TOP STORY

ICC Group B Committee Action Hearings

Once again it has been a busy building code cycle at the ICC. With significant proposals affecting the cold-formed steel industry the AISI Code Staff in concert with industry partners performed their due diligence to defend our interests. More

COLD-FORMED STEEL ENGINEERS INSTITUTE – NEWS AND UPDATES

CFSEI Installs New Executive Committee

New leadership has been installed at CFSEI. More

CFSEI Announce Nabil Rahman As Recipient of the 2016 John P. Matsen Distinguished Service Award

The Cold-Formed Steel Engineers Institute (CFSEI) has named Nabil Rahman, Ph.D., P.E., as the recipient of the 2016 John P. Matsen Distinguished Service Award. More

CFSEI Announces 2016 Design Excellence Award Winners

The Cold-Formed Steel Engineers Institute (CFSEI) presented three Design Excellence Awards on May 24 during the 2016 CFSEI/MASFA (Mid-Atlantic Steel Framing Alliance) Expo held May 23-24 at the Historic Inns of Annapolis in Annapolis, Maryland. More

CFSEI Publishes New Technical Note on Antiterrorism Design Requirements for Cold-Formed Steel Framing

The Cold-Formed Steel Engineers Institute (CFSEI) has published a new Technical Note, "Antiterrorism Design Requirements for Cold-Formed Steel Framing" (Tech Note S100-16). More

CFSEI to Host Webinar on Updated Edition of Cold-Formed Steel Framing Design Guide on August 11, 2016

The Cold-Formed Steel Engineers Institute (CFSEI) will host a webinar on "Back to Basics: Cold-Formed Steel Framing Design Guide, AISI D110-16" on Thursday, August 11, 2016 at 3:00 PM EDT. More

HEADQUARTERS

Steel Framing Alliance
25 Massachusetts Avenue, NW
Suite 800
Washington, DC 20001
Tel: 800-797-8335
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NEW MEMBERS

- Anesta Consulting, Inc.
- Bratney Companies
- Certified Testing Laboratories
- Eisen Group
- Ekiert
- M2K
- Mouse River Construction LLC
- NCI Group Inc.
- Pinnacle
- SEF Consulting USA, LLC
- Teng Li & Associates
- Williams AE

UPCOMING EVENTS

August 11, 2016
CFSEI WEBINAR
Back to Basics: Cold-Formed Steel Framing Guide – AISI D110-16
3:00 p.m. Eastern Time
More

October 26-28, 2016
METALCON
Baltimore, Maryland
More

November 9-10, 2016
Wei-Wen Yu International Specialty Conference on Cold-Formed Steel Structures 2016
Baltimore, Maryland
More
MARKETPLACE

Light-gauge Steel Design Tweaked to Hit the ‘Sweet Spot’ for Mid-rise Buildings
The hybrid system uses light-gauge steel to resist gravity and concrete shear walls to resist seismic forces.  More

Six-Story Building Put to Earthquake Test
Researchers at the University of California, San Diego rocked and rattled a six-story steel frame building on a giant shake table Wednesday to see how the structure would withstand major earthquakes.  More

April 2016 Construction at $1,133.9 Billion Rate
The U.S. Census Bureau of the Department of Commerce announced today that construction spending during April 2016 was estimated at a seasonally adjusted annual rate of $1,133.9 billion, 1.8 percent (±1.3%) below the revised March estimate of $1,155.1 billion.  More

Future Buildings need Environmental Product Declarations
The battle to persuade mainstream opinion that sustainability matters is now largely won. But one day, we may look back on this as the easy bit. Why? Because another problem looms: how can we accurately measure it?  More

Construction of the Tallest Wood Condo Tower in North America Officially Begins
QUEBEC CITY, June 14, 2016 /CNW Telbec/ - This morning, a ground-breaking ceremony was held for the Origine green condo project, set to become the tallest solid wood condo tower in North America.  More
TOP STORY

ICC Group B Committee Action Hearings

Once again it has been a busy building code cycle at the ICC. With significant proposals affecting the cold-formed steel industry the AISI Code Staff in concert with industry partners performed their due diligence to defend our interests. Below is a report from AISI Code Staff on the results from the Code hearings.

The International Code Council (ICC) Group B Committee Action Hearings (CAH) were held in Louisville, KY on April 17 – 27, 2016. Group B included Track 1, with hearings of the IWUIC, IFC, IRC-B and IBC-S Code Committees; and Track 2 with hearings of the Admin, IECC-R and IECC-C Code Committees. Included next to each proposal number is the action taken by the responsible committee followed by a short summary.

Please note that these actions were not final. The next step was assembly action voting, which just completed. Two of the proposals reported below were affected by the assembly action voting; namely F158-16 and ADM94-16.

Based on these outcomes, AISI will submit public comments, as appropriate, to be heard at the Public Comment Hearings (PCH) held October 19-15, 2016 in Kansas City, MO. After the hearings, the governmental consensus voting will determine the final position on each proposal and public comment.

IWUIC: International Wildland-Urban Interface Code

WUIC3-16 (Disapproved)

Class 1 Ignition-Resistant Construction Exterior Walls Tested to ASTM E2707.

According to the proponent, the American Wood Council (AWC), the proposal follows current procedures and acceptance criteria adopted in California for combustible exterior walls. The proposal also excludes architectural trim, cornice projections and other exterior architectural elements from the ignition requirements. The proposal, if approved, would benefit combustible construction that is currently restricted – the code allows non-combustible construction, heavy timber, walls with 1-hour rated exterior, walls with fire retardant treated wood (FRTW) exterior, or walls with ignition resistant materials exterior.

Continued next page … | Top Main | Top Article | Next Article |
WUIC4-16 (Disapproved)
Class 1 Ignition-Resistant Construction Accessory Structures, such as Deck, Tested to ASTM E2632 and ASTM E2726 (or E84)
According to the proponent, AWC, the proposal is based on current regulations, procedures and acceptance criteria adopted in California. The proposal, if approved, would benefit combustible construction that is currently restricted – the code allows non-combustible, heavy timber, 1-hour rated or FRTW construction, or ignition resistant materials in accordance with 503.2.

WUIC6-16 (Disapproved)
Class 2 Ignition-Resistant Construction Exterior Walls Tested to ASTM E2707.
This proposal, by AWC, is identical to WUIC3-16, but for Class 2 ignition-resistant construction.

WUIC7-16 (Disapproved)
Class 2 Ignition-Resistant Construction Accessory Structures, such as Deck, Tested to ASTM E2632 and ASTM E2726 (or E84)
This proposal, by AWC, is very similar to WUIC4-16, but for Class 2 ignition-resistant construction.

WUIC9-16 (Disapproved)
Non-Mandatory New Appendix I – Building Materials Directory
The proposal, by AWC, provides for “products which comply with the California Code” to be “deemed to comply with” the IWUIC code. It also provides for a table establishing the “equivalency” of ASTM E2707, ASTM E2632 and ASTM E2726 to “comparable” test standards in California.

