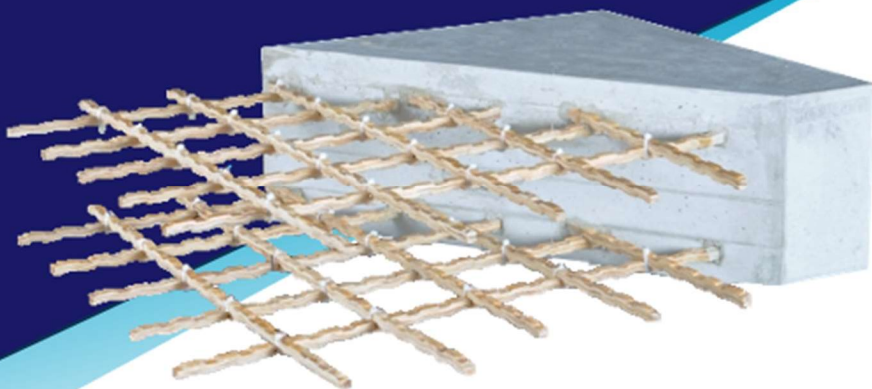


**RUSSELL**  
NDE SYSTEMS INC

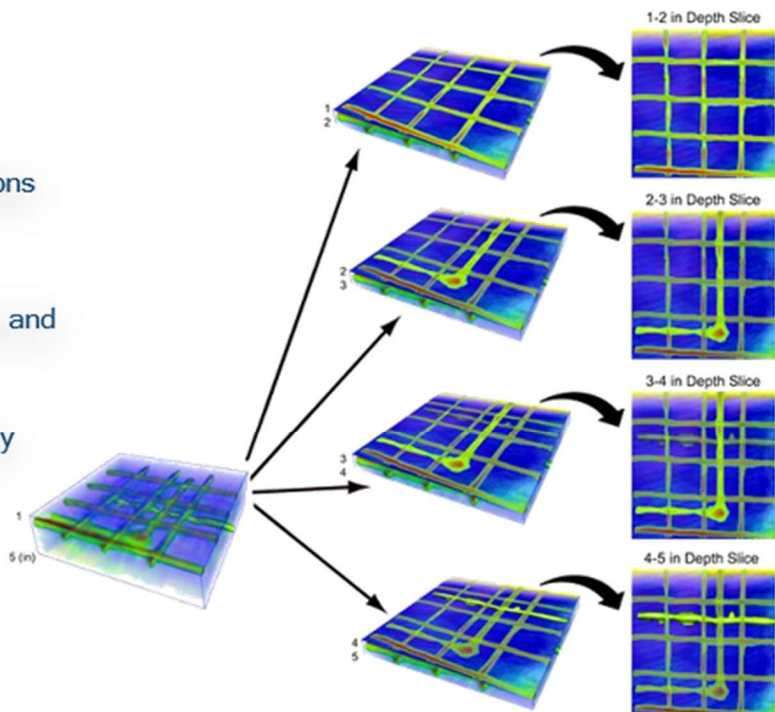
# CONCRETE IMAGING

(GPR) Ground  
Penetrating  
Radar



## Applications:

- > Rebar pattern identification and locations
- > Detect post-tension cables
- > Locate metallic and non-metallic pipes and conduits
- > Detect voids and concrete homogeneity
- > Slab-on-grade assessment
- > Locate in-floor glycol lines
- > Detect current-carrying utility lines



[www.russelltech.com](http://www.russelltech.com)

