



# OVERCOMING CHALLENGES USING HANDSET FORMWORK FOR CONDO FOUNDATION CONSTRUCTION

Ottawa, Ontario, Canada

2 Minute Read Time

## URBAN CONCRETE CONSTRUCTION OBSTACLES

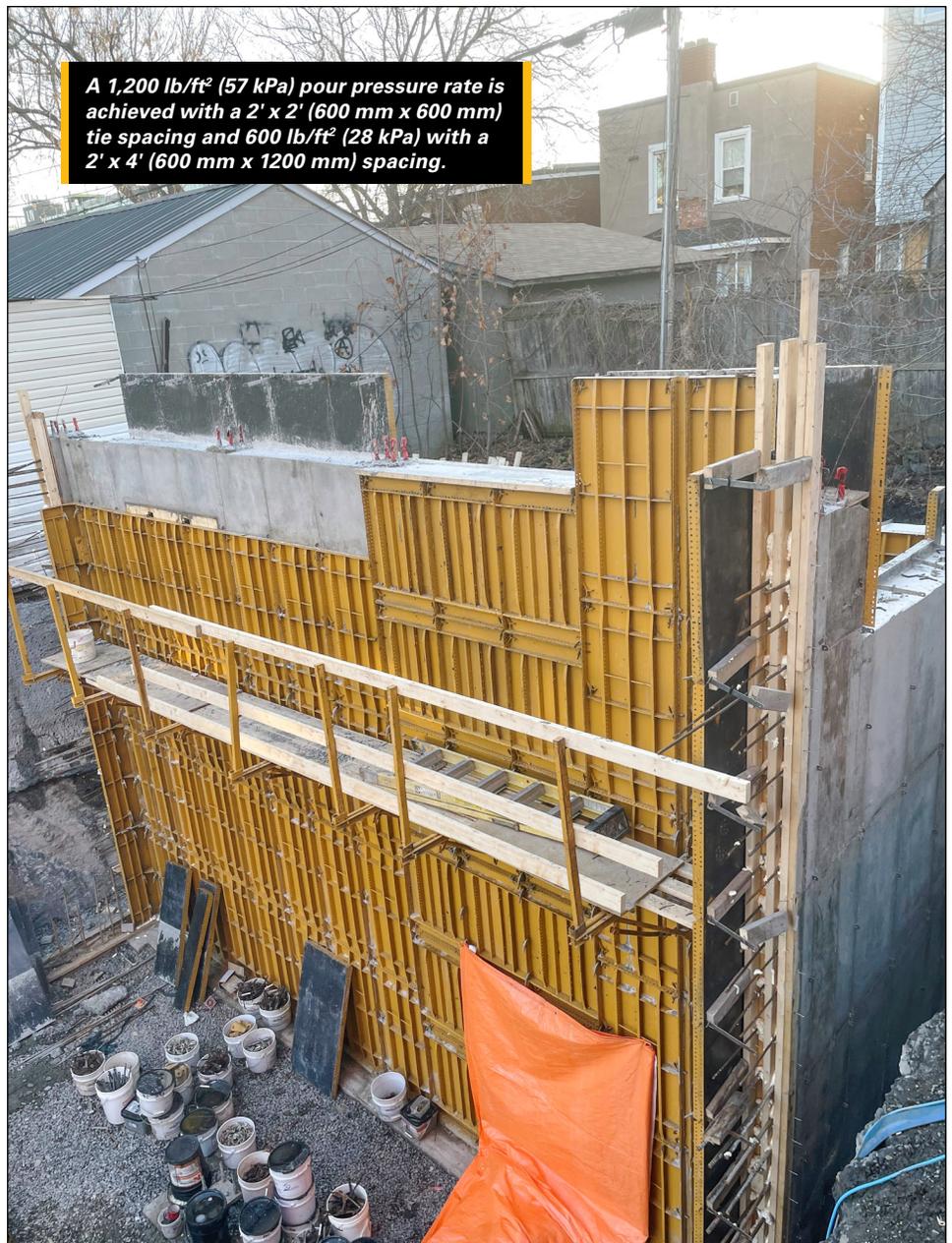
While building foundations for a new condominium development in downtown Ottawa, Canada, UNLTD Construction faced numerous obstacles. The proximity of neighboring foundations and overhead electrical wires made safety and accessibility to the site a challenge. To mitigate these challenges, shotcrete stabilization was used to reinforce the foundations of neighboring houses during the excavation process, but a solution still needed to be found to bring concrete formwork to the site.

