

Case Study: **Trump International Hotel and Tower** by Şahin Akin
Submitted to: Günel, Ay – Spring 2017

PROJECT DETAILS

Official Name: Trump International Hotel & Tower^[1]
Other Names: Trump Tower Chicago, Trump Plaza^[1]
Construction Period: 2005 - 2009^[1]
Location: United States - Chicago, 401 North Wabash Avenue^[1]
Architecture: Skidmore, Owings & Merrill (SOM)^[1]
Structural Engineering: Skidmore, Owings & Merrill LLP^[1]
Architectural Height: 423.2 m^[1]
Floors Below/Above Ground: 2 / 78^[1]
Architectural Style: Modernism^[1]
Gross Floor Area: 241,545 m²^[1]
Building Cost: \$850,000,000^[1]
Status: Completed^[2]
Global - National - City Ranking: 18 - 4 - 2^[1]
Aspect Ratio (h/d): 8 (Height divided by smaller base dimension)
Structural Material: Reinforced Concrete^[2]
Building Function: Residential - Hotel^[2]
Structural System: Outrigger Frame System^[14]

1. Trump Tower Chicago Facts retrieved (May 2017) from: www.emporis.com/building/10118/trump-international-hotel-tower-chicago-423-2-m
2. Trump Tower Chicago Facts, retrieved (May 2017) from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
3. Trump Tower Chicago Facts, retrieved (May 2017) from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
4. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
5. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
6. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
7. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
8. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
9. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
10. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
11. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
12. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
13. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>
14. Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 1: Trump Tower Chicago

SITE LOCATION - SITE LAYOUT

- Positioned along the Chicago River at the juncture of North Michigan Avenue and River North, Trump International Hotel & Tower Chicago is the city's most enviable address.^[4]
- The 360 degree unobstructed Chicago views from the skyscraper thanks to curtainwalls.
- Trump Tower sits directly at the heart of downtown Chicago and Chicago Loop, provides prime views of Lake Michigan, Chicago River, and entire city.
- Building is aligned parallel to the Chicago river to create connection between the city and the riverfront. There are three river walk, retail stores and restaurants at the first three floors.
- The site allows Trump Tower to be set in the Chicago lakefront skyline as an icon for the city.^[1]

Figure 2: View of Trump Tower from Lake Michigan

Figure 3: Scenic View from Trump Tower's level 89

Figure 4: Trump Tower Chicago retrieved from: www.trumptowerchicago.com/news

Figure 5: M. Smith, Trump International Hotel And Tower Technical Assessment, Chicago, The Pennsylvania State University Senior Thesis, 2009

Figure 6: Retrieved from: <http://www.trumptowerchicago.com/news>

Figure 7: Retrieved from: <http://www.trumptowerchicago.com/news>

Figure 8: Footprint Comparison drawn by Şahin Akin

DESIGN STRATEGIES: BUILDING PROGRAM-PHASED OCCUPANCY

- 92 stories, 250,838 square meters^[1]
- 9,290 square meters of boutique shopping and fine dining along the riverfront^[1]
- Hotel hosts 339 live-story luxury condominiums^[10]
- 486 super-luxury residential condominiums^[10]
- Michelin-starred restaurant at level 14^[10]
- Health club and spa facility at level 14^[10]
- 1,858 square meters of multi-function banquet and meeting room space including a grand ballroom, skyline reception room^[10]
- Over 370 indoor public parking space^[10]
- 5 mechanical floors^[10]

Figure 17: Building Program drawn by Şahin Akin

Figure 18: Occupancy Diagram drawn by Şahin Akin

Figure 19: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 20: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 21: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 22: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 23: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 24: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 25: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 26: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 27: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 28: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 29: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 30: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 31: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 32: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 33: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 34: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 35: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 36: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 37: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 38: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 39: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 40: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 41: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 42: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 43: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 44: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 45: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 46: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 47: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 48: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 49: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 50: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 51: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 52: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 53: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 54: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 55: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 56: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 57: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 58: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 59: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 60: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 61: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 62: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 63: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 64: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 65: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 66: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 67: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 68: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 69: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 70: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 71: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 72: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 73: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 74: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 75: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 76: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 77: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 78: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 79: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 80: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 81: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 82: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 83: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 84: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 85: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 86: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 87: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 88: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 89: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 90: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 91: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 92: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 93: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 94: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 95: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 96: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 97: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 98: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 99: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 100: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

OTHER FLOOR PLANS

- The outrigger levels occur just below the building setbacks, and the roof. Outriggers also serve as transfer girders as the columns are relocated at the facade.^[1]

Figure 20: Construction Diagram drawn by Şahin Akin

Figure 21: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 22: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 23: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 24: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 25: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 26: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 27: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 28: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 29: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 30: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 31: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 32: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 33: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 34: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 35: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 36: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 37: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 38: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 39: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 40: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 41: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 42: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 43: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 44: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 45: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 46: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 47: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 48: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 49: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 50: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 51: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 52: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 53: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 54: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 55: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 56: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 57: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 58: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 59: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 60: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 61: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 62: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 63: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 64: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 65: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 66: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 67: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 68: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 69: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 70: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 71: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 72: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 73: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 74: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 75: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 76: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 77: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 78: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 79: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 80: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 81: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 82: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 83: Retrieved from: <http://www.emporis.com/building/trump-international-hotel-tower-2017>

Figure 84: Retrieved from

