

# next floor

Enhancing Mobility.

Conserving Resources.

*Next Floor* explores how the newest advances in technology are creating intelligent mobility systems and at the same time helping to preserve our precious natural resources.



**Schindler**



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Schindler news from North America and beyond

**Cover photo:** An elevator lobby in The Crescent Office Towers in Dallas, Texas. A Schindler PORT device is seen on the left.

**Photo above:** Schindler 9300® escalators efficiently move visitors through the busy Metro Toronto Convention Centre.

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**Correspondence:** Schindler Elevator Corporation, *Next Floor* Editor, P.O. Box 1935, Morristown, NJ 07962-1935  
[uswebmaster@us.schindler.com](mailto:uswebmaster@us.schindler.com)  
[www.schindlernextfloor.com](http://www.schindlernextfloor.com)



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# Preserving our planet



Planet Earth has the remarkable ability to renew many of its precious resources. But an equal or larger number of our natural resources are finite; once used up they will be lost to us forever. As a consequence, innovative technology is being applied to ensure we make the most efficient use of our nonrenewable environmental assets. In addition, practical solutions to this challenge are finding expression in important areas of business practice.

An example is found in the tangible efforts of building owners to achieve higher levels of energy efficiency, not simply because it is more economical in the long term, but because as one building owner recently expressed, "It's the right thing to do." And Schindler is helping with advanced technology. The Power Factor 1 regenerative drives available on a range of our elevators are designed to return energy to a building's electrical grid. But it is not only electrical energy that building managers seek to conserve; their focus includes other resources like clean water and clean air. Schindler innovation is also at work in these efforts. For example, our new space-saving Schindler 3300 machine room-less, traction drive elevators eliminate the hydrocarbon products associated with hydraulic elevators.

Complementing efforts to conserve ecological resources is the incorporation of natural elements into building design. Rooftop gardens are finding increasing popularity as methods of collecting and reusing rainwater. Parks and garden areas are being integrated into building layouts, and the use of design elements found in nature, like fractals, is enhancing both interior and exterior décor. At Schindler, we are encouraged and inspired by these efforts from both a business and an environmental perspective. You and I have been entrusted with the care of our planet, with its conservation and the preservation of its abundant life forms. Most importantly, we share the view that, in the final analysis, our stewardship is simply the right thing to do.

A stylized, handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

Jakob Züger  
Chief Executive Officer, Americas



# Charismatic Crescent

Dallas, Texas, which is the ninth largest city in the United States, is part of the Dallas/Fort Worth/Arlington conurbation, also referred to as the Dallas Metroplex. This is a booming commercial area with a population in excess of 6 million that, among other things, is home to 23 billionaires. Dallas is the third most popular business destination in the U.S. and, while it is best known as a major center of commerce, it also offers its share of amenities in terms of cultural, media and sport diversions.





Photo left: The three office towers provide a dramatic backdrop for the upscale Crescent complex as it unfolds in a triangular form that points to the future. Photo credit: Crescent Real Estate Equities, Ltd. Photo center: The overall angular configuration of the complex is counterbalanced by the curved shapes and open spaces incorporated into each building's design. Photo right: An elevator lobby in one of the office towers with a PORT terminal visible on the left wall.

## The shape of business

Within a business area known as the Uptown - Turtle Creek district is The Crescent Office Towers. Completed in 1986, it is one of the centerpieces of the Dallas Class A office landscape and part of a complex that encompasses an upscale hotel, and a wide selection of retail establishments and restaurants. Schindler services all 50 elevators and six escalators throughout the entire site. The Crescent®, as it is known, totals 1,134,826 square feet of office space in three contiguous buildings with a 19-story center structure and two adjoining 18-story structures. The Crescent is home to the Dallas offices of some of the world's best-known financial firms, including Goldman Sachs, Morgan Stanley SmithBarney, Citibank, Credit Suisse, Deutsche Bank, Merrill Lynch and J.P. Morgan Case & Co. It is conveniently located on the edge of the Dallas Central Business District and offers easy access to major highways. The Crescent also reflects the

dynamic aspects of the Uptown - Turtle Creek district, thanks to premier restaurants, shops and service amenities located within the complex.

## Stylish design

The Crescent possesses a bright appearance and elegant character. The exterior of the buildings is Indiana limestone with insulated double-pane reflective clear glass set in the clean lines of aluminum frames. The lobby areas are finished in Italian Pink Royale polished granite walls with Italian Pink Royale polished granite mixed with Imperial Black and Charcoal Black polished granite on floors. Ceilings are either an Italian mosaic glass tile or white painted plaster. Revolving doors and passenger elevator doors in the lobbies are a brushed bronze finish. Garage elevator doors, which open onto the ground floors of each building, are dressed in a modern stainless steel treatment. Of course, there is more to The Crescent than just good looks. ►

## ► Conserving a vital resource

In Texas, water is a precious resource and The Crescent works diligently to conserve it, along with sustained efforts at improving overall energy efficiency. Chilled water is used as the source for The Crescent's air conditioning system and provides 4,100 tons of cooling capacity. The cooling is accomplished by chilling the water to 35 degrees at night, during off-peak utility rate hours. The system stores approximately 1,275,000 gallons of water in storage tanks, where it is funneled through heat exchangers during the day, and later the warm water is returned to the tanks, where it is again chilled overnight.

