

ERA

STRUCTURAL ENGINEERING

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ER-POST™ STRUCTURAL SYSTEM



A Smart Approach for Mid- to High-Rise Construction

OWNER BENEFITS

The ER-POST™ (Precast Open Space Truss) system provides:

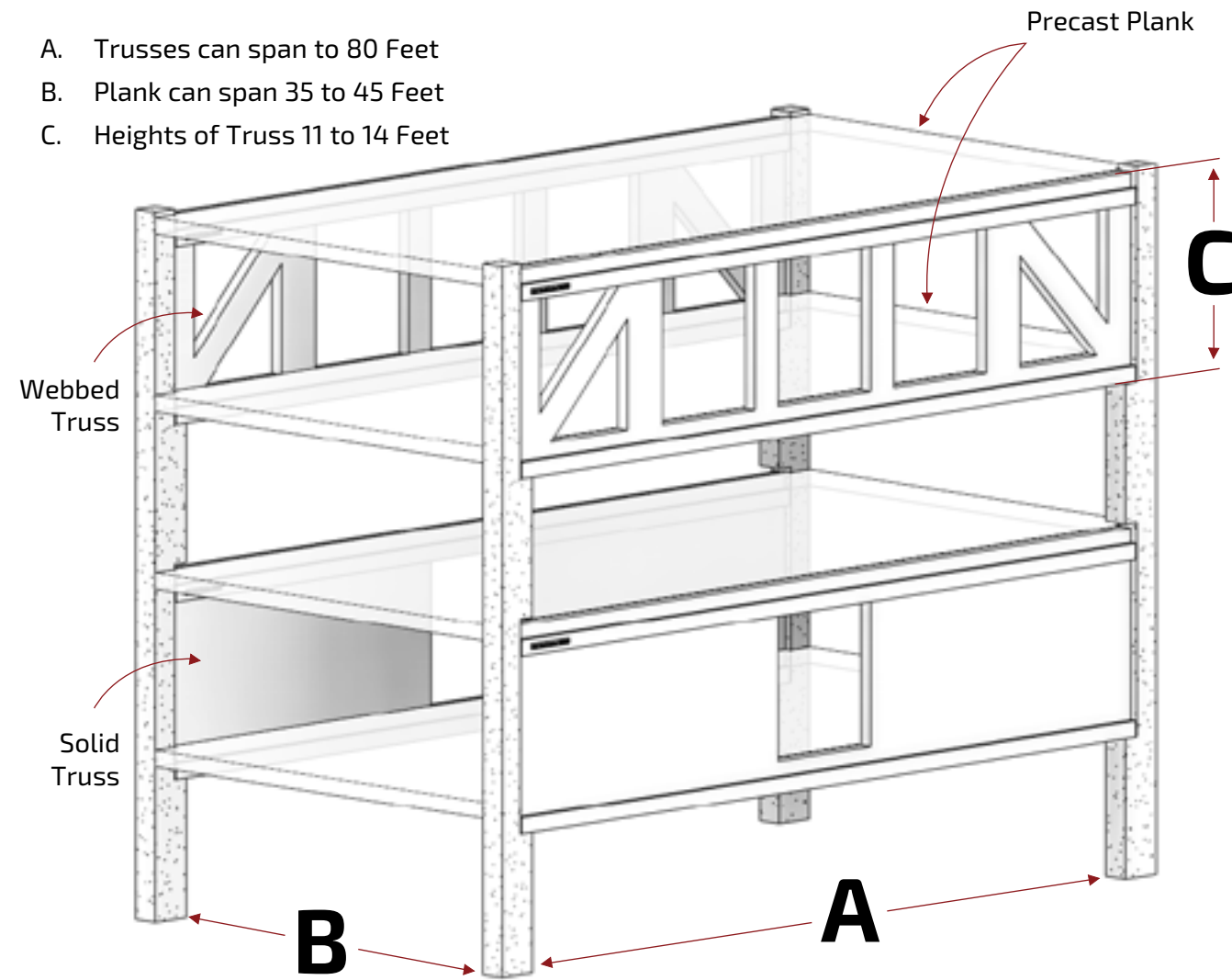
- Design flexibility: parking layouts do not dictate unit designs
- Column-free spaces
- Increased usable square footage
- Truss can be hidden or used as architectural feature
- Floors above and below the trusses are completely open
- Floors containing trusses can have clear spans of 40' to 45'
- Minimization of most winter construction issues/costs
- Truss lengths up to 80' are easily achieved
- Flexibility in space planning
- Early owner occupancy
- Garage levels free of column transfers, maximizing parking spaces and minimizing auto damages caused by columns
- 2 & 3-hour fire ratings
- Lower insurance costs

SUSTAINABILITY

- Innovative high performance structural solution
- Recycled material content
- Local/regional materials
- Enhanced thermal performance
- Daylighting and views
- Efficient use of materials
- Modularity and erectability
- Reusable structure
- Deconstructability and salvagability

FLEXIBLE FRAMING DIMENSIONS

- A. Trusses can span to 80 Feet
- B. Plank can span 35 to 45 Feet
- C. Heights of Truss 11 to 14 Feet



CHALLENGE

Develop... a framing system that bridges the gap for multi-family, senior living and hospitality industries between:

- Four/five story wood construction (maximum allowable height)
- Ten story post-tensioned concrete (minimum economical limit)

And improve...

- Interference from interior columns, especially in parking
- Flexibility and clearance for mechanical components
- Underground parking ratio
- Construction schedule
- Construction sequence/coordination of trades on site
- Compliance with design intent
- Long term durability and maintenance
- Fire rating
- Sound transmission levels
- Shrinkage and deflections typically found in wood construction

SUCCESS STORIES



Multi-family: Bookmen Stacks



Hospitality: Element Hotel Bloomington



Government: Sherburne County Justice Center



Multi-function: Cobalt Condominiums



Student Housing: Augsburg Gateway Center



Multi-family: Oak Park Apartments

SOLUTION



1 The precast concrete truss is delivered to the site on a flat bed truck.



2 The truss is lifted off the truck and is starting its swing into position. It only takes 15 minutes from truck to placement!



3 The truss is aligned with its support columns, slid into the column brackets, and welded to the columns.



4 The truss is in its final position and awaits the top and bottom chord precast plank to complete the floor system.



5 Notice the clear span. The truss bottom chord supports the second floor and the truss top chord supports the third floor, leaving the first floor completely open.



6 Fast and simple erection with all precast elements - columns, trusses and plank. On site work is minimized. Total erection for 9 floors was 29 working days from initial delivery.

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Ericksen Roed - Precast Open Space Truss