



## CASE STUDY

### Oak Park and River Forest High School Oak Park, Illinois

Like most schools, the buildings and grounds department at Oak Park and River Forest High School faced the challenge of operating at maximum efficiency with minimum investment. The school's bells, clocks, and lights systems were managed manually, which meant the staff electricians had to dedicate valuable resources and time to check and maintain campus systems. Seeking an automated and streamlined approach, the institution installed the Primex 72MHz XR Time Synchronization System for Digital Clocks and Bell Scheduling.

*“At least partially as a result of our new digital clocks throughout the building, especially the affectionately named ‘shot clocks’ that count down the final seconds of our passing periods, our overall student tardiness has dramatically declined by 25 percent.”*

-Nathan L. Rouse, Principal

#### The Problem:

When an academic program produces students such as Nobel and Pulitzer Prize winner Ernest Hemingway and Ray Kroc, founder of McDonald's, excellence in education becomes the natural mission. Oak Park and River Forest High School (OPRFHS) is such a place. In its 139-year history, OPRFHS in the western suburbs of Chicago has crafted a rich tradition of fostering great minds. It's no wonder the school's motto is “those things that are best.”

Yet, in a time when schools are facing state and federal funding cuts, this mission of academic excellence is often threatened, leaving administrators with the challenge of finding ways to operate more efficiently, resourcefully and proactively so they need not cut staff or programs. The trouble is, finding a more cost-effective and efficient way of managing existing systems can be a daunting task.

This is the reason Robert Zummallen, Director of Buildings and Grounds for OPRFHS, actively attends facilities conferences – to keep up on technology trends in facility management that might help him trim budget costs.

“Properly maintaining an academic facility is an important contributor to student success,” says Zummallen. “Having a safe, healthy environment allows educators to focus on teaching and students to focus on learning. But, when you have to work with tight funding, everyone has to do their part to look for ways to cut costs without compromising quality.”

The 3,200-member student body at OPRFHS depends on the school's bells, clocks and lights to function so they arrive on schedule for the full amount of class time. While attending a facilities conference in 2009, Zummallen came

across a system that opened his eyes to some critical inefficiencies in the school's bells, clocks and lighting operations.

Each day, the staff electricians at OPRFHS had to travel to widespread locations across four floors on the 15-acre campus to turn on the lights every morning and off at night. They also had to inspect every panel on each floor to be sure the clocks were operating properly and reflecting the correct schedule. This was a taxing task, considering the distance between the individual panels for these systems could sometimes span two city blocks, or a quarter of a mile. Twenty-five percent of the typical OPRFHS electrician's day was spent just turning on lights and making sure the school's clocks and bells were functioning.

“We employ highly trained electricians to make our bells, clocks and lights function properly. But because the electricians have very specialized skills, they are an expensive resource,” says Zummallen. “I knew we needed to make a change to address the inefficiencies in the system.”

Primex offers the XR Time Synchronization solution, a powerful, wireless, scalable system that automatically synchronizes timekeeping and bell scheduling across sprawling facilities. Eco-friendly and cost-efficient, XR Transmitters use five times less power than competitors to ensure your timekeeping equipment stays in sync.

## The Solution:

A technical advisor at the conference introduced Zummallen to an application that would automate the school's bells, clocks and also lights by synching them on a single, scalable software system. Upon careful budget and labor analysis when he returned to the school, Zummallen realized that replacing the old, manual operations with this system could reduce labor costs, improve reliability and staff efficiency.

He presented this solution to the OPRFHS board and explained the benefits, including how it would allow him to allocate important resources to other buildings and grounds projects.

The OPRFHS board saw the advanced capabilities of the Primex 72MHz XR Series Time Synchronization and Bell Scheduling system and how it could also be applied to control lighting. The board understood how the system would allow Zummallen's facilities team to program, coordinate and manage multiple schedules system wide and quickly moved to approve the purchase. What once took two hours of labor each day among several electricians to turn on, schedule and maintain the lights, bells and clock systems, now took a fraction of that time. Zummallen was able to refocus his team of electricians to tasks that better suited their special capabilities.

The XR Series system was selected because of the remote monitoring available through the central management system that allowed a 40 percent reduction in the school's electrical budget. OPRFHS saw a return on investment within three years of installation in addition to a \$7,500 annual savings in labor.

The impact of the solution shows up most dramatically when schedules change for holidays or early release days. With the new system in place, timing for bells and lights is now easily changed campus-wide within a matter of minutes from a single interface in Zummallen's office. The result is a nearly maintenance-free facility when it comes to the bells, clocks and lights.

Perhaps the most impressive, and unforeseen, result of installing the Primex system was the contribution it made to reducing student tardiness by 25 percent, which could account for the decrease in failing grades by 35 percent.

"I see remarkable improvement in student learning, because they are not lingering in the hallways. They are in class," says Zummallen. "And that's the most important part."

Zummallen's initiative has helped OPRFHS maintain its standard of excellence and produce "those things that are best."

## Results:

- The Primex system contributed to a 40 percent reduction in the school's hallway lighting budget.
- 25 percent reduction in student tardiness.
- Contributed to a 35 percent reduction in failing grades.
- \$5,000 yearly savings in labor cost for time synchronization.
- Contributed to an additional \$2,500 yearly savings in labor cost by automating the lighting throughout the facility.



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