







Benefits of Building Green

For our residents...

- Safer, healthier living environments
- Savings on their utility bills

For our communities...

- Conserves valuable natural resources
- Reduces use of fossil fuels that contribute to global warming
- Creates an attractive, quality product that provides affordable housing for the long-term

For our organization...

- Reduces operational expenses and capital expenditures
- Improves marketability of the property
- Attracts funders and investors
- Contributes to the success of CHP's mission to create affordable, sustainable, housing opportunities and services for the people and communities we serve.



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Yorktown Square II

2006 LIHTC Project
60 family units

Location: Yorktown, VA
York County



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Yorktown Square II: Green Features

- The first multifamily preservation project in Virginia to receive Earthcraft Certification
- Energy efficient mechanical systems, appliances and lighting
- Extensive construction waste recycling
- Milling of trees into rough-hewn lumber
- Durable finishes



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Yorktown Square II: Financing

Tax Credit Equity: \$2,425,000
VHDA-VHF: \$548,000
RD: \$595,160
HOME: \$375,000
FHLBA-AHP: \$125,000
Deferred Developer Fee: \$283,346
NeighborWorks America: \$100,000
Total Sources: \$4,451,506



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Rutledge Hills

2009 LIHTC Project
48 family units

Location: Amherst, VA
Amherst County



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Rutledge Hills: Green Features

- **Site:** land re-graded to slope away from the buildings; improvement of existing gutters to discharge water 5 feet away from foundation; landscaping with native and drought tolerant plants.
- **Energy Efficient Building Envelope and Systems:** Reduced air infiltration by 20% through performance of air sealing on chases as well as attic, HVAC, plumbing and electrical penetrations; cellulose insulation to R-38 in the attic; sealed and insulated all attic access openings.
- **Resource Efficient Building Materials:** 30 year warranty shingles; Energy Star low-e double paned windows; 14 SEER HVAC units with HSPF of 9.0. Cooling and heating equipment sized within 6,000 btu/h and 25,000 btu/h of Manual J. Heat traps and 2' feet of pipe insulation at water heater
- **Energy Efficient Lighting and Appliances:** Automatic outdoor lights ; Energy Star rated refrigerator , high efficiency (.92 electric) water heaters. Solar hot water heater in community building.
- **Indoor Air Quality:** kitchen range s vented to the exterior; low VOC paints, sealers and adhesives; installation of *Carpet and Rug Institute* certified low VOC carpet;
- **Water Conservation:** 1.6 gal/flush low flow toilets and 2.5 gal/min low flow shower heads will be installed; Energy Star rated dishwashers will be installed.
- **Waste Management:** 50% of construction waste recycled.



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Rutledge Hills: Financing

Tax Credit Equity: \$2,026,613
 VHDA-VHF: \$540,000
 RD: \$1,404,769
 HOME: \$500,000
 FHLBA-AHP: \$245,000
 Deferred Developer Fee: \$114,625
 NeighborWorks America: \$384,000
Total Sources: \$5,215,007



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Rutledge Hills: Cost to Green

Green/Sustainable Feature	Estimated Added Cost
Air Sealing to reduce air infiltration by 20%	\$6,125
Low-e double paned windows to upgrade and replace single paned windows	9,250
Increase insulation from R-30 to R-38	6,500
Upgrade from 12- to 14-SEER HVAC units with HSPF of 9.0	48,000
Seal and insulate all attic access openings	2,800
Use 30-year versus 25 year roofing with installed roof drip edge	500
Install kitchen fans vented to outside	4,800
Low-flow 2.5 gal/min shower head upgrades	1,155
Low-flow 1.6 gal/flush toilets	16,685
High efficiency water heaters with heat traps	4,100
Outdoor lighting motion sensors to reduce unnecessary light trespass	6,000
Upgrade to Energy Star dishwashers and refrigerators	2,400
Down Spout Extensions to move discharge 5' from foundation	\$ 1,000
Lead paint, asbestos and radon tested	740
Re-grade site to slope away from building (not usually done in a typical rehab)	11,400
Landscape Revisions to include native and drought tolerant plantings	\$7,000
Total Cost for Green Improvements	\$128,455

Thoughtful, green, sustainable housing preservation is not only feasible, but is an ethical imperative...



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