

# CTBUH Journal

International Journal on Tall Buildings and Urban Habitat

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Tall buildings: design, construction, and operation | 2012 Issue III

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## China Special Issue: 9<sup>th</sup> World Congress

Greenland's "Breathing Tower" in Wujiang

China's Advanced Façade Technologies

Details on China's Unique Linked Towers

Special Report: China's New Economy

Meet the President of Shanghai Tower

Inside the China Broad Group

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### Case Study: Greenland's Suzhou Center, Wujiang

#### A Unique Collaboration Results in "Breathing" Tower



The latest project in the long partnership between Greenland, Oving & Merrill and the Chinese Government is the Suzhou Center in Wujiang. The project is a unique collaboration between the two firms, resulting in a "breathing" tower that is both a landmark and a model for sustainable design.

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### Research: China's Unique Linked Towers

#### Finding Structural Solutions by Connecting Towers



This research explores the structural solutions for connecting towers, a common feature in Chinese architecture. The study finds that connecting towers can provide a more efficient and sustainable way to build tall buildings.

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### Special Report: China 2012

#### Big Shifts Ahead as China Enters New Era



This special report discusses the challenges and opportunities facing China in 2012. It highlights the need for innovation and sustainable development in the face of rapid urbanization and environmental concerns.

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“The rise of supertall buildings in modern Chinese architecture has a social context... Chinese ancestors relentlessly tried to conquer the highest mountains and the biggest rivers in order to challenge the order of nature.”

Zhang Junjie, Chairman of the Board, East China Architectural Design & Research Institute, Page 34

# An Insider's View on Navigating the Approval Process for Tall Buildings in China



Brian Lee

## Interviewee

### **Brian Lee, Design Partner**

Skidmore, Owings & Merrill LLP  
224 S. Michigan Ave.  
Chicago  
IL 60604  
United States

t: +1 312 360 4843  
f: +1 312 794 7526  
e: brian.lee@som.com  
www.som.com

### **Brian Lee**

As a design partner at Skidmore, Owings & Merrill, Brian Lee has designed unique, landmark projects across the globe, including East and Southeast Asia, Europe, and the Middle East. Due to his extensive international experience, he has developed solid practices for collaboration and design leadership.

Mr. Lee has been responsible for several award winning domestic and international projects as well as first place competitions. Notable projects include Poly Corporation Headquarters (Beijing), Poly Real Estate Headquarters (Guangzhou) and China World Trade Center Tower 3, Beijing's tallest building. Mr. Lee is currently leading the design of CWTC Phase 3B, a 280-meter tower that is the newest addition to the China World Trade Center complex

Mr. Lee's design for Jinling Tower in Nanjing, China, was featured in the 2004 Venice Biennale. His work has also received numerous awards and has been published in architectural journals in the United States, Europe, and Asia.

For years Brian Lee has been on the cutting edge of tall building development in China as one of the lead designers for Skidmore, Owings & Merrill. He's worked on projects that changed the face of China's cities, including the Poly Real Estate Headquarters in Guangzhou and China World Trade Center (CWTC) Tower 3, Beijing's tallest building. He is currently leading the design of CWTC Phase 3B, a 280-meter tower in the China World Trade Center complex.

In an interview with CTBUH Journal Editor Kevin Brass, Mr. Lee discusses the complexities of designing buildings in China and the challenges of the approval process.

## How is the process of designing buildings different in China?

I think what's interesting is that many of the things that we experience in North America are being more and more adopted in China. Chinese developers have become more sophisticated in terms of their project management, the way they go about selecting architects, engaging in and establishing budgets, dealing with the approvals process, value engineering and, ultimately, the construction process.

## Such as?

Let's just take approvals. First of all, from a technical point of view, the process often includes expert panels, which you don't really get in the United States. And they're composed of people who are often times very highly respected professionals from the various disciplines. Sometimes I've been before panels where, in addition to well-known foreign architects, they've had "National Treasures"—engineers and architects who have achieved a high status in their society. So it's interesting that you have this kind of consistent oversight at a high level.

