

RoadMap

GPR Services

RoadMap GPR Services provides rapid cost effective measurements of subsurface conditions on roads, highways and bridges. Standard information products include:

- ✓ Asphalt thickness
- ✓ Sub-base characteristics
- ✓ Historical repair zone identification
- ✓ Construction-practice classifications and zoning
- ✓ Bridge deck deterioration maps
- ✓ Asphalt/Concrete/Rebar quantification
- ✓ Dowel bar assessment and
- ✓ Buried utility location.

Our streamlined information products have been developed to meet the needs of design engineers, project planners and maintenance managers who need quick, cost effective subsurface information for decision making. Customized analysis products are also available.



Frequently Asked Questions

How Do We Do It?

RoadMap GPR Services uses unique ground penetrating radar (GPR) technology developed by Sensors & Software Inc. The unique SmartTrailer houses multiple GPR sensors which detect subsurface conditions while driving at highway speeds. The subsurface information is precisely positioned using integrated DMI and GPS units and synchronized with digital images of the road.

All data are digitally recorded for immediate semi-automated processing into final information products using RoadMap Analysis software. Products are delivered in paper or electronic image visual format or as electronic digitally tabulated results. Electronic tabulated results provide positioned digital data for import into GIS systems or for integration with map and satellite imagery (e.g. Google Earth images).

How is Traffic Safety Achieved?

Our RoadMap system operates on any highway or road without need for stopping. Operation is at normal highway speeds without recourse to additional support. Our integrated tow-vehicle with safety indicators manned by professional experienced operators makes for safe operation and no traffic disruption.

How Fast is Data Collection?

Data collection is at normal highway speeds. For major highways, operation will be at 50-60 mph or 90-100 km/h. For detailed studies or urban situations, operations at 30-40 mph or 50-60 km/h are common. For large projects, data acquisition is very efficient. For short sections of multi-lane roads, where each lane must be surveyed, the logistics of turning around reduces productivity.

How Much Does it Cost?

Cost is very dependent on the size and the location of the project. The majority of cost is information handling, mobilization to site and operational setup. Assuming a minimum of 100 lane km/day acquisition, costs are typically less than \$ 12-15 lane-km; ancillary effort, analysis and deliverable creation can be 2 to 20 times the acquisition cost. Specific costs are provided in tabulated form when formal quotations are presented.

How Soon Do I Get Results?

Data analysis time depends greatly on the deliverable you require. In general, simple products are deliverable within 5 days of acquisition. More complex analysis deliverables are typically delivered in less than 20 days. Specific timelines are provided when projects are quoted.

How About Control Information?

Those familiar with GPR may wonder how we qualify the data obtained. Reliable transformation of GPR information into depth and material classification requires site control. Our normal practice is to use the GPR data and our extensive experience to analyze data in the initial step. We then correlate initial results with any control information available. We further augment our high speed data with localized property measurements (such as GPR velocity) whenever possible. Our deliverables are tabulated such that updates can be easily made when additional control information becomes available.

What about radio interference?

For those who may have heard GPR is limited by the FCC for road work, Sensors & Software RoadMap ground coupled sensors fully comply with all FCC & EU regulations. RoadMap represents the new generation of GPR for highway inspection.