CELEBRATING

YEARS

Straight Lines

Winter 2019

75 YEARS Spicer group

TABLE OF CONTENTS

NEW HIRES

ELLIE BRADY: Ellie was recently hired as a Project Assistant in the Municipal Group in our St. Johns office. She graduated from Hope College with a bachelor's degree in Business Administration.

ERICA COSCARELLI: Erica spent the summers of 2016 and 2017 interning for Spicer at our Lansing office while pursuing a bachelor's degree in Environmental Engineering. After graduating, she was hired as a Design Engineer in the Water Resources Group in our Saginaw office.

BRETT DAAVETTILA: Brett was recently hired as a Construction Engineer in the Construction Services Group at our Saginaw office. He graduated from Michigan Technological University with a bachelor's degree in Civil Engineering.

KAYLA GHIATA: For the past three years, Kayla has been interning with Spicer's Applied Technologies Department. In 2018, Kayla graduated from Michigan State University with a bachelor's degree in Environmental Engineering, after which she accepted a position as a Design Engineer in our Lansing office.

HUNTER GROVER: Hunter was recently hired as a Construction Services Technician for the Municipal Group in our St. Johns office. He holds an associate's degree in Civil Technology and Surveying and Materials Technology from Lansing Community College and has worked as Survey Support and a GIS Technician for MDOT.

WILLOW HASSEL: Willow was hired as a Project Assistant for the Applied Technologies Group in our Lansing office. She has a bachelor's degree in Environmental Studies and Sustainability and has previously worked with the Ingham County Drain Commissioner.

DAWID KIERYS: Dawid was recently hired as a Design Engineer for the Municipal Group in our Dundee office. He has a bachelor's degree in Civil Engineering from the University of Illinois, and a master's degree in Civil Engineering from Michigan Technological University.

MARTIN MCDOWELL: Marty joined the Survey Group in our Saginaw office as a CAD Technician. He has an associate's degree in Computer Aided Drafting from Heartland Community College.

MATTHEW MUELLER: Matt was recently hired as a Design Engineer for the Water Resources Group in our Grand Rapids office. He graduated from Western Michigan University with a bachelor's degree in Civil Engineering.

TULAKEMELWA NGASALA: Tula was recently hired as a Project Engineer in the Applied Technologies Group in our Lansing office. She earned her bachelor's degree in Civil Engineering and her master's in Water Resources Engineering from the University of Dar es Salaam in her home country of Tanzania. She recently graduated from Michigan State University with a doctorate in Environmental Engineering.

KATIE PFENNINGER: Katie was recently hired into the Transportation Engineering Department in our Saginaw office as a CAD Technician. She is currently enrolled in the CAD Certification program at Delta College.

RAMA SANDA: Rama was recently hired as a Design Engineer for the Water Resources Group in our Saginaw office. He earned a bachelor's degree from Jawaharlal Nehru Technological University in India and earned his master's degree in Civil Engineering at Michigan Technological University.

NIVIN SIMMER: Nivin joined our Spicer Group team as a Project Architect in the Planning and Architecture Group in our Saginaw office. She has a master's degree in Architecture from Lawrence Technological University and 13 years of architecture experience.

RYAN SULLIVAN: Ryan interned with Spicer in 2017 with the Municipal Group, and again in 2018 with the Construction Services Group in our Saginaw office. He was recently hired as a Construction Services Engineer after graduating with his bachelor's degree from the University of Michigan.

LINDSEY WICKMAN: Lindsey was hired as a Design Engineer with the Municipal Group in our Saginaw ofice. She earned a bachelor's degree in Physics from Hastings College as well as a bachelor's degree in Civil Engineering from Columbia University.

ABBIE WILES: Abbie was recently hired as a Marketing Professional for the Marketing Department doing graphic design in our Saginaw office. She graduated from Grand Valley State University in 2018 with a bachelor's degree in Illustration and Graphic Design.

FOLLOWING THE SIGNS

SPICER'S TRANSPORTATION GROUP ENGINEERS AND INVENTORIES ROAD SIGNS ACROSS THE STATE

ROAD SIGNS ON WILDER ROAD IN BAY COUNTY

Between the M-13 Connector and Tiernan Road, Wilder Road in Bay County is home to businesses, residences, and hundreds of road signs directing the 24,000 motorists that drive the busy corridor every day.

These federal and state-regulated signs direct traffic, give warnings, and relay information to travelers along this 4.5 miles of roadway, more so than anywhere else in the County.

"Wilder Road has grown over the years," Cory Wale, the Assistant Engineer with the Bay County Road Commission (BCRC), said. "It is a direct connectivity corridor with the M-13 connector on the west and the M-15 on the east, and an important one for our region."