## Moving a vital resource

The Crescent's novel approach to moving water through its buildings is complemented by its ingenious approach to moving another vital resource ... people. Schindler's innovative PORT (Personal Occupant Requirement Terminal) elevator technology was selected to move occupants faster and more efficiently through The Crescent, making it the first building in Dallas to benefit from the advanced destination-dispatch system. PORT Technology transforms the way occupants navigate and move around the building, while increasing efficiency and energy savings in the process. A phased modernization process is bringing PORT Technology to the three towers one at a time and includes major equipment upgrades such as energy-efficient Power Factor 1 drives.

PORT Technology acts as the central nervous system of a building by providing a two-way communication interface between the occupants and Crescent's environment. The system employs a sleek, futuristic interface positioned at access points and elevators around the building. The operating software is capable of calculating the optimum route to any destination within the building, and also "learns" how its occupants typically move around. PORT Technology then instructs the elevators to direct and transport people quickly and safely to their individual destinations. Furthermore, Schindler's patented technology works with RFID badges to identify passengers and call elevators for personal service.

Rick Flusche, assistant manager — operations, explains, "With the PORT Technology, we are not just buying an elevator modernization for today, but a system for the future, one that is scalable and expandable. The access control features with RFID badges provide personalized 'concierge service' to our Crescent tenants, and add security and value to our building."

What makes Schindler's PORT system special is the ease with which managers at The Crescent can configure the system to accommodate a wide range of needs in real time. Whether it's helping to meet new energy-efficiency goals, updating security or adapting to people with special needs, unprecedented levels of customization can be achieved with PORT Technology consistent with The Crescent's exceptional level of service to its tenants and visitors. ■



Photo above, top: Rick Flusche, assistant manager — operations, The Crescent. Photo above, bottom: PORT devices can read a variety of identification media, such as ID cards, PIN codes, wristwatches or key rings like the one shown here.



A PORT card reader device identifies personalized passenger information and selects the elevator that will provide the most efficient route to passenger destinations.







The Asia House, or Quadrangle, is the largest of Oberlin's nine "Program Houses," four of which focus on languages and five on cultural heritages.

# Small College, Rich Heritage

Located in North Central Ohio, Oberlin College & Conservatory is ranked as one of the top 25 liberal arts colleges in the United States, and its music school is regarded as one of the best in the U.S.

**F**ounded in 1833, Oberlin College and the town that bears its name both demonstrate an enthusiasm for "learning and labor." In the early years, tuition was free, and, in return, students were expected to contribute by helping to build and sustain the community. It was an idea that attracted many bright young people who would otherwise not have been able to afford tuition.

## Pioneers and legends

Oberlin was the first college in America to admit students of color (1835) and the first to grant bachelor's degrees to women (1841).

In 1891, Oberlin established an intercollegiate sports program and the following year named John Heisman its football coach. In 1936, a national award given to the most outstanding college football player was renamed the Heisman Trophy.

Today, Oberlin's enrollment is 2,900, and it's considered "most selective" by *U.S. News & World Report* magazine because of the demanding academic standards required for admission. It offers 47 majors in its College of Arts and Sciences, along with eight majors and 20 private areas of study in its Conservatory of Music.





Oberlin also offers a wide range of extracurricular activities, with 22 varsity sports, 200 student groups and service programs that attract the participation of more than 1,200 students.

### Planning for tomorrow

Oberlin keeps a sharp eye on the future. Part of this vision includes updating and renovating existing facilities to keep pace with the needs of today's students. A recent example is the renovation of the Asia House residence hall, a three-story older structure that required the addition of an elevator to meet ADA requirements. The Asia House is home to students who share a common interest in Asian and Asian-American cultures. Built around an open courtyard and also known as the Quadrangle, it conveys a quiet sense of privacy, despite its location on a busy college campus.

According to Rick Gerena, skills trades service manager at Oberlin, "Because Schindler has been responsible for servicing all of the elevators here at the college, we asked them if they could help us

Fixtures in the Schindler 3300 elevator are composed of metallic-finished buttons with stylish, tempered safety glass panels, back-printed in white, to create a contemporary, modern look, while meeting all applicable codes.



Photo above: Steve Varelmann, director of Facilities Planning and Construction. Photo left: Oberlin College has the oldest continuously operating Conservatory of Music in the United States. Conductor Bridget Reichl leads the orchestra in Finney Chapel. Photo credit: Scott Goldsmith.

with a suggestion for the Asia House since space there was limited. They recommended the Schindler 3300 machine room-less elevator because of its space-saving design, and it also fit nicely into our budget."

Steve Varelmann, who also serves as college architect, explained, "We specified the Schindler 3300 elevator for several reasons. Its traction drive eliminates the need for a machine room, along with the pumps and oil associated with hydraulic elevators, so it satisfied our environmental requirements. It's also loaded with features that result in a smooth

and quiet ride, so it doesn't disturb students who are studying. And we also like its energy-saving benefits, like low-power LED lighting. It simply delivered a better value all around."

