A LITTLE HELP FROM YOUR NEIGHBORS

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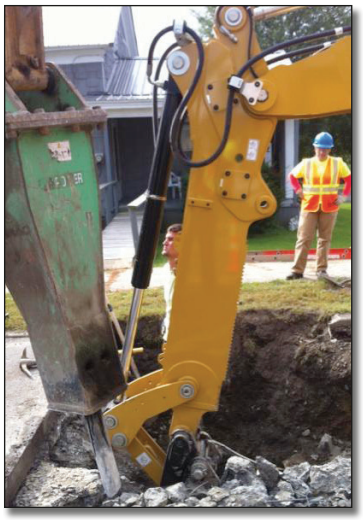
Chances are you have had days like the one that I will share with you in this article. One of the best things about working for a rural member system is that each and every day has its ups and downs and we never can tell if we will have more ups than downs, or vice versa. Keeping our sense of humor is what allows us to keep our sanity, or so they say. I don't actually know who "they" are, but I have heard it repeated, more than once.

The trucks roll out two hours before the work day is actually supposed to start. There is a plugged sewer line at the village diner. Not your village diner, your village diner burned down over six months ago. No, this is the diner located in the Village of Dexter, just a few short miles from the Village of Brownville which, as it turns out, is the subject of this article. Without much hassle, the sewer gets unplugged before the morning breakfast crowd arrives and life is good. Ah, but before going to unplug the sewer at the diner, a quick stop at the day's excavation site to make sure the location request has been marked. In addition to the water and sewer lines, there are natural gas lines on both sides of the state road. In order to see, because it is still dark, the flashlights are grabbed. This creates a little anxiety with the resident who sees two men with flashlights in her front yard. However, once she recognizes the village truck, she calms down and is able to go back to sleep. The road work signs are put out, both *"Men Working,"* and *"One Lane Road Ahead"* from both directions.

Back at the Department of Public Works (DPW) garage, the tools are assembled, the equipment is loaded in the truck and the job plan is discussed. The very day before, two village employees attended the New York Rural Water Association (NYRWA) Basic Safety training class presented by Bob Moody of E.J. Prescott. The training included excavation, trenching and shoring, as well as roadway traffic safety and was attended by 79 operations specialists over the course of two days. Although safety is, and always should be, a priority on any job that is tackled, we can never have enough instruction and reminders of how to safely get the job done.

At the site where the leak was located the previous day, work is ready to begin. A work zone has been created, traffic is steady and moving quickly past the area where the speed transitions from 55 mph to 35 mph as it enters the village limits. The underground utilities are already marked and flagged, and a line locator from the natural gas company shows up to confirm and document the gas line locations. The asphalt is marked for the saw cutter, between the white line and the grass. After the asphalt is cut, the backhoe with the hammer attachment is positioned to begin breaking through the concrete reinforced with rebar. This is a slow, tedious process. Matt Shawcross, from the Village of Dexter, arrives to assist with the backhoe work. A rhythm is formed; Jackhammer with the backhoe, cut the rebar,

then scrape and dig a little with a second backhoe to compliment the hammer work. Take time to pull the dump truck alongside the work zone, reducing traffic to stop and go with two flaggers and a single lane. Once the debris is cleaned up, the truck is repositioned out and away from traffic and two lanes are again free to flow with the school busses and the steady stream of morning commuters. The digging continues until it is time to use the delicate touch of a hand shovel. Not so delicate though, the site is rock and the hand digging is not easy. This part of the village was installed in the 1930's with galvanized pipe. Use of sand and gravel was not common practice back then as they used the same material that was dug out, which was limestone rock. The corporation stop is located and there is no sign of leaking water in the hole. The hissing water can be heard topside, but no sign of the water leak yet. The decision is made to cross the white line and expand the excavation another 18" into the road. The work zone is adjusted, traffic flow is adjusted, and the hammer, cut, and dig process is repeated.



The dump truck is full so the load is taken away. There is a problem, something is wrong. A hydraulic line is broken and the truck is out of commission. Limp it back to the DPW garage. While that is being dealt with, the correlator is brought back to the site to set up on the water valve across the road and the galvanized pipe that has been unearthed. If luck is to be had, it will identify the leak just a little farther under the road....the state road with the 12 inches of concrete reinforced with rebar. No luck on this leak as it turns out. The correlator places the leak just to the side of dead center of the road. It is now lunchtime, and sandwiches are provided for a quick bite to eat around the tailgate.

A call is placed and another dump truck is brought over and borrowed from the Village of Glen Park. No one ever wants to dig a state road, and on this day certainly not one with 12 inches of concrete and rebar. Another call is made and this time it is to the State Department of Transportation. The road is to be closed down. Detour signs are set up and traffic is re-routed through the village. One more option exists before cutting the state road. The Village of Black River has a "hole hog". A pneumatic air hammer that is capable of boring a hole under roads. A call to Black River and it turns out Steve Lily is on vacation. However he returns the phone call and brings the compressor trailer with the air hammer from the village located on the North East side of Watertown. A resident calls and another blocked sewer line is reported and two men are dispatched to get that taken care of.