But with that growth came an increased number of road signs, and a number of aging road signs, something that was made clear to the BCRC after a county-wide inventory of all their permanent road signs that was completed over three years ago.

"Our sign shop has the equipment and expertise to do more than 90 percent of our sign upgrades in house," Wale said. "Everything throughout the rest of the County, we could design and update ourselves. But Wilder Road is a much more difficult corridor due to the high-traffic volume and the number and size of the signs."

The American Association of State Highway and Transportation Officials (AASHTO) and the Michigan Department of Transportation (MDOT) sets standards for road signs on every detail about a sign including size, reflectivity, the material used to create the sign, the post a sign is displayed on, and more.

These standards are updated and change over time to reflect new laws in effect, changes in speed limits, or new safety standards. In Michigan, whoever owns the road also oversees that road's permanent signing, which includes updating signs to comply with state and federal standards and maintaining or replacing signage along that roadway.

"Signs degrade over time," Michael Niederquell, P.E., the Director of Transportation Engineering at Spicer Group, said. "The weather affects the reflectiveness of a sign in headlights, the road itself can change, or the signs are hit by motorists. Snow plows are also a road sign's worst enemy."

To bring the Wilder Road corridor into state and federal compliance, the BCRC hired Spicer Group, who is pre-qualified by MDOT to perform freeway and non-freeway sign inventory, design, and upgrades.

"SIGNS DEGRADE OVER TIME, THE WEATHER AFFECTS THE REFLECTIVENESS OF A SIGN IN HEADLIGHTS, THE ROAD ITSELF CAN CHANGE, OR THE SIGNS ARE HIT BY MOTORISTS."

Niederquell and the Transportation Engineering Department at Spicer Group have more than two decades of combined road sign experience in doing inventory, designs, and upgrades. The engineers and designers have upgraded more than 2,200 miles of MDOT non-freeway signing, upgraded more than 1,550 miles of MDOT freeway speed limit signing, and worked with county, city and village agencies on road projects throughout the state which included signing.

"We want to put each sign in the best spot possible following state and federal standards. In the end, we want the road to be signed so it is the safest route possible."

"When we first start a project, we take an inventory of all the existing signs, from the start of the project route, to the finish," Niederquell said. "We check every attribute about each sign – the placement, the size, color, all of it. Once the inventory of signs is as accurate as possible, we'll redesign the signs to fit that section of road to include existing and any required missing signs. We want to put each sign in the best spot possible following state and federal standards."

"In the end, we want the road to be signed so it is the safest route possible."

While working with BCRC, Spicer's engineers inventoried more than 200 permanent road signs along the Wilder Road corridor. The final design resulted in 167 signs being replaced. This included 15 stop signs, 24 speed-limit signs, 29 turn-lane signs, all signage for school zones, signage for three railroad crossings, signage for rail trail crossings, along with 26 intersection road name signs, and guide signing for local attractions.

Using a sign design software program, the team at Spicer details special signs and designs everything from the font, legend size, margins, borders, indents, etc. for a sign. All sign detail is included in the plans as part of the project packages that contractors bid on. This also allows the contractor, owner, and inspector to know how to fabricate the sign and what to expect once a sign is installed.

Once the designs are approved, contractors will come through and install the new road signs while removing the old ones.

"Everyone loves the fact that the road names and guide signs are now so bright and legible," Wale said. "They're larger, and drivers can see them better. The signs are now where you expect them to be, and we also removed a lot of sign clutter in the process."

Spicer engineers inventoried more than 200 permanent signs along Wilder road, and designed replacements for 167 signs.

Left: **Before the BCRC sign inventory and replacement project, this sign had too much text and the text was too small.**

Right: **After the signs redesign and replacement, it is clear, concise, and meets federal and State sign standards.**

CELEBRATING 75 YEARS IN BUSINESS

LEGACY OF SERVICE WITH QUALITY & INTEGRITY CONTINUES

Seventy-five years ago, Clifford H. Spicer signed one of the first receipts for work done by his own company.

The work was a survey of two lots in the Village of Chesaning, cost the client $35, and was performed on Dec. 7, 1944. While the paper is slightly faded, the edges a bit worn, and the typeset slightly smudged, there is no mistaking the scrawling signature of Spicer's founder.

His name rests at the top of the paper, as does the address and four-digit telephone number of his home on Mackinaw Street in Saginaw, Michigan where he started the business.

Born on August 30, 1902, in South Lyon, Michigan, Spicer was the only child in his family of five to go onto college. He graduated from the University of Michigan with a degree in Civil Engineering in 1924 and then went on to work in the City of Saginaw's Engineering Department, before moving to a private firm, called Francis Engineering.

