TRAINING and CERTIFICATION SEMINAR for CONCRETE



1-1

Table of Contents

- 1. Introduction
- 2. WYDOT (ASTM) Test Methods

Temperature, Slump, Unit Weight, Air Content – Pressure,

Making Cylinders & Beams, Curing

- 3. Fundamentals of Concrete
- 4. Batch Water, Aggregate Moisture, W/CM Ratio & Adjusting Slump
- 5. WYDOT Specifications for Portland Cement Concrete Pavement (PCCP)

1-2

- 6. WYDOT Specifications for Structural Concrete
- 7. Admixtures, Hot & Cold Weather Concreting
- 8. Practice Problems
- 9. WYDOT Sample Exam
- 10. Solution to Practice Problems & WYDOT Sample Exam

1_3

Section 1 Introduction



WMTC Concrete Training & Certification Seminar

1-4

Why WMTC Concrete Certification?

- Fulfills testing technician requirements for WYDOT QC/QA concrete projects
- Provides recognition for concrete technicians who have demonstrated ...
 - knowledge & ability to properly perform field tests on fresh concrete
 - a basic knowledge about concrete fundamentals and WYDOT specifications
- · Increases the reliability & confidence level of test results
- · Improves quality control
- Assures accuracy in identifying good quality & substandard concrete

1-5

WMTC Certification

- Administered by the University of Wyoming & WYDOT
- Recognized by State of Wyoming
- Valid for 5 years (must pass all three exams)
- WYDOT Written Exam (take online)
 - 45 multiple choice/True-False Questions (open book & notes)
 - Covers concrete fundamentals & WYDOT Specifications
 - To Pass: 70% overall score or higher (32 correct answers)
- Concrete Testing Written Exam (take online)
 - 50 multiple choice/True-False Questions (open book & notes)
 - Covers WYDOT (ASTM) testing equipment and procedures
 - To Pass: 70% overall score or higher (35 correct answers)
- Concrete Testing <u>Performance</u> Exam covering (take at Cheyenne Lab)
 - Six ASTM Standards Pass/Fail Exam: 2 tries per test (closed book & notes)

Education Materials

For this seminar, you need the following ...

- WMTC Training and Certification Seminar For Concrete (print out materials)
- 2. ASTM Standards (Six Standards on Loan from WTMC)

You will also need a Calculator

1-7

Definitions

ACI International -American Concrete Institute, Farmington Hills, MI

ASTM - American Society for Testing and Materials, West Conshohoken, PA

MTM - WYDOT Materials Testing Manual

PCA - Portland Cement Association, Skokie, IL

SSRBC - WYDOT's Standard Specifications for Road & Bridge Construction

1-8