



Hooper
CORPORATION
Spring 2018 Edition

OnSite



From the President



BY DAVE ORR
HOOPER PRESIDENT



**OUR PHILOSOPHY TOWARD SAFETY:
“First, Last, and Always!”**

Flying into Madison recently, I was struck by our impressive lakes and the visually stunning Wisconsin State Capitol. The view revealed the natural beauty of the land and the expanding reach of new development throughout Dane County.

- The history of development in this area allowed me to pinpoint areas of my personal involvement and that by Hooper Corporation. All across Wisconsin (and actually throughout the nation) there is tangible evidence of successful projects.
- The construction and trades industries have helped transform our community.
- As President of Hooper Corporation – and a long career with General Heating and Air Conditioning (GHAC) – I have worked alongside many general contractors on these projects.

It is this legacy of leadership that has inspired people associated with Hooper Corporation for more than 105 years. It is a record of activity and accomplishment. It speaks to the power of a dream to change hundreds of thousands of lives.

Approximately one-quarter of a century ago, I was working in the HVAC construction industry. As 1994 arrived,

“**It is a record of activity and accomplishment. It speaks to the power of a dream to change the lives of hundreds of thousands of lives.**”

a new affiliation was established when GHAC was acquired by Hooper. The true value of that partnership has now been established in the expanded reach and accomplishments of the new organization which can be found throughout this edition of our newsletter.

In this spirit, I want to introduce you to Mr. John Stenger and Premier Energy Services (p. 4). As a result of this new acquisition, Hooper’s reach now extends into the natural gas distribution industry. In addition to reaching well beyond Madison and Dane County, thanks to Premier’s leadership role in the industry, we now have significantly expanded capabilities.

Just as we welcome John and his team into the Hooper Corporation, we also

celebrate significant projects in our recent profile of work.

- Madison’s near east-side and Isthmus area welcomes new signature buildings (p. 6 and 7) and the emerging biotechnology sector continues to solidify on the west side (p. 8).
- Mechanical project in Stevens Point (p. 9) and electric power projects in Minot, North Dakota (p. 5) and Northern Minnesota (p. 10) are also highlighted.

Hooper’s commitment to comprehensive safety (p. 3) permeates all that we do and all that we stand for as a company. It is the men and women of Hooper/GHAC – now exceeding 1,000 for the first time in history – that make our work so strong, so effective, and so valuable.

Flying over Madison, you can nearly see the expanding reach of Hooper’s record of service and community engagement.

At Hooper Corporation, our commitment to safety permeates everything that we do. The safety of our employees and work sites serves as our bedrock corporate value.

- This uncompromising commitment places safety as the first, last, and most continuously affirmed value in everything we do and how we organize our work.

The commitment to safety is found up and down the organization. While many organizations strive to continually improve their processes and promote comprehensive safety, we take this to the next level by engaging and empowering all Hooper employees to make real, and continuing, efforts to improve our practices.

The reach of our vision is broad. We realize it is not nearly enough that this be voiced by our leaders – we ask our employees to do more as we all expect more.

- Everyone at Hooper looks for opportunities to demonstrate and advance visible safety management to demonstrate the breadth of our support.
- We are uncompromising in our commitment to the health and safety of our employees, subcontractors, customers, and community.

Here are ten ways leaders at Hooper Corporation demonstrate visible safety management:

- 1. Safety Policy** – At Hooper, we continuously revise and update our safety manual. This resource serves as an ever-evolving expression of a corporate philosophy that places safety first. It helps document our unwavering support for safety and health as the most important business objective. The formal statement of our safety policy is broadly and repeatedly shared and discussed with all employees.
- 2. Safety Goals and Expectations** – We have also set and clearly communicate safety goals and related expectations to all employees. Safety goals provide the roadmap for directing our resources toward a common objective and milestones to measure how well the organization is doing in achieving that objective.
- 3. Safety Committees** – Hooper has formed more than 10 safety committees that meet quarterly throughout the year. The leadership team carefully selects the committee chairs to ensure that the effort includes solid representation from all levels of the organization. Safety

committees are a cornerstone to cultivating a positive safety culture.

