SUCCESS STORY

DAYTON SUPERIOR

Glasshouse Skylofts Tower is a Gem of a Precast Success

Glasshouse Skylofts is a 200-suite tower combining an urban lifestyle with the luxury, entertainment and amenities expected from a modern living space

Concrete walls were precast with a Sleeve-Lock rebar coupler along the bottom edge, ready to connect Dowel Bars and Dowel-Ins..

SUMMARY

The Glasshouse Skyloft project was created to increase the small-footprint residential options in downtown Winnipeg. Featuring units 435-822 sqft on 20 floors, it is designed to fit the modern aesthetic of the area and the "live green" philosophy of residents seeking an urban chic lifestyle. To meet structural and architectural design requirements, concrete elements figured prominently in the plans.

CUSTOMER

Haywood Concrete Products, Haywood Manitoba
www.haywoodconcrete.com

Urban Captial Group
http://www.urbancapital.ca/

PROJECT

Glasshouse Skyloft
www.glasshousewinnipeg.com

CHALLENGE

Originally designed as a cast-in-place project, Haywood Concrete Products made a proposal to the developer that by using precast load bearing panels manufactured at their plant, they could deliver the finished product to site and install in a fraction of time it would take poured-in-place. Structural load bearing precast panels requiring a continuous rebar splice connection between floors, with the ability to meet tight restrictions on how tall the panels can be for transportation.

SOLUTION

D410 Sleeve Lock Grout Sleeves were used at the bottom of each panel to connect the structural rebars from the panel below it. Once in place and grouted, the Sleeve Lock couplers provided continuous rebar connection from the 6th floor of the building all the way to the 21st. Since the panels were too

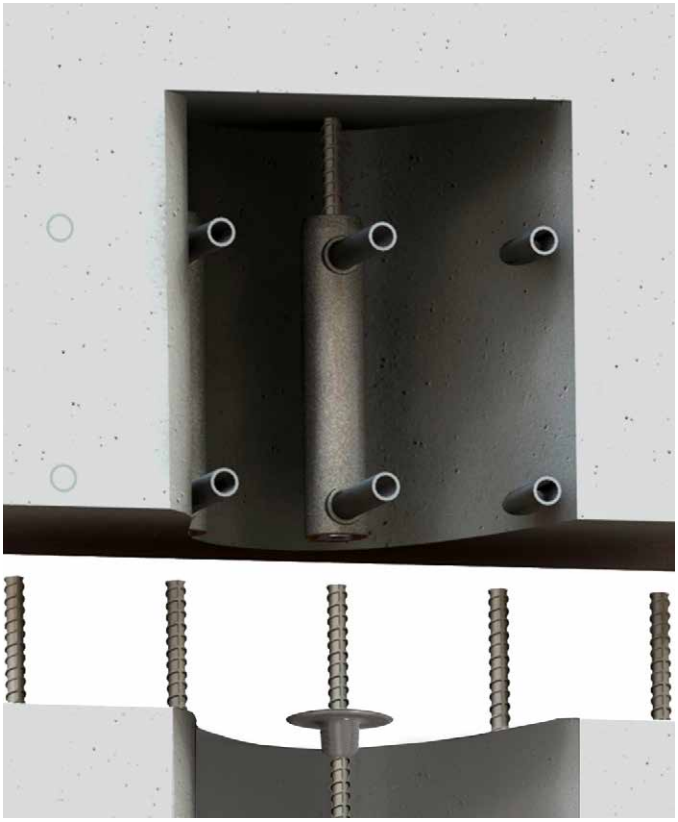
tall to transport with rebar protruding out of the top, Haywood precast utilized the Dayton Superior DB/DI rebar splice bars with the D101A Dowel bars being placed flush with the top of the panel. Once on site, D101 Dowel-Ins were installed to finish the splice from one panel to the other

RESULTS

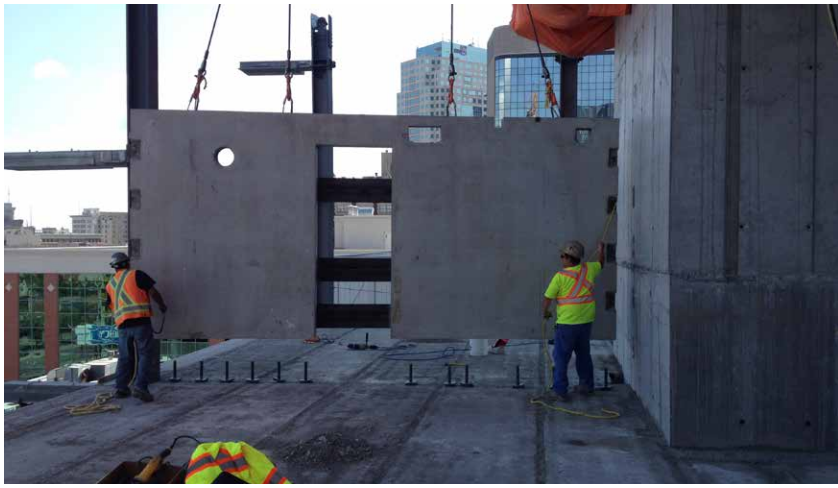
- Wall panels were manufactured at a plant and installed on site once cured to strength
- The process eliminates form setting and stripping labor of cast-in-place walls
- No forms needed to be lifted to the next level
- Once wall panels were installed, operations to add the next deck could begin

RESOURCES

Technical information is available in the Rebar Splicing Handbook and Technical Data Sheets posted on the Dayton Superior web site.



Cut-away rendering of D101 and D101A DB/DI connections with D410 Sleeve-Lock couplers similar to the project configuration.



Walls were lowered onto Dowel-Ins tied to the previous level.

Once set fully in place, grout is injected into the embedded sleeve to create a strong connection.

The load-bearing precast walls were aligned with braces.