IFC: International Fire Code

F36-16 (Disapproved)
Approved Fire Apparatus Access Roads for Buildings with Sprinklers
The proposal limits the exception (authorizing a longer, over 150 feet, maximum access distance) to buildings with NFPA 13 sprinkler systems only, effectively cancelling similar exceptions for buildings with NFPA 13R and NFPA 13D sprinkler systems.
F37-16 (Disapproved)
Not Less than 2 Fire Apparatus Access Roads for Type III, IV, V Buildings Higher Than 3 Stories
The proposal, by the Masonry Alliance for Codes and Standards, substantially increases access road requirements for combustible construction over 3 stories high.

F38-16 (Disapproved)
New Provisions Introducing Requirements For Fire Apparatus Access Roads During Construction
Among other things, the proposal requires the access road to be provided “prior to introducing combustible materials on the construction site”.

F113-16 (Disapproved)
Comprehensive Revisions to sections 202 and 701 through 707 with respect to the Maintenance Fire Resistant and Smoke Resistant Construction
According to proponent, representing the ICC Fire Code Action Committee, the proposal is primarily intended as a reorganization of Chapter 7, however, it also contains intentioned additional maintenance, repair and replacement requirements. As pointed by the opposition, the proposal also contains poor language and many intended and unintended requirements that would be difficult to implement.

F150-16 (Disapproved)
NFPA 13 Sprinklers for Risk Category III and IV Buildings and Other Structures
The proposal, by the National Fire Sprinkler Association, introduces a requirement of NFPA 13 sprinklers, to Chapter 9 of the IBC, for almost all buildings and other structures (there are 2 minor exceptions) with a building area over 1000 square feet that contain any occupancy described as Risk Category III or IV in Table 1604.5 of the IBC. The justification is based on the perceived need for sprinklers to enforce the message of “viability and resilience” implied in Risk Categories III and IV for “critical structures”. The proposal, if approved, would require sprinklers in many building (including very small buildings) that pose negligible fire hazard, and also potentially, would reduce the number of designated emergency shelters.
F158-16 (Disapproved / Approved as submitted by assembly action)
Increased Sprinkler Requirements for Schools
The proposal, by the National Fire Sprinkler Association, substantially (by almost 3 times) reduces the fire area triggers for sprinkler installation in Group E occupancies. It also introduces a new requirement for sprinklers throughout all Group E occupancies “designated as a community storm shelter”.

F167-16 (Disapproved)
NFPA 13R Sprinkler System Limit in terms of Story Height
The proposal attempts to introduce a requirement that the 4 story limit for NFPA 13R systems be measured from the grade level rather than from the horizontal assembly separation over the podium/pedestal story in the so-called “pedestal buildings”.

F168-16 (Disapproved)
NFPA 13R Sprinkler Protection and Alternative Construction Requirements for Attics
The proposal, by the Portland Cement Association, attempts to introduce new requirement for NFPA 13R sprinkler protection in attics. Furthermore, it attempts to introduce restrictive attic construction requirements, as alternatives to sprinkler protection, in combustible construction buildings (of Types III, IV and V).

F170-16 (Disapproved)
NFPA 13 R Sprinkler Protection for Balconies and Decks of Dwelling and Sleeping Units in Combustible Construction Buildings
The proposal, by the Portland Cement Association, requires NFPA 13R sprinklers over balconies, decks and ground floor patios (where under wood framed balconies or roofs) of dwelling and sleeping units in type III and IV buildings.

F171-16 (Disapproved)
NFPA 13 R Sprinkler Protection of Concealed Combustible Spaces in Attics
This proposal attempted to introduce NFPA 13R protection requirements for concealed combustible spaces in attics.
F172-16 (Approved as modified)
NFPA 13R Sprinkler Protection and Alternative Construction Requirements for Attics
The proposal, by the National Multifamily Housing Council and ICC Fire Code Action Committee, is a substantially relaxed version of F168-16.

F327-16 (Approved as modified)
Fire Watch at Building Demolition and Construction Sites
The proposal introduces more specific triggers and more detailed requirements for the establishment and maintenance of fire watch during demolition and construction (for all types of buildings) during working hours or while temporary heating equipment is operated.

F328-16 (Withdrawn)
Fire Watch at Construction Sites Involving Combustible Construction Materials
The proposal suggests additional triggers and requirements for the establishment and maintenance of fire watch during construction involving combustible construction materials. The fire watch is required to "be maintained at all times until the buildings passive and active fire protection systems have been approved and placed in service".

F329-16 (Approved as modified)
Fire Watch during Non-Wording Hours
The proposal originally required fire watch during non-working hours at project sites for combustible construction exceeding 40 feet in height. Modifications proposed during the hearing effectively extended the requirement to all types of construction.

F333-16 (Disapproved)
Maximum Distances for Temporary Fire Vehicle Access Roads for Combustible Construction
The proposal adds new maximum distance requirements for fire vehicle access roads during demolition and construction, suggesting 150 feet maximum distance "on not less than 2 sides of the building being constructed" for combustible construction exceeding 2 stories in height.

Continued next page
F334-16 (Disapproved)
Fire Vehicle Access during Construction Involving Residential Combustible Buildings
The proposal, by the Steel Framing Alliance, requires fire vehicle access to all sides of residential building under construction “with combustible building elements 40 feet or more above grade plane”. It also provides for “approved alternative protection” or “temporary sprinklers” if the all-side access requirement cannot be satisfied.

F336-16 (Disapproved)
Sprinkler Protection during Construction of Type III, IV, V Buildings Higher Than 40 Feet
The proposal, by the Masonry Alliance for Codes and Standards, suggests that “the portion of the building or structure that is more than 40-feetabove fire department vehicle access shall not begin construction until the automatic sprinkler is operational for all stories below”. It further requires that “such automatic sprinkler system shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring”.

F340-16 (Approved as submitted)
New Occupancy Category of Higher Education Laboratories
The proposal, by the ICC Fire Code Action Committee, suggests new category of Higher Education Laboratories with a new IBC section 427 devoted to it with a load of new provisions, including barrier separations and 2-hour floors (for an otherwise B occupancy).

G16-16 (Disapproved)
Introduction of New Definition into IFC and IBC – Smoke Zone
The proposal defines the term Smoke Zone as “a defined area for which the movement of smoke is limited or restricted through the use of mechanical and/or passive smoke control systems” in sections 202 of both IFC and IBC. The term is currently not used in IFC or IBC.

Continued next page …
IRC-B: International Residential Code - Building

G2-16 (Approved as modified)
Definition modification to “light-frame construction”
AISI noticed a void with the AWC proposal to modify the definition of “light frame construction which in part states “…repetitive wood and cold-formed steel….” We noticed that only the word “wood” is used which could mean any type (e.g. nominal, engineered, timber, etc.) and not “nominal wood framing” or “dimensional wood” as was the original intent of the definition when created. AISI proposed a floor modification to add the term “dimensional” to wood, however multiple members from the audience and the code development committee objected, and therefore did not consider that modification.

RB5-16 (Disapproved)
Definition modification to “blocking”
This proposal, by Brian Johnson, proposed a definition for blocking as 2-inch wood member. AISI spoke in opposition due to various size and materials used for blocking. If approved, this proposed provision could have eliminated the use of cold-formed steel (CFS) framing members to be used as blocking in residential construction.

