FHWA Construction Contracting Issues Update

AASHTO Subcommittee on Construction

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The winds of change are blowing . . .
United States
Department of Transportation

Modal Administrations

- Federal Aviation Administration (FAA)
- **Federal Highway Administration (FHWA)**
- Federal Motor Carrier Safety Administration (FMCSA)
- Federal Railroad Administration (FRA)
- Federal Transit Administration (FTA)
- Maritime Administration (MARAD)
- National Highway Traffic Safety Administration (NHTSA)
- Office of Inspector General (OIG)
- Office of the Secretary of Transportation (OST)
- Pipeline and Hazardous Materials Safety Administration (PHMSA)
- Saint Lawrence Seaway Development Corporation (SLSDC)
Role of the US DOT
Office of the Inspector General

Office of Inspector General
U.S. Department of Transportation | Calvin L. Scovel III, Inspector General

OIG Accomplishments: Semiannual Report

Audits
- 39 audit reports
- 138 recommendations

Investigations
- 25 convictions
- 31 indictments
- 160 investigations opened
- 108 cases referred for criminal prosecution

Return on Investment
- $54 Fiscal Year 2016
- $1

Recommendations
- Open Audit Recommendations: 460
- Open Financial Recommendations: $6,034,246,982
Current OIG Audits of FHWA Programs

2017 Audit of FHWA’s Oversight of Engineer’s Estimate

• Accurate estimates are necessary to effectively budget programs and to serve as an accurate gauge in assessing competition.

2017 Audit of FHWA’s Oversight of Force Account Procedures

• Primarily focusing on FHWA’s review and approval of force account approvals for public agency work and RR/utility work
• Not focusing on change order force account procedures
FHWA Risk Based Stewardship and Oversight (RBSO)

- Personnel limitations
- Delegation to States
  - State to act “on BEHALF” of FHWA
  - Projects Of Division Interest involvement
  - Focused Program/Process Reviews
  - Engineering and Financial duties
An example: FHWA Risk Based Stewardship and Oversight

FHWA Missouri Division (22 employees)
- 5 Transportation Engineers
- 1 Team Leader
- 1 Bridge Engineer
- 1 Pavement / Materials Engineer

FY 2016 FHWA Construction Authorizations
- $767 M Obligated for approximately 582 projects totaling $1,069 M
- Project of Division Interest (PoDI) plans = 90
- Compliance Assessment Program
- Financial Integrity Review and Evaluation (FIRE) reviews
Quantification of Cost, Benefits and Risk Associated with Alternate Contracting Methods and Accelerated Performance Specifications

AASHTO Subcommittee on Construction
Keith R. Molenaar, PhD.
University of Colorado

Dr. Molenaar’s 2016 Presentation and handout:
https://construction.transportation.org/annual-meetings/
2016 Design-Build State Laws for Transportation Procurement
(Source: http://www.dbia.org/advocacy/state/Pages/default.aspx)
Public-Private Partnerships:
States with Significant Transportation Public-Private Partnership Enabling Statutes

- Toll Concession
- Asset Lease
- Pre-Development Agreement
- Design-Build-Finance
- Availability Payment Concession

States with CM/GC Experience
Available FHWA Innovation Deployment Funding

- Accelerated Innovation Deployment (AID) Funding
  - Up to $1m per award
  - Project initiates within 12 months
  - [https://www.fhwa.dot.gov/innovation/grants/](https://www.fhwa.dot.gov/innovation/grants/)

- State Transportation Innovation Council (STIC) Incentive Funds
  - Up to $100,000 per year
  - contact your FHWA division office & the FHWA CAI office
  - [https://www.fhwa.dot.gov/innovation/stic/](https://www.fhwa.dot.gov/innovation/stic/)

- MAP-21 Section 1304 Innovative Project Delivery Funding
  - Up to 5% increased federal share
  - [https://www.fhwa.dot.gov/innovation/resources/increased_federal_share.cfm](https://www.fhwa.dot.gov/innovation/resources/increased_federal_share.cfm)
### e-Construction & Partnering

**Tools & Technologies promote:**

<table>
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<tr>
<th>Category</th>
<th>Promoted Features</th>
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<tr>
<td>Transparency</td>
<td>- Open access &amp; sharing of records</td>
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<tr>
<td>Project Team Identification</td>
<td>- Early alignment &amp; integration</td>
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<td>- Mutual trust, respect, &amp; understanding of mutual goals</td>
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<tr>
<td>Streamlined Process/Procedures</td>
<td>- Efficiency &amp; Accountability</td>
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<td>Early issue resolution &amp; Dispute Detection</td>
<td>- Proactive instead of reactive</td>
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<td>- Open &amp; honest communication</td>
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3D Engineered Models/CIM support

Data converts to information that can be used to make decisions that save on costs, time, RFI’s and improve safety!

The Digital Transformation of the Construction Industry

- Significantly improved outcomes:
  
<table>
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<th>Performance Metrics for Contractors (all sizes)</th>
<th>More Than 5%</th>
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<tr>
<td>Percentage Reduction of Final Construction Cost</td>
<td>41%</td>
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<tr>
<td>Percentage of Accelerated Project Completion Due to Schedule Compression</td>
<td>45%</td>
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<tr>
<td>Percentage of RFI Reduction</td>
<td>63%</td>
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<tr>
<td>Percentage Reduction in Number of Reportable Safety Incidents</td>
<td>14%</td>
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Benefits of 3D Modeling for Structures

- Improves workflow from detailing to fabrication
- Provides one source for data
- Improves the “3C’s” among project stakeholders
- Supports fit verification & clash detection
- Reduces errors & eliminates redundant/manual efforts

Image Sources: Wisconsin DOT
Bridge Bundling

• Condition & aging of the nation bridges—driving force
• Leading States: GA, MO, NY, PA, OH, & OR
• FAST ACT Sec. 1111(j), Bundling of Bridges
  • Encourage States to bundle 2 or more similar eligible bridges and award a single contract for engineering and design or construction – a bundled project may be listed as one project in the MPO TIP or State STIP
  • Using STBG and/or NHPP Funds
  • Objective is to save time and cost and speedily reduce number of bridges in poor condition (56,000 as of 12/2016)
FAST ACT: Encourage Spending on Off-System Bridges

- Maintains Current Set-aside for Local Off-system Bridges.
- Provides flexible funding, Surface Transportation Block Grant (STBGP), to best address State and local transportation needs.
- Increases the percentage of STBGP funds that are sub-allocated to local areas from 51 percent in fiscal year 2016 to 55 percent in fiscal year 2020.

Bundling Bridge Projects to Save Money and Build Faster
1. NHI Risk-based Estimating eBook Training
2. RBE Application Tool
   - Excel app free of proprietary software
3. RBE On-site/online Applications Workshop
   - Application of tool and fundamentals of RBE estimating

EBook –
- Fundamentals
- Process & Procedure

Application Tool
- Case studies
- Exercises
- Joint projects
Federal-aid Essentials
https://www.fhwa.dot.gov/federal-aidessentials/
In Closing

- Federal Highway is changing
  - FHWA personnel
  - Regulation reform
  - Innovation
  - Resources
Contact

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