



COLORADO

Department of
Transportation



I-70 East Partially Covered Lowered (PCL) Alternative

Transportation Commission, June 2014



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Project Need

- The I-70 East / Viaduct Replacement Project (the “Project”) has been under consideration for more than a decade.
- Preventative maintenance of the viaduct, while a short-term option, fails to fully address safety, capacity requirements and has long-term cost implications
- Replacement is the option that best meets all three stated Project goals:
 - Improve safety
 - Improve access
 - Improve mobility



Proposed Project



- The SDEIS will recommend the Partially Covered Lowered (PCL) Alternative as the preferred alternative
- PCL is the only concept to receive broad community and political support since the start of Project
- Full project includes two express toll lanes in each direction from Brighton Blvd to Tower Rd.



I-70 East PCL Alternative Project Phases

Base (\$1.05 Billion)

- Brighton Blvd. to Dahlia St. (“Viaduct only”) constructed to full width but initially striped for only one managed lane in each direction
- Temporary slip ramps between Dahlia St. and Holly St.

Extended to 270 (\$350 million)

- Construct EB I-270 to EB I-70 flyover connection
- Brighton Blvd. to I-270 constructed to full width with two managed lanes in each direction
- Taper to one managed lane in each direction between Quebec St. and I-270

Extended to Pena (\$40 Million)

- Brighton Blvd. to Quebec St. constructed to full with two managed lanes in each direction
- Taper to one managed lane in each direction between Quebec St. and I-270
- Extend one managed lane from I-270 to Pena Blvd.

Full to Pena (\$200 million)

- Brighton Blvd. to Pena Blvd. constructed to full width with two managed lanes in each direction

Full to Pena with direct connects (\$160 million)

- Construct managed lane direct connections as applicable



I-70 East PCL Alternative Project Phases and EIS Estimated Costs¹

Total Project by Phases	Additional Cost	Total Cost
Base Project	\$1.05B	\$1.05B
Extended Project to I-270	\$350M	\$1.40B
Extended Project to Pena	\$40M	\$1.44B
Full Project to Pena	\$200M	\$1.64B
Full Project to Pena with Direct Connectors	\$160M	\$1.80B

- Note that the estimates above are based upon traditional EIS estimating practices. They do not align with the dollar amounts presented later in this presentation as the proposed funding package for this project. Competition is relied upon to achieve desired project scope.

¹ Estimated dollar amounts correspond to EIS estimating practices and are subject to change depending upon project size, procurement and delivery method selected.



I-70 East PCL Alternative Potential Funding Sources¹

The following have been identified as potential funding sources for the Project:

1) Annual Bridge Enterprise Revenues (\$850M²)

- Funds available only for bridge related elements of the base project
- Some elements of the base project not eligible for Bridge Enterprise funds
- Includes milestone payments during construction and annual Performance Payments

2) DRCOG/STP-Metro/CMAQ (\$50M)

- Funds needed within the base project to cover non Bridge Enterprise eligible items

3) SB09-228 Funds (\$271M)

- 20 March 2014 Legislative Council and OSPB forecasts project transfer in FY2016
- Current forecast is for initial transfer of \$202M (\$181M available for highway uses)
- 1.5 years of transfers dedicated to this effort

4) CDOT and/or HPTE will need to fund approximately \$97M³ in Operations Maintenance, & Rehabilitation (OMR) costs for the general purpose lanes for first 30 years. The specific funding source for OMR payments not yet identified.

¹ Sources assumed for the Value for Money Analysis with 30 year concession

² Note: CBE funds are shown in NPV.

³ Note: funds are shown in NPV.



Value for Money

- Value for Money Analysis (VFM) completed 2013 and previously provided to the TC and the HPTE Board
- VFM considered three different P3 models
 - Toll Risk
 - Annual Performance Payments
 - Design, Build, Finance
- Projected toll revenues do not generate sufficient revenues to cover capital costs or all operating costs
 - Express lane tolls primary use is to manage traffic
- VFM analysis completed by Macquarie suggests that DBFOM procurement will result in an 12.0% reduction in the NPV compared to a DB procurement in construction costs and a 16.4% reduction in the NPV of total payments including OMR cost savings¹
- **A combination of construction milestone payments and annual performance payment model currently under consideration**

