



**AGGREGATE & READY MIX**  
ASSOCIATION OF MINNESOTA



Lake Superior College



**2006 - 2007**

**Mn/DOT Certification Courses  
and Recertification Courses**

**Presented by ARM of Minnesota in  
Cooperation with Lake Superior College**

Aggregate Production

Concrete Field 1 – Mn/DOT and ACI

Concrete Field 2

Concrete Field Recertification – Mn/DOT only

Concrete Plant 1

Concrete Plant 2

Concrete Plant 1 Recertification

Concrete Plant 2 Recertification

Concrete Flatwork Finisher & Technician – ACI

**ARM Registration Office**

12300 Dupont Ave. South

Burnsville, MN 55337

(888) REDI-MIX (888.733.4649)

registration@armofmn.com

www.armofmn.com

Fax: 952.707.1251

## Aggregate & Ready Mix Association of Minnesota (ARM)

ARM is united and committed to the aggregate & ready mix concrete industries for the purpose of promotion, education, environmental awareness and government affairs while serving as a responsible citizen to our customers, employees, and neighbors.

ARM is a statewide, non-profit association of producers and businesses who have a common interest in the production of aggregates and ready-mix concrete. Members include aggregate and concrete producers, cement and fly ash producers, admixture suppliers, mining and trucking equipment suppliers, engineering and legal firms, and various other companies related to the industry.

ARM promotes the use of the various products produced by its members and represents the industry interests with other state and national associations. ARM works vigorously to insure that its members and customers are kept current of the latest technologies and developments. To accomplish this goal, ARM is sponsoring the technical certification training in conjunction with the Minnesota Department of Transportation and Lake Superior College, Duluth, MN.

### ARM Staff

Fred Corrigan – Executive Director  
Jill Cohen – Operations Manager  
Margaret Mills – Communications & Events Director  
Dan Frentress, P.E. – ACI Education Coordinator  
Suzanne Johnsrud – ACI Registration Coordinator

Registration Office (888) 733-4649  
email: [registration@armofmn.com](mailto:registration@armofmn.com)

## Minnesota Department of Transportation Certification Program

Most states across the nation require some sort of certification or qualifications for construction and materials testing technicians. These programs vary somewhat from state to state, but have a common theme: they try to gauge technical expertise and ensure a minimum level of competence.

Mn/DOT has developed a number of areas of technical certification utilizing technical expertise from Mn/DOT, private industry and educational institutions and has engaged instructors with technical competence and experience to present the courses.

Since aggregate technology is common to most areas of highway construction, the Aggregate Production class has been developed as a required introductory course to the other training classes in Grading and Base, Bituminous and Concrete Plant. There is no recertification for this class. Successfully passing the class is only required once.

Further information on the classes offered in the Mn/DOT Certification Program may be obtained by contacting the Technical Certification Office at (651) 297-7195 or (651) 296-3126 or write to:

**Mn/DOT – Construction Office**  
Technical Certification Section  
John Ireland Blvd., MS 650  
St. Paul, MN 55155-1899  
<http://www.dot.state.mn.us/const/tcp/>

## Aggregate Production

Aggregate and Ready Mix Association of Minnesota (ARM), in cooperation with Lake Superior College, and Minnesota Department of Transportation, is offering Aggregate Production classes on the dates and locations as shown.

The topics to be presented in this course include aggregate applications, sources, production, specifications and identification of rock types and unsound materials. The course includes a full day of laboratory work doing sampling and splitting, coarse and fine aggregate gradations, specific gravities, spall content, and percent of crushed particles.

While this is an introductory class, students are expected to have a **workable knowledge of mathematics and be able to perform math functions on hand-held calculators**. Certification will require completing the lab exercises and passing the open book examination with a score of at least 70%.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a high-lighter.

- Prerequisite: None
- No recertification required
- Length: 3 days (1 College Credit) from 8:00 AM – 4:30 PM
- Professional Development Hours (PDH): 18 PDH
- Fee: \$325
- Instructors: Tom Hunt Mn/DOT (Ret.) and Dan Frentress, P.E.