- 4. Employee Recognition** – We have a comprehensive safety and recognition program that identifies and rewards those who make valued safety improvement efforts and that help highlight safety success initiatives. By recognizing positive safety performance, Hooper reinforces shared commitment to the safety-oriented behaviors expected across all levels of the organization.
- 5. Safety Audits** – On a quarterly basis, Hooper asks its managers and executives to perform formal safety audits of all jobsites as part of the continuous evaluation of the performance of our safety program. These audits are essential to refresh and update our comprehensive safety program.
- 6. Participate in Incident Investigation and Review Committees** – Company leaders actively participate in the investigation of all safety incidents. This effort facilitates the orderly development of new approaches and other corrective actions that will promote safety.
- 7. Monthly Safety Calls** – The leadership team also conducts

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Hooper Corporation Acquires Premier Energy Services

Acquisition creates additional diversification to provide electric and natural gas services to energy delivery utilities



Moving toward an expanded array of essential services for the electric power industry, Hooper has added Premier Energy Services as a new operational unit. Based out of Ohio, Premier is an established and leading provider of natural gas distribution services, including engineering, design, construction, inspection, and maintenance serving a broad region presently including the states of Ohio, Kentucky, and Indiana.

Premier was established 16 years ago as a contractor for the natural gas utility industry. Led by president and founder John Stenger, P.E., the organization has advanced a broad vision to be an engineering and construction company offering safe, reliable, and cost-efficient services to local utilities. Stenger will continue as Premier's president working within the Hooper Corporation structure.

A client-centered concentration on serving the needs of the utilities in a broad multi-state regional area, Premier has provided high quality engineering and technical services in a wide variety of settings. Premier has earned a reputation for cost-effective services and its comprehensive program of quality improvement and safety training and practices.

Over the course of its 105 year history, Hooper Corporation has continuously grown and expanded through prudent growth coupled with a commitment

to strategic specialization through the diversification of services. Through the acquisition of Premier, Hooper now has expanded and improved the breadth of services to offer its utility customers.

"With natural gas-fired power plants and upgrading natural gas pipelines on the rise, public utilities want more quality-focused, integrated service providers," said Steve Lindley, vice president, Electric Power Division. "Both Hooper and Premier share a common commitment to safety, quality, responsiveness, and cost, to build and maintain the infrastructure that enables energy utilities to confidently deliver cost effective, reliable, and efficient power to homes and businesses throughout the United States."

Currently, the American market includes more than 2.4 million miles of natural gas pipeline infrastructure. This network supplies 177 million Americans with natural gas. Natural gas utilities spend more than \$19 billion annually to help enhance the safety of the natural gas distribution system and to upgrade and expand service. (Council of State Governments)

Many public and investor owned utilities offer both electric and natural gas services, so the acquisition now positions Hooper as a stronger, more integrated, diversified, and evolving service partner to these utilities.

"We are excited to join the Hooper team because they are recognized throughout the energy delivery industry as a customer-centric company focused on safety, cost, quality, and responsiveness – the same foundational traits as Premier," said Premier president Stenger. Noting that Premier's offices will remain in Dayton and Cincinnati, Ohio, Stenger added: "Together, we will be in a stronger position to meet the increasing needs of energy delivery utilities for more



Above: John Stenger, co-founder and owner of Premier Energy Services, with his daughter, Erin, and grandson, Connor, at the Cincinnati Reds Opening Day.

integrated partners."

As a result of this new alignment across service sectors, Premier's history of growth is expected to advance at significant levels due to this acquisition by Hooper. This pattern of growth – both by Hooper and Premier – is expected to grow significantly in the next few years. These market-based changes will result in additional investments in the people and the infrastructure required to leverage the increasing demand for natural gas distribution services by energy delivery utilities.

Electric Power Department Teams up with Xcel Energy to Provide Increased Electric Service Reliability to Minot Area

Hooper's Electric Power Division is pleased to partner with Xcel Energy to improve and expand power for the City of Minot, North Dakota. In a project approved by the North Dakota Public Service Commission, a new transmission line and power substation will be constructed to serve the needs of the expanding community.

