



CC's Project of the Year

THIS DISPLAY OF DECORATIVE CONCRETE LIES ON A REMOTE NORWEGIAN COAST.

The city of Ålesund (pronounced Ole-sund), with a population of 43,000, is located on several islands connected by bridges and undersea tunnels along the western coast of Norway. After the city burned down in 1904, it was rebuilt with concrete buildings—both residential and commercial—to avoid such a tragedy from happening again. The houses were built in a beautiful Art Nouveau style (Jugend style). Ålesund is a town that has come to love concrete.

Fishing and farming have been the primary occupation in the Ålesund area, but today ship building and the oil industry also have strong presences. The entire country of Norway has become wealthier as a result of oil wells along coastal areas and in the North Sea. The economic crisis that has gripped most of the world doesn't exist here and the construction industry thrives.

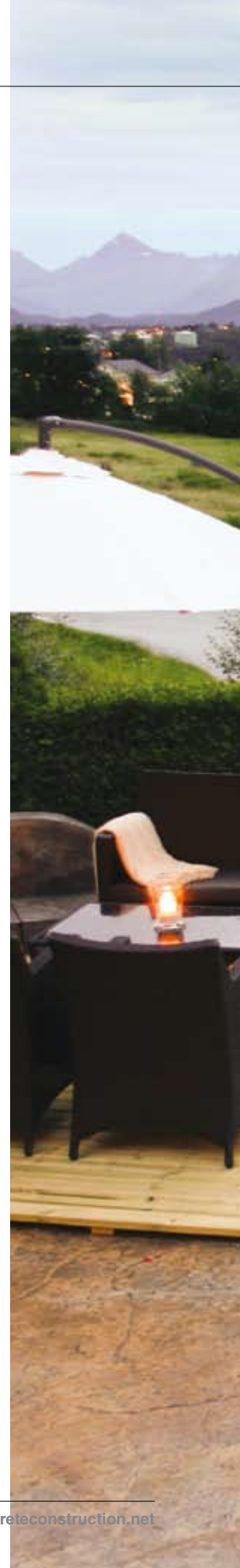
Dekorbetong

Ove Nordstrand, owner, Dekorbetong Ltd., Nordstranda, Norway, says concrete has been

part of his life for more than 40 years in the Ålesund area—both before and after his technical education. He has experience with concrete formwork, carpentry, and construction management. In 1984, he started a ready-mix concrete producer business to serve the bridge projects and undersea tunnels that were being built in the area. It was during this time he experimented with ways to apply decorative treatments with concrete, without knowing that companies in the U.S. already had developed tools for stamping patterns.

In 1992 he attended a concrete exposition in Copenhagen and discovered that he could buy stamps and materials designed for decorative work. He started Dekorbetong Ltd. in 1995 after he closed the ready-mix plant, deciding to focus on decorative concrete. He thinks he has one of the first companies in Norway involved with decorative concrete work. He says although his company isn't large—it employs three full-time crew members and hires additional help for larger projects—they have completed a lot of work.

Visit www.concreteconstruction.net for more details and exclusive photos of these projects, as well as all of the entries to this year's Decorative Concrete Project of the Year awards.





If the concrete in this photo was plain, this beautiful scene would look very different.

PHOTOS: OVE NORDSTRAND



The most difficult part of this project was the construction of these steps. Two placements were needed: one for the walls and structure under the steps and one for the risers. Both placements took place on the same day. Nordstrand's "free hand" forming system creates natural looking steps.

Decorative concrete is relatively new to Norway. Nordstrand's company travels to towns throughout his area to install work but he has begun to train and franchise other concrete contractors in towns large enough to support the decorative market. Today his company installs colored concrete, stamped concrete, diamond polished concrete floors, concrete countertops, acid staining—even concrete window sills. But the company's most interesting product, the one which captured the attention of the CONCRETE CONSTRUCTION editorial staff, is what he refers to as "vertical concrete construction by free hand."

