Customer Services

As part of the MCL's overall goal, technology transfer is not only accomplished through project participation, demonstrations, training, and equipment loan. In an effort to reach a maximum number of transportation personnel with significant project findings, evaluation results and innovative concrete technologies, the MCL provides project reports and publishes papers in journals and symposia proceedings. Presentations at industry conferences and showcases, such as ACI, PCI, ACPA and TRB, are also made to further the transfer of these new technologies. MCL staff can also provide speakers, put on specialized workshops and give telephone assistance.

Tensile bond testing of ultra-thin whitetopping.

Contacts

If you are interested in one or more of the services provided by the Mobile Concrete Laboratory, you can contact your FHWA resource center, division office, or the MCL staff directly. Gary Crawford, Project Manager, can be reached at (202) 366-1286 and Leif Wathne, MCL Project Engineer, can be reached at (202) 366-1335. Both are located in the Office of Pavement Technology in Washington DC.

Tony Kane (l) and other visitors being briefed in FHWA's mobile concrete laboratory.

U.S. Department of Transportation
Federal Highway Administration
Office of Pavement Technology
400 7th Street, SW
Washington DC 20590

August 2000 **FHWA-IF-00-028**

FHWA
Mobile Concrete
LABORATORY

Transferring Advanced Concrete Technology To Our Partners

U.S. Department of Transportation
Federal Highway Administration

Mission

Federal Highway Administration's Mobile Concrete Laboratory (MCL), managed by the Office of Pavement Technology introduces federal, state and local transportation personnel to the state-of-the-art concrete technology in materials selection and mixture design, as well as field and laboratory testing. In an effort to bridge the gap between research and the field, the MCL accomplishes this technology transfer in one of several ways:

- By conducting on-site field testing at construction projects to supplement state highway agency (SHA) testing,
- By training SHA personnel to get "hands-on" experience with new technologies and test equipment,
- By showcasing equipment and technology at industry conferences, symposiums, and SHA facilities to familiarize transportation personnel with state-of-the-art technology,
- By providing an equipment loan program where SHA personnel can borrow equipment for various lengths of time after having been trained in its use by MCL staff.

The current focus of the MCL includes high performance concrete (HPC) for pavements and bridges, nondestructive testing, and performance related specifications (PRS). An active partnership with manufacturers, contractors, industry associations and academia is encouraged and maintained in all of the MCL's activities.

Technology

Field demonstrations are performed using a fully equipped mobile concrete testing laboratory which can perform a wide range of concrete tests, including conventional destructive tests as well as new and innovative nondestructive tests. These capabilities include:

Conventional QC Tests:

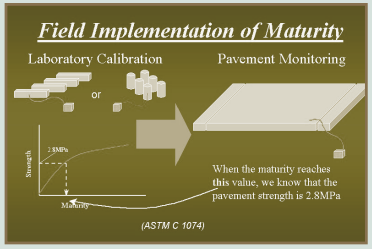
- Temperature, slump, air content, unit weight
- Strength (compression, flexural, splitting tensile)
- Elastic Modulus and Poisson's Ratio

Use of Impact-echo to find joint deterioration.

Nondestructive and In Situ Tests:

- Match Curing
- Maturity Testing
- Tensile Bond Strength
- Pull Out Strength
- Surface Hardness
- Impact Echo
- Pulse Velocity
- Reinforcing Steel Locator

NHI Training Course.



Overview of maturity testing.

Durability Related Tests:

- Microwave Water Content
- ASR Detection
- Rapid Chloride Permeability
- Surface Airflow Permeability
- Coefficient of Thermal Expansion
- Linear Traverse/Modified Point Count
- Air Void Analyzer
- Vibrating Slope Apparatus
- Aggregate Gradation Software
- HIPERPAV Software