

**2019:**  
Our 19th Year

This month marks our opening 19 years ago, while this is just our 2nd newsletter, with 01 issued on our 10th anniversary in 2010. We could not wait for our "20th" to share some news! A key Principal rejoined us last month with roots and shared visions in our past which will benefit our Clients, and fellow project team members. Also, we published a subtle breakthrough design called, "Harmonized Elevator Dispatching and Passenger Interfaces", having visible and performance benefits.

Since 2010, some 100+ story towers we started at concepts are now well under construction, we completed design for many projects globally, we are in design for others, and many are complete -- including a science center in Miami, Cincinnati's Great American Tower, TD Ameritrade HQ in Omaha, towers for Lodha in Mumbai, Bitexco Financial Tower in Vietnam, Samba Bank HQ in Riyadh, a large university, and an airport. We also provided review services for the world's tallest building.

– **Barker Mohandas Team**, April 2019

**Malaysia**



**PNB 118, Kuala Lumpur**  
Architects: Fender Katsalidis Architects, RSP  
Structure & MEP: [Link to CTBUH Database](#)



**Mike Spaner, M.S.E.E.,**  
Principal  
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**Key Principal Rejoins**

On 1 March 2019, Mike Spaner rejoined us as a key Principal. His roots with us go back to our formation in developing the powerful software tools we use for traffic-system optimization studies for high-rise buildings. He later joined as a Principal and was involved in VT system design with several tall buildings, including the 1000m+ Nakheel Tower, and various "wide-rise" projects. Mike's elevator industry roots go back to the Otis Elevator Worldwide R&D Engineering Center. He holds a MSc degree in Electrical Engineering from Rensselaer Polytechnic Institute. Mike is focused on cultivating our critical processes and design services which support the success of Clients' projects and assist fellow design team members. He will also lead or co-lead project design work, along with our other key principals.

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We began PNB 118 with FKA's first concepts, took VT system design through "early" tendering (one of our **Processes**), and based on the award to Kone, we are now providing construction administration services. This will be Malaysia's tallest building, consisting of offices, a Park Hyatt Hotel, and an "OB" deck -- accessed via scenic double deck lifts (in the glass hoistway line shown leading up to the mast).

**U.S.A.**



**Hudson's Site, Detroit**  
Architects: SHoP & Kendall/Heaton  
Structure & MEP: Buro Happold



**Elevator World, USA**  
November 2018  
[Link to Article](#)

**Harmonized Dispatching**

"Harmonized Elevator Dispatching and Passenger Interfaces" was recently featured as the cover article in the primary magazine for the elevator industry. This includes a case study with comparative traffic performance improvements, our functional sketches, and screen shots from the elevator manufacturer who is building this now for both double deck and single deck elevators. In the main lobby, most key functions of destination dispatching introduced in the early 1990's are retained, while improvements also begin there. The drivers were to improve traffic performance and user interfaces for office buildings, building upon destination and hybrid dispatching techniques. With this article in November 2018 we released this innovation into the public domain. Some credits include both Schindler and Kone.

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Hudson's Site is an important project for those of us who worked in similar cities in the U.S., and wish to see more such projects here! In addition to a tower, it has circulation elements of a "wide-rise" project in a "block" building. Our designs are being led by our Principal, Sean Morris, P. E. [Link to Client's Site.](#)

**India**



**World One, Mumbai**  
Architects: Pei Cobb Freed, Somaya & Kalappa  
Structure, MEP: LERA, Buro Happold



**Interview, Book 2011,**  
2015  
[Link to verticalcity.org](http://verticalcity.org)

**R&D for VT, Tall Buildings**

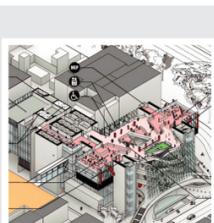
During the design of a **200+ story tower** we had studied ropeless elevators with linear synchronous motors, including with MagneMotion, as most major elevator companies had shelved related R&D efforts. As a result, for an interview/chapter for "Vertical City: A Solution for Sustainable Living", we suggested that ropeless, skylobby shuttle elevators are overdue! Later, thyssenkrupp announced their MULTI system, Rick Barker introduced their leaders in presenting same at CTBUH 2015, and in ENR magazine Barker said their project leader had, "... in fact, led an R&D effort across the threshold of the untethered Holy Grail of the elevator industry." Still, in a **2017 paper on super-speed elevators** we again encouraged the next step of ropeless skylobby shuttle elevators.

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Rising to 117 stories, World One is the tallest of 4 towers on the site for which we completed VT design and are providing on-going services, including for a new office tower. The passenger lifts, by Schindler, are protected for the fire brigade to manually assist with evacuation, homing-in on code refuge floors.

**Mexico**



**Reforma 432, Mexico City**  
Architects: Foster+Partners, V-FO  
Structure: WSP



**Circulation Study**  
Elevators & Escalators -  
Retail, Parking, Bridge

**Complex Circulation**

Over the years we have studied vertical circulation for many complex wide-rise projects, and areas like the "block" building for Hudson's Site (above). The base areas of a tall building can be as complex, and Reforma 432 was a case in point. It has different street entrances, many parking levels below grade, and in a separate structure connected via a bridge, multiple floors of public retail, and a 54-story office tower, that is accessed via double deck elevators with a 2-level main lobby. Escalators of course connect all retail levels, which are also served by a group of elevators which stop at all parking levels, and in reality have no distinct "main" traffic lobby. After a task of gathering, identifying, and timing various peak pedestrian flows, we used a special version of a dispatching simulator to study queues and long waits at all elevator lobbies, to quantify the retail elevators, as we have done for similar projects.

For the office tower part of Reforma 432 we studied single vs. double deck elevators, in a central vs. offset core. We completed design with double deck elevators in an offset core to enable the "L" footprint of the tower for maximum retail utilization and full open office plans, in close collaboration with F+P.

**U.A.E.**



**Aykon City by DAMAC, Dubai**  
Architects: Handel Architects, KEO  
Structure, MEP: KEO International Consultants



**Altair Tower, Colombo**  
Design Architect:  
Safdie Architects

**News from Dubai Office**

Our Newsletter "01" in 2010 announced the opening of our office in Dubai, Barker Mohandas Middle East, led by Anand Sivan. While we did this after a large construction boom, our focus on having the right engineering leader, with our support, has proven successful. There is now a **CTBUH database page** for the tallest projects our Dubai office has handled directly. Some VT systems being planned in Dubai are also being built elsewhere such as in Colombo. Sivakumar Rangaraj, a skilled mechanical engineer with lift experience at Schindler and Kone and who also joined us. In addition to his project work, Sivakumar led a study comparing seismic designs and codes for VT, in collaboration with our office. "BMME" also assisted with observations on-site at the Burj Khalifa in 2015, and earlier with VT design for a very large airport built near Jeddah. Please contact our Dubai office to learn more: [bmme@barkermohandas.com](mailto:bmme@barkermohandas.com)

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Aykon City is a 4-tower project, with 2 of the towers under construction now with lifts provided by Schindler. Our office in Dubai provided full design services from concepts, through tender reviews.