RB69-16 (Disapproved)
Exception for dimensional and structural composite lumber
This proposal, by SBCA, proposed to remove dimensional lumber and structural composite lumber as exceptions to requiring fire protection on floor system construction. This proposal was a result of several failed fire tests of this assembly. If approved, the building code would require dimensional lumber and structural composite lumber to be protected with a fire resistance rating. Therefore, it would eliminate a competitive advantage for wood framing in floor system applications.

RB177-16 (Approved as submitted)
Update CFS Provisions - Foundations
This proposal, by AISI, clarified anchorage requirements for CFS wall framing to foundations as listed in Chapter 4 of the IRC. No technical content was changed. Clarification of CFS framing provisions enables the code user to more easily utilize CFS framing.

Continued next page … | Top Main | Top Article | Next Article
RB195-16 (Approved as submitted)
**Update CFS Provisions – Floor Framing**
This proposal, by AISI, updated IRC Chapter 5 – *Floor Framing* to be consistent with AISI S240-15 – *North American Standard for Cold-Formed Steel Structural Framing* and AISI S230-15 – *Standard for Cold-Formed Steel Framing – Prescriptive Method for One- and Two-Family Dwellings*. The updates also included substantial changes to allowable span tables for floor framing members. Consistency between the model building code and the AISI standards minimizes confusion that may arise with the use of CFS framing, thus eliminating unnecessary barriers.

RB248-16 (Approved as submitted)
**Update CFS Provisions – Wall Framing**
This proposal, by AISI, updated IRC Chapter 6 – *Wall Framing* to be consistent with AISI S240-15 – *North American Standard for Cold-Formed Steel Structural Framing* and AISI S230-15 – *Standard for Cold-Formed Steel Framing – Prescriptive Method for One- and Two-Family Dwellings*. The updates also included substantial changes to allowable wall height tables resulting from a change in design wind speeds, which align CFS framing design with the current design standards.

RB265-16 (Approved as submitted)
**Update CFS Provisions – Wall Covering**
This proposal, by AISI, updated references in the CFS section of Chapter 7 – *Wall Coverings* to AISI S240-15 – *North American Standard for Cold-Formed Steel Structural Framing*. This proposal also deleted the reference to ASTM C645 Section 10 and C955 Section 8. These reference screw spinout tests have either been incorporated into the applicable AISI standard, or have been deleted. The removal of the unnecessary ASTM test standards eliminated unnecessary costs for CFS framing.

RB321-16 (Approved as submitted)
**Update CFS Provisions – Roof/Ceiling Framing**
This proposal, by AISI, updated IRC Chapter 8 – *Roof/Ceiling Framing* to be consistent with AISI S240-15 and AISI S230-15. The updates also included substantial changes to allowable span tables for roof and ceiling framing members.

*Continued next page …*
IBC-S: International Building Code - Structural

FS3 (Disapproved)
Vinyl siding attachment
This proposal, submitted by the Vinyl Siding Institute (VSI), reorganizes the vinyl siding section and potentially eliminates the fastener spacing requirements for CFS framing. AISI together with VSI developed a floor modification to correct the issue. Since the proposal was defeated, AISI will consider working with VSI on a public comment for reconsideration as modified.

FS7 (Approved as submitted)
Steel industry standards
This AISI proposal adopts the latest CFSF industry standards into IBC Chapter 26.

FS8 (Approved as submitted)
Cladding attachment over foam sheathing
This proposal, by the Foam Sheathing Committee, makes adjustments in Table 2603.12.1.

G2 Part 1 (Approved as modified)
Definition of “light-frame construction”
This proposal, by AWC, changes the definition of light-frame construction. Part 2 of the proposal was heard in the IRC (Please see further discussion above).

G3 (Disapproved)
Definition of “curtain wall”
This UL proposal adds a definition for curtain wall, which limits it to “fenestration products”. The definition for curtain wall should be more generalized, especially since it is used throughout the IBC and in Proposal S148-16. Since the proposal was defeated, AISI will reach out to UL to see if they are going to submit a public comment for reconsideration as modified.

Continued next page …
S1-16 (Approved as Modified)
Relocation of balcony provisions to roof chapter
The AWC proposed to move the remaining balcony provisions to Chapter 15 “Roofs”. AISI, and others, testified that this was not appropriate as Chapter 14, whose scope still referred to balconies, would be the more appropriate location. Code development committee agreed and retained the balcony provision in Chapter 14. We expect the AWC to product a public comment.

S6-16 (Disapproved)
Enclosed eave and soffit ventilation
AWC proposed to have ventilation requirements for eaves and vents located in Chapter 15 roofs. AISI, and others, testified that this was not needed since no data to suggest that there is a problem with the code, that the proposal was flawed, and that the proposal emphasized that eaves and soffits that are enclosed are outside the building envelop with substantiation for need to distinguish this aspect. We expect that the AWC to submit a public comment.

S7-16 (Disapproved)
Balcony and Elevated Walkway ventilation
AWC proposed to have all balconies and elevated walkways that were enclosed be ventilated to the exterior to prevent moisture build up and for inspection. AWC suggested that this is as a result, or in reaction to, the Berkeley, CA balcony collapse which killed people (Now under litigation). Ironically the technical analysis reports on the incident remain sealed as a result of the litigation. AISI opposed this proposal citing that there was a lack of technical substantiation to support the need for this proposal, ventilation of enclosed spaces are covered in Section 1203, that this proposal would apply to all constructions (e.g. Above grade pedestrian walkways, mechanical equipment walkways, etc.) and not just wood as it is currently, failed to provide a constant enforceable method for inspection, and contained arbitrary provisions. We expect AWC to submit a public comment.

Continued next page … | Top Main | Top Article | Next Article |
S123 (Disapproved)
High seismic areas
This NCSEA proposal adds additional alternate means and methods requirements for seismic force-resisting systems for buildings located in SDC C, D, E or F. While AISI not necessarily opposed to more comprehensive review of alternate SFRS in higher SDC, this proposal is poorly written and needs substantial editorial work.

S126 (Approved as submitted)
Structural integrity
This NCSEA proposal editorially fixes the charging language to Section 1615 on structural integrity.

S128 (Disapproved)
Structural observations
This proposal, submitted by City of Henderson, NV, expands the application of structural observation significantly. It is not well substantiated. It was disapproved by the committee in favor of Proposal S133.

S129 (Disapproved)
Special inspections for CFS framing
This proposal by AISI adds special inspection for CFS framing. This proposal is one in a series adopting the latest generation of AISI standards for cold-formed steel. It is intended to coordinate with Proposal S137, a comparable NCSEA proposal adopting special inspection requirements for wood light frame construction. Since light frame construction includes competitive solutions in both wood and cold-formed steel framing, our position is that the special inspection requirements should remain consistent and coordinated between the two structural materials, meaning that both proposals must either succeed or fail together. AISI will develop public comments to address special inspections for CFSF trusses and lateral force resisting systems in high wind and high seismic areas. However, there is no plan at this time to submit a public comment for reconsideration of the entire proposal. See Proposal S137 for additional discussion.

