Facility Audit Report

2016 Facility Audit Report Spooner Area School District

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Contents

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History

CESA 10 FACILITIES MANAGEMENT DEPARTMENT - Established in Wisconsin in 1964, Cooperative Educational Service Agencies (CESAs) have a long history of partnering with municipalities and school districts. CESA 10 Facilities Management Department (CESA FM) is a nonprofit educational service agency providing facilities management services to local government and school district customers throughout the state of Wisconsin.

With decades of experience and expertise in managing institutional facility needs, CESA FM has a unique position as a nonprofit educational service agency. This unique position helps to ensure that customers benefit from CESA FM's trusted and unbiased judgment and experience gained through the execution of hundreds of investment grade audits, school energy efficiency, construction, renovation and environmental projects, and other facilities services.

CESA FM assists public entities in the management of their facilities needs in the areas of health, safety, energy efficiency, referendum and long term planning, and construction management. The department's main areas of concentration are:

- **Investment Grade Audits including Long-Term Comprehensive Plans**
- **Referendum Planning**
- **Project Management/Owner's Representative**
- **Energy Management**
- **Environmental Health and Safety Consulting**
- **Environmental Project Consulting and Management**

CESA FM's vast knowledge of school facilities coupled with a nonprofit mission to serve makes a partnership with CESA FM a natural step in developing long-term facility solutions across school and government facilities. We share a commitment to customer empowerment through customer-protective processes and customer-oriented solutions.

MISSION - With an entrepreneurial mindset and a nonprofit fee structure, CESA 10 Facilities Management Department provides: *Safe, Healthy, Efficient, Comfortable, Energy and Resource Conscious* environments for school and government entities through shared knowledge, linkage to resources, and sustainable actions.

VISION
Efficient buildings, safe people, healthy environments, sustainable change.

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Investment Grade Audit/Needs-Based Project and Maintenance Prioritization

Investment Grade Audits consist of facility-wide analyses that culminate in quantification of project costs for educational, technology, infrastructure, and maintenance concerns. CESA FM's audits also include potential cost and energy savings as well as a prioritization tool. CESA FM's specific team approach focuses on customer input and includes the following steps:

1. **Analyze building use and characteristics for preliminary infrastructure, energy, educational, technology and other needs using bills, current costs, and previous studies.** This involves analysis of historic facility use, maintenance costs, utility data, and development of the building's energy utilization index (EUI) to compare to similar buildings (benchmarking).

2. **Initial discussion and walk-through analysis to identify critical environmental and safety/compliance hazards, customer preferred facility improvement measures (FIMs), and known critical maintenance needs.** This involves an initial discussion with administration and each facility's staff (principal, building manager, and lead custodian). Documents and topics reviewed include: worker's compensations claims, incident reports, safety issues, space needs, energy usage, plan review, maintenance logs, and past projects. Staff input is used to identify and prioritize projects, current and long-term maintenance needs, as well as any environmental/safety hazards.

3. **Detailed audit of facility using team approach (education, technology, energy, environmental, and facilities experts).** With user input and a team approach, each building's condition, efficiency, educational, and safety/compliance issues are carefully assessed. This analysis identifies low-cost/no-cost measures to meet and address current needs and issues, short and long-term maintenance tasks, environmental considerations, capital improvements, and other FIMs that merit further consideration to meet customer needs.

4. **Confirm FIMs and prioritized needs through customer feedback, potential costs, savings, and desired outcome.** This includes savings and cost analysis of all measures that meet the customer's needs and constraints, and a discussion of any effects on operation and maintenance procedures. Potential capital-intensive improvements that require more thorough data collection and analysis are identified and prioritized for further review. Initial estimates of potential costs and savings are discussed with administration.

5. **Gather additional information from vendors and/or the customer, including prioritizing and providing detailed analysis of capital-intensive modifications and maintenance.** This step focuses on finalizing potential capital-intensive projects identified and involves more detailed field data gathering and possible engineering analysis. It provides estimated project cost and savings information with a level of confidence high enough for most capital investment decisions.

6. **Create final report and Prioritization Matrix; present to customer, and/or Board, and/or community.** CESA FM subject matter experts (e.g. facilities, educational, technology, environmental health and safety) will provide photographic documentation of possible improvements and will assemble and present detailed, prioritized recommendations in a flexible format tool (Prioritization Matrix) that can pivot based on customer, Board, and community decisions. The report can include the benefit of maintaining current facilities versus consolidating or building new and identify which projects may fit the Revenue Limit Exemption for Energy Efficiency.

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Prioritization Factors

CESA FM has a team of technical experts who specialize in different aspects of school facilities and routinely work with districts to perform detailed on-site audits to evaluate the current condition of their facilities, review usage, systems and structures, and provide a flexible prioritization tool to allow for quick reconfiguring of project lists to aid the District and Board in choosing an array of possible facilities decisions.

In order to properly prioritize each building system and component district-wide, an assessment tool based on four different criteria is utilized. The rationalization for each criterion is outlined below. Criteria are weighted, after discussion with district administration, to reflect current school and community priorities and funding sources.

Criteria #1: Safety/Health/ Compliance Issues

Staff and student health and safety are critically important. Building systems or components that may receive priority because of a safety, health, or compliance concern include flooring composed of asbestos tiles that are degrading, exterior doors that are a security concern, roofing systems that are beginning to fail and could lead to mold issues, and the lack of ventilation equipment creating indoor air quality issues as well as code compliance issues.

Air quality makes a difference in learning

There are many benefits of prioritizing safety, health, and compliance issues. The results of poor indoor air quality in schools are documented on the EPA website:
http://www.epa.gov.iaq/schools/benefits.html

Excerpts from the EPA website:

Causes of IAQ: Leaky roofs, *problems with heating, ventilation, and air conditioning systems; insufficient cleaning or excessive use of toxic cleaning chemicals; and other environmental issues can lead to poor IAQ and trigger health problems like asthma and allergies.*

Ability to Perform: *Research shows that a school's physical environment can affect academic performance. Studies demonstrate a connection between IAQ improvements, such as increasing fresh air ventilation and removing the source pollutants, and improved academic performance. Controlled studies show that students complete school work faster as ventilation rates increase. The performance of teachers and staff also improves with increased ventilation rates.*

Test Scores: *Students in classrooms with higher fresh air ventilation rates tend to achieve higher scores on standardized tests in math and reading than students in poorly ventilated classrooms.*

BALANCING SECURITY AND MOBILITY

The needs of today's K-12 education spaces have changed. A heightened attention to security and the need to keep unauthorized people out cannot inhibit free movement within a school campus for students and staff. While there are many factors that contribute to a safe learning environment, appropriate access control is now becoming a fundamental requirement.

Public schools use a variety of practices and procedures intended to promote the safety of students and staff. In the School Survey on Crime and Safety (U.S. Department of Education), public school principals were asked about their school's use of safety and security measures and procedures. Certain practices, such as locked or monitored doors or gates, are intended to limit or control access to school campuses, while others, such as metal detectors, security cameras, and limiting access to social networking websites, are intended to monitor or restrict students' and visitors' behavior on campus.

In the 2011–12 school year, 88 percent of public schools reported that they controlled access to school buildings by locking or monitoring doors during school hours. Other safety and security measures frequently reported by public schools included the use of security cameras to monitor the school (64 percent) and the enforcement of a strict dress code (49 percent). In addition, 44 percent of public schools reported that they controlled access to school grounds by locking or monitoring gates during school hours.

As indicated above, a key component to school security is the increased use of security cameras as a tool to monitor and improve student safety. Images of students captured on security videotapes that are maintained by the school are not considered education records under FERPA (Family Educational Rights and Privacy Act). These videotapes may be shared with parents of students whose images are on the video and with outside law enforcement authorities, as appropriate.

Another component is the increasing use of security badges. Once considered only a 'lunch card,' security badges now can be used to allow access and tracking of individuals within a campus setting.

Criteria #2: Equipment/ Materials in Critical Condition/ Lack of Functional Condition

Closely related to safety, health, and compliance, the next criterion used to prioritize facilities needs was equipment or materials in critical condition. Items with high probability of failure in the short term can generate much higher expenses and a variety of other issues if they are not taken care of promptly. For instance, failure to replace a roofing system now could generate much higher costs due to mold and water damage in the future.

It is worthwhile to note that items with a high probability of failure in the short term will need to be addressed regardless of what the District chooses to do over the long term, because of the possible health and safety issues.

As aptly stated in *Save a Penny, Lose a School:*

> *Reduced funding affects the quality of maintenance in many ways. Schools may be reluctant to follow manufacturers' recommendations if equipment seems to be functioning properly, but neglecting routine maintenance may reduce the life of the machinery and systems, increase the cost of operating them, and decrease their level of performance.*
>
> *Proper maintenance is an important issue because deferring maintenance affects the health, safety, and morale of everyone who uses the facility, as well as the cost of operations. If the building requires extensive repairs, renovation, or replacement, deferred maintenance may even force its closure.*

Criteria #3: Projects with Long-Term Futures/Return on Investment

After immediate needs and health/safety projects are completed, the District should invest in facilities with the highest probability of long-term future building use. Projects ranked high are in facilities are likely to stay in use for the long term because of location, availability to accommodate expansion and educational needs, and current condition. If a decision to consolidate is made for now or in the future, the weighting of projects in that facility can be adjusted (in the Prioritization Matrix) to reflect that project's priority. This is just one of the many benefits of a "living" matrix.

Criteria #4: Projects Cost/ Payback Considerations

Long-term vision is a factor for project prioritization. For instance, investment in long-term phone and data equipment may be a wise choice to avoid utility costs, maintenance costs, and the need for multiple upgrades to the system in a short period of time. Additionally, relatively low-cost lighting and controls projects can start saving energy immediately, have fairly short paybacks, and long-term savings.

Again, as aptly stated in *Save a Penny, Lose a School:*

The connection between good maintenance and reduction of the cost of operations is clear when one considers energy consumption. Money to pay utility bills usually comes from the maintenance and operations budget, so high costs for energy usage drain money intended for routine and preventive maintenance and repairs, which, if completed, would reduce consumption. Investing in routine maintenance (such as cleaning filters, retrofitting, and other conservation practices) would save money that is now literally "going up in smoke."

CESA FM will identify proposed upgrades that provide return on investment from reduced maintenance, lowered utility usage, lowered liability and training obligations all while improving safety and occupant comfort, and providing the best possible learning environment for students.

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Executive Summary

At the request of the Spooner Area School District, CESA FM had technical experts perform a detailed on-site audit of the high school, middle school, and elementary school in August and September of 2016. The audit was to meet the Board requirement of a facilities maintenance and capital project plan for the next several years. The recommendations in this report have the goal of improving failing and inefficient equipment, suggesting needed maintenance, and reducing energy consumption to ensure any taxpayer investment is managed within an appropriate payback period.

CESA FM knows that despite a district's best intentions of keeping facilities well maintained and administered, major facility needs constantly crop up due to lack of space and an aging infrastructure. CESA FM believes the most efficient path to a safer and more effective learning environment is to prioritize projects that need to occur and determine both a short and long-term maintenance/capital improvement plan that aligns with the goals and budget of the District and community.

The Spooner Area School District has done an effective job at utilizing the existing equipment in the buildings to the best of their working ability. Some equipment is reaching, or past, the end of its life and should be planned for replacement to ensure the equipment does not fail when the school is counting on it to create a safe and comfortable environment for students and staff to learn and teach. CESA FM would be happy to assist the District with a long-term action plan should the District decide that would be helpful.

Common themes throughout the buildings audited include needed improvements in safety, building envelope, hardscapes (concrete, asphalt), and HVAC and lighting upgrades.

Although the District has used and managed the existing equipment effectively to meet the needs of the schools, improvements are going to be needed in the near future. The District can utilize this report as a guide to identify the highest priority facility improvement measures (FIMs) during capital planning.

The recommendations included in this report are meant to assist the District over the next several years in conserving energy, reducing operating and maintenance costs, and improving occupant comfort and safety where applicable.

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Detailed Analysis of Facilities

DISTRICT-WIDE ANALYSIS

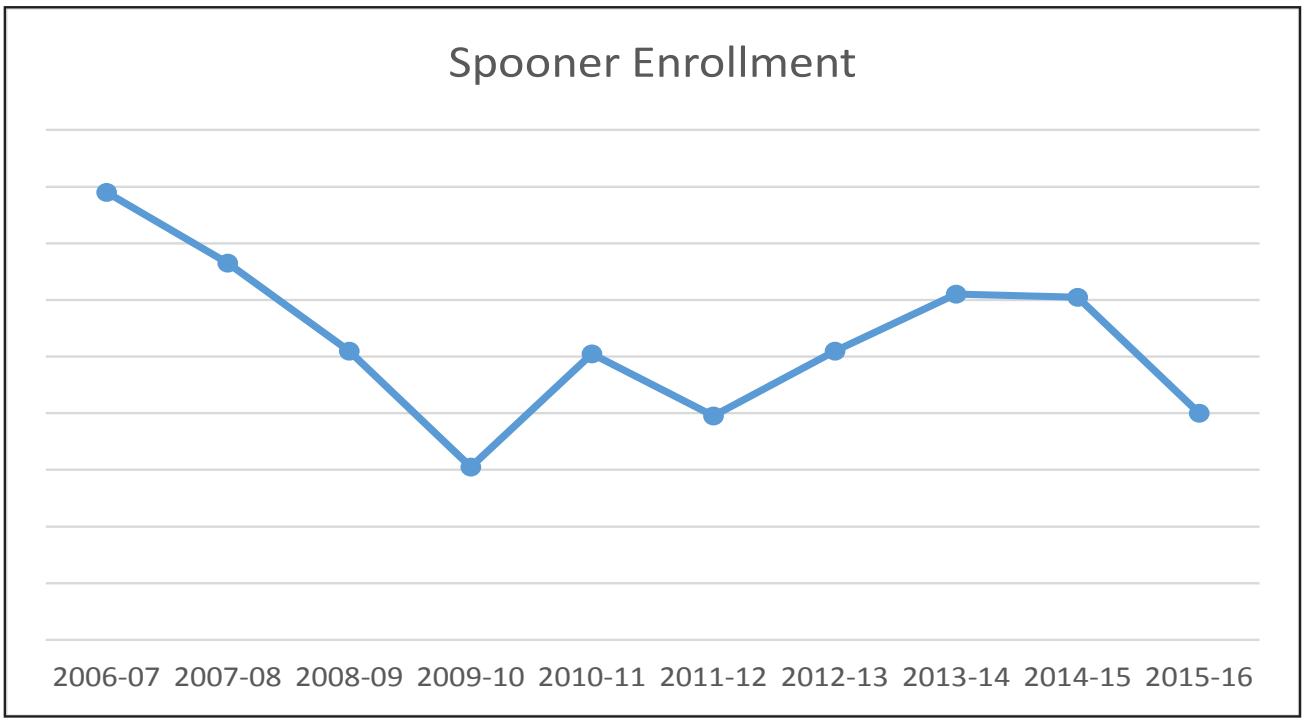
According to its website, the Spooner Area School District is located in Washburn and Burnett Counties in northwest Wisconsin. The District is comprised of the City of Spooner and all or part of 20 townships in the greater Spooner area. The District's approximately 550 square miles make it one of Wisconsin's largest school districts in terms of geographical area.

