Lake County Sewer Company has come a long way since its inception in the early 1980s. The company initially offered sewer cleaning, inspection and excavation, and while the latter has since slipped off the menu of services, the company has grown and is now offering a much wider range of services to satisfy their expanded client base.

The company acts as the general contractor on 80 percent of their projects, according to company president Frank Klima Jr., who says they have the equipment, trained personnel and safety record to meet the varied needs of customers across Ohio, Michigan, Indiana, Pennsylvania, West Virginia and Kentucky. They also travel to other states when requested and have gone as far as Houston to help a client.

Klima, who has been with the company since incorporation in 1981, says all of their functions are essential to their performance, from cleaning and televising, to grouting, manhole rehabilitation and sewer lining. The company has an impressive record of success and an array of equipment to satisfy the customer base.

(continued)
THE INTRUDERS

In Lake County Sewer’s territory, 80 percent of the sewers are vitrified clay or concrete installed from the 1920s to the 1960s. The challenges are roots, joints and mineral deposits or calcium buildup where joints are leaking. Their job is to go in, televise and clean as much as 2,000 to 3,000 feet of pipe per day.

Klima says the client’s engineer will look at the report and decide if it needs to be groused. If there is structural damage, they may want to reline or do sectional lining.

“We open the pipe to the original carry capacity,” says Klima. “The pipe may be good now, but in another couple years the roots and minerals will be back. The client will decide if those joints are not good and the pipe is failing and what the solution will be.”

In manhole-to-manhole inspection, they may have a 300-foot run with 2-foot sections and 150 joints. If they are grousing the line, they will test and seal each joint with the packer. This involves an air test at each joint, and if it holds a certain amount of air for a defined period of time, they will deflate the packer and move to the next joint. The grousing process injects the solution outside the pipe and through the faulty area that leaked air. It is then sealed.

The company does mainline and lateral grousing. The grousing trucks carry the Aries Illumi-Zoom Pan & Tilt camera as well as the Aries Ultra Mini Pan & Tilt camera. They also have LETS (Lateral Evaluation Televising System) capability on the grousing and TV tracks.

For proper cleaning and clearing, they rely on nozzles from Enz USA and large chain cutters from USB-Sewer Equipment Corp. They also buy nozzles from Jack Doherty Supplies, Mitech and various other suppliers.

“Nozzles can make or break you when you are out there working on a sewer. We operate with a series of nozzles on each truck, and they all have different functions in the pipe.”

Frank Klima Jr.

“Nozzles can make or break you when you are out there working on a sewer,” says Klima. “We operate with a series of nozzles on each truck, and they all have different functions in the pipe. If the nozzle has the wrong orifices, or you put the wrong nozzle on the hose, the TV operator will see what is happening.”

He says if the line is not properly cleaned, the CCTV operator will remove the jet and go to a root cutter or different nozzle. When they have cleaned the line from manhole A to manhole B, that line will be completely evaluated, cleaned and ready for rehabilitation.

Klima says they buy grousing products from Avanti International and PYCOSA Chemicals. Mainline and lateral packers come from Logiball.

For products in manhole rehabilitation, under some harsher circumstances, they use sprayed application products from The Strong Company Inc., A.W. Cook Cement, and Sewer-End Coat by Kemeny. The company is licensed to use all of these manhole rehabilitation products.

When the solution calls for full lateral lining, they use LMK Technologies’ performance liner process. For short lining or sectional lining they use the NewLife Liner System from Stephens’ Technologies.

FIRST LINE OF DEFENSE

On the equipment front, Lake County Sewer Company has as many as 40 vehicles in all. Most of the fleet are International trucks from Lake Truck Sales & Services in Painesville, Ohio.

For grousing and televising there is an 18-foot Morgan Corporation van on a 2005 4400 International chassis with dual CAT pumps producing 300 psi/3 gpm, 1,500 feet of multi-conductor Kevlar cable for television, and for grousing, a 1,000-foot steel- armored cable and 800 feet of grout quad hose. There are also two flat-screen monitors on board.

The company also has a 2011 International 7500 6x6, body by US Truck Body, which is used for grousing. The grousing truck has laser profile and sonar (continued)
Frank Klima III attaches a sewer cleaning head to the high pressure hose.

Inventory also includes various push cameras and locators by RIDGID, along with other cameras by Aries.

Klima says they like to turn over their equipment every five to seven years. Most maintenance is conducted by the equipment manufacturers, although some minor repairs are dealt with in their garage.

BOOTS ON THE GROUND

"We believe in retaining good employees," says Klima. "Any kind of turnover with employees is very costly. New employees go through a trial period to be sure this is the work they want to do. When I say employee turnover is costly, it's because there are uniforms supplied, there is profit sharing, medical insurance. To bring people on board at any given time costs the company money if they don't work out. It's very important to keep good people happy. We have employees who have been with us 15 to 20 years."

Technicians attend NASSCO's Pipeline Assessment Certification Program and are trained in many procedures. Every employee who works in the field goes through confined-space entry training and will have a harness sized individually. A tripod and winch are also provided, as confined-space entry is conducted regularly.

"We have gas monitors on all trucks along with the other equipment," says Klima. "We have to be prepared when entering in any way a structure that may not be intended for a man to work in. If you even reach into a manhole it is considered confined-space entry. We work under these conditions all the time."

Drivers must have a Class B CDL license with air brake and tanker endorsements, and take responsibility for their equipment, starting each morning by fueling up and conducting pre-trip inspections to ensure all equipment is functioning properly.