### Course Dates and Locations

AG1257	Rochester DOT	Nov. 28-30, 2006
AG1258	Rochester DOT	Nov. 29-Dec. 1, 2006
AG1259	Baxter DOT	Dec. 4-6, 2006
AG1260	Baxter DOT	Dec. 5-7, 2006
AG1261	Mankato, Country Inn	Jan. 9-11, 2007
AG1262	Mankato, Country Inn	Jan. 10-12, 2007
AG1263	Detroit Lakes DOT	Jan. 16-18, 2007
AG1264	Detroit Lakes DOT	Jan. 17-19, 2007
AG1265	Mn/DOT Maplewood Lab	Jan. 22-24, 2007
AG1266	Mn/DOT Maplewood Lab	Jan. 23-25, 2007
AG1267	Bemidji DOT	Feb. 6-8, 2007
AG1268	Bemidji DOT	Feb. 7-9, 2007
AG1269	Willmar DOT	March 6-8, 2007
AG1270	Willmar DOT	March 7-9, 2007
AG1271	Duluth DOT	April 9-11, 2007
AG1272	Duluth DOT	April 10-12, 2007

# Concrete Field 1 and 2 Certification and Recertification

## Concrete Field Testing Technician Level 1

This Concrete Field 1 class offers certifications for **BOTH ACI and Mn/DOT**. The certification you would like to receive will be indicated by the fee level you select on the registration form.

The course is for those who produce, test and inspect Portland cement concrete. The test procedures presented include slump, strength, air contents, unit weight and sampling. To be certified the technician must pass both the written and performance examination. Actual tests will be performed on the second day. Field work clothes suggested.

CF1216	Mn/DOT Tng & Conf Ctr	Nov. 15-16, 2006
CF1217	Mn/DOT Tng & Conf Ctr	Dec. 20-21, 2006
CF1218	Mn/DOT Tng & Conf Ctr	Jan. 10-11, 2007
CF1219	Ramsey County Public Works	Jan. 31-Feb. 1, 2007
CF1220	Mn/DOT Tng & Conf Ctr	Feb. 27-28, 2007
CF1221	BASF, Eagan*	Mar. 14-15, 2007
CF1222	Rochester DOT	Mar. 20-21, 2007
CF1223	Bemidji DOT	April 16-17, 2007
CF1224	Mn/DOT Tng & Conf Ctr	April 18-19, 2007

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: None
- Length: 2 days (1 College Credit) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 12 PDH
- Fee: \$315 ACI & Mn/DOT Certification  
\$265 Mn/DOT Certification Only
- Instructors: Ann Johnson, P.E., Dan Frentress, P.E.

## Concrete Field 2

This class is designed for the more experienced Technician and is recommended for those who are responsible for concrete inspection of paving, curb and gutter, walks, and related structures. The course covers materials technology and construction practices based on Mn/DOT specifications and PCA publications. The student textbook will include specification updates and information from the Mn/DOT Concrete Manual. To receive Mn/DOT certification the student must earn a score of at least 70%.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Field 1
- Length: 4 days (2 College Credits) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 24 PDH
- Fee: \$375 (includes student manual)
- Instructors: Dan Frentress, PE, Paul Juckel, Mn/DOT (Ret.), and Maria Masten, P.E., Mn/DOT Concrete Office

CF2079	Mn/DOT Tng & Conf Ctr	Dec. 12-15, 2006
CF2080	Granite Falls, Super 8	Mar. 27-30, 2007
CF2081	St. Cloud DOT	Apr. 3-6, 2007

## Concrete Field Recertification – Mn/DOT only

This class will include updates on the technology of cementitious materials, admixtures and aggregates. Test procedures will be reviewed as well as updates of the specifications and the Mn/DOT Concrete Manual. Durability issues will be discussed with particular emphasis on finishing practices and curing. This class does not provide ACI recertification.

**For ACI Concrete Field recertification, an individual must re-attend, and successfully complete, one of the Concrete Field 1 classes.**

- Prerequisites: Mn/DOT Concrete Field 1 & 2 Certification
- Length: 1 day from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 6 PDH
- Fee: \$150
- Instructors: Paul Juckel, Mn/DOT (Ret.), Maria Masten, PE, MnDOT Concrete Office, Dan Frentress, P.E.

CFR0071	Mn/DOT Tng & Conf Ctr	Dec. 11, 2006
CFR0072	Granite Falls, Super 8	Mar. 26, 2007
CFR0073	St. Cloud DOT	April 2, 2007
CFR0074	Rochester DOT	April 9, 2007
CFR0075	Mn/DOT Tng & Conf Ctr	April 10, 2007
CFR0076	Bemidji DOT	April 11, 2007
CFR0077	Duluth, The Inn on Lake Superior	April 12, 2007
CFR0078	Mn/DOT Tng & Conf Ctr	April 23, 2007

## ACI Concrete Flatwork Finisher Technician Program

This program is designed to provide a basis for certifying experienced concrete finishers, alleviate problems related to improper field practices, upgrade the quality of concrete construction, and prepare the industry for the possibility of mandatory certification in the future. Craftsmen who upgrade their skills and credentials through ACI certification may increase their own opportunities as well as contribute to the advancement of the industry. Before taking this course, students should have a good working knowledge of the proper use of finishing tools, placing, finishing, jointing, curing, and protection.