The District services students at three schools located in the City of Spooner. Spooner Elementary School serves K-4 students, Spooner Middle School serves 5th through 8th grade students, and Spooner High School serves the District's 9th through 12th grade population. The District also operates a community-based-4-year-old kindergarten, a charter virtual school, provides early childhood special education services for the community, and provides the majority of the financial support for the Washburn County Alternative School located in Spooner.

The Spooner area's demographics can be generalized as rural and lower income.

Facility Floor Space in Square Feet		
Elementary School	Middle School	High School
63,000	99,000	163,000

Based on data obtained from the Wisconsin Department of Public Instruction (DPI), enrollment numbers have fluctuated annually for the past 10 years, but have remained steady between 1,320 - 1,360 students during the past five years. This data does not include enrollment for the 2016-17 school year.



From an educational perspective, the Wisconsin DPI rates the Spooner Area School District (2013-14 data) as "Meets Expectations." It has a score of 68.2 which is comparable with the majority of school districts in the state. The District exceeds the state Priority Area standards in on-track and postsecondary readiness, especially when it comes to attendance and graduation rates. There are pressing issues that will need to be addressed for this school to continue in its present state, specifically health and safety issues which correlate directly with student health and attendance rates.

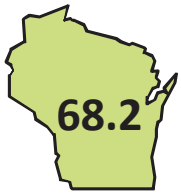
FINAL - PUBLIC REPORT - FOR PUBLIC RELEASE

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Spooner Area

District Report Card | 2013-14 | Summary

Overall Accountability Score and Rating



Meets Expectations

Overall Accountability Ratings	Score
Significantly Exceeds Expectations	83-100
Exceeds Expectations	73-82.9
Meets Expectations	63-72.9
Meets Few Expectations	53-62.9
Fails to Meet Expectations	0-52.9

Priority Areas	District Score	Max Score	State Score	Max Score
Student Achievement	**62.8/100**		**66.4/100**	
Reading Achievement	28.6/50		29.8/50	
Mathematics Achievement	34.2/50		36.7/50	
Student Growth	**58.9/100**		**62.4/100**	
Reading Growth	31.8/50		31.5/50	
Mathematics Growth	27.1/50		30.9/50	
Closing Gaps	**65.1/100**		**66.3/100**	
Reading Achievement Gaps	31.6/50		17.0/25	
Mathematics Achievement Gaps	33.5/50		16.3/25	
Graduation Rate Gaps	NA/NA		33.0/50	
On-Track and Postsecondary Readiness	**86.0/100**		**85.3/100**	
Graduation Rate	37.4/40		36.0/40	
Attendance Rate	37.2/40		37.2/40	
3rd Grade Reading Achievement	2.8/5		2.8/5	
8th Grade Mathematics Achievement	3.4/5		3.5/5	
ACT Participation and Performance	5.2/10		5.8/10	

Student Engagement Indicators	**Total Deductions: 0**
Test Participation Lowest Group Rate (goal ≥95%)	Goal met: no deduction
Absenteeism Rate (goal <13%)	Goal met: no deduction
Dropout Rate (goal <6%)	Goal met: no deduction

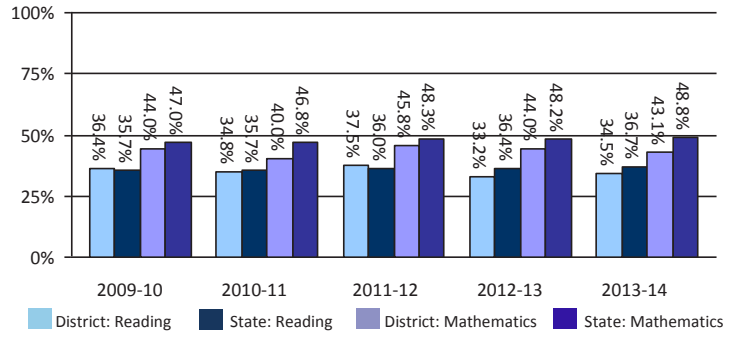
District Information

Grades	K4-12
Locale	Rural
Enrollment	1,276
Race/Ethnicity	
American Indian or Alaska Native	2.4%
Asian or Pacific Islander	0.7%
Black not Hispanic	2.1%
Hispanic	1.6%
White not Hispanic	93.2%
Student Groups	
Students with Disabilities	13.0%
Economically Disadvantaged	51.7%
Limited English Proficient	0.0%

Wisconsin Student Assessment System Percent Proficient and Advanced

Includes Wisconsin Knowledge and Concepts Examination (WKCE) and Wisconsin Alternate Assessment for Students with Disabilities (WAA-SwD). WKCE college and career readiness benchmarks based on National Assessment of Educational Progress.

State proficiency rate is for all tested grades: 3-8 and 10

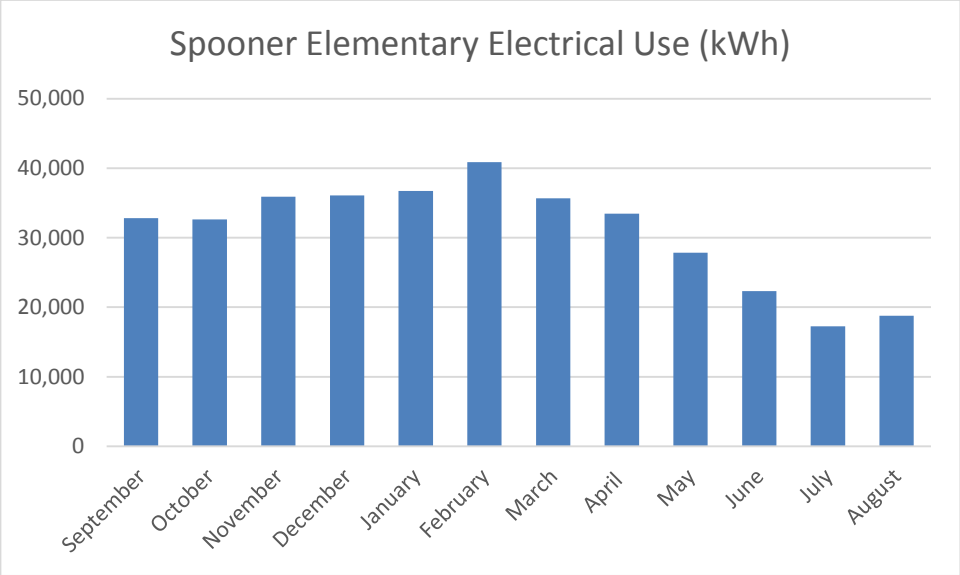


Notes: Overall Accountability Score is an average of Priority Area Scores, minus Student Engagement Indicator deductions. The average is weighted differently for districts that cannot be measured with all Priority Area Scores, to ensure that the Overall Accountability Score can be compared fairly for all districts. Accountability Ratings do not apply to Priority Area Scores. Details can be found at http://reportcards.dpi.wi.gov/ .

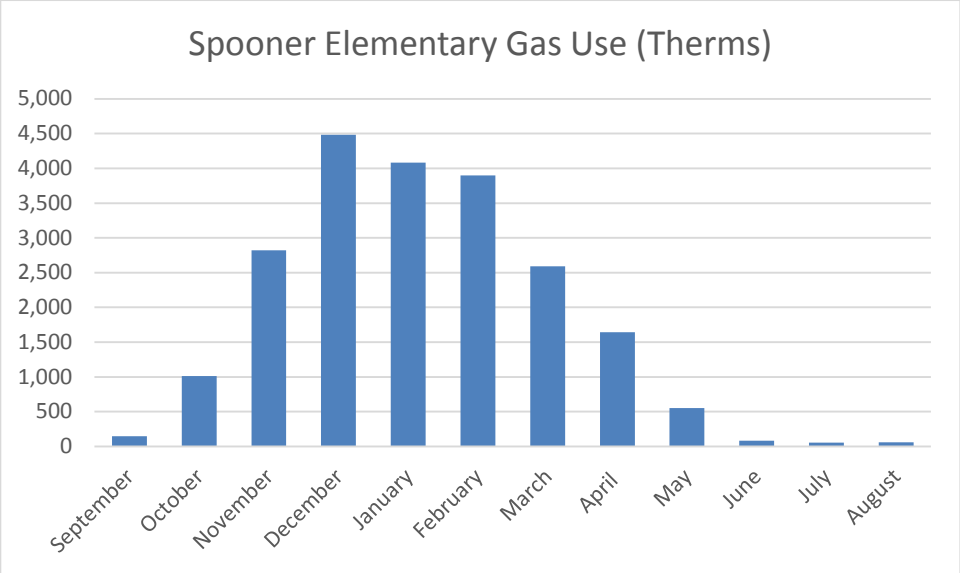
Spooner Elementary School

UTILITY ANALYSIS

The utility graphs below demonstrate the electrical consumption at the Spooner Elementary School during the 2015-2016 school year. Consumption is consistent over the occupied school months, due to the nature of elementary schools and relatively consistent schedules. The building is well-managed, as shown through decreased electrical use during the summer months.



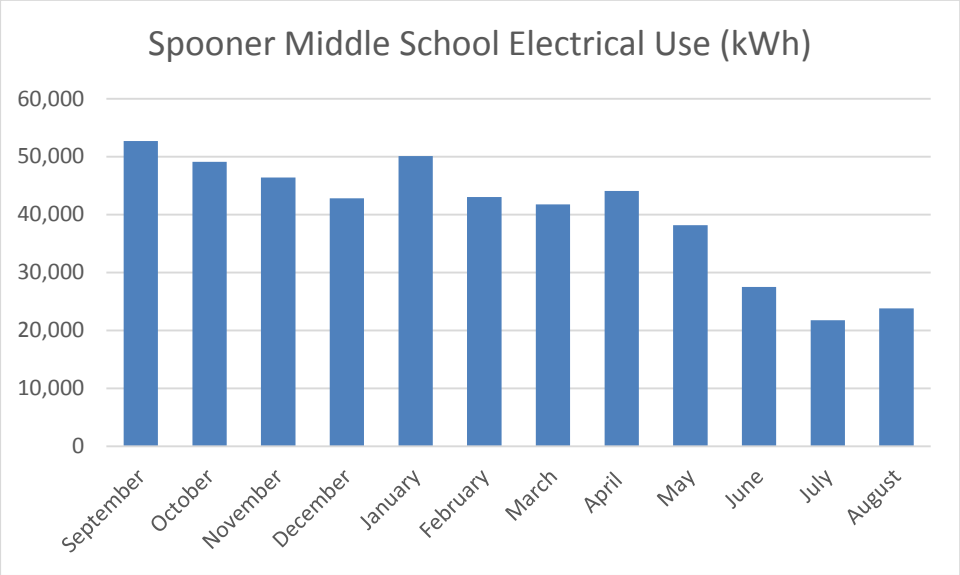
The gas load follows a typical profile for a building that is heated with natural gas and is exposed to Wisconsin's weather patterns. It should be noted that a new, high-efficiency boiler was installed in the summer of 2016, which should lower overall gas usage at the facility.



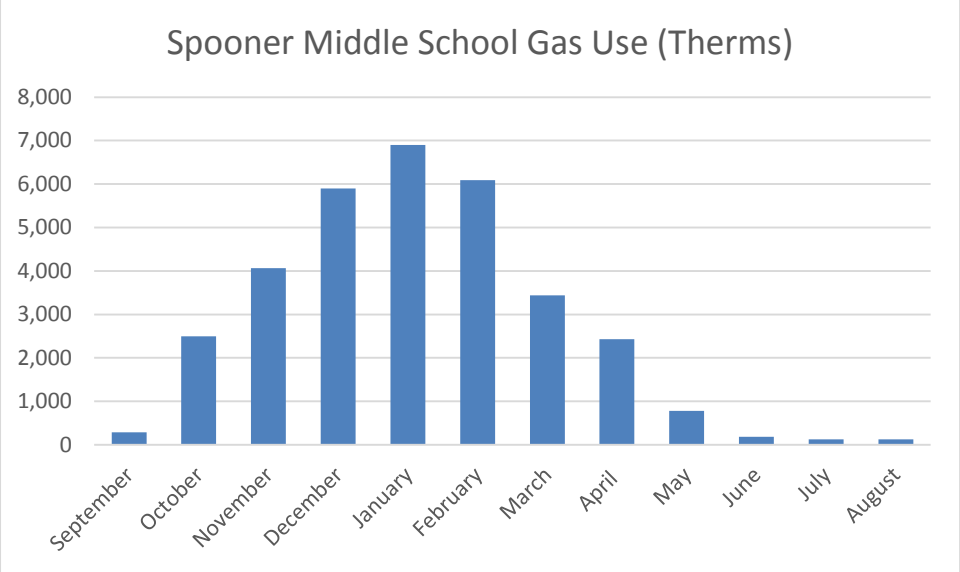
Spooner Middle School

UTILITY ANALYSIS

The utility graphs below demonstrate the electrical consumption at the Spooner Middle School during the 2015-2016 school year. Consumption is relatively flat as a result of minimal air conditioning at the facility and relatively consistent hours of occupation. Minimal electrical use during the summer months shows that this facility is also well-managed.



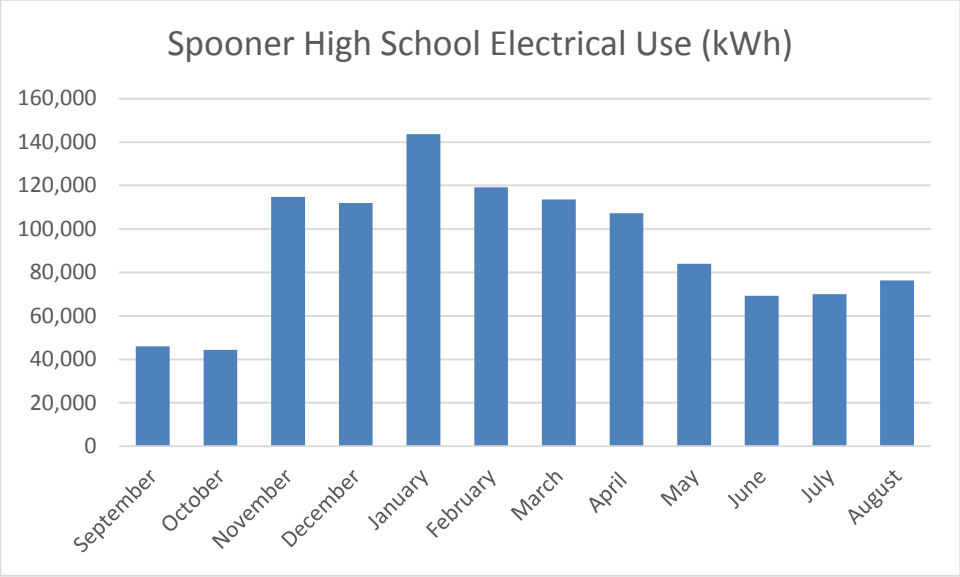
The gas load follows a typical profile for a building that is heated with natural gas and is exposed to Wisconsin's weather patterns.



