An average of 30,000 people bustle through the Tower City Rapid Station in Cleveland every day. The station is located within the Tower City Center, a development in the heart of the city composed of hotels, shops, restaurants, offices and even the historic Terminal Tower, all atop the transit station. With all rail lines converging at this station and several bus routes serving the area, efficient people flow is critical for this busy hub.

When the station’s four escalators — originally installed in the 1980s — were no longer holding up to their job, the Greater Cleveland Regional Transit Authority (RTA) turned to KONE, its escalator service provider, for modernization options.

KONE proposed its EcoMod™ escalator modernization solution. This solution would provide the station with entirely new escalator technology, which was far more robust than the original units, up to code with several added safety features and could be installed efficiently without the major disruption of truss removal.

**Overcoming Challenges**

The original escalators were commercial grade, featured high-deck bronze balustrades and were installed prior to several safety options being available. Because of the continuous problems and shutdowns, it was clear that the units needed to be replaced with entirely different technology.

It was imperative to upgrade the durability of the units to meet daily transit-level activity. Significant performance-level upgrades would be required — including upgraded step loading — to bring them to near-100% compliance with transit-escalator standards. However, it would have been impossible to fully replace the units — including their trusses — given the space constraints, access problems and necessary

Continued
The system was modernized with KONE’s EcoMod.

The completed escalators have received much praise from passengers.
All equipment is removed, except the existing Otis truss, which was inspected, cleaned and painted.

The artwork on these barricades was specially commissioned by RTA from a local artist with an “All Things Cleveland” theme.
ongoing usage of the existing facility. As a result, it was clear that retaining the existing truss/building interface through a modernization approach was the only viable means to proceed.

Thanks to the flexibility of the EcoMod solution, the KONE team was able to smoothly and efficiently upgrade the escalators without removing the trusses. The old units were upgraded to robust, transit-grade units and outfitted with all modern safety-device features required by code.

The two tallest units were converted from high-deck solid-balustrade to glass-balustrade escalators. With these units the architectural focal point of the entire station, the visual improvement was dramatic.

The team also had to contend with two critical deadlines and tight schedules. The first pair of escalators was to be modernized in time for the Republican National Convention, and the second pair had to be modernized by St. Patrick’s Day, two extremely busy days. St. Patrick’s Day saw approximately 100,000 commuters that year, a drastic increase from the average 30,000 per day.

The KONE team also had to modernize the units around the fluctuating traffic through the station, which could be unpredictable at times. For example, a major championship sports game in June unexpectedly brought nearly 250,000 commuters to the station during just a five-hour period. Crews had to be on their toes and ready to adjust installation plans to ensure the project would not disrupt the flow of increased traffic.

Despite these challenges, KONE was able to deliver both pairs of escalators on time, and the new units were immediately able to handle high traffic after turnover. Cleveland RTA Project Manager Steve Hershman said:

“There’s no question this is an incredible, well-designed piece of mechanical apparatus. We’ve received nothing but positive feedback from RTA, Tower City and commuters regarding the new escalators. In working with KONE on a regular basis, I really have never seen such a dedicated, focused group of professionals who know their craft and know how to take care of issues — good or bad. Working in a very tight, confined space takes a good crew to do what they did on a very tight schedule.”

A Unique Approach to Communication

During the installation process, RTA and KONE also took a unique approach to minimize disruption, keep traffic moving and keep commuters happy. RTA commissioned a local artist to design a vinyl wrap for the barricades to strategically barricade the area with instructions for commuters.

KONE also worked with RTA team members at the customerservice desk, located just outside the construction area, so they could help effectively redirect traffic. Weekly project-management meetings were held between RTA and KONE personnel to fine-tune the plan throughout the installation process. “The KONE office personnel have been incredible,” Hershman said. “They’ve been very responsive to RTA’s needs, everything from soup to nuts in terms of the information we needed, etc.”

Conclusion

After repeated issues with and shutdowns of the escalators at the Tower City Rapid Station, RTA had an opportune time to modernize the units before major public events were to take place in Cleveland. Facing time constraints and the inability to completely remove the original escalator trusses, RTA turned to KONE to modernize the escalators using EcoMod. KONE was able to meet the tight deadlines and provide the station with far more robust escalators that could efficiently help commuters reach their destinations.

Credits

Owner: Greater Cleveland Regional Transit Authority
Cleveland RTA project manager: Steve Hershman
KONE sales executive: Nick Mohler
KONE project manager: Dan Powers
KONE installation team: Matt Hardin, apprentice; Chris Cipro, apprentice; Jeff Lindell, foreman; and Brendan Hyland, mechanic