



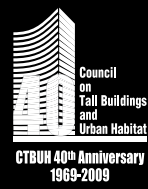
Best Tall Buildings 2009



CTBUH
International
Award Winning
Projects



Antony Wood



*Towards a sustainable urban future



ILLINOIS INSTITUTE
OF TECHNOLOGY
COLLEGE OF ARCHITECTURE

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The CTBUH would like to thank our 2009 Awards committee members for volunteering their time and efforts in deliberating this year's winners.

We would also like to thank the companies who submitted their projects for consideration for this year's awards, and who contributed to the content of this book.

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Linked Hybrid

Beijing, China

The pedestrian-oriented Linked Hybrid complex, sited adjacent to the old city wall of Beijing, aims to counter current urban developments in China by creating a new twenty-first century porous urban space, inviting and open to the public from every side. A filmic urban experience of space; around, over and through multifaceted spatial layers, as well as the many passages through the project, make the Linked Hybrid an “open city within a city”. The project promotes interactive relations and encourages encounters in the public spaces that vary from commercial, residential and educational, to recreational; a three-dimensional public urban space.

The project exists on three levels. The ground level offers a number of open passages for all people (residents and visitors) to walk through. These passages include “micro-urbanisms” of small scale shops which also activate the urban space surrounding the large central reflecting pond. All public functions on the ground level—including a restaurant, hotel, Montessori school, kindergarten, and cinema—have connections with the green spaces surrounding and penetrating the project. On the intermediate level of

the lower buildings, public roof gardens offer tranquil green spaces. The central roof garden features an open design to reflect the architectural structure of the cinematheque. At the top of the eight residential towers private roof gardens are connected to the penthouses.

Elevators displace like a “jump cut” to a series of passages on a higher level. From the 18th floor a multi-functional series of skybridges with a swimming pool, a fitness room, a café, hotel bar, and an art gallery, connect the eight residential towers and the hotel tower, and offer views over the city. The shops at the grade level are complimented by the programs at the bridge level and work together to be semi-lattice-like rather than simplistically linear. The complex aims to achieve a programmatic self sufficiency of amenities for residents. By bringing diverse programs together both on the ground floor and in the bridges, the project stresses ambulatory circulation. Rather than skybridges that drain street life, the aim is for a base route and sky route that will constantly generate random relationships like the richness of metropolitan density; functioning as social condensers in a special experience of city life to both residents and visitors.

In proposing the sectional variety of Linked Hybrid, the aim is for new “Z” dimension urban sectors that aspire to individuation in urban living while shaping public space. In the experience of traversing the bridge route, one feels the urban excitement of the passage of the body through space. Movement, spatial sequence and time of day with different light are intertwined.

Opposite: Towers viewed from within central plaza
Photo © Shu He

Completion Date: Spring 2009

Height: 66m (217ft)

Stories: 21

Area: 220,000 sq m (2,368,060 sq ft)

Primary Use: Towers 1–8: Residential, Tower 9: Hotel

Other Use: Retail, Office, Public Space

Owner/Developer: Modern Green Development Co., Ltd.

Architect: Steven Holl Architects

Associate Architect: Beijing Capital Engineering Architecture Design Co., Ltd.

Structural Engineer: Guy Nordenson and Associates, China Academy of Building Research

MEP: Transsolar ClimateEngineering, Beijing Capital Engineering Architecture Design Co., Ltd., Cosentini Associates

Contractor: Beijing Construction Engineering Group



“Though this project is not especially tall, it points the way forward for the intensified multi-use, multi-level, connected cities of the future.”

