Infrasense Performs Pavement Evaluation on Interstate 85 in South Carolina Using High Speed Ground Penetrating Radar

Infrasense recently performed pavement structure evaluations for an 18-mile section of Interstate 85 in South Carolina using Ground Penetrating Radar (GPR). Surveys were performed on the right travel lane ad right shoulder, for a total of 72 miles of analyzed pavement.

([PRWEB](#)) August 31, 2016 -- Infrasense, Inc. recently completed a subsurface pavement structure investigation of 18 miles of Interstate 85 in South Carolina using high-speed ground penetrating radar (GPR). The highway pavement was surveyed in both driving directions to obtain continuous structure information for both bound and unbound material layers. Both the right travel lane and the right shoulder were surveyed, totaling 72 miles of highway pavement analyzed for pavement structure. The results of this project will be used for future rehabilitation planning.

The pavement structure data was collected with a single air-coupled radar antenna manufactured by [Geophysical Survey Systems Inc.](#) (GSSI), and was synchronized with a Global Positioning System (GPS) to provide coordinate locations for the detected pavement thicknesses. Data collection was performed at driving speeds allowing traffic to flow without any disruption. Pavement structure results were provided in tabular and graphical formats.

Infrasense has played a key role in the development and implementation of [GPR for pavement assessments](#) over the past 25 years. Currently, the most common application of this state-of-the-art technology is the determination of pavement layer thickness because, unlike traditional coring, GPR requires no lane closures and provides a timely and cost-effective means of collecting continuous thickness data. This data may be used for network-level pavement management, project-level rehabilitation design, or quality assurance of newly constructed pavements. Infrasense surveys have covered over 10,000 lane miles of pavement. Projects range in size from our recent asphalt thickness project on a 6-mile section of I-64 in Chesapeake, Virginia, to a survey of over [2600 miles of county roads in North Dakota](#) working with the North Dakota State University's Upper Great Plains Transportation Institute.

At the network level, GPR can provide layer structure data used to identify homogeneous sections and to compute the remaining life of segments of the network. Computation of remaining life enables highway agencies to optimize their programming and planning of pavement rehabilitation. A number of agencies have implemented GPR at the network level, including the California Department of Transportation (CalTrans) and the Oklahoma DOT.

At the project level, GPR data provides information that enables owner agencies and consultants optimize rehabilitation design by providing accurate information on the current pavement structure. GPR data is also used to implement pavement recycling by providing details on the thickness of the bound material and how it varies over the project length.

Many GPR pavement thickness studies focus on supporting FWD operations. Pavement strength evaluations using a Falling Weight Deflectometer (FWD) provide useful data to pavement engineers for estimating remaining life and planning rehabilitation. Accurate pavement layer thickness data enhances FWD pavement strength evaluations, because thickness data is required for calculation of the pavement moduli, and GPR can provide this continuous thickness information quickly and efficiently. Infrasense has provided pavement

thickness data for 24 airports in South Carolina in order to supplement FWD testing on the runways, taxiways, and aprons, where limited access meant the high speed GPR surveys were especially suited for the job.

Layer thickness estimates are also useful for quality assurance/quality control (QA/QC) for construction of new pavements and overlays. GPR can provide a faster and more complete means of nondestructively obtaining QA/QC data than coring. Inadequate layer thickness can be quickly identified, and construction pay factors may be determined.

About Infrasense, Inc.
Since 1987, Infrasense, Inc. has applied the most current technologies to the most difficult challenges in subsurface scanning. Infrasense's engineers are able to nondestructively extract critical information from a diverse range of structures. The firm has conducted research to advance the field of subsurface detection, while also providing valuable information to clients across the country. Learn more about Infrasense, Inc. and its services at http://www.infrasense.com.

Contact Information
Lori McCormick
Infrasense, Inc.
http://www.infrasense.com
+1 (781) 281-1686

Online Web 2.0 Version
You can read the online version of this press release here.