Rick Gerena added a final thought, "The Schindler 3300 is exceeding our expectations, it's been extremely reliable and it is a really strong performer, too. When it's move-in time at the beginning of the semester, each student brings in what seems like enough furniture and fixtures to fill a small house, and the Schindler 3300 manages to handle it just fine." ■

# Conventional Wisdom



The main entrance to the Metro Toronto Convention Centre.

Toronto is located in the eastern province of Ontario and is widely recognized as one of the world's leading financial centers. It is a vital Canadian hub for a broad spectrum of commerce that includes transportation, aerospace, telecommunications, software, publishing and medical industries.

**A**s an international business and tourism center, Toronto plays host to visitors from around the world and the Metro Toronto Convention Centre serves as the showcase for a variety of conferences, expositions and trade shows. The Centre has approximately 700 events with 2 million visitors annually and is within walking distance of the Toronto waterfront. It is served by more than 12,000 nearby hotel rooms, fine shopping, restaurants and attractions.

## **A sizable advantage**

Constructed in 1984, the Metro Toronto Convention Centre is large enough to accommodate virtually any gathering. It encompasses more than 2 million square feet of exhibit and meeting space, includes 64 meeting rooms, a world-class 1,330-seat theater and two spacious ballrooms. Up to 40,000 visitors attend a single conference, meeting or trade show at the venue, which has hosted a number of notable events, including the G7 conference in 1988 and the G-20 summit in 2010. Recently, the Metro Toronto Convention Centre was host to Greenbuild 2011, an annual international conference and exposition conducted by the U.S. Green Building Council (USGBC). Its purpose is to educate attendees on building sustainably, while showcasing the latest in products and services designed to demonstrate that going green can grow businesses.

The escalators serve visitors as they travel between the three floors in each of two buildings that comprise the Centre.







As many as 40,000 visitors attend a single event at the Metro Toronto Convention Centre. Schindler services all of the escalators and is reconfiguring the direction flow within the facility.

### Sustainable solutions

The Metro Toronto Convention Centre also stands at the forefront of sustainable meetings by offering exhibitors the option of securing electrical power generated from natural, sustainable resources. In addition, zero-waste meetings are offered that successfully avoid adding to existing landfills by preventing, eliminating or recycling virtually everything the events generate. The Centre also provides conference managers with the tools to calculate their event's carbon footprint along with suggestions on how it can be minimized. Further environmental impact savings are found in offering alternatives to the use of paper through wireless access to conference and show information materials. These and other award-winning programs are examples of the type of progressive thinking that consistently earns the Metro Toronto Convention Centre some of the highest rankings of all conference and convention venues in North America.

### Improving the flow

Recently, the Centre began a program of adding 14 energy-efficient Schindler 9300® escalators, with 10 installations completed to date. According to Vince Quattrociocchi, vice

president of operations, "The objectives were to add a number of escalators to handle our increased traffic because attendance at events has been growing steadily. We are also replacing some of the older escalators and improving the directional flow of traffic through the facility. The original configuration of most of the escalators required passengers to backtrack in order to reach another escalator traveling in the same direction. As we replace the older escalators with the Schindler units, their engineers are repositioning the configurations to move traffic in a linear or straight-line direction, thus speeding flow through the buildings. It's a significant improvement."

Quattrociocchi continued, "Of course, all of this installation work has to be done in a fully operational, very busy convention center. We try to schedule as much work as possible during slower holiday periods, and the Schindler teams have been great about getting in and getting work done within very tight periods. Schindler is responsible for maintenance of all of the 38 escalators and 17 elevators. They provide us with a quality product at a good price point, expert installation and first-rate maintenance of a diverse portfolio of mobility systems." ■

# Going for the Gold



Photo below: San Francisco's weather is so mild, people spend a lot of time in the open air. Midday crowds gather in the plazas set on different levels between the Embarcadero Center towers. Photo left and below, credit: Timothy Hursley, 1989, Embarcadero Center Collection.

Situated in the heart of San Francisco's commercial district, the Embarcadero Center is one of the largest mixed-use complexes in the United States. It encompasses 4 million square feet of office and retail space, and is home to four office towers and three interconnected shopping levels. Acclaimed for its diverse business and entertainment facilities, the center features more than 70 retail shops, abundant restaurants, a multiscreen cinema and a wide range of services to meet visitors' needs.





### A rich history

In the 1840s, the area was known as the eastern waterfront district of San Francisco, and it wasn't until 1849 that its population skyrocketed with the influx of treasure seekers during the California Gold Rush. Many of the fortune hunters, or 49ers as they were known, came to San Francisco by boat, and, by 1862, the docks where the vessels were moored became known as the Barbary Coast, famous for its dance halls, saloons and raucous atmosphere. In the 1920s, the region had lost much of its notoriety and settled down to be known as the more mundane San Francisco Produce District. The 1940s saw the area become a major military logistics center ... the name *embarcadero* means, "the place to embark." After the Loma Prieta earthquake in 1989, also known as the World Series Earthquake, a major redevelopment of the Embarcadero was undertaken. New plazas and squares were created, along with palm-lined boulevards that invited retail shops, offices, restaurants and tens of thousands of visitors each month.



Schindler ID offers fully integrated access control through RFID technology.