Antony Wood, Council on Tall Buildings and Urban Habitat

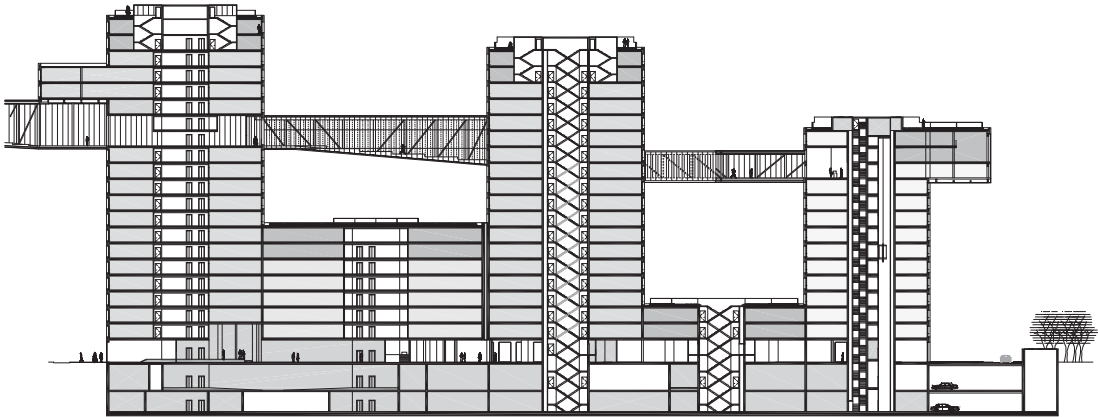
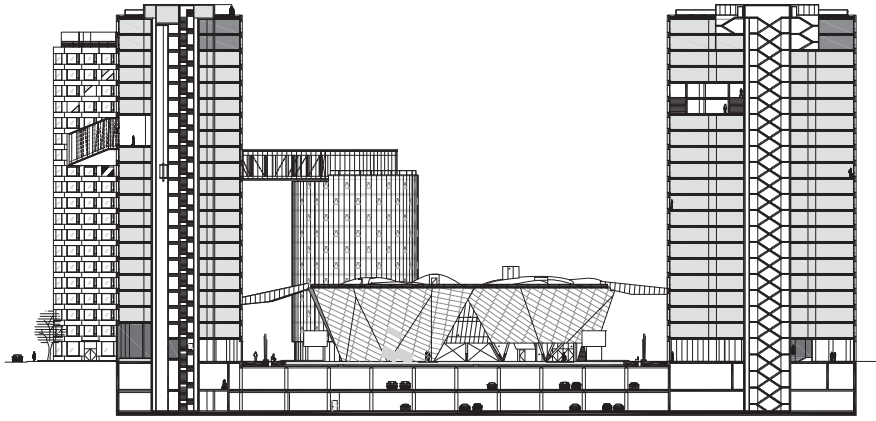


Above: Exterior views of skybridge connections
Left Photo © Iwan Baan, Right Photo © Shu He
Opposite Top: Building sections
Opposite Bottom: Aerial view within urban context
Photo © Shu He

The point of view changes with a slight ramp up, a slow right turn, or a stop to gaze at the distant urban view. The encircled route connects the towers in a new collective aspiration—different from towers as isolated iconic objects. The context of this new linkage is the increasingly privatized and objectified nature of recent Beijing developments.

Geo-thermal wells—660 in number—at 100 meters (328ft) deep, provide Linked Hybrid with cooling in summer and heating in winter, and make it one of the largest green residential projects in Beijing. About 70% of the heating and cooling load is covered by the geothermal system throughout the year. Using this closed-loop system saves a calculated 5600 KW in

energy during summer and 3700 KW in winter. The large urban space at the center of the project is activated by a grey water recycling pond with water lilies and natural grasses in which the cinematheque and the hotel appear to float. The pond is part of a total project grey water recycling system, which connects all apartments to a main ultraviolet filter tank system and with distribution watering all landscape gardens and roof gardens. In Beijing, where water shortage requires urgent measures, Linked Hybrid sets a new example as a total ecological urban sector with living, working, cultural, and recreational facilities operating from the same sustainable systems of water recycling and geothermal cooling and heating.





