

Charlotte, USA

Bank of America Tower

New tech,
safer cities

For most people, 'use the elevators' might seem like a surprising instruction in an emergency. But, at Bank of America Tower, the elevators equipped with 'Occupant Evacuation Operation' (OEO) can evacuate people quickly and safely. This landmark tower is in the rapidly growing city of Charlotte, North Carolina. The safety of the city's future passengers is in our hands – as we help build its tallest buildings with the latest technology.

Challenges and client brief

- New tall building code requirements for safe evacuation following 9/11
- Pioneering installation of cutting-edge tech
- Growing market for tall buildings

Schindler solutions

- Occupant Evacuation Operation (OEO)
- Integrated new tech in real world application
- Expanding to serve new clients

Owner
Highwoods Properties

Developer
Lincoln Harris LLC

Architect
LS3P

General Contractor
Gilbane Building Company
Shelco Inc.



Project overview

2019

Construction end year

11

Schindler 7000 elevators

7

Schindler 5500 elevators

2

Schindler 330A hydraulic elevators

Schindler PORT

Elevator control

145 m

Max travel height

3.56 m/s

Max speed

Occupant Evacuation Operation (OEO)

Innovation employed

Faster & safer



Real-world adjustment

Our client asked for state-of-the-art OEO technology and sustainable operation in their LEED (Leadership in Energy and Environmental Design) Gold certified building. The elevators at Bank of America Tower are capable of regenerating power, feeding it back to the building grid and lowering overall energy consumption, a signature Schindler sustainability feature in normal operation. However, OEO testing revealed that too much energy could cause a power overload during an emergency operation. To address this, our Schindler team worked closely with the general contractor and the building's electrical design team to eliminate potential power surges, thus ensuring the elevators run smoothly when operating on the emergency generators. OEO in the Bank of America Tower provides the perfect example of how we can adapt new technology to fit real-world situations.

OEO controls and monitoring systems for emergency responders and building management provide clear communications - and of course a classic red American emergency phone.

Project highlights

OEO – getting people out faster

Everyone knows that taking the elevator in a high-rise building is usually faster than the stairs, especially for less mobile people who might also slow down movement in a crowded stairwell. Occupant Evacuation Operation (OEO) technology uses the elevator system to manage the evacuation of people from high-rise buildings safely and efficiently. When OEO is activated in an emergency, building occupants are directed to assemble in fireproof landing areas and then guided by live messaging signage to specific emergency-equipped elevator cars. Given the significant cultural change in asking people to jump in an elevator when the alarms are going off, occupant training and communication are essential to ensure the entire process proceeds smoothly. Industry studies show that OEO allows for up to 50% faster evacuation in comparison to exclusively using the stairs. OEO is also safer

and more secure, especially for less-mobile building occupants.

Technology like OEO is essential in creating safer and more sustainable cities. Christopher Mason, a 34-year Schindler veteran and tech guru, helped to develop OEO for the entire industry, starting in 2009. Changes were made to high-rise building safety protocols in the International Building Code following lessons learned from 9/11. Today, any building over 420 feet (128.02m) in the USA must have OEO-enabled elevators or an additional emergency stairwell. Mason consulted on the OEO installation at Bank of America Tower, Schindler's pioneering OEO project in the USA. Mason believes that in future many more buildings will feature OEO, as its benefits get more widely recognized and accepted. "Eventually people will ask, 'Why doesn't this building have elevator evacuation operation?'," he said.



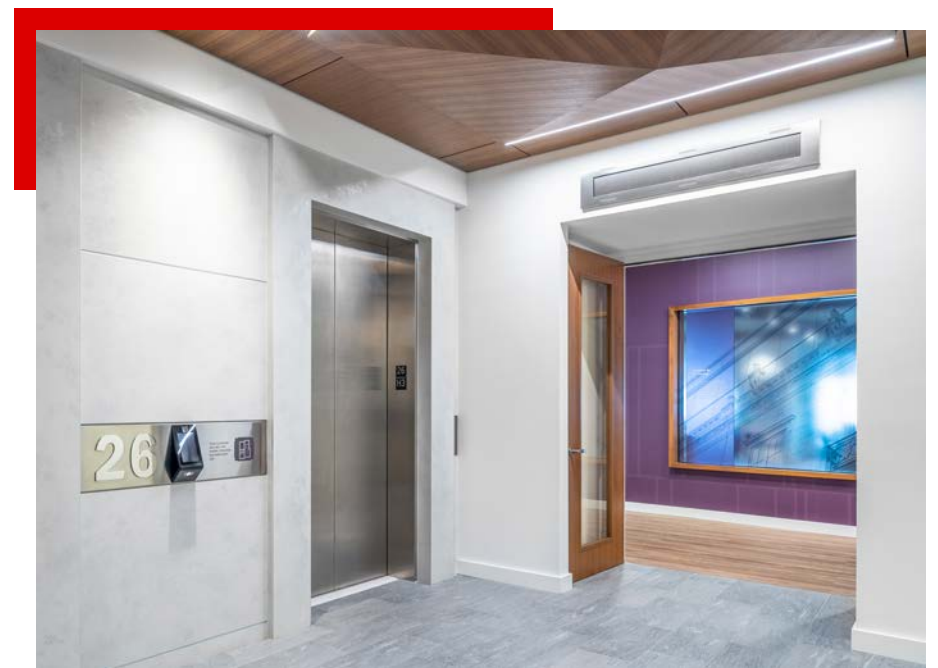


Kick-start an entire market

Building the city of Charlotte

Small and medium-sized cities like Charlotte are booming all across America, proving a viable alternative to sprawling metropolises. We are happy to contribute to this growth, in Charlotte and beyond. The Bank of America Tower is part of the Legacy Union development, a new center for Charlotte. Bank of America Tower is just the beginning. This 33-story skyscraper is capped with

a 30-meter LED lit-glass pyramid – a beacon for Charlotte. Cities get built project by project, and more buildings mean more people. In less than five years, our Schindler Charlotte installation team has grown from six to 26, as we've helped our clients build the city. With localized knowledge and industry expertise for even the most demanding projects, we'll continue to shape cities like Charlotte for many more years to come.



“ We are witnessing significant population growth and economic expansion in cities like Charlotte. These new urban centers provide improved quality of life that leverages new technologies and new ways of thinking. Schindler is thrilled to be leading the way with innovative, safety-oriented vertical transportation solutions for progressive clients like Bank of America. ”

Rick Piovano
Director Key Accounts for Schindler Large Projects in North America

