

SHOWCASE PROJECT: TIMBERCROFT APARTMENTS

SOLUTION OVERVIEW

Timbercroft Apartments is an affordable and accessible townhouse and apartment development located in Owings Mills, Maryland. Originally constructed in 1972, the development faced deferred maintenance issues as a result of aging systems, which included the building envelope, HVAC, appliance, and water heating systems. When WISHROCK purchased the property in 2014, it faced several challenges: it was committed to keeping the community—284 units spread over more than 20 buildings—affordable. It wanted to make Timbercroft less burdensome on residents and less taxing on the environment by focusing on energy efficiency, water conservation, and indoor air quality. And it was determined to make Timbercroft a smoke-free housing community, a commitment WISHROCK is making portfolio-wide.

SECTOR TYPE

Multifamily

PROJECT SIZE

245,000 Square Feet

FINANCIAL OVERVIEW

\$13,000,000

SOLUTIONS

To achieve its goals, WISHROCK relied on the [Enterprise Green Communities Criteria](#) and certification program as a roadmap for the development's rehabilitation. To earn this national certification (designed specifically for the affordable housing sector), an affordable housing developer must meet multiple interrelated criteria including energy and water conservation, indoor air quality, and green building material measures.

Through a partnership with the Maryland Department of Housing and Community Development, WISHROCK was able to preserve Timbercroft's affordability and rehabilitate the property. WISHROCK worked with design and development teams at Whiting-Turner, The Architectural Team, and New Ecology to complete the development's 14-month renovation. Timbercroft received support from TD Bank, which invested \$12.8 million in Low-Income Housing Tax Credit equity in partnership with Enterprise Community Investment, as well as the U.S. Department of Housing and Urban Development, Citibank, Fannie Mae, the State of Maryland, Baltimore Gas & Electric, Baltimore County, and other financial and regulatory partners.

Under Maryland's Multifamily Energy Efficiency Housing Affordability (MEEHA)-EmPOWER energy

efficiency incentive program, WISHROCK leveraged \$518,000 in financing for cost-effective energy improvements, including high-efficiency HVAC equipment, water heaters, lighting, and insulation.

To earn the Enterprise Green Communities Certification, WISHROCK conducted what the Enterprise program calls a Moderate Rehab of the property across all units and common areas. All projects must achieve compliance with the Criteria's mandatory measures. Additionally, Moderate Rehab projects must also achieve 30 optional points. WISHROCK earned an additional 47 points across several Criteria categories. Key elements of the retrofit that reduced energy and water consumption included:

- Building envelope air sealing with spray foam
- New vinyl siding and new exterior pre-finished vinyl shutters
- R-38 attic insulation
- ENERGY STAR® roofing shingles
- Tankless Domestic Hot Water heaters
- HVAC
 - >15.5 and 16.0 SEER AC systems
 - .92 AFUE furnace
 - In 2- and 3-bedroom units, existing bathroom exhaust ductwork was extended through roofs, and ENERGY STAR bath exhaust fans were installed. New ductwork was also installed from kitchen exhaust hood to side wall vents.
- Water conserving low-flow faucets/showerheads
 - Bathroom faucets – 1.0 gpm
 - Kitchen faucets – 2.0 gpm
 - Replaced toilets met 1.28 gpf or less.
- ENERGY STAR refrigerators and dishwashers
- ENERGY STAR low-E Argon windows: vinyl single hung window systems, 3/4-inch thick insulated glass
- Low-E Argon glass patio/balcony door systems, 3/4- inch thick insulated glass spacers
- Interior Lighting: ENERGY STAR LED fixtures in all units, common area lighting with occupancy sensors or automatic bi-level lighting controls.
- Exterior Lighting: ENERGY STAR LEDs with daylight sensors

OTHER BENEFITS

WISHROCK followed Enterprise's Healthy Living Criteria to guide indoor air quality and other health and safety measures during the rehabilitation. These measures included:

- Mold prevention:
 - In bathrooms, kitchens, and laundry rooms, installed materials that have durable cleanable surfaces
 - Water heaters have corrosion-resistant catch pans sloped to drains piped to the drainage system
 - Tub and shower enclosures have non-paper faced backing materials such as cement board and fiber
- Integrated Pest Management: All wall, floor, and joint penetrations sealed with low-VOC

caulking or other non-toxic sealing to prevent pest entry. Rodent and corrosion-proof screens provided for openings greater than ¼ inch.

- Low-allergen vinyl flooring
- Low-VOC paints, primers, adhesives, and sealants
- Smoke-free building: A no-smoking policy was implemented and enforced in all common and individual living areas and within a 25-foot perimeter around the exterior of all residential buildings. Lease language now prohibits smoking in these locations.

WISHROCK observed additional benefits resulting from Timbercroft's retrofit, including:

- Reduced resident turnover
- Reductions in repetitive maintenance costs e.g., lighting
- Improved stability in long-term utility costs due to reduced exposure to volumetric influence
- Opportunity to expand community understanding of ability to influence health outcomes in homes
- Contractor implemented a construction waste recycling plan in which materials were recycled instead of being sent to a landfill

(All costs are estimates based on \$ 0.15/kWh and \$ 0.95/Therm)

Annual Energy Use

(Source EUI)

Baseline(2014)



Expected(2017)



Energy Savings

20%

Annual Energy Cost

Baseline(2014)



Expected(2017)



Cost Savings

\$237,000



Timbercroft Apartments Ribbon Cutting