Jury Statement

With its rich pallet, appropriate scale and consistency in architectural language, Linked Hybrid adds a level of high quality architecture to the city of Beijing. Working well above the plane of purely sculptural architecture, the project embodies, on an urbanistic scale, where the future of tall buildings and urban cities is heading, creating architecture that does not isolate, but rather connects both on the ground plane and in the sky. This creates both a unique ground level plane that acts as an oasis in the density of Beijing, and a real multi-use zone of connected urbanism in the sky.

The project incorporates numerous sustainable design features, but really goes far beyond its geo-thermal and water recycling, to tackle the much broader issue of social-urban sustainability itself. Its mix of residential and retail, cinemas and kindergartens, hotels and art galleries, swimming pools and parks—all within a single complex—is remarkable. The vision to weave these facilities into the complex not only at the ground plane but throughout the section of the building, is fantastic. It is only in the intensification of our cities and the inclusion of mixed urban-public facilities in the sky that the true vibrant, dense cities of the future can be realized. The Linked Hybrid building, perhaps more than any other built project, really does point the way to that future.

In the winter the pool freezes to become an ice-skating rink. The cinematheque is not only a gathering venue but also a visual focus to the area. The cinematheque architecture floats on its reflection in the shallow pond, with its exterior wall capable of projecting films, adding vitality to the community. Its first floor is left open to the community, with views over the landscape surrounding the building. The three film projection halls will be occupied by Broadway Cinema from Hong Kong.

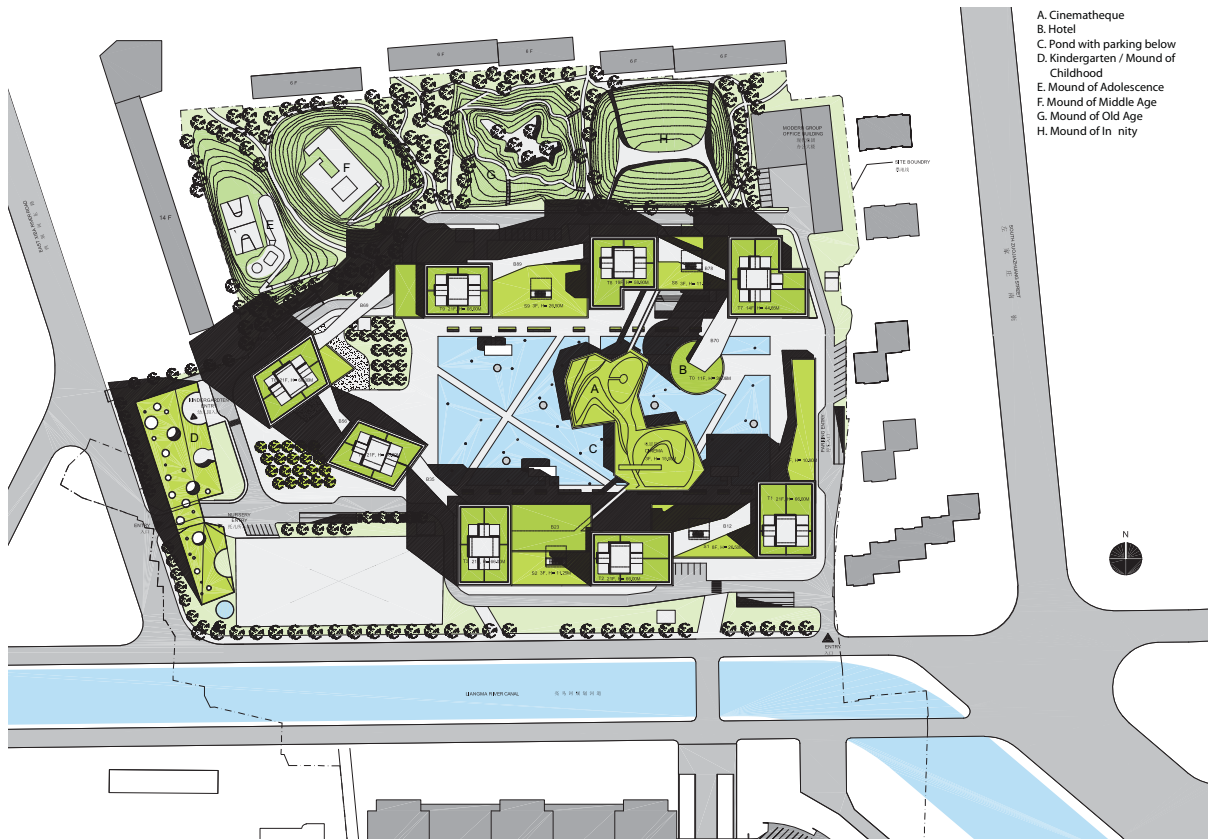
The polychrome of Chinese Buddhist architecture inspires a chromatic dimension. The undersides of the bridges and cantilevered portions are colored mem-