Continued next page …
S130 (Disapproved)
Special inspections for light-frame construction
This proposal, submitted by Mark Gilligan, deletes the light frame construction exception for the statement of special inspection. The reason statement argues that it is already covered. However, that is not the case. IBC Section 1704.3 Exception #3 exempts light frame construction from special inspection and tests -- not the Statement of SI.

S133 (Approved as modified)
Structural observations
This NCSEA proposal expands the application of structural observation significantly, requiring it for all large, or important, buildings anywhere in the country and wherever the consequence of structural failure is greater by virtue of complexity, size, occupancy, or risk, as determined by the AHJ or RDP. The IBC-S Code Committee preferred this proposal over that of Proposal S128.

S135 (Approved as submitted)
Special inspections for steel construction
This AISC proposal modifies the exception in Section 1705.2. The purpose of this proposal is to tighten up the exception for special inspection of steel construction. Under this exception, if fabrication process doesn’t include any welding, thermal cutting or heating operations for the entire building or structure, then special inspection can be waived.

S137 (Disapproved)
Special inspections for wood construction
This NCSEA proposal adds special inspection requirements for wood light frame construction. Heard prior to Proposal S129, it was disapproved by the IBC-S Code Committee. It is unclear at this time if NCSEA will submit a public comment requesting reconsideration. AISI will continue to monitor the situation.

S138 (Approved as submitted)
Special inspections for wood trusses
This NCSEA proposal modifies the wood truss requirements to match the CFSF truss requirements.
S148 (Disapproved)

**Special inspection requirements for wall panels, curtain walls and veneers**

This proposal, submitted by SEANY, adds special inspection requirements for wall panels, curtain walls and veneers. It is not well written or documented. It is unclear at this time if SEANY will submit a public comment requesting reconsideration, since there was significant opposition. AISI will continue to monitor the situation.

S252 (Approved as submitted)

**Steel industry standards**

This AISI proposal adopts the latest generation of AISI standards for cold-formed steel framing. This particular proposal focuses on IBC Chapter 22 by incorporating references to three new cold-formed steel standards -- AISI S240, AISI S400, and AISI S202.

S299 (Approved as submitted)

**Steel industry standards**

This AISI proposal adopts the latest CFSF industry standards. This particular proposal focuses on IBC Chapter 25 by incorporating a reference to the new cold-formed steel structural framing standard – AISI S240. Additionally, it amends existing language to reflect updates made to the existing cold-formed steel nonstructural framing standard – AISI S220.

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**Admin: Administration Committee**

ADM74-16 (Disapproved)

**Construction documents to have fire-resistance rated information**

The National Association of Home Builders proposed to add to the construction document provisions a requirement to identify fire-resistance rated constructions in a residential building. AISI opposed this proposal on the basis that it was poorly written and appeared to discriminate against allowing the use of publically available electronic tested designs (e.g. UL directory, Thermal/Acoustical Guide, Gypsum Association, etc.) as an alternative to copying and pasting tested designs. AISI is working with NAHB on a solution for the fall code hearings.

*Continued next page …*
ADM94 (Approval as modified / Approved as modified by assembly action)

Updating of Referenced Standards
All steel standards, including AISI cold-formed steel standards, submitted for consideration as administrative updates were approved without question or opposition. No action is necessary for the public comment hearings in this regard. However, the adoption of ASCE 7-16 is in jeopardy. The modification by the assembly action that was approved (69% to 31%) would deny ASCE 7-16 and keep the reference in the IBC, IRC and IEBC as ASCE 7-10 with Supplement 1. Assuming that a public comment reintroduces ASCE 7-16 for consideration, a 2/3 majority during the final voting would be needed for approval. A further complication is that there are many other code change proposals that are tied to the updated ASCE 7-16.


RE21-16, RE23-16, RE27-16 (Disapproved)
Rigid Foam Insulation
The rigid foam industry submitted multiple code change proposals that would recognize wall assemblies which were insulated from the exterior (continuous insulation) to the climate zone tables as another option to cavity or cavity plus continuous insulation. AISI, and many other attendees, opposed these proposals as they did not show if it would be cost effective (unlike the other listed assemblies), and did not believe that the option to use the rigid foam insulation also as a vapor barrier was valid as a reason to support this proposal as the current values for the permeability of the rigid foam insulation varies greatly (e.g. 0.08 perms to 7.0 perms).

RE51-16 (Disapproved)
Mass Wall Categories
A proposal by AWC attempted to add to the list of “mass wall” provisions (Energy mass) a new category “cross laminated timber”. AISI objected to the inclusion as the proposal failed to provide any calibrated hot box test results that demonstrated equivalency with solid timber and solid logs that are currently listed (See table below). We expect AWC to submit a public comment.

Continued next page …
2015 IECC Residential (current wood mass) | AWC (proposed wood mass)
---|---
Solid Timber | Solid Timber
Solid Logs | Logs (Notice that the word “solid” was removed)
---|---
Cross Laminated Timber (NEW)

RE53-16 (As Submitted)
Cold-Formed Steel Conversion Table
Mr. Nowak submitted a proposal to correct an error in the wood frame walls to cold-formed steel framed walls conversion table in the residential energy code. No opposition.

IECC-C: International Energy Conservation Code - Commercial

The attendance by “above energy code” organizations has grown. This year the list of those organizations included: Groups: Alliance to Save Energy, New Buildings Institute, American Coalition for an Energy Efficient Economy, Coalition for Fair Energy Codes (Run by Greg Johnson for the wood industry), South West Energy Efficient Project, Energy Efficient Codes Coalition, and the Responsible Energy Codes Alliance. Many of these organizations are funded by manufacturers of products, such as the insulation industry.

CE51-16 (Disapproved)
Greenhouses
Proponent and related greenhouse owners presented a case of changing the requirements of the current greenhouse provisions in the IECC, only three years after getting greenhouses recognized in the energy code. The opposition did not accept the concept of modifying the definition to delete the word “exclusively” from the definition “…exclusively used for, and essential to, the cultivation, protection or maintenance of plants…”, and did not accept it being removed from low energy buildings provisions with exemptions. AISI in the past has objected to exempting yet another building occupancy from the mandatory energy requirements while the opaque envelope minimum requirement(s) continues to get more stringent.

Continued next page …
CE57-16, CE58-16, CE59-16 (All Disapproved)

Wood frame construction R-values/U-factors
The American Plywood Association, American Wood Council, and the Coalition for Fair Energy Codes (Another wood industry dominated organization) proposed to reduce their R-values and/or U-factors for multiple climate zones. AISI and many others argued against the proposals. The code development committee recognized the market advantage this proposal would have created and disapproved the proposals. The same results occurred in 2013 when the same entities presented similar proposals.

CE67-16 (Disapproved, preferred CE68) CE68-16 (Approved as submitted)

IECC Envelope reference to ASHRAE 90.1 Appendix A
Both proposals recommended that an option be included in the climate zone tables (Tables with minimum R-value or maximum U-factor) to allow users to use the pre-calculated envelope assemblies that are currently contained in Appendix A (“NORMATIVE APPENDIX A RATED R VALUE OF INSULATION AND ASSEMBLY U-FACTOR, C-FACTOR, AND F-FACTOR DETERMINATIONS”) of ASHRAE Standard 90.1. At this time the scope of the IECC states that the user must use either the IECC or ASHRAE Standard 90.1 only. There was a general overall level of support for this option to be integrated into the IECC to offer greater flexibility.