### A tall order

Completed in 1981, Four Embarcadero Center, at 45 stories and reaching 571 feet, is the tallest of the interconnected buildings that make up the complex. Boston Properties, which owns and manages the building, decided to modernize the elevators as part of its efforts to secure LEED® Gold Certification. Schindler was selected to install energy-saving solid-state drives and Schindler ID® destination dispatching. The patented Schindler ID technology offers the ability to divide the building into zones with well-defined and personalized access controls. The building uses card readers to validate passenger access rights and assigns the appropriate elevator to bring passengers to their destinations sooner, with less crowding and greater comfort.

Schindler was selected for the upgrade based on a review of similar modernizations performed at other locations in San Francisco, and a record of proven performance in increasing the efficiency of elevator operation. New Schindler solid-state drives help conserve elevator energy in combination with the system's more energy-efficient destination-dispatch technology. The upgrade spanned about two years, a period when Boston Properties also began the process of seeking LEED Gold Certification for Four Embarcadero Center with a team led by Danny Murtagh, director of engineering. ►



Photo above: The Ferry Building along the Embarcadero is an upscale gourmet marketplace, office building and ferry terminal. It is also home to San Francisco's well-known farmers' market, and its landmark clock tower can be seen from Market Street, a main thoroughfare of the city.

## ► Group effort

According to Murtagh, “It is one thing to build a new building that meets LEED requirements. While certainly not easy — it is a very different process to update an existing building. Four Embarcadero is 30 years old, and some of our older systems required modifications to achieve energy efficiency, whereas a new building would be more likely to have energy-compliant systems to begin with. Over the years, we made energy-efficient changes that definitely served us well, but obtaining LEED certification required a tremendous amount of research, implementation, improvements, documentation and a companywide commitment. The final result is a more marketable building and one that can compete very effectively with new construction.”

Boston Properties’ LEED team learned quickly that enlisting support from partners was going to be vital to its success. They drew upon resources that included contractors, consultants and service providers. The goal was to improve business sustainability in the company-owned assets and have improvements positively affect tenants over the long term. By operating the building in a more sustainable manner, they would become better stewards of the environment, while lowering operating expenses in energy, recycling, water and ongoing consumable materials.

The commitment to being more sustainable and energy efficient is not new to Boston Properties. Murtagh continued, “Over the years, the Embarcadero Center has gone from zero waste diversion toward 75 percent waste diversion with the implementation of our on-site recycling program that

began in 2007. The building now houses on-site compost collection and trash sorting. The team actively pursues Energy Star benchmarking that has demonstrated proven success in all of our San Francisco high-rise properties.”

Today, Four Embarcadero Center, at 30 years old, stands as an icon of energy efficiency and sustainability. Boston Properties has since begun the process of LEED certification at five additional San Francisco Bay Area buildings. ■

LEED is a registered trademark of the U.S. Green Building Council.

The Schindler ID variable algorithm is the most advanced in the industry and combines with leading-edge software to drive a powerful logic program that continually adapts to changes in elevator traffic patterns.

Elevator passengers at Four Embarcadero Center are brought to their destinations sooner, with less crowding and greater comfort.



Schindler ID's access control features validate passengers' access rights and call an elevator automatically.







## One for All

Shortly after Schindler received the modernization assignment, the company was also awarded the contract to service and maintain all 75 elevators and 16 escalators in the four buildings that comprise the Embarcadero Center.

This includes:

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Building One: 18 elevators and 4 escalators

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Building Two: 19 elevators and 4 escalators

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Building Three: 15 elevators and 4 escalators

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Building Four: 23 elevators and 4 escalators

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Photo left: Most patients and visitors enter Morristown Medical Center through the main entrance, which features the newly designed Simon-1 Lobby.  
Photo below: The lobby of the Gagnon Cardiovascular Institute, where more open heart surgeries are performed each year than at any other hospital in the state.



# Medicine On The Move

The famous Johnstown Flood struck in Pennsylvania, President Cleveland signed a bill to admit the Dakotas, Montana and Washington to the Union, and construction of the Eiffel Tower in Paris was completed. It was 1889. In Morristown, New Jersey, the former military capital of the American Revolution, Myra Brookfield had a dream of founding a hospital since none served the region, and made a bequest of her home to begin the process.

The stipulation was that the community would have to raise an additional \$15,000 over three years, about \$350,000 in today's dollars, to furnish and equip the new hospital. Through the tireless efforts of another woman, Augusta Stone, the necessary funds were secured, and thus began the legacy of what was to become a prominent medical center a century later.

## The dream grows

The original hospital structure was completed in 1898, and wings were added in 1909 and 1914. Eventually, the hospital outgrew its location, and a new building was completed in 1952, with wings added in 1962 and 1973. Today, Morristown Medical Center is part of the Atlantic Healthcare System, and its

buildings are composed of interconnected "specialty hospitals" that include the Carol G. Simon Cancer Center, Goryeb Children's Hospital and Gagnon Cardiovascular Institute, the largest cardiac surgery center in New Jersey. The center is also the official hospital of the New York Jets football team.

In 2009, Morristown Medical Center was designated, for the third time, a Magnet Hospital for Excellence in Nursing Service, the highest level of recognition by the American Nurses Credentialing Center for facilities that provide acute care services. Designated a Level I Regional Trauma Center by the American College of Surgeons, the center offers emergency care with highly trained trauma teams.





