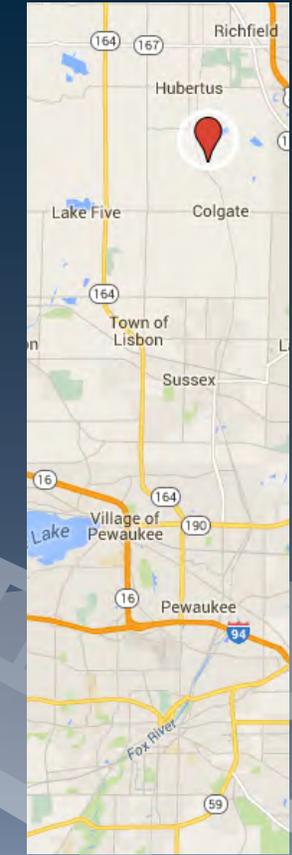


Notable Concrete in Milwaukee, WI, and Vicinity



Compiled by ACI Committee 124, Concrete Aesthetics

Designed and produced by ACI Publishing Services

Special thanks to Jack Gibbons, FACI, Concrete Materials Consultant, for lining up the submissions.

Questions or comments? Please e-mail the editor, Michael Paul, at mpaul@larsenlandis.com



Hoan Bridge and Lake Interchange

I-794 at the Milwaukee River Inlet
Milwaukee, WI 53202

The \$182 million rehabilitation of the 2 mile (3.2 km) long Hoan Bridge and Lake Interchange was completed in only 15 months. The Hoan Bridge incorporated 34,000 yd³ (26,000 m³) of concrete and 11,000,000 lb (4,990,000 kg) of stainless steel reinforcing to complete 63,600 ft² (5900 m²) of re-decking.

High-performance concrete was used in the new bridge deck, which was replaced under traffic using staged construction and a movable barrier. The project team's state-of-the-art design methodology, innovative solutions including major steel retrofits, and extensive, continuous collaboration with stakeholders ensured an exceptionally successful project that will provide economic vitality for Milwaukee far into the future.

Project credits: Michael Baker International, Inc., Engineer, and Walsh Construction, General Contractor.

Submitted by Brian A. Roper, Southeast Freeways Construction Supervisor, Wisconsin Department of Transportation, Waukesha, WI.



Kilbourn Tower

923 East Kilbourn Avenue
Milwaukee, WI 53202

Kilbourn Tower is a 33-story condominium tower located in downtown Milwaukee. The elegant high-rise features 74 condominiums, ranging from 2200 to 7800 ft² (200 to 725 m²) each. The 215,000 ft² (19,900 m²) building also includes four levels of underground parking for 154 cars, as well as a dramatic two-story atrium reminiscent of a five-star hotel.

The Kilbourn Tower project was the first building project in Milwaukee to use 12,000 psi (83 MPa) concrete.

Submitted by Josh Skogman, Director of Quality, Mortenson Construction, Brookfield, WI.

Photography courtesy of John J. Korom Photography



Milwaukee Art Museum

700 North Art Museum Drive
Milwaukee, WI 53202

This 125,000 ft² (11,600 m²) cast-in-place addition was constructed of concrete, steel, and glass. The structure was designed and built to serve as a high-profile and widely recognized symbol for the City of Milwaukee. The dramatic design includes louvered wings enclosing the reception hall, a restaurant with a 180-degree lake view, and double masts anchoring the building and its cabled pedestrian footbridge.

The addition also features an 11,000 ft² (1020 m²) vaulted exhibition area, a 90 ft (27 m) high glass and steel reception hall with a sunshade that can be raised and lowered, a 300-seat lecture hall, and a multi-use park.

Construction of the 100-space underground parking area required radius-bent steel reinforcing bars and nonrepetitive, manually bent stirrups. The ceiling of the parking structure models the arches and sloped ceilings of the addition.

Project credits: Santiago Calatrava Architects & Engineers, Architect; Kahler Slater, Inc., Architect of Record; Graef, Structural Engineer; and CG Schmidt, Inc., Construction Manager and Concrete Contractor.

Submitted by Mark Schmidt, Director of Field Operations, CG Schmidt, Inc., Milwaukee, WI



Milwaukee Public Market

400 North Water Street
Milwaukee, WI 53202

The 21,600 ft² (2000 m²) Milwaukee Public Market, located in the historic Third Ward, is a place where locally owned businesses can sell fresh and prepared foods.

Concrete forms were lined with gap-spaced cedar boards to create a concrete finish reminiscent of older concrete construction. Exterior steel columns were encapsulated in tapered cast-in-place concrete jackets. Cedar boards were used for the 12 ft (3.6 m) tall forms. With a top opening of only 4 to 6 in. (100 to 152 mm), there wasn't enough room to operate a vibrator in and around all the reinforcing bars and the steel column. Collaboration among the contractor, structural engineer, and concrete supplier led to the use of self-consolidating concrete for the columns.

Another challenge was the interior concrete floor finish. The design called for a unique and "indescribable" color pattern that was neither uniform nor integral. Pigment was broadcast and worked in using a variety of unconventional finishing techniques, with the architect "lending a hand." After four 10 by 16 ft (3 by 4.8 m) mockup slabs, the intent was achieved and the floors have the desired character and consistency.

Project credits: Kubala Washatko Architects, Architect; Harwood Engineering, Structural Engineer; CG Schmidt, Inc., General Contractor and Concrete Contractor.

Submitted by Mark Schmidt, Director of Field Operations, CG Schmidt, Inc., Milwaukee, WI



ProHealth Care D.N. Greenwald Center

240 Maple Avenue
Mukwonago, WI 53149

The ProHealth Care D.N. Greenwald Emergency Department project consisted of a 65,650 ft² (6100 m²) addition and 10,490 ft² (975 m²) of renovations.

The project was the first health-care project in Wisconsin to use a voided concrete slab system, in which air voids, reinforcing steel, and concrete are integrated in a two-way structural slab. Slab panels are assembled at the manufacturer's facility where a concrete base slab is placed, the bubbles are placed within the reinforcing bar, and the entire panel is shipped to the site for installation. Once panels are in place, additional concrete is placed surrounding the bubbles.

Advantages of the voided concrete slab system include 35% reduction in dead weight, material efficiency and reduced cost, ease of building systems installation, faster construction, safer installation, and lower risk.

Submitted by Josh Skogman, Director of Quality, Mortenson Construction, Brookfield, WI

Photography courtesy of C&N Photography and Mortenson Construction



The Gingery Residence

621 Violet Court
Colgate, WI 53017

Overlooking a wooded ravine, this new weekend retreat provides a quaint and cozy living space. The composition directs the residents from the internal spaces to the woods around them. The central living area incorporates an expansive window wall on the south, sheltered by deciduous trees in the summer, bringing the natural surroundings into the home.

The design aligns with resident's program requests, such as minimizing the building's presence from the street, energy efficiency, and green design. Further, the structure complements the landscape, rather than making a negative impact. The home embraces the surroundings.

Continuous insulated concrete forms were used on the foundation, lower level, and upper level exterior walls to provide a high R-value and thermal mass, without breaks in the insulating envelope.

Project credits: Wydeven Architects, Architect; Excalibur Builders, General Contractor; Pierce Engineering, Structural Engineer; and Durabond Concrete and Coatings, Concrete Contractor.

Submitted by Bruce Wydeven, AIA, Wydeven Architects LLC, Milwaukee, WI
Photography courtesy of Edmunds Studios



Map

Click on the map below to view the Google map.