Those meeting the ACI required work experience (1500 hours per year for 3 years) and passing the written examination, with a score of 70% are certified as a Concrete Flatwork Finisher & Technician.

ACI will also grant certification as a Concrete Flatwork Technician to those who pass the written examination with a score of at least 80%. Upon completion of the required work experience, a Technician can be certified as a Finisher.

- Prerequisites: none
- Length: 1 day from 8:00 AM - 4:30 PM
- Fee: \$185
- Instructor: Dan Frentress, P.E.

CFF&T	BASF Admixtures, Eagan*	Mar 1, 2007
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(Note: a minimum of 10 students required to hold class)

\*BASF is formerly Degussa Admixtures

# Concrete Plant 1 and 2 Certification and Recertification

## Concrete Plant 1

This course is to train and certify technicians in concrete producing plants to meet the requirements of the Certified Ready Mix Plant Specifications. The instruction covers the sampling and gradation of aggregates as well as moisture determinations and batch adjustments. No laboratory work is included in this class. For certification, the student must pass a written exam with a score of at least 70%. Student must be familiar with calculations using a hand-held calculator.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Aggregate Production
- Length: 2 days (1 College Credit) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 12 PDH
- Fee: \$225 (includes student manuals)
- Instructor: Dale Kottke, Mn/DOT (Ret.), and Wendy Garr, Concrete Engineering Specialist

CP1092	St. Cloud DOT	Jan. 30-31, 2007
CP1093	Mn/DOT Tng & Conf Ctr	Feb. 6-7, 2007
CP1094	Rochester DOT	March 6-7, 2007

- **Note:** Those who are seeking recertification for Concrete Plant 1 should take the Concrete Plant 1 Recertification 1 Course.

## Concrete Plant 1 Recertification

This class will review the requirements for ready mix concrete as detailed in the Mn/DOT Certified Plant specifications. Topics will include rates of testing, aggregate gradation and quality issues, moisture control in the mixes, record keeping, and technology updates.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Plant 1 Certification
- Length: 1 day 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 6 PDH
- Fee: \$150
- Instructors: Dale Kottke, Mn/DOT (Ret.), Wendy Garr, Concrete Engineering Specialist

CP1R22	St. Cloud DOT	Jan 29, 2007
CP1R23	Mn/DOT Tng & Conf Ctr	Feb. 5, 2007
CP1R24	Rochester DOT	March 5, 2007

## Concrete Plant 2

This course is for managers, quality control personnel, and inspectors in concrete producing plants who require Level 2 certification to meet the specifications for Certified Ready Mix plants. The course will relate specific performance requirements to the concrete mix design and production controls to produce the specified mixes. The course covers ACI mix design procedures and specific Mn/DOT requirements as well as aggregate and admixture technology. Mn/DOT Plant 2 Certification will be based on satisfactorily passing the course examination and completing a detailed mix design.

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Plant Level 1
- Length: 4 days (2 College Credits) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 24 PDH
- Fee: \$545 (includes student manuals)
- Instructor: Dr. Ken Hover, P.E.

CP2028	St. Cloud DOT	Feb. 27-Mar. 2, 2007
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**Note:** Those who are seeking recertification for Concrete Plant 2 should take the Concrete Plant 2 Recertification course.

## Concrete Plant 2 Recertification

This review is for individuals who have attended the Concrete Plant 2 course. The topics will include an update in performance requirements and mix designs for concrete. Additional discussion will include quality issues and technology updates. **This will be the only session available for Concrete Plant 2 Recertification.**

What to bring to class:

Student manuals are included in the class fees; however, students must bring a calculator, #2 pencils, and a highlighter.

- Prerequisites: Concrete Plant Level 2
- Length: 1 day (1 College Credit) from 8:00 AM - 4:30 PM
- Professional Development Hours (PDH): 6 PDH
- Fee: \$150
- Instructor: Dr. Ken Hover, P.E. and Doug Schwartz, PE; Wendy Garr, Concrete Engineering Specialist

CP2R06	St. Cloud DOT	Feb. 26, 2007
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**AGGREGATE & READY MIX**  
ASSOCIATION OF MINNESOTA

**Registration Office**  
12300 Dupont Avenue South  
Burnsville, MN 55337  
[www.armofmn.com](http://www.armofmn.com)  
[registration@armofmn.com](mailto:registration@armofmn.com)

## Registration Information

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Registrations will be processed on a first come–first served basis. The class sizes are limited, so early registrations are suggested to obtain the date preferred. All registrations must be accompanied by a check or credit card number. **REGISTRATIONS WILL NOT BE PROCESSED WITHOUT PAYMENT AND A Mn/DOT TECH ID #.** (Purchase orders will not be accepted.) Organizations sending several individuals may pay with one check if desired.

