

Spotlight

A publication of Spotts, Stevens and McCoy



SPOTTS | STEVENS | MCCOY

AUGUST 2021

Our work touches everyday life.

From the water you drink to the air you breathe to the buildings and communities where you live, work and play.

Spotts, Stevens and McCoy is a family-owned regional engineering, environmental, and surveying firm serving local and global clients. We engineer solutions for a better world. Our work touches everyday life; from the water you drink, to the air you breathe, to the buildings and communities where you live, work and play.

EXPERTISE

- Building Engineering
- Site and Civil Engineering
- Survey, Data Capture and Modeling
- Water and Wastewater Engineering
- Construction Phase Services

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"EDUCATION IS THE MOST POWERFUL WEAPON YOU CAN USE TO CHANGE THE WORLD."

Nelson Mandela

Making the World a Better Place

It's the time of year again where children, parents, and teachers are engulfed in *Back to School*. This time of year is reserved for that special feeling of entering a new classroom, opening new school supplies, and having that "ready to learn" feeling. But at SSM we believe that learning and education are tools that not only transcend this time of year, but also transcend the school-aged years.

After all, Nelson Mandela wasn't wrong when he said, "Education is the most powerful weapon you can use to change the world." It's the powerful weapon our team uses everyday.

It is our refined expertise and knowledge that prove the value in learning that we hold. It is our determination to finding solutions for even the most difficult challenges and our passion for finding answers for all unanswered questions. These are what give us the confidence to say we make the world a better place.

It's our willingness and our enthusiasm to step up to a challenge, our commitment to asking the right questions, and our zeal for learning about each and every client's needs. These are the arsenal with which we change the world.

Back to school is a special time. It reminds us of why we do the things that we do. Our work touches everyday life; from the water you drink, to the air you breathe, to the buildings and communities where you live, work and play.

We believe in making the world a better place today and for future generations by helping clients plan, design, build, operate, and protect their infrastructure, assets, and resources. We believe in constantly growing, in constantly learning so that we can continue to make the world a better place. Why? Because we believe in giving future generations the opportunity to change the world.

Focus on the Campus

SSM answers the multi-faceted needs of educational campuses with a single source for engineering and consulting services. We understand what institutions of learning need, and we deliver cost-effective, sustainable services.

Investigating mold and indoor air quality issues. Engineering new building systems. Renovating old structures for new life. We collaborate with the school's facility team to balance the needs of the administrators, faculty, and students, and guide the team toward the project goals with responsible fiscal and environmental stewardship. The specifics vary, but one course is always part of the program: ensuring a safe and healthy environment for students and staff to learn, live, and work.

EXPERTISE

- Site Engineering and Infrastructure
- Stormwater Management
- Architectural Engineering
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Construction Phase Services
- Survey, Data Capture
- Geographic Information Systems
- Indoor Environmental Quality
- Regulatory Compliance
- Water Planning, Engineering, Design
- Wastewater Planning, Engineering, Design
- Energy and Sustainability Services
- Financial and Grant Assistance

Higher Education



LINCOLN UNIVERSITY

Student Union and Services Building

SSM provided structural engineering and construction phase services for an approximately 15,000 square foot addition to the Student Union and Services Building at Lincoln University. The project also included significant upgrades to the existing building area. The existing two story concrete framed building was expanded on three sides by the addition of a two story steel framed structure. The existing structure was analyzed and reinforced as required for new loads, including new rooftop mechanical equipment. The structural design included design of foundations, ground floor slab, retaining walls, elevated floor slabs, steel framing, and roof deck.

MARYMOUNT UNIVERSITY

Berg Hall and Rowley Hall HVAC Upgrade

Berg Hall and Rowley Hall are both dormitory buildings located at Marymount University in Arlington, VA. The existing dorm rooms in each building were served by fan coil units supplied by a two-pipe heating and cooling system. The scope of the project was to replace the existing fan coil units, greater than 270 individual units, and upgrade the existing two-pipe system to a four-pipe system in each building.

Work in Berg Hall also included replacement of the existing air-cooled chiller with two new 35-ton water-cooled heat recovery chillers, and the addition of a dry cooler. The existing boilers were also replaced with a new 600 MBH boiler, and new pumps were provided for the heating system as well as the cooling system.