Left: Detail view of façade and skybridge

Opposite Top: Site plan

Opposite Bottom: Interior of a skybridge

Photos © Shu He



- A. Cinematheque
- B. Hotel
- C. Pond with parking below
- D. Kindergarten / Mound of Childhood
- E. Mound of Adolescence
- F. Mound of Middle Age
- G. Mound of Old Age
- H. Mound of Intimacy

branes that glow with projected nightlight. Based on chance operations of the I-Ching, the window jambs and heads have colors found in ancient Chinese temples. The façades are monochrome revealing their colors in the parallax views of movement around or looking up. An exoskeletal concrete frame with insulation and sanded aluminum skin is utilized throughout with lateral earthquake bracing exposed in the gridded structural wall. This allows maximum flexibility for interior apartment layouts while establishing the space. A basic model apartment was designed with “hinged space,” in which rotating walls allow loft-like open apartments with long diagonal interior views. Spaces are connected by visual perspective, from one room to the next.

Re-using the earth excavated from the new construction, five landscaped mounds to the north contain recreational functions. The “Mound of Childhood”, integrated with the kindergarten, has an entrance





Left: Overview of central public plaza with roof garden over theater in center
Opposite Top: Building elevations: south above, east below
Opposite Bottom: View at ground plane with large reflecting pool in foreground
Photos © Shu He

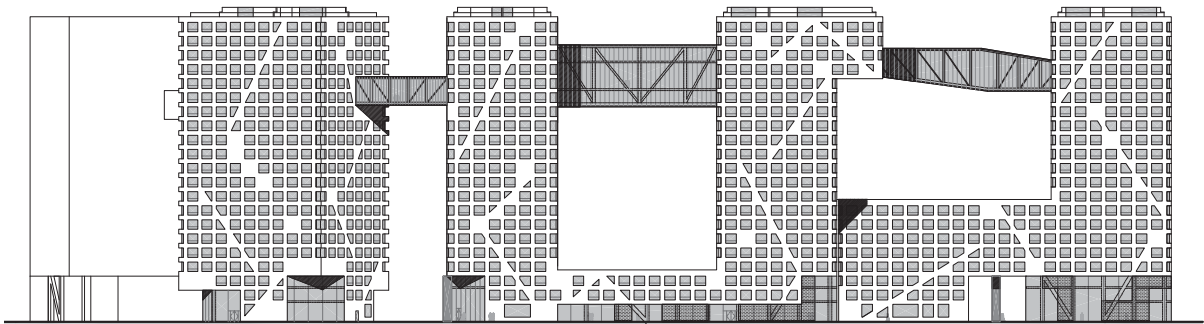
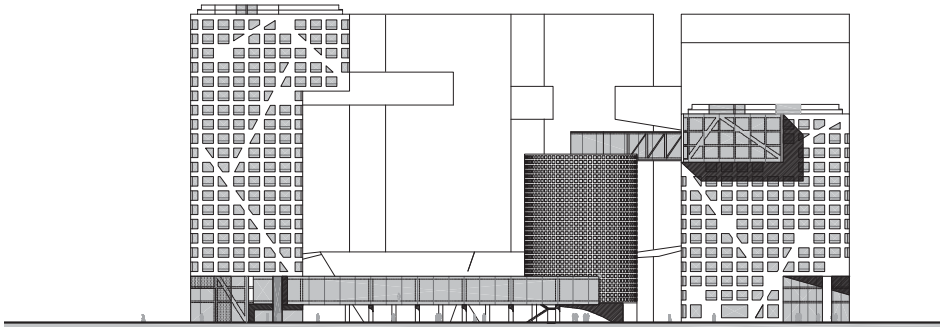
“Coherent, dramatic and well thought-out architecture which makes complete sense socially and visually.”

