CONGRATULATIONS TO THE WINNERS OF THE CEBA BUILT BY THE BEST AWARD

Stellar and Maple Reinders Scoop Awards

The Controlled Environment Building Association names Stellar of Jacksonville, Florida and Maple Reinders Constructors Ltd. Of Ontario, Canada, as the recipients of the 2024 CEBA Built By The Best Award. The awards were presented during the CEBA Annual Conference and Expo held in Ponte Vedra Beach, Florida, in November.

The nominations are organized into two categories – projects under $35 million and over $35 million. Stellar won the award for its over $35 million state-of-the-art 136,000 square foot, 140-foot tall, frozen food storage facility extension in Russellville, Arkansas.

Maple Reinders Construction Ltd won the award for its under $35 million, 160,000 square foot, multi-use facility constructed for Dot Foods Canada of Ingersoll, Ontario.

"Congratulations to Stellar and Maple Reinders that emerged from an extremely competitive field," says GCCA President and CEO Sara Stickler. "CEBA members are THE experts in building and delivering facility innovation for the cold chain, and that is why we are so pleased to recognize excellence through the Built By The Best Award program each year."

Daryl Wolfenbarger, Project Manager at Americold, holds the Stellar-Americold teams' 2024 Built By The Best winner's plaque.

Joseph Sabourin, Project Director, Food and Beverage at Maple Reinders represents the 2024 Built By The Best winning team of Maple Reinders Construction Ltd-Dot Foods.

THE MAGNIFICENT SEVEN: CEBA BUILT BY THE BEST FINAL REVIEW

Meet the finalists for the 2024 Built By The Best Award.

By Keith Loria

Now in its ninth year, the Built By The Best Award, established by the Controlled Environment Building Association (CEBA) – a key partner of the Global Cold Chain Alliance (GCCA) – celebrates the creativity and expertise of those involved in exceptional construction or renovation projects for controlled environment buildings worldwide.

This year, the competition attracted hundreds of impressive submissions from CEBA members, with seven projects selected as finalists for the 2024 award.

Here's a glimpse of the seven companies that contended for this year's Built By The Best accolade. Full case studies of the winning projects as well as the finalists will be featured in Cold Facts throughout 2025.

Cubic 33 Group
for Emergent Cold LatAm

Emergent Cold LatAm, a temperature-controlled food storage and logistics company in Latin America and the Caribbean, hired Cubic 33 Group to construct a frozen food warehouse located in the city of Talcahuano in Chile. Situated in a region globally recognized for its seafood and fruit production and exports, the warehouse is a strategic enhancement to the local cold chain infrastructure, featuring a storage capacity of 3,164,424 square feet and 37,000 pallets.

Cubic 33 Group was faced with a tight deadline, requiring the simultaneous design, permit acquisition and construction start. It also dealt with an unusually heavy rainy season, complicating tasks including earth movement and footings. Seismic considerations added to the challenges.

Throughout the job, Cubic 33 Group incorporated numerous technologies, materials and methodologies to improve the efficiency of the facility. For example, it utilized steel-fiber reinforced concrete for the slabs, allowing the company to reduce the number of construction joints. It also added heated slaps and rapid doors with air curtains, which reduced air exchange and minimized ice accumulation within the chambers.

Evans General Contractors
for RL Cold

Evans General Contractors completed a cold chain storage facility for RL Cold on a 29-acre site in Wilmington, North Carolina.

The fully customized build-to-suit project offers adaptability with various temperature ranges, a deep dock for value-added services and a commitment to sustainability. The LEED Gold-certified facility showcases building technologies, such as a CO2 transcritical refrigeration system, VNA racking, in-rack blast freezing, solar panels and rainwater reclamation.

The VNA slabs, engineered and poured by Fricks, were laid on top of 40 psi under-slab insulation in 8-foot wide strips throughout the freezers and QFM room. To optimize production, Evans coordinated the daily pouring of these strips while considering the impact on other trades. These pours not only affected access for trades within critical areas but also required allowing sufficient time for the slabs to cure before moving equipment onto them.

Notable for operational efficiency is the integration of backup power for the refrigeration system in addition to life safety devices connected to emergency generators. This setup allows the facility to operate at 75% capacity for 24 hours during a power outage, ensuring a continuous flow of products while permanent power is restored.

Fisher Construction Group
for Agile Cold Storage

Agile Cold Storage engaged Fisher Construction to design and build an additional 92,000-square-foot ASRS (automated storage retrieval system) cold storage facility at its operations in Gainesville, Georgia.

The facility was conceived as a large blast freezer capable of rapidly cooling the approximately 50% of products arriving warm from the processing facility. With a capacity of 48,260 pallet positions, Fisher constructed a rack-supported building featuring six cranes and designed to maintain a final operating temperature of -10 degrees.

Fisher also took on the design and construction of a 24,150-square-foot loading dock equipped with an automated conveyor system. Most of the refrigeration equipment, including six ALTA units, was situated on the roof of the loading dock, adding 435,000 pounds of weight to the structure.