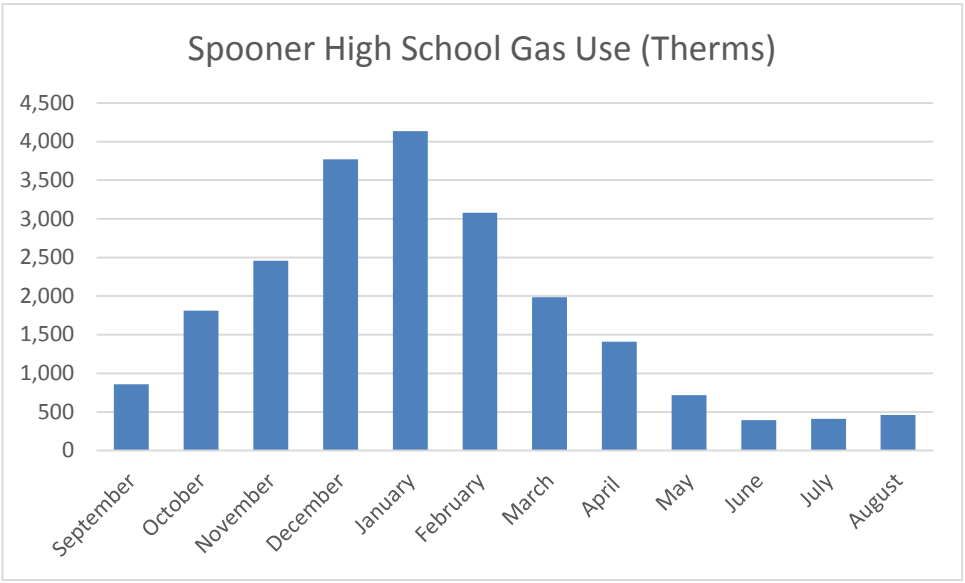
Spooner High School

UTILITY ANALYSIS

The utility graphs below demonstrate the electrical consumption at the Spooner High School during the 2015-2016 school year. Since the high school has geothermal heating and cooling, along with water source heat pumps, the electrical consumption will increase with both heating and cooling loads. Peak load is achieved in January, according to the graph, which corresponds to theoretical consumption.



The gas load follows a typical profile for a building that is heated with natural gas and is exposed to Wisconsin's weather patterns. The usage is much lower than a typical school building, because boilers are only used for auxiliary heating. Usage is much lower this year than previous years, thanks in part to needed modifications to the hydronic piping system at the high school identified by CESA FM Energy Management.

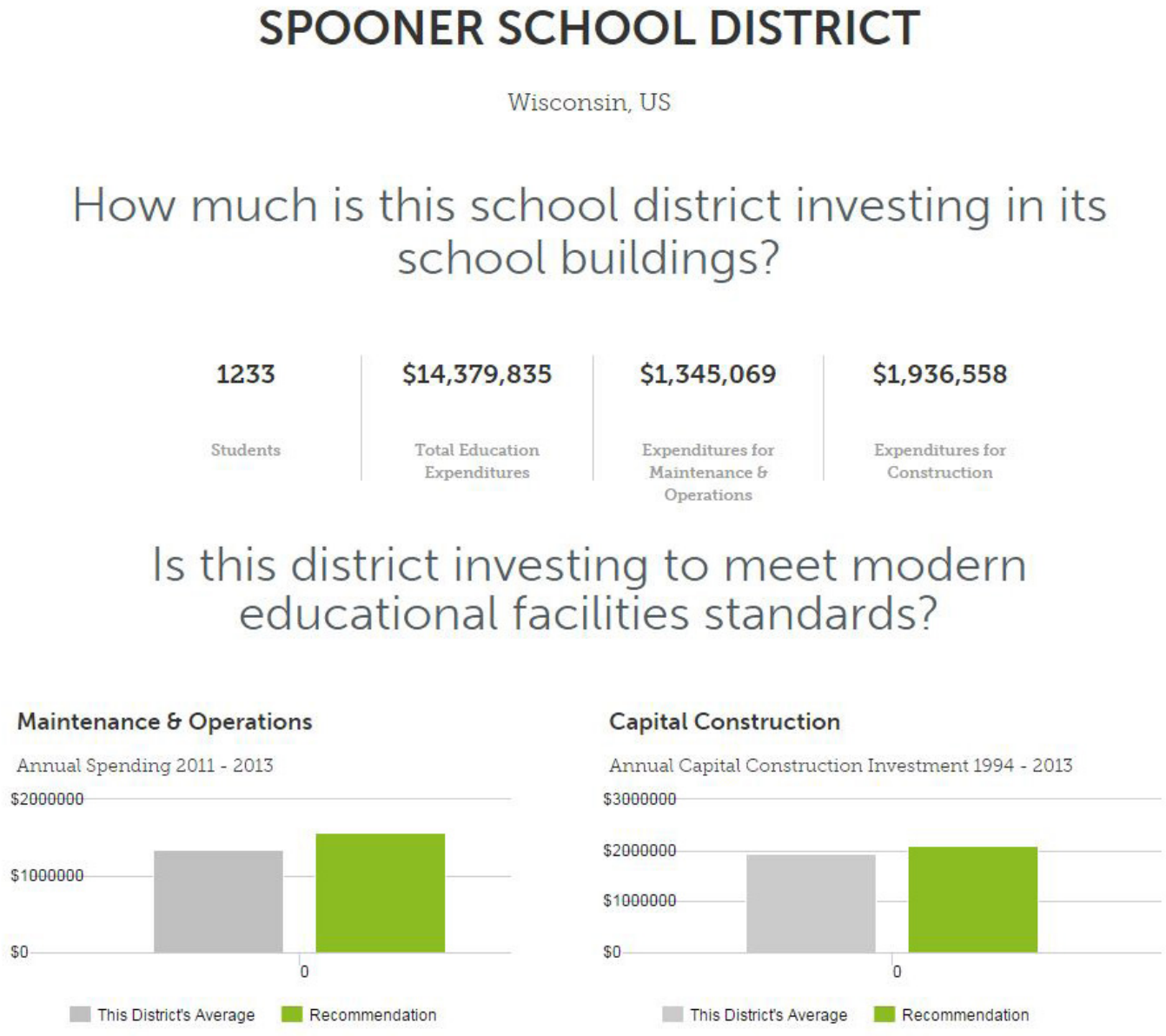


History

FACILITY EXPENDITURES

CESA FM knows that despite a district's best intentions of keeping facilities well maintained and administered, major facility needs crop up due to lack of space and an aging infrastructure. The most efficient path to a safer and more effective learning environment is to prioritize projects and determine both a short and long-term facility plan that aligns with the goals and budget of the District and community.

Based on data from The Center for Green Schools shown below, Spooner Area School District is spending less than the recommended amount, based on modern standards, on maintenance, operations, and capital construction costs. This makes the development of a comprehensive facility plan more important than ever.



RECENT PROJECTS & POSITIVE OUTCOMES

In 2009, Spooner Area School District built a new high school. The boiler project and related boiler loop was overseen by an architect, mechanical engineering firm, and mechanical contractor.

In October 2015, Spooner Area School District hired CESA FM as an Energy Manager to help reduce the District's energy costs. This service includes optimizing existing equipment, controls settings and schedules, as well as instructing custodial staff on best operating practices for HVAC equipment.

In partnership with the District, the CESA FM Energy Manager discovered that the boiler loop was not properly connected to the geothermal loop. It was piped backwards (a serious design and/or installation flaw), which required much higher boiler temps to inject any heat into the geothermal loop. Additional issues (likely from poor or no commissioning) included incorrect boiler settings and geothermal loop temperature set point in the control system.

A contractor was hired to correct the plumbing loop, and the settings on the control system were adjusted by the Energy Manager. Thanks to this critical find, the school will benefit from lower gas use, lower electricity use for cooling (from the lower loop temperature), and building comfort will be improved.

As illustrated in the 2015-16 and 2016-17 Energy Management Update (EMU) reports located in the appendix, all three schools reduced their electricity use, peak electrical demand, and natural gas use when compared to the 2014-15 school year.

TOTAL ENERGY SAVINGS FROM October 2015 - August 2016: $67,273

The energy savings at all three of the Spooner schools in the first 11 months of our contract is evidence of the effectiveness of the Energy Management Service. Many control set-points and schedules were improved to contribute to the energy reductions. The elementary control system wasn't fully functional until September 2016, therefore Energy Management should have a big impact on the energy use at the elementary school in the upcoming year. Custodial staff should be commended for their willingness to learn new systems and for their cooperation with CESA FM Energy Management.

In 2015, the Spooner Area School District had a bid in hand for an elementary controls project of $272,000 and a performance contractor offering to complete the work for a “simple 8% markup.” Something seemed off. The bid seemed far too high and the quoted fee was far lower than the vendor’s typical fee. A process was put into place that included:

- Paying a small amount to have an engineer prepare proper specifications for the project, making sure the District got the most efficient, effective controls — more than were included in the original bid.
- Received competitive bids from qualified vendors, including the vendor who had originally bid.
- Reviewed all bids and made an apples to apples comparison.

The result of the process was that the original vendor reduced their bid by $50,000 and still wasn’t the lowest bid! The District saved a large amount of money and, as a result, was able to do another small, but critically important boiler project.

TOTAL SAVINGS FROM ELEMENTARY CONTROLS PROJECT: $50,000

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District Considerations & Options

ROOFING

The roof is a critical component of a school's building envelope system. Not only does it include essential structural components, it also encompasses the foundation, walls, windows, and masonry. And when all those components work in tandem, a proper roof can be waterproof and energy efficient, saving a district unnecessary maintenance and utility costs. The benchmark life for roofing systems in the U.S. is approximately 20 years.

THE PROBLEM

The roofing at Spooner Elementary School is the original ballasted rubber roof. At approximately 30 years age, it has been well maintained and has surpassed the predicted useful life of the product. During the time of the audit, it was apparent there have been multiple leaks where water has damaged ceiling tiles and pooled on the floor. The roof was observed to have seams that were separating and will continue to form new leaks due to the degrading of the material until the roof is replaced.

There were no obvious signs of microbiological growth or structural issues that have been caused by water entering the building, but those are a real possibility with the number and size of the leaks that were observed.

PROPOSED SOLUTIONS

Option	Estimated Building Costs
Replace roof with same type of rubber roof with rocks over the top (ballast).	$315,000
Convert roof to a fully-adhered roof.	$630,000

MIDDLE SCHOOL GYM

All buildings are faced with the ongoing challenge of moisture problems. The key is to control the moisture before it can pose a health risk and damage a building's integrity. Buildings constructed with bricks often experience water wicking, which causes moisture to travel through the brick's porous material. This can cause damage to the brick, especially when it is exposed to excessive moistures during freeze-thaw cycles. When bricks begin to deteriorate due to age and exposure to moisture, it poses serious safety and structural problems.

THE PROBLEM

The exterior of the old gym at the Spooner Middle School is brick covered in stucco. It was evident at the time of the audit that the brick was in poor condition due to moisture issues. The bricks on the outside were spalling (flaking) and there was efflorescence (white patches caused by the migration of salt through bricks). The brick on the inside and doorways were showing similar serious signs of degradation due to moisture.

The moisture and safety issues need to be addressed at the middle school gym. There are several options ranging from repair to demolition. Determining which option is best will require further study and conversations with the District to identify the needs of the school.

PROPOSED SOLUTIONS

Option	Estimated Building Costs
Repair the existing structure - The visible brick inside and outside along with the doorways is not an overly daunting task, but analyzing the interior support members in the wall is. At minimum, a structural engineer should be brought in to study the condition of the load bearing structure and give a recommendation.	Current estimate is $500,000 to fix existing walls. Additional costs may be incurred to repair roof and ceiling. This cost is dependent on results of structural engineering evaluation.
Tear the building down - This option is not overly cost prohibitive and will eliminate any future cost and safety concerns associated with the old gym. This will eliminate a space currently being utilized by the school, and some expense would be incurred to finish the spot where the gym stood to level ground.	$250,000
Demolish the existing gym and rebuild a new space - A few possibilities include an auditorium, a new office/entryway, and a new area for modern science and technology classrooms.	$2-3 million

SECURE ENTRANCES, SAFE SCHOOLS

Protecting children's safety must be a school's top priority. Unfortunately, many schools lack a proper security system to enable them to carry out this task. Not only do surveillance cameras capture and regulate the students, staff, and community members who are entering the school, they also can provide footage that depicts children who are misbehaving, fighting, or bullying as well as someone who commits a crime on school property. It is every school's responsibility to keep children in their care as safe as possible. Installing a proper security system is the first step toward making this happen.

THE PROBLEM

The existing security system at the Spooner Elementary School consists of monitoring the front door via a camera and buzzer system. The office is located across the hallway from the front doors. Not only are exterior doors left unlocked during the morning hours when staff is arriving, the front doors are over 30 years old and don't always completely close. Having doors that do not close and lock override any security measure the buzzer and camera provide. The camera system also displays low-resolution images and there are several areas not covered by the cameras.

The existing security system at both the middle and high schools consist of buzzers on the exterior doors. These buzzers aren't tied into a centralized security system, they are simply a buzzer on the door. The middle school office is located through the front doors and across a commons area. The high school office adjoins the entryway on the left-hand side. More details about the security system can be found in the Technology Recommendations on the following page.

PROPOSED SOLUTIONS

Option	Estimated Building Costs
Elementary School - Build vestibule connecting front doors and office. Reroute students through this space.	$40,000
Elementary School - Replace doors and make any necessary repairs to handicap access equipment to ensure reliability.	$8,000 per set of doors
Elementary School - Perform a security upgrade coordinated by IT.	$40,000
Middle School - Relocate secure entryway to staff parking lot (incorporate with any future remodeling of the area).	$400,000
Middle School - Perform a security upgrade coordinated by IT.	$50,000
High School - Build airlock between front doors and office where entrants must wait to be buzzed in. Reroute students through this space.	$45,000
High School - Perform a security upgrade coordinated by IT.	$80,000
Subtotal of all safety and security costs.	**Budgetary approximation $700,000**

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Technology Recommendations

As with any school district, technology is an important piece in enabling students and staff to reach their goals. Having a top notch information technology program is a balancing act of keeping up with advances in technology while making wise choices that limit expenses and effectively utilize equipment on hand.

