Dr. Andy Davids

WORKS

"It is a privilege to be an Engineer. Responsibility and Joy come with that privilege in equal measure, and this nowhere more clear than when an Owner invites you to create something extra-ordinary."

- Dr. Andy Davids

"È un privilegio di essere un ingegnere. Responsabilità e la gioia sono dotati di tale privilegio in egual misura, e questo nulla più chiaro rispetto a quando un proprietario vi invita a creare qualcosa di extra-ordinario."

- Dr. Andy Davids

Dr. Andy Davids

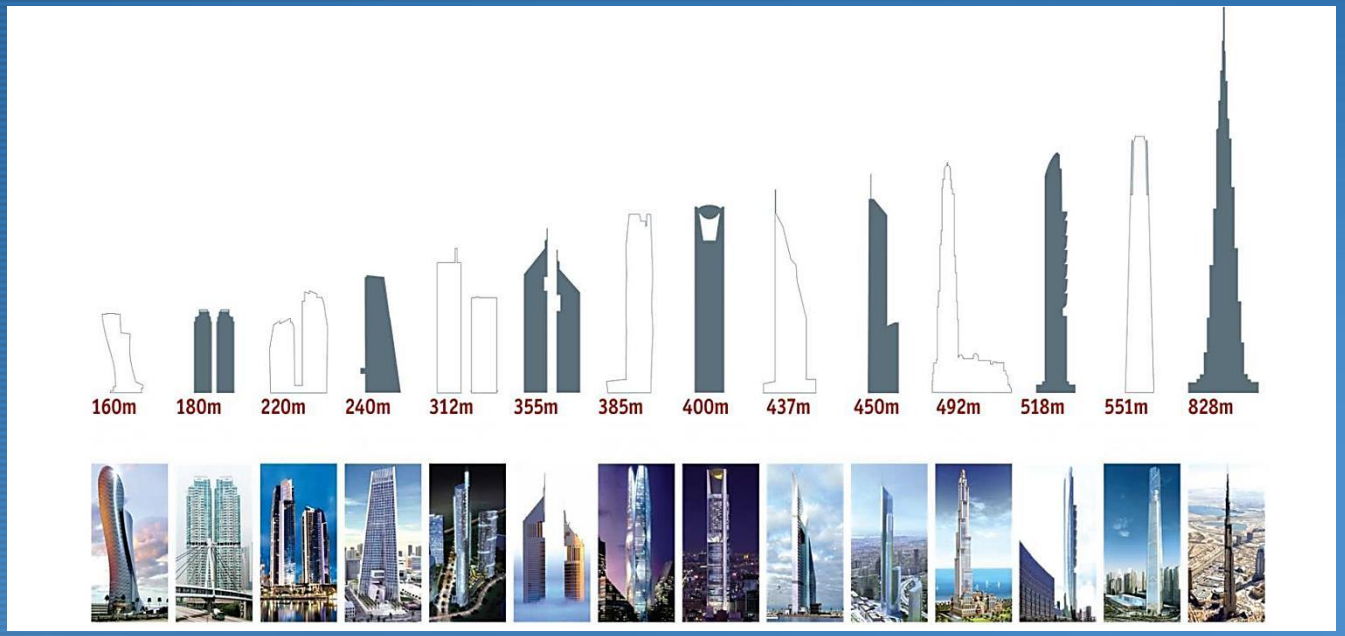
He is an Australian Engineer by training and passion and holds a PhD in Engineering and an Adjunct Chair in Architecture at the University of Sydney, and serves on several International Code Committees. He received the RW Chapman medal and Engineering Excellence Award from the Institution of Engineers for his work.

Andy leads a tall building design ‘Studio’ and has been responsible for the design and construction of many Super Tall projects around the world. These includes:

- 355m tall Emirates Towers in Dubai
- 80 level Sun & Sky Towers in Abu Dhabi
- Central Bank Tower Kuwait

He held design responsibility for the recently completed **Burj Khalifa**, which is the current tallest building in the world.

COLLECTIVE WORKS Globally



The above slide offers an illustration of some of these projects, and Andy was the Technical Director on these projects, either from inception to completion for the Owner or developing alternative structural and construction systems for the Contractor.

"It has been a privilege to be involved in the design and construction of many of the tallest buildings in the world over the last 10 years." - Dr. Andy Davids

Christchurch Art Gallery, NZ

Overview

The entire public circulation realm along the front of the new Art Gallery in Christchurch is created with a steel and glass curtain wall. The wall is 15m tall having the shape of parts of intersecting cones, supported by fabricated steel blades and cast arm spreaders. Andy was the Structural Engineer for the project, undertaken in collaboration with John Perry, now Chief Engineer at Yuada Facades.

