

Upfront and In Need

Affordable Housing Explained

By Dallas Erwin and Kate Peterson

Affordable housing is in the news more than ever before. As rising rents and harrowing rates of homelessness echo across the country, housing advocates are relieved to see the spotlight finally shine on the need for this essential community resource, but their relief is shortlived. All this attention is the result of millions of families searching for a stable place to call home. The National Low Income Housing Coalition (NLIHC) estimates that there's a shortage of 7.2 million homes. Innovative partnerships are slowly creating positive change. To build more and better housing for the people that need it most, resourceful engineers are necessary. Affordable housing building trends offer a glimpse into the sweeping social change affecting neighborhoods and how engineers can make a difference.

Affordable Housing

The phrase “affordable housing” isn't always understood uniformly outside of the industry – essentially it offers subsidized homes for low-income individuals to help free them from rent burden (more than 30% of income going to rent), so they have more resources to spend on other essentials like food, healthcare, and education.

Mercy Housing is an affordable housing nonprofit; with a presence in 41 states, they have over 37-years' experience serving low-income families, veterans, seniors, and people with special needs. Mercy Housing partners with communities to make long-term commitments, resulting in positive, measurable outcomes for residents and neighborhoods.



833 Bryant rendering.

From an engineer's perspective, affordable housing and market-rate developments are similar in many ways. What is different is the funding and, consequently, the planning. All well-executed real estate developments have concise planning, but affordable housing needs the details earlier than what is commonly expected with market-rate properties. Mercy Housing's seasoned real estate developer, Kuhl Brown, offers insight into the affordable housing industry and what that means for the engineering aspect of planning: “We often need engineering design input and insight early, requiring higher concept detail upfront. Affordable housing funding is typically competitive, and pre-development is a huge component of being successful.” The subsidies Kuhl references are the Low-Income Housing Tax Credits (LIHTC). Pronounced colloquially as ‘lie-tech,’ it is not a buzz word, but rather the lifeblood of affordable housing. Created in 1986 under the Reagan Administration, this vital funding source raises private equity for affordable housing through the allocation of federal tax credits going toward the rehabilitation and construction of below-market-rate housing for low-income tenants. LIHTC funding is excruciatingly competitive, while compliance is held to the highest standard and administered by state housing finance agencies. Deadlines are strict; you can typically only apply for LIHTC funding twice a year, but each state is different. Kuhl confirms that “construction *type* has a huge impact because land and sites are scarce and we are competing for the same land and labor costs that market-rate developers can fund through private equity.”

There are several takeaways for the structural engineer. First, the project will be front-loaded more than a typical project, meaning more fee will be needed in the

Professional Master in Structural Design of Tall Buildings

PMTB

Dreaming of getting a professional master's degree but can't leave your job?

Earn a professional master's degree in structural design of tall buildings from an internationally recognized institution through **blended learning**

[online + in-class] approach

Apply now!

For more info
✉ solutions@ait.ac.th
☎ +(662) 524 6388
🌐 solutions.ait.ac.th/pmtb

ADVERTISEMENT—For Advertiser Information, visit STRUCTUREmag.com

Offered by
Civil and Infrastructure Engineering Department,
School of Engineering and Technology, Asian Institute of Technology (AIT), Thailand



planning and schematic design phases. Also, the level of detail required early will be greater than normal. Many structural engineers are only used to selecting the structural system and roughing out typical member sizes during schematics but, for affordable housing projects, the architectural design is very far advanced, so the structural design needs to be too. Beam and column sizes and wall thicknesses need to be determined accurately for both coordination and accurate pricing.

LIHTC geographic allocation can be enhanced through a 30% basis boost that is decided by the U.S. Department of Housing and Urban Development (HUD). HUD's Qualified Census Tract (QCT) is the mapping system that annually chooses tracts to be included as a QCT based on the tract's income. This often becomes essential in determining the viability of where LIHTC funding can go. The decision ultimately changes the substantial up-front planning for engineers due to each site locations' unique geological and zoning concerns. QCTs are commonly found in lower-income and middle-income areas and often in higher-density urban areas.

Additionally, state and city ordinances require lengthier and more detailed applications for affordable housing. "We cannot move forward with construction until city and state applications are awarded, plus capital campaigns must be in place prior as well. We are held to an even higher standard because our funding provides tax credits; certain states require amenity packages that are at or above market rate developments, depending on the market."

During the initial planning, developers first look for need – does this community truly need below-market-rate housing? There is a myriad of economic and sociopolitical factors that play into this. Secondly, they think about opportunity – zoning and availability factors must fall into place. Thirdly, perhaps the most challenging, funding – LIHTC is part of this equation and notably the country's largest affordable housing resource, but it is not the only available opportunity. Local and other soft funding sources can be critical for success. There are no quick answers to these questions.

The value of the LIHTC credits dropped recently with the federal tax reform that lowered corporation and business tax rates and thus their need for credits. Additional headwinds are construction costs, which are climbing nationally but also somewhat market dependent. Kuhl points to resourcefulness and creativity as the paths forward; "We are always balancing cost and need with even small things like parking and other parts of the development that may be seemingly simple, yet complex from a development and zoning or entitlement perspective." Affordable housing developers often use engineers and firms that have previous experience with below-market-rate housing for practicality and cost saving purposes.

Ready to Roll Up Your Sleeves?

Tightened budgets and deadlines make 3-D modeling increasingly popular to reduce planning errors. Modular construction is another trend that is increasingly appealing in the affordable housing scene. Structural engineers with experience and know-how with evolving technologies focused on cost-effective quality construction (low main-

tenance), and those that have the communication skills to engage with the developer, architect, and contractor in project development and problem-solving, have a leg up. Kuhl notes that "We are always asking, is there a more efficient production possibility offsite? Some of these offsite construction methods can cut down on construction time by six to eight months. Efficient structural and civil engineering is essential when it comes to doing more with less."

When Kuhl is asked what engineers can do if they are interested in affordable housing, he recommends to simply "Get out and tour some; most developers love showing off what they have built!" Nonprofits like Mercy Housing do not just build homes; they build a sense of community. Creative collaboration is a theme of not only affordable housing construction but the entire industry as well. Housing is a complex, multifaceted issue that touches so many aspects of society, and partnerships are vital. The affordable housing industry continues to measure and quantify the far-reaching benefits of stable homes. From engineers to civic leaders and even healthcare professionals, the message is clear, home is hope. ■

“ They [firms with affordable housing experience] are familiar with our unique requirements; these architects and engineers know our design priorities and often how we choose who to go with – experience and trust. It is particularly appealing when all architects and engineers are under one firm – again, this is friendly to time and cost. Because of our financing structures, we are trying to be more efficient with less money. Especially in competitive markets, we need to maximize scale and units on smaller urban sites. The same problems that are common for market-rate can pop up with affordable housing.”

~ Kuhl Brown, Mercy Housing

Dallas Erwin is Mercy Housing's Content Manager. (derwin@mercyhousing.org)

Kate Peterson is the Senior Vice President of Marketing and Communications for Mercy Housing. (kpeterson@mercyhousing.org)

DEWALT

**THE MOST
ICC-ES APPROVALS
FOR MECHANICAL AND ADHESIVE ANCHORS
IN THE INDUSTRY**

WWW.ANCHORS.DEWALT.COM



ADVERTISEMENT For Advertiser Information, visit STRUCTUREENGINEER.org

Copyright ©2019 DeWALT