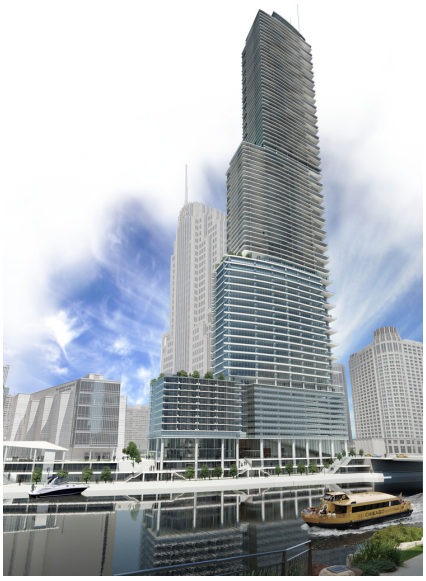
Arch 574: High-Rise and Habitat Graduate Design Studio
Fall 2021
Instructor: Paul J. Armstrong

NORTH CITYFRONT PLAZA HOTEL/CONDOMINIUM TOWER:
A VERTICAL CITY IN CHICAGO'S STREETERVILLE DISTRICT



Skyscrapers are important landmarks of the city and contribute to urban quality, density, sustainability, and livability. Mixed-use high-rises, that combine residential, hotel, and retail spaces, can make a positive contribution to Chicago's Loop (Central Business District) in terms of iconic significance, urban vitality, and urban infrastructure. The project is designed to explore the relationship of the skyscraper to a complex physical, social, and environmental context while engaging issues of detail and construction in expressing architectural ideas and concepts. Students who wish to integrate technical knowledge with design are encouraged.

Site. The site is located on the north bank of the Chicago River in the 200 block of **Chicago's Streeterville District,** immediately south of the NBC Tower. North Cityfront Plaza Drive on its western edge, North Water Street on its northern edge, and North Columbus Drive on its eastern edge define the site. Even in the current recession, this is an area of growing demand for housing and hotel accommodations.

Project: Comprehensive design of a **hotel and condominium tall building** with parking, lease spaces, amenity floors, sky lobbies, restaurant(s), amenities and other functions with emphasis on structure, vertical circulation, building systems integration, site development, and sustainability.

Professional Advisors: The first few weeks of the semester will focus on site and case study research and building a site model. Students will have input from **architects and engineers** who are experienced in tall building design as **project advisors**. The design process will require multiple reviews (formal and informal) with expertise from related areas, such as structural engineering and mechanical systems. Special attention will be given to the **integration** of physical systems that has to occur at the very initial stages of the project. Advisors are **Mark Frisch, FAIA, LEED AP BD+C, Technical Design Principal** and **Mark Thompson, AIA, LEED, Associate Principal** of Solomon Cordwell Benz, and **James Pawlikowski SE, Director of Engineering,** of Rex Engineering Group.

Hybrid Studio: The university encourages in-person instruction. Students will have access to dedicated studio space and school resources throughout the semester. Most instruction will be facilitated in-person with the instructor supplemented with distance learning on-line. All COVID protocols shall me maintained including face coverings, hand sanitizing, and social distancing when in studio.

Team Projects. Integration of complex building systems is required of all buildings but especially in skyscrapers. Consequently students will work in teams simulating the real world needs of collaboration.

Reviews. **Project critiques** will occur each class with virtual models and drawings. There will be **two formal reviews:** a mid-term with schematic designs and a final review with design development. **Models and drawings** will be required for the mid-term and final reviews with presentations of the projects to the professional advisor team.

Required Field Trip(s) to Chicago to research the site and context and a second field trip for the Midterm Review TBD.

Recommended Texts.
1. Leonard R. Bachman, *Integrated Buildings: The Systems Basis of Architecture* (New York: John Wiley & Sons, 2003).
2. Johann Eisele and Ellen Kloft, *High-Rise Manual: Typology and Design, Construction and Technology* (Basel; Boston: Birkhauser-Publishers for Architecture, 2002).
3. Paul J. Armstrong, *Design Guidelines for Tall Buildings*, unpublished PDF, available in Arch 574 folder at Illinois Box (2018).