- The existing system will be upgraded through the construction of a 230 kilovolt (kV) Magic City-McHenry transmission line and new substation to be constructed southeast of Minot.

The existing system – a 115-kV line – was built more than 60 years ago. Working with Xcel Energy, Hooper will install a new double-circuit 230/115 kV transmission line.

Once completed, the new transmission line will span roughly 20-miles, connecting the existing McHenry Substation near Velva, ND, with the new Magic City Substation located near the waste water treatment facility in Minot. Construction began in the fall of 2017



and is expected to be in service by December 2018. The removal of the outmoded 115 kV transmission line will then take place in Spring 2019.

Projects of this scale and nature always face a series of weather-related challenges.

"Construction crews have faced adverse weather conditions and bitter cold temperatures," said Joe Samuel, Xcel project manager. "But they've worked hard to keep the project on schedule and complete environmentally sensitive work during frozen ground conditions."

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A CATALYST FOR INNOVATION

The Spark: Changing Madison's East Side One Building at a Time



Clockwise from top left: Rendering of The Spark; The Spark external progress from East Washington Avenue in March; Large diameter polypropylene (PPR) piping fused system with electrofusion couplings; 10,000 gallon rain water reuse system.

Gebhardt Development Enhances Madison's East Washington Avenue Corridor



Madison's reputation and stature as a high-performing marketplace continues to be reflected in the significant improvements that are being made in just about all neighborhoods. Nowhere is this more evident than in the rapidly transforming East Washington Avenue corridor.

One of Madison's leading companies, American Family Insurance, is making a signature statement through the construction of a new building called The Spark. The eight-story, 158,000 square-foot building is located in the 800 block of East Washington Avenue. Hailed as a "catalyst for innovation," the Spark building is viewed as being "dedicated to innovation, collaboration, and entrepreneurship in Madison."

The new building will house some of the company's offices as well as the city-sponsored, StartingBlock.

- StartingBlock will be located on the

second, third, and fourth floors and will be an entrepreneurial center for start-up companies and established entrepreneurs to share knowledge, skills, and professional assistance.

The Spark also represents an opportunity for American Family to cost-effectively create workspace for future growth.

East Washington Avenue is marked by a number of significant new developments. StartingBlock and The Spark are part of the larger Capital East Development Project that includes the Gebhardt Building, home for Frank Productions' music venue, The Sylvee, and the new Capital East Parking Garage.

About The Spark:

- The building will have a modern, environmentally-sustainable design and feature collaborative indoor and outdoor spaces.
- The Spark's design creates an architectural statement while

being inclusive of the fabric of the neighborhood.

- The continued movement of the construction industry to become more environmentally sustainable is shown in The Spark which will use only 50 percent of the energy of a typical Midwest office building.

In order to meet this high standard, Hooper and General Heating and Air Conditioning (GHAC) worked with general contractor, J.H. Findorff & Son, and American Family Insurance for over a year in the design phase before the project broke ground to ensure that all needs were met. Hooper plumbing crews installed the total plumbing systems including domestic water system, sanitary waste and venting system, storm water system, and rain water reuse system.

Green Energy and Sustainability

The building will have a LEED (Leadership

(Continued on page 11.)

Madison's East Washington Avenue corridor is rapidly transforming into a dynamic and exciting destination for living, dining, and enjoying a variety of music venues. The latest project is the eight-story Gebhardt Building, located immediately adjacent to the Spark Building developed by American Family Insurance. This project is the final piece remaining of the city-owned vacant lots from the former Don Miller auto dealership.

- The building houses The Sylvee, by Frank Productions, a 2,500 seat state-of-the-art performance venue.
- Vintage Brewing Co. restaurant will reside on the ground floor of the building.
- This 100,000 square foot building will also offer premier office space (floors two through four).

Working alongside general contractor, Miron Construction, Hooper plumbing crews provided plumbing systems for the building and also completed the installation for many of the tenants including "The Sylvee" and the Frank Productions office. The overall feasibility of the project was enhanced by Hooper's re-engineering of the building's plumbing system – savings in excess of 30 percent were achieved from the original design.

