners Resident Green Survey

I recycle whenever possible.

1. strongly disagree	3.52%
2. disagree	11.92%
3. neutral	19.65%
4. agree	43.63%
5. strongly agree	21.27%



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Wood Partners Resident Green Survey

I am aware of the concept of a "carbon footprint."

1. strongly disagree	12.60%
2. disagree	21.95%
3. neutral	20.05%
4. agree	31.30%
5. strongly agree	14.09%



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Wood Partners Resident Green Survey

I am familiar with the benefits that the ENERGY STAR logo indicates.

1. strongly disagree	9.62%
2. disagree	14.91%
3. neutral	13.28%
4. agree	37.26%
5. strongly agree	24.93%



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Wood Partners Strategy and Timeline to Achieve ENERGY STAR

Conceptual/Schematic Estimate Phase

- Wood Partners uses the Builder Option Package (Prescriptive Path) to provide a preliminary estimated cost for ENERGY STAR qualification.
- Wood Partners contacts HERS Rater(s) at this time to solicit bids.



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Design Development Phase

- The design consultants are provided with the Builder Option Package (Prescriptive Path estimated cost) and incorporates the required measures into the early building design & specs.
- Wood Partners selects the HERS Rater and determines which options to be included in the scope of the work. The HERS Rater is provided with the Builders Option Package (Prescriptive Path estimated cost) from the SD Phase along with the early building designs & specs prepared by the design consultant.
- Energy Modeling with REM/Rate is conducted at this time by the HERS Rater prior to final Construction Documents.



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Contract Document Phase (25% to 50%)

- The HERS Rater completes the Energy Modeling with REM/Rate for the project and provides feedback on which recommended options with the least cost to achieve qualification.
- The design consultants and applicable subcontractors are provided with the HERS Rater's recommendations.
- Design refinement is anticipated during this period prior to the completion of the Contract Documents.



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Substantial Completion

- The HERS Rater obtains sampling of units with a blower door and duct blaster to ensure building envelope and ducts meet the air tightness requirements.
- The HERS Rater's instructions are carefully followed throughout the design and construction process to avoid any design or construction remediation.
- The HERS Rater's visual inspection for air barrier alignment, insulation installation, thermal bridging, duct installation and ventilation commissioning.



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Wood Partners Projects

Alta Aspen Grove – Littleton, Colorado

- ENERGY STAR for New Homes (v2)
- LEED for Homes – Silver



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Wood Partners Projects

Alta Henderson – Dallas, Texas

- ENERGY STAR for New Homes (v2.5)



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David Woodward

David Woodward is recognized across the nation for his ability to drive results in the multi-family arena. His forward thinking management and leadership style was a catalyst in Dave being named the MultiFamily Executive of the Year in 2007. He serves on the Board of Directors of the National Multi-Housing Council (NMHC), is a member of the Young Presidents Organization (YPO), and is a regular speaker at apartment industry events across the nation.

Prior to founding CompassRock, Dave was the CEO of The Laramar Group where, for 12 years, he was instrumental in driving record growth with the successful management of more than 40,000 units. Prior to his CEO role at Laramar, Dave held the role of Senior Vice President, Operations at Archstone Communities with a portfolio of over 80,000 units.



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David Woodward

- 25 Years of Experience in the Real Estate Industry
- 7 Years Helping to Build Archstone's Operating Platform (1993-2000)
- 12 Years as CEO of Laramar Building the Company into a National Player with Over 40,000 Units Under Management (2000-2011)
- Founded CompassRock in 2011
- CompassRock Manages 30,000 Apartment Units in 18 Major Markets
- Growing Portfolio of Commercial Properties Under Management
- Manage for Institutional Owners, Lenders and Special Servicers as well as Regional and Local Investment Groups
- Manage the Largest Multifamily Property in the U.S. – 11,200 Unit Peter Cooper Village / Stuyvesant Town in New York City



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A Little History

- Joined Archstone in 1993 as an Asset Manager
- Headed up Archstone's Green Program in Late 1993
- Being a Good Asset Manager Accidentally Put Me at Forefront of Green Initiatives in Our Industry
- Completely Bottom Line Driven – No Marketing, No PR, No Employee Involvement, No Morale Boost
- The Math that Worked 20 Years Ago Still Works Today
- If Everyone ONLY Did What We Did 20 Years Ago the Economic and Environmental Benefit Would be HUGE!!



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The CompassRock Green Team

- Comprised of a Cross-Section of Associates from Operations, Construction, Maintenance, Marketing and Other Departments with a Strong Interest in Sustainability
- Monthly Calls to Check Progress on Existing Initiatives and Brainstorm New Ideas
- The List of Ideas Around Sustainability Just Keeps Growing
- Many Initiatives Have a Compelling ROI – Others are No-Cost or Low-Cost
- Many Benefits: Financial, Company Culture, Recruiting and Retention, Business Development, and, of Course, the Environment
- Many Institutional Owners/Clients Have Their Own Sustainability Programs and They are Looking to Their Service Providers to Amplify their Efforts



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Thank you!

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