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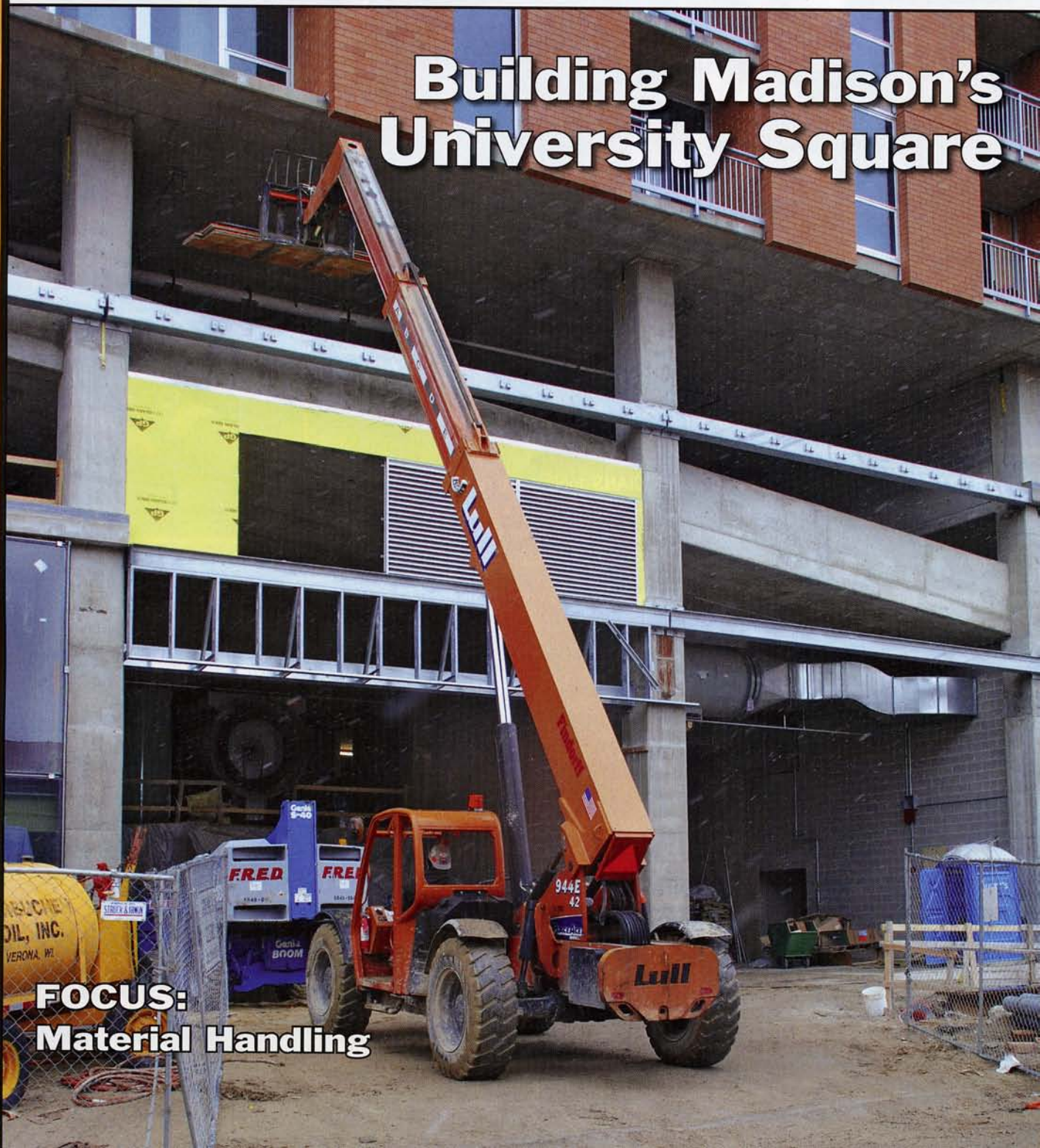


Building Madison's University Square

FOCUS: Material Handling

Madison's *Magnificent* University Square

Impressive $190-million mixed-use project moving ahead, on schedule.

