

## New Technology Locates Underground Utilities at Deeper Depths

*Device will identify the precise placement of utilities in a sea of existing facilities*

The shallow underground horizon is fast filling up with a multitude of ever-expanding utility facilities. The need to find room in this underground landscape leads utility companies to even deeper locations. In the transportation environment, utility companies are constantly challenged to find the locations of deep utility facilities. For new placements, it can be difficult to provide traceable signals to identify and tag the locations for future purposes.

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### *Innovation in Locating Deep Utilities*

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## The Solution

Deep utility construction places a premium on technology solutions to correctly identify, tag, and locate these locations. New technologies such as active and passive acoustical signatures, electronic scanning techniques to capture utility material signatures, Long-Range IFD tagging techniques, seismic reflectivity, and accurate mapping systems all play a role in finding the locations of deeper underground utilities. **A new device is being developed as part of the second Strategic Highway Research Program (SHRP2), which will go beyond the shallow underground utility location technologies and expand the locatable zoom capability needed to find deep utilities.**

## The Benefits

Knowing the type and location of utilities that are placed deep underground is important for designers of transportation projects and contractors alike. The new device will enable transportation planners to design projects that avoid these utilities, since they can be very expensive to relocate. In addition, by knowing where these utilities are located, accidental damage to unidentified utilities can be circumvented, avoiding costly repair costs for contractors.

## Who can use these tools?

Although the prototype equipment is still under development, expected users include utility companies, utility locating companies, contractors, and the transportation design community. Reports are expected in 2013.

**New technology will resolve many utility location challenges**

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**FOCUS AREA:  
Renewal (R01C)**

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New device will enable location of underground utilities at deeper depths.

### Save Money

- Finding these deep utility locations saves money on expensive uncovering operations.
- Preventing utility conflicts during construction saves money in relocating or fixing damaged utilities at these deep locations.

### Save Time

- New technologies save locating time through conventional excavation methods.
- Finding deep utilities avoids the time-intensive repairs necessary during construction when these utilities are impacted, saving the project from lengthy delays.

## How can you learn more?

The full report on the new technology will be available in 2013 at [www.trb.org/SHRP2/Publications](http://www.trb.org/SHRP2/Publications). For more information, contact Amanda Rutherford at FHWA, [amanda.rutherford@dot.gov](mailto:amanda.rutherford@dot.gov) or Greta Smith at AASHTO, [gsmith@aaashto.org](mailto:gsmith@aaashto.org).

### About SHRP2 Implementation



The second Strategic Highway Research Program is a national partnership of key transportation organizations: the Federal Highway Administration, the American Association of State Highway and Transportation Officials, and the Transportation Research Board. Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the Nation's highway system.

### Strategic Highway Research Program

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