General Heating and Air Conditioning (GHAC) crews worked on multiple systems within this building. Crews are installing a water source heat pump system served by roof mounted cooling towers and two 1000 MBH boilers. A dedicated outside air system was installed to take care of the OA requirements. Per the owner's request, GHAC crews installed electric VAV

(variable air volume) unit heaters, fan-powered VAV and cabinet unit heaters in lieu of hot water heating. A VRV (variable refrigerant volume) system is also being utilized in critical areas.

Madison's East Washington corridor is becoming a new signature focal point for the city's resurgence as new development is found throughout the broader metropolitan region. Hooper and GHAC are proud of the work being done to meet the needs of the city's population from millennials to empty-nesters. These projects underscore the value of efforts to create the right mix of retail, offices, apartments and condos, bars/restaurants, and entertainment venues.



Specialized HVAC and Mechanical Systems Help Advance Illumina's Leadership in Biotechnology

As a business start-up, Illumina aspired to transform human health by unlocking the tremendous power of the human genome. With its acquisition of Epicentre Biotechnologies operating out of UW-Madison's Research Park, Illumina has clearly emerged as a global leader in genomics – best described as the intersection of biology and technology.

Expansion of the scientific laboratories and facilities at Research Park will help solidify and enhance Illumina's capacity for leadership in the pharmaceutical and biotech research and manufacturing industry. Working alongside Findorff as the general contractor, General Heating and Air Conditioning (GHAC) and Hooper Corporation are completing the full HVAC and mechanical systems.

This 132,000 square foot facility will provide room for increased manufacturing of life science tools and integrated systems for large-scale analysis of genetic variation and function. The project will be completed later this year. Some highlights of the Illumina project:

- **GHAC – HVAC.** GHAC will perform design assist services to install the HVAC system for the facility including air handling systems, heating water, chilled water, plant steam, and humidification.
- Like many major projects, the construction schedule

posed major challenges. As the building became a core and shell structure, the major work of completing the tenant improvement portion was being designed. GHAC strived to include as many of the tenant improvement elements in the core and shell structure as possible. This challenged our BIM and preconstruction teams to keep up with the fast moving schedule.

- GHAC played a key role in coordination between mechanical trades and facilitated design services with the engineer which helped mitigate scheduling challenges.
- **Plumbing – Specialized Plumbing.** Hooper plumbing crews are installing specialized waste piping materials and equipment to neutralize the waste before entering the city service in this complex production facility. The reverse osmosis (RO) water system with individual loops to each floor of each wing of the building will help keep disruptions to a minimum. Crews followed unique standards while installing specialty systems for oxygen, clean steam, natural gas and compressed air.
- **Custom Metals.** The Hooper custom metals crew fabricated a stainless steel wall system for the sterilization

space as well as custom stainless steel shelving and stainless steel ceiling utility panels.

- **Piping.** The Piping Department is currently making headway on the natural gas, process vent, clean steam, and oxygen systems, which are critical to enzyme production and research that will be conducted at the facility. In the coming months, the primary focus will be on installing the clean steam generator and completing the process piping in the Fermentation Suites. To date, our pipe fitters onsite have installed over 2,000 feet of pipe.
- **Fire Protection.** The Fire Protection Department used BIM to design the entire project and coordinated with all other mechanical trades. Crews installed nine sprinkler systems total, five wet sprinkler system zones, pre-action sprinkler system zones with two total pac cabinets, two clean agent zones, one 1500 GPM electric fire pump, 800 sprinklers, and over 20,000 feet of sprinkler piping.

Hooper and GHAC Provide Support for the Expansion of Sentry Insurance



With a Wisconsin-based history dating back to its founding in 1904, Sentry Insurance now employs over 2,500 people in the Stevens Point area. It occupies a visually dominating site originally built in 1977 and associated facilities, including a golf course and sports complex in Stevens Point. Adding to this impressive footprint, Sentry is now adding a seven-story office complex adjacent to the main campus. With this project, Sentry Insurance will occupy the two largest buildings in Portage County.

Hooper and General Heating and Air Conditioning (GHAC) are pleased to be involved in this important project. This is the second combined effort in Stevens Point by Hooper/GHAC. (It follows the 176,000 square foot new science building at UW-Stevens Point. That new facility is scheduled to be open this fall.)

