ONE MORE SCOOP

One More Scoop looks at issues involved in the damage prevention of underground facilities. Each month, industry leaders give their views on a specific topic. This month, our panel includes **Don Heyer**, operations /public relations manager for USA North; and **Ron Peterson**, president of S.E.E. Underground Technologies and Consulting.

This month, our panel of industry leaders discusses the importance of knowing exactly where utilities have been installed, what materials were used and how the utilities affect the rest of the managed environment. Available utility records (maps) are often dated and misrepresented by inaccurate as-builts and proposed planning records. What should utility owners/operators do to create better records?

View from Don Heyer

The owner/operator needs to start utilizing the new technology to identify his underground facilities. The most important aspect of this question, in my opinion, is to know where the underground facilities are located. Using latitude/longitude with a global positing system unit (GPS) that has survey quality technology is helpful to an owner/operator.

When the owner/operator is installing new facilities including mainline, secondary and lateral subsurface installations, this technology will provide several benefits to him. First, he will have the exact location of his underground facility. Secondly, he can utilize the altimeter reading for his facility to make sure he is locating the correct facility. He will have better information concerning the location of the underground facility equating to less damages. The use of this technology will help him eliminate wasted man hours spent manually inputting the location of the facility. Finally, when assisting design engineers, these exact utility locations will help to provide more accurate information for designing new projects.

The owner/operator needs to work closer with cities, counties and developers on new subdivisions. In these areas, the cities and counties could require the developers to use longitude/latitude GPS survey quality technology when installing the underground facility including mainline, secondary and laterals. Not only would the cities and counties benefit, but so would the owner/operator. No longer would you have major time gaps adding the new streets or new installation to the utility maps. It could be done within a few minutes. One major benefit would be that the subdivision would be a safer place to live because the subsurface installations would have been properly identified.

When an owner/operator performs maintenance to a subsurface installation or has to repair a damage facility, he should be utilizing the same technology as we discussed earlier. Doing this over a period of time, the owner/operator would have more accurate mapping data for the location of his underground facilities. Every little bit helps to eventually provide a complete and accurate mapping data base.

Since damage prevention is a shared responsibility, another tool for the owner/operator to use would be encouraging the use of subsurface utility engineering (SUE) to the highest level by project owners. The project owner would gather owner/operator as-builts or red lining on the design drawing to determine the approximate location of the subsurface installation. When the design is 50 to 60 percent complete, the project owner would call in a locate request ticket to the local one call center and pothole for existing underground facilities to determine if the facilities are where they are suppose to be located. When the project owner locates the underground facility correctly, he can take a latitude/longitude of the position of the facility and provide that to the owner/operator. If the facility is not found where it was marked, taking a latitude/longitude position of the facility and providing that information to the owner/operator will eliminate this type of problem from happening again, at least, at this site.

With subsurface installation software it is possible for the owner/operator to collect other pertinent information about his underground infrastructure. He can add information such as the type of material from which the subsurface installation is constructed, whether the facility has another facility within it, when the last maintenance was done on the facility, the size of the facility, the number of facilities or any other details that the owner/operator wants to keep.

View from Ron Peterson

One resource that remains largely untapped in the development of better records is the ability of the field locator to provide feedback upon completing a locate request. Locators (in-house or contract) utilize these records every day when performing their job. The development of a communications loop between the locator and engineering group could solve a lot of these issues. My own field experience was that nothing was set up to address these inaccuracies or provide the feedback opportunity. Opening a simple line of communications could drastically improve the process.

Inspection accompanied by the use of GPS during the installation process could also improve the accuracy of as-builts and records. I recognize that there are many accuracy levels and costs associated with GPS, but even the lowest level of accuracy could make the difference. In the locating industry, maps/records are considered only a guide when performing a locate. It's one of the first steps in the locate process, along with the visual scan (looking around), but even a map with the facility in the general vicinity should give the locator what he needs to do the job.

Phase 2 of the Virginia Pilot Project, deals with the incorporation of GPS into the locating process. During this phase, locate equipment will be integrated with GPS and points will be plotted along the located facilities. While this phase is still in development, a benefit for the owner/operator should be the ability to verify mapping and make corrections when discrepancies are identified. This will slow the individual locate time somewhat, but if successful, it will provide a means for improved mapping as well as another value added product from locator to owner/operator.

The key to damage prevention is communication and mapping plays a major role in the process. By opening lines of communication between engineering and field locators and inspectors, as well as utilizing existing GPS technology, we should be able to improve the accuracy of records and prevent unnecessary damages to valuable underground facilities. **UF**