CFSEI
COLD-FORMED STEEL ENGINEERS INSTITUTE

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CFSEI ANNOUNCES WINNERS OF 2020 DESIGN EXCELLENCE AND CREATIVE DETAIL AWARDS

WASHINGTON, DC —The Cold-Formed Steel Engineers Institute (CFSEI) has announced the winners of its 2020 CFSEI Design Excellence and Creative Detail awards. The awards are usually presented during the annual CFSEI Expo, but this year's event, originally scheduled for May 19-20 in Tampa, Florida, was canceled due to the COVID-19 pandemic.

CFSEI Design Excellence Awards recognize projects that exemplify excellence in the structural design of new or renovated structures utilizing cold-formed steel (CFS) products. Entries are judged on design creativity, technical innovation and overall project excellence in cold-formed steel utilization. The 2020 CFSEI Design Excellence Award winners are:

Category: Residential/Hospitality

- First Place—raSmith—Hub State Street—West Lafayette, Indiana

Category: Municipal

- First Place—ADTEK Engineers, Inc.—Ballston Quarter Pedestrian Walkway—Arlington, Virginia

Category: Commercial

- First Place—raSmith—Stew Leonard's—Paramus, New Jersey

Details on the CFSEI Design Excellence Award winners are included on CFSEI's website at https://www.cfsei.org/design_excellence_award_winner_2020.

CFSEI Creative Detail Awards recognize a cold-formed steel detail that exemplifies creativity or ingenuity to solve a design challenge. The 2020 CFSEI Creative Detail Awards are presented to:

- First Place—The Leffler Group—Pena Hyatt Place—Denver, Colorado
- Second Place—Cold-Formed Steel Expert, LLC—The Prado—Sandy Springs, Georgia
- Third Place—ADTEK Engineers, Inc.—The New International Spy Museum—Washington, DC

Information on the CFSEI Creative Detail Award winners are included on CFSEI's website at https://www.cfsei.org/creative_detail_award_winner_2020.

"Cold-formed steel provides a cost-effective solution for a wide variety of construction projects," said Robert Wills, P.E., managing director of the Cold-Formed Steel Engineers Institute. "Our goal in conducting this competition is to share these solutions and stimulate new ideas for architects, engineers and other design professionals. We appreciate all the entries that were submitted."

Design Excellence Award Projects

First-Place Award / Residential/Hospitality—raSmith—Hub State Street—West Lafayette, Indiana

Hub State Street is an 11-story luxury student housing option near Purdue University. The modern mixed-use building is an eclectic mix of studio, 1-, 2-, 3- and 4-bedroom units. The exterior utilizes prefinished prefabricated panels with all cold-formed framing and connection elements located dimensionally on the building. The structure has 400 different prefabricated panels and 200 different prefabricated Stolite finish panels, all precisely dimensioned and fabricated to fit, like a puzzle. Two different trellises, located at the top parapet and a building corner, wrap two elevations and span across multiple panels.

First-Place Award / Municipal—ADTEK Engineers, Inc.—Ballston Quarter Pedestrian Walkway—Arlington, Virginia

The Ballston Quarter Pedestrian Walkway replaced the Festival Bridge across busy Wilson Boulevard. Structural steel tubes support a waving zinc roof which encloses an interior space surrounded by glass curtain walls, a polished concrete floor and a faceted wood-look ceiling.

The bridge connects the new Ballston Mall to the Metrorail station. The unusual curved shape was achieved using conventional CFS and proprietary curved framing as well as concave stud bracing. No two studs are alike at the top of the structure, which was the most difficult curve to achieve. On-the-spot solutions were required to meet installation and budget deadlines.

First-Place Award / Commercial—raSmith—Stew Leonard's—Paramus, New Jersey

The Stew Leonard's grocery chain operates stores along the Eastern Seaboard, but this site marks its first venture into New Jersey. R.A. Smith, Inc. was contracted to provide structural analysis and design for two exterior silos, trademarks of Stew Leonard's, which feature curved cold-formed shear walls that are wrapped in two layers of plywood and finished with stucco. The freestanding 50-foot-tall silo, built behind the store, consists of six stacks of three shear wall panels. The smaller silo is located on the front canopy near the entrance and consists of two 7-foot-tall segments, each with four shear wall panels.

Creative Detail Award Projects

First-Place Award—The Leffler Group—Pena Hyatt Place—Denver, Colorado

The project includes a 10-foot-tall, 18-foot-wide, partially freestanding roof parapet wall. It utilizes a built-up CFS girt along the back face and CFS brace anchored to a nearby concrete core wall. The south portion of the wall uses 14-inch-deep studs and continues into a five-story wing wall which protrudes from the building, while the north portion has a six-inch wall bypassing the roof from the level below with a 10-foot cantilever. A site visit revealed that the wall did not have the additional support that had been requested, so the roof joists could not transfer the lateral reaction from the wall if kicked. The Leffler Group designed a solution to support the 10-foot-tall roof wall while minimizing disturbance to already installed roofing, parapet cap and flashing, and exterior finishes.

Second-Place Award—Cold-Formed Steel Expert, LLC—The Prado—Sandy Springs, Georgia

This project focused on the design of the new facade of the existing concrete masonry unit (CMU) building incorporating the unique architectural feature of the wingwall and the eyebrow. It involved placing CFS wingwall cantilevers up above the CMU framing and CFS cantilevers out beyond the corner of the building, tying back the wingwall for both lateral and

vertical loads to the CMU wall over two feet away, designing for corner zone and parapet winds, and dealing with a limited width for work with a total thickness of 12 inches, leaving only eight inches for CFS framing.

<u>Third-Place Award</u>—ADTEK Engineers, Inc.—The New International Spy Museum—Washington, DC

The design features for this project include a glass "veil" suspended in front of an enclosed "black box" exhibition space that allows the movement of people to be visible from both inside and outside. A critical design requirement was to frame a triangulated fin at veil at each level that was supported from the building structure independent of the sloping tube to ensure differential movement between the sloping tube and cold-formed steel fin. For each CFS post, rigid clip connectors and fasteners at the bottom and slide clip connectors and fasteners at the top were used to accommodate the dead load and lateral wind loads.

The Cold-Formed Steel Engineers Institute comprises hundreds of structural engineers and other design professionals who are finding a better way to produce safe and efficient designs for commercial and residential structures with cold-formed steel. CFSEI members work together to develop and evolve industry standards and design methods, produce and issue technical bulletins, and provide seminars and online training to improve the knowledge and skills base of engineers and design professionals. For more information, visit https://www.cfsei.org/.

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