The Spooner Area School District technology plans were reviewed as part of this report by CESA 10 Subject Matter Experts Ross Wilson, Learning Services Director, and Sarah Lipke, Learning Services Consultant. Some of the more urgent IT needs that were discussed during the audit included security upgrades, network wiring needs at the elementary school, and the future of the phone and intercom systems. Ross and Sarah found the Information Technology Program at the Spooner Area School District to be well coordinated, and the equipment well utilized and maintained. However, they did identify a few gaps in equipment obsolesce and pinpointed a few areas to stay on the leading edge for the future. Below are their findings.

SECURITY SYSTEMS - ESTIMATED COST: $165,000

The current security system at each school consists of limited entry that's monitored via a camera and door buzzer system, buzzers at a few exterior doors, a computerized visitor check-in and badge system, and cameras installed intermittently throughout the schools. This system is on the low side of security systems that exist in schools today.

The information technology group has budgeted $165,000 for an updated camera system and earmarked it as a priority for the near future. The new cameras will have motion sensors that only record when activity is sensed. This will greatly reduce storage needs and make reviewing of activity less time consuming. These new cameras will be installed at the elementary, middle, and high schools.

Currently, the exterior door buzzers at all three schools are not connected to a centralized security system. Tying in these door alarms with the security system will allow staff to be aware whenever an exterior door is opened. The combination of cameras on the doorway coupled with the alarm when someone is entering the building will give staff more warning of any potential threats.

NETWORK WIRING - ESTIMATED COST: $30,000

Network wiring needs to include updating the existing wiring to CAT 6a to handle the ever increasing data loads on the system. The elementary school has the highest need for upgrade with 20-year-old wiring running throughout the building at this time. The cost for each building to be rewired is approximately $30,000.

PHONE SYSTEM - ESTIMATED COST: $250,000

The phone system will need a complete upgrade as the phones are reaching the end of their useful lives. Due to the interconnected nature of the devices, the entire system will need to be replaced. The cost for a new system is estimated at $250,000.

HIGH SCHOOL GENERATOR - ESTIMATED COST: $500,000

The idea to add a generator at the high school is mentioned further in the report, but also needs to be noted here due to the long-term function it would give technology devices at the school in case of emergency. An additional benefit of installing a generator is the potential to be an emergency center for the County.

NEW TECHNOLOGY

New technology ideas that could help keep future costs low include a device made by Cisco that includes intercom video, projection, phone, and a motion sensor. This is something the District IT staff is currently evaluating.

REDUCING COSTS

Efficiency is always a goal in order to reduce costs. Areas where time and savings could be gleaned include activity monitoring for projectors and zero client computing, as well as moving away from group training and focusing on personalized training via computer.

EQUIPMENT REPLACEMENT

Most of the equipment that falls under the Information Technology Department's responsibility has a planned date for replacement. This includes all devices used by staff and students as well as district-wide systems, such as security equipment and phones. CESA 10 Subject Matter Experts agreed that the replacement plan was adequate as long as it was funded and carried out as planned.

ADA Compliance Issues

The Americans with Disabilities Act (ADA) defines an individual with a disability as someone who has a physical or mental impairment which substantially limits one or more major life activities. As a public entity, schools fall under Title II of the ADA. Title II dictates that schools must provide programs that are accessible and usable by individuals with disabilities. This applies to all existing facilities.

In order to become ADA compliant, schools often make structural improvements to their existing facilities. This can include installing wheelchair ramps, handrails, an elevator, and parking spaces. As part of this report, Tad Beeksma, Project Manager, identified areas where the Spooner Area School District could improve its ADA compliance.

BATHROOMS AT THE ELEMENTARY AND MIDDLE SCHOOLS

The ADA mandates the space allocated for bathroom stalls, height for toilet fixtures, partitions, dispensers, handrails, mirrors, and urinals. Bathroom spaces and stalls must allow easy access to students in wheelchairs and with crutches. The ADA was passed in 1990. The Spooner Area School District does have at least one restroom that conforms to ADA compliance, however the remaining bathrooms at the elementary and middle schools were constructed prior to this act, and therefore are not ADA compliant. Should the Spooner Area School District engage in any remodeling, they must provide sinks, toilet stalls, and toilets or urinals in the school restrooms being modified to achieve ADA compliance. Due to the aging nature and condition of the existing bathrooms, future modifications are imminent.

DOOR OPENERS AT THE ELEMENTARY SCHOOL

Opening a door can be extremely challenging for an individual with limited mobility. That's why the ADA requires automatic door openers for public entities such as schools. The wheelchair-accessible automatic door openers at Spooner Elementary School are currently non-functioning. The District needs to fix this in order to maintain ADA compliance.

ELEVATOR AT THE MIDDLE SCHOOL

The use of wheelchair ramps and an elevator in two-story school buildings is essential for ADA compliance. The Spooner Middle School currently has an elevator, however, the elevator is old and past its expected useful life. Also, due to its age, replacement parts for the elevator will be difficult to find and most likely prohibitively expensive if located. There is no alternate means for impaired students to reach the upper levels should the elevator malfunction. This is a major reliability concern if the controls malfunction, since emergency repairs can take weeks, if not months, leaving the elevator out of service for an extended period of time. Should this happen, the District would have to drastically rearrange classes to accommodate disabled students.

DISTRICT-WIDE WEBSITE

When many people think of ADA compliance, they think of a building or structure. However, school websites are an online proxy for a school and can be accessed by disabled students and parents. School websites should be designed to be friendly to screen readers, which are commonly used by individuals with visual disabilities. This means screens should be easy to scan, readers should have the option to skip over navigation and other unnecessary text, and headings, and text should be structured in a clear manner that allows the reader to easily identify any breaks in the text.

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Environmental Health & Safety Concerns

School buildings and grounds have a direct correlation between student learning, achievement, and health. Facilities must be designed to be hazard free and to promote the overall health and safety of students, staff, and visitors.

Lance Gregorich, Environmental Health & Safety Manager, visited the Spooner Area School District to determine potential environmental hazards. This report is based on matters which were observed or came to his attention during the day of the assessment, and should not be relied upon as an exhaustive record of all possible risks or hazards that may exist or potential improvements that can be made.

SPOONER ELEMENTARY SCHOOL

FIRE EXTINGUISHER BLOCKED

During the time of the audit it was noted that there was a fire extinguisher that was blocked. As the picture shows, it would be difficult to get to the fire extinguisher in the event of an emergency. Regular inspections should be made to ensure that all fire safety equipment and doorways are free and clear of obstructions.

PLAYGROUND

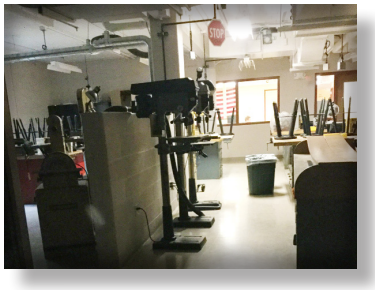
The playground equipment itself appears to be in good condition, but the amount of sand under the equipment is inadequate. The amount of sand under the equipment should be more than 10” deep to minimize the risk of injury.

SPOONER MIDDLE SCHOOL

ASBESTOS

Facilities that are as old as the Spooner Middle School typically have a large amount of asbestos containing materials in them from the time of construction or from renovations through the years. A full asbestos audit wasn’t done at this time, but it was noted that there were a few areas with materials that are known to contain asbestos. One such material is vinyl tile flooring. The Spooner Middle School has tile flooring that is still intact, and therefore isn’t an immediate risk, but has the potential to become a hazard if it starts to chip or crack. The flooring, along with any other materials in the building that are known to contain asbestos, should be abated before any potential exposure.

SHOP - NO BOLTS



It was observed during a walk-through of the shop areas at the middle school that the drill presses were not bolted down. There is a safety hazard when tall, heavy equipment such as drill presses are not bolted down to the floor. If the presses are knocked over, serious injury could result.

LEAD PAINT

The gym area at the middle school has significant amounts of peeling paint from the interior walls. Based on the age of the building, there is a high probability that some of the layers of paint contain lead, which poses a health hazard. Any paint dust that becomes airborne can be inhaled by the occupants.

SPOONER HIGH SCHOOL

VENTILATION

The ventilation in the shop areas was not tested at the time of the audit, but needs to be evaluated to make sure that no students and staff are not being exposed to harmful chemicals. Any areas where welding, machining, painting, finishing work or other processes that could generate hazardous fumes take place need to be evaluated.

MACHINE GUARDING

There are several pieces of equipment throughout the shop areas that do not have proper guarding to keep staff and students safe while the equipment is in operation.

The grinding wheel, saws, and other equipment in the shop area at the high school did not have the proper guarding in place. Without proper guarding, serious injury can result even if goggles are worn.

Guarding should be put on the equipment that follows the manufacturers guidelines and conforms to any applicable safety regulations.

Project Prioritization by School Building

Spooner Elementary School

Indicates projects that may be eligible for the Revenue Limit Exemption for Energy Efficiency

SECURITY MEASURES: Security Systems

Estimated Cost: $50,000

GENERAL DESCRIPTION: Measure ID #SESS32 & SESS33

The existing security system at the elementary school consists of monitoring the front door via a camera and buzzer system. The office is located across a hallway from the front doors and visitor entrance where the camera and buzzer are located. Once visitors enter the building, they proceed to the office and sign in via a computerized log in. Badges are worn by visitors so that they can be identified as having checked in at the office.

The exterior doors to the parking lot are currently unlocked during the morning hours when staff is arriving. This is done to accommodate the large number of people arriving at the same time.

There are some internal cameras, but the image quality is poor and there are areas where the cameras don't cover. This portion of the security system is mentioned here, but will be addressed more completely as part of the district's technology infrastructure.

DESCRIPTION OF MOST URGENT NEEDS

◄ The front doors at the elementary school don't always close completely due to 30 years of wear and tear. Doors that do not close and lock override any security measure that the buzzer and camera system provide. Until this is fixed, anyone could walk up to the school and enter without authorization. Due to the age and condition of the doors, the recommendation is to replace the doors and make any necessary repairs to the handicap access equipment to ensure reliable function.

The exterior doors to the parking lot being unlocked in the morning is also a security issue. As part of this measure, the doors should be monitored or only accessible by a district-issued fob.

Spooner Elementary School

MECHANICAL MEASURES: Air Conditioner

Estimated Cost: $30,000

GENERAL DESCRIPTION: Measure ID #SECC6

The only air conditioned areas at the elementary school are the central office areas. These areas are served by air conditioning equipment that is original to the building and located up on the roof. Through the years of being exposed to the weather, the equipment has degraded and become unreliable and inefficient.

The air conditioner on the roof is the only cooling device that serves the computer server room at the elementary school. For this reason reliability is important. If the air conditioning unit fails, there is the possibility that the servers will overheat and fail.

DESCRIPTION OF MOST URGENT NEEDS

Replace air conditioning units

Air conditioning units have seen huge efficiency gains over the last 30 years as well. A new unit would help to pay itself back in utility savings over the years. ►

▲ Repairs were made to the air conditioning unit at the elementary school this summer. Due to its age and exposure to the elements, it will likely continue to need repairs and will be unreliable. The air conditioning unit at the elementary school should be replaced.

BUILDING ENVELOPE MEASURES: Exterior Doors

GENERAL DESCRIPTION: Measure ID #SEED13

Estimated Cost: $40,000

All of the exterior doors are commercial grade, metal doors. Some of the doors at the elementary are new, but many are original.

DESCRIPTION OF MOST URGENT NEEDS

Replace exterior doors

◄ Even though these are commercial doors and have been well maintained, when they have been used for 30 years, they will have issues. The doors that are original should be scheduled for replacement.

Spooner Elementary School

BUILDING ENVELOPE MEASURES: Roofing

Estimated Cost: $315,000

GENERAL DESCRIPTION: Measure ID #SERS30

The roof at the Spooner Elementary School is the original ballasted rubber roof. At around 30 years old, it has been well maintained and has surpassed the predicted useful life of the product. During the time of the audit, it was apparent that there have been multiple leaks where water has damaged ceiling tiles and pooled on the floor. The roof was observed to have seams that were separating and will continue to form new leaks due to the degrading of the material until the roof is replaced.

There were no obvious signs of microbiological growth or structural issues that have been caused by water entering the building, but those are a real possibility with the number and size of the leaks that were observed.

DESCRIPTION OF MOST URGENT NEEDS

Replace elementary school roof

◄ The roof can be replaced with the same type of rubber roof with the rocks over the top (ballast), or it can be converted to a fully adhered roof. The ballasted roof is the more economical option, but the rocks on top of the roofing material make it difficult to find leaks when they happen.

▲ The roof at the elementary school needs to be replaced to avoid the potential for microbiological growth and/or structural degradation. The roof is well past its predicted useful life and will continue to leak until replacement due to the age of the material and continued exposure to the elements.

ELECTRICAL MEASURES: Building Envelope Lighting

GENERAL DESCRIPTION: Measure ID #SEBE4

Estimated Cost: $10,000

The lighting around the perimeter and in the parking lot consists of metal halide fixtures of varying intensities. Lighting for the parking lots is controlled by a system that can be programmed to turn the lights off and on.

DESCRIPTION OF MOST URGENT NEEDS

Upgrade exterior lighting

◄ The exterior lighting is obsolete and low efficiency. The payback on utility costs and maintenance savings of new LED lighting is very favorable. The exterior lighting should be upgraded before any major repairs or maintenance is performed on the existing fixtures. ►

Spooner Elementary School

MISCELLANEOUS MEASURES: Flooring

Estimated Cost: $200,000

GENERAL DESCRIPTION: Measure ID #SEFS16

Several types of flooring exist at the Spooner Elementary School all of which are original to the building. The hallways and restrooms have heavy tile, the gym is wood, and the classrooms are a mix of vinyl and carpeting. Due to the number of different flooring types, there are a large number of transitions from one flooring type to another throughout the building.

DESCRIPTION OF MOST URGENT NEEDS

◄ Wherever there is a transition for the flooring, such as the transition from a doorway to a classroom or from carpeting to vinyl tile in the middle of the classroom, there are issues with the flooring being in poor condition. The vinyl tile throughout the building has been damaged or is peeling because of years of use. The carpet in the classrooms has also surpassed its predicted useful life and needs replacement to address areas that have trip hazards or are excessively worn. ►

SAFETY MEASURES: Fire Alarm System

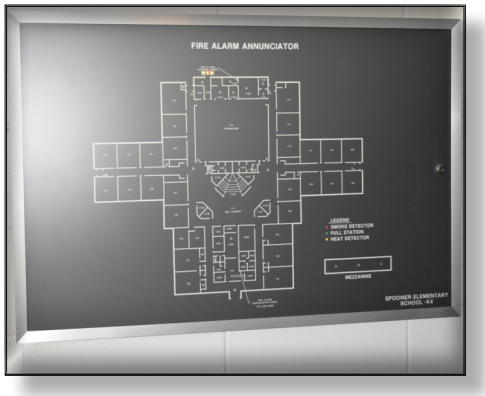
Estimated Cost: $100,000

GENERAL DESCRIPTION: Measure ID #SEFA15

The fire alarm system at the elementary school is original to the building and obsolete. Most of the system is functional and the system passed the fire inspection, but repair parts are unavailable and the system will continue to become more and more unreliable as time passes.