Ken Shuttleworth, Make

portal through it. The “Mound of Adolescence” holds a basketball court, a roller blade and skate board area. In the “Mound of Middle Age” there is a coffee and tea house (open to all), a Tai Chi platform, and two tennis courts. The “Mound of Old Age” is occupied with a wine tasting bar and the “Mound of Infinity” is carved into a meditation space with circular openings referring to infinite galaxies.

At the Linked Hybrid project, the idiosyncratic changes of new users and adjustments according

to taste are already visible—life at the urban scale goes on—but the hope of shaping new public space with Hybrid Buildings of “Z” dimension experiences remains a core intention. The overlapping perspective thrill of walking the skybridge route is matched by the amazing porous sense of urban enclosure while walking within the public space at grade. The magical night time up-lighting on the bridges reflected in the central pond are phenomenal experiences which cannot be photographed—they must be felt via the body in space.



Lifetime Achievement Lynn S. Beedle Award

John C. Portman, Jr.

John Portman & Associates

John Portman pioneered the role of architect as developer by financing, owning, managing and designing major building projects throughout the world. His philosophy of architecture is rooted in the desire to understand and shape the aesthetic as well as the economic dimensions of the urban environment. This innovative approach has generated a prolific body of work. Portman, over a 55 year career, has personally designed and realized the construction of 49 tall buildings. These projects have made a positive impact on the urban fabric of major cities such as Atlanta, San Francisco, Los Angeles, New York, Singapore, Beijing and Shanghai. Portman's leadership in the movement to revitalize America's city centers as both architect and developer of large scale mixed-use projects

marked the US's return to urbanism in the latter half of the 20th century.

Mr. Portman discovered his passion for architecture as a high school student. With World War II in full force however, his plans to pursue an education in the field were put on hold. He served in the US Navy and attended the US Naval Academy during World War II. When the war ended, he resigned from the Academy to pursue architecture. He received a Bachelor of Science in Architecture from the Georgia Institute of Technology in 1950. After a three year apprenticeship, Mr. Portman opened his own firm in 1953. In 1956, he made a partnership with H. Griffith Edwards to form Edwards & Portman Architects. When Edwards retired in 1968, the firm became known as John Portman & Associates.

Mr. Portman's impact is perhaps greatest on his hometown of Atlanta where today the 14-block Peachtree Center complex attests to his commitment to the downtown business district and includes many of his landmark projects. Peachtree Center began in 1961 with the opening of the Atlanta Merchandise Mart. The Mart has since grown to become AmericasMart®, the world's largest single wholesale marketplace in a fully integrated complex. By stimulating trade and tourism, Mr. Portman was the catalyst that established Atlanta as one of the nation's premiere



Photo © Stephen Cord

Opposite: View of downtown Atlanta, defined by Portman designs. From left to right: The Westin Peachtree Plaza (1976), AmericasMart® (1961), Peachtree Center Office Buildings (1965–1975) with the Hyatt Regency Atlanta (1967) peeking over the top and SunTrust Plaza (1993)
Photo © Timothy Hursley



“John Portman single handedly changed the way urban hotels are thought of. He, more than any other, pioneered the heroic use of the atria as a dramatic design element.”

