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Branford Housing Authority and Beacon Communities' Shoreline Grove achieves Passive House certification - designed by Newman Architects

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Branford, CT Shoreline Grove, designed by Newman Architects for a partnership between the Branford Housing Authority and Beacon Communities, has achieved Passive House (Phius) Certification, meeting very high-performance building standards for a comfortable indoor environment with very low operational energy consumption. It is the largest Passive House certified project in the state and the second largest in New England.

“Shoreline Grove’s Passive House Certification is an exciting achievement for Newman and Branford, but also for affordable housing in Connecticut as a whole,” said Paul Santos, AIA, principal and director of housing at Newman Architects. “It shows that affordable housing can achieve the highest standards for energy efficiency and desirability.”

The 67-unit affordable housing building on Montowese St. opened to residents in 2023, replacing deteriorating elderly and disabled affordable housing with larger, modern apartments in a new community that better meet residents’ needs with additional amenities, services, and parking onsite.

The Phius standard is a pass-fail standard for building energy performance, with additional requirements for quality assurance inspections, and for low-moisture-risk design. In meeting Phius requirements, the building excels in its energy efficiency with a Home Energy Rating Score (HERS) of 40, significantly below energy code in the state. In its final blower door test, a key piece of the

testing phase for achieving Phius certification, the building came in at 0.054 cfm/sf, which is 10% below the threshold needed, equivalent to 0.476 ACH (air changes per hour). Newman worked with the Phius consultants New Ecology to earn the Passive House certification.

An efficient mechanical system with energy recovery units and photovoltaic panels combined with a continuous air barrier, air tightness at eaves and roof conditions, and triple-glazed vinyl insulated windows meet the requirements of Passive House certification. A blend of flat and sloped roof angles hides the mechanical systems from view.

Shoreline Grove expands access to affordable housing in a warm and welcoming community and creates a long-term sustainable asset for the neighborhood and town. Central ground-floor amenities, programmed with the involvement of a resident council, include a community room with kitchen and computer room, fitness center, a wellness exam room, and a package concierge.

The one-bedroom units are 600-700 s/f, and the larger, two-bedroom units are designed to work for families or roommates. Large windows and open kitchens enhance the generous size and brightness of the units. Built-in casework and VCT wood-look tiles bring warmth and durability to the interiors.

Located on a rocky and wooded site, the building overlooks the central public park in town with a view of the harbor. Four stories nestle into the topography, shorter on the residential side, and with a footprint that minimizes the removal of existing trees. The house-like character references the grand historic Branford hotels of the 1920s and 30s.

The project team included:

- Client: Branford Housing Authority / Beacon Communities;
- Architect: Newman Architects;
- Builder: Enterprise Builders;
- MEP engineer Innovative Engineering Services (IES);
- Structural engineer: Michael Horton Associates; and
- Civil engineer: TPA Design Group.