DESCRIPTION OF MOST URGENT NEEDS

◄ Not only is this system critical to safety, but can also cause disruption and anxiety if alarms are tripped due to equipment malfunction. To guarantee a high level of reliability and reduce the annual cost of maintaining the fire alarm system, the system should be updated. Any obsolete parts and components should be replaced and updated. ►



Spooner Middle School

BUILDING ENVELOPE MEASURES: Exterior Walls

GENERAL DESCRIPTION: Measure ID #SMEW15

Estimated Cost: $250,000

The exterior of the old gym at the middle school is brick covered in stucco. It was evident at the time of the audit that the brick was in poor condition due to moisture issues. The bricks on the outside were spalling (flaking) and there was efflorescence (white patches caused by the migration of salt through bricks). The bricks on the inside and doorways were showing similar serious signs of degradation due to moisture.

The inside of the gym had a relatively new gym floor that was in good condition with the exception of a trap door that is used to access a mechanical room. This door is not locked and poses a major safety risk if left open.

DESCRIPTION OF MOST URGENT NEEDS

▲ The moisture and safety issues need to be addressed at the middle school gym. There are several options ranging from repair to demolition. Determining which option is best will require further study and conversations with the school district to identify any needs at the school.

The first option is to repair the existing structure. The visible brick inside and outside along with the doorways is not an overly daunting task, but analyzing the interior support members in the wall is. At a minimum, a structural engineer should be brought in to study the condition of the load bearing structure and give a recommendation before repairs are started.

Another option is to tear the building down. Tearing the building down will not be overly cost prohibitive and will eliminate any future cost and safety concerns associated with the old gym. This will eliminate a space that is currently being used by the school and some expense would be incurred to finish the spot where the gym stood to level ground.

Another option would be to demolish the existing old gym at the middle school and rebuild something that is currently not available at the middle school on that spot. A few possibilities for new spaces could include an auditorium, a new office/entryway, or a new area for modern science and technology classrooms.

Again, any options need to be thoroughly researched and discussed with the stakeholders in the Spooner School District.

Spooner Middle School

MISCELLANEOUS MEASURES: Elevators

Estimated Cost: $40,000

GENERAL DESCRIPTION: Measure ID #SMEL12

The elevator at the middle school is older but functional. It serves the older, multistory sections of the school.

DESCRIPTION OF MOST URGENT NEEDS

◄ Due to its age, there aren't any replacement parts available for the elevator. This is a major concern, because if the controls malfunction, the elevator will be out of service for an extended amount of time. ►

GROUNDS MEASURES: Restrooms

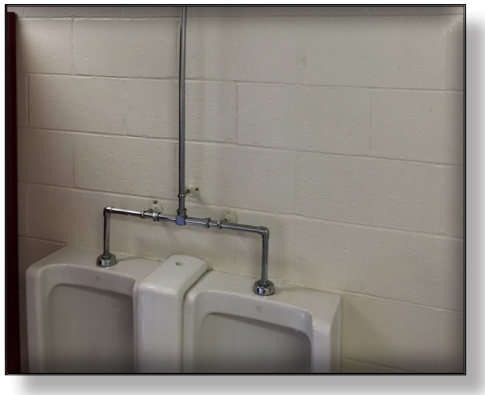
Estimated Cost: $15,000

GENERAL DESCRIPTION: Measure ID #SMRE31 & SMRE30

The restrooms throughout the school have tile flooring, mostly plastic partitions, and fixtures that vary greatly in age.

DESCRIPTION OF MOST URGENT NEEDS

Update urinals and hand wash stations



▲ The urinals in a few of the bathrooms are the old "fill and flush" style that continuously run water anytime the lights are on. This type of system uses much more water than newer systems. They should have motion activated valves installed.

▲ The hand wash stations and the oldest sinks need to be replaced. They are difficult to adjust and parts are becoming obsolete.

Spooner Middle School

HVAC MEASURES: Air Conditioning

Estimated Cost: $2,000

GENERAL DESCRIPTION: Measure ID #SMCC6

There is no central chiller at this building, but there are direct expansion cooling units for the office and library. There are also a few ductless air conditioning units for areas with high densities of electronics.

DESCRIPTION OF MOST URGENT NEEDS

Replace thermostat

◄ The thermostat for the office air conditioning has a malfunctioning display and cannot be programmed. The thermostat needs to be replaced.

BUILDING ENVELOPE MEASURES: Exterior Doors

GENERAL DESCRIPTION: Measure ID #SMED14

Estimated Cost: $40,000

The exterior doors are either metal or glass with metal frames and cover a wide range of ages.

DESCRIPTION OF MOST URGENT NEEDS

▲ Several sets of exterior doors have deteriorated due to age and exposure to salt that is used for de-icing. Doors that are in poor condition are difficult to close at times and could pose a security risk.

Spooner Middle School

MISCELLANEOUS MEASURES: Steps

Estimated Cost: $50,000

GENERAL DESCRIPTION: Measure ID #SMSH37

The middle school has a multistory building and a considerable amount of stairs and sidewalks outside. Both internal staircases and the external concrete stairs and surfaces are in poor condition in many spots. The internal stairs in the older sections of the building are cracked and chipped due to decades of use. The external concrete is cracked and heaved from weather and exposure to salt for de-icing purposes.

DESCRIPTION OF MOST URGENT NEEDS

The concrete steps and sidewalks surrounding the building need to have cracks repaired, uneven pavement leveled, and curbs should be painted yellow to let people know that there is a step according to applicable codes to avoid trip hazards. ►

▲ The cracking of the staircases inside of the building is not only a trip hazard but raises a red flag that the building may be shifting slightly. In the short term, any excessive cracks should be repaired, but also the root cause of the cracks in the stairs and flooring should be investigated.

Spooner High School

PLUMBING MEASURES: Domestic Water

Estimated Cost: $20,000

GENERAL DESCRIPTION: Measure ID #SHDW10

There are four high-efficiency domestic water heaters at the high school. At the time of the audit, two were not functioning due to the failure of one or more components.

DESCRIPTION OF MOST URGENT NEEDS

Replace domestic water heaters

◄ The existing domestic water heaters need to be repaired or replaced. Based on the reliability of the existing water heaters, the more cost efficient option is most likely replacement.

Spooner High School

LIGHTING MEASURES: Interior Lighting (In process)

Estimated Cost: $10,000

GENERAL DESCRIPTION: Measure ID #SHIL22

The high school has emergency lighting installed throughout the school that is powered off of batteries since there is no generator on site. The existing fixtures are in fair condition, but the need for increased maintenance and inspection is a burden.

DESCRIPTION OF MOST URGENT NEEDS

Replace emergency lighting

◄ The existing emergency lights at the high school should be replaced with fixtures that require less maintenance and are more reliable. New fixtures with LED lights and lithium batteries last much long between maintenance needs than old fixtures.

MISCELLANEOUS MEASURES: Flooring

Estimated Cost: $50,000

GENERAL DESCRIPTION: Measure ID #SHFS17

The hallways are terrazzo and are in good condition. The gym floor is wood and is in good condition. There is some carpet throughout the building that is showing wear.

DESCRIPTION OF MOST URGENT NEEDS

◄ The carpeting in the building is the most urgent flooring need. There are areas in the library and in the office where the carpet is separating at the seams. The carpeting needs to be scheduled for replacement to reduce the safety issues associated with trip hazards.

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Facility Improvement Measures Summary

The following projects were included in the Prioritization Matrix and are separated by school. They include additional information to show they may be projects eligible for funding under the Revenue Limit Exemption for Energy Efficiency (RLE). Should the District want to proceed with these projects using RLE funds, a qualified provider would need to be hired to verify the savings and implement the projects.

Savings Summary: Spooner School District

Facility Improvement Measure (FIMs)				Electricity			Nat. Gas			Water Savings				
Priority Matrix No.	FIM Description	Estimated Cost	*Environ. Hazard Mngmnt	kWh	kW	$	Therm	$	Total Energy Savings $	CCF	$	Total Maintenance Savings $	Simple Payback (Years)
	Mechanical Measures	**$ 30,000**		**12,857**	**14**	**$ 1,286**	**-**	**$ -**	**$ 1,286**	**-**	**$ -**	**$ 500**	**16.8**
	Air Conditioning Unit - SES	$ 30,000		12,857	14	$ 1,286	-	$ -	$ 1,286	-	$ -	$ 500	**16.8**
	HVAC Control Measures	**$ 2,000**		1,000	**-**	**$ 100**	-	**$ -**	**$ 100**	**-**	**$ -**	**$ -**	**20.0**
	Air Conditioning Controls - SMS	$ 2,000		1,000	-	$ 100	-	$ -	$ 100	-	$ -	$ -	**20.0**
	Lighting Measures	**$ 106,000**		52,873	**$ 16**	**$ 5,287**	-	**$ -**	**$ 5,287**	**-**	**$ -**	**$ 1,400**	**15.9**
	Exterior Lighting - SES	$ 10,000		3,283	1	$ 328	-	$ -	$ 328	-	$ -	$ 400	**13.7**
	Interior Lighting - SES	$ 96,000		49,590	15	$ 4,959	-	$ -	$ 4,959	-	$ -	$ 1,000	**16.1**
	Building Envelope Measures	**$ 495,000**		-	**$ -**	**$ -**	3,763	**$ 2,634**	**$ 2,634**	**-**	**$ -**	**$ 6,500**	**54.2**
	Roofing - SES	$ 315,000		-	-	$ -	1,580	$ 1,106	$ 1,106	-	$ -	$ 5,000	**51.6**
	Exterior Doors - SMS	$ 40,000		-	-	$ -	169	$ 118	$ 118	-	$ -	$ 500	**64.7**
	Exterior Doors - SES	$ 40,000		-	-	$ -	169	$ 118	$ 118	-	$ -	$ 500	**64.7**
	Window Replacement - SMS	$ 100,000		-	-	$ -	1,845	$ 1,291	$ 1,291	-	$ -	$ 500	**55.8**
	Miscellaneous Measures	**$ 15,000**		-	**-**	**$ -**	-	**$ -**	**$ -**	**451**	**$ 1,399**	**$ 100**	**10.0**
	Automatic Urinal Valves - SMS	$ 15,000		-	-	$ -	-	$ -	$ -	**451**	$ 1,399	$ 100	**10.0**
Total		648,000		66,730	30	6,673	3,763	2,634	9,307	451	1,399	8,500	**33.7**

***The red/yellow/green indicates the likelihood of the project running into environmental hazards and associated abatement costs with red being the highest likelihood and associated cost and green the lowest. The colors in the chart are based on CESA 10's experience with environmental hazards and a visual inspection only. Since environmental hazards are often hidden and/or found in layers, costs are not estimated in this report. Costs will be estimated upon FIM selection and actual testing for hazards.**

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Project Prioritization Matrix Screen Shots

As part of CESA FM's study of the Spooner Area School District facilities, an electronic workbook of spreadsheets was produced. These spreadsheets are not only a valuable part of this study, but can be adapted for use by District staff in the future.

The spreadsheets list all of the equipment, fixtures, and materials in each facility and assign points based on key criteria. As was described early on in this report, the criteria prioritize projects that have environmental health and safety and/or functional condition benefits, but also take into account the project paybacks.

Once the workbook of spreadsheets is delivered to the District, any of the spreadsheets can be modified and sorted to provide data on any number of scenarios. For instance, if it is determined after further inspection that a roofing system is in very poor condition and in jeopardy of failing, the criteria value for functional condition can be changed and the list of projects can be sorted so that the roofing project is moved up in the list of prioritized projects.

The following pages contain static pictures of the tool and are intended to give anyone reading this report a sample of the level of detail involved. The actual spreadsheets will be delivered to the District in a usable digital format, in which the flexibility of the tool can be fully utilized.

Spooner School

Project Recommendation Priority Order

Scoring System					
Poor=10 Ave=5 Good=0	0%=10 25%=5 50%=0	High=15 Med=8 Low=0	<$10k=5 $50k=3 >$100k=0	<2 Yr=5 5 Yr=3 >10 Yr =0	>30 points = Fix immediately >25 points = Fix in next year >20 points = Fix in next 2 years

Measure ID#	School	Inspection Group	General Description	Description of Most Urgent Needs	Functional Condition	Predicted Useful Life Remaining	Environmental Heath & Safety Concern	Project Cost	Return on Investment	Total Points	Cost estimate to address urgent needs
SESS32	Elementary	Security Systems	The existing security system consists of monitoring the front door via a camera and buzzer system.	The front doors do not always close completely due to 30 years of wear and tear on the doors themselves. The doors in the front along with the handicap access need to be replaced to ensure proper function.	9	10	14	4	0	37	$10,000
SMSH76	Middle School	Steps	Internal staircases have some cracks, but for the most part are in good condition.	The steps and sidewalks at the school are in need of repair due to prolonged exposure to salt.	9	10	13	2	0	34	$50,000
SHIL100	High School	Interior Lighting	The high school has 2x4 fluorescent troffers in place throughout most of the facility. The fixtures are set up with electronic ballasts and 32 watt fluorescent bulbs.	The main lighting is in good condition, but the emergency lighting is a concern. The emergency fixtures have batteries in them that go dead quickly. One solution is to replace the existing fixtures with LED emergency lights that will not drain the batteries as quickly as the existing fixtures.	8	8	13	5	0	34	$10,000
SMEW54	Middle School	Exterior Walls	The exterior of the building is mostly brick. As with the rest of the facility, there is a wide range of ages and conditions of the exterior.	The most urgent need for the exterior walls at the Middle School is in the small gym. The brick walls were covered over with stucco some years back and as a result, moisture was trapped in the bricks. The bricks subsequently deteriorated and are in poor condition. A decision needs to be made on whether to tear down the old gym or spend the money to repair the walls.	10	10	13	0	0	33	$250,000
SERS30	Elementary	Roofing	Roofing at the elementary is original flat roof with ballast covering. There are several different roof heights.	The roof is leaking in several locations and is well past its predicted useful life. It needs to be replaced to avoid the potential for structural damage and microbiological growth due to water entering the building.	9	10	13	0	0	32	$315,000
SMED53	Middle School	Exterior Doors	The exterior doors are either metal or glass with metal frames and cover a wide range of ages.	Several sets of exterior doors have deteriorated due to age and exposure to salt that is used for deicing. Doors that are in poor condition are difficult to close at times and could pose a security risk.	9	8	12	3	0	32	$40,000
SECC6	Elementary	Chiller	There is no chiller at the elementary, but there is an air conditioning unit for the central office spaces that is original to the building.	Repairs were made to the air conditioning unit for the office this summer. The unit is 30 years old and will contiue to need repairs in the future due to its years of service and exposure to the elements. The air conditioning unit should be included in short term planning for faciliity upgrades with a new, high efficiency cooling unit.	8	10	10	3	1	32	$30,000
SMCC45	Middle School	Chiller	There is no central chiller at this building, but there are direct expansion cooling units for the office and library. There are also a few ductless air conditioning units for areas with high densities of electronics.	The thermostat for the office air conditioning has a malfunctioning display and cannot be programmed. The thermostat needs to be replaced.	9	10	8	5	0	32	$2,000