Doha Convention & Exhibition Center

Overview

The new Exhibition Centre in Doha provides an extra-ordinary public facility. A unique roof was developed to clear span 96m and provide 50,000 sqm of column free space for flexible exhibition layouts. Andy collaborated with Jahn Architects and MKA from inception, and the project is currently nearing construction completion.

Grand Hyatt Abu Dhabi

Overview

This striking project provides a unique building for the Hyatt Hotel in Abu Dhabi. The building is organic in form, and was built using a form-following dia-grid fabricated using high strength structural steel. The project was completed in 2011.

Andy was the Technical Director developing the construction system for the project, in close collaboration with RMJM.

Mei Foo and Nam Chong MTR Station

Overview

The MTR is the backbone of the city of Hong Kong. It is in constant operation, and seamlessly moves millions of residents each day. The MTR stations at Mei Foo and Nam Chong are busy stations located on the Westrail line, constructed using Heavy RC Box systems in deep excavations. Andy was the Structural Engineer for these stations, developed in collaboration with David Roberts, now CEO of Aedas Architects Hong Kong.

Central Bank of Kuwait

Overview

The project was specially designed by HOK Architects in London to the exacting needs of the Central Bank of Kuwait. The triangular floor plan has a 21m clear span between RC shear walls and a mega-frame perimeter.

Andy was the Technical Director for the project, which has just been completed by China State Construction.

Ski Dubai

Overview

The project provides one of the largest indoor ski-slopes in the world, being 450m long and 75m wide clear span. It was designed to be fabricated on top of the RC car-park and strand-jacked up into place. Andy provided Construction Engineering to this ambitious endevour, which is now operational.

Federation Square Melbourne

Overview

The project involved creating an Urban Space in the heart of Melbourne by building a strong RC deck over 24 operational rail lines without disturbance, and then placing a group of beautiful chaotic buildings on top for Public Use.

Andy was involved in the Structural Engineering of this remarkable project, in collaboration with LAB Architects.

Circle on Cavill Gold Coast

Overview

This project provided residential accommodation in twin 70/50 level towers, and a large retail component on a prominent site on the Gold Coast. Proximity of the ocean and a high water table in sand lead to the adoption of ‘top down’ construction techniques for the basement and foundations of this major project for Sunland. Andy was the Technical Director for the project from inception to completion, in collaboration with Wethered Howe and Sunland Architects.

Istanbul Metropol

Overview

The project provides 600,000 sqm of mixed-use facilities including office, hotel, residential, retail and car-parking on a prominent site in Istanbul for the Varyap-Gap JV. The project is one of the largest construction projects in Europe, and includes a major podium and three prestigious towers, the central one of which will be the tallest building in Europe. Andy is the Technical Director for the entire project from inception to completion, and the project in under construction at present.

ADNOC HQ Abu Dhabi

Overview

The project provides prestigious HQ Office accommodation for the Abu Dhabi National Oil Corporation, ADNOC, on a prominent site on the Corniche in Abu Dhabi. The building provides 60,000 sqm over 75 levels, and at 346m will be the tallest building in Abu Dhabi when completed in 2014. The current construction system was developed for Sixco Contractors during their tender for the project, and provided Sixco with a winning edge to secure the prestigious contract. The system incorporates world best practice CFT columns and HSC Concrete in the overall ensemble.

Andy is the Technical Director for the Contractor Construction System, and the project is currently under construction.

KLIA Satellite Terminal

Overview

The satellite terminal at KLIA is a stunningly beautiful terminal designed by prominent Japanese Architect, Kisho Kurokawa. The wing shaped roof is a key element, and it was developed to provide minimal columns to the terminal circulation space, and a surprise garden atrium in the middle. Andy collaborated with the Contractor, Yongnam, to achieve a roof configuration which provided maximum efficiency and satisfied Architectural intent.

Hanking HQ Shenzhen

Overview

This project includes 120,000 sqm of prestigious office space in a 450m tall building on a prominent site in Shenzhen. The tower is oriented to face South, and the main RC cores at each end provide stability with the office space between being constructed using composite floors supported by CFT columns. The major gaps between modules provide significant relief of Typhoon wind pressure, and create common roof garden spaces favoured by the Owner. Andy is the Technical Director of this project, in collaboration with Benjy Ward at Gensler Architects in Shanghai.

Berwaz 'Frame' Dubai

Overview

The building is in the form of a 'Picture Frame' being 150m high and 95m span, with a trapezoidal cross-section of thickness only 8m. An extensive wind tunnel testing programme was conducted to study the effect of vortex shedding known to cause instability in buildings of such slenderness and cross-sectional shape. The upper bridge provides a public observation deck, and the project is designed to be built using conventional RC legs and a prefabricated steel bridge which will be assembled at ground level and strandjacked into place. Andy is Technical Director for this extra-ordinary project currently under construction.

