FHWA Update
AASHTO Committee on Construction
August 13, 2018
Pittsburgh, PA

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Associate Administrator, Office of Infrastructure
U.S. DOT, Federal Highway Administration
Overview

• Hot Topics
• Every Day Counts (EDC)
• Other topics of interest

All images FHWA unless otherwise noted.
March 22, 2018 Omnibus Spending Bill

- $1.3T split among 12 agencies
- $47.5B for highways ($2.525B above FAST Act)
  - $2B funneled through STBGP
  - $300M to Federal Lands/Tribal program
  - $225M to a new bridge program
Competitive Highway Bridge Program
Statutory Requirements

- $225M for highway bridge replacement and rehabilitation projects on public roads.

- Projects must demonstrate cost savings through bundling [23 U.S.C. 144(j)]

- Funding comes from the General Fund and requires a match (80%/20% or sliding scale).

- Funds must be obligated by September 30, 2021 (must be expended by September 30, 2026).

- Funding is eligible to States with a population density of less than 100 people per square mile based on the 2010 census and a State’s total land area.
States **Eligible** for the FY18 Omnibus Competitive Highway Bridge Program
Unmanned Aerial System (UAS)

- UAS Usage
  - Surveying and Mapping
  - Remote Inspection
  - Geospatial Tagging
  - Operations and Incident Management
  - Construction
USDOT UAS Integration Pilot Program

- Partnerships to accelerate safe UAS integration.
- Help USDOT and FAA craft new enabling rules
  - Balance local and national interests
  - Improve communications
  - Address security and privacy risks
  - Accelerate the approval of operations that currently require special authorizations
- 10 Selectees announced May 9\textsuperscript{th}, 2018.
Asset Management Program

23 CFR Part 515: Asset Management Plans
Images: Parsons Brinckerhoff and San Francisco County Transportation Authority
Transportation Performance Management Program

**Investment Decisions**
Using goals, measures, and data to make better informed decisions about how to invest transportation funding.

**Aimed at a Better Performing Transportation System**
Setting targets, developing plans, reporting results, and being accountable for performance.

**For Connected and Productive Communities**
Focusing on the efficient delivery of goods and safe, reliable journeys to work, to school, to shopping, to community activities.
FHWA Every Day Counts (EDC)

Market-ready + Proven + Underutilized

Visit FHWA Website: [https://www.fhwa.dot.gov/innovation/everydaycounts/edc_5/](https://www.fhwa.dot.gov/innovation/everydaycounts/edc_5/)
EDC-4 e-Construction & Partnering Deployment Activities

Website Resources

Peer Exchanges

Webinar Series

Regional Workshop - PA

FHWA Tech Documents

Informational YouTube Videos

https://www.fhwa.dot.gov/construction/econstruction/

Image Sources: FHWA, Michigan DOT
e-Construction Implementation

Baseline (February 2017)  
Current (June 2018)  
Goal (December 2018)  

Source: FHWA CAI / Division Offices
e-C&P Implementation

Baseline (February 2017)
- Institutionalized: 11
- Assessment: 4
- Demonstration: 6
- Development: 11
- Total: 22

Current (June 2018)
- Institutionalized: 13
- Assessment: 6
- Demonstration: 9
- Development: 7
- Total: 19

Goal (December 2018)
- Institutionalized: 17
- Assessment: 7
- Demonstration: 5
- Development: 6
- Total: 19

Source: FHWA CAI / Division Offices

Legend:
- DDOT (Washington, DC)
- Federal Lands Highway
- Puerto Rico
- US Virgin Islands
e-Construction: Digital Construction Inspection

- Digital construction inspection is the next step for eConstruction
- Supports ‘BIM for Infrastructure’ and lifecycle asset management
- FHWA has 2 free workshops remaining (Florida will host one)
  - Contact David Unkefer David.Unkefer@dot.gov
- ‘Construction Inspection for Digital Project Delivery’ - TFHRC
  - Contact Matt Corrigan Matthew.Corrigan@dot.gov

Image credit Wisconsin DOT

Image credit Snyder & Associates
Launching EDC-5

- Safety
  - Rural Roadway Departure
  - STEP 2.0

- Mobility
  - Crowdsourcing
  - Weather-Response

- Shortening Project Delivery
  - Project Bundling
  - Value Capture

- Quality
  - UAS
  - Advanced Geotech
  - CHANGE 2.0

- Environment
  - Virtual Public Involvement
## EDC-5 Summits

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EDC-5: Project Bundling

- Single contract award for preservation, rehabilitation, or replacement of several highways or bridges
- FAST Act encourages bridge bundling to save time and cost
- Bridge Bundling Guidebook under development: Fall delivery date
- Goal to expand bundling beyond bridges to include all project types efficiently improving the condition of the Nation’s highways
EDC-5: Unmanned Aerial Systems (UAS or Drones)

- Enhancing Structural Inspections
- Augmenting Routine Construction Inspections
- Improving Emergency Response Operations
Other topics of Interest
Operationalizing Indefinite Delivery / Indefinite Quantity (ID/IQ) Contracting

- Federal Register Notice and Request for Comments to operationalize Indefinite Delivery / Indefinite Quantity (IDIQ) for “low-cost” ID/IQ contracts (published May 2, 2018)


- FHWA Notice - provides guidance for FHWA office to authorize and approve ID/IQ projects (anticipated in mid-year 2018)
Low-cost ID/IQ contracts
- 1 - 2 year contracts
- Categorical Exclusion
- Work orders < $2 million/year

Extensions allowable; May not exceed 5-year term

Must comply with all applicable Federal-aid requirements (NEPA, DBE, other part 635 requirements, etc.)

Best value or multiple-award contracts may still be pursued under SEP-14
Cost Estimate Guidance

• **Estimating Guidance** - FHWA is updating our Guidelines on Preparing Engineer’s Estimate, Bid Reviews, and Evaluation.

• **Estimating Training** - In August 2017 FHWA initiated a task order to develop NHI Training Course NHI-134205 Risk-based Estimating.
New DBE Guidance

- NEW DBE Manual published out of FHWA Office of Civil Rights

Disadvantaged Business Enterprise Program
Administration and Oversight on Projects
with Alternative Contracting and Procurement

Contact Christine Thorkildsen at: Christine.Thorkildsen@dot.gov
Building Information Modeling (BIM) for Infrastructure

Source: Dr. David Jeong, Iowa State University, Presentation August 17, 2016
FHWA Efforts to Explore and Advance BIM

- Construction Inspection for Digital Project Delivery
- Leveraging Augmented Reality (AR) for Highway Construction
- Integrating 3D Digital Models and other Building Information Management Data into Asset Management
- Identifying Data Frameworks and Governance for Establishing Future BIM for Infrastructure Standards
- Developing a FHWA National Strategic Roadmap for deployment of BIM within the U.S.
Bridge Preservation Guide

Available online at: www.fhwa.dot.gov/bridge/preservation/guide/

- Identifies cyclical and condition-based preventive maintenance activities for consistency throughout the nation
- Defines routine maintenance and activities not eligible for Federal funds
- “How to” establish a bridge preservation program
Ongoing FHWA Research

• Quality Assurance Practices and Case Studies for Accelerated Bridge Construction (ABC)

• Documenting Effective Uses of Project Scheduling Methodologies for Project Delivery Methods

• Analysis of Material Source Mergers and Acquisitions on Project Delivery Quality and Costs

• Development of Pavement Performance Related Specifications

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