Tim Johnson, NBBJ



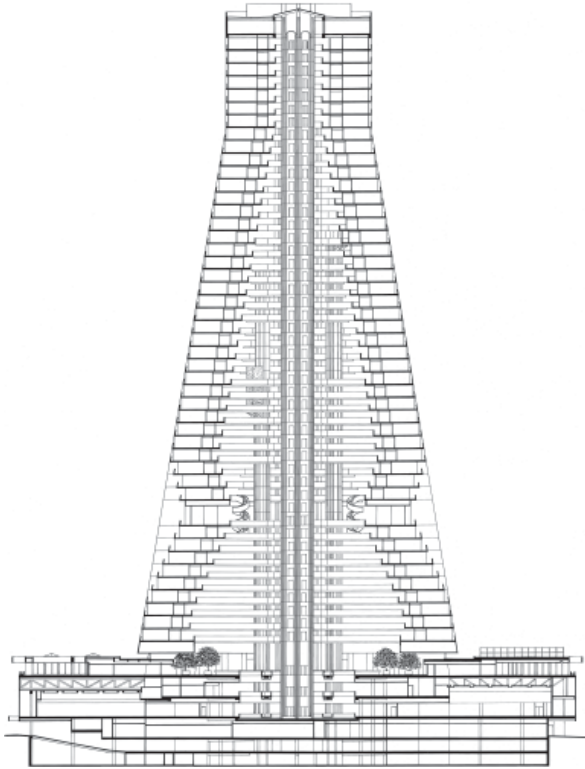
Left: View looking up atrium at Atlanta Marriott Marquis (1985)
Photo © Jaime Ardiles-Arce
Opposite Top Right: Section through Atlanta Marriott Marquis
Opposite Top Left: Exterior view of the sculptural form of the Atlanta Marriott Marquis
Photo © Timothy Hursley
Opposite Bottom: Aerial view of Embarcadero Center, San Francisco, (1971–1989)
Photo © Timothy Hursley

convention cities. His three major downtown hotels, the Hyatt Regency Atlanta, The Westin Peachtree Plaza, and the Atlanta Marriott Marquis, anchor the convention district. The tallest building in Atlanta when it opened in 1967, the Hyatt Regency Atlanta, with its 22-story atrium, made architectural history and was the catalyst that launched Hyatt.

Today, Mr. Portman is best known for his urban mixed-use complexes wherein his understanding of people and their response to space translates into enhanced environments and award-winning architecture. From Embarcadero Center in San Francisco and Times Square in New York, to Marina Square in Singapore and the Shanghai Centre in China, he has taken people away from the congestion of urban life to create

spaces that are open and uplifting to the human spirit. In Detroit, when Henry Ford sought to stop urban flight from the city, Mr. Portman responded with the design of the Renaissance Center. In Los Angeles, The Bonaventure Hotel initiated the renewal efforts in the city's Bunker Hill district.

Mr. Portman's international work began with the design and development of the Brussels Trade Mart in 1975, then shifted to the Far East. The Regent Singapore was Portman's first international hotel, followed by Marina Square, a major complex that includes three hotels, a major retail mall and an office building. Mr. Portman entered China in 1980 and was one of the first American architects to become actively involved when China opened its doors to the West. His pioneer







Above: Rendering of Zhejiang Fortune Finance Center, Hangzhou, China (expected 2010)

Opposite Top Left: Tomorrow Square, Shanghai China, (2003)
Photo © Michael Portman

Opposite Top Right: Beijing Yintai Centre, Beijing, China (2008)

Photo © Beijing Yintai Property Co., Ltd.

Opposite Bottom: Marina Square, Singapore (1987)
Photo © Michael Portman

project, the Shanghai Centre, a large, mixed-use complex, has been described by *China Daily* as “one of the five architectural stars in mainland China.”