## Morristown Medical Center Fast Facts

5,699 employees
1,245 physicians
186 medical residents
658 beds
36 elevators
37,725 admissions*
3,897 newborn deliveries*
77,093 emergency visits*
286,048 outpatient visits*
11,235 surgeries* (excludes open heart)
1,152 cardiac surgeries* (open heart)
15,207 ambulatory surgeries* (same-day surgery)

\*Annual estimate

Photo right: Ray Fochesto, manager of facilities at Morristown Medical Center, enjoys complete confidence in Schindler's service delivery program. Photo far right: Rob Murray, Schindler's on-site technician, keeps 36 elevators in top working order to meet the hospital's critical demand for uninterrupted mobility.



### Lifesaving mobility

According to Ray Fochesto, manager of facilities, "Morristown Medical Center is a fast-paced institution, and moving patients through the facility can be a matter of life and death. We have 400 trauma flights landing here every year, and transporting patients from the rooftop helipad to the OR is time-critical, so we rely on our Schindler trauma elevators to get the job done. They perform flawlessly."

Fochesto continued, "In fact, we have 36 elevators here, and Schindler maintains them all. We have a dedicated Schindler technician on-site named Rob Murray who's been with us more than four years, and I'm overwhelmed by his performance.

Rob is simply a gifted individual who keeps our elevators running day and night without breakdowns. While the elevators in critical areas are new, a few of our service elevators are 60 years old, and all passed a recent audit by the Joint Commission on Hospital Accreditation that scrutinizes every operational function of the hospital, including our electrical and mechanical systems. Deciding to have a Schindler technician on-site is probably one of the best decisions we've ever made."

In 2011, Morristown Medical Center celebrates its 119th anniversary of serving the northern New Jersey community with a full range of medical specialties and services. ■

# Knowledge Finds a Larger Home



It's a small town, with a population of about 6,000, located near Kansas' eastern border with Missouri. Its name, Osawatimie, is a combination of the names of two American Indian tribes, the Osage and the Pottawatimie.

**T**he area is rich in local history and during the Civil War era, Osawatimie was the base of operation for John Brown, the legendary abolitionist. Preserving the heritage of the town is partly the mission of its 18,000-volume library, which maintains an extensive collection of local historical volumes as well as Civil War genealogy. While the library occupied a small two-story building, only the ground floor offered usable

space of about 3,600 square feet. The basement was virtually inaccessible to library members who were disabled or to parents accompanied by children in strollers, because it was too difficult to navigate down the flight of steps.

## **Renovation**

When Osawatimie town officials decided it was time to renovate the library, they determined that an elevator would be in order. Clearly, space was at a premium in the small building, so an elevator without a machine room would be a real plus. Since libraries are also known for offering a



tranquil atmosphere, quiet operation was highly desirable. And costs are always a challenge in small communities, so an affordable elevator, economical to operate, would be a must. The elevator that answered all of the library's needs was the Schindler 3300. The Schindler 3300 was the right choice since it eliminates the need for a machine room or control closet. The architect utilized the space that would have been required for a control closet as a new electrical room and HVAC pipe chase, creating even more usable space for the library.

### Transformation

The Schindler 3300 has had a dramatic impact on the service the Osawatomie library provides to its community. According to Elizabeth Trigg, the library's director, "Not only did the Schindler 3300 elevator conserve space for us, it actually doubled our usable area to 7,200 square feet by making our lower level accessible to everyone. In fact, our children's collection is housed there, and our summer reading program attracted 450 children who, in total, read 227,000 pages! Of course, the elevator itself is a big hit with the children who all want to push the button to send it on its way."

### Visitation?

Ms. Trigg continued, "For awhile, we wondered if the elevator might be haunted. One day, we had a storm with a power failure, and the elevator automatically returns to the lower level when this happens. We heard voices coming from the elevator, but upon inspection found no one inside and no one on the lower level. Could it be the ghost of John Brown? We later learned that when there is a power failure, the local Schindler service office is notified through remote monitoring, and they call the elevator to see if anyone is inside. As far as we're concerned, it is just another example of the great service that we've received from Schindler. Their people have been complete professionals and a pleasure to work with ... although the ghost story was kind of fun while it lasted." ■



# Mobility At Metropolis



British Columbia is Canada's westernmost province. It's home to the Canadian Rockies, Vancouver, the third largest metro area in Canada, and an abundance of pristine parks and breathtaking natural beauty. While natural resources form the heart of the economy of British Columbia, its cities bring a wealth of commercial assets. An example is Burnaby, the third largest city in the province, which has become a technology center hosting a range of notable corporate operations, including Nokia, Telus, Electronic Arts, Creo and Future Shop.



The Metrotower I office building, part of the Metropolis at Metrotown complex in Burnaby, places an emphasis on ecology, environmental responsibility and sustainability.



Ivanhoé Cambridge is a global developer/owner/manager of high-quality shopping centers. Metropolis at Metrotown is one of its leading properties in Canada. Tenants of Metrotown I have easy access to all that Metropolis at Metrotown has to offer.