Two men - operator and technician - work as a team on each truck. Back-up equipment is always available, including two or three cameras, several tractors and other equipment and supplies.

"In this business you can't take more than half an hour to fix something," Klima says. "You have to be able to keep the job going."

"With a two-man team grouting a line, one is handling the packer as it goes into the pipe and the second man is at the other end of the manhole 300 feet away, where the winch is set up. This device pulls the equipment through the entire sewer," he says. "You have to have teamwork."

There are two superintendents with Lake County Sewer, Richard Smith and Frank Klima, who oversee the progress of ongoing projects. Klima says

TURN THE TIDE

The issue of IBI is the true battleground for Lake County Sewer as they provide their services in the region.

"We do not want that infiltration," says Frank Klima Jr., president of the company. "When that happens you have problems on the costs. Not only is the water that infiltrates sanitary sewers treated and resent to streams, lakes, etc., it can be costly to treat. The sewers are designed to hold only so many gallons."

"Any given day people are flushing their toilets and watering their lawns. The sewers are flowing; if it is raining and the water infiltrates the sanitary sewer, the sewer fills with water and they get to the point where basements flood. There is a lot involved in the work; we do so that sewers don't have to be dug up to be repaired or replaced."

"By providing a turnkey operation, and solutions before costly damage to the infrastructure, our customers can determine how best the pipe can be rehabilitated. Now they can decide on the cost effectiveness of the various procedures available."

 capabilities, along with dual pumps (300 psi/3 gpm) by CAT. There are three flat-screen monitors, 1,500 feet of multi-conductor Kevlar cable for television, and 1,000 feet of steel armor cable. The truck has 800 feet of penta grout hose. It is a much bigger unit suitable for off-road grouting, and can be used to grout laterals from the mainline.

"In this business you can't take more than half an hour to fix something. You have to be able to keep the job going."

Frank Klima Jr.

The company's two B-15 Aquatech JetVacs (Hi-Vac Corporation) were built at the same time and purchased new. They're built on 2007 International 5600 chassis and feature 2,500-gallon plastic water tanks, 15-cubic-yard debris tanks and positive displacement blowers. The water pumps (2,000 psi/80 to 125 gpm) are by URAGA (Chemco).

Water tankers are a 1995 Ford LN 8000 with a 3,800-gallon tank, and a 1998 4900 International with a 2,200-gallon water tank. Honda pumps transfer water from the tankers to jet combo trucks and are useful in remote areas where they do not have access to fire hydrants.

"We constantly run water hoses to the big jets to feed them so they don't have to break down and move to get water. This is a productive thing for us," says Klima.

Two Aries Industries CCTV trucks, and a 1999 and a 2009 4900 International box truck each have Aries Illumi-Zoom Pan & Tilt cameras and LETS (Lateral Evaluation Television System).
their technicians will often come up with good ideas they can share with the superintendents at the morning tailgate meetings.

**WHEN IT’S TIME TO GO OR GROW**

“When bidding a job, we typically will have a two-week period from start to finish by the time we get the bid book and decide to place a bid,” says Klima. “So you have about one week to actually bid. You can’t just look at the site of the work. You have to look at where you will get water, access — ingress and egress — where you park your vehicles, if they will be out of town, and where to house your men. There are traffic control issues and safety concerns. Bidding is not always fun.”

“It’s so important to get the crews out.
Everything we do is based on an hourly rate.
An hour delay is an hour wasted.”
Frank Klima Jr.

Klima, Richard Smith and Rick Marucci do the buying and bidding for the company, and they are cautious when it comes to adding new equipment or services.

“We will not buy it unless we’re going to use it,” Klima says. “We have to go with the flow of the economy. Sometimes a state will get a large grant, and the work might be something we always meant to get into but never had the work for it. Maybe there is not a lot of work for that business. We will always investigate during the bidding stage to see if it is something for us.”

He says they will call the manufacturer to learn more about the potential for that type of work. On the other hand, manufacturers will sometimes contact Lake County Sewer to request that they test a new piece of equipment or product. This allows Lake County Sewer to test the durability and productivity of said equipment. Once tested, they report their findings back to the manufacturer.

**FROM THE HOME FRONT**

Lake County Sewer operates out of a 16,000-square-foot building on two acres. The building is designed so that as they grow, another bay can be added to the current nine bays.

“You have to remember that with the exception of December and January, all of our equipment is normally out on jobs, only coming back here periodically,” says Klima. “They will likely be parked at the municipality we are working for, or in a building we may rent near a job site.”

They count among their many clients Northwestern Water and Sewer District in Ohio, the Cities of St. Clair Shores and Eastpointe in Michigan, Mount Pleasant and Mt. Lebanon, Pa., and many other municipalities in Michigan, Pennsylvania and Ohio.

Klima says most jobs last about one to two weeks, but it all depends on the nature of the job and where it’s located. The company is frequently called for emergencies. With some clients they will have a purchase order. Others will have a one-year contract with an option to extend for another two years.

**JUST REWARDS**

At the start of each day at Lake County Sewer, Klima says they are focused primarily on seeing that the crews are safely on the road, which includes employees who are out of town and just leaving their hotel rooms. They need to be ready with their equipment and ready to fix problems in the sewers — and to know that they will do it right.

“It’s so important to get the crews out,” he says. “Everything we do is based on an hourly rate. An hour delay is an hour wasted.”

On a personal note, he most enjoys seeing each employee mature in the company, and to see Lake County Sewer Company continue to move forward.

“Just to see these guys grow up and move up. At the end of the day, that is my reward,” says Klima.