NDT Product and Service Provider

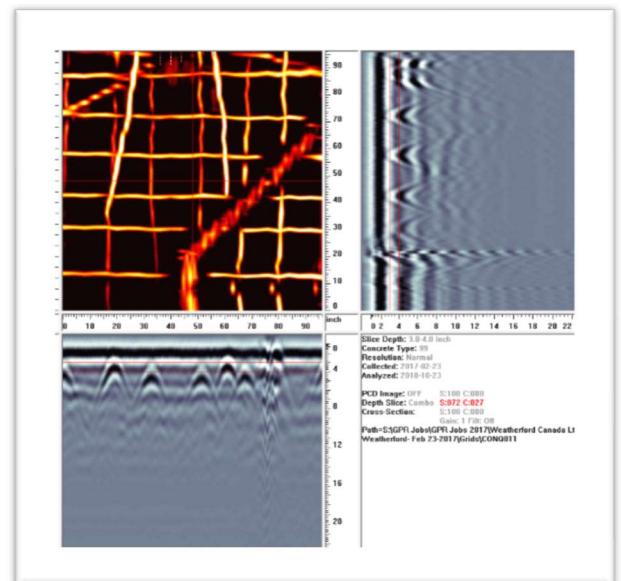
## Our Services

Russell NDE Systems Inc. provides GPR (ground penetrating radar) services on concrete. Our systems deliver fast imaging on the spot, for clients who need to evaluate, drill or cut concrete structures. GPR can be used to locate metallic and non-metallic pipes, conduit, rebar and post-tension cables inside concrete floors, walls and ceilings. Knowing the location of these before you drill or cut concrete will help avoid costly repairs.

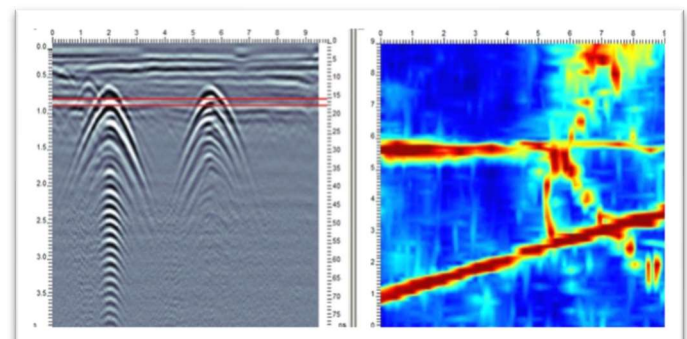
GPR is a form of nondestructive testing that employs radio waves to identify objects within concrete, a necessary step to take prior to construction activities if the structure may contain cables, rebar or pipes. Testing is done with a transducer that is moved over a pre-defined grid. A GPR inspection is fast, presents no health hazards and can penetrate up to two feet of concrete. Results from the GPR data can be saved with a digital copy or print out.

### GPR Concrete Imaging Advantages:

- > Self-contained and quiet operation
- > No health hazards
- > Non-intrusive
- > Access only required from one side
- > Instant results
- > Provide depth estimates
- > Can see through up to 24" of concrete
- > Can see pipes hanging below floor
- > Color map representation in depth slices available if required
- > Provides a permanent record



Output examples of Rebar and Conduit within scanned concrete



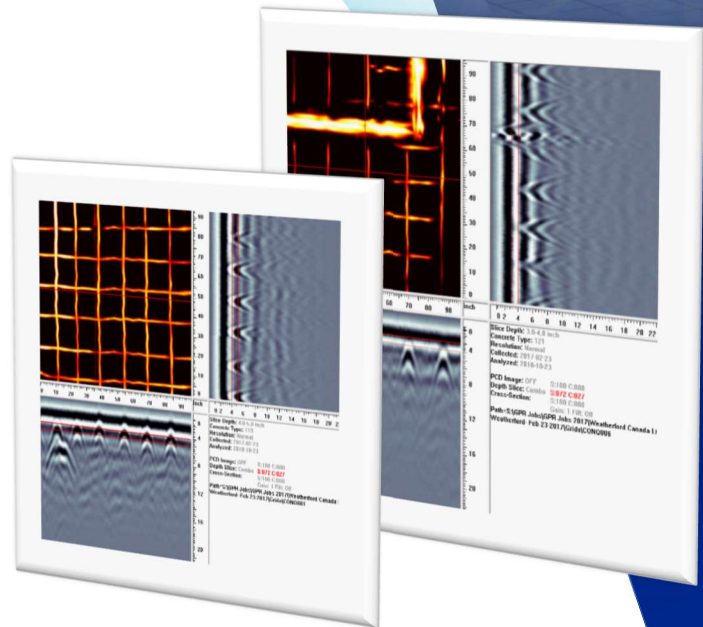
**Grid Scan Mode:** Grid Scan detailed mapping generates on-site 3D images to better visualize embedded objects.