SSM performed a detailed field survey of each building. The existing fan coil units were located in extremely tight spaces above the ceiling. Converting the system from a two-pipe system to a four-pipe system required detailed coordination with existing architecture and other utilities. SSM conducted the field survey over the Winter break while students were not on campus, and then quickly completed the design to meet the aggressive permit submission deadline.



MANSFIELD UNIVERSITY

Alumni Hall Third Floor Lecture Hall

Study and preliminary design for the conversion of a 2400 square foot lecture hall into three separate functional spaces by the installation of moveable partitions. HVAC and Electrical Systems needed to be reconfigured to function as three individual zones. SSM performed a survey existing HVAC and Electrical Systems, determined how to modify these system to support the new Architectural layout for the space, and estimated the cost of construction for the renovations. SSM also evaluated the existing structure to determine if it could support the proposed moveable partitions.



Kindergarten-12th Grade



UPPER MERION AREA SCHOOL DISTRICT

- **Performed asbestos survey and assessment** and delivered AHERA Management Plans. Conduct 6-month asbestos surveillance inspections. Prepared specifications, reviewed submittals and plans, conducted air monitoring and contractor oversight.
- **Environmental services to assist with a preliminary Clean Fill Determination** for soil generated from the construction site of the District's new high school. The review included Site Environmental Due Diligence, Soil Clean Fill Sampling and Analysis and Evaluation.

WESTTOWN SCHOOL

- **Steam System Study** | Evaluate existing central steam plant and develop one or more alternate scenarios for providing heat to the campus.

WYOMISSING AREA SCHOOL DISTRICT

- **HVAC, plumbing, fire protection and electrical systems design** for an Elementary Center project involving the addition of 12 new classrooms, a new gymnasium, a new administration wing, and renovations to the existing school
- **Construction Phase Services** including review of applications for payment, review of shop drawings, site observation, and resolution of construction issues related to mechanical, electrical, and plumbing work.
- **Construction phase activities related to protecting indoor air quality** in an occupied school building during construction activities.
- **HVAC, plumbing, fire protection, and electrical systems design** for a new natatorium.
- **Site Engineering** services including administration of Borough review process on behalf of the District, grading plan, stormwater management plan, and landscaping design for a new field house.
- **Sinkhole investigation and Repair**

Supporting School Leaders

This month we excitedly welcomed educators to SSM for the Inside Berks Business program. Together we enjoyed a day of all things STEM/STEAM. We're so proud to be a part of supporting teachers in fostering STEM-based learning and future careers.

Thank you to Berks Business Education Coalition (BBEC) and Berks County Intermediate Unit (BCIU) for jointly sponsoring this summer program.



Teaching Current Leaders

This month team members from our Environmental Division attended and presented at the PA Rural Water Association Annual Conference.

SSM expert AI Guiseppe presented a training session on Tools and Technology for Source Water Protection.

SSM expert Darryl Jenkins presented a training session on Treating Water or



Teaching Future Leaders

Philadelphia School District | Energy Audit Education

SSM's Energy and Sustainability Services division delivered energy engineering into the hands of more than 250 Philadelphia School District students. This experiential learning was provided first as a standalone curriculum and later within an ESCO project team.

The curriculum begins with teacher engagement and input, familiarizing students to the ESCO work happening in their school.

Then, it progresses to a student tour of the building's Mechanical Room. Students measured energy use (light levels, carbon dioxide levels, temperature, humidity and more). These were measured by the students using a variety of meters and data collection devices that are tools used in the daily work of the Mechanical Engineers who conduct the program.

Back in the classroom they use the data to calculate an energy use baseline, identify potential improvements and calculate the associated energy savings with those improvements.

The program culminates in student presentations to teachers, principals, and district administrators.

From start to finish the students grow STEM knowledge, math, writing, and science skills as well as team building, communications, and public speaking. Plus- it's a great first step in learning about energy use and consumption and ways we can do a better job of making the world a great place today and for generations to come.