An innovative aspect of the project design was the incorporation of ASRS buildings that could be situated at a significantly lower elevation than the loading dock. This design feature, combined with the automation cranes'

ability to retrieve products from any height within the system, allowed Fisher to reduce the overall building height to comply with local height restrictions while optimizing the site layout.

2024 CEBA Built By The Best Award Recipient

Maple Reinders Construction Ltd.
for Dot Foods Canada

Dot Foods Canada, Inc., enlisted Maple Reinders Construction Ltd. to design and build a new 168,875-square-foot distribution center in Ingersoll, Ontario, which will also serve as its flagship Canadian headquarters.

The facility features an 85,000-square-foot freezer maintained at -18°C to -30°C as part of a sustainably focused CO2 refrigeration system, a 30,000-square-foot cooler/cold dock set between 10°C and 3°C, a 45,000-square-foot ambient storage and distribution production area, and 10,000 square feet of office space.

In the refrigerated and ambient storage areas, a concrete slab was designed as a joint-free slab that uses additives for a sustainable approach, minimizing the concrete material needed to achieve the required density. This method not only lowers maintenance costs but also created a more hygienic environment suitable for food-grade use.

The facility's refrigeration systems and underfloor heating were designed to work in a harmonious loop. Thermal breaks interact with the panels, slab, and operations, allowing the systems to function effectively both inside the building and with the surrounding environment. Balancing these interconnections, ensuring the end-product's performance, and prioritizing safety on the construction site were central considerations throughout the design and build phases.

Thought was given to sustainability throughout the project. For instance, using Primx jointless concrete in the construction provided notable environmental and economic advantages. This material accelerated construction by up to 30%, leading to shorter project timelines and reduced resource consumption. More significantly, Primx concrete resulted in up to 70% lower CO2 emissions compared to traditional concrete, aligning with the project's sustainability objectives.

Primus
for RL Cold

RL Cold has successfully completed its latest cold storage distribution facility in Ridgeville, South Carolina. Primus' design-build experience, along with its collaborative approach and problem-solving capabilities, led RL Cold to select Primus for the 295,000-square-foot project.

Among the features of the new facility are an automated de-slat conveyor system, very narrow aisle racking that requires 85% flat floors and in-rack fire suppression, a cascade ammonia CO2 system, fully convertible freezers operating between -10° and 35°, and a QFM blast freezer designed specifically for protein products.

The Ridgeville project achieved LEED Gold certification. Notable features include a 1-megawatt rooftop solar array, a 50,000-gallon rain capture tank that cools refrigeration coils, and electrical vehicle chargers. Additional sustainable practices included heat island reduction measures, the use of low-emitting materials, and the incorporation of environmental product declaration products.

A significant addition to the project was the 1-megawatt solar array, reflecting RL Cold's sustainability commitment, and is expected to offset a large portion of the facility's energy costs. The installation of the 50,000-gallon rainwater capture tank cooled condensers during peak demand, resulting in a 30 percent boost in energy efficiency while halving water requirements compared to traditional cooling tower systems.

Sina Construction
for Congebec

By hiring Sina Construction, Congebec realized its goal of opening a new CO2-based refrigeration plant in Mascouche, Quebec, Canada.

The primary products cooled and frozen in the warehouse are meat products, dairy products and seasonal goods that have high risk of spoilage and temperature abuse as well as strict requirements for freezing. Therefore, the facility was designed with multi-temperature rooms to accommodate different product types.

Measuring just over 9 million cubic feet, it stands as the largest warehouse in Congebec's portfolio to date. The selection of CO2 as the refrigerant is a significant factor in the building's energy efficiency,

The new freezer is equipped with a loading dock featuring access to 30 doors. Key installations include three refrigeration plants totaling over 700 tons, two adiabatic coolers with variable speed fans, two electric boilers for auxiliary heating, 46 evaporators for climate control, and extensive air conditioning and ventilation systems. Additional features comprise 13,000 linear feet of piping, over 500 valves, and more than 400 probes and sensors integrated into the refrigeration system.

An automated central control system manages all climate maintenance within the facility, while the building's overall design meets the latest codes and regulations.

2024 CEBA Built By The Best Award Recipient

Stellar
for Americold Logistics

When Americold sought a 136,000-square-foot expansion of its refrigerated distribution center in Russellville, Arkansas, to accommodate the increasing demands of a food company customer, it turned to Stellar.

The new facility, standing at 140 feet tall, features an ASRS complete with gantry and loop connections that link the warehouse to the loading docks. It also incorporates automation technology, an ammonia refrigeration system, insulated metal panel exterior walls and an advanced fire protection system.

A standout feature of the facility is its fully automated truck unloading system designed to streamline logistics operations by automating the transfer of goods from trucks to storage. This significantly reduces the time and labor involved, enhancing efficiency and addressing labor shortages while providing a scalable solution to adapt to future growth and market demands.

Building Information Modeling (BIM) was utilized throughout the project lifecycle, facilitating precise coordination among various trades, including structural, mechanical, electrical, and automation teams, while helping to minimize potential conflicts.

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