While waiting for the "hole hog" to arrive, the other side of the road is dug out, and the gas line running parallel with the road is exposed about 12 inches above the waterline it transects. Steve sets up, takes his measurements and requests further excavation to reveal more open space to ensure avoidance of the air hammer contacting the gas line. He also marks the air hose with the distance so he knows when it should be to the other side. Satisfied, he places the air hammer into position, a little low to make sure the air hammer is not in line with the gas line. It starts

out slow. A little repositioning and he starts again and with a small surge, the unit makes its way to the other side. The mark that Steve put on the air hose is to the point where the air hammer would be to the other excavation, but on the other side there is no sign of the hammer head. Did it get redirected and veer off course? A little more digging and the head is found. It is found in the sewer line and life is not so good.

Now there is no way to avoid digging the road. Not only must the water line be replaced, but the sewer has to be replaced as well. The trench to be dug is measured and marked across the road. The asphalt saw cutter is used to define the sides of the trench. The backhoe with the hammer is again necessary with the work stopping every few minutes for the rebar to be cut so the concrete chunks can be removed. This process is another two and a half hours of back and forth hammering, cutting, and clawing out the road to get down to the sewer. The water lateral at this point will be totally replaced and rightfully so, as the galvanized pipe walls have been found to be totally deteriorated. Careful hand digging >>>

to reveal the sewer line without breaking it in hopes of slip lining it with green pipe turns out to be in vain. Mayor Patrick O'Conner arrives on site after completing his regular job for the day. He makes himself available to help, and pitches in when needed.

The clay tile sewer pipe, though once straight as an arrow, now snakes back and forth in the trench. What a sight to see. Knowing that this material is almost an inch thick and rigid as rock, the almost hundred years it has been in the ground has warped its walls back and forth in such a way. There is no way the green pipe will follow the curves. It has to be opened up and in some places removed to allow a straight run. The fidgeting, and adjusting, and fabricating to make the necessary transition from the clay tile to the green pipe takes the day into evening. A layer of sand is spread out on top of the sewer pipe. The sand depth is adjusted to keep the waterline below the frost line. The new copper pipe is unrolled and stretched across the road in the trench. It is too dark to see by this time. The vehicle lights are turned on and a flashlight is held above the work connecting the copper pipe to the corporation stop. After that is completed the valve is opened up. All tools are picked up and staged for cleaning and inventorying. More sand is used to cover all of the new work. Two Large pizzas have been brought and everyone stops to eat for a short break. After the break it is 8:45 pm, and now the tamper is used to compress the sand, a layer of number 2 crushed stone and more tamping, until the height has been brought up to where the cold patch will be placed. After the cold patch is applied, it is around 10:45 pm. Long after the same village resident who peered out through her curtains at the two men with flashlights in the early morning hours has gone to sleep for the night.

As it turns out this was a Friday. Everyone had had a long, hard work week with three other water leaks that were identified and repaired, and everyone was already tired even before the start of the day. It was clear on this Friday we could say if it could go wrong, it did go wrong; equipment breakdowns, water leaking under the middle of the road, and a breached sewer line. However, we would not be entirely correct in that assessment. In reality, this day actually proved to be a great success. First and foremost, no one was injured on the job. It is a very difficult job, with a lot of hard work and physical effort involved. There are many hazards to contend with, not the least of which is vehicle traffic. And just like Bob Moody from EJP shared in his Safety Training presentation on the previous day, "mitigate and/or remove the hazard" to create safer working conditions and the Village of Brownville did exactly that. By detouring traffic, a much safer *"Work Zone"* was created and focus on the task at hand was achieved. Something else was also evident on this day. Mutual Aid amongst these small villages has been practiced for many years. Working through these challenges together really exemplified the concept and purpose. Without delay, without question, the Villages of Dexter, Glen Park, and Black River all stepped up and provided their equipment and service to the Village of Brownville in their time of need. Knowing fully that if and when a time of need arises in their village, the assistance and use of equipment will be returned. Bill Pickett, Superintendent for the Village of Brownville, who if you remember was awarded the Water Operations Specialist of the Year at our 2015 Annual Technical Conference, wears many hats. Unplugging sewers before daylight, running the heavy equipment, and down in the trenches. Whatever needs to be done, he and his team can be counted on to get the job done. Steve Mott has dedicated his whole career to the village and has over 29½ years of experience to draw from. Jody Youngs has worked for the village for 4½ years and brings a diverse background of experience to the job every day. Jarod Flath started working for the village a year and a half ago and is working toward his certification in wastewater treatment. Together, they make an awesome team and I am proud to share their pride in their work and the professionalism they bring to their community. It was my good fortune to be witness to such a day. Mutual Aide agreements and shared services are just one way for many small rural member systems to work towards becoming more sustainable. These communities work together and help one another routinely. This was not an isolated circumstance, it just happened to be a day that I was fortunate enough to witness.