Then, in 1944, while the U.S. was still embroiled in World War II, he struck out on his own.

In a letter from the Michigan Society of Professional Engineers, it was written that "He gained a great deal of practical knowledge that helped him later in his career at these jobs. Spicer's reputation as a man of integrity and skilled engineer quickly followed him as he began his business."

Working at first with only a three-man surveying crew, he handled drain projects for Saginaw, Tuscola, Bay, Gratiot, and Midland Counties and by February of 1945, the business had grown and moved into a second-floor office at 404 ½ Court Street.

In 1951, still operating as Cliff H. Spicer Engineering, the business moved less than a mile away to 818 S. Michigan, where it occupied just the first floor. In 1959, the business was incorporated and became known as Spicer Engineering, with five engineers owning stock.

By then, the company had completed many drainage design projects for County Drain Commissioners and had begun working with nearly every township, village, and city in the Great Lakes Bay Region. In many of these municipalities, it was Spicer engineers who designed their first water and/or sanitary sewer system.

Twenty years after he opened the doors, in 1964, Spicer had 24 employees, including two registered engineers and not only worked for

Jeff Wood, current Spicer COO, in 1994 conducting survey on Main Street in Frankenmuth

municipalities and private contractors, but industrial and commercial entities that were growing in the region, like General Motors.

In a 1964 article published by the Saginaw News, it described Spicer as "a man with snow-white hair, soft voice and a shy smile, who has built a reputation for engineering and consultant advice. He probably knows where more sewer lines, water lines, drains, and weak bridges exist in this part of Michigan than any other person."

Cliff Spicer was rarely referred to by his first name by those working under him. It was usually "Mr. Spicer," and by 1971, he had grown the company to a payroll of over 50 people.

When announcing his retirement in 1972, Spicer was quoted as saying that, "We try to give good service by delegating responsibility to qualified persons. And given the chance, I'd do the same thing all over again. I've enjoyed every minute of it."

When Spicer officially retired, the reins of the company were handed over to Otto Schiesswohl, who had been with Spicer since the beginning. Three years later, Charles G. Sessner, who joined the company in 1954, followed in his footsteps as president.

During the 50's, 60's, and early 70's, Spicer worked with many communities and developers to help transform fields and wooded acres to finished subdivision streets complete with measured lots, curbs, gutters, water and sewer hookups. About a quarter of the firm's business was in the private sector and most of the company's work was in the Lower Peninsula.

By 1979, the company had added a planning department and employed 35 engineers, a registered planner, two registered land surveyors, and three graduate architects. That year, the company also invested in a $100,000 computer system that produced drawings, analyzed water systems, and eliminated much of the manual work and computations.

In 1981, the engineers began using a water analysis software package, known as Kentucky Pipeworks, and the survey department began using a "total station" in early 1989, which allowed surveyors to input survey data or notes in the field into a handheld computer.

These investments and advances in technology allowed Spicer to continue to grow and expand, becoming recognized experts in stormwater management and environmental issues. As services expanded, so did the staff, with James Curtis taking the helm of the company in 1985.

"And given the chance, I'd do the same thing all over again. I've enjoyed every minute of it."

In 1992, Spicer Engineering moved its headquarters from a converted three-story home, across the Saginaw River to an office building at 1258 S. Washington. A year later, Dale Deibel, who was hired as a design engineer for Spicer in 1974 at $5.25 an hour, became President of the company.

"I started out working on six-foot-long drafting tables. I went from design engineer to a project manager, to vice president, then I became president for 12 years. It was always rewarding to see a project from start to finish, but I enjoyed the people at Spicer. While I was there, we grew to employ 150 people. I worked with so many different people, they stopped being co-workers after awhile and became family."

Deibel led the company as Spicer celebrated its 50th Anniversary and was honored by then Governor John Engler in 1994. The company's founder, Cliff Spicer, who was 92, also attended and was honored.

"Cliff Spicer left a great reputation for quality at Spicer," Jim Curtis said in a 1990 news article. "People throughout the state recognize his name as one that stood for competence, integrity, and quality. I know that our adherence to quality solutions and quality service is what will continue to move us forward successfully. No matter what product we deliver, we cannot survive without quality."

Over the next decade, Spicer officially changed its name to Spicer Group, Inc. to reflect the business' commitment to full-range engineering, surveying, and planning services. Several other offices were opened around the state, including a permanent office in St. Johns, and the headquarters moved once again to accommodate growing employee numbers to the current address of 230 S. Washington.

Deibel passed the company's presidential reins to Don Scherzer, who had been with Spicer for over 20 years, in 2005. He led the company through economic hills and valleys until 2017, when Robert Eggers was named as the new leader.