Our team has delivered this program in multiple schools in the Philadelphia School District including:

- Carver Middle School
- Lankenau Environmental Science Magnet High School
- Overbrook Educational Center
- Tanner Duckrey School
- Walter B. Saul High School
- Northeast High School

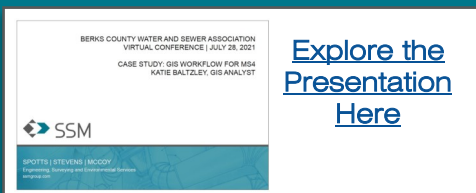
To find out more about our energy curriculum, reach out to our Energy Team by contacting Paul Spiegel, Director at paul.spiegel@ssmgroup.com



Learn Something New

Here's a great resource by our own GIS Analyst, Katie Baltzley.

Learn about optimizing asset management through GIS through a case study of GIS Workflow for MS4.



Opportunities at SSM - join the team!

Visit ssmgroup.com for more information about these opportunities:

Survey Technician to operate all field surveying instruments including robotic survey instruments, GPS surveying instruments, and auto-levels.

Site/Civil Engineering Designer with responsibilities for preparation of base plans; design and layout of site improvements including roadway geometry, grading, utilities, construction details, profiles, and E&S plans.

Construction Project Representative with 4-10 years of experience in the water, sanitary sewer, and stormwater field, including the inspections of mains, pump stations, treatment plants and paving projects.

Senior Water/Wastewater Design Engineer with eight or more years of water/wastewater experience to support our work on projects such as municipal treatment facilities, distribution systems, collection systems, sanitary and storm sewers.

Mechanical Engineer with at least seven years of experience in the design of HVAC, process piping and plumbing systems in industrial, commercial, and R&D type facilities.

Systems Administrator with 8 - 10 years' experience in an IT role, and a minimum of 5 years systems administration experience to join our Information Technology department.

Staff News

[Scott T. Miller, RLA | Manager, Land Development Services](#)



SSM welcomes Scott T. Miller, RLA to the Civil Engineering Division as Manager, Land Development Services. In this role he is responsible for managing all phases of land planning process including, landscape architecture and site design from conceptual design and master planning through production of construction documents and presentations to governmental review agencies for industrial, commercial, institutional and public sector clients.

Miller has over 35 years of land planning and landscape architecture experience including zoning and expert witness expertise, and management of land development projects including site layout, storm water management, grading, landscaping, erosion and sediment control, NPDES permitting, site construction inspection, feasibility studies, cost estimates, and project approval coordination.

[Seth Nace, PE, LC, LEED AP | Manager, Electrical Engineering](#)

Seth Nace has transitioned into the role of Department Manager. In this role he will be responsible for daily operations of the department and execution of the department's strategic assignments. His experience includes design of high, medium, and low voltage power distribution systems and substations, motor control, lighting and lighting controls, and auxiliary systems including photovoltaic, emergency/ standby power generation systems, uninterruptible power systems (UPS), fire alarm, security and access control, signaling and suppression systems, and telecommunication systems for various facilities.

[Emerick Martin, PE | Technical Manager, Electrical Engineering](#)

Emerick Martin has transitioned into the role of Technical Manager. In this new role, he will be responsible for managing the technical aspects of the department's business and ensuring the technical proficiency, adherence to technical standards, and performing quality control for all department project deliverables. Martin has more than 30 years of electrical engineering and construction experience with responsibilities for the design of high, medium, and low voltage power distribution systems and substations; motor control, lighting, emergency power generation, UPS, photovoltaic, fire alarm, security, sound, and CCTV systems for various facilities.

[Matthew Smith | Senior Survey Crew Chief](#)

Matthew Smith has been promoted to the role of Sr. Survey Crew Chief. Smith is responsible for conducting field topographical and property surveys, engineering surveys, records research, preparing plots, calculations and legal descriptions for properties; establishing field control; construction stakeout; and monumentation.

[Jeff Thoms, PE | Technical Manager, Structural Engineering](#)

Jef Thoms has transitioned into the role of Technical Manager. In this new role, he will be responsible for managing the technical aspects of the department's business and ensuring the technical proficiency, adherence to technical standards, and performing quality control for all department project deliverables. Thoms has more than 20 years of experience in structural engineering and design. Projects include multi-tenant housing, industrial, educational and institutional structures. From elementary schools and middle schools to waste water treatment plants, he has experience in project management, detailed engineering design, and construction administration.