Materials Quality Assurance
Stewardship Reviews

Mid-Atlantic Quality Assurance
Workshop - February 2017

FHWA Materials and Quality Assurance Team
QA Review Objectives

- Evaluate State’s QA program
- Capture and Promote Best Practices
- Compliance with 23 CFR 637 B
  - Quality Assurance Procedures for Construction
- Assess and Minimize Risks
- Improve Material Quality and Efficiency
QA Stewardship Reviews

• Typically 5 states per year
• 50 states plus 10 follow-ups since 2003
• Structured program review
• Site visits to evaluate implementation
QA Review Teams

• FHWA Office of Infrastructure
• FHWA Resource Center
• FHWA Division Office P&M Engineer
• State Staff: Materials & Construction
  • Statewide / central office
  • District / region
QA Program

• Random numbers / sampling
• Sample security
• Independent Assurance tolerances
• Design-Build QA roles
• Pavement smoothness testing
Asphalt Quality

• Mix design validation
  • Aggregate specific gravity ($G_{sb}$)
  • Mixture maximum gravity ($G_{mm}$)
  • AC correction factor

• Monitor aggregate gravity ($G_{se}$)

• Validation of contractor data for acceptance
Asphalt Best Practices

• Joint density specifications
• Volumetrics used for acceptance
• Sampling behind the paver
• MSCR in lieu of “PG plus” tests
• Percent within limits specifications
QA Best Practices

• Electronic data records
• IA: System vs. Project approach
• Utilize NTPEP data
• Regional coordination
• Routine QA program review
QA Reviews & Asphalt Acceptance

Use Contractor test results
Use Only State Tests for Acceptance
Reviewed - Use Contractor test results
Reviewed - Use Only State Tests for Acceptance

(Based on 2014 FHWA Quality Assurance Assessment.)
QA Reviews - Outcomes

- Spread best practices
- Monitor regulatory compliance
- Identify national challenges & weaknesses
- Guide for improvement opportunities
QA Reviews - Future

• Planned 2017: PR, ND, 3 more
• Risk based selection
• Coordination
  • FHWA Division Office
  • State DOT
References

• Contact: Jeff Withee
  jeff.withee@dot.gov or 202-366-6429

• FHWA Quality Assurance Stewardship Activities
  http://www.fhwa.dot.gov/pavement/stewardship.cfm

• FHWA Policy and Guidance Center – Materials and Quality Assurance
  http://www.fhwa.dot.gov/pgc/index.cfm?ddisc=52&dsub=1006