Wuhan Center Tower

**Facts**

**Official Name**  
Wuhan Center Tower

**Name of Complex**  
Wuhan Center

**Structure Type**  
Building

**Status**  
Architecturally Topped Out

**Country**  
China

**City**  
Wuhan

**Street Address & Map**  
Hanxi Road

**Building Function**  
hotel / residential / office

**Structural Material**  
composite
- Core: Reinforced Concrete
- Columns: Concrete Filled Steel
- Floor Spanning: Steel

**Proposed**  
2008

**Construction Start**  
2011

**Completion**  
2019

**Height: To Tip**  
438 m / 1,437 ft

**Height: Architectural**  
438 m / 1,437 ft

**Floors Above Ground**  
88

**Tower GFA**  
343,900 m² / 3,701,709 ft²

**# of Parking Spaces**  
1,200

**Companies Involved**

**Owner**  
China Oceanwide Holdings Group

**Developer**  
Wuhan CBD Investment Development Company

**Architect**  
- **Design**  
  East China Architectural Design & Research Institute

**Structural Engineer**  
- **Design**  
  East China Architectural Design & Research Institute
- **Peer Review**  
  Thornton Tomasetti

**MEP Engineer**  
- **Design**  
  East China Architectural Design & Research Institute

**Main Contractor**  
China State Construction Engineering Corporation

**Other Consultant**  
- **Cost**  
  Sweett Group
- **Façade**  
  ALT Limited; East China Architectural Design & Research Institute
- **Landscape**  
  SWA Group
- **Lighting**  
  Grand Sight Design International
- **Wind**  
  RWDI

**Material Supplier**  
- **Cladding**  
  Jangho Group Co., Ltd.
- **Paint/Coating**  
  Jotun
- **Steel**  
  China Construction Steel Structure Corporation

**About Wuhan Center Tower**

Inspired by a sailing vessel, Wuhan Center Tower is appropriately situated beside the Mengze Lake in Hubei province, along the Yangzhi River. The tower is divided into five vertical sections, seamlessly integrating retail, office, and residential spaces, as well as a hotel. It is
easily accessible from public transportation, designed to serve the needs of residents and guests, as well as the city’s burgeoning business community.

The primary design features that enhance the structure’s sustainability are the façade and an integrated energy core. A folding glass curtain façade enwraps the Wuhan Center, with two bevels running along its height. The slotted sides help reduce wind pressure on the building. The tower’s façade materials were carefully considered with respect to appearance and function. Fully glazed and sealed curtain wall systems allow more light into the space, but also increase solar heat gain. To address this issue, folding curtain wall units optimize shading performance, reducing solar radiation and indoor heat gain by 50% compared to a smooth curtain wall. Comfortable indoor temperatures are also maintained through a sophisticated air flow system, employing techniques such as using stratified air at the top of the tower in cooling systems.

The main focus of the tower’s core design is space efficiency. The core area reduces gradually as the building’s height increases, leaving more free space in the core tube to arrange mechanical, electrical, and auxiliary systems in an “integrated energy core.” The tower’s design typifies the sustainable building concept, utilizing both architectural modeling and façade technology to create a high-performance structure, recognizing that as urban population density increases, and buildings grow taller by necessity, the environmental imperative is that much more powerful.

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13 Oct 2016 – CTBUH Research

Research Papers

Significant Progress in Construction Equipment of Super High-Rise Building
1 Sep 2018 – International Journal of High-rise Buildings Volume 7 Number 3

Wuhan Center – A Sustainable Design Exploration for Skyscrapers
Sep 2012 – CTBUH 2012 9th World Congress, Shanghai

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