

Enterprise Green Communities, the standard for sustainable futures, is the only national green building program designed explicitly for affordable housing construction. Green building practices lead to healthy, efficient and environmentally responsible affordable homes, and promote equitable development by giving residents a voice in creating their communities.

Project Overview

River View Tower in Chattanooga, Tennessee is a high-rise affordable senior apartment building that recently completed a modernization, and received multi-family tax exempt bonds allocated by the state housing finance agency, THDA. The project team certified the property to the Enterprise Green Communities 2015 Criteria, earning a total of 79 points.

Energy and Water Savings

For River View Tower, all utilities are paid by the owner, and energy and water reductions could provide a significant sources of cost savings. The key for the Wishrock Group was to find the right package of upgrades that would maximize savings and return on investment. For Wishrock, their participation in the in the U.S. Department of Energy's Better Buildings Challenge, and commitment to portfolio-wide energy and water benchmarking, made this task much easier.

The project team pursued optional criterion 1.1c Designing for Project Performance, where the project team compared energy and water usage of River View Tower with others in Wishrock's portfolio. The project team discovered that the building's energy and water costs were not exorbitant, but closer examination showed that the electricity usage and costs were far higher than other portfolio properties, and the energy audit uncovered that almost one third of the monthly electricity bill was for demand charges¹.

This comprehensive assessment of River View Tower allowed the project team to create a proposed energy and water upgrade package that would save approximately \$300,000 in energy costs, electricity demand charges and water costs on an annual basis. The projected annual water savings, 2.3 million gallons, could fill 3.5 Olympic-sized swimming pools.

Upgrades included new HVAC systems, efficient lighting, new water heating equipment and low-flow WaterSense plumbing fixtures. Residents benefited as well; new in-unit heating and cooling equipment allows for residents to properly control temperatures within their units and the new ventilation system will provide improved indoor air quality.

¹ Commercial electricity customers are billed for energy in two ways: consumption charges and demand charges. Consumption charges are for the volume of electricity consumed over a billing period. Demand charges are for the highest level of electricity used during that same billing period. By basing a portion of a customer's electricity bill on the highest level of demand, the utility is trying to distribute more of the power system maintenance costs to those who use it most.



View of River View Tower front entrance after completion of moderate rehabilitation.

Project Information

Location: Chattanooga, Tennessee

Project Type: Moderate Rehabilitation

Construction Cost: \$15,200,000

Property Information: 161 apartments; 50 studio and 111 one-bedroom apartments; 95,000 SF; built in 1970. The building is a 18-story high-rise tower with two elevators.

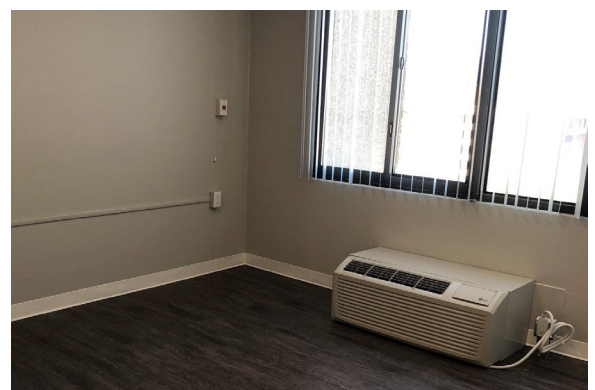
Project Team

Property Developer & Owner: Wishrock Group

Architect: MBI Companies, Inc.

Green Building Consultant: SK Collaborative

Property Manager: Tesco Property Management



Inefficient centralized HVAC systems were replaced with efficient units that have controls in each apartment.

Improving Resident Well-Being

The River View Tower project team determined that the greatest design impact on resident health would be to focus on reducing asthma and respiratory health issues, and addressed these health factors by improving indoor air quality. In addition to upgrading the mechanical ventilation system, the project team pursued optional criteria that required asthmagen-free insulation and flooring products and included language within the project specifications. These practices were adopted above and beyond mandatory Enterprise Green Communities criteria like low- to no-VOC paints and sealants. In addition, the property established a no-smoking policy within the facility, ensuring residents are not exposed to harmful second-hand smoke.

“We think Enterprise Green Communities is flexible because it’s not solely about energy savings. There are criteria that focus on the health and well-being of residents, which is important to us as well.”

Penn Lindsay, Wishrock Group

River View Tower serves an aging population and it was vital for the project team to understand how design and services could prevent worsening health issues, increased isolation and premature moves into assisted living or nursing facilities. Housing for aging adults must focus on creating a more independent, active lifestyle. To support the residents ability to remain mobile and age in place, the project team rehabilitated 10% of the units to be fully accessible² and renovated the stairway to allow for everyday travel between floors.

The property is centrally located with a bus stop across the street, close to a small park and downtown Chattanooga a fifteen minute walk way. These amenities provide connection to the community. The project team also committed to providing residents with access to a community-supported agriculture (CSA) subscription. The location, design features and services will support aging adults in living a more independent, active lifestyle.



Aerial view of 18-story River View Tower prior to moderate rehabilitation.

Implemented Optional Criteria

- 1.1c Designing for Project Performance
- 2.8 Access to Public Transportation
- 2.12 Access to Fresh, Local Foods
- 2.14 Local Economic Development & Community Wealth Creation
- 4.6 Access to Potable Water during Emergencies
- 6.10 Asthmagen-free Materials
- 6.11 Reduced Heat-Island Effect: Roofing
- 7.1 Ventilation
- 7.4 Elimination of Combustion within the Conditioned Space
- 7.11b Beyond ADA: Universal Design
- 7.16 Smoke-Free Building



Apartment kitchens were updated with more energy-efficient appliances and light fixtures.

² Units were designed in accordance with ICC /ANSI A117.1, Type A, Fully Accessible guidelines.