## Sustainable shopping

But Burnaby isn't all business. It's home to Metropolis at Metrotown, a sprawling 450-store mega mall that's the largest in British Columbia and the second largest in Canada. The mall complex also includes restaurants, theaters and two office towers with a third under construction. Linked to surrounding cities, including Vancouver, via the SkyTrain, areas surrounding the mall have become a nexus for commercial and residential development.

Metropolis at Metrotown places an emphasis on environmental responsibility and has adopted a number of programs designed

to reduce the mall's ecological footprint. These include reduced consumption of electricity through the use of LED lighting and digital control systems, along with extensive recycling efforts, all designed to conserve precious natural resources.

## Looking up, looking out

Amid the myriad of shops and services at the Metropolis at Metrotown rises Metrotower I, a 28-story, 261,000-square-foot, mixed-use commercial building sheathed in reflective glass. Completed in 1989, this gleaming centerpiece of the mall complex, Metrotower I, offers secure underground parking facilities that service the entire center. ►



Tenants of Metrotower I enjoy the benefits of Schindler ID® destination dispatching, which improves efficiency and reduces energy usage.

- From the parking area, a shuttle elevator delivers tenants and visitors to a grand three-story office tower lobby dressed in highly polished imported granite and featuring magnificent 32-foot-high windows. Volumes of natural light and giant tropical plants in the lobby create a healthy and positive office environment. Five high-speed elevators with polished stainless steel doors, back-painted reflective glass and sleek polished granite floors carry the sophisticated central lobby theme through to the multi-tenant floors.

### A Canadian first

Metrotower I is the first building in Canada to benefit from Schindler ID® destination-dispatch technology. Schindler ID interfaces with the building's security access control system, and now Metrotower I management can offer personalized elevator access with a system that also significantly reduces time to destination. With the ability to grant and prohibit access to specific floors, Schindler ID minimizes waiting times, improves traffic handling by 23 percent over the building's conventional system and incorporates unique assistance features for people with disabilities.



According to Herman Achterholt, operations manager for Ivanhoé Cambridge, the building owner, "Our five elevators were beginning to show their age, so it was time for a modernization. Schindler stood

out as offering the best dispatch technology and a system that would interface with our existing controllers. While we weren't experiencing major delay issues with our old elevators, we were very concerned about removing cars from operation while they were being individually modernized. Since we have five elevators, removing one from service could represent a 20 percent loss in efficiency. With the Schindler ID destination-dispatch system in place, there was no reduction in system efficiency, even with one elevator taken out of service." This is accomplished by a complex algorithm that groups passengers by destination and assigns the most efficient elevator for each person.

The installation took place over a weekend, and on Monday morning, the transition was flawless. Achterholt continued, "The Schindler team worked hand in hand with our security company to achieve the access control we require."



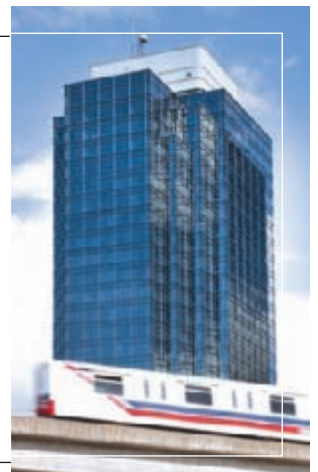


Schindler ID destination-dispatch technology reduces passenger waiting times at Metrotower I.

### Notably green

Metrotower I utilizes a computerized control system that provides flexible scheduling, programming and monitoring of the building's lights. Energy-efficient fluorescent tubes and electronic ballasts add to the energy-savings program. A range of software application programs controls the use of HVAC and water systems to conserve resources and minimize waste. As a result of these and other conservation efforts, Metrotower I has been recognized with several awards, including the 2005 Regional (British Columbia) BOMA EARTH Award for Environmental Awareness, Health, Energy and Recycling. ■

Photo right: The Vancouver SkyTrain provides passengers with a fast and scenic commute to the Metrotown office towers.





# Star of India



Mumbai is India's largest metropolis. A well-known tourist destination, it is also a center for business and government.

Situated on the western coast of India is its largest city, Mumbai. Formerly known as Bombay, Mumbai is now recognized as an excellent commercial, financial and entertainment center with a population of more than 20 million. Its natural harbor is regarded as one of the best in the world, and Mumbai enjoys a long-standing reputation as India's premier maritime port, handling 60 percent of the country's total containerized cargo.



The historic Gateway of India monument is a major tourist attraction, located on the waterfront in South Mumbai.

Mumbai's history predates the Stone Age, and the city has experienced many periods of rapid growth. One of the most impressive of these occurred in the 1960s and '70s, as the city emerged as a key player on the world stage. Its rapid ascension as a business capital during this time brought with it an increasing need for hotel accommodations. Originally constructed in the 1970s, the Hotel Centaur, located near Mumbai Airport, was noted for its unusual circular design that surrounds a lush central lagoon. Over time, the Centaur began to show its age until a leading developer, Sahara India Pariwar, decided to transform the Centaur into a five-star hospitality experience.

## From age to age

The Centaur was reborn as the Sahara Star, and it is indeed a jewel in the crown of Mumbai's hotels. One of the most distinguishing features of the hotel is the design of the three elevators in its covered courtyard. Custom made by Schindler, the elevators are an integral part of the overall architectural concept.