Story and photos by Mike Larson, editor

It is the largest mixed-use project in Madison, Wis., history – a 1.1-million-square-foot facility that combines retail space, housing, University of Wisconsin offices, and parking in a 13-story complex now under construction in the heart of Wisconsin's capital city.

Owned jointly by Executive Management, Inc., Steve Brown Apartments and the University of Wisconsin – Madison, this 3.4-acre, $190-million project dominates the 700 block of University Ave.

It will house 143,000 square feet of retail facilities, 360 apartments, 250,000 square feet of university offices, and 425 parking stalls.

The first two floors will contain retail space and parking. Perched atop one side of the retail space will be 10 stories of apartments. Atop the opposite side will be nine stories of university facilities.

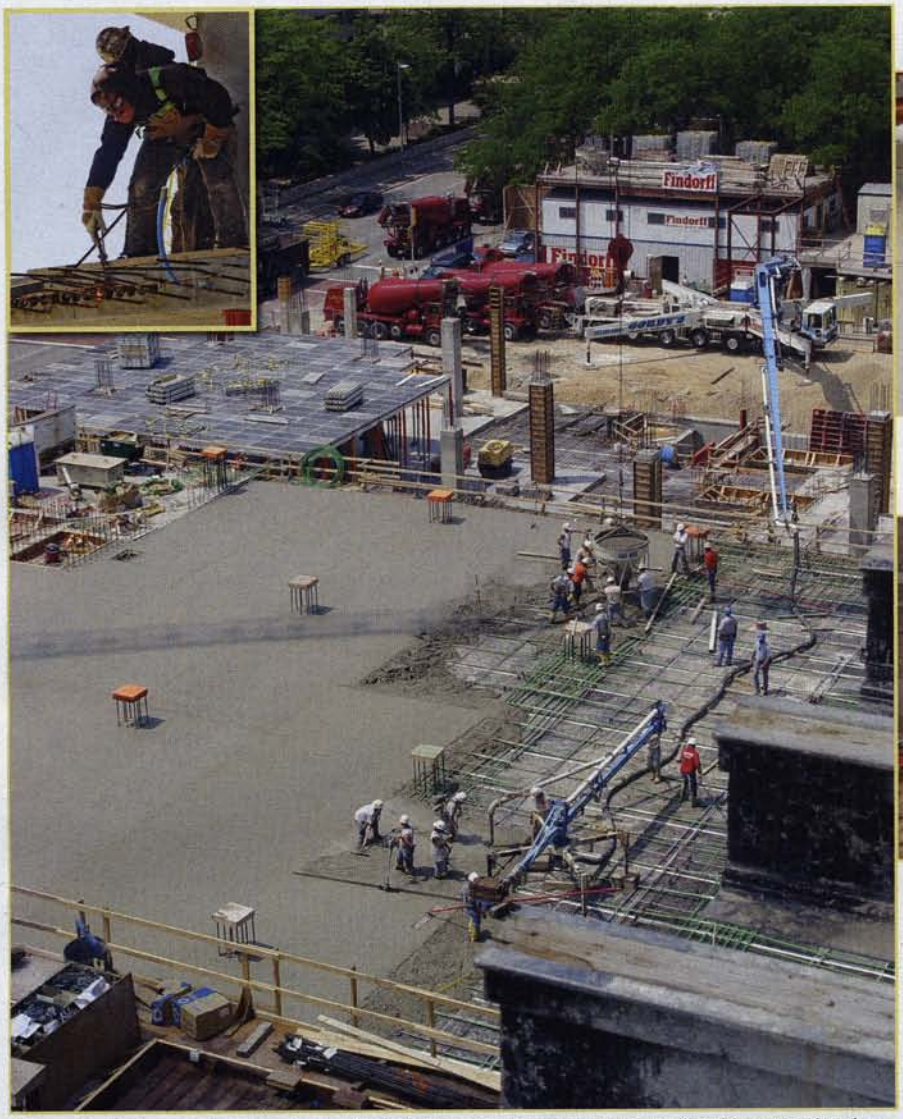
Madison's J. H. Findorff & Son, Inc., is the general contractor managing construction of the project, which broke ground June 2, 2006.

