



## Russia Tower: Design Challenges

The new Russia Tower at 600 m tall will be Europe's tallest building and one of the most distinctive high rises in the world. The striking form evolved through a collaborative process between the architect, Foster + Partners of London, and structural engineer, Halvorson and Partners of Chicago. The innovative 'braced spine' structural system developed in this process is an extremely efficient concept for super-tall structures and was a direct response to the design challenges and opportunities presented by this project. While the tower is simple in form and concept, the structural analysis and design of the tower were challenging because the structural elements and systems do not conform to many of the assumptions underlying common code provisions. Consequently, the design had to return to basic principles for loads and for strength and stability design. The methods developed for the design will be presented with observations on their applicability to future buildings.

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