

™  
**intelliRock**  
concrete facts • superior results



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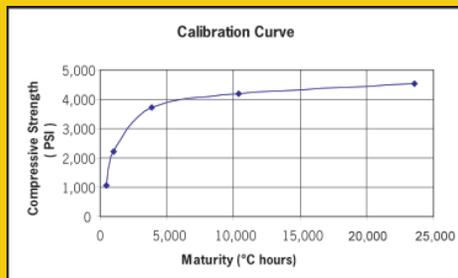
# The intelliRock System

The most widely adopted maturity-method system for profiling temperature and estimating the strength of placed concrete:

- Accurate strength data from placed concrete for improved quality control and safety.
- Real-time, on-site information to optimize workflow, reduce construction time and cost.
- Complete, rugged, easy-to-use system.
- Ideal temperature profiling system for mass pours and placements in cold weather.

## How intelliRock Is Used

Before construction begins, a set of test cylinders are cast, several with Loggers embedded, to plot the relationship between compressive strength and maturity (degrees Celsius x hours) for the specified mix design. At standard intervals – 1, 2, 4, 7, and 14 days – strength and maturity are measured. Results are graphed on a calibration curve:



During construction, intelliRock maturity measurements are plotted on a curve to accurately estimate concrete strength. Here, a maturity reading of 4000°C-hours corresponds to a compressive strength of 3800 psi.



“ The intelliRock System has been easy to use and allows us to **pour and strip forms like clock-work**. It is very straightforward, either you have maturity and strength or you don't; the System tells you.”

**Bob Bolduc, P.E.**  
QA/QC Manager  
**Lane Construction**  
Washington, D.C.,  
Metro Extension



## Dallas High Five Dallas, Texas

The I-635 / US 75 cloverleaf in Dallas, Texas, is one of the busiest, most congested highways in the country. The Dallas High Five - a five-level, \$261 million, high-speed interchange - will greatly improve traffic conditions. Begun in Jan. 2002, the project is scheduled to finish in April 2007. Zachry Construction accelerates workflow with intelliRock's real-time, in-situ strength estimation. As of Jan. 2005, the job was XX% complete and YYY days ahead of schedule, and Zachry is in line to earn bonuses of up to \$11 million.

## I-40 Bridge

Webbers Falls, Oklahoma

On May 26, 2002, a barge struck the I-40 Bridge near Webbers Falls, Oklahoma, collapsing four spans and severing the east-west interstate corridor. Oklahoma transportation officials predicted a six-month reconstruction timeline. Using IntelliRock, Gilbert Central Corporation, a subsidiary of Kiewit, completed the job in 47 days, earning a \$1.5 million early completion bonus.



## How IntelliRock Works

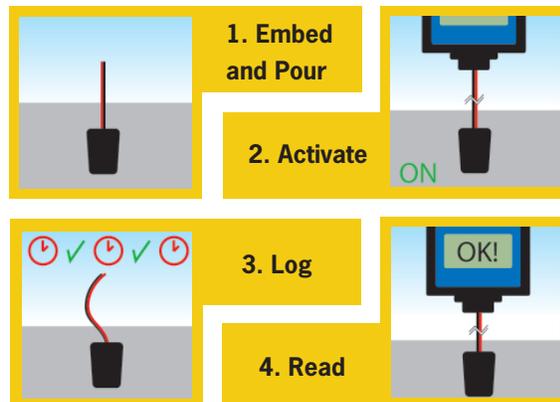
IntelliRock is a complete system, designed for convenience, ease of use, and low cost. And it's engineered to stand up to the rugged conditions of heavy construction sites. The system includes:

**Loggers.** IntelliRock Loggers, about the size of a 35mm film canister, contain a long-life battery, microprocessor, memory, and thermistor. Embedded in placed concrete, Loggers continuously calculate and store concrete maturity data (temperature and time). A tough casing protects the intelligent electronics inside; the only exposed part are the Loggers' 18-gauge leads.

**Reader.** The handheld IntelliRock Reader is used to communicate with embedded Loggers. Workers simply connect Logger leads at the Reader's spring-loaded terminals and use the Reader to view and download maturity and temperature data. Readers also have a serial port for connection to an external computer.

**Software.** Installed on an office PC, IntelliRock Software facilitates transfer of maturity and temperature data from the Reader to the PC in secure, unalterable electronic files for later distribution, documentation, and analysis.

On the job, workers take four easy steps to measure temperature or strength:



“ Being able to measure strength in real time is a major benefit.

**IntelliRock gave us reassurance that the concrete was at a safe strength** and we weren't putting our people in danger, while at the same time allowing us to gain time on our schedule. In five months, **we calculated our benefit at \$175,000.**”

**Pamela Culbertson**  
Project Engineer  
**McCarthy Building Co.**  
Phoenix, Arizona





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## intelliRock Benefits

Delivering highly accurate, real-time temperature and maturity data, intelliRock ensures quality, safety, and cost-savings – and helps owners, engineers, and contractors make timely, intelligent decisions:

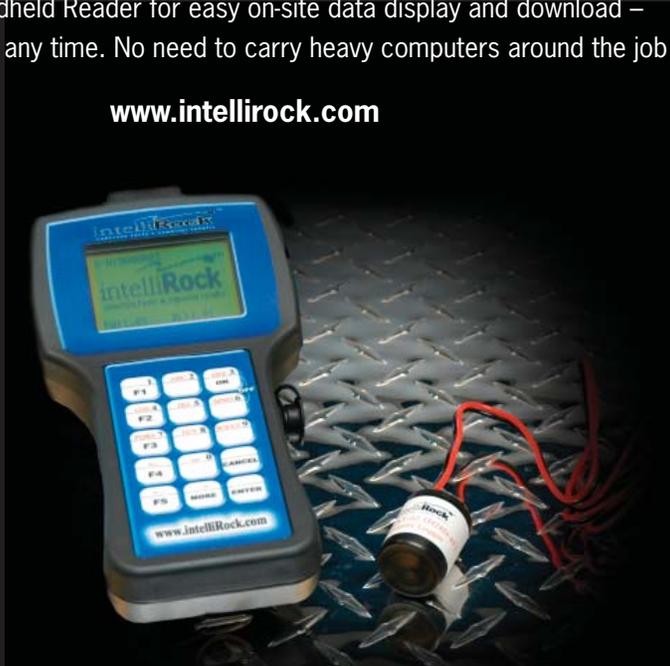
- Accelerated workflow to save days per pour – and weeks on large projects.
- Reduced expenditure for forms, equipment, testing, and man-hours.
- In-situ temperature monitoring for accurate, economical temperature control.
- Improved safety, especially in cold weather when concrete is slow to cure.
- Rapid detection of mix inconsistencies for faster error recovery.
- Data integrity and assured accountability from uninterrupted, unalterable data.
- New opportunities to earn early completion bonuses.

## intelliRock Advantages

intelliRock utilizes – and optimizes – the maturity method, adopted as an industry standard by ASTM, ACI, NIST, and others, offering real advantages over traditional cylinder testing and other maturity products:

- More accurate than lab- or field-cured PCC test cylinders.
- Real-time data for faster decisions. No waiting for 2-, 3-, or 7-day breaks.
- A complete system for worksite and office convenience.
- Rugged Loggers protected by resin casing and surrounding concrete
- Portable handheld Reader for easy on-site data display and download – anywhere, at any time. No need to carry heavy computers around the job site.

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



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