The apartments will be ready for occupancy on August 14 of this year. The two-story retail space will be set for businesses to move in by sometime in fall. And the university's office space will be done by December 1, according to Mike Langowski, the Findorff superintendent overseeing this project.

Top: This section of University Square will have retail space on the ground and second floors, topped by nine floors of University of Wisconsin facilities.

Far left: Looking from the opposite direction, one can see the work being done on the tower. The red frame is for a material-handling hoist that services construction crews working this section of the building.

Left: A view of University Square's housing tower, taken earlier in the project, shows the red material hoist serving construction on this section, as well as the two towercranes that dominated the site for more than a year.



Above: Earlier in construction, Findorff made several large concrete pours like this one. It involves both a pumping system and pouring with a crane-supported bucket. In all, Findorff placed more than 48,000 cubic yards of concrete for the project.
Inset: A welder trims off excess cable after a floor has been post tensioned.

Working on a floor whose structure has been completed, a workman installs steel studs for interior dividing walls.

As the building speeds toward completion, a backhoe is helping construct a utility tunnel that runs alongside it. The completed tunnel will run seven blocks to carry utilities to University Square and a number of University of Wisconsin buildings in the area.

The university's space will include not only administrative offices, but also the student health service clinics and offices, the student activities center and the university's radio station.

One of University Square's unique features will be a "green" roof terrace on the third floor above the retail space.

The terrace will encompass a pedestrian mall, patios, benches, gardens, and other park-type features. It will also help control storm water runoff, with the gardens absorbing some of the water from rain and snow.

Construction Team Operates Smoothly

Although Findorff has done much of the construction work with its own crews, it has also overseen the 25 subcontractors that have joined in to

Left: Two lattice-boom towercranes were workhorses on the project, handling all types of materials, moving equipment, and pouring concrete from two-yard buckets.

perform specialty work ranging from excavating to electrical, plumbing and fire-protection-system installation.

Some of those subcontractors are Hooper Construction (plumbing), Westphal & Co. (electrical), NAMI (air handling), and Ahern Fire Protection, all from the Madison area. In all, more than 380 workers have participated in the construction.

The building sits over a one-story deep underground parking garage and is supported by poured-concrete foundations and support columns.

All of its floors are constructed of cast-in-place, post-tensioned concrete poured and tensioned by Findorff.

The entire project is expected to require about 48,500 cubic yards of poured concrete.

Larger pours were handled with pumping systems, and smaller pours were done using two-yard buckets handled by the project's two towercranes or by lattice-boom crawler cranes.

Material handling was done using telehandlers, the towercranes, crawler cranes, and building-mounted elevators.

According to Langowski, the success of this ambitious project has come from the combination of a good plan and excellent cooperation among all the contractors working the project. ■

An operator's eye view from alongside one of the telehandlers.

Amount Of Material Used Gives Perspective Of Project's Scale

To get a feel for the size of the University Square project, take a look at some of the materials used to construct it.

- **116,000 square feet of pre-cast concrete**
- **159,000 square feet of glass**
- **568 miles of electrical wire**
- **57 miles of electrical conduit**
- **13,000 electrical receptacles**
- **12,000 light fixtures**
- **4,000 light switches**
- **500 electrical panel boards**
- **7.2 million pounds of rebar**
- **412 tons of post-tensioning cable**
- **Housing tower has 14 miles of water pipe and 9 miles of drain pipe**
- **48,500 cubic yards of concrete, enough to pave a 4-foot-wide sidewalk 186 miles from Madison to Marinette**

Above: Telehandlers like this one have also been workhorse material handlers on the project. Their ability to telescope loads high up or far out provides the versatility needed on a project of this type.

Below: Now that most of the big pours are done and the towercranes have been dismantled, Findorff is completing smaller pours using buckets handled by the lattice-boom crawler cane still on site.