Working alongside J.H. Findorff & Son Inc., the general contractor, Hooper and GHAC are proud to be making important

contributions to a vital new center to serve the current and emerging needs of one of our nation's leading mutual insurance companies.

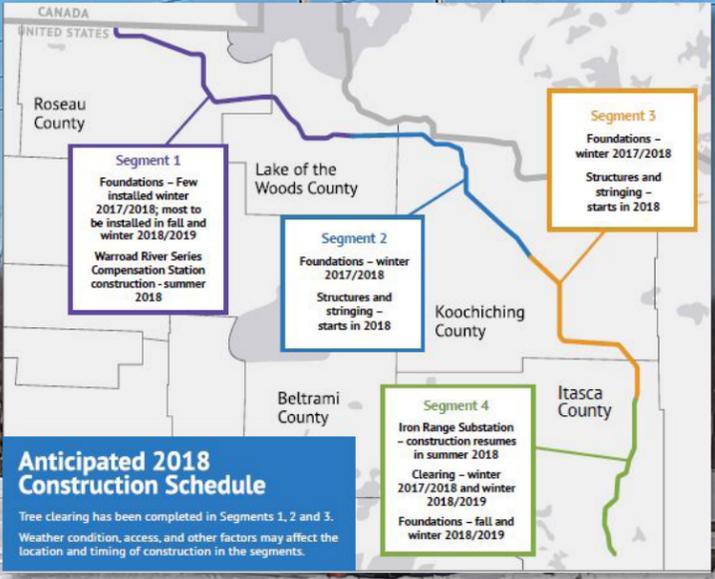
This 270,000 square foot building sits next to Sentry's existing campus on the southwest corner of Division Street and North Point Drive. Sentry purchased the land in 2011 with an eye toward future growth and improving the entrance to the city.

- The building is intended to provide a larger area for insurance writers and will initially house about 500 associates.
- It will include an on-site cafeteria, fitness and wellness centers, and health services.
- The complex will also include a four-story parking ramp, terrace and gardens, and indoor/outdoor spaces for associates to take breaks.

The building had limited mechanical space, so GHAC used a design build process for the complete HVAC system including a chilled water plant, air handling units, and boilers all with N+1 redundancy. This project also provided our designers another opportunity to use the office building high standards developed at EPIC in another part of Wisconsin. Hooper installed all the plumbing including domestic water, sanitary and storm piping

We are pleased to have this opportunity to serve valued clients serving the nation through its headquarters in Portage County. We are proud to team up once again with general contractor, Findorff, and we look forward to completing other projects that build upon and extend Wisconsin's capacity for award-winning national service.

Hooper Engaged in International Effort to Supply Clean Electric Power



(Source: Great Northern Transmission Line newsletter)

Pictured: Helical pile.

Global demand for electrical power is providing incentives for new, reliable, and sustainable power sources. This is also leading to new infrastructure and improved transmission lines. In North America, one good example of these trends is a new project to bring hydroelectric power from northern Manitoba, Canada, to the power grid in Minnesota.

The U.S. Department of Energy issued a permit (late 2016) giving federal approval for Minnesota Power's plan to bring electricity into Minnesota from the Canadian hydroelectric dams. Construction of the Great Northern Transmission Line will bring clean, emission-free energy into Minnesota. This development will help meet growing demands for energy while simultaneously improving the reliability of the distribution system.

At a cost (for the Minnesota portion) of \$560 million, the 500 kV transmission line will connect Manitoba with Minnesota's Iron Range. Spanning a distance of 224 miles, the Minnesota portion of the line will start in Roseau

County and run to an expanded electric substation at Blackberry (just east of Grand Rapids). The project will also include the construction of associated substation facilities and transmission system modifications.

The large scale of the project was subdivided into four separate segments. Hooper is pleased to partner with Wilson Construction on a joint venture to work on the first two segments. Initial construction began in December 2017. The wet, swampy, and boggy terrain required that the foundations be installed in the winter months when the region would be frozen. To complete the project, a series of ice roads were created to provide access for equipment. Work on the foundations had to be complete by early March, prior to the warmer spring weather. There are three main foundation types that are being installed – helical piles, micropiles, and drilled piers. Structure type, span length, and soil conditions all determine the type of foundation.