Vertical concrete by free hand

During the years he owned the ready-mix company, Nordstrand experimented



with concrete mixes, hoping to develop a mix that could be used for vertical applications without slumping. He settled on a mix with 3/8-inch top-sized aggregate including well-graded stone and sand sizes in order to minimize void spaces between them, following a gradation curve. The mix also included a more than usual amount of portland cement. By the time he started his company, he already had a concrete mix for doing vertical work, so his biggest challenge was to develop

the craft skills needed to offer clients something very unique.

After reading this you might be asking yourself the question, "Why bother?" The simple answer is that you achieve shapes at reasonable cost you can't create with formed concrete. Three-dimensional rounded surfaces are easy to construct when they are "free handed," when you have the right mix design and skill to shape them properly.



The concrete garden

With great views of the ocean sound and the mountains, homeowners Jorunn and Tore Aakre from Ellingsoy in Ålesund wanted an outside veranda to take advantage of the scenery—adding an outside living area. Nordstrand met with Jorunn to work out the concept, then Nordstrand provided the final design and drawings. The project included an addition to their hillside home, a second-story level concrete deck, retaining walls, a fountain and spa, planters, seating areas, a textured patio deck, and a curving stairway leading to the upper floor of their house. Every concrete element would include colored, textured surfaces.

Nordstrand says it took four workers four days to complete their portion of the project. Other contractors constructed the second level deck and the concrete block retaining walls, which he provided the vertical decorative work. His team completed all the vertical elements first. Ready-mix that wasn't too stiff was delivered and dumped on the ground. Workers shoveled it into position for the planter curbs and batter-retaining walls. Then they created the shapes with hand floats, applied a handshake color, stamped



Forming curving batter-walls is very difficult. Using Nordstrand's "vertical concrete construction by free hand" method makes the job much easier.

impressions, and finished the work with a sealer application. Some of the battered walls were as high as 4 feet.

Their greatest challenge was the curving steps leading to the second-story deck. Nordstrand says they filled the void under the steps with polystyrene foam to support the steps during placement and until it developed its design strength—removal afterward created a small storage room. They placed $\frac{3}{8}$ -inch rebar (10 mm) on an 8-inch grid (20 cm) in the walls and in the structural layer of concrete under the steps.

Two separate placements created the steps, both performed on the same day. When the first load of ready-mix concrete arrived, workers placed it in the wall areas on either side of the steps and on top of the polystyrene in the structural layer under the step risers. They used shovels and hand floats to accomplish this. Then they applied dry-shake color hardener and stamped textures on the surfaces. A second load of ready-mix was used to construct the actual steps, starting with the top one and then the second, down to the last. Each curving step was shaped with hand floats and troweled, colored with dry-shake color hardener, and stamped with a texture.

Closing thought

When you think of Norway and places like Ålesund, visions of mountains, fjords, glaciers, and dramatic views come to mind. Decorative concrete isn't what you expect to see, especially in an out-of-the-way place like Ålesund. But Nordstrand hopes to change all that by teaching his skills to contractors from other towns, completing Norway's beautiful surroundings.

It isn't often that CC sees an all new decorative technique—we went all the way to Norway to see this one.



Work starts by creating a pile of concrete and then shaping it. Shown here, workers use drywall scrapers to begin the shaping.



2010 Honorable Mentions

By Sharon Rehana



CITY CENTER

Las Vegas

CONTRACTOR | T.B. Penick & Sons Inc.,
San Diego, Calif.
www.tbpenick.com

T.B. Penick & Sons, in collaboration with MGM Mirage Design Group and landscape architects, worked to design 480,000 square feet of the 18 million-square-foot City Center in Las Vegas. The idea was to create decorative concrete walls of the casino circle and adjoining water displays, as well as the majority of the project's exterior flatwork. The project included 10,000 yards of concrete; 480,000 square feet of flatwork that includes glass-seeded Lithocrete, Bomanite imprint, and integral and gray broom finish concrete; and 10,000 linear feet of pour-in-place walls, formliners, and smooth finish walls. The majority of the work took six months to complete.