## PORTABLE & EFFICIENT SOLUTION FOR COMPLEX FOUNDATION CONSTRUCTION

After collaborating with EFCO on a previous project, UNLTD Construction sought EFCO's expertise and experience to recommend a formwork solution. They needed a portable formwork option that could be transported by hand to the site and used repeatedly during the construction of the foundation. Removing the formwork posed an extra challenge because of the limited space in the excavation area and the inability to use a crane for lifting due to the overhead electrical wires restricting the site. EFCO recommended their handset formwork, **HAND-E-FORM®**.

## CONCRETE CONSTRUCTION WITH HANDSET FORMWORK

Construction began at the back of the structure, away from the main road. After carrying the formwork into the site, the first step involved placing concrete for a courtyard with exposed corners and varying heights, with the highest point being 5.50 m (18'-2"). HAND-E-FORM was configured to the necessary measurements of the project and then quickly cycled for the next pour. ▶

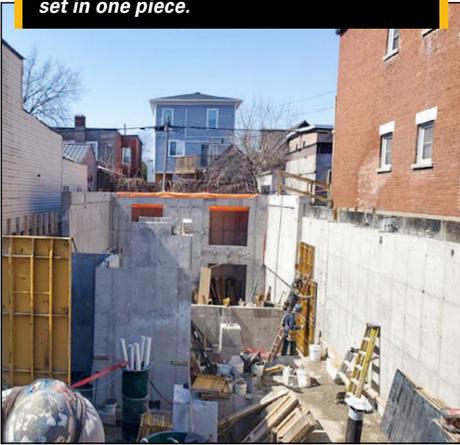


UNLTD was pleased with the HAND-E-FORM system and the as-struck concrete finish that was achieved.

### CONCRETE POURING PRECISION

Including a beam at the upper part of the second and third pours presented another obstacle for UNLTD. These concrete beams were cast at mid-point and top of the wall that would carry a steel structural floor. EFCO HAND-E-FORMS proved yet again to be the most appropriate solution for this task. The second phase involved constructing an elevator pit and multiple columns throughout the building. The formwork for the third pour was placed on top of the formwork used for the second pour. The combined height of these pours was 5.7 m (18'-9").

*At only 6 lb./ft<sup>2</sup> (29 kg/m<sup>2</sup>), HAND-E-FORM has steel alloy facesheet, steel stiffeners, and side flanges all welded together to set in one piece.*



### WHY UNLTD CHOSE EFCO

With the growing emphasis on infill developments to address urban sprawl, UNLTD needed a handset solution that was easily cyclable. The lightweight and easily transportable nature of HAND-E-FORM makes it suitable for use in areas with restricted entry, and its adaptability allows for the creation of different structural components. EFCO's handset formwork can be stacked for multiple elevations and consistently produces a superb concrete surface. EFCO's Quality products and Innovative solution was the perfect option for UNLTD to achieve the lowest in-place concrete cost.

### EFCO EQUIPMENT HAND-E-FORM®

**UNLTD CONSTRUCTION TEAM**  
Martin Gervais ..... Owner/Operator

**EFCO FORMWORK SPECIALISTS-GEORGETOWN**  
Alex Lacasse ..... Territory Manager  
Brendan Rayburn.....Field Supervisor  
Shah Khan, P.E. .... Engineer

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