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Scoring System					
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SEFA15	Elementary	Fire Alarm System	The fire alarm system is original to the system. It is regularly serviced and fire inspections are done to ensure safety.	Some of the components of the fire alarm system are obsolete and can not be replaced. Scheduling the system needs to be scheduled for replacement and upgrading to avoid costly emergency repairs in the future.	8	10	13	0	0	31	$100,000
SEFS16	Elementary	Flooring	Several types of flooring exist at this building. The hallways and restrooms are heavy tile, the gym is wood, and the classrooms are a mix of vinyl tile and carpeting. The vast majority of the flooring throughout the building is original.	The tile flooring is damaged near the doorway in many of the classrooms and needs to be repaired.	9	10	12	0	0	31	$200,000
SMEL51	Middle School	Elevators	The elevator at the Middle School is older, but functional. It serves the older, multistory sections of the school.	Due to its age, there aren't any replacement parts available for the elevator. This is a major concern, because if the controls malfunction, the elevator will be out of service for an extended amount of time.	8	7	12	4	0	31	$40,000
SMEC52	Middle School	Exterior caulking and sealants	All external door, window, and expansion joints are caulked	It was noted at the time of the audit that the caulking should be reapplied around the building, especially at expansion joints to prevent water from entering the building envelope.	9	9	8	5	0	31	$2,500
SMRE70	Middle School	Restrooms	The restrooms throughout the school have tile flooring, mostly plastic partitions, and fixtures that vary greatly in age.	The urinials in a few of the bathrooms are the old "fill and flush" style that continuously run water anytime the lights are on. This type of system uses much more water than newer systems. They should have motion activated valves installed.	8	8	8	4	3	31	$15,000
SESS33	Elementary	Security Systems	The existing security system consists of monitoring the front door via a camera and buzzer system.	There are no security controls on the doors to the staff parking lot. These doors are left unlocked while staff is arriving. To improve security, these doors, at a minimum, should have security locks on them that can only be opened by staff who are issued a fob or card.	5	7	15	3	0	30	$50,000
SEED13	Elementary	Exterior Doors	All of the exterior doors are commercial grade, metal doors. Some of the doors at the elementary are new, but many are original.	Even though these are commercial doors and have been well maintained, when they have been used for 30 years, they will have issues. The doors that are original should be scheduled for replacement.	8	6	12	3	1	30	$40,000
SHFS95	High School	Flooring	The hallways are terrazzo and are in good condition. The gym floor is wood and is in good condition. There is some carpet throughout the building that is showing wear.	The carpeting in the building is the most urgent flooring need. There are areas in the library and in the office where the carpet is separating at the seems. The carpeting needs to be scheduled for replacement to reduce the safety issues associated with trip hazards.	8	7	12	3	0	30	$50,000

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SHDW88	High School	Domestic Water	There are four high efficiency domestic water heaters at the high school. At the time of the audit, two were not functioning due to the failure of one or more components.	The existing domestic water heaters need to be repaired or replaced. Based on the reliability of the existing water heaters, the more cost efficient option is probably replacement.	9	7	10	4	0	30	$20,000
SMWI63	Middle School	Windows	The windows for most of the building are aluminum frame, double pane glass.	The windows are in need of replacement for many of the classrooms. The frames are coming apart at the corners and some of the crank out windows can no longer be used because they will not close if they are opened.	10	10	9	0	1	30	$100,000
SEBE4	Elementary	Building Envelope Lighting	The lighting around the perimeter and in the parking lots consists of metal halide fixtures of varying intensities. The lighting for the parking lots is controlled by a system that can be programmed to turn the lights on and off.	The exterior lighting is obsolete and low efficiency. The payback on utility costs and maintenance savings of new LED lighting is very favorable. The exterior lighting should be upgraded before any major repairs or maintenance is performed on the existing fixtures.	7	8	9	3	3	30	$10,000
SMRE69	Middle School	Restrooms	The restrooms throughout the school have tile flooring, mostly plastic partitions, and fixtures that vary greatly in age.	The hand wash stations and the oldest sinks need to be replaced. They are difficult to adjust and parts are becoming obsolete.	9	8	8	3	2	30	$40,000
SEIL17	Elementary	Interior Lighting	There is a mix of different fluorescent bulbs in the fixtures at the elementary. Some are of the older T-12 style with a magnetic ballast and others are newer T-8s with electronic ballasts.	The older T-12 fluorescent fixtures should be replaced with either high perfomance T-8s or with LED troffers. Motion sensors can be incorporated with either of these system, so incorperation of sensors should be invested.	8	8	8	3	3	30	$96,000
SEPG28	Elementary	Playground	Multiple play areas are located around the building. The equipment ranges greatly in material, age, and level of wear.	The oldest equipment, including the train should be repaired or replaced to avoid the potential for injury.	8	5	12	4	0	29	$10,000
SMPS66	Middle School	Parking Lot	The parking lots are asphalt with concrete sidewalks leading to the school. There appears to be adequate capacity for staff as well as visitors.	The parking lot needs to be recoated and have crack sealing done. This should be scheduled every 5 years or so as a preventative maintenance item.	8	7	10	4	0	29	$25,000
SESH35	Elementary	Steps	Aside from a full set of bleachers, there are very few,if any, steps at this building.	The bleachers are in need of replacement due to 30 years of wear and tear. New bleachers will save on maintenance and will have additional safety features.	8	10	10	1	0	29	$80,000
SMRS70	Middle School	Roofing	Roofing at the Middle School is ballasted rubber roofing on everything but the gyms which have barrel roofs with fully adhered roofing material	A roofing audit should be carried out to document the condition and options for replacement of the roofing surfaces. Many commercial roofing companies will provide free audits with no obligations.	7	6	10	5	1	29	$0
SERE29	Elementary	Restrooms	The stools and metal partitions in the student restrooms are good quality and in fair shape for their age. The exhaust fans in some of the restrooms were not functioning at the time of the audit. Also, it was noted that the same flooring that exists in the hallways was used in the student restrooms. This is uncommon in commercial applications due to differing cleaning demands.	The hand wash stations are obsolete and are in need of replacement due to leaks and malfunction.	9	7	9	4	0	29	$25,000

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SHSF114	High School	Sports Fields	The high school has several sports fields located on the school grounds including: football, soccer, and baseball. There is also a large gymnasium on the grounds.	The fields can accommodate the current needs and are well maintained. There are no urgent needs at this time for the outdoor fields. The indoor gymnasium has issues with the motors that drive the basketball backboards up and down as well as a divider screen and a screen for presenations. These pieces of equipment need to be repaired.	9	8	7	5	0	29	$5,000
SEPS26	Elementary	Parking Lot	The two parking lots are asphalt with one being used primarily for visitor parking and student drop off/pick up and the other being used primarily for staff parking.	Both lots need to be sealed and have any cracks filled to avoid deterioriation of the surface.	8	5	12	3	0	28	$40,000
SESH34	Elementary	Steps	Aside from a full set of bleachers, there are very few,if any, steps at this building.	The transition from the staff parking lot into the school building may be steeper than was is allowable by code. It was relayed during the audit walk through that a staff member has been injured at this spot. Either the slope should be changed by reshaping the whole approach area or the area should to be otherwise modified to eliminate the hazard.	7	5	12	4	0	28	$20,000
SHPS105	High School	Parking Lot	Parking lot areas are extensive enough to handle parking for staff students and sporting events. They are asphalt with concrete curbs and islands.	The parking lot areas need to have the cracks filled and be sealed as part of on-going maintenance. This should be done every 5 years or so.	7	7	10	4	0	28	$30,000
SEBF3	Elementary	Boiler	There are three boilers at this facility. One of these is a new high efficiency model as of 2016 and the other two are original, 30 year old standard efficiency models.	There is a new boiler in place at the elementary school, but there are also two 30 year old boilers. The 30 year old boilers are functioning in a role as back ups and on very cold days at this point, so their low efficiency isn't the primary driver for replacement. They should be scheduled for replacement before any further major repair work is scheduled though. Putting a new boiler in service rather than repairing the old units will save on maintenance fees for years to come.	8	10	8	1	1	28	$120,000
SEDW10	Elementary	Domestic Water	There is one newer domestic water heater in the boiler room and another older unit that was removed this summer. The newer unit is a high quality commercial grade fixure capable of high output. The drinking fountains throughout the building appear to be original and have seen extensive use.	The drinking fountains are low efficiency and are becoming increasingly more expensive to maintain. The drinking fountains that are original to the building should be scheduled for replacement in the near future.	8	7	8	4	1	28	$12,000
SESW33	Elementary	Servers	The data equipment at the elementary is adequate at this time, but the network cabling is obsolete.	The network cable should be upgraded to CAT 6	7	9	8	4	0	28	$30,000
SMSS72	Middle School	Security Systems	The main entrance has a camera and visitors must be buzzed in. The staff have fobs that they use to access the exterior doors. For student entry, the doors are left unlocked in the morning when students are arriving.	The bus drop off and configuration of the building will not currently allow for a secure entry. If there are major changes made to the facility in the future, including a secure entry should be considered.	6	5	15	1	0	27	$85,000

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SEFS17	Elementary	Flooring	Several types of flooring exist at this building. The hallways and restrooms are heavy tile, the gym is wood, and the classrooms are a mix of vinyl tile and carpeting. The vast majority of the flooring throughout the building is original.	The carpet in many of the classrooms is worn out and needs to be replaced.	8	8	10	1	0	27	$75,000
SEPI27	Elementary	Phone	The current phone system is adequate, but is quickly becoming obsolete.	The phone system is in the long term plan for complete replacement district wide (2018-2019). It's difficult to separate the elementary out of this for reason	8	8	10	1	0	27	$80,000
SMPI67	Middle School	Phone	The current phone system is adequate, but is quickly becoming obsolete.	The phone system is in the long term plan for complete replacement district wide (2018-2019). It's difficult to separate the middle school out of this for reason	8	8	10	1	0	27	$80,000
SHPI106	High School	Phone	The current phone system is adequate, but is quickly becoming obsolete.	The phone system is in the long term plan for complete replacement district wide (2018-2019). It's difficult to separate the high school out of this for reason	8	8	10	1	0	27	$90,000
SHPU96	High School	Heating	There are over 100 Mc Quay heat pumps around the high school that are used for heating and cooling of individual spaces. These units vary in size and in heating and cooling capacities. Heat pump systems in general require a high number of pieces of equipment that then generate maintenance needs. The system at Spooner High is no exception.	When a heat pump needs to be replaced at the high school, the units can't just be directly replaced with a new heat pump of the same type from the same manufacturer. The original manufacturer was bought by another company and this has caused integration issues. New heat pumps need to have additional work done to integrate them into the hvac controls. The most urgent need is to maintain and replace heat pumps as they malfunction. A budget should be created for the long term to replace a few units every year.	7	5	10	4	1	27	$15,000
SHBE82	High School	Building Envelope Lighting	The perimeter lighting and parking lot lighting are HID fixtures. HID stands for "High Intensity Discharge". The existing light fixtures are relatively efficient and in good order, but will most likely start to burn out in the next few years.	As the existing perimeter and parking lot lights start to burn out, they should be replaced with LED fixtures rather than have the bulb replaced. The LED fixtures will pay back their cost with energy savings in a short time and will last much longer than the existing HID lights.	6	5	10	4	2	27	$20,000
SEFS18	Elementary	Flooring	Several types of flooring exist at this building. The hallways and restrooms are heavy tile, the gym is wood, and the classrooms are a mix of vinyl tile and carpeting. The vast majority of the flooring throughout the building is original.	The wood gym floor has never been resurfaced and is in need of maintenance	7	8	8	4	0	27	$20,000
SMSF75	Middle School	Sports Fields	The football field bleachers functioned as the main bleachers for varsity football and track events before the new high school facilities were built and are quite old.	A bleacher safety report should be generated to determine if the bleachers are up to code and if there are any commonents that need to be replaced due to safety concerns.	8	5	13	0	0	26	$2,500

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SMEI50	Middle School	Electrical infrastructure	The main electrical gear is newer, but there is a variety of old and new electrical equipment throughout the facility. The old electrical panels are full, but there are still replacement parts available. The new panels have room for expansion.	There are no obvious needs at this time for the electrical infrastructure at the middle school. To help identify any "hot spots", an audit with an infrared camera should be done.	6	5	10	5	0	26	$2,500
SHAU80	High School	Auditorium	The auditorium theatrical lighting and seating is newer than most facilities and in good condition.	The lighting over the seating areas are incandescent and are difficult to replace. Installing LED lights that are dimmable would require less frequent replacement and would save energy. These lights should be changed in mass when a few of them burn out.	5	5	8	5	3	26	$1,000
SHAH79	High School	Air Handling Equipment	The high school has a number of large air handlers that are located in mechanical rooms around the facility. There are energy recovery devices installed as part of the air handling system as well as sound attenuators.	The air handling units are in good condition for the most part. The energy recovery devices have had a few issues and two units were inoperable at the time of the audit. It is suggested that the energy recovery devices be repaired.	9	5	6	4	2	26	$10,000
SHAU81	High School	Auditorium	The auditorium theatrical lighting and seating is newer than most facilities and in good condition.	The screen that can be projected on to for slides shows and presentations is malfunctioning. The screen should be replaced.	9	5	6	5	0	25	$2,500
SMBF42	Middle School	Boiler	Three newer Themal Solutions boilers are in place at this facility. The boiler capacity in place should provide plenty of redundacy so that if one boiler fails, the other two can carry the load.	The boilers should be tuned up to ensure that they are running at peak efficiency and componenets that commonly cause failure are replaced.	6	5	6	5	3	25	$1,500
SMFS56	Middle School	Flooring	The hallways floors are mostly terrazzo with vinyl tile in the classrooms. The flooring varies in age from relatively new to over 70 years old.	Some of the classroom tile is asbestos. This doesn't present any immediate danger when it's in good condition, but if it starts to deteriorate, it should be removed immediately.	7	5	12	0	0	24	$150,000
SMST71	Middle School	Sanitary	Sanitary piping ranges in greatly in age like much of the rest of the infrastructure. The majoirty of the piping is cast iron.	The oldest piping may become problematic due to its age and should be on a long term plan for replacement.	7	7	10	0	0	24	$200,000
SMFS60	Middle School	Flooring	The hallways floors are mostly terrazzo with vinyl tile in the classrooms. The flooring varies in age from relatively new to over 70 years old.	The terrazzo flooring in the hallway is cracked is several locations.	7	8	9	0	0	24	$50,000
SMIL61	Middle School	Interior Lighting	The majority of the school is lit by fluorescent lighting fixutres with 32 watt T-8 bulbs and electronic ballasts.	The current fixtures are adequate, but when the bulbs and/or ballasts start to fail in large numbers, the fixtures should be upgraded to LED fixtures.	7	5	8	1	3	24	$90,000
SEWI35	Elementary	Windows	The windows are double pane with wooden frames and are operable.	Damaged screens should be replaced.	7	5	7	5	0	24	$500