"No matter how we do the work, we will always remain true to our Cliff Spicer roots"

The story of Spicer Group reads like the American Dream. Spicer began in the spare bedroom of a humble home with less than half a dozen employees and has now grown to employ more than 200 people from offices in Saginaw, St. Johns, Dundee, Lansing, Manistee, Grand Rapids, Detroit, and Atlanta GA. With no signs of slowing down, a commitment to stronger, safer, and smarter quality services, Spicer Group is now celebrating its 75th year in business.

"Our work continues to evolve with technological advances such as mobile LiDAR, laser scanning, data storage, GIS modeling, and drones. All of this changes how we do the work but it does not change why we do the work," Eggers said. "No matter how we do the work, we will always remain true to our Cliff Spicer roots – focusing on project quality, integrity, and building good relationships."

In many of these municipalities, it was Spicer engineers who designed their first water and/or sanitary sewer system.

One of three WCSUA wastewater treatment plant lagoon aerators set to be replaced.

Rehabing Rural Wastewater Treatment

Two-Year Project to Rehabilitate 15 Pump Stations Given the Green Light in Newaygo County

For 40 years, the White Cloud Sherman Utilities Authority (WCSUA) has provided wastewater collection and treatment services to more than 1,000 customers in and around the communities of the City of White Cloud and Sherman Township.

Situated in rural Newago County, Michigan and surrounded by the Huron Manistee National Forest, the service areas for WCSUA run along the White River, and surround Lake White Cloud, Robinson Lake, Crystal Lake, and Long Lake. The collection system and the lagoon style wastewater treatment system were built between 1978 and 1979.

The entire system consists of 22.4 miles of gravity sewer, 417 sanitary sewer manholes, 15 sewage pump stations, and 5.8 miles of sanitary force main. The treatment facility has three aerated lagoons, two storage lagoons, an irrigation pump station, and 80 acres of farm land, housing six spray irrigators for land application of the treated water.

"The service WCSUA provides not only protects the environment for their customers, but also all the residents of the City of White Cloud, Sherman Township, as well as the waters of the State of Michigan," Brian House, P.E., project manager for Spicer Group, said.

Knowing their system was aging, in early 2018, WCSUA hired Spicer Group to conduct a preliminary inspection of their collection system to determine the status and level of repairs needed.

"The sewer collection system and treatment facilities have been well maintained, but there have been no major equipment replacements or upgrades since the original construction nearly four decades ago," House said. "All mechanical components of the treatment facility and at each pump

Current entrance to one of WCSUA's steel can pump stations. This project will rehabilitate all 15 of the authority's pump stations to make them more efficient.

One of the WCSUA's pump stations near Crystal Lake

station in the collection system are working beyond their expected service life. Many components have failed or are in eminent danger of failing."

In general, the equipment within pump stations can be expected to last 15 to 20 years with regular maintenance, House said. The WCSUA facilities are going on 40 years and have had no equipment replacements.

Working with the WCSUA, the Spicer Group team developed a plan to not only fix the aging system but fund the project as well, utilizing a $5.1 million low-interest loan through the United States Department of Agriculture Rural Development program for Michigan.

WCSUA was one of several projects in Michigan communities to receive funding like this to help rebuild and improve rural water and wastewater infrastructure.

The inside look at a pump station wet well that will be rehabilitated as part of this project.

40-year old equipment and controls will be replaced at all WCSUA pump stations.

Along with upgrading and replacing equipment, repairs will also be made to the wastewater treatment plant pump house. Additionally, aerators at the sewage lagoons will be replaced.

"Getting affordable, feasible funding for WCSUA was a huge part of getting this project going."

"For rural communities like this one, that have a steady number of customers, there is funding available for larger scale, capitol improvement projects," House said. "Getting affordable, feasible funding for WCSUA was a huge part of getting this project going."

Along with replacing outdated equipment in the 15 pump stations, the project will also include converting eight steel can, wet-pit/dry-pit-type pump stations that require operators to enter small spaces underground

Wet well at one of WCSUA's pump stations

to perform maintenance and repairs, into submersible pump stations. This will eliminate the need for potentially hazardous confined-space entries.

Each pump station will also be equipped with a back-up generator to ensure function in the event of any power failure.

The addition of a supervisory control and data acquisition (SCADA) system to monitor each of the pump stations and the wastewater treatment plant will allow WCSUA staff to operate and maintain the sewer assets more economically and proficiently.

Once permits are obtained, bidding is scheduled to begin on this project in the early spring of this year, with an estimated completion date in 2020.

"When everything is finished they will have a wastewater treatment system that is up to code and pump stations with equipment in them that is 40 years newer," House said. "Everything will run smoother and more efficiently."

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