

**2022:**  
Our 22nd Year

In looking back since our last newsletter (April 2019) our primary thought is to say: **THANK YOU** to the Clients who persevered with their projects, and to their Architects who we worked closely with. Accordingly, this focuses on projects under construction or completed during the last two years. We also recognize a major professional contribution by a colleague, and some by our consultants.

In looking at these projects we also regain a special appreciation for the Builders, and particularly the Elevator Manufacturers. They implemented the details of some design solutions and improvements we put forward, after recognizing their value as further steps for safety, performance, energy or space efficiency, useability, and/or serviceability for the vertical transportation system involved.

– Sean Morris, P.E., Principal

**Detroit**

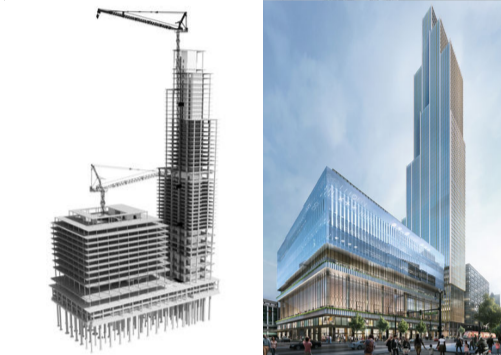


**Faria Lima B32, São Paulo**  
Completed 2021  
Design Architect: PEI Architects  
Elevators: thyssenkrupp

**Main Work - Part 1**

For high-rise projects our “VT” traffic-system studies are valuable to Clients at concept design, especially with our “Multi-Group Optimizer” tool. In studying options for occupancy massing and mix, with floor sizes varying with tower form, we can help determine an economical number of floors based on elevator core size, or how many floors can be built for a given core -- for further analysis by other disciplines. Our most viable VT system solutions are then quickly accompanied by drawing details to help establish core and floor plans early. For the “B32” office tower, single vs. double deck elevator systems were also compared using our tool, a certain single deck system was selected, and that happened to result in the building having the fastest elevators in Brazil.

We began studies for Hudson’s Site early on. We studied various iterations for height and occupancy massing which helped finalize the project design. The “Block” includes office floors and exhibition areas, and the “Tower” hotel and apartment floors. We are now providing construction administration services for this very important project by Bedrock.



**Hudson’s Site, Detroit**  
Design Architect: SHoP Architects  
Elevators: thyssenkrupp Escalators: Schindler

**Kuala Lumpur**



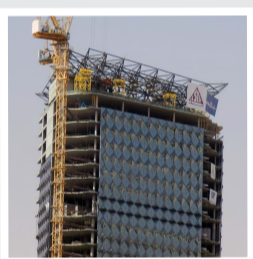
**World One, Mumbai**  
Completed 2020  
Design Architect: Pei Cobb Freed  
Elevators: Schindler

**Tall Buildings**

Looking further back, we assisted with the design of many buildings which became the tallest in the country or the city, and lately the world’s 2nd tallest. We also reviewed the existing elevator equipment in the world’s tallest building (Burj Khalifa in Dubai), and designed or reviewed “VT” systems for towers which were to be even taller. In our design work we always tried to put forward improvements based on our experience, and the importance of the projects. The efforts can be intense, even in “shop drawings”. Yet, after, we gain an appreciation for many of the implementations by the Elevator Manufacturers, and for the construction methods by the Builders.

In 2021 the spire of Merdeka 118 reached 678.9 m (2227 ft), making this the world’s 2nd tallest building. Our services began with VT studies at first concepts, progressed through detailed design and tendering, and continued in construction administration. The tower includes over 80 office floors -- served by a system of double deck local and skylobby shuttle lifts for space efficiency, a Park Hyatt hotel, and observation deck levels -- reached via a pair of long travel double deck scenic lifts. Our specifications cover many important improvements for tall building elevators, without quantum leaps in technology.

**Mumbai**



**SNB Head Office, Riyadh**  
Completed 2020  
Design Architect: Foster+Partners  
Elevators & Escalators: Otis

**Main Work - Part 2**

Some projects have unique design requirements. The 40-floor SNB Head Office (formerly Samba Bank HQ Tower) in Riyadh, part of the King Abdullah Financial District, was such a project. We worked under Buro Happold and with Foster + Partners in London. After our studies to finalize the primary lift groups (supplemented by 20 escalators in a large atrium), we provided drawing and specification details for certain high-rise, high-speed lifts to have an offset and upside-down machine -- located at the top floor served, adjacent to the hoistways, to allow for needed overruns under a relatively low roofline.

Another such project was Lodha Park Parkside (T2), one of several residential towers completed on the site in 2021. While not normally applied to the traffic, given unusual layouts of lifts within their groups, we simulated destination dispatching -- with instant car assignments which considered walking times, to enable the lift cores. We also provided a solution to add suspension system stiffness so an economical machine roping ratio could be used with extended lift travels, therefore reducing costs for all lifts.

**Dubai**



**Sivakumar Rangaraj, Technical Director, Barker Mohandas Middle East (BMME)**

**Dubai Office**

After roles in engineering and field technical support with two major elevator manufacturers, Sivakumar’s goal in joining us was, “to work in a team comprised of leaders in their field, to learn more of complex elevator engineering elements, and how those come together in a cohesive, integrated, and efficient manner”. His professional contributions with us now include VT seismic engineering studies toward local code improvements. He has consistently delivered high quality VT consulting services for Clients. Our Dubai office is also involved in VT design for large low-rise projects, currently 10 hotels for The Red Sea Development Company in The Kingdom of Saudi Arabia -- working with Foster+Partners, Oppenheim Architecture, Khatib & Alami, Dewan Architects & Engineers, KEO International, Arcadis, and Stantec; and completed in 2021, 22 buildings involving 81 lifts and 10 escalators for Dubai Digital Park.

Completed in 2020, Amna Tower is the 3rd tower built on the site following an identical 75-floor tower, and a 52-floor tower, by Al Habtoor Real Estates. These residential towers are serviced by high-speed lifts, with separate “MRL” lifts serving 6 podium levels. Full VT design services were provided from concept design through tender documentation.

**Global**



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

**Professional Contributions**

Dr. Marja-Liisa Siikonen, formerly Director of People Flow Planning, Kone, has provided a comprehensive reference work for VT traffic-system planning. This is the first book of its kind since the key 2nd edition of Vertical Transportation: Elevators and Escalators by George Strakosch at JB&B in 1983 (following his 1st edition at Otis in 1967). Her book is an important new resource, including for Architects. Rick Barker provided review comments for some sections. At Kone, Marja-Liisa and Dr. Janne Sorsa recognized the benefits of a technique we introduced (and later released via this article in EW). As a result, we see a new VT industry definition in her book, “**Harmonized elevator dispatching**: ..also called *advanced destination control system*.” She also acknowledged some past contributions by our consultants.

Also in 2021 we benchmarked our calculations for individual elevator group traffic performance within our Multi-Group Optimizer against those published (new ISO 8100-32:2020 standard, CIBSE Guide D), and results from the Elevate™ software tool. Our tool was found to be more sophisticated, while also computing system-wide (i.e., multi-group) solutions.

**People Flow in Buildings**

Marja-Liisa Siikonen

WILEY Blackwell

**New Elevator Industry Book, 2021**  
Author: Dr. Marja-Liisa Siikonen,  
MLS Lift Consulting, Finland