Multiple grid sizes available

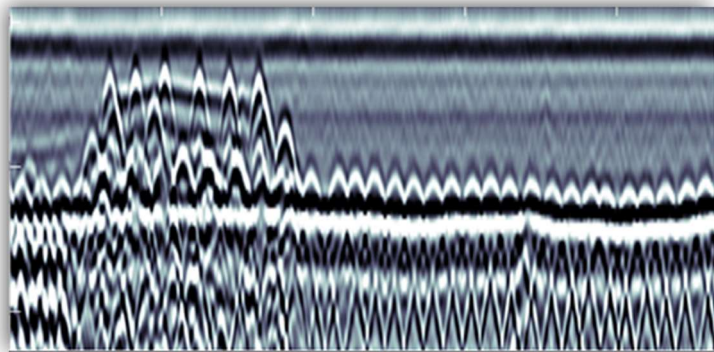
Image sizes:

- > 600 x 600 mm (24" x 24")
- > 1200 x 1200 mm (48" x 48")
- > 2400 x 2400 mm (96" x 96")

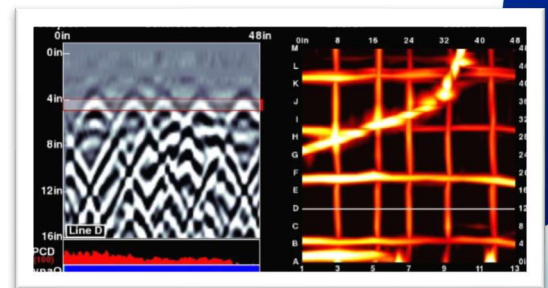
Russell NDE Systems grid scan laydowns are always scanned in high-resolution mode



**Line Scan Mode:** Line Scan reconnaissance surveys provide a real-time assessment of targets embedded in concrete. Pinpoint targets with the backup arrow.



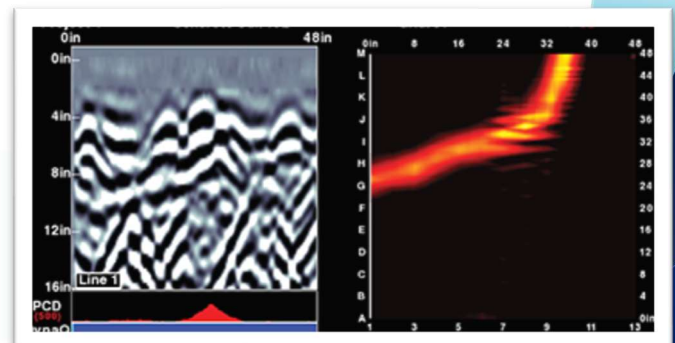
- > Generates cross-sectional view of scanned material



### Power Cable Detector (PCD)

Power cables embedded in concrete pose an immediate risk when construction work needs to be done.

- > PCD augments GPR imaging with the ability to detect current-carrying utility lines.
- > Locate and differentiate these hazardous utilities from other structural elements.





**Ancillary Services for Construction Applications:**



- > **Infrared Thermography:**
  - In-floor heating; detect glycol lines beneath floor
  - Detect heat loss
  
- > **Utility Line Locating:**
  - RD unit; trace ferrous or non-ferrous lines through concrete

**Which industries come to Russell NDE Systems for non-destructive testing services?**

Manufacturing	Municipal Infrastructure	Ports
Automotive	Commercial Construction	Government
Airports	Water Treatment Plants	Military
Refineries	Concrete bridge decks, girders and support columns	Power Plants

The above list includes the major business categories most commonly served by Russell NDE Systems Inc. We are experienced in delivering quality NDT services that our clients can count on.

Contact us to learn what solutions we have for you.



**Russell NDE Systems Inc.**

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