CE270-16 (Disapproved), CE293-16 (Disapproved), CE294-16 (Approved as submitted)

Solar ready roofs
All three of these proposals attempted to require that all buildings have structural elements and features to be solar ready (e.g. Roof structure to be robust enough to support solar, conduit or shafts vacant for future piping or conduit, etc.). The proposals were proposed either for incorporation into the body of the provisions (required to be solar ready) and in an appendix (required only when jurisdiction approves). AISI testified that the application to all buildings does not serve the building owner well as the owner could prefer to use solar over a parking lot or located at grade rather than the roof. AISI also questioned why all buildings (e.g. air traffic control towers, open parking structures, etc.) would be required to subject to these provisions.

Continued next page …
We expect the above code organizations and solar manufactures to continue to pursue with these proposals at the public comment hearings. However, CE294 took care of many of the AISI concerns, but will still require some minor work in preparation for the fall public comment hearing. AISI will attempt to work with the proponent.

Editor, Framework Online
CFSEI Installs New Executive Committee

New leadership has been installed at CFSEI. The newly elected 2016-2017 Executive Committee includes:

- Chairperson - Robert Warr, P.E. – Frameworks Engineering, LLC
- Immediate Past Chairperson (non-voting) – Jennifer Zabik, P.E, S.E., President – Zabik-Turner Engineering
- Vice Chairperson – Georgi Hall, P.E.– Director of Engineering, California Expanded Metals Products, Co. (CEMCO)

Committee Members:

- Nate Bacon, P.E. – Base Design Group, Inc.
- Paul Dalia, P.E. – Light Gauge Steel Engineering Group, Inc.
- Matthew Mancl, P.E. – ClarkDietrich Engineering Services
- Brandon Wahl, P.E. – Associate 360 Engineering Group

The committee has hit the ground running, already charting the CFSEI course for the remainder of 2016 and 2017. If you would like to learn more about becoming active in CFSEI, please contact us at info@cfsei.org.

Editor, Framework Online
CFSEI Announce Nabil Rahman As Recipient of the 2016 John P. Matsen Distinguished Service Award

Award is renamed to honor a respected and beloved colleague

The Cold-Formed Steel Engineers Institute (CFSEI) has named Nabil Rahman, Ph.D., P.E., as the recipient of the 2016 John P. Matsen Distinguished Service Award. CFSEI’s Distinguished Service Award was renamed this year to honor John P. Matsen, P.E., founder and principal of Matsen Ford Design Associates in Waukesha, Wisconsin, who passed away in June 2015. The award, which recognizes the significant contributions of an individual who has volunteered time, talent and resources to the cold-formed steel industry, was presented May 24 during the 2016 CFSEI / MASFA (Mid-Atlantic Steel Framing Alliance) Expo at the Historic Inns of Annapolis in Annapolis, Maryland.

“Nabil is considered one of the premier structural engineers in the cold-formed steel framing industry, recognized especially for his expertise in the areas of blast, impact and progressive collapse,” said Maribeth Rizzuto, LEED AP – BD+C, Managing Director of the Cold-Formed Steel Engineers Institute. “His contributions to our industry are numerous and varied, ranging from inventions to new software products to technical publications and more. At CFSEI, we especially appreciate his leadership at the national level and on several of our committees. He has also been active in our webinar series since it was launched, playing key roles in organizing the sessions, hosting them, and answering questions at their conclusion. His contributions have greatly enhanced the webinar series.

Continued next page …
“This year, the presentation of the Distinguished Service Award is especially meaningful because it was renamed to honor John P. Matsen, a widely respected colleague and friend. During a career that spanned more than three decades, John was committed to pioneering and expanding the use of cold-formed steel framing in structural and nonstructural applications. He chaired many of the CFSEI committees, and like Nabil, dedicated countless hours to launching and improving our webinar series. It is especially fitting that Nabil, who shares John’s passion for the industry, was named as the first recipient of the award that bears his name. It is the highest award that we present for individual achievement.”

Nabil A. Rahman, Ph.D., P.E. is the Director of Engineering and R&D for The Steel Network, Inc. and a Principal at FDR Engineers in Durham, NC. He is the current chairman of the ASCE-SEI Committee on Cold-Formed Steel Structures and a past chairman of the Cold-Formed Steel Engineers Institute. Dr. Rahman has vast experience in cold-formed steel design, product development, and software development; as well as the analysis and protection of structures against extreme loads (progressive collapse, blast and impact). He serves as a member of the American Iron and Steel Institute (AISI) Committee on Specifications and Committee on Framing Standards, and is a member of the ASCE Committee on Disproportionate Collapse. He is a named inventor on seven U.S. patents, the technical director of one of the top-used software products in the U.S. for the design of cold-formed steel components, and the author of more than 50 research papers and technical notes.

Editor, Framework Online
CFSEI Announces 2016 Design Excellence Award Winners

The Cold-Formed Steel Engineers Institute (CFSEI) presented three Design Excellence Awards on May 24 during the 2016 CFSEI/MASFA (Mid-Atlantic Steel Framing Alliance) Expo held May 23-24 at the Historic Inns of Annapolis in Annapolis, Maryland. The winners were: a) First Place – Base Design Group, Inc. for Meditech Foxborough Office and Conference Center in Foxborough, MA; b) Second Place – Excel Engineering, Inc. for the condominium building located at The Wharf, 525 Water Street in Washington D.C.; and c) Third Place – ClarkDietrich Engineering Services LLC for the William P. Hobby Airport Expansion Project in Houston, TX. The CFSEI Design Excellence Awards recognize small and large projects that exemplify excellence in the structural design of new or renovated structures utilizing cold-formed steel products.

“These three projects are excellent examples of using cold-formed steel framing and extensive team coordination to accomplish innovative and cost-effective design solutions,” said Maribeth Rizzuto, LEED AP – BD&C, Managing Director of the Cold-Formed Steel Engineers Institute. “Each project presented its own unique design challenges. We received many creative submissions for this award, and had a difficult time making the final selections. We appreciate all of the entries that were submitted.”

About the Projects

First Place - Base Design Group, Inc. - Meditech Foxborough Office and Conference Center, Foxborough, MA

Meditech Foxborough Office and Conference Center is a four-story structure. The project consisted of a complete renovation of an existing structure that had not been occupied in years.

Continued next page …
The renovation included the significant removal of an existing elevated concrete floor slab and existing steel columns to make way for a new two-story, 568-seat auditorium with a center stage area using cold-formed steel framing as the primary structural system. The auditorium was unique for its elliptical shape and presented several design challenges. The project was completed in June 2015.

