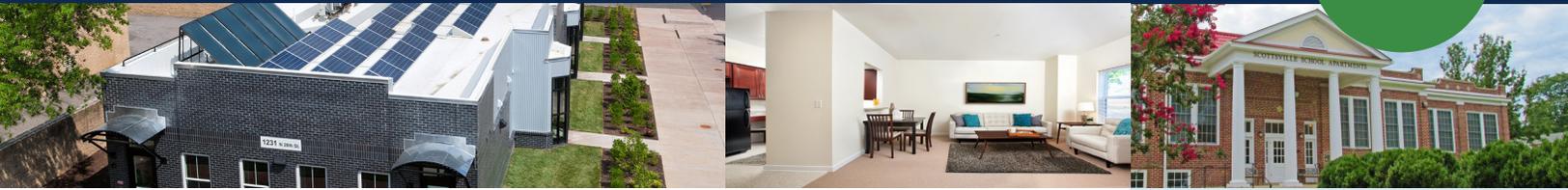


EarthCraft Multifamily

OVERVIEW



EarthCraft Multifamily (ECMF), administered by Viridiant in Virginia, Maryland, and Washington D.C., is the country's first multifamily-specific green building program. The program provides certifications for both low-rise and mid-rise projects, with pathways for new construction, renovation, historic preservation, and adaptive reuse.

EarthCraft covers a wide range of sustainability issues, including environmental impact, energy performance, indoor air quality, building durability, and affordability. The ECMF program addresses these areas at the unit-level and for the community as a whole. The result is multifamily communities that are healthy and operationally cost effective, as well as energy, water, and resource efficient.

ECMF certification is accomplished through a step-by-step process molded to each developer and their project team's needs. Viridiant works with the project team throughout the construction process to ensure the project is meeting energy performance goals and EarthCraft standards.

EarthCraft programs utilize program guidelines, points-based worksheets, the Home Energy Rating System (HERS), site visits, and diagnostic testing to verify that each project complies with program standards and current green building best practices. Project teams work with an EarthCraft Multifamily Project Manager and Technical Advisor (TA), who provide support in meeting program criteria from the design phase through all phases of construction.

VIRIDIANT - BY THE NUMBERS

- 270+ EarthCraft Multifamily projects totaling 18,000+ units
- Average New Construction HERS: 71
- Average Renovation Percentage Improvement: 48%

ECMF CERTIFICATION PROCESS

Step 1: Pre-Review

- Pre-Review Submittal
- Worst-case energy modeling feedback provided

Step 2: Pre-Construction

- Project Registration
- ECMF Project Manager assigned & contract issued
- Design Review meeting, review energy modeling revisions

Step 3: Construction

- Construction Kick-Off Meeting
- Regular site visits to verify points & requirements
- Preliminary diagnostic testing and visual inspections

Step 4: Project Closeout

- Final diagnostic testing & documentation submittal
- ECMF Project Manager confirms energy modeling performance

Step 5: Certification

- Certification materials provided to project team after verifying program compliance and attainment of energy goals

CERTIFICATION COSTS

- \$500 pre-review fee*
- Approximately \$300 - 700 per unit, based on project complexity and certification level

*Fees may be higher for renovation

801 Main Senior Apartments

Landbridge Development

Newport News, VA

CASE
STUDY



BACKGROUND

801 Main Senior Apartments is a new construction development that achieved EarthCraft Multifamily (ECMF) Platinum certification in 2017. The community, located conveniently in the heart of Newport News, is designed for seniors. Various energy-efficient systems were utilized to increase building efficiency and lower energy costs for all 44 one and two bedrooms apartments. The development also features 100% Universal Design units. Additional amenities include a laundry room, computer center, and garden plots. This project was possible with funding from Virginia's 9% competitive Low Income Housing Tax Credit Program. The project team consisted of Landbridge Development, Martin Riley Associates, Agile Construction Company, and Excel Property Management. Their work demonstrates attention to our environment as well as the residents' health, comfort, and financial stability.

SUSTAINABLE BUILDING

The construction of 801 Main Senior Apartments included measures required to obtain ECMF certification of the building. Not only did Landbridge Development prioritize measures that reduce energy consumption, indoor air quality was also given significant attention to improve the health and safety of senior residents. Green building features include:

- ZIP R-3 continuous insulated sheathing, R-10 slab insulation, cellulose R-19 wall cavity insulation and R-49 attic insulation
- Ducts are insulated, sealed, and located in conditioned space
- Energy Recovery Ventilator (ERV) provides fresh air for each unit
- High efficiency water heaters (0.95 EF), air-source heat pump and cooling system (16 SEER, 9 HSPF)
- ENERGY STAR light fixtures, dishwashers, refrigerators, bath fans
- ENERGY STAR windows (0.29 U-value, 0.25 SHGC)
- WaterSense faucets, showerheads, toilets

AFFORDABLE HOUSING IN THE EARTH CRAFT MULTIFAMILY PROGRAM

Since its inception, EarthCraft has dispelled the myth that green costs too much. The EarthCraft program takes a practical approach to constructing environmentally responsible projects, making them accessible to a variety of market sectors, including affordable housing. EarthCraft assures energy and water savings, healthier indoor air quality, and reduced maintenance and utility costs – attributes that are critical to moderate and lower income residents. Through its affordable housing work, EarthCraft ensures that the benefits of green building reach those who need them the most.

Since 2006, EarthCraft has been incorporated into the state Qualified Allocation Plans in both Virginia and Maryland. Through these programs, affordable housing developers are incentivized with additional funding to promote sustainable, affordable developments.

Based on a 2015 study published by Virginia Center for Housing Research at Virginia Tech, apartments certified by Viridian to EarthCraft Multifamily standards, with third-party testing and inspection, on average outperform modeled estimates by 16.6% and new standard construction housing by approximately 30% with respect to energy consumption. On average, residents saved 464 kWh a month or \$54. This means that over the course of a year, residents save an average of \$648 on their electricity bill.



viridian



LANDBRIDGE
DEVELOPMENT