CASE STUDY

Revitalizing a City of Firsts: How Springfield, Massachusetts is **modernizing without compromise**

For two decades, the city has been rewriting the story of what's possible when modern infrastructure meets historical integrity.

As the third-largest city in Massachusetts, Springfield wears its past proudly. Grand libraries. Stone-lined city halls. Renowned museums. Public schools that have served generations.

Known proudly as the "City of Firsts," Springfield earned this title through a legacy of pioneering achievements – from housing America's first Armory and military arsenal to serving as the original home to Indian Motorcycles, America's first motorcycle company. It's also home to two cultural touchstones beloved around the world: the birthplace of basketball and the childhood home of Dr. Seuss.

Springfield's legacy is both industrial and imaginative, a city where invention and culture have always gone hand in hand. Beneath the charm of its 19th-century architecture, however, lurked a more sobering reality: the systems behind the walls were aging, inefficient, and in many cases unable to meet the needs of a 21st-century city.

SIEMENS

"We had schools built in the 1890s," recalls Mayor Domenic Sarno, the city's longest-serving mayor. "If it got too warm, you opened the windows. If it got too cold, you put on a jacket. These buildings weren't designed for modern HVAC or air quality systems. But we knew we had to change that, and we had to do it in a way that wouldn't burden our taxpayers."

In 2006, Springfield leaders partnered with Siemens to launch one of the most comprehensive energy and infrastructure improvement initiatives in the Commonwealth of Massachusetts. Since then, more than $100 million have been invested in upgrades across dozens of schools and municipal facilities—from libraries and fire stations to the ice arena and the historic City Hall. No referendums. No overrides. No increased tax burden.

"Without a partner like Siemens," says Patrick Roach, Chief Financial and Operations Officer for Springfield Public Schools, "we never would've been able to accomplish what we did. The depth of their bench, their engineering knowledge – it's like a one-stop shop so that we can focus on education."

"

Without a partner like Siemens, we never would've been able to accomplish what we did. The depth of their bench, their engineering knowledge – it's like a one-stop shop so that we can focus on education. We've saved tens of millions on energy and utilities, which we've have been able to reinvest right back into our students and teachers."

Patrick Roach
Chief Financial and Operations Officer
Springfield Public Schools

Modern infrastructure, layer by layer, balances history and progress

The city's challenge wasn't just about adding air conditioning or updating controls. It was about modernizing without compromising the historic nature of its buildings. "Think of it like renovating an old house," explains Thomas Ashe, Executive Director of Parks, Buildings, and Maintenance. "You can't just rip things out, but you can't always get the parts you need to keep things running as they should. It takes a lot of dedication and know-how to do this kind of work, and Siemens has played a big part in that for us."

Siemens worked shoulder-to-shoulder with City leadership and inspectors to deliver a modernization program that respects the past while investing in the future.

At the heart of Springfield's modernization program was a clear mandate from the mayor: improve indoor air quality, add air conditioning, and bring decades-old buildings up to modern code without disrupting their character or day-to-day use.

In schools, fire stations, libraries, and other municipal buildings, some more than a century old, work began behind the walls. Siemens replaced outdated steam systems with modern HVAC infrastructure, re-piped entire buildings, and overhauled electrical systems to handle new cooling loads. To support new rooftop units, Siemens also reinforced rooflines while adding attic insulation and envelope sealing to improve thermal performance and reduce energy waste.

Along with these upgrades, Siemens installed modern automation controls that allow the city to better monitor and manage building system performance. Because life safety is a priority for Springfield, Siemens updated legacy fire alarm systems to meet the latest code requirements and support integrated emergency response.

Today, Springfield buildings are healthier and more resilient, efficient, and comfortable so they can serve the city's students, staff, and residents for decades to come.

Schools at the center

Although the infrastructure projects spanned libraries, police stations, and the ice arena, Springfield Public Schools have perhaps been most profoundly improved. Siemens has made significant improvements to air quality, heating, cooling, and controls in more than 23 school buildings since 2022.

According to Ashe, 13 schools are still in line to receive full air conditioning, something these buildings did not have previously, transforming the learning experience for thousands of students, many of whom attend school year-round. He says, “Our mayor wanted to be certain that, whether students attend school in one of our newer buildings or a 100-year-old building, they would have similar educational experiences.”

Why the focus on air quality and comfort? April Hodgen, District Project Manager, puts it this way: “There’s research that shows better air quality and comfort have a positive impact on absenteeism, reading and math scores, and even health in terms of allergies and asthma. Students are more alert, attendance is greater, teachers can teach better, and graduation rates are higher.”