Second Place - Excel Engineering, Inc. - Condominium Building at The Wharf, 525 Water Street, Washington, DC

The project scope was a 108-unit condominium building, the first residential project to be constructed in a development known as The Wharf, a mile-long waterfront neighborhood including retail, residential, hospitality and offices. Most of the project consisted of load-bearing cold-formed steel framing. The wall framing contains complex curves and angles, which required prefabrication off-site. Extensive beam pockets, MEP sleeves, shear wall posts and an aggressive construction schedule provided additional challenges. The project was completed in December 2015.

Third Place – ClarkDietrich Engineering Services LLC - William P. Hobby Airport Expansion Project, Houston, TX

Southwest Airlines established a hub at Hobby Airport and wanted to expand its international flight offerings, requiring an expansion for the international terminal. The plan called for five new terminal gates and a new parking garage. The project required complex engineering challenges and framing designs with short construction deadlines. Detailed panel drawings and extensive coordination between the engineering and BIM teams were critical to completing the project on time. The project was completed in October 2015.

All CFSEI award entries were judged by a panel of cold-formed steel professionals on demonstrated excellence and achievement in the use of cold-formed steel based on the following criteria: design creativity, technical innovation, system efficiency and economy, constructability, complexity of problems solved, and design integration.
The 2016 CFSEI/MASFA Expo was attended by more than 100 architects, builders/contractors, engineers and other construction industry professionals. The event provided opportunities for education, networking, and an exposition featuring state-of-the-art innovations, technologies and principles in cold-formed steel framing. This is the only event of its kind dedicated to the cold-formed steel framing industry and is held on an annual basis.

Editor, Framework Online

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NEW MEMBERS
 Anesta Consulting, Inc.
 Bratney Companies
 Certified Testing Laboratories
 Eisen Group
 Ekiert
 M2K
 Mouse River Construction LLC
 NCI Group Inc.
 Pinnacle
 SEF Consulting USA, LLC
 Teng Li & Associates
 Williams AE

UPCOMING EVENTS
August 11, 2016
CFSEI WEBINAR
Back to Basics: Cold-Formed Steel Framing Guide – AISI D110-16
3:00 p.m. Eastern Time
More

October 26-28, 2016
METALCON
Baltimore, Maryland
More

November 9-10, 2016
24th Short Course on Cold-Formed Steel Structures
St. Louis, Missouri
More
CFSEI Publishes New Technical Note on Antiterrorism Design Requirements for Cold-Formed Steel Framing

The Cold-Formed Steel Engineers Institute (CFSEI) has published a new Technical Note, “Antiterrorism Design Requirements for Cold-Formed Steel Framing” (Tech Note S100-16). While cold-formed steel can be used throughout the building as exterior and/or interior walls, floor and roof systems, this Technical Note focuses on blast protection of building envelopes, specifically exterior walls.

The U.S. Department of Defense (DoD) Unified Facilities Criteria program has developed documents to assist design engineers through the implementation of antiterrorism requirements into cold-formed steel framing design. This Technical Note provides detailed discussion to clear up any confusion related to these topics:

- The applicability of UFC 4-010-01 to the design of the building envelope.
- Static and dynamic design approaches for exterior walls.
- Application of these design approaches in a design example.

Tech Note S100-16 was written by Nabil Rahman, Ph.D., P.E., Director of Engineering and R&D for The Steel Network, Inc. and a Principal of FDR Engineers; and Casey O’Laughlin, P.E., Senior Research and Development Engineer at Jacobs Technology. Nabil Rahman has vast experience in cold-formed steel design, product development, and software development; as well as the analysis and protection of structures against extreme loads (progressive collapse, blast and impact). Casey O’Laughlin has unique experience leading RDT&E (Research Development Test and Evaluation) efforts for various technologies against blast, ballistic, forced entry, and other security engineering-related projects.

Continued next page …
This Technical Note is the latest in CFSEI’s continuing series of instructional documents on topics related to cold-formed steel framing for commercial and residential construction.

CFSEI Technical Notes are available free of charge to CFSEI members at www.cfsei.org. Non-members can purchase them at the AISI Steel Store. For more information on joining CFSEI, visit www.cfsei.org.

CFSEI maintains a Steel Framing Hotline to answer inquiries from construction professionals seeking cold-formed steel solutions for their projects. Suggestions for additional Technical Note topics are welcomed. The Steel Framing Hotline is accessible at 1-800-79-STEEL.

Editor, Framework Online
CFSEI to Host Webinar on Updated Edition of Cold-Formed Steel Framing Design Guide on August 11, 2016

The Cold-Formed Steel Engineers Institute (CFSEI) will host a webinar on “Back to Basics: Cold-Formed Steel Framing Design Guide, AISI D110-16” on Thursday, August 11, 2016 at 3:00 PM EDT. This is the seventh webinar in CFSEI’s “Back to Basics” series and is designed for architects, engineers, building officials and contractors. Participants are eligible for 1.5 PDHs.

The webinar will:
- Discuss a new design example for ledger framing.
- Include information on other design examples available through the CFSEI Technical Notes series.

AISI D110-16 and AISI S100-12 are available for purchase at the AISI Steel Store, www.steel.org. AISI S240-15 is available for free download at www.aisistandards.org. Roger A. LaBoube, Ph.D., Curator’s Teaching Professor Emeritus of Civil Engineering and Director of the Wei-Wen Yu Center for Cold-Formed Steel Structures at the Missouri University of Science and Technology, will conduct the webinar. Dr. LaBoube has an extensive background in the design and behavior of cold-formed steel structures including cold-formed steel beams, panels, trusses, headers and wall studs, as well as bolt, weld and screw connections. He is a member of the American Iron and Steel Institute’s Committee on Specifications and the Committee on Framing Standards. He is a Registered Professional Engineer in Missouri.

More information on the webinar and registration details are available at www.cfsei.org.

Editor, Framework Online
MARKETPLACE

Light-gauge Steel Design Tweaked to Hit the ‘Sweet Spot’ for Mid-rise Buildings

The hybrid system uses light-gauge steel to resist gravity and concrete shear walls to resist seismic forces.

When the Sparc apartment in Bellevue is finished this summer, the 104-unit building will have a contemporary skin that disguises a new hybrid structural engineering system. The system, designed by Bellevue structural engineering firm Cary Kopczynski & Co., tweaks the light-gauge steel construction method by incorporating a shear wall system that allows engineers to build taller without the higher costs of a reinforced concrete building.

Topping-off next week, the nine-story building is getting a lot of attention from local developers, architects and contractors, according to Cary Kopczynski & Co. marketing and visual design specialist Mari Al-Khazraji. "We are getting many requests for site visits, and some developers have even flown from California to check out how light-gauge is being implemented at the site."

While light-gauge steel construction has been around for years as a substitute for wood-framed low-rise apartment buildings and single-family homes, the Sparc building uses a modified version of traditional light-gauge steel design that allows the developer, Security Properties, to build a few floors higher than a wood-framed building and have greater floor space and ceiling heights.

The Sparc is a multi-building development that is part of the 16-block Spring District in Bellevue, which is an urban mixed-use neighborhood with residential, retail and office space being built in three phases.

The Sparc will have five apartment buildings. But because it is taller than the adjacent apartments, the nine-story light-gauge steel building will be the only one of its kind in the development.

