

The Masonry Society

Sustainability E-News

LEED Materials Updated

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SPONSORED EDITION

From The Editor

The U.S. Green Building Council (USGBC) has tweaked the Materials & Resources (MR) credits in the LEED rating system again. LEED v4 was a big change to the MR category with a new focus on product transparency that proved difficult for designers and manufacturers to achieve. LEED v4.1 tried to correct this by deleting some credit options, reducing thresholds, and simplifying criteria. While an improvement, evidentially design teams were still struggling to meet the criteria, particularly those for the optimizing MR credits. With the latest LEED addenda, USGBC has lowered these thresholds again. From my work with manufacturers, I know meeting the product transparency criteria is not as easy or simple as it sounds. While many masonry producers continue to work toward providing disclosures (HPD, EPD, etc.) for their products, all take time, effort, and money to complete. Hopefully with the revised criteria, more will be able to not only provide this basic information but will be encouraged to consider how they can further improve their manufacturing.

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NOTE: Inclusion in this newsletter is not an endorsement of the products and materials featured, nor have these products been evaluated by TMS or the editor. Furthermore, the views expressed in the articles featured are those of the article authors.

GREEN BUILDING NEWS

In this edition we focus on stories featuring the durability and resilience of masonry construction. ~Tina

Using masonry for wet flood-proofing

CONSTRUCTION SPECIFIER

There are two types of flood-proofing—dry and wet. Dry flood-proofing implies a new design for a structure or retrofit additions to an existing facility that prevents the entry of flood waters. Wet flood-proofing, on the other hand, involves an intentional design process to allow water to enter a structure built with flood-resistant materials like masonry. The design intent is to permit flood waters to enter and exit the structure freely and enable the flood waters to rise and fall evenly inside the building in the same rate and manner as on the outside. This also implies the flood-resistant materials are a permanent part

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Platinum Level



of the structure. They can be maintained to provide an attractive look before a flood event and can also be easily restored to their original condition at minimal cost. Learn more [here](#).

Masonry façade upgrade strategies for K-12 facilities
BUILDING ENCLOSURE

Masonry strengthening, façade overcladding and targeted expansions represent cost-effective approaches to making the most of existing K-12 facilities, benefiting a wide and diverse group of users. They can also contribute to improved neighborhood cohesion, helping to celebrate and build upon the legacy of each historic school building. Read [the article](#).

Retrofitting heritage masonry buildings
CANADIAN ARCHITECT

Heritage masonry buildings make up a large portion of Canada’s urban structures—from the historic warehouses in the downtowns of thriving cities to the shops that line small-town main streets and squares. Not only are these structures significant assets to our physical environment and culture, but their robust assembly and appealing character make them adaptable to new uses. [This article](#) shares some do’s and don’ts relative to retrofitting masonry buildings from Canadian Architect Magazine.

Concrete block stairwells all that is left after fire
BRADFORD TODAY

A fire has resulted in the total loss of a hotel under construction in Bradford West Gwillimbury in Ontario, Canada. When the fire service responded, the fire was well involved on the ground floor and spreading upward. Besides the concrete block stairwells, the entire construction was wood framing, all of which was lost in the blaze. The structure is considered a total loss. As is common in these fires, the only part of the structure standing after the fire was those concrete block stairwells. Incidents such as these could be avoided with concrete masonry construction. [Read more](#).

CODES and STANDARDS NEWS

USGBC’s new Pilot Credit on cool walls focuses on the reflectivity of the wall surface to lower the temperature of urban heat islands. Important things missing from such requirements include consideration of the actual building site and the positive effects that thermal mass of a cladding can have. ~Tina

Major changes to Materials & Resources credits for LEED

LEED USER

USGBC did some spring cleaning, and the LEED Materials & Resources (MR) category was first on its list. The [2021 Quarter 2 Addenda](#) include some significant updates to requirements for Environmental Product Declarations, Sourcing of Raw Materials, and Materials Ingredients across both BD+C and ID+C LEED v4.1 rating systems. The changes include reducing the thresholds for materials in order to earn points, which should make these credits more accessible to design teams. For an explanation of the changes, [click here](#).