The Sahara Star encircles a tropical oasis complete with small lagoon, palm tree-lined walkways and lush gardens.

Transforming a hotel from the 1970s into an inspiring customer experience for the 21st century required vision and, most of all, imagination. Teams were dispatched to locations across the globe to investigate architectural and design trends of the future. The result is a structure that is as much a tropical nature reserve as a hotel. The circular configuration embraces an expansive green area, around a lush tropical lagoon complete with waterfalls and vegetation in the form of banana plants, ferns and palm trees. The complex also houses India's largest marine aquarium. Hovering over this impressive space is a vast dome that encloses the area to afford an oasis of calm, and a relaxing escape from the hustle and bustle of surrounding Mumbai.

Much like a Roman amphitheater, the hotel's 223 rooms are located around the "tropical" centerpiece. Balconies face the lagoon, allowing guests to enjoy the view without having to leave their rooms. The trip up to the rooms is an experience in itself. Three Schindler panoramic glass elevators deliver a stunning view of the tropical haven below. As the cars ascend, more of the expanse is revealed, and when all three elevators stop at the same floor simultaneously, they form a hemisphere, a suitable symbol for a hotel that joins guests with a natural environment. ►

India's largest aquarium is the backdrop for the Sahara Star's Ocean restaurant. This exceptional aquarium provides patrons with spectacular views of a wide variety of exotic fish.







As hotel guests approach the Schindler panoramic elevators, they can immediately enjoy views of the lush tropical lagoon through the glass doors on each cab.

### ► Inspired design

The concept for the elevators originated in Switzerland. While traveling in Zurich, Vivek Kumar, CEO of Sahara Star, discovered two elevators that together created a hemisphere. Kumar immediately decided that he wanted the same type of elevators for the hotel, and the journey from Zurich to Mumbai began. Sahara Star's elevators would have to be entirely custom made, and Schindler specialists in high-rise and complex elevator projects went to work to bring Kumar's vision to life. The most important change was including three elevators instead of two, with the resulting hemisphere measuring 24 feet across when all three are aligned.

### A cinematic solution

In the main workshop in Switzerland, the cabs were assembled and every detail checked, before being disassembled for the journey to Mumbai, where the local installation team would take over. Because the cabs were so unusual, the initial assembly process was filmed so that the team would have no difficulty installing these unique elevators. Among the biggest challenges was lining up the rails of all three elevators within the existing structure to ensure that all parts of each elevator were precisely aligned when viewed from outside.





The world's first "hemisphere" compound-curved, custom-designed, all-glass panoramic elevators rise in the Sahara Star.

**The view is the future**

The tower with the three glass elevators is easily the most distinguishing feature of the hotel. The image is particularly spectacular at night, when the illuminated tower, looming large over the tropical vegetation, is enhanced by the lights from the surrounding balconies.

The Sahara Star is one of several hotels ushering in a new era in hospitality, where the hotel is as much of an experience as the destination. Thanks to Schindler's ingenuity, the elevators at the Sahara Star are enhancing that experience. ■

# Platinum Pearl

Portland, Oregon's Pearl District, adjacent to the center of the city, is characterized by upscale shops, trendy restaurants, art galleries and deluxe residences. Originally an area that was home to industry, it has been a focus of urban renewal since the early 1990s, and today an abundance of cafes, theaters, boutiques and clubs attracts an upwardly mobile demographic.



The random pattern of balconies, combined with the various sizes and configurations of the windows, imparts a sense of free-flowing spontaneity in the exterior design of 937 Condominiums.



A view of Portland's Pearl District from one of 937 Condominiums' balconies.

The 114-home, 16-story 937 Condominiums, located in the heart of the Pearl District, is an outstanding example of an award-winning residence that combines energy and environmental features with natural design and sophisticated lifestyle amenities. In fact, the building is the third high-rise condominium in the U.S. that is LEED Platinum Certified, the highest sustainability rating from the U.S. Green Building Council (USGBC).

## Designed by nature

For the exterior of 937 Condominiums, designers turned to fractal patterns like those found in rock formations. The skin of the building contains random window openings and a deck pattern that adds richness in variation uncommon in similar structures. A 3,000-square-foot green roof covers the second-story setback and adds natural beauty, while helping with storm water retention and filtration. The result is a building with a natural rhythm that reflects the surrounding landscape and is pleasing to the eye.





Photo left: Oversize windows bring impressive views of Portland into each of the condominiums and add to the feeling of expansiveness in the room layouts. Photo below: Warm, natural color tones are used throughout 937 Condominiums and extend into the design treatments of the Schindler elevator cars.

Interior details seamlessly share the design direction of the exterior, with floor-to-ceiling glass panels for exceptionally abundant light. Residence layouts incorporate groundbreaking floor plans and tasteful design treatments. The lobby also expresses the innovative fractal pattern through an artistic wall that reflects the history of the Pearl District.

The most striking feature of 937 Condominiums' interior is the abundance of light that permeates the residences as the result of 8-foot-high windows, some of which are up to 10 feet wide. While many energy-efficient buildings with large window areas must rely on glass-darkening coatings, 937 does not, and yet manages to conserve heat in winter and cool air in summer.

