Green Hybrid Habitats

Green Hybrid Habitats Passive Near Zero Energy and Indoor Air Quality Systems to Address COVID-19
Healthy Home Stretches from the Foundation to the Roof

Indoor air quality was a hot sales button even before "stay at home" became a national battle cry. "We've never needed to convince our buyers that health is important," says CEO Colie Dooley, which is partnering with Energy & Environmental Building Alliance (EEBA) to build a passive, near zero, healthy homes. "We just need to show them how we support it," he says.

Beyond the Standard

Indoor air quality, or IAQ, has long been a cornerstone of the brand, and the builder has followed the standards of the Environmental Protection Agency's Indoor airPLUS program, contributing to the 16,584 homes certified since 2016.

You could call the Green Hybrid Habitats home "Indoor airPLUS Plus," after Green Hybrid Habitats augmented the EPA's baseline. "We wanted to use this model to show ways to integrate IAQ products to maintain a healthy environment," Dooley says.

Key System Elements

Exhaust-only ventilation: Fresh air will be provided by what Dooley calls "a prefab balanced system." An exhaust fan in the laundry room will run continuously at low speed to remove stale air, while a fresh-air supply fan in the basement's mechanical room will provide makeup air into the HVAC return. That fan includes a MERV 8 air filter and sensors that regulate the fan within preset temperature and humidity parameters.

Advanced filtration: Air introduced to the return plenum will be further purified by an electronic air cleaner, then delivered to the home's air handling unit programmed to run continuously at low speed. The electrostatic MERV 13 filter is designed to remove 99% of airborne allergens.

Humidification: Proper indoor humidity is crucial for good health. "Humans are healthiest at a relative humidity of be­tween 35% and 45%," says Aprilaire, a manufacturer of IAQ-related products. For North and South Carolina’s climate, the home will include Aprilaire's whole-house humidifier to maintain indoor relative hu­midity at healthy levels using the forced air distribution system.

Active radon mitigation: Beneath a home’s basement slab is a sealed vapor barrier over a horizontal perforated pipe buried in 4 inches of dean gravel. That pipe will connect to a vertical pipe that extends through the roof, and a continuously running in-line exhaust fan in the attic will actively mitigate any radon gas.

Monitoring and control: Panasonic’s new Cosmos air quality system uses sensors in the bedrooms, kitchen, and living room to communicate wirelessly with a router to ramp up the home's exhaust fans or to turn on the range hood when VOCs, carbon dioxide, or particulates exceed preset levels.

Key elements of Green Hybrid Habitats, LLC home's integrated indoor air quality system will include the Aprilaire 5000 air cleaner, and Panasonic's Cosmos air quality monitor and WhisperGreen Select local exhaust fans.

Lasting Value

Of course, the COVID-19 pandemic has made people even more anxious about health issues, perhaps permanently so. "The message that a GHH home is the safest, healthiest place to be will linger long after the pan­demic has passed," Dooley says, giving healthy homes with managed indoor air quality an edge in every market.