## To an outsider, that sounds like "design by committee." Is that the result?

I don't think so. What I've found is that often times the design panel will make a recommendation and it goes through. Sometimes the panel will make a recommendation but the government or the

client may be able to have a say contrary to that decision. Then the panel, at other times, will be split in terms of the things that they may request or pronounce as good or bad. In my experience, the design panel's ultimate responsibility is not necessarily to approve or disapprove something. What they try to do is expose and discuss issues for consideration. Structural panels are a little different. You need to satisfy that group.

## Are certain elements emphasized in the process that might be different than in other countries?

China is very pragmatic in terms of examining issues of urban design, the way the project relates to the streets, especially in terms of traffic and transit systems. They try to understand density, in terms of too much area or too little area. Often times panels will evaluate this even though there may already be a listed density as part of the design brief that's been approved by the government. Somebody will say, "Oh maybe that's too much area." Or, "it's too big and bulky." In addition to evaluating the organization or the expression of the project, they may recommend it be downsized or even cancelled. To me, that actually gets into a fairly comprehensive way of discussing things. This is not an unsophisticated process.

In this process, you also may involve the Mayor, Vice-Mayors, and the Party Secretary. Even now, I'm still not sure who gets a final say



and how they interact. But it is clear the voice of the local governments and maybe even higher central governments will come into play, if the project is important enough.

**I assume that varies tremendously from city to city.**

Yes, it does. Every city has its own dynamic of local government decision makers and standing, as well as mandate, in the larger political framework.

**What role is the process playing in the larger design of Chinese cities, in terms of creating buildings that link up with the community and the urban fabric?**

I don't think anybody views these buildings as isolated objects anymore. In places like Beijing, there have been several master plans done and re-done, to envision how that city, particularly its core area, is going to be developed (see Figure 1). I remember

probably 10 years ago going into the planning department and they had very elaborate computer models of the CBD area. They would do fly-through to understand the massing of the buildings, view corridors and context. You would actually use a joystick to fly through the model.

Now, in addition to the visual concerns, you will see fairly extensive planning of traffic systems; below grade connections to transit, retail or integrated parking; land use and open space to a stronger economic analysis, and energy infrastructure to make the district work more efficiently on the city scale. I have a sense that these things are more comprehensive.

**What about the livability aspects?**

Livability is probably still a work in progress, as with any rapidly developing city. There are obvious concerns about traffic congestion

and poor air quality that have accompanied development. Projects would sometimes develop independently and isolated from a larger network of circulation or open space systems. The mixed-use high density in cities is great for promoting less cars, more transit, but there is room for tuning how each project relates to another.

To give an example, a lot of times each one of these individual projects will have a tower and shopping mall. Well, how many shopping malls can you actually have before you surpass the market's ability to support them? Are malls the best way to build a vibrant commercial district of interrelated public streets and open spaces that other cities around the world are finding successful? Has there been comprehensive thinking about a broader range of uses, building typologies, demographics and strategic planning in the area? I think they're probably leaving it up to the market to decide whether some fail or succeed.

I think that the other aspect of livability involves the landscape. In China, the urban landscape planning process still needs to mature, which surprises me since the Chinese have a great love of landscape.

