Thank you for attending the presentation: The ABC’s of Modular and Prefabricated Construction

The following includes the presentation slides as well as some additional resources.
Accelerated Building Construction (ABC) for Mixed – Use Parking Structures

Presented by: Rob Paquette, Stubbe’s Precast
Brian J Hall, Canadian Precast / Prestressed Concrete Institute
Precast Concrete Builds on .... Accelerated Building Construction and Aesthetics!
Precast Concrete Builds on .... Accelerated Building Construction

ABC does this by incorporating:

• Modular and prefabricated construction methods for design and construction of permanent and/or moveable facilities,

• ABC provides a streamlined approach to every project where the advantages of manufacturing improves quality control and saves money for clients who need to maintain strict deadlines.
Modular Component Construction

• Modular component construction is an off-site based construction method, during which individual components are manufactured (or ‘prefabricated’) in a factory, transported to the site entirely complete and assembled on location.
Modular Component Construction

• With ABC construction a consultant and/or manufacturer are usually brought on board the same time the owner hires an architect or engineer,
• so this does require more time in advance to plan and provide feedback on design, but it all can all be done while the construction site is being prepared.
Rob Paquette, Stubbe’s Precast

Custom Precast Solutions
Modular Construction Components

Using precast concrete components together as a complete structural system creates a design in which the whole is greater than the sum of the parts.
Floor slabs

- Hollowcore slabs
- Double tees
Hollowcore Slabs

- Slim floor slab
- Integrated fire rating
- Multiple thicknesses available to suit span lengths
Hollowcore Spans

Max spans with residential loading

- 8” Hollow Core = 28 feet (8.5 metres)
- 10” Hollow Core = 38 feet (11.6 metres)
- 12” Hollow Core = 43 feet (13.1 metres)
- 14” Hollow Core = 48 feet (14.6 metres)
Double Tees

• Capable of long spans
• Heavy load carrying capacities
Floor Section

- Concrete topping
- 600 mm minimum
- See Detail A
- 5% slope minimum
- Structural T flange
- Precast inverted T-beam
- Design bearing pad so that compressive creep deformation does not cause debonding of topping over T-flange.
Supporting Structure

• *Delta beams*

• *Precast columns and beams*

• *Precast loadbearing interior and exterior walls*
Delta Beams

- Flush with underside of hollowcore slabs
- Integrated fire rating
Precast beams and columns

- Capable of supporting multiple levels of precast walls above
- Integrated fire rating
Precast loadbearing walls

- Multiple exterior finishing options available
Exterior wall panels below grade

- Open sites
Exterior wall panels below grade

- Zero lot line
Integration with Residential Towers
Integration with Residential Towers
Integration with Residential Towers
Integration with Residential Towers
Integration with Residential Towers
Maple Avenue Condo
Barrie, Ontario
Maple Avenue Condo
Barrie, Ontario
Maple Avenue Condo
Barrie, Ontario
Maple Avenue Condo
Barrie, Ontario
Maple Avenue Condo
Barrie, Ontario
Ridout Street Parking
Ridout Street Parking
Ridout Street Parking
Fanshawe Manor
Fanshawe Manor
Fanshawe Manor
Fanshawe Manor
Fanshawe Manor
Holiday Inn Express, Brantford
Holiday Inn Express, Brantford
Holiday Inn Express, Brantford
The Onyx at Barrel Yards, Waterloo
The Onyx at Barrel Yards, Waterloo
The Onyx at Barrel Yards, Waterloo
Brian J Hall, B. B. A., MBA | Managing Director
Canadian Precast Prestressed Concrete Institute
Vice Chair - Royal Architectural Institute of Canada Foundation
Finishes and Colours
Do You Know Your ABC’S
Finishes
Concept for a Project ...
…beautiful improvement to a warehouse…
Drawings are converted to CNC software.
CNC Milling machines work cutting the design onto a perfect replica.
CNC work completion.
So from the simple sketch...
...we have a perfect result.
Stain OR Paint?
Benefits of choosing stain:

• Penetrating - will **NOT** mask surface texture
• Water Repellent
• Durable
• 25 year Warranty
• Water-Based
• Low VOC Content
• No peeling, fading or frequent maintenance
• Mould and Fungus Resistant
Unlimited Colour Selection
OneFortyNine
Total Precast Apartment Buildings
Hamilton, Ontario
Precast Concrete is de-molded the next day and the texture is transferred on the concrete element.
Turn any picture into 3D Art.
Offering cost effective and brilliant result
Accelerated Building Construction (ABC)

In conclusion properly engaged, ABC modularized projects can also allow great artistic expressions in architecture and engineering by allowing normally uneconomic projects to proceed. Furthermore ABC offers the greatest opportunity to engage new technologies and new thought in better building.
Thank you for your time today
Questions: