



Performance Incentives for Public-Private Partnerships (P3s)

WEBINAR SERIES: INNOVATION IN PRACTICE

June 24, 2020

Webinar Logistics



PowerPoint Presentation available on BATIC Website



Submit questions in Q&A box



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Webinar Overview

**Quantification
of Alternate
Contracting
Methods**

**Maryland
Purple Line P3
Project**

**RTD Eagle P3
Project**

Quantification of Cost, Benefits and Risk

Associated with Alternate Contracting Methods and Accelerated Performance Specifications

Keith R. Molenaar
Professor and Dean
University of Colorado

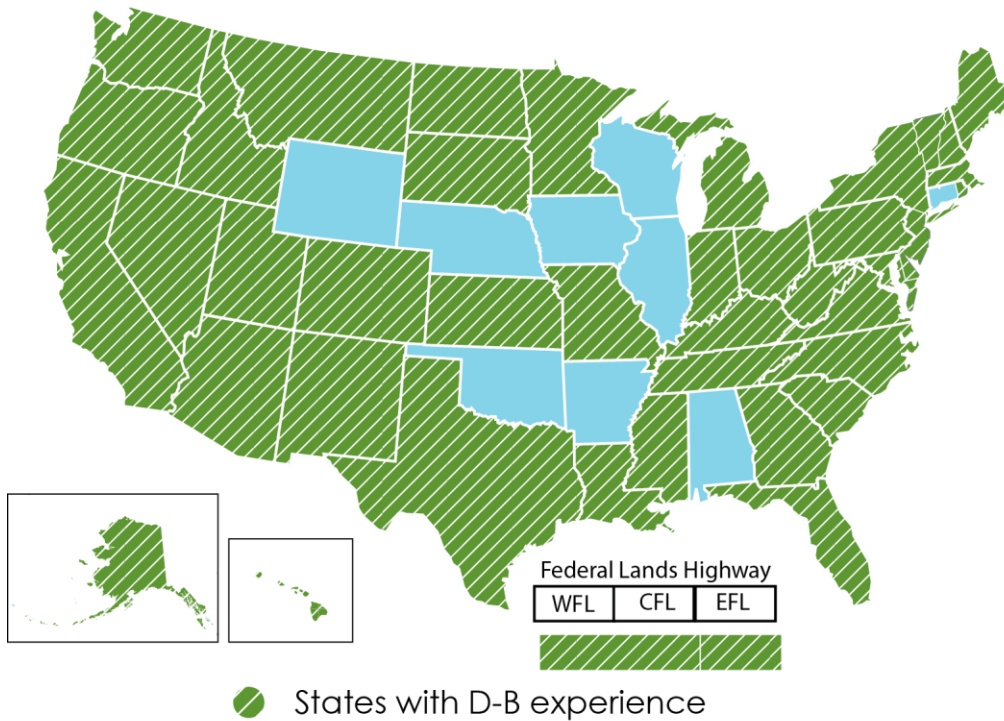
How do delivery methods relate to project performance?

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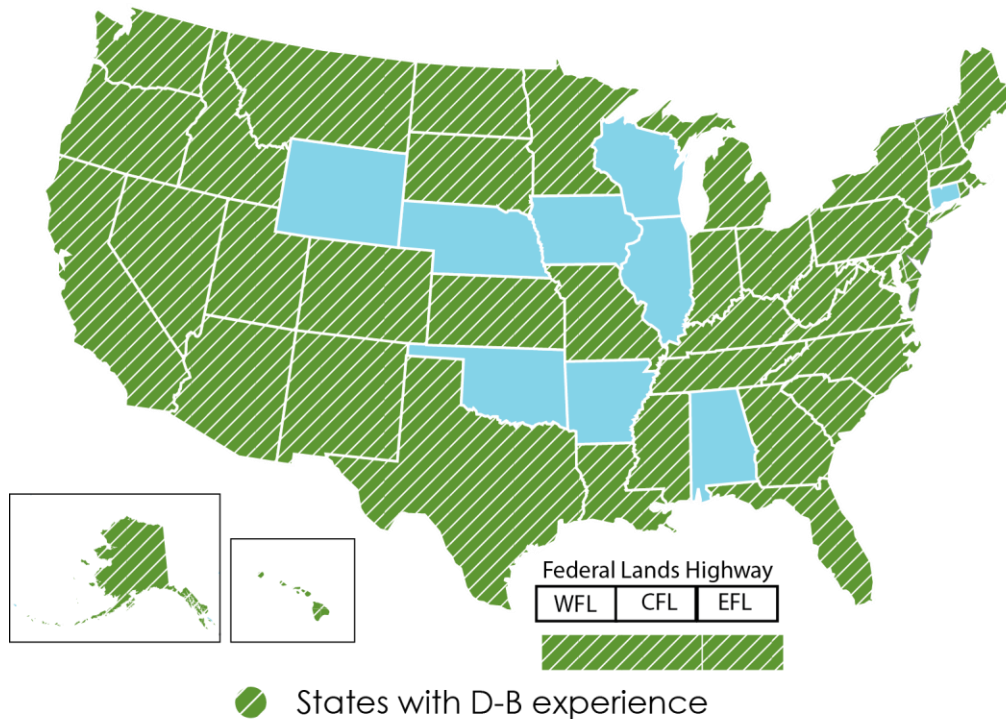
- FHWA-funded, 3-year research study
- More than 15 investigators and research assistants
- Data collected from 291 completed projects
- Deliverables include data analysis and lessons learned



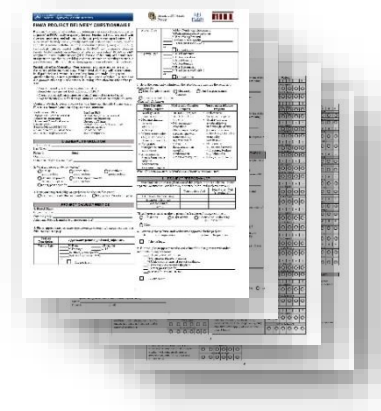
Data Collection



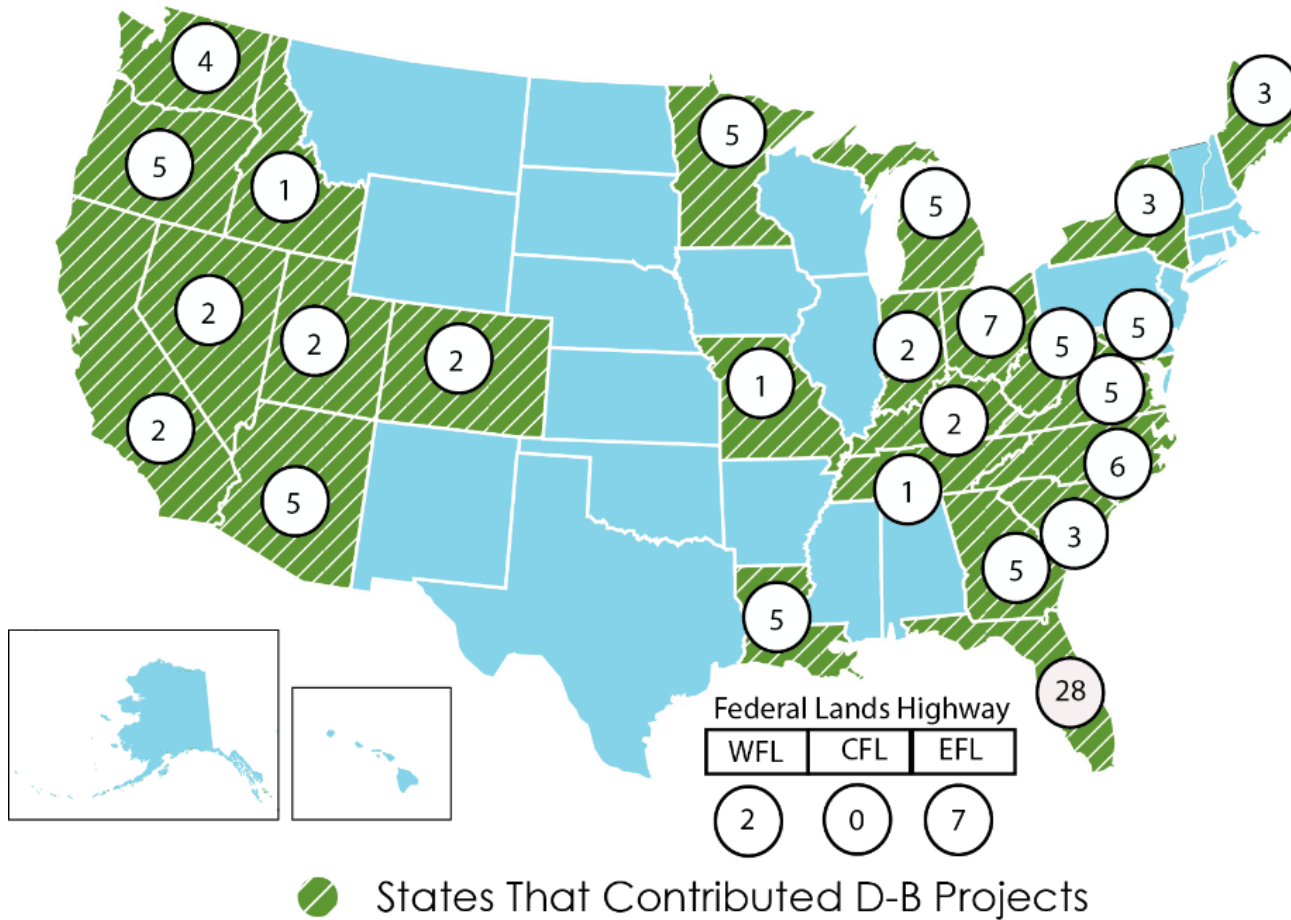
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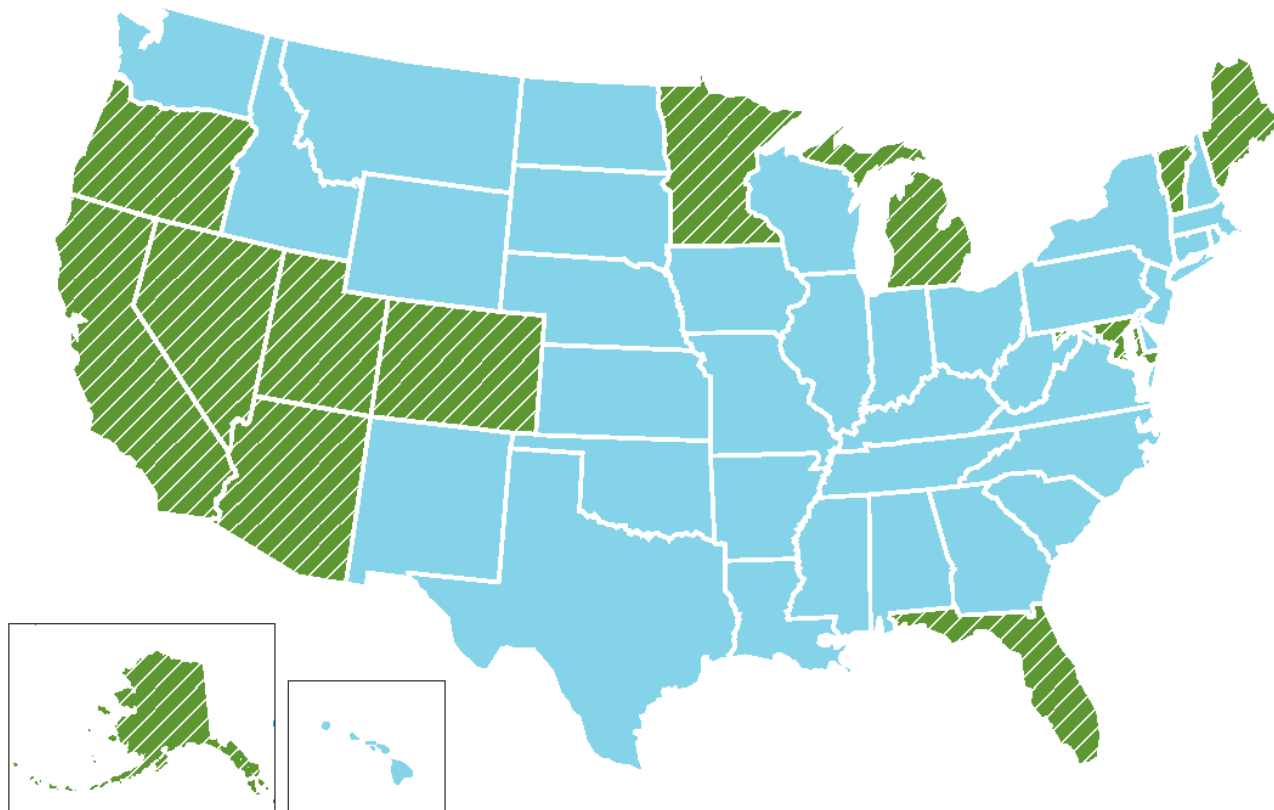
- **Two-step approach**
 1. Contract admin databases
 2. Project manager questionnaires
- **Follow-up calls for data validation**



Data Collection

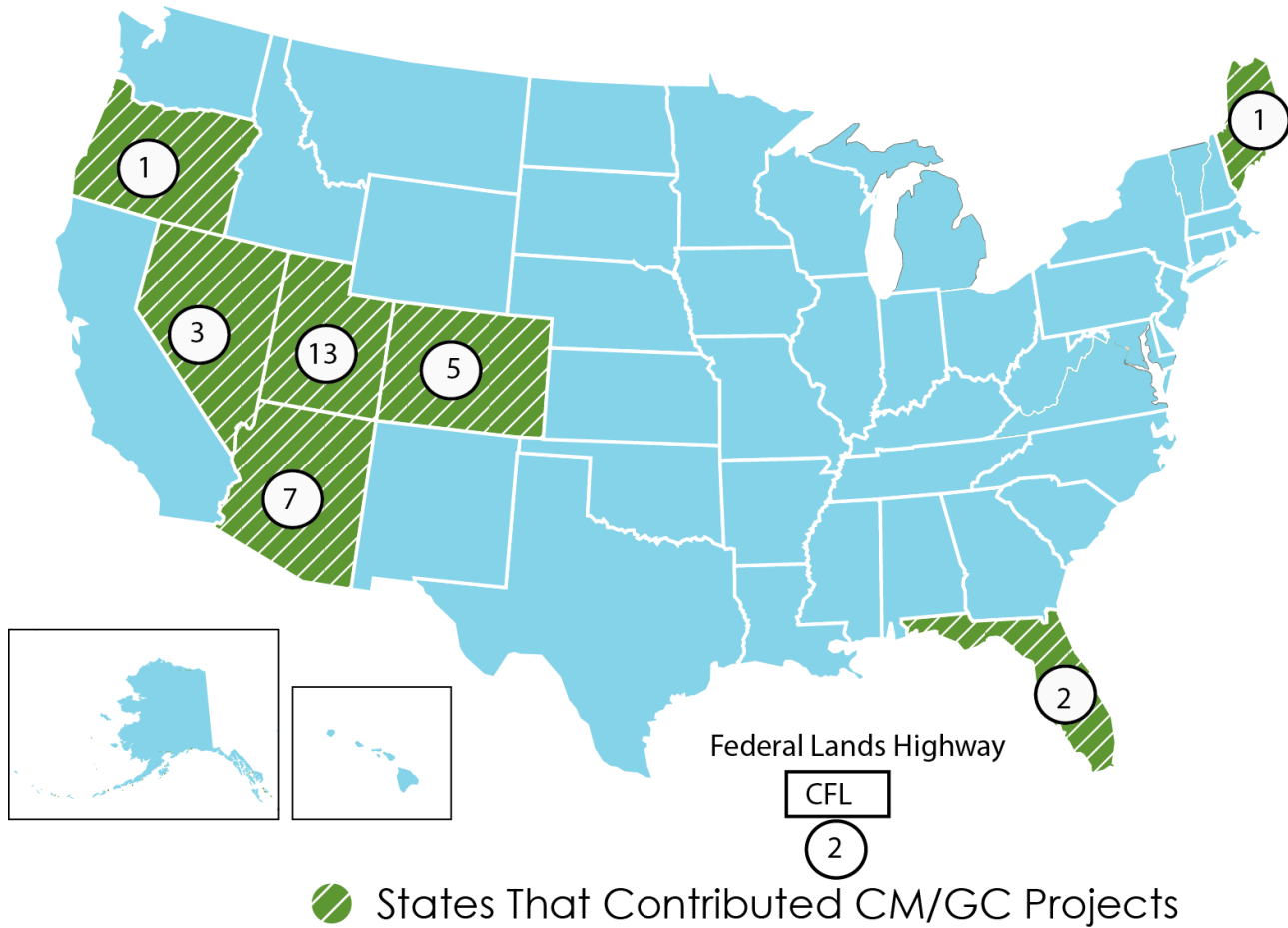


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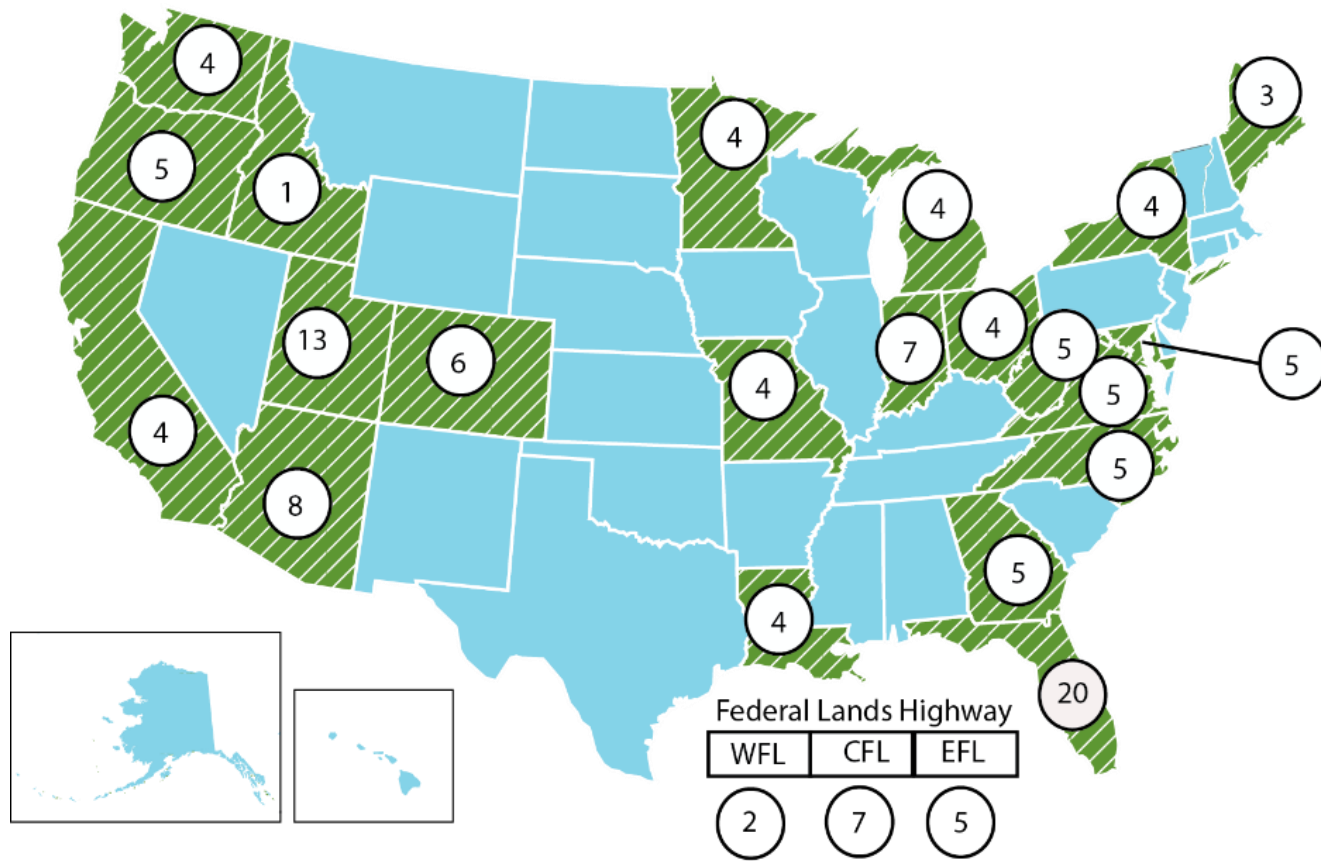


 States with CM/GC Experience

Data Collection

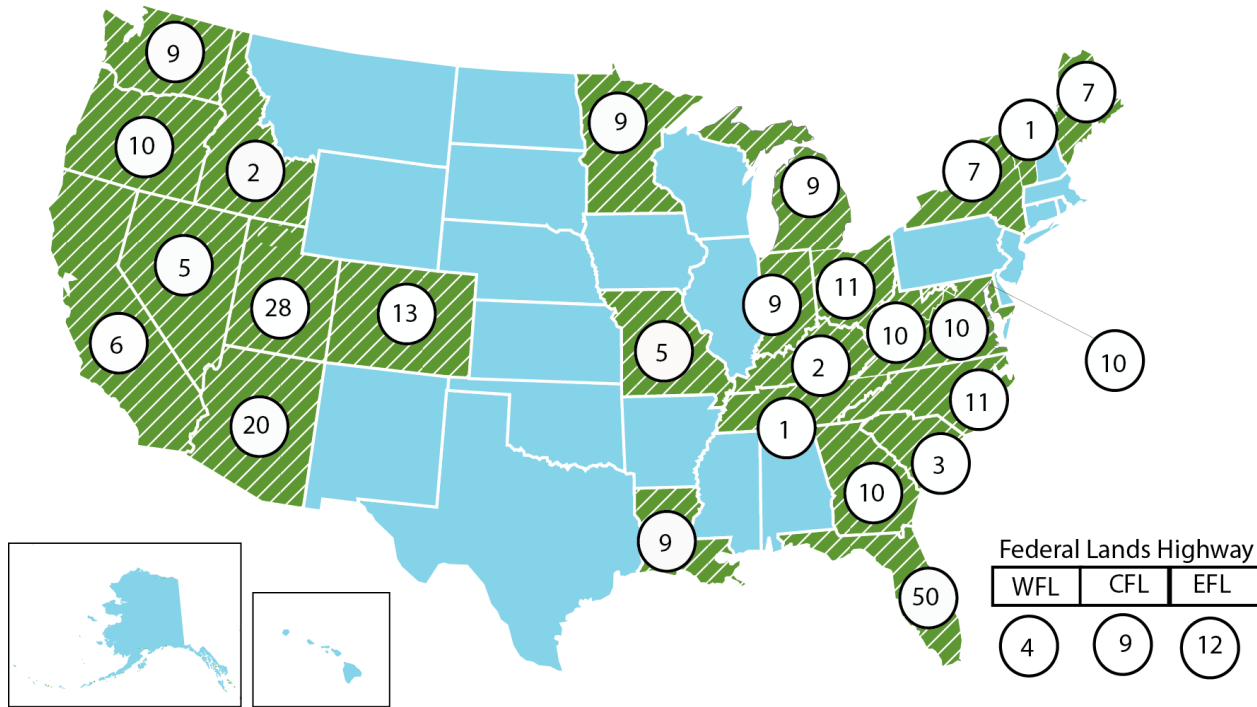


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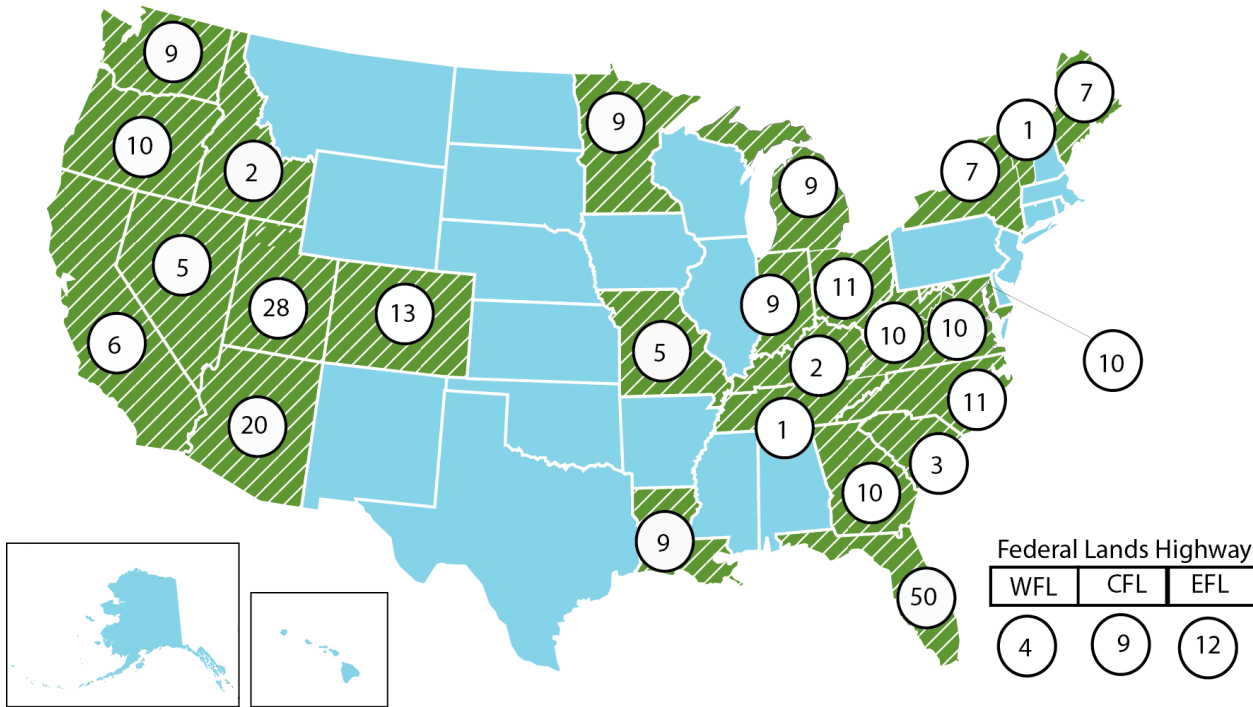
● States That Contributed D-B-B Projects

Data Collection



States That Contributed: D-B-B, CM/GC & D-B Projects

Data Collection



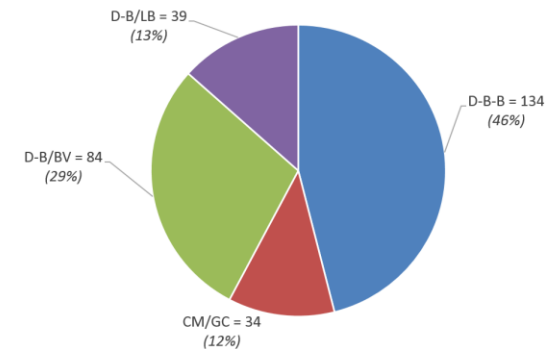
States That Contributed: D-B-B, CM/GC & D-B Projects

Research Data Collection

291 Projects

- 134 D-B-B projects
- 34 CM/GC projects
- 39 D-B/LB projects
- 84 D-B/BV projects

28 agencies

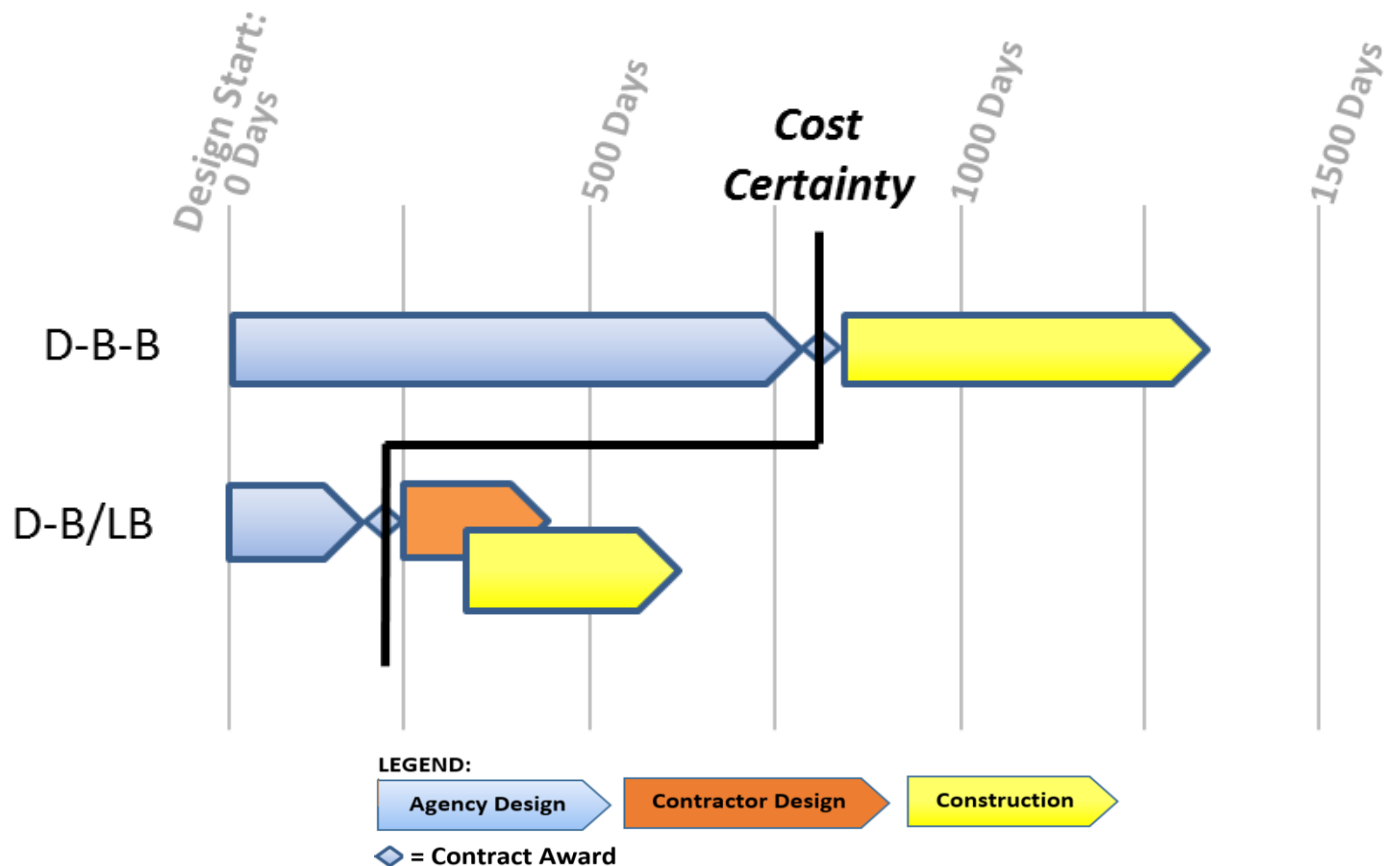


Tech Brief of Empirical ACM Performance

Timing of Award for D-B-B & D-B/LB projects between \$2M-10M

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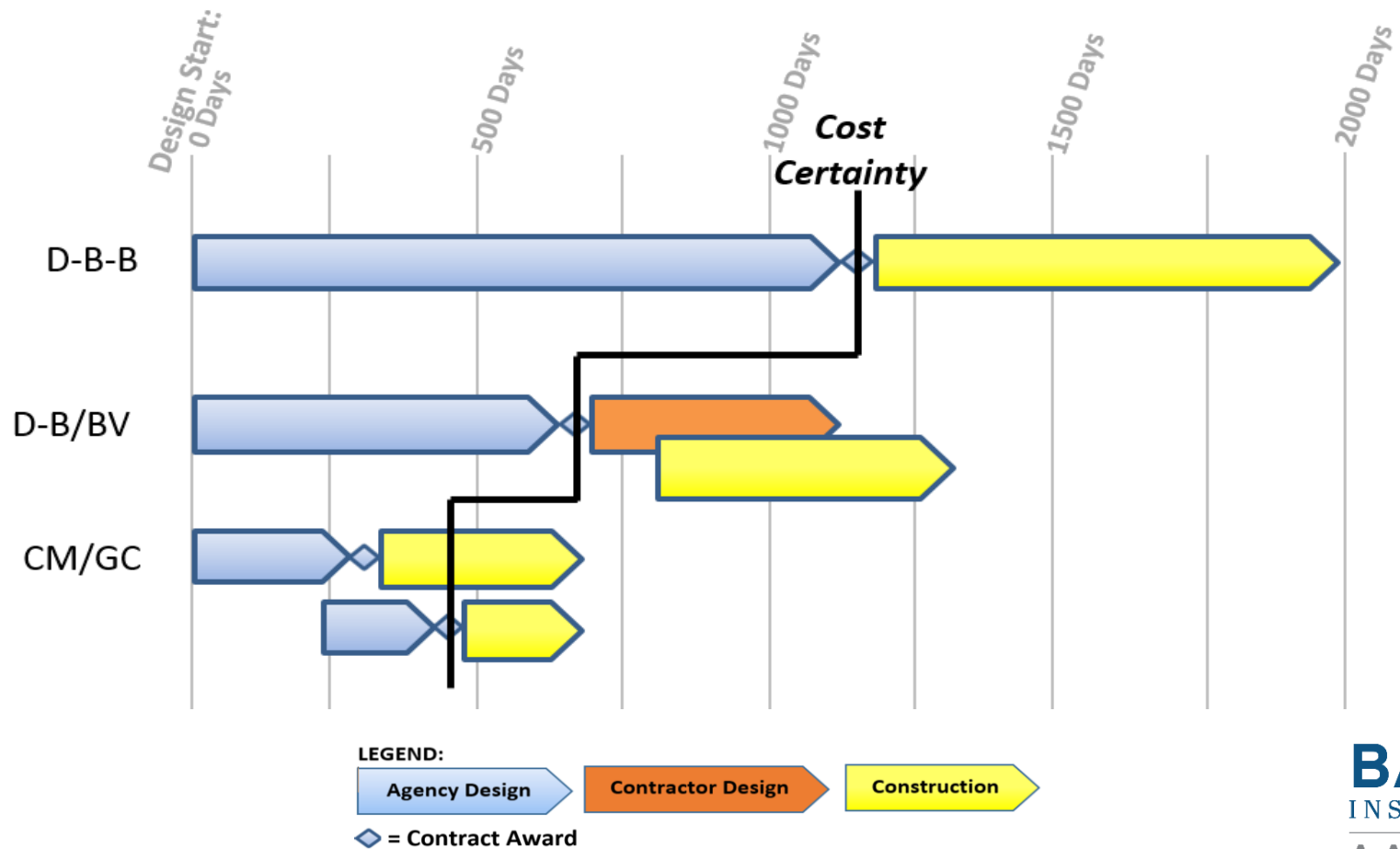


Tech Brief of Empirical ACM Performance

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Relationship between ACMs and Change Orders

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Average Impact (% of cost growth) of Change Order Categories

Change Orders	D-B-B (n = 65)	CM/GC (n = 19)	D-B/LB (n = 21)	D-B/BV (n = 57)
Agency Directed	1.2%	0.7%	1.6%	1.9%
Plan Quantity Changes	1.1%	0.3%	0.6%	0.2%
Unforeseen Conditions	2.4%	1.5%	1.8%	1.8%
Plan Errors and Omissions	0.9%	0.6%	0.1%	0.5%
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Purple Line P3 Project Financial Incentives

Ivar Draganja, MBA
PMC Commercial Lead
Purple Line Program Management Team
Maryland Transit Administration



Agenda

- I. **Project Overview**
- II. **Developers' on view performance incentives**
- III. **Incentives used on the Purple Line project**
- IV. **How are liquidated damages assessed?**
- V. **How did the Owner ensure that the project stayed on schedule?**
- VI. **Conclusion**

Purple Line Overview

- 16 mile east-west light rail line between DC and the I-495 Beltway
- Connects with:
 - 4 Metrorail Stations
 - All 3 MARC Commuter Rail Lines
 - Amtrak's NE Corridor
 - Regional and local buses
- \$5.6B 36-year P3 contract
 - \$2.0B cost of design-build work



Purple Line Overview – Stakeholders



Federal Transit Administration



Key Stakeholders

- MDOT SHA
- Montgomery County
- Prince George’s County
- University of Maryland
- WMATA
- CSX
- Permitting Agencies
- Utility Companies (17+)
- Property Owners



Developers' View on Performance Incentives

- **Purpose of performance incentives**

- If it is to foster time efficiency during construction
 - bids are so competitive that there is little float in the schedule
 - balanced risk profile similar to design-build is a better approach
- If it is to focus Concessionaire on important issue to Owner
 - Incentives can be a useful tool if incentive is significant (as measured against total design and construction amount)
 - Does put initial effort on achieving milestone
 - But if Concessionaire subsequently sees that it cannot meet milestone, focus can be lost
 - To some extent it helps to put liquidated damages (“LDs”) on top of bonus, i.e. LDs will start if there is a delay

Developers' View on Performance Incentives

■ Bid considerations

- LDs are easier to price in than bonuses
 - LDs are entered into overall risk register for the bid
- Bonuses are generally not priced into the bid
 - Exception is if the bid is extremely competitive

■ Impact on Owners' selection of incentives in contract

- LDs more prevalent than bonuses
- Risk profile needs improvement

Incentives on the Purple Line Project

- **Completion of Construction**

- If early completion, revenue service can start earlier
- If 366 or more days late, Concessionaire default

- **Operations and Maintenance**

- Non-compliance points system (deductions from availability payments)

- **Miscellaneous**

- LDs related to maintenance of traffic flow, access and mobility (D and F Rating)
- Incentives related to odors, dust, noise, vibration, cleaning, access and mobility (A rating) etc.

Incentives on the Purple Line Project

Risk sharing mechanisms

- Real property required for Utility Easements considered an Additional Property for which Concessionaire is to pay 50%
- Utility Related Relief Events cost sharing
 - Incremental costs: Concessionaire first \$2.75 million, next \$2.75 million shared, Owner above \$5.5 million
 - Delay costs: Owner's risk
- Differing Site Conditions
 - In general, Concessionaire's risk
 - Incremental costs: Concessionaire first \$7.5 million, next \$7.5 million shared, Owner above \$15 million

Incentives on the Purple Line Project

What occurred during construction phase

- Record of decision vacated
- Right of way / acquisition of property interests
- Third party approvals
- Governmental approvals
- Design-build consortium termination towards Concessionaire for extended delay on the project

Assessment of Liquidated Damages

Traffic flow

- LDs vary depending on
 - Road type (highway, arterial, other)
 - No. of lanes closed
 - Time (minutes)
- High LDs

Access and mobility

- For D and F ratings
- Initial day rate, additional day rate

Strategy has been successful

Owner Ensure that Project on Schedule

Original RSA Deadline was March 11, 2022

- Owner has granted 160 days of delay
- Concessionaire has requested 976 days

Measures taken

- Weekly meetings
- Very frequent ad hoc meetings
- Letters of concern
- Liaising with other authorities, third parties to help Concessionaire
- Suggest (but not direct) technical solutions

Conclusion

Public-Private Partnership

Balanced risk profile

Aligned incentives

Eagle P3 Project

Joe Christie
Eagle P3 Project Director, RTD

Jenifer Ross-Amato
Deputy General Counsel, RTD



Project Overview



A Line

- 23-mile electric commuter rail corridor between Denver Union Station and Denver International Airport
- 6 intermediate stations
- 12 public at-grade railroad crossings
- Opened in April 2016

B Line

- 6.2-mile electric commuter rail corridor
- First segment running from Union Station to Westminster Station
- 1 new private at-grade crossing
- Opened in July 2016

G Line

- 11.2-mile electric commuter rail corridor
- 6 intermediate stations
- 15 public at-grade crossings
- 1 private at-grade crossing
- Opened in April 2019



What You Need To Know About Eagle P3 Project

- Performance Based P3 Approach
- Performance Based Financing Approach
- Construction Payments Based on Progress
- Service Payments Based on Overall Availability Ratio with Incentives
- RTD Controlled Farebox Revenues
- Used Local and Federal Funding Sources

Previous BATIC Webinar can be found at:

http://www.financingtransportation.org/capacity_building/event_details/eagle_p3.aspx.

