

Sustainable Residential Infill Home Development

Deconstructing rather than demolishing a home for residential infill construction can do wonders for the community and environment

By VIC REMMERS

When considering traditional methods of new construction as it relates to factors like climate change as well as health and resource management, “sustainable” and “environmentally-friendly” are unfortunately not always the first words that come to mind. While this may be true for some forms of new construction, this is a limiting, one-size-fits-all way of thinking. Yes, there will always inevitably be the builders who turn and burn a property without much thought to the long-term well-being of its surroundings, but not all forms of new residential construction are cut from the same cloth.

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Many residential infill homebuilders take the time to identify desirable pieces of land with unsafe and dilapidated houses. After carefully deconstructing the current structure, they replace it with a new, stable home. Infill homebuilding is especially helpful in providing housing options in cities where there is an influx of new residents and demand is high. In our company’s hometown of Portland, Ore., and across the country, urban growth boundaries prevent builders from access to open land, making it essential to look for properties on which a house currently resides.

Throughout the residential infill process, a builder makes a multitude of decisions to ensure a high quality final product. How can the existing structure be removed in a way that limits environmental impact? How can previous materials be sustainably disposed of? What sort of energy efficient appliances and features encourage green living for future homeowners? At each step, eco-friendly infill builders consider how their choices can best benefit the environment on a larger scale.

Deconstruction vs. Demolition: Currently, just under 10 percent of homes in Portland are deconstructed each year, far above the national average of one to two percent. These homes are carefully taken apart, piece-by-piece, with the goal of salvaging the maximum amount of building materials along the way. If deconstructed correctly, an infill homebuilder can save up to 85 percent more of a home’s major components than traditional demolition methods.

Take your average 2,800 square foot home for example—if a builder were to deconstruct that home versus demolish it, this process can save up to 16 tons of materials from the waste stream, release 24 tons less CO₂ into the atmosphere, and alleviate the overall need to create new building materials moving forward. By partnering with local deconstruction service centers and recycling all reusable wood,

cardboard, drywall, and metal, residential infill homebuilders can also help their fellow community members in search of supplies.

Deconstruction used in residential infill homebuilding also works to create a healthier community. Often times, the previous homes contain dangerous chemicals and substances such as lead paint or asbestos. Instead of demolishing their way through these toxins, eco-minded infill builders take the utmost care in identifying, analyzing, and removing materials with homeowner and neighborhood health in mind. While deconstruction can be an uncommon choice due to its expensive nature, its community and environmental benefits outweigh the costs.

Homes Built to Withstand the Test of Time: Once the deconstruction process is complete and a new house has been successfully built, homeowners are able to move into a home they know is safe and secure for the long haul. With the annual number of destructive, “great” earthquakes nearly tripling over the last decade, it’s now more important than ever for homeowners to feel absolutely confident in their home’s ability to withstand a natural disaster. By replacing unstable homes with new, dependable ones, residential infill builders are working to increase resident safety and construct houses that withstand the test of time.

The Importance of Green Building Certifications: A final component of residential infill building that tests the one-size-fits-all way of thinking about new construction is the opportunity to collaborate with non-profit organizations like Portland-based Earth Advantage to receive a sustainable building certification. With certification programs like these, environmentally-conscious infill builders work against rigorous benchmarks to ensure a healthy and sustainable house for the foreseeable future. With this certification, homebuilders push their sustainable limits and challenge themselves to be more efficient with energy, materials, and resources. By keeping these eco-friendly goals in mind, the average sustainable home often leads to 15 percent increase in energy efficiency in comparison to standard homes.

Environmentally-conscious builders agree that there is so much more that can be done to strengthen sustainable practices, and thus challenge the limiting, one-size-fits-all school of thought on new construction. By keeping this in mind, eco-minded residential infill builders can provide healthy and environmentally-friendly homes that will be a pillar in the community for a long time to come.



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