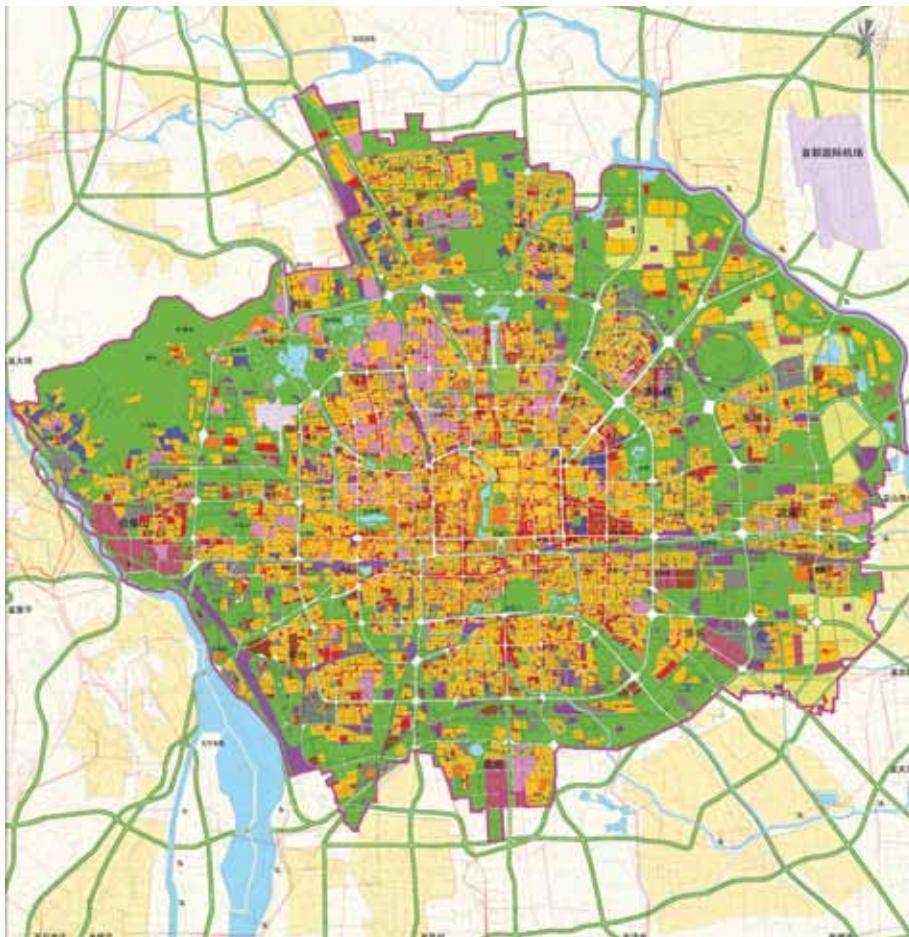


Figure 1. Beijing Master plan 2004–2020. © Beijing People's Government 2004

“...it is clear the voice of the local governments and maybe even higher central governments will come into play, if the project is important enough.”



Figure 2. Beijing CBD East master plan expansion. © SOM

“I don’t think that there is a China style. I think that anyone visiting the various cities would probably notice that the work is very international, very contemporary. This is partly because many foreign architects are working in the country and are bringing different ideas into China.”

#### In the sense that it is not considered in the plan?

I think it’s usually thought of a little later in the process, when many designers believe it should be during the initial conceptualization. It is important to think about those public spaces, the streets, parks, courts, and gardens that make up the spaces in between buildings and create a connection to nature and the public realm.

#### What other challenges exist in the master planning effort?

One thing that is interesting to us – and we have made some references to it in some of our master plans, particularly in the Beijing CBD East master plan (see Figure 2) – is comprehensive energy, sustainability and conservation systems. I think China is making big strides in terms of things like national energy codes and a consciousness about energy conservation. Cities have and are doing central cooling, heating and waste treatment. They require water reclamation and treatment. I think now they are taking a leadership role, saying, “Well, we have control, we are going to do these sustainable things,” and then enabling the projects to be tied together.

#### Do you think there is a China design style developing?

I don’t think that there is a China style. I think that anyone visiting the various cities would probably notice that the work is very international, very contemporary. This is partly because many foreign architects are working in the country and are bringing different ideas into China.

But I also think that Chinese architects, who do most of the work, are practicing in the same vein, facing the same issues, and often times using the same language that other architects around the world use.

We get clients who often respond to projects that are unique and have some sort of connection to their company, whether it is the company’s personality or the corporate mission. Other times, clients seek projects that are responsive to the history, geography or character of the city or region. If there’s a style that is developing, I think that certainly it’s international, but the best buildings, the ones which have the most impact, are somehow tied into an aspect of local culture or geography. Some smaller scale buildings that use local materials or traditional construction techniques will invariably have a stronger sense of a national legacy. It might be more difficult with tall buildings.