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SHKE101	High School	Kitchen Equipment	The high school cooks meals for the entire district, and so has a full kitchen as well as refridgerated storage.	There are no urgent needs for kitchen equipment at this time, but equipment such as the dishwasher, refridgeration, and the cooking equipment should all be put on a long term schedule for replacement.	4	5	10	3	1	23	$50,000
SEOB25	Elementary	Out Buildings	There is a maintenance garage next to the elementary school. This garage is a stoage place and a maintenance area for mowers and outdoor equipment.	The maintenance garage is functional but should be tied in with any improvements to lighting that are carried out at the elementary building	7	5	8	3	0	23	$5,000
SEAH1	Elementary	Air Handling Equipment	The air handling equipment at the elementary is mostly constant volume air handlers with booster coils at the individual rooms. The office has a central air handler that serves variable air volume (VAV) boxes that can adjust the amount of air based on heating or cooling needs.	The air handling fan motors and coils are in decent condition for their age. Regular maintenance should continue to be done. A cleaning of the coils could be performed to increase the efficiency of heat transfer.	6	5	8	3	1	23	$10,000
SHFA94	High School	Fire Alarm System	The fire alarms system is relatively new and fire alarms are serviced and tested regularily.	Continue to service and test the fire alarm system on a regular frequency	5	0	12	5	0	22	$5,000
SEPU17	Elementary	Heating	Hot water heating is the main source throughout the building. Many of the valves in this system have been replaced. The hot water coils, booster coils, perimeter and spot heating devices are all original.	Replace any valves that are original to the building	7	5	10	0	0	22	$10,000
SMHP59	Middle School	HVAC Piping	The hot water piping varies widely in age. Some parts of the school have relatively new piping and some areas have old, original piping	There are no immediate concerns for the HVAC piping, but water chemistry needs to be monitored to be sure the pipes stay in good condition.	7	5	10	0	0	22	$2,500
SECE5	Elementary	Ceilings	The ceiling tiles at the elementary appear to be original with replacements being made as necessary. Some of the tiles were stained from roofing leaks.	The lack of mechanical cooling throughout all of the sections of the building except the office has meant that temperatures and humidity levels in the summer can be quite high. The exposure of the ceiling tiles to heat and humidity has caused them to sag and degrade. Replacement of the ceiling tiles should be included in long term planning.	8	5	9	0	0	22	$10,000
SHBF81	High School	Boiler	Since there is a geothermal heating system in use at the high school, the boilers here function as supplimental heat. The two boilers in place are high efficiency condensing boilers that should work well to suppliment the geothermal heating.	There are no large issues with the boiler plant at this time. The boilers should be tuned at least every other year and have the critical components such as ignitors and flames sensors replaced.	6	3	8	5	0	22	$2,000
SMBE43	Middle School	Building Envelope Lighting	Mostly high pressure sodium fixtures with a few metal halides. The fixtures appear to be reaching the end of their useful lifes. Some of the fixtures were on during the daytime when the audit was done.	The malfuntioning lights that stay on during the day should be replaced with LED fixtures. Spending money to repair the old fixtures wouldn't be a good value.	5	5	8	2	2	22	$15,000
SHSS111	High School	Security Systems	The main entrance has a camera and visitors must be buzzed in. The staff have fobs that they use to access the exterior doors. For student entry, the doors are left unlocked in the morning when students are arriving.	The bus drop off and configuration of the building doesn't currently have all of the staff and students entering the building at a secure entry. If there are major changes made to the facility in the future, including a secure entry should be considered.	5	0	13	3	0	21	$25,000

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SMID60	Middle School	Interior Doors	The interior doors are mainly high quality commercial wood doors.	Some of the doors are quite old and are showing their age. Long term planning should include the replacement of the oldest doors and any that are damaged.	6	5	10	0	0	21	$10,000
SEAU2	Elementary	Auditorium	The elementary auditorium is a room intended for much smaller groups than the auditoriums such as most middle or high schools have. The space has a recessed floor for a stadium effect.	There are no immediate needs for the auditorium. The changes in floor height are a potential safety hazard and railings should be installed.	5	3	10	3	0	21	$5,000
SHCV97	High School	HVAC Controls	The digital controls at the high school are from Johnson Controls, but are serviced by Ahern.	The most urget need for the hvac controls is to continue to upgrade and integrate the controls as software and hardware are replaced through the years.	5	0	10	5	1	21	$2,500
SHEC91	High School	Exterior caulking and sealants	The exterior caulking and sealants around doors, windows and at expansion joints were in good condition at the time of the audit.	Even though the sealants are in good condition at this point, they will need to be evaluated on an annual basis. If there is any shrinkage, cracking, or peeling, the caulking will need to be removed and replaced.	6	0	9	5	0	20	$1,000
SECL7	Elementary	Classroom Cabinetry	Storage space in the classsrooms and in miscellaneous areas is plentiful, but the majority of the cabinets are original to the building and have seen extensive use.	Cabinetry in the classrooms is well maintained, but it's wearing out. Long term planning for facility upgrades should include replacement of the cabinetry.	7	5	8	0	0	20	$100,000
SMCT48	Middle School	Classroom Technology	The desktops, laptops, projectors, and other IT equipment are all updated on a regular basis and are in good working order	Classroom IT equipment is in good working order, but needs to remain on a regular replacement cycle	5	3	8	3	1	20	$75,000
SHCT87	High School	Classroom Technology	The desktops, laptops, projectors, and other IT equipment are all updated on a regular basis and are in good working order	Classroom IT equipment is in good working order, but needs to remain on a regular replacement cycle	5	3	8	3	1	20	$75,000
SHED92	High School	Exterior Doors	High quality commercial grade metal doors are in place at all of the entrances from the outside of the building.	There are no urgent needs at this time, but security is a concern when discussing the building entrances.	4	0	12	3	0	19	
SECT8	Elementary	Classroom Tables	The classroom tables are high quality units, but some are original and are beginning to show their age.	The tables in the classrooms are adequate, but should be scheduled for replacement as part of long term planning.	6	5	8	0	0	19	
SEEC12	Elementary	Exterior caulking and sealants	The expansion joints, window edges, and other areas appear to be filled with high grade commercial sealants	Caulking and sealants look to be in good condition, but should be inspected and maintained annually	5	0	7	5	2	19	
SMOB65	Middle School	Out Buildings	The only outbuilding at the middle school is the pressbox for the football field.	No urgent needs at this time.	8	5	6	0	0	19	
SMLC63	Middle School	Lockers	The lockers in the hallways were estimated to be 50 years old	Even though the lockers are 50 years old, there were no immediate needs. The lockers will need to be replaced at some point in the future due to years of use and so, should be on a long term plan for replacement.	8	5	6	0	0	19	
SELC23	Elementary	Lockers	Cubbies and coat racks are used in place of lockers at this building. The coat racks have a metal ledge that supports plastic hooks, used for hanging coats.	The plastic hooks that are used to hang coats break easily and are difficult to replace. If metal hooks are compatable with this system, they should be installed to bolster the durability of this system.	7	3	6	3	0	19	

Spooner School

Project Recommendation Priority Order

Scoring System

Poor=10 Ave=5 Good=0	0%=10 25%=5 50%=0	High=15 Med=8 Low=0	<$10k=5 $50k=3 >$100k=0	<2 Yr=5 5 Yr=3 >10 Yr =0	>30 points = Fix immediately >25 points = Fix in next year >20 points = Fix in next 2 years

Measure ID#	School	Inspection Group	General Description	Description of Most Urgent Needs	Functional Condition	Predicted Useful Life Remaining	Environmental Heath & Safety Concern	Project Cost	Return on Investment	Total Points	Cost estimate to address urgent needs
SMDW49	Middle School	Domestic Water	The water heaters at this facility are newer with no major issues.	No urgent needs at this time.	5	3	6	4	1	19	
SHEI89	High School	Electrical infrastructure	The electrical infrastructure is still relatively new and was designed for the inclusion of electronics and newer technologies.	The electrical infrastructure is in good condition at this time, but installation of a generator is something that would have benefits to the district. If there is a power outage without a generator in place, some critical components for security, lighting, and technology will not operate for very long. Installing a generator will enable the facility to continue operation at some limited capacity and make sure any critical systems are functional.	5	0	13	0	0	18	
SEHP19	Elementary	HVAC Piping	The piping for the heating system at the elementary is composed of both copper and cast iron. Almost all of the piping was installed at the time of original construction	There were no immediate needs at the time of the audit.	5	5	8	0	0	18	
SMCV58	Middle School	HVAC Controls	The HVAC controllers are Trane Tracer units with all digital sensors and actuators. The controls are services by Ahern	The controls are in good condition, but require regular maintenance.	5	0	8	5	0	18	
SMCL46	Middle School	Classroom Cabinetry	There isn't much for true cabinetry in this school, but there are shelves. The shelves have seen years of use, but are in fairly good condition for their age.	No urgent needs at this time.	7	5	5	0	0	17	
SMCT47	Middle School	Classroom Tables	The classroom tables and chairs have seen many years of use in most cases, but are in good conidtion for their age.	No urgent needs at this time.	7	5	5	0	0	17	
SMAH40	Middle School	Air Handling Equipment	The middle school facility has everything from newer rooftop units to old air handlers. All of the units were retrofit with digital controls and new actuators recently.	Some of the components of the air handling system are quite old. Continued maintenance and inspections need to be carried out to identify any issues.	6	3	7	0	0	16	
SECT9	Elementary	Classroom Technology	The desktops, laptops, projectors, and other IT equipment are all updated on a regular basis and are in good working order	Classroom IT equipment is in good working order, but needs to remain on a regular replacement cycle	5	3	5	2	0	15	
SMFA55	Middle School	Fire Alarm System	The fire alarm system is a simplex system and has been tested regularily to identify any operational concerns.	There are no urgent needs associated with the fire alarm system that were identified at the time of the audit.	4	0	10	0	0	14	
SHSH115	High School	Steps	The high school is a single story building for the most part. There are a few mechanical rooms and other miscellaneous spaces that need to be accessed via stairs or ladders.	All stairs and ladders appeared to be in good condition.	4	0	10	0	0	14	
SHRS109	High School	Roofing	The high school has a flat roof of several different sections. The roof itself is ballasted rubber.	There are no urgent needs at this time, but the roof should be inspected regularily to make sure there are no issues that need to be addressed.	5	0	8	0	1	14	
SMKE62	Middle School	Kitchen Equipment	There is warming and dishwashing equipment at this facility, but no cooking equipment.	All of the equipment is in good working order at this time, but should be put on a long term plan for replacement for planning purposes.	4	2	5	3	0	14	

Spooner School

Project Recommendation Priority Order

Scoring System

Poor=10 Ave=5 Good=0	0%=10 25%=5 50%=0	High=15 Med=8 Low=0	<$10k=5 $50k=3 >$100k=0	<2 Yr=5 5 Yr=3 >10 Yr =0	>30 points = Fix immediately >25 points = Fix in next year >20 points = Fix in next 2 years

Measure ID#	School	Inspection Group	General Description	Description of Most Urgent Needs	Functional Condition	Predicted Useful Life Remaining	Environmental Heath & Safety Concern	Project Cost	Return on Investment	Total Points	Cost estimate to address urgent needs
SEEI11	Elementary	Electrical infrastructure	Most of the electrical panels and the electrical service entrance for the building have capacity for expansion and are original to the building.	There are no urgent needs in the electrical infrastructure at the elementary school.	5	0	8	0	0	13	
SHCE83	High School	Ceilings	A drop ceiling is in place in the hallways and many of the classrooms. The grid and tiles are in good shape with only a few tiles being replaced due to leaks in the hvac equipment.	No urgent needs at this time. Continue to replace tiles as they are damaged.	4	0	6	3	0	13	
SMOE64	Middle School	Office Equipment	As with all schools, there are several copiers, scanners, and other office equipment. Most of the equipment is newer.	There were no urgent needs for office equipment at the time of the order, but the office equipment needs to be put on the long term plan for replacement.	3	0	5	4	1	13	
SEKE22	Elementary	Kitchen Equipment	There is no preparation of food done in the kitchen area at the elementary. Only warming equipment is used.	There are no immediate needs for kitchen equipment replacement	4	0	8	0	0	12	
SHSA113	High School	Shop Areas	The shop areas are set up in spaces that were designed for the purpose and with relatively modern equipment.	There are no urgent needs at this time.	4	0	8	0	0	12	
SHWI116	High School	Windows	The windows at the high school are double pane with aluminum frames. The windows can be opened to allow ventilation from the outside and are operable.	The aluminum frames of the windows transfer heat to the outside and can be cold in the winter. It's a complicated process to try to insulate this style of window after they are installed. If windows are scheduled for replacement, they should have insulated frames in the future.	4	0	7	0	1	12	
SMCE44	Middle School	Ceilings	The ceiling tiles and surfaces throughout the school were in good condition.	No urgent needs at this time.	5	2	5	0	0	12	
SMPG68	Middle School	Playground	The playground equipment is newer and in good condition here	No urgent needs at this time.	3	0	8	0	0	11	
SHHP98	High School	HVAC Piping	The piping at the high school for HVAC is quite new	There are no urgent needs at this time.	3	0	8	0	0	11	
SHOB104	High School	Out Buildings	There is an equipment storage shed and a consession stand on the high school property	The outbuildings are newer and are in relatively good condition with the exception of some minor issues.	5	0	6	0	0	11	
SHRE108	High School	Restrooms	The high school restrooms have tile floors, newer automatic fixtures, and plastic stall partitions.	Restrooms are in good condition and are well maintained. No urgent needs.	5	0	6	0	0	11	
SMSW73	Middle School	Servers	The data equipment at the middle school is adequate at this time.	There is a long term upgrade plan in place district wide for IT equipment. Barring any equipment failures, the plan should be followed.	5	0	5	0	1	11	
SHSW112	High School	Servers	The data equipment at the high school is adequate at this time.	There is a long term upgrade plan in place district wide for IT equipment. Barring any equipment failures, the plan should be followed.	5	0	5	0	1	11	
SHEW93	High School	Exterior Walls	The exterior walls are brick and appear to be in good condition with no spalling or cracking.	No urgent needs at this time.	3	0	7	0	0	10	
SHID99	High School	Interior Doors	The interior doors at the high school are high quality, commerical grade wood doors with hardware of equal grade.	There are no urgent needs at this time.	3	0	7	0	0	10	

