

## **Infrasense Performs GPR Survey at the “new” Loon Mountain Resort bridge in Lincoln, NH to prepare for its Opening**

*Infrasense Inc., one of the leading subsurface detection firms in the nation, recently completed a ground penetrating radar (GPR) survey to map the depth of steel reinforcing bars within the new Loon Mountain Resort bridge in Lincoln, NH. The objective of the survey was to map the depth of steel reinforcing bars within the travel lanes and sidewalk to verify the proper concrete cover thickness per the NHDOT 520.3.1.6.3.6 quality assurance specification, which requires that the rebar/concrete cover depth be verified and recorded prior to opening the bridge to traffic.*

Lincoln, NH ([PRWEB](#)) September 28, 2016 -- Infrasense Inc., one of the leading subsurface detection firms in the nation, recently completed a ground penetrating radar (GPR) survey to map the depth of steel reinforcing bars within the new Loon Mountain Resort bridge in Lincoln, NH. The newly constructed bridge replaces one that was compromised and partially collapsed in 2011 due to high waters of the Pemigewasset River that it spans during Tropical Storm Irene. A temporary bridge has been providing access to the resort during the construction of the new Bridge, which was nearly completed in June 2016, at the time of the survey.

The objective of the survey was to map the depth of steel reinforcing bars within the travel lanes and sidewalk to verify the proper concrete cover thickness per the NHDOT 520.3.1.6.3.6 quality assurance specification, which requires that the rebar/concrete cover depth be verified and recorded prior to opening the bridge to traffic. GPR was the preferred method for this survey because of its ability to image accurately measure the location and depth of objects within a material (concrete) without the need for cutting, drilling, or coring.

GPR data were collected along the centerlines of the three planned travel lanes and along the centerline of the sidewalk, including the new deck area as well as the approach slabs totaling approximately 1300 linear feet across 4-alignments. The data collection was completed using a 1.5-GHz antenna and a GSSI SIR-20 GPR control unit, providing efficient and accurate results, requiring less than 2-hours to complete.

Ground penetrating radar operates by transmitting short pulses of electromagnetic energy into the deck using an antenna that is moved across the concrete surface. These pulses are reflected back to the antenna with an arrival time and amplitude that is related to the location and nature of dielectric discontinuities in the material (air/asphalt or asphalt/concrete, reinforcing steel, etc). For the Loon Mountain Bridge, we were interested in the reflected response of the reinforcing steel, which was used to map the depth. Approximately 4-weeks after the completion of the work, on July 25th, 2016, the new Loon Mountain Resort bridge was opened to traffic.

About Infrasense, Inc.

Since 1987, Infrasense, Inc. has applied state-of-the-art technologies to address the most difficult challenges in subsurface scanning. Infrasense's engineers are able to nondestructively extract critical information from a diverse range of structures. In addition to providing ongoing subsurface evaluation services to clients across the country, the firm has also conducted numerous research programs to advance the field of subsurface detection and non-destructive evaluation. To learn more about Infrasense and the services we provide, visit our website: <http://www.infrasense.com>

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