New LEED Pilot Credit: Heat island mitigation with cool walls

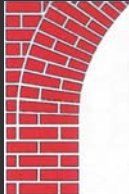
USGBC

The latest update to LEED includes a new [cool walls Pilot Credit](#) intended to ‘minimize effects on microclimates and human and

Concrete Masonry
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Western
States Clay
Products
Association

Gold Level



Masonry
Institute
of
America



Portland
Cement Association **

Silver Level



Spec Mix **
Bronze Level



ACME Brick ***



Cast Stone Institute ***

wildlife habitats by using solar-reflective “cool” exterior walls to reduce urban heat islands.’ The credit requires that at least 75% of the building’s gross exterior wall area (including vertical fenestration) have a “cool-wall material” surface. For the purposes of this pilot credit, a “cool-wall material” must be opaque to sunlight, exhibit an initial solar reflectance of at least 0.60, and exhibit an initial thermal emittance of at least 0.75. This requirement is similar to ones found in other green building standards.

Updates to FEMA publications for safe rooms

FEMA

The Federal Emergency Management Agency (FEMA) recently published revised editions of its community and residential safe room guidance documents, which have been updated for correlation with ICC 500-2020. The fourth edition of FEMA P-361 (2021), “Safe Rooms for Tornadoes and Hurricanes: Guidance for Community and Residential Safe Rooms” and the fifth edition of FEMA P-320 (2021), “Taking Shelter from the Storm: Building or Installing a Safe Room for Your Home” were released. Both include updates and refine criteria for how to design and construct a safe room that provides near-absolute protection from wind and wind-borne debris for occupants. Find out more and download both documents [here](#).

Adapting building codes to changing weather risks

BUILDING ENCLOSURE ONLINE (tiered subscription)

As a first line of defense, building codes and standards are fundamental in assuring that buildings support the health, safety, and welfare of communities, including protecting life during hazardous events. Read more [here](#).

GREEN PRODUCT NEWS

Researcher sees waste as block-making source

BRUNEL UNIVERSITY LONDON

Brunel University London researchers are looking to create and demonstrate a waste-based cement mix that can be 3D printed into modular components for buildings. “Our objective is to decrease the CO2 footprint of printed products against traditional virgin concrete and cementitious mortars, through the development of printable mixtures that will use up to 100% recycled aggregates,” said project lead Seyed Ghaffar in [this article](#).

Researchers pursue glass as sand substitute in concrete

CREATE ONLINE (Australia)

Australian researchers are examining the potential of waste glass in concrete, an application that could address a global shortage of sand suitable for construction and the need to keep glass waste out of landfills. Although glass can be ground down easily enough to create sand-like grains, Australian researchers have found that using it in concrete is not so simple. [Read more](#).

EDUCATIONAL NEWS

NEW Masonry Education Hub

THE MASONRY SOCIETY

The Masonry Society (TMS) has launched the [Masonry Education Hub](#), a Learning Management System that allows designers, professors, students, and other users to obtain on-demand masonry education. The Masonry Education Hub provides a central location for excellent and accessible training sessions on a variety of masonry



Nelson Testing
Laboratories **



Northwest Concrete
Masonry Association *



Pennsylvania Concrete
Masonry Association ***



Masonry Institute of
Washington

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topics. Currently over 40-course offerings are available for “on-demand” learning on topics including masonry basics, inspection, testing, codes and standards, and strength design of masonry.

ASTM Webinar: Climate Resiliency Planning and Strategy

ASTM INTERNATIONAL

Join ASTM on May 26th, 2021 at 2:00 PM ET for a free webinar on Climate Resiliency Planning and Strategy. The webinar will provide an overview of where to begin a planning process and concepts of various strategies to prepare for climate change in various sectors.

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