The mixed-use complex sits between the Bellagio and Monte Carlo hotels, with nearly a ¼ mile of Las Vegas Strip frontage. The entire project was completed in December 2009. Jen Miller, project manager for Tishman Construction Corp. of Nevada, the owner's representative, expressed appreciation, remarking, "The quality of the decorative work is something I don't believe Vegas has seen before, especially in public traffic areas."

THE ULTIMATE MANCAVE

Wapakoneta, Ohio

CONTRACTOR | Artistic Concrete Coatings,
Wapakoneta, Ohio
www.artisticconcretecoatings.com

This project came to life when the owner expressed his disappointment of not being able to put down real hardwood flooring in his mancave, a den-like oasis complete with fireplace, wet bar, and comfortable seating—after installing radiant heat in his concrete floors. Artistic Concrete Coatings suggested using products that simulate hardwood flooring.

Using a 24-inch diamond grinder, the crew prepared the surface by vacuuming and masking the surrounding area and applying a layer of black modified acrylic concrete. They taped out the wood planks and sprayed a light tan layer of modified acrylic concrete. While the material was still wet, they used a small kitchen broom to drag across the surface to simulate a wood grain texture. Next, they used small 2-inch chip brushes to make the knot holes. After it dried, they pulled the tape, vacuumed, and drilled 3/8-inch nail holes at the end of each plank. Two crew members handstained each board for eight hours to achieve a more natural look. Finally, on the fourth and fifth day, they applied two coats of UV-resistant epoxy and then an application of a chemical- and abrasion-resistant coating. The end result was a simulated hardwood floor that received more compliments than any other aspect of the mancave.





2010 Honorable Mentions



RED ROCK VISITOR'S CENTER—WALKWAYS *Las Vegas*

CONTRACTOR | Floor Seasons Inc., Las Vegas
www.floorseason.com

A vision that seemed overwhelming at first was in the end, art you can walk on. This was Floor Seasons' first government project with the Parks and Recreations Division as well as a historical project for Nevada. One of the concepts was earth, wind, and fire. Using chemical stains, each element was distinguished by cutting lines into the concrete in various widths, which led the way to each of the elements pavilion. Once in each pavilion, visitors interact with displays that demonstrate how that element affects and works with Red Rock.

In the earth pavilion, four colors were chosen to represent the rocks that are indigenous to the region. On top, the words, "Native People" and "Burrows," as well as an 8-foot-long snake were carved into the structure. In the fire pavilion, terra cotta stain was used and flames were cut in after it was sealed to give it some extra life. The wind pavilion simple two large swirls featured two shades of blue. In addition, a 150-foot sidewalk leading to a large 22-foot-diameter circle was completed. Leading up to the sidewalk, petroglyphs, including a rabbit, turtle, snake, and a lizard, were etched simply with black stain, giving them a silhouette look. Finishing off the project is a map of the historical trails in Red Rock on the circle.

CHRONIC TACO

Las Vegas

CONTRACTOR | Floor Seasons Inc., Las Vegas

Readers' Choice
AWARD

With the most votes this year, Chronic Taco is the 2010 Readers' Choice Decorative Project of the Year.

Having previously worked for one of the owners of Chronic Taco

at a different location, Floor Seasons Inc. was up for the challenge of designing a fun and hip floor for the new location in Las Vegas. The first step was to remove pre-existing tiles. Next, the art was printed on vinyl and the star made in metal. A chalk line was used to get to the center of each piece of art for perfect placement on the floor. Then the crew stuck each piece down and cut through the vinyl, which was later pulled up to finish any lines that weren't touching or deep enough. After taping and filming the walls, the crew cleaned and prepped the floor. They started with the art because they were prestaining and presealing them before the field stain went down. This technique allowed for fewer flaws in the finished product. Next, water-based stain was used for the art to match a specific color the clients wanted in the logo.

After applying the Tinturas with either an airbrush or chip brush, the crew sealed all of the art so it would be protected from acid stain. Next, two coats of blue stain with blue ironite was applied to accent areas. After residue, the crew put down two coats of sealer in the field and three coats of sealer on the art. In between coats of sealer, they grouted all joints and art with a hot blue grout, making the art pop. The project then was sealed with four coats of wax, proving an amazing end result. **CC**