Abu Dhabi Tower

Overview

This project provides large scale mixed-use office, hotel, retail and residential accommodation on a prominent site in Astana, the Capital of Kazakhstan. The project includes a 75 level tower which was originally designed by others using conventional construction techniques, and sent to Tender upon that basis.

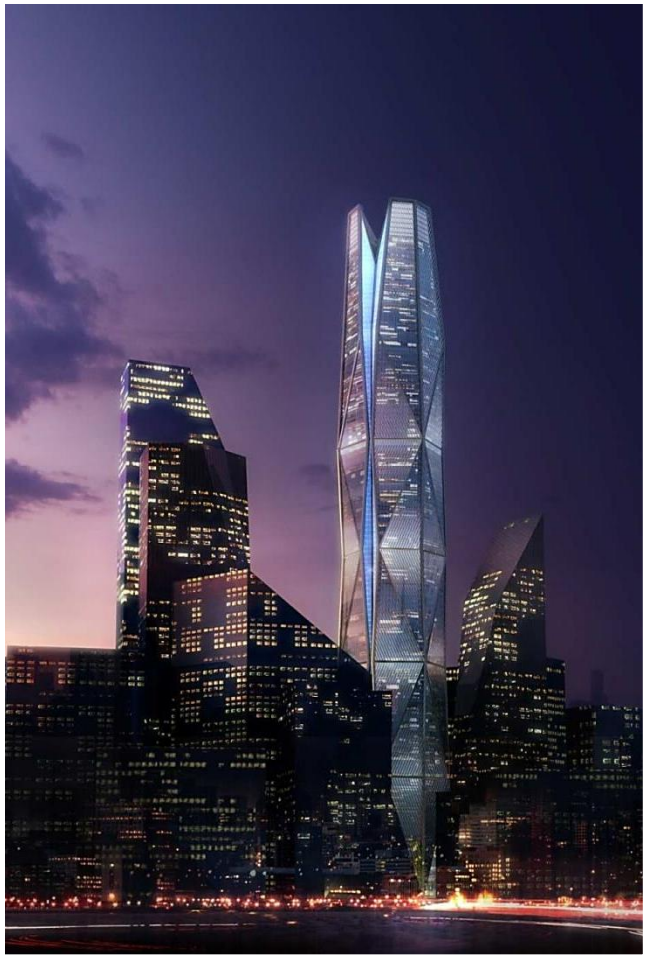
Andy was invited by the Bidding Contractors to develop a winning alternative construction system for the 75 level tower, saving time and cost for the tower which is currently under construction in the rapidly emerging market of Kazakhstan.

Emirates Towers Dubai

Overview

The project consists of twin towers providing prestigious office and 5 star Jumeriah Hotel accommodation, along with retail and car-parking. Andy was the Technical Director for the Project from inception through to construction completion.

Capital Market Authority



Overview

The project provides prestigious HQ Office accommodation for the Capital Market Authority of Saudi Arabia, and is the centre-piece if the new KAFD Financial District in Riyadh. The building provides 150,000 sqm over 80 levels, and includes the new Thyssen twin lift system. At nearly 400m, it will be the tallest building in Riyadh when completed in 2014. The construction system incorporates world best practice CFT columns and cast in place HSC Concrete Core with composite structural steel floors to create a rapid construction system.

Andy collaborated with HOK Architects and is the Technical Director for the project, currently under construction.

Burj Khalifa

Overview

The project provides mixed-use accommodation for a boutique Armani Hotel, Serviced Apartments, Freehold Apartments and Offices over 160 levels.

The first 678m of the tower was designed to be constructed using high strength RC placed using rapid self-climbing formwork, and the upper 150m was built using fabricated structural steelwork and a self-erecting spire to reach 828m. The project was completed in 2010 as the tallest building in the world.

Andy was the Technical Director and Chief Structural Engineer for the project from inception to completion.

Sky City J220 Changsha

Overview

The project provides mixed-use accommodation for a Hotel, Apartments, and Offices over 220 levels and will reach 838m high upon completion. The tower is located in a Seismic zone and designed to be constructed using structural steel ‘bundled tube’ frames to provide ductility and and prefabricated floor panels to provide speed of erection.

The project structural design has been completed and is currently going through the National ERP Process in China, with construction planned to start in 2013. When complete, it will be the tallest building in the world.

Andy was the Technical Director responsible for developing the complete structural and construction system for the project, in collaboration with the Owner BROAD, and LDI Ceedi.

"The true recipients of this award must be the teams of bright people who are drawn to such projects, for it is their clever efforts that create the conditions for these projects to be realized in practice."

- Dr. Andy Davids

"I veri destinatari di questo premio devono essere le squadre di persone brillanti che sono disegnate per tali progetti, poiché è loro sforzi intelligenti che creano le condizioni per questi progetti da realizzare in pratica. "

- Dr. Andy Davids