



# MDOT Construction

2013 County Road Association  
of Michigan

**County Engineers' Workshop**

# Construction Topic Overview

- Contract Administration
  - Issues and trends
- Density
- Geotechnical
- Paving
  - Concrete and Hot Mix Asphalt (HMA)

# Contract Administration Issues

- Timeliness
  - Pay Estimates, Contract Modifications, Project Closeout
- Project Inspection and Oversight
  - Qualifications
  - Staffing
- Documentation
  - EOT, Progress Clause, MOT
- Buy America

# Contract Modifications

- STC/SAB Process > 200 days
- Current Requirements
  - BOHIM 2012-03
  - Maximum approval 64 days for Tier III
  - Additional Oversight Signatures
    - Mandatory Local Agency signature.
- Tier III Average Time
  - 39 days handwritten signatures
  - 6 days electronic signatures

# E-Sign Contract Modifications

- Tier I e-signed cont mods can be approved within minutes.
- Eliminates mail time
- e-Sign has minimal cost
- Can't refuse e-Sign (via e-Sign Act 6/2000)
- Contractors being paid 4-5 times faster.

# e-Construction

- 5 Major Components
  - 3D Plans/Model at Bidding (GPS equipment)
  - e-Signature Mandatory
  - Paperless Projects (Electronic Records)
  - Contractor submits to ProjectWise (no software)
  - New MDOT e-filing system
- Saves Time and Cost
  - For MDOT, Contractors, Subs, Suppliers, Local Agencies & Consultants.

# e-Construction

- 4 Pilot projects (> \$120 million)
- Direct Cost Savings
- Immense Time Savings
- Transparent
- Accountable
- Reduced Construction Cost
- Goal is 2014 Statewide Implementation

# Geotechnical

- Subsurface investigation
  - Appropriate Design (site conditions)
  - Depth of Investigation
- Density Reports
  - Submitted daily to project office for QA review
  - Submitted weekly to Lansing Density Unit and Region Area Density Supervisor



# Geotechnical

- Drilled Shaft Construction
  - New specification 718 in the 2012 SSFC
- Tremie Pour Checklist
  - Under development
- LRFD Plan Notes
- Pile Forms (1157L, 1161L)
  - Provide final copies not raw data

# Paving - Concrete

- Quality Assurance/Quality Control
  - New Special Provision 12SP604(A) for Local Agency Projects only.
  - “Quality Assurance” pay item no longer applies
  - “Conc Quality Initiative” pay item no longer applies
  - All QA calculations made by Agency
  - Costs for QC program and initial curing facilities are included in unit prices for the work...no additional payment

# Paving - Concrete

- Concrete Pavement Repairs
  - Maturity Method of Acceptance
    - Beam Breaks with specified minimum flexural strength required.
    - 28 Day Cylinders for acceptance of pavement repair not required.
  - Better definitions
    - “Repair” versus what is a “Replacement”.

# Paving - Concrete

- Simplified the concrete patching mixture selection as follows,
  - Less than 72 hours opening to traffic: Grade P-NC at 300 psi flexural strength
  - 72 hours or greater opening to traffic: Grades P1 or P1M at 550 psi opening to traffic strength
- Note: MDOT Grade HE concrete no longer exists

# Paving - HMA

- Documentation
  - Density
    - Proper documentation must be recorded.
  - Temperature
    - Needs to be recorded on load tickets.
  - Calculations of Yield
    - Many times a number is given but not the calculations that support it.
  - JMF
    - Written up for the project prior to the start of paving.

# Paving - HMA

- Pre-Production meetings
  - QC/QA testing requirements
  - Communication Plan
  - JMF
  - Testing responsibilities

# Contract Administration Handouts

- Administration
  - Common deficiencies
- Density
  - Construction Advisory 2009-13 Density Testing and Inspection
  - Report Review Information
- Share with Construction Staff

# Questions

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