VRECAST WALL AND FLOOR SYSTEM

CASE STUDY-1

Cleveland Global Peak Center (GPPC)

Over 210,000 sq. ft. facility in Cleveland, Ohio

OVERVIEW

Faced with retrained wall thickness and interior space limitations challenges, the original 4" precast wall spanning 14ft faced several structural design challenges with stresses exceeding allowable limits. The Vrecast Wall Panel System was implemented to deliver full structural integrity, thermal efficiency, and long-term durability within the existing wall profile.

Use of the Vrecast system eliminated the need for redesign and reconfiguration of the primary structure to accommodate concrete cladding, preserved the original architectural intent, and maintained the project schedule. As a result, the design team and general contractor selected Vrecast as the optimal system, demonstrating its efficiency, adaptability, and performance in complex structural and cladding applications.

ROLE OF VRECAST

The VREcast system was selected to meet the project's demanding structural and aesthetic criteria while accelerating construction:

Composite Components:

Cold-formed steel (CFS) is structurally integrated with concrete using Glass Fiber Reinforced Polymer (GFRP) bars for effective structural integrity, thermal efficiency and durability.

Architectural Integration:

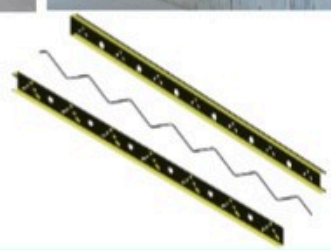
Panels produced with smooth form finish without compromising on performance or constructability.

Thermal Mitigation:

The Vrecast system inherently eliminates thermal bridging through a ¼" isolation gap, delivering superior thermal performance with 4" of R-5/in spray insulation.

MEP Management:

Features within the CFS to accommodate all mechanical, electrical, and plumbing (MEP) services within the limited spacing between 6" metal studs.



OUR SOLUTION

One of the key engineering milestone in this project was the application of the VREcast wall panel system, an advanced high-thermal and light-weight structural composite facade technology with aesthetically pleasing exterior finishes.

Comprising cold-formed steel bonded with high-performance concrete, the panels offered superior strength-to-weight ratio, enhanced thermal efficiency, and rapid installation advantages. Their adoption significantly optimized the construction process by reducing material handling, on-site labor, and overall project durability and aesthetic versatility.

Venu Chada, P.E.
Founder/Owner of VREcast

Contact Us Today!
513-633-8863
Email us at: vgrchada@outlook.com
https://www.vrecast.com