- Helical piles- These are long steel shaft foundations that are turned

deep into the soil to hold up the foundation cap. The majority of the foundations will be helical piles.

- Micropiles- These long steel shaft foundations are drilled and grouted into the soil to support the structure foundation. These are used where soil conditions prevent the effective use of helical piles, such as shallow bedrock or very rocky soils.
- Drilled piers – This is a deep foundation system that is a large diameter concrete cylinder constructed by placing concrete and reinforcing steel into a drilled shaft.

Helicopters will begin carrying structures this spring and summer and the entire project is expected to be complete in June 2020. Hooper is proud to be working on a project of this importance and scale. We are pleased to be an important part of this joint venture with Wilson Construction. The unique aspects of this construction have challenged us to find creative solutions to difficult problems.

> Our Philosophy Toward Safety (continued from page 3)

monthly safety calls to keep all employees informed concerning the latest safety information and other related developments.

8. Participate in Monthly Continuing Education Courses – Each month the Safety Department provides a continuing education course for all managerial employees. These sessions continuously update the shared understanding of our commitment to safety.

9. All Hands Meetings – Hooper's leadership team regularly takes

the opportunity to share personal comments about the importance of safety to them with other employees.

10. Follow Safety Rules and Policies – At Hooper, the same safety rules apply to all levels of the organization. This shared commitment to best practices leads to a comprehensive commitment to safety up and down all levels of the organization.

At Hooper Corporation, our shared commitment to safety is a continuing commitment. The leadership team helps drive standards and high expectations

that are supported and advanced by workers at all levels throughout the organization.

The visibility of these efforts is one of the reasons why Hooper continues to create a safety culture that is recognized as a leader within our industry. Through these efforts, our employees can see how they are supported as our company's most important asset.

> Electric Service in Minot, North Dakota (continued from page 5)

In addition to the weather, one unique aspect of this project has been the proximity of the power lines to an active eagle nest. During the construction, crews carefully erected a series of nine structures in the area immediately proximate to the eagle's nest. Seasonal construction restrictions prohibit any project work in the eagle nesting area between Feb. 1 and June 30. Any

structures that were not installed in that area by Feb. 1 will be held off until early July. The stringing of the conductor will commence this summer.

In the North Prairie Township, the new route deviates from the existing 115 kV transmission line for approximately 4.2 miles and will be located in a new right-of-way. In addition, approximately 1.2 miles of new 115 kV transmission line

will be constructed along a new right-of-way to connect the new Magic City Substation to the existing electrical grid in the City of Minot.

> The Spark (continued from page 6)

in Energy and Environmental Design) 4.0 designation.

- This is the most recent version of LEED green building rating given by the U.S. Green Building Council.

This is also the first WELL certified building in Madison.

- WELL Building Standard covers seven core concepts of health to optimize buildings to advance human health and well-being.

Additional Green Initiatives

1. The building also has a geo-exchange bore field, heat recovery air handling units, and cold plasma ionization which improves air quality by controlling odors and allergens, killing pathogens, and reducing

particles.

2. Several steps were taken to make sure the building used significantly less energy. One way is through the rain water reuse system. The 10,000 gallon rain water reuse system will use water from storms to feed the make-up water for the HVAC equipment.

3. The rain reuse system is above ground and inside the building which posed a challenge. Hooper worked closely with Findorff, to ensure that the tank could fit in the building and be installed before the building was closed in.

4. All large diameter water piping was a polypropylene (PPR) piping fused system with electrofusion couplings

to decrease the carbon footprint of the building. In fact, the extent to which PPR piping and electrofusion couplings were used has not been done in Madison before. This required a major investment in tools and education for our crews. Extensive use of shop fabrication including pump assemblies, valve assemblies, and pipe fabrication helped expedite on-site construction.

This unique building on Madison's east side combines innovation and style and we are proud to have the opportunity to work alongside longtime partner, Findorff, in creating a history-changing new signature building for Wisconsin's capitol city.