Registrations will be confirmed on a daily basis **via email** and U.S. Mail. If you have not received a class or waiting list confirmation notice within two to three weeks, please contact the ARM Registration office to ensure your registration has been received. The confirmation letter will include class date, location and general directions. Hotel recommendations are listed on the ARM web site ([www.armofmn.com](http://www.armofmn.com)) and lodging reservations are the responsibility of the student.

If a registrant's class choices are full, the student will be contacted with alternative options. If all classes are full, the registrant will be placed on a waiting list and will be notified of openings at any location on any date unless otherwise specified.

**Individuals who have a disability, either permanent or temporary, which might affect their ability to perform in a class should indicate the disability on the attached registration form or contact the ARM Registration Office at (888) 733-4649 or [registration@armofmn.com](mailto:registration@armofmn.com).**

### Cancellation Policy

Cancellations and class changes must be made in writing and received by the ARM Registration office at **least seven (7) calendar days** prior to the class. No refunds will be issued after that time. Companies may opt to send replacements to a class. If a student misses a class they are required to re-register and resubmit the class fee.

Cancellations may be mailed to the address on the brochure cover, emailed to [registration@armofmn.com](mailto:registration@armofmn.com) or faxed to (952) 707-1251. If faxing, it is **your responsibility** to make sure the transmission is confirmed.

### Course Rescheduling & Cancellation

ARM, Mn/DOT, and Lake Superior College reserve the right to reschedule and/or cancel courses due to insufficient registrations. Students registered in those classes will be notified and offered an alternative date and/or location, or a refund if requested.

### Retesting

Retesting must occur in conjunction with a scheduled Concrete Field I course for the \$125 fee. If a student fails either the written or performance part of the ACI Field I certification examination, retesting is available on request to the ARM Registration office. A fee of \$125 is charged to cover the cost of processing the ACI exam.

Retesting for any of the other classes can be scheduled through the Mn/DOT Technical Certification office in St. Paul by contacting Greg Johnson at (651) 296-3126.

### Student Information Updates

If a student has a change of job, address, or phone prior to attending their classes, please contact the ARM Registration office with the updated information.

**\*Please note:** The Mn/DOT Trg & Conf Ctr is also known as the Arden Hills Training Center. The Mn/DOT Materials Lab is also known as Maplewood Lab. Duluth "LSC" is Duluth Lake Superior College.

# Class Registration Form

Use this form for Aggregate Production, Concrete Field/Plant, Concrete Flatwork, and Recertifications.

Please use one registration form for each class and each student.

Student Name \_\_\_\_\_

Student e-mail \_\_\_\_\_

Mn/DOT Tech ID (required) \_\_\_\_\_

Registration forms that are received without a Mn/DOT ID will not be processed.

If you do not have a Mn/DOT ID, please contact:  
Suzanne Johnsrud  
email: registration@armofmn.com

Home Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone (\_\_\_\_) \_\_\_\_\_

Name of Business \_\_\_\_\_

Contact Person \_\_\_\_\_

Contact Email \_\_\_\_\_

Bus. Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Bus. Phone (\_\_\_\_) \_\_\_\_\_

Bus. Fax (\_\_\_\_) \_\_\_\_\_

## PLEASE COMPLETE USING COURSE #

1st Choice \_\_\_\_\_

2nd Choice \_\_\_\_\_

3rd Choice \_\_\_\_\_

ARM is pleased to offer its members a discount on Aggregate Production, Concrete Field, and Concrete Plant Courses. If you are a member, please subtract \$10.00 per course.  
(Note: Member discount does not apply to Recertification Courses.)

Please check if you are an ARM member

Payment Options:

Check or Money Order payable to ARM of MN

Charge my credit card: \_\_ Visa \_\_ MasterCard

Charge my employer's credit card \_\_ Visa \_\_ MasterCard

Credit Card # \_\_\_\_\_ Expiration Date \_\_\_\_\_

Name on Credit Card \_\_\_\_\_ CVC# (3 digit # found on back of card) \_\_\_\_\_

Billing Address of Credit Card \_\_\_\_\_

Signature \_\_\_\_\_ Total Due \$ \_\_\_\_\_

## Mail registration form and payment to:

ARM Registration Office  
12300 Dupont Avenue South  
Burnsville, MN 55337  
Fax: 952-707-1251

Suzanne Johnsrud  
888-733-4649  
registration@armofmn.com  
www.armofmn.com

Confirmation letter will be sent **via email** and U.S. Mail to each registrant following receipt of payment.

**Register Register Register Register Register Register**

## Office Use Only

Check # \_\_\_\_\_ Amt \_\_\_\_\_ Rec'd \_\_\_\_\_ Deposited \_\_\_\_\_ CC Auth. \_\_\_\_\_