#### How do you think the next wave of Chinese towers will differ from the current wave?

I think that the buildings will definitely get more efficient and more technically sophisticated. Engineering-wise, we’ve been making a lot of progress in working with the Chinese codes and the Chinese expert panels to devise buildings that really push the envelope in terms of being efficient, using less materials and conserving resources.

I think that exterior enclosures are becoming more sophisticated, partly due to the new technologies brought in, but also through the growing maturity of the Chinese curtain wall and higher quality building suppliers and systems now available in China. I think that there is a rise of professionals, manufacturers, and fabricators who understand how to build buildings in China, and that the plans

currently being developed all have a high degree of thoughtfulness to them.

### Does the process reward function and efficiency?

Oh, yes. Absolutely. None of our buildings would get built, and I think a lot of buildings don't get built, unless they fit within certain cost parameters. Nobody wants to throw away a lot of money because of huge egos or unattainable ambitions or because somebody has decided that the strategy is to make a statement.

### An attitude which exists in other areas.

Sometimes those buildings are part of bigger real estate and investment strategies. But we're finding that the clients [in China] very much want to have buildings that can be built and that means they must be efficient and economical. They're usually delighted when we're able to bring something unique to the design which makes it special. As an integrated practice, SOM has some advantages. We can really put elements together to propose ideas with cost efficiencies and space efficiencies, and then it's up to us to come up with something that is memorable.

In the end, each scheme presented for a project meets the criteria from the design brief. But each building has a different quality in terms of how it would exist in the city.

One of the schemes we recently developed uses the building as a metaphor for the entire region. The city has a river and two mountain ranges which surround it, and our clients loved the fact that their building actually had this quality of two objects with voids and bridges that connect the two towers. The local poetic connection made it work.

### Is the livability quotient becoming more important in the design briefs?

I think so. We often find that China has a stronger design sense, along with a sense of space and how things are connected. Our clients travel all over the world and have become very adept at identifying the best urban environments. So in design briefs, we see a real desire to create the pedestrian and

human scale environment – places for retail, restaurants, shops, public spaces, public indoor spaces, public outdoor spaces – by stitching these things together. It's about developing these dense urban environments into great places for the next generation, who are increasingly aware and worldly.

### How does the collaboration process differ in China?

When we work in China, sometimes we're unable to use our own internal disciplines or familiar consultants, but we still strive to have that same level of collaboration early in the design process. In fact, it might drive some consultants crazy because they want to wait until, "the architects get their act together" before they interact. But we are constantly trying to challenge preconceptions and search for those little secrets and those little nuances to make a better design – why does the structure have to be like that? Or what can we really do to save energy? Or what can we do to make the place more livable? So we do engage our outside consultants early in the design process.

The other aspect is that it's very essential to use the LDIs (local design institutes), because very few foreign firms – if any – are actually currently licensed in China. We tend to avoid using LDIs that want to rubber stamp drawings, because we know that if they're not involved early and are not part of the design process, they are not likely to say, "Look, let's try to figure out how to get things approved."

Actually, the organization of many of the LDIs is very similar to SOM. They have structural engineering, building systems and various other disciplines within their offices. So we have similar cultures. We involve them early and really want them to be a part of the design process. LDIs are part of the critique and are essential to figuring out the viability of the projects in terms of codes and rules and all those sorts of things.

### What keys would you identify to moving a project along the approval process?

First of all, the project has to be efficient and cost effective. If it isn't, it's never going to get built. We've seen other projects that are

essentially just big, flashy ideas. But without the ability to actually implement your ideas and convince the client that they can successfully be implemented, they're not going to get done.

Secondly, you have to have good, smart clients that are with you in terms of the ability to put the project together – approvals, working with local designers, working with the expert panels and building authorities, as well as the planning and infrastructure departments that all give approvals. We have great repeat clients.

I think the last one would be the ability to develop a project that is unique and has some kind of original quality that is not derivative, something that strikes an emotional chord in terms of people's perception of their city or their company. I think authenticity and appropriateness is important. It's what people will ultimately respond to. ■