Continued next page …
“The light-gauge hybrid system we have used is in the sweet spot for buildings between six to 10 stories,” said Cary Kopczynski & Co. Principal Joe Ferzli. “A lot of developers are really interested in knowing more about it.”

Ferzli said the Cary Kopczynski & Co. design uses light-gauge steel framing in a manner that other designers and developers have overlooked for commercial buildings. “Our application of light-gauge framing has been used in limited applications on the West Coast due to a misunderstanding of the system limitations,” Ferzli said. “The concept of using the concrete floor on metal deck, without joists, and the concrete shear walls to carry the lateral seismic loads makes this system competitive for residential and hotel applications up to 10 stories.”

Traditionally, light-gauge steel is used for bearing walls and floors. In this method, shear walls use strap bracing, Sure-Board and hold-down anchors.

On the Sparc project, Ferzli altered that formula by calling for concrete shear walls and a more efficient flooring system. The flooring system forgoes the traditional use of floor joists and instead uses a metal deck topped with concrete.

“This simplified hybrid system — where gravity forces are resisted by light-gauge steel and seismic forces resisted by concrete — makes this construction system cost effective,” he said.

The concrete shear walls have a higher lateral capacity than light-gauge steel shear walls. “We reduced the amount of shear wall requirement to a handful of walls,” he said. By eliminating the need for floor joists, the jumbo floor deck spans between bearing walls are up to 20 feet — reducing the floor depth and increase ceiling heights. The total floor thickness is about 5 inches, he said, compared with the traditional wood-flooring deck thickness of about 14 inches.

In addition, the system saves on labor costs because subcontractors can navigate easily through the structural system by reducing the number of light-gauge steel shear walls, he said.

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Josh Richards, a structural engineer with KPFF in Portland, said his firm recently used light-gauge structural steel on the eight-story Cameron Apartments in Portland, designed by SERA Architects.

He said the structural system for the Cameron consists of a configuration similar to the Sparc, using concrete shear walls to resist lateral loads and light-gauge steel bearing walls for gravity support.

But, instead of long-span metal deck and concrete for the floor structure, KPFF used a Hambro floor, which provides a composite slab and steel joist system spanning from the corridor walls to the exterior.

The Hambro system, made by Canam Buildings of Saint-Georges, Quebec, allows contractors to pour concrete flooring on more than one level at a time.

The framing walls were prefabricated off-site, improving the construction schedule, he said. The apartments are one of the few light-gauge steel commercial projects in Portland.

The project was completed early this year, and the general contractor was Bremik Construction.

Richards said KPFF is looking into using the light-gauge structural steel system on six other Portland projects.

"We see light-gauge construction more in Seattle than Portland," Richards said, "but more and more people are looking into this type of construction because people are always looking for ways to save money and provide more economical structural systems in buildings.

"It's another tool to look at how a project can pencil out," he said.

Ferzli said Kopczynski & Co. will use the company's hybrid light-gauge steel design on three upcoming projects in Denver and possibly a few more in the Midwest.
Ferzli said he believes the hybrid design will catch on for mid-rise buildings because the International Building Code limits wood-framed buildings to five stories, and concrete buildings are more expensive.

“The concept of using the concrete floor on metal deck and concrete shear walls to carry the lateral seismic loads and use a jumbo deck without joist for the floor makes this system competitive for residential/hotel applications up to 10 stories,” he said.

The general contractor on the Sparc is Walsh Construction Co.

**MARKETPLACE**

**Six-Story Building Put to Earthquake Test**

Researchers at the University of California, San Diego rocked and rattled a six-story steel frame building on a giant shake table Wednesday to see how the structure would withstand major earthquakes.

The towering building jolted, shuddered and let out a hollow, grinding sound but remained standing as drones peeked in its windows. The water heaters and at least some of the flat-screen TVs seemed to remain in place, though researchers still need to review the drone footage to see exactly how the building fared inside and out.

The event was a simulation of the 6.7-magnitude Northridge quake. That temblor caused heavy damage to the Los Angeles area in 1994.

The test is part of a $1.5 million, three-week series of tests aimed at determining whether the lightweight steel structure is a better option than wood frame structures for tall, residential buildings in earthquake-prone areas like California.

The six-story structure built in about a week and designed to replicate a multi-family residential building is the tallest building of its kind to ever undergo such tests. It is equipped with appliances, such as water heaters and stoves, which could potentially ignite a fire during an earthquake.

"What we are doing is the equivalent of giving the building an EKG to see how it performs after an earthquake and a post-earthquake fire," UC San Diego structural engineering professor Tara Hutchinson said.

Over the next few weeks, the building will undergo more intense simulated quakes, including California's 7.2-magnitude Cape Mendocino earthquake in 1992 and the 8.8-magnitude temblor in Maule, Chile in 2010.

*Continued next page*
Later, researchers from Worcester Polytechnic Institute will set rooms on fire to test the frame's resistance.

Hard-hatted scientists, engineers, earthquake safety experts and news media witnessed the tests Wednesday. Small drones flew in and around the building to map the structure and assess damage. More than 250 sensors, more than 40 video cameras, and a GPS system were also in the building, gathering data. Some sensors are sensitive enough to detect movements caused by the wind.

Researchers also want to know whether drones equipped with heat-detection cameras could be used to find survivors and assess damage after earthquakes and the fires that often follow the temblors.

As part of the tests, researchers will ignite pans of heptane, a liquid fuel, in eight rooms on the second and sixth floors to achieve temperatures as high as 1,000 degrees Celsius — almost 2,000 degrees Fahrenheit. Using temperature probes and video cameras, the researchers will assess how damage from the simulated earthquakes affects the fire protection systems.

The engineers expect the building to fare well in all the tests, in part because the structure is lighter than a concrete building of the same height, making it more flexible and easier to move with the shaking rather than resist it.

At the end of the testing, the building will be put to its biggest test — a simulated earthquake that is stronger than what the structure was designed to withstand. The largest building of this construction type tested before on the giant shake table was a two-story residential structure in 2013.

The project is supported by a coalition of government agencies, foundations and industry partners including the U.S. Department of Housing and Urban Development, the California Seismic Safety Commission and partners from the steel industry and insurance companies.

MARKETPLACE

April 2016 Construction at $1,133.9 Billion Rate

The U.S. Census Bureau of the Department of Commerce announced today that construction spending during April 2016 was estimated at a seasonally adjusted annual rate of $1,133.9 billion, 1.8 percent (±1.3%) below the revised March estimate of $1,155.1 billion. The April figure is 4.5 percent (±1.6%) above the April 2015 estimate of $1,085.0 billion. During the first 4 months of this year, construction spending amounted to $334.8 billion, 8.7 percent (±1.5%) above the $307.9 billion for the same period in 2015.

Private Construction
Spending on private construction was at a seasonally adjusted annual rate of $843.1 billion, 1.5 percent (±0.8%) below the revised March estimate of $855.9 billion. Residential construction was at a seasonally adjusted annual rate of $439.7 billion in April, 1.5 percent (±1.3%) below the revised March estimate of $446.3 billion. Nonresidential construction was at a seasonally adjusted annual rate of $403.5 billion in April, 1.5 percent (±0.8%) below the revised March estimate of $409.6 billion.