### **Stylish efficiency**

Two Schindler 400A® machine room-less elevators were specified to coordinate with the décor and modern feel of the condominiums, thanks to their space-saving benefits, contemporary styling and wide range of design options. Their smooth, quiet ride and reliable operation further enhanced the elegant living environment of the building. In addition, the Schindler 400A elevators incorporated energy-efficient drives and offered the ability to recycle 93 percent of post-installation waste, two important considerations for a building constructed to achieve LEED certification. ►



937 Condominiums' lobby is graced with wall artwork that echoes the natural fractal patterns found in the exterior design of the building.



## 937 Condominiums' LEED Sustainability Features

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High-efficiency heating and cooling systems

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Energy Star appliances

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Dual-flush toilets

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Externally vented kitchens

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Second floor retail setback (podium) contains 4,000-square-foot vegetated ecosystem

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130-foot-long storm water flow-through planter purifies water running from the roof

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94 percent of debris from the construction of 937 Condominiums was recycled

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### ► An exclusive club

The building is only the third high-rise condominium to achieve LEED Platinum status in the United States. Geoff Wenker of W & K Development, one of the owners of the property, discussed the motivation for seeking LEED Platinum Certification. "First, this is Portland, Oregon, and there is an ecological mind-set in this region that predisposes those of us involved in commercial ventures to think carefully about the environmental impact of our projects. Constructing a condominium that is designed to conserve energy and preserve the natural resources we draw our design inspiration from is just the right thing to do. Moreover, in terms of marketability, our goal is to attract condominium owners who believe in the same principles we do and who share our enthusiasm for caring for our ecosystem. Some developers consider these to be lofty goals with an even loftier price tag, but the actual incremental costs of building an energy-conserving building with minimal environmental impact are not prohibitive. While accurately determining the long-term savings and return on investment can be challenging, it seems to us to be obvious that saving energy simply makes sense."

937 Condominiums has also been recognized with the 2009 HBA Building Excellence Award, 2009 Top Project of Its Class by the *Daily Journal of Commerce* and 2009 Street of Dreams awards. ■



Gleaming stone floors and polished stainless steel in the elevator lobby reflect the sophisticated elegance of 937 Condominiums.



# next news



## SCHINDLER ANNOUNCES ACQUISITIONS

Schindler has acquired White Plains, New York-based Midland Elevator Company, Inc. Established in 1984, Midland Elevator Company focuses primarily on elevator maintenance, repair and modernization. Schindler has also acquired 100 percent ownership of the elevator and escalator business of Coservicios S.A., manufacturers of the leading "Andino" brand of elevators. By acquiring a 46 percent stake in Xuchang Xiji Elevator Co. Ltd., headquartered in Henan Province, China's central region, Schindler has established a new joint venture in that country. The Xuchang Xiji company produces 10,000 elevators and 4,000 escalators annually.

## SCHINDLER MAKES FORBES INNOVATORS LIST

Schindler Holding has been named as one of the 100 most innovative companies in the world by the leading American business magazine, *Forbes*. Schindler joined firms such as Amazon, Apple, Google and ABB on the prestigious list, which ranks companies according to a metric called the "Innovation Premium." *Forbes* uses this metric to measure the premium the stock market has placed on the value of a company based on expectations of future innovations, including new products, services and markets that will drive the business into the future. The *Forbes* ranking demonstrates that innovation is one of the key factors in Schindler's success.

## SCHINDLER GOES GREENER

Schindler has made a multimillion-dollar investment in sustainable technologies in the renovation of its North American headquarters in Morristown, New Jersey. The building features a brand-new 21,000-square-foot rooftop solar array; all 475 windows have been replaced with insulating dual-pane windows, and high-efficiency LED and T5 lighting has been installed, along with other energy- and water-conserving systems. The building also features a new Schindler 9300® AE escalator with ECOLINE that generates energy savings of up to 20 percent per year and a Schindler 3300 machine room-less elevator that is up to 60 percent more energy efficient than a hydraulic elevator. A dedicated website ([adema.kiosk-view.com/schindler](http://adema.kiosk-view.com/schindler)) highlights real-time data on the energy savings of the building's new solar roof.

## SCHINDLER EXPANDS TOOLS FOR ARCHITECTS

Schindler is continuing to expand its resources available to architects. A new Schindler-sponsored online accredited course is now available at AEC Daily, at [www.aecdaily.com/en/1444954](http://www.aecdaily.com/en/1444954), the largest provider of free online continuing education to architects, engineers and other construction professionals. Additionally, an AIA-accredited lunch-and-learn course, titled "Vertical Transportation: Machine Room-Less Elevators," has been approved for 1.25 Learning Units. Information on Schindler products, as well as drawings, specifications and links to Schindler BIM objects, can be found with a few mouse clicks on the Sweets, ARCAT, Autodesk SEEK and Architectural Record websites, as well as [www.us.schindler.com](http://www.us.schindler.com).



## Design freedom. Access control.

With Schindler's PORT (Personal Occupant Requirement Terminal) Technology, visitors move through your building faster and more conveniently. Passengers receive personalized service while you exercise access control. The PORT system calls cars automatically and delivers destination-dispatch elevator service. Expand your design horizons with PORT Technology and provide VIP or special needs services to individual tenants, while contributing to improved security for all. Contact your Schindler representative to learn more.