Construction Payments

- Detailed WBS Price Form
- Cost-Loaded Baseline Schedule
- Earned Value Progress Payments
- Maximum RTD Payment Defined by Contract
- Contractor's Reserve Account
- Some Items Paid Outside of Cost Loaded Schedule



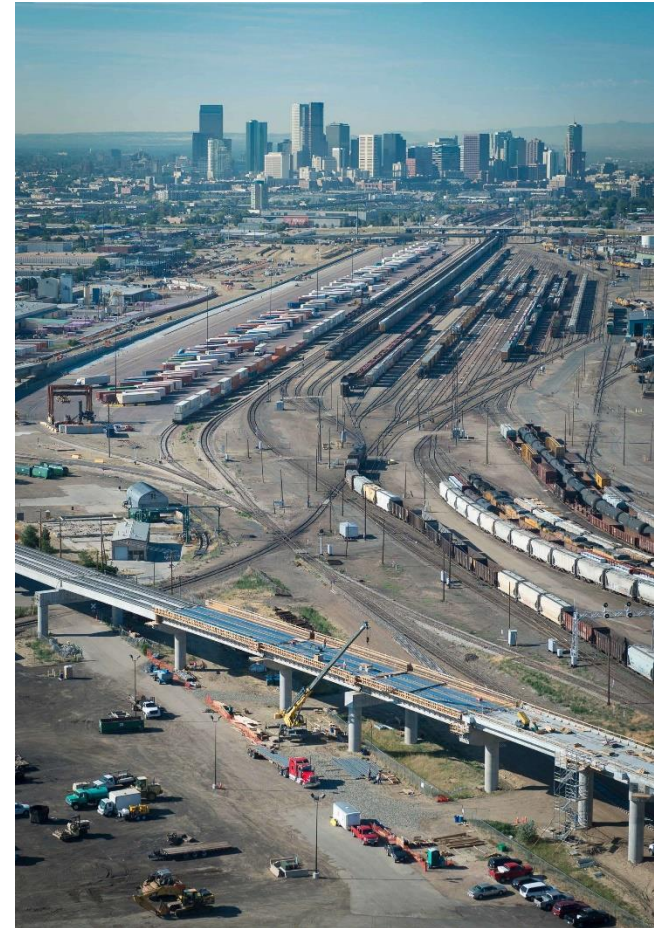
Service Payments

- Payments Based on Availability Ratio
- 30 Day Payment Cycles
- Up to 0.5% Bonus for OAR > 95%
- Deductions Up to 25% for OAR < 95%
- Annual Bonuses for Power Consumption



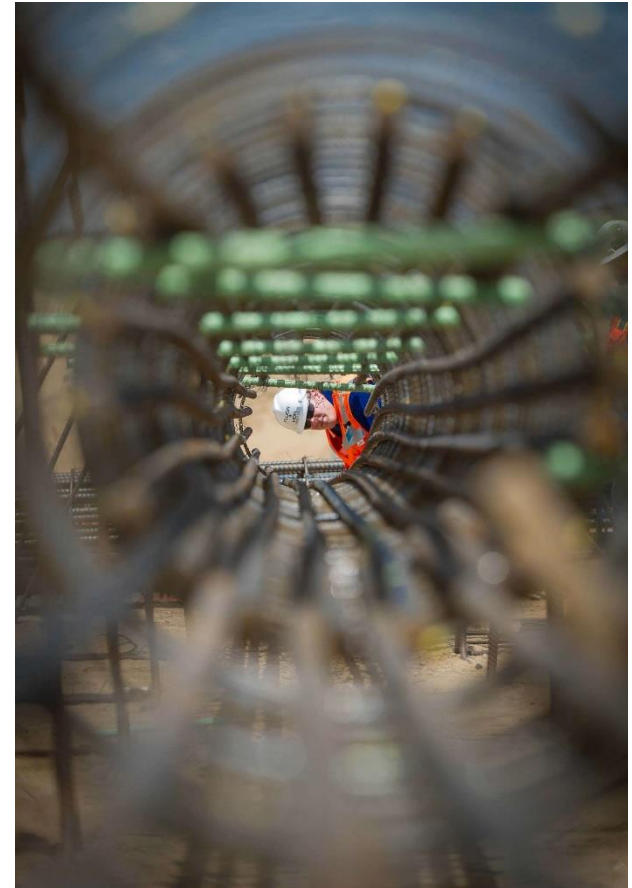
Project Challenges

- Construction Issues
- Testing and Commissioning
- Regulatory Approvals
- Independent Engineer Certification
- 3rd Party Projects



Dispute Resolution Process

- Side Agreements for A and B Lines
- Change In Law Claim
- Dispute Resolution Panel
- Concessionaire Termination Event
- Litigation



Lessons Learned

- Follow the contract.
- Make sure everyone understands their roles and responsibilities.
- It is still about the people.



Let's hear from you



Wrap-Up

Thank you for attending today's webinar

The BATIC Institute will post responses
to all questions received today on its website

The recorded webinar will also be available
on the BATIC Institute website:

www.financingtransportation.org

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Webinar
July 23, 2020

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