Public Construction
In April, the estimated seasonally adjusted annual rate of public construction spending was $290.8 billion, 2.8 percent (±2.5%) below the revised March estimate of $299.2 billion. Educational construction was at a seasonally adjusted annual rate of $70.0 billion, 2.5 percent (±3.9%)* below the revised March estimate of $71.8 billion. Highway construction was at a seasonally adjusted annual rate of $89.4 billion, 6.6 percent (±7.2%)* below the revised March estimate of $95.7 billion.

Source: U.S. Department of Commerce, June 1, 2016
Future Buildings need Environmental Product Declarations

Charles Robinson examines the critical role of the Environmental Product Declaration (EPD) in designing genuinely sustainable buildings

The battle to persuade mainstream opinion that sustainability matters is now largely won. But one day, we may look back on this as the easy bit. Why? Because another problem looms: how can we accurately measure it?

Construction is a particularly complex case, with its vast web of inputs affecting so many areas that sustainability must address, from energy, materials and land use to water, waste and pollution. Yet sustainability clearly matters in building design, and not just from an environmental perspective. Sustainable buildings can be cheaper to run, easier to let and more attractive to investors.

The ultimate goal, perhaps, would be to award buildings a sustainability rating that’s as easy to understand as the one for your washing machine. What we need to get there, more than anything, is information. Lots of it; authoritative, detailed and properly audited — so architects can design buildings from the earliest stages to sustainability criteria laid down by LEED (Leadership in Energy and Environmental Design), BREEAM (Building Research Establishment Environmental Assessment Method) and others. This is where the Environmental Product Declaration, or EPD, comes in.

First, let’s rewind a little. What exactly is an EPD? An EPD is a document detailing a product’s impact during its whole life cycle. It isn’t a certification of environmental credentials per se, but a map of the product footprint, from raw material, through manufacturing, logistics and impact during use, to end-of-life recycling. So-called “generic” EPDs assess the footprint of a typical product of a certain type; a typical electric oven, say, or a typical mechanical lock. They provide valuable information for the design process.

Continued next page …
However, products validated by a generic EPD can be manufactured anywhere, with a multitude of components, finishes, dimensions and so on. A generic EPD only gives a loose indication of a product’s environmental impact. They are useful; an impression of the landscape. A “product-specific” EPD, on the other hand, is like an Ordnance Survey map.

These upgraded EPDs detail a product’s precise environmental impact based on a unique bill of materials. They are intensive and time-consuming to create, involving a complete life-cycle study of a single product, manufactured in a specific way. But they give architects the tools to make a properly informed choice. In LEED, BREEAM and similar green building certifications, a product-specific EPD can be worth twice as many credits as its generic equivalent.

Their value recognizes that, without this kind of detail, it’s impossible to accurately assess environmental performance. Take an example from my own company, the global leader in door opening solutions ASSA ABLOY. The recent EPD for our SMARTair™ wireless escutcheon details everything from the embodied carbon of the complete product and impact of carton and foam packaging, to the recycling potential of its steel and zinc content, among much, much more. It runs to 10 detailed pages. Across our group, we have now published 250+ product-specific EPDs, covering mechanical locksets, cylinders, door closers, floor springs, multi-point locks, doors, handles, hinges, and mechatronic and many other access control solutions. Our EPDs are independently researched by a third party, and then verified by the Institut Bauen und Umwelt (IBU) in Germany.

Creating a mass of trustworthy EPDs has required major investment, of course. It demands adherence to comprehensive standards — in ASSA ABLOY’s case, the ISO 14025 and EN 15804 standards, which are recognised internationally, including by LEED and BREEAM. Meeting these standards ensures environmental performance can be compared fairly across products and manufacturers — which can be critical for building procurement and design.
Armed with a product-specific EPD, architects and construction companies can work with clients to build and run more sustainable buildings. If building sustainability ratings are ever to be as easy to understand as food labels, the EPD is a critical ingredient in the recipe.

Charles Robinson is Sustainability Manager at ASSA ABLOY Group EMEA.

Source: Security News Desk, June 16, 2016
MARKETPLACE

Construction of the Tallest Wood Condo Tower in North America Officially Begins

QUEBEC CITY, June 14, 2016 /CNW Telbec/- This morning, a ground-breaking ceremony was held for the Origine green condo project, set to become the tallest solid wood condo tower in North America. Quebec Premier Philippe Couillard and Quebec City Mayor Régis Labeaume both attended the event to celebrate the project, which has positioned Quebec as a leader in eco-friendly wood construction. Origine will also be the flagship building of the Pointe-aux-Lièvres ecodistrict, in the heart of Quebec City. The 41-metre-tall building, to be delivered by the end of the year, will feature 12 storeys made of gigantic cross-laminated timber above a concrete ground floor. It will house 92 condo units.

Origine’s success speaks to the openness of Quebec City residents, who are willing to try innovative eco-friendly concepts. Origine is clearly in a league of its own, with natural-gas air and water heating, radiant floors, a smart garbage chute and—most importantly—a matchless location that offers the best of city and nature living.

Partnerships to bolster Canada’s wood construction leadership

The project could not have come to life without the vision and involvement of the Government of Canada, the Quebec government, the Ville de Québec and many research partners, including FPInnovations. Origine is the first major project in a promising new industry that can meet demand for sustainable buildings.

The project was selected by Natural Resources Canada and received $1.175 million in funding under the Tall Wood Building Demonstration Initiative. That federal program helps to cover some of the additional construction costs of such buildings, including research and development projects.

Continued next page …
The Quebec Ministère des Forêts, de la Faune et des Parcs paid for unprecedented fire-resistance testing to demonstrate the concept's structural stability in the event of a fire. The Régie du bâtiment du Québec never compromised on safety and compliance as it analyzed and eventually approved the project with great open-mindedness. In the wake of the Origine project, the Quebec government even released a construction guide for medium- and high-rise buildings.

As for the Ville de Québec, it designed the Pointe-aux-Lièvres ecodistrict and authorized construction of Origine.

**What they said**

"By supporting innovation and the use of new techniques in the construction of wood-based high-rise buildings, we are supporting the growth of a strong and competitive forestry industry. These investments in research and development lead to cleaner, more sustainable construction practices, all while promoting the creation of employment opportunities in the forestry sector. Innovative, entrepreneurial ideas like these are integral to our fight against climate change."

—Jim Carr, Canadian Minister of Natural Resources

"I wish to congratulate Origine's promoters on their boldness. To build a wood structure that tall, they had to demonstrate the project's feasibility and compliance with all safety standards. Today's ground-breaking ceremony shows that the Pointe-aux-Lièvres ecodistrict project is moving forward at a very good pace, with surfacing work set to begin soon and the July delivery of an all-wood, 59-unit social housing complex."

—Régis Labeaume, Quebec City Mayor

"Buyers looking for a unique lifestyle fall in love with the project's exceptional location and innovative concept. Origine is a distinctive, one-of-a-kind project that we are extremely proud to be building."

—André Huot, NEB Consortium representative

Source: *Edmonton Journal, June 14, 2016*