

IMPACT STATEMENT



*Vision:
The RMC Research & Education Foundation is a lasting resource for increasing quality, professionalism, and sustainability in the ready mixed concrete industry by funding high quality, high value, non-proprietary research and education programs.*

**JULIE GARBINI
EXECUTIVE
DIRECTOR**

**RMC RESEARCH
& EDUCATION
FOUNDATION**

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The RMC Research & Education Foundation's Work Delivers Results to the Industry & Community

- ◆ Increased understanding and application of the **energy** and **environmental benefits of concrete** (*MIT Concrete Sustainability Hub Life Cycle Assessment Interim Reports, 2010; Ready Mixed Concrete Industry LEED Reference Guide, 3rd Edition 2009; Study on Higher Volume Fly Ash Concrete and companion Guide for the Construction Team, 2008; Effect of Pavement Type on Fuel Consumption and Emissions in City Driving, 2010; Optimizing Concrete Mixtures for Performance and Sustainability, underway; Materials assembled in CD "Research Supporting Sustainable Development"*)
- ◆ **Savings** of approximately **\$300 million annually in materials and disposal costs** and better **environmental stewardship** through reuse of crushed concrete as aggregate (*Crushed Concrete Aggregate Study, 2007*); **enhanced sustainability** of the concrete production process (*Sustainable Concrete Plant Guidelines, 2011; MIT Concrete Sustainability Hub Concrete Science Work Plan*)
- ◆ Expanded use and performance of **pervious concrete** as a **sustainable building material** and as a **stormwater management tool** (*Pervious Concrete Research Compilation, revised 2011; studies on maintenance and hydraulic performance, 2007; study on long-term field performance in variable climates, 2007; Performance Evaluation of In-Service Pervious Concrete Pavements in Cold Weather, 2011; study of pervious concrete and porous asphalt, 2009; research on wearing course applications, 2011; Green Highways Partnership training for specifiers, underway*)
- ◆ **Reduced permitting fees** for transit-mixed plants of **approximately 25%** based on study data adopted into EPA AP-42 (*Air Emissions Studies and Data Analysis, 2004-2005*)
- ◆ **Better concrete performance** and **reduced materials costs** through expanded use of **performance-based specifications** (*MIT Concrete Sustainability Hub Concrete Science Work Plan; P2P Experimental Case Study, 2006; Model Language for Performance-Based Specs, 2008; and support of ACI Report on Performance Criteria, 2010; Optimizing Concrete Mixtures for Performance and Sustainability, underway; Materials assembled in CD "Research to Support the P2P Initiative"*)
- ◆ **Increased quality** and use of **SCC** in cast-in-place applications as lateral pressure exerted on formwork by SCC is better understood (*SCC Formwork Pressure Study, 2010*)
- ◆ **Improved quality** of concrete and **enhanced credibility** for producers to carry out performance-based specifications through development and implementation of a quality management system (*Guideline for a Quality Management System, 2008; P2P Initiative CD*)
- ◆ Overall concrete industry **savings of \$63 million** in exemption from OSHA's Hexavalent Chromium rule and assured protection of employees (*Hex Chrome Exposure Study, 2004*)
- ◆ Enhanced **safety** of individuals in communities susceptible to catastrophic weather events and research to support **strengthening building codes** (*Hurricane Katrina Study, 2006*)
- ◆ **Enhanced credibility** for plant inspections and **increased batching accuracy** (*Guide for Inspection of RMC Production Facilities, 2007; Batching Accuracy Study, 2007*)
- ◆ Expanded opportunity to **leverage over \$2 million** in government funding for concrete research through **partnering** and meeting industry funding match requirements

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- ◆ Development of **tools to better test, predict and model concrete performance** (*Performance Alternatives to Durability Provisions of ACI 318, underway; NIST Virtual Cement & Concrete Testing Lab, on-going*)
- ◆ Development of **guidelines and tools to optimize design** of concrete pavements (*Development of a Guide to Concrete Overlays for Asphalt Parking Areas, underway; Refinement of Erosion Design Tool for Low Volume Concrete Roads and Parking Lots, underway*)
- ◆ Strategic plan toward **standardizing building information modeling (BIM)** software platforms to enhance tools for specifiers designing in concrete (*Development of Industry Foundation Classes for Structural Concrete Components, underway*)
- ◆ Development of courses, instructor materials and certification programs to enhance employee performance and invest in the industry's most important asset: its personnel
- ◆ Training Materials and Certifications:
 - ⇒ Spanish Translation of NRMCA's Truck Mixer Driver Manual and Five Concrete Delivery Professional Program Modules
 - ⇒ Certified Concrete Delivery Professional Training Videos
 - ⇒ Pervious Concrete Contractor Certification Craftsman Text
 - ⇒ Plant Operator Certification Textbook and Instructor Materials
 - ⇒ Participation in Green Highways Partnership Training for Municipalities and State DOT's on use of stormwater management tools like pervious concrete
 - ⇒ Co-Funding with state DOTs of CP Tech Center National Training Program for State and Local Public Agencies on Cement-Based Paving Products
- ◆ Course Development:
 - ⇒ The Effective RMC Supervisor Course
 - ⇒ Financial Management Course for Non-Financial Managers
 - ⇒ Ready Mixed Concrete Plant Manager Certification
 - ⇒ Certified Concrete Sales Professional Program and Ready Mixed Concrete Sales Manager Training Course and Certification
- ◆ Concrete Industry Management Program:
 - ⇒ Long-term support committed for the industry's premier undergraduate degree program at Middle Tennessee State University, Arizona State University, California State University—Chico, New Jersey Institute of Technology, and Texas State University with 500 students currently enrolled as majors and over 600 graduates
 - ⇒ Partner with CIM Universities on research and education programs (Pervious Concrete Research Compilation; Supervisor Workshop Course development)

Donations to the RMC Research & Education Foundation are tax deductible (Fed Tax ID # 52-1680963).

Our endowment goal will generate at least \$1 million in program funding annually, **forever**.

The Foundation supports practical and applied research and education programs that can be used by associations and individual companies to increase professionalism and quality in the industry.

We carefully review proposals to avoid duplication of effort and maximize opportunities for cooperative research with industry partners and government agencies.

The Foundation does not engage in proprietary research that could undermine private interests.

www.rmc-foundation.org