Roach concurs, and expands on the idea: “We’ve saved tens of millions on energy and utilities, which we’ve have been able to reinvest right back into our students and teachers.”

“There’s research that shows better air quality and comfort have a positive impact on absenteeism, reading and math scores, and even health in terms of allergies and asthma. Students are more alert, attendance is greater, teachers can teach better, and graduation rates are higher.”

April Hodgen
District Project Manager
Springfield Public Schools

Elementary and Secondary School Emergency Relief Fund (ESSER) funds played a critical role in unlocking these improvements. According to Mayor Sarno, “We were advised to focus on long-term infrastructure investments rather than recurring costs. That’s how we’ve stayed ahead and how we’re going to keep moving forward.”

“I’m a proud graduate of the Springfield Public Schools. But before my time as mayor, we had some work to do to improve the school system. We have worked very, very hard to make key investments. Today, our graduation rate has improved by 36 percent.”

Mayor Domenic Sarno
City of Springfield, MA

Investing in futures: EMPOWER+ brings STEM to life

Through the Siemens EMPOWER+ program, the City of Springfield is taking advantage of a grant program designed to foster student engagement in science, technology, engineering, and math (STEM). The funding has been used to modernize lab spaces and expand access to 3D printers, robotics kits, and digital fabrication tools that bring theoretical learning into the real world. These investments have helped Springfield sharpen its focus on academic competitions and career preparation while delivering on the mission of the schools' science departments: to provide safe, academically engaging environments that prepare students for lifelong learning, meaningful employment, civic responsibility, and global awareness in the 21st century.

With support from the Siemens EMPOWER+ program, Springfield schools will be able to update technology and engineering lab equipment and resources, as well as acquire top-notch equipment for all students, including those who come from disadvantaged backgrounds. Now, school leaders have found that Springfield students are more competitive than ever at the state science fair, which has increased their access to scholarship opportunities for post-secondary study.

Siemens engineers and staff have also shown up in classrooms and career fairs, providing students with real-world insight and mentorship. "Springfield Public Schools is committed to preparing students for lifelong learning, meaningful careers, civic responsibility, and global engagement. Programs like Siemens EMPOWER+ at STEM Middle Academy help us bring that vision to life by enhancing students' access to high-quality technology and engineering resources," says Dr. Sonia Dinnall, Superintendent of Springfield Public Schools It's a full-circle investment: the same teams installing control panels and fire alarm systems are helping students imagine their own future careers.

"Springfield Public Schools is committed to preparing students for lifelong learning, meaningful careers, civic responsibility, and global engagement. Programs like Siemens EMPOWER+ at STEM Middle Academy help us bring that vision to life by enhancing students' access to high-quality technology and engineering resources."

Dr. Sonia Dinnall
Superintendent
Springfield Public Schools

"In working with Siemens on these projects and using ESSER funds, we are the first in the state for a lot of the things we've done. We're leaders for our educational practices, and oftentimes looked on as a model. A lot of times, we have other schools come in and want to see what we're doing, how we're doing it, and use us as a best practice," says Hodgens.

In short, not all infrastructure investments can be measured in kilowatt-hours and BTUs; some are measured in inspiration.

A future-focused partnership

The city's approach to modernization is comprehensive: HVAC retrofits come with upgraded controls. Electrical systems are modernized to support new cooling loads. Building envelopes are sealed and insulated to improve comfort and efficiency. Open-protocol systems allow the city to integrate and scale over time.

And they are doing so on their own terms, with no new tax burden and a keen eye on both the bottom line and the future. According to Mayor Sarno, the city now saves about $1.6 million annually through utility efficiency. More than $2 million in rebates have been captured from utility providers. He says, "It's good for the budget, good for the environment, and good for our people."

Ashe goes on to say: "Our challenges aren't going away, but neither is Siemens. We've been fortunate over the past few years to receive an incredible amount of funding through the Federal government, and Siemens has been at the forefront of these efforts to make sure our schools thrive and our community benefits from these programs."

City of Springfield Savings

$1.6M
utility efficiency

+

$2M+
rebates from utility providers

"Our challenges aren't going away, but neither is Siemens. We've been fortunate over the past few years to receive an incredible amount of funding through the Federal government, and Siemens has been at the forefront of these efforts to make sure our schools thrive and our community benefits from these programs."

Thomas Ashe
Executive Director of Parks, Buildings, and Maintenance
City of Springfield, MA

Legal Manufacturer

Siemens Industry, Inc.
950 Deerfield Parkway
Buffalo Grove, Illinois 60089-4513
United States of America

Telephone: +1 (847) 215-1000

SIEMENS