

Tilt up walls tilt down construction costs

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(Cincinnati, Ohio) - The buzz about skyrocketing construction costs has forced those in the industry to get creative or die. Neyer Construction's lifeblood is tied to tilt-up construction, a method used since the 1940s to construct industrial buildings quickly and cheaply. But the company today is latching onto a national movement to prove that tilt-up is a fast, cost-effective and environmentally conscious method for constructing buildings of all types and sizes. Tilt-up is like any other construction method, because the foundation is placed and floor slab formed before the walls are built. The difference is that walls are cast out of concrete panels lying flat on the ground and then lifted all at once to accept the building's roof. In the 1940s and '50s, tilt-up became popular in California and Texas for large warehouses and industrial facilities. In the '70s, it spread to the Midwest and Florida. But not until recently has it been used for other building types, such as churches, retail centers, schools and office buildings. "If you can draw the shape you want, we can cast it," said John Neyer of Neyer Construction. Innovations in forming systems and mobile cranes have made the method a viable option. Benefits include the reduced cost for an all-concrete wall, less manpower needed to build the structure, less construction waste, use of all-natural materials and energy efficiency. But most important is cost. "As the price and lead time of steel have gone up and met the price of concrete, it's a no-brainer with regard to using tilt-up," said Pat Moore, director of architecture for Al Neyer Inc., a development company. John Neyer said the average cost of a tilt-up wall is \$8 per square foot compared to \$12 per square foot for a masonry wall. The time it takes to construct the wall is 25 percent less, and 50 percent less labor is needed. And compared to a metal building, it requires less maintenance because it can withstand storm damage, will not dent or rust and can be painted a minimum of every five years. Tilt-up buildings also hold heat better because of the massing of materials in concrete. Concrete is a recycled and reusable material. These elements are important to sustainable design and the U.S. Green Building Council's Leadership in Energy and Environmental Design standards, in which certification is becoming widespread. Moore said tilt-up also has become more popular because contractors can make it look more attractive. "People are not just satisfied with the industrial look. We're able to add a whole level of features that make this a corporate office look," he said. One example is the U.S. Bank building near Lunken Airport. Another is St. Ursula Academy's gymnasium and convocation center designed by GBBN Architects using tilt-up technology. "Using a less expensive wall construction, we were able to put more inside the building," said Jane Goode, the project's manager. Neyer Construction recently completed the Central Light building, visible from Interstate 71 in Mason, and a Petsmart store in Zanesville, Ohio. It's adding on to OKI Systems' corporate headquarters in Evendale and will begin the Milford headquarters of Glenny Glass next week. The company bid 483,000 square feet of tilt-up in the second half of 2005 and 465,000 square feet in the first two months of 2006. According to the Tilt Up Construction Association, 753 million square feet of buildings used tilt-up nationally in 2005 compared to 664 million square feet in 2004, a 13 percent increase. In addition to bidding more tilt-up buildings, Neyer is positioning his staff as tilt-up experts. He is one of 17 certified tilt-up technicians in the state of Ohio and the only one in southwest Ohio. Neyer employs a certified supervisor, one of two in the state. And he recently sent three more employees to be trained as supervisors. Neyer Construction also is certified by the American Concrete Institute to educate architects, developers and building owners on the architecture and benefits of tilt-up. "It shows a professionalism to the industry," he said.