Mass timber’s attributes pressuring cement industry

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Concrete — the mix of water, aggregate, and Portland cement — is battling for the market share it has enjoyed for decades in low- to mid-rise construction, while also addressing issues stemming from its environmental footprint. The competition is coming from mass timber, which is gaining renown amid an expansion in usage.

The aesthetics and structural aspects of mass timber have caught the eye of architects and builders, as wood’s popularity in mid-rise building construction grows.

Consequently, it’s also grabbed the attention of concrete interests, who have generated marketing campaigns exalting the virtues of their product, while citing the perceived disadvantages of mass timber.
That attention alone indicates that the concrete industry is taking competition from wood seriously.

Mass timber proponents cite environmental attributes as one if its biggest advantages over concrete. Carbon emissions from the manufacture of cement comprise 7-8% of the world’s total, according to reports.

Production of cement in the U.S. emits the second-great- est amount of gases in the economy’s manufacturing segment, behind iron and steel. In contrast, lumber production does not show up on the EPA’s long list of emitters. More importantly, the forestlands generating lumber are a vast carbon sink, removing CO2 from the atmosphere, wood advocates say.

The forest products industry for decades has been under the scrutiny of environmental groups. With mass timber, wood used in tall-building construction is perceived by many to be an environmentally responsible alternative to traditional tall-building materials.

To combat the growth in mass timber, the concrete in- dustry has keyed on safety issues. Thus, the threat of fire is used by the industry to discourage the use of mass timber. However, building codes, which include fire-suppressing materials and sprinkler systems, have been amended to limit fire danger in these buildings.

The “Build with Strength” program is a multimillion dollar campaign administered by the National Ready Mixed Concrete Association, promoting to architects, builders, and building code developers the benefits of concrete construction in the low- to mid-rise building sector. The NRMCA warns members that pro-wood advocates are busy at the state and local levels, promoting the use of