Spooner School

Project Recommendation Priority Order

Scoring System					
Poor=10 Ave=5 Good=0	0%=10 25%=5 50%=0	High=15 Med=8 Low=0	<$10k=5 $50k=3 >$100k=0	<2 Yr=5 5 Yr=3 >10 Yr =0	>30 points = Fix immediately >25 points = Fix in next year >20 points = Fix in next 2 years

Measure ID#	School	Inspection Group	General Description	Description of Most Urgent Needs	Functional Condition	Predicted Useful Life Remaining	Environmental Heath & Safety Concern	Project Cost	Return on Investment	Total Points	Cost estimate to address urgent needs
SEEW14	Elementary	Exterior Walls	The facility has brick walls that are in good condition. There are no visable issues with spallling or tuck pointing.	There are no immediate needs for the wall structures, but maintenance inspection should be scheduled annually.	5	0	5	0	0	10	
SHLC102	High School	Lockers	Lockers are newer and meet the needs of the students.	No issues were noted with the lockers	5	0	5	0	0	10	
SHCT86	High School	Classroom Tables	The tables at the high school is relatively new and in good condition.	No urgent needs at this time.	4	0	5	0	0	9	
SEID20	Elementary	Interior Doors	The interior doors are commercial grade wooden doors with high quality knobs and hardware.	There are no immediate needs for the interior doors	5	0	4	0	0	9	
SEST31	Elementary	Sanitary	The facility is on city sewer and has not had any major issues	No issues	5	0	4	0	0	9	
SEOE24	Elementary	Office Equipment	Standard office equipment such as copy machines and printers exist at the elementary school.	Most of the office equipment is currently functioning well, but they should be put on a long term schedule for replacement due to obsolescence.	3	0	5	0	0	8	
SHST110	High School	Sanitary	The sanitary piping is all newer	There are no urgent needs at this time.	3	0	5	0	0	8	
SHCL85	High School	Classroom Cabinetry	The cabinetry at the high school is relatively new and in good condition.	No urgent needs at this time.	2	0	4	0	0	6	
SHOE103	High School	Office Equipment	According to maintenance staff, the office equipment is rented.	There were no urgent needs at this time.	3	0	0	0	0	3	
SMAU41	Middle	Auditorium	There is no auditorium at this school	Not applicable	0	0	0	0	0	0	
SHCC84	High School	Chiller	Cooling at the high school is accomplished via the geothermal system, so no chiller is needed.	Not applicable	0	0	0	0	0	0	
SHEL90	High School	Elevators	None	None	0	0	0	0	0	0	
SHPG107	High School	Playground	Since this is a high school, there really isn't an area that would be considered a playground.	Not applicable	0	0	0	0	0	0	
SECV18	Elementary	HVAC Controls	The HVAC controls in this building are completely new and replace the original pneumatic controls with digital.	There are no immediate needs for the digital controls						0	
SMSA74	Middle School	Shop Areas	There is a wood shop at the middle school. It is set up with the standard school shop equipment.							0	

Summary

In summary, the Spooner Area School District has been well maintained; however, there are major facility needs primarily due to an aging infrastructure and increased safety and security standards and needs.

As part of this report, CESA 10 analyzed the safety, security, technology, learning spaces, environmental health and safety, ADA compliance, building maintenance, and capital improvements needed at the Spooner Area School District. After a detailed study, CESA 10 found $1.5 million in immediate needs at the Spooner Area School District, with roughly $1 million per year for the next two years in additional needs. This estimate includes the cost of only demolishing the middle school gym. Should the District decide to do something else with the space, CESA 10 believes costs will rise by an additional $2 million or more.

Cost	Year
$1,500,000 (demolish middle school gym) or $3,500,000 (do something with gym space)	2017
$1,000,000	2018
$1,000,000	2019

The most efficient path to a safer and more effective learning environment is to prioritize projects that need to occur and determine both a short and long-term facility plan that aligns with the goals and budget of the District. Should the District choose to move forward with a referendum, CESA 10 can aid in the development of a strategic communications plan that educates the community on the District's critical safety and infrastructure needs.

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Appendix

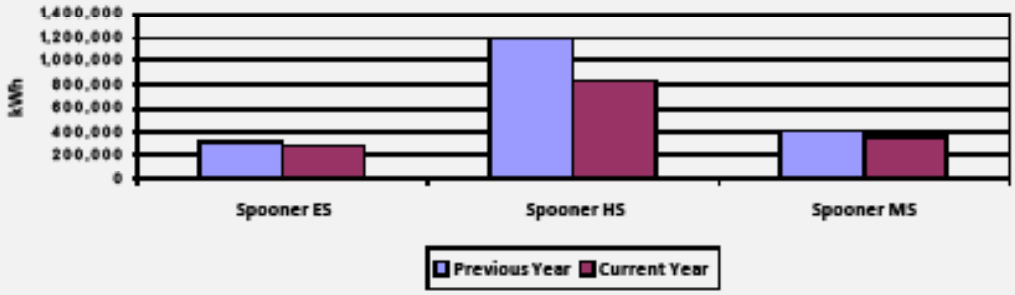
C·E·S·A 10
Facilities Management Services

Energy Management Update
Fourth Quarter 2015-2016

Spooner School District

District - Energy Consumption

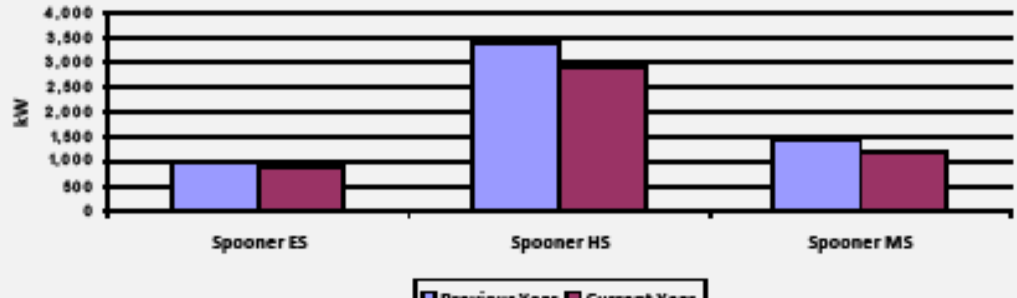
Electricity* Use - By Building
Oct - May



District Year to Date**
kWh Savings
$27,010
23.4% reduction
**YTD begins June 1, 2015

*Electricity does not include demand (kW) or associated savings

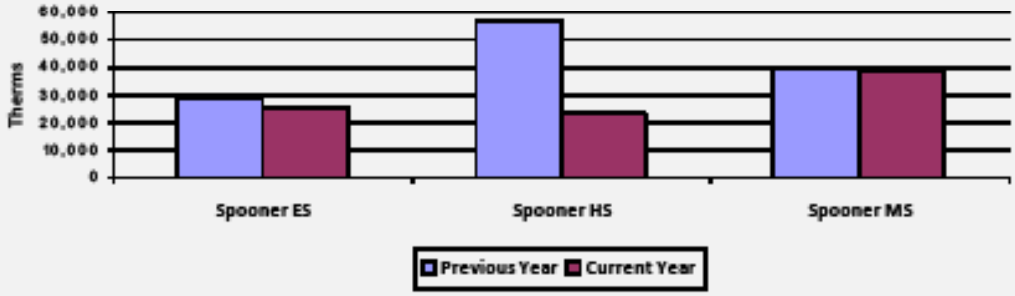
Peak Monthly^ Demand - By Building
Oct - May



District Year to Date**
kW Savings (on-peak)
$6,480
kW Savings (customer)
$1,170
**YTD begins June 1, 2015

^Only on-peak demand graphed above; on-peak and customer (ratchet) demand $ savings provided

Natural Gas~ Use - By Building
Oct - May



District Year to Date**
therms Savings
$21,326
30.7% reduction
**YTD begins June 1, 2015

~Used HDD to normalize therms for natural gas usage in current year to 30 year average

TOTAL ENERGY SAVINGS
June - May = $55,985.79

Energy Management Update

Fourth Quarter 2015-2016

C·E·S·A 10
Facilities Management Services

Completed Energy Projects

Turned equipment off over holiday breaks
Gave Energy 101 presentation to all staff
Identified boiler room piping deficiencies and recommended corrective action
Made many setpoint and schedule adjustments to HS and MS controls programs
Made program changes on controls systems at all schools to allow better adjustability
Reprogramed MS controller on Commons air handler so unit turns off at night

Future Energy Projects

Install new control system at Elem school
Continue to optimize control systems at all schools
Install high efficiency boiler at Elem School

EMU is a quarterly publication of CESA 10's
Energy Management Program.

Questions, comments and suggestions can be directed to
Todd Wanous, CESA 10 Energy Manager
715.720.2143 or twanous@cesa10.k12.wi.us

Energy Management Update

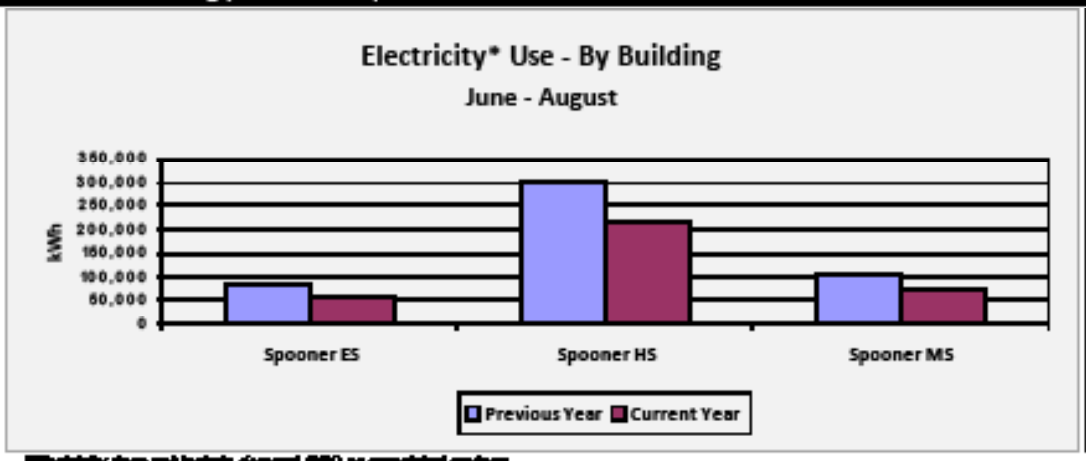
First Quarter 2016-2017

C·E·S·A 10

Facilities Management Services

Spooner School District

District - Energy Consumption



District Year to Date**

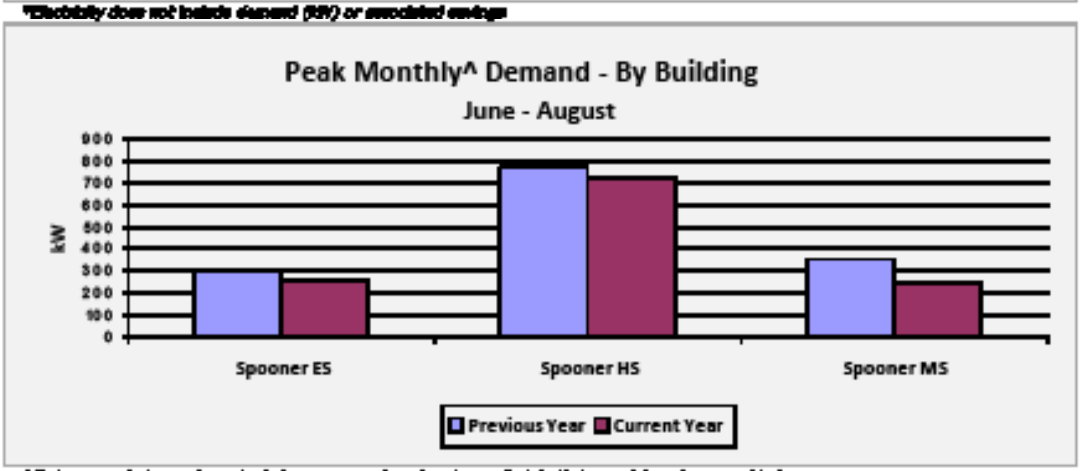
kWh Savings

$9,358

29.3% reduction

**YTD begins June 1, 2016

*Electricity does not include demand (kW) or associated savings



District Year to Date**

kW Savings (on-peak)

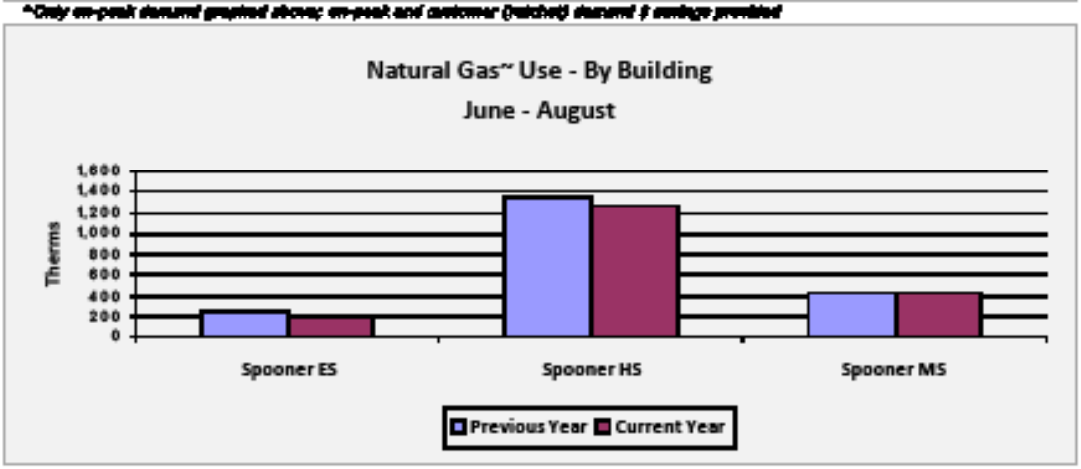
$1,668

kW Savings (customer)

$241

**YTD begins June 1, 2016

^Only on-peak demand graphed above; on-peak and customer (ratchet) demand $ savings provided



District Year to Date**

therms Savings

$20

5.4% reduction

**YTD begins June 1, 2016

~Used HDD to normalize therms for natural gas usage in current year to 30 year average

TOTAL ENERGY SAVINGS

June - August = $11,287.49

Energy Management Update

First Quarter 2016-2017

C·E·S·A 10

Facilities Management Services

Completed Energy Projects

Adjusted all schedules and setpoints for summer operation at all schools
Turned equipment off over holiday breaks
Gave Energy 201 presentation to support staff
Made many setpoint and schedule adjustments to HS and MS controls programs
Made program changes on controls systems at all schools to allow better adjustability
Installed new control system at Elem school
Install high efficiency boiler at Elem School

Future Energy Projects

Continue to optimize control systems at all schools
Continue providing quarterly energy reports and energy savings posters

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Energy Management Program.

Questions, comments and suggestions can be directed to
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