Much of the firm’s work continues to be in Asia, throughout China, India, and Korea. Beijing’s tallest building, Park Tower at Beijing Yintai Centre by John Portman & Associates, opened just prior to the recent Olympic Games. Tomorrow Square in Shanghai, among the city’s tallest buildings, has had a tremendous impact on the skyline. Over the years, the way work gets done may have changed—Zhejiang Fortune Finance Center, soon to open in Hangzhou, China,

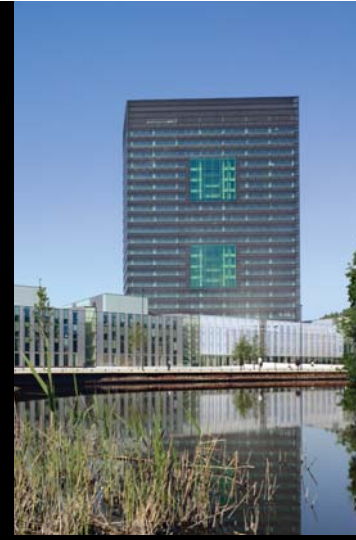
Jury Statement

While John Portman has been, and continues to be, involved in many significant tall building projects around the world, what sets Mr. Portman apart is the way in which he considers not just the building itself, but the greater context of its surroundings. His careful urban planning and ability to weave art, nature, and the pedestrian experience together in his designs has led to the successful revitalization of many neighborhoods.

One of his largest contributions was the way he almost single handedly changed how urban mixed-use hotels were thought of, with the idea of bringing the urban context into the lobby and thrusting it vertically up through the towers in atria, which create amazing internal environments and expose the functions within. The rich experiences this creates moved hotels to become far more entertaining and expressive. The drama that was created by his ideas are scattered around the world. There are very few grand hotels employing huge, dramatic atria—from the Jin Mao in Shanghai to the Burj Al Arab in Dubai—that do not owe something to the early pioneering work of John Portman. There are very few architects that have, quite literally, influenced the direction of an entire industry. John Portman has created a legacy the entire US should be proud of. He is a very worthy winner of the CTBUH Lynn S. Beedle Award.

is the firm’s first building designed using BIM technology—but the design philosophy remains focused on creating “people places” incorporating nature, art, water features, natural light, textures and other engaging sensory experiences.

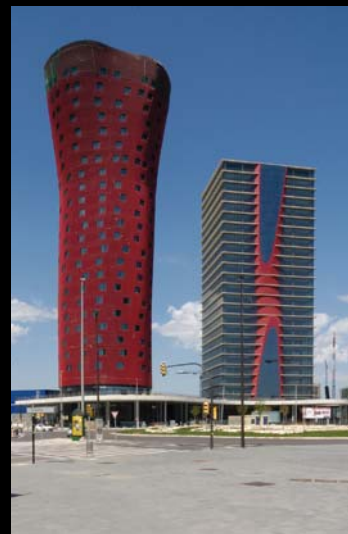
John Portman believes that an architect cannot gain understanding by isolating himself. He must interact with his society through participation and public exposure. Mr. Portman has always been an active participant in civic and community affairs, and with his design philosophy, he has made a profound impact on the international community as well.



This is an international overview of the best tall buildings in 2009 as recognized by the awards of the Council on Tall Buildings and Urban Habitat (CTBUH). From the Manitoba Hydro Place in Winnipeg and the Broadgate Tower in London to the QIPCO Tower in Doha and the Linked Hybrid Building in Beijing, this official guide features winning projects alongside finalists and the other nominees from around the world. In addition, the 2009 CTBUH Lifetime Achievement award winners are profiled for their life's work in the advancement of tall buildings: John C. Portman, Jr. (*John Portman Associates*) and Dr. Prabodh V. Banavalkar (*Ingenium, Inc.*).

Including the CTBUH's official list of the "100 Tallest Buildings in the World" as well as height and awards criteria—the Council is the internationally recognized official arbiter of tall building height—it provides architects, developers, engineers and building managers with detailed insights into the latest in innovative tall building projects.

With an unprecedented boom in skyscraper construction in the recent years it is important to ask what makes a tall building successful. This book seeks to provide an overview of tall building construction in 2009, highlighting those projects that represent the most cutting edge in design, and those taking steps to advance the tall building typology towards an integrated and sustainable element of the world's cities.



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