¹ VFM analysis completed by Macquarie assumed a 30 June 2046 concession end date (25.5 year operating term) compared to the 35-year operating term currently contemplated



Performance P3 V DB

Risk Transfer

- Private partner responsible for performance and over the projects entire life not simply during construction.
- OMR costs funded and performance assurance built into the agreement, preventing deterioration and poor performance
- Achieve greater schedule and cost certainty without contingencies held by the state

Private Sector Risk	DB	P3
	Design-Build	Design-Build-Finance-Operate-Maintain
Design Risk	Private	Private
Construction Risk	Private	Private
Maintenance Risk	Public	Private
Operations Risk	Public	Private
Financing Risk	Public	Private
Revenue Risk	Public	Public



Performance P3 v. Toll Risk P3

- In a performance payment P3 unlike a revenue risk model
 - the number of years for the concession are controlled by the payment profile preferences of the public sponsor.
 - The need for non compete provisions is eliminated as the public sponsor bears the revenue risk
 - Compensation events are far more limited and relate to events that increase concessionaire costs outside of agreed upon specifications in the concession agreement



I-70 East PCL Alternative Project Timing - Milestone vs. Performance Payments

- The timing of payments has a major impact on project cost and risk transfer
 - Numerically, the lowest cost is to pay the private partner as early as possible
 - However, risk transfer is best achieved through payment in arrears after performance has been demonstrated rather than upfront.
 - Private partner is incentivized to complete construction as early as possible to reduce interest during construction and earn payments as early as possible
- To balance between lowest cost and effective risk transfer milestone payments are best based upon:
 - The percentage of work completed, including materials and mobilization
 - The completion of milestone events
 - Private partner is funding some proportion of construction costs prior to payments
 - Private partner has significant “backload” of payments to ensure a long term commitment to build the project with life cycle and maintenance cost in mind

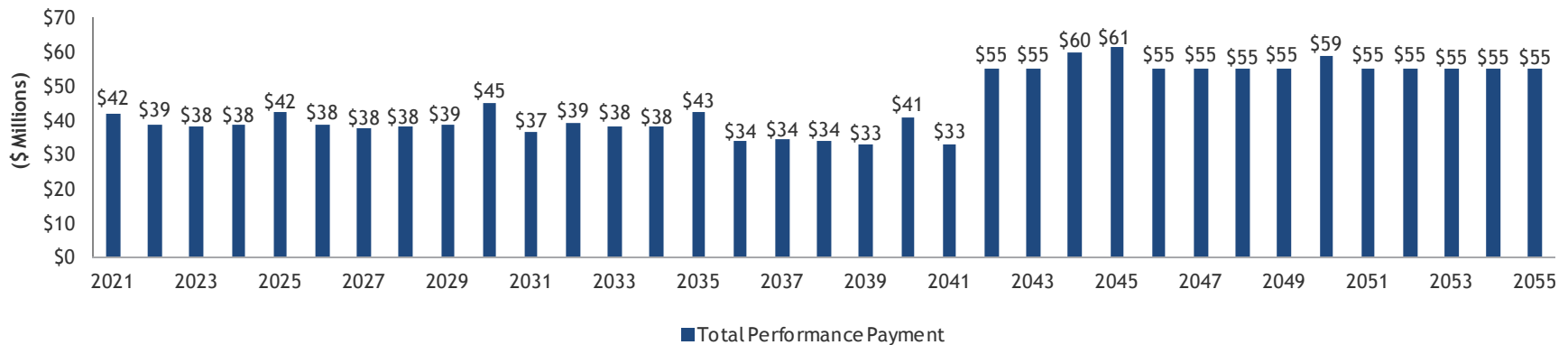


Indicative Payment Timing

Indicative Construction Milestone Payments. Does not include annual performance payments¹

	TOTAL	2016	2017	2018	2019	2020
CBE	\$349M	\$63M	\$64M	\$64M	\$79M	\$79M
SB 09-228 Payments	\$271M	-	\$135M	\$136M	-	-
DRCOG	\$50M	\$15M	\$15M	\$20M		
O&M Performance Payment (CDOT)	\$35M	\$6M	\$11M	\$6M	\$6M	\$7M
Total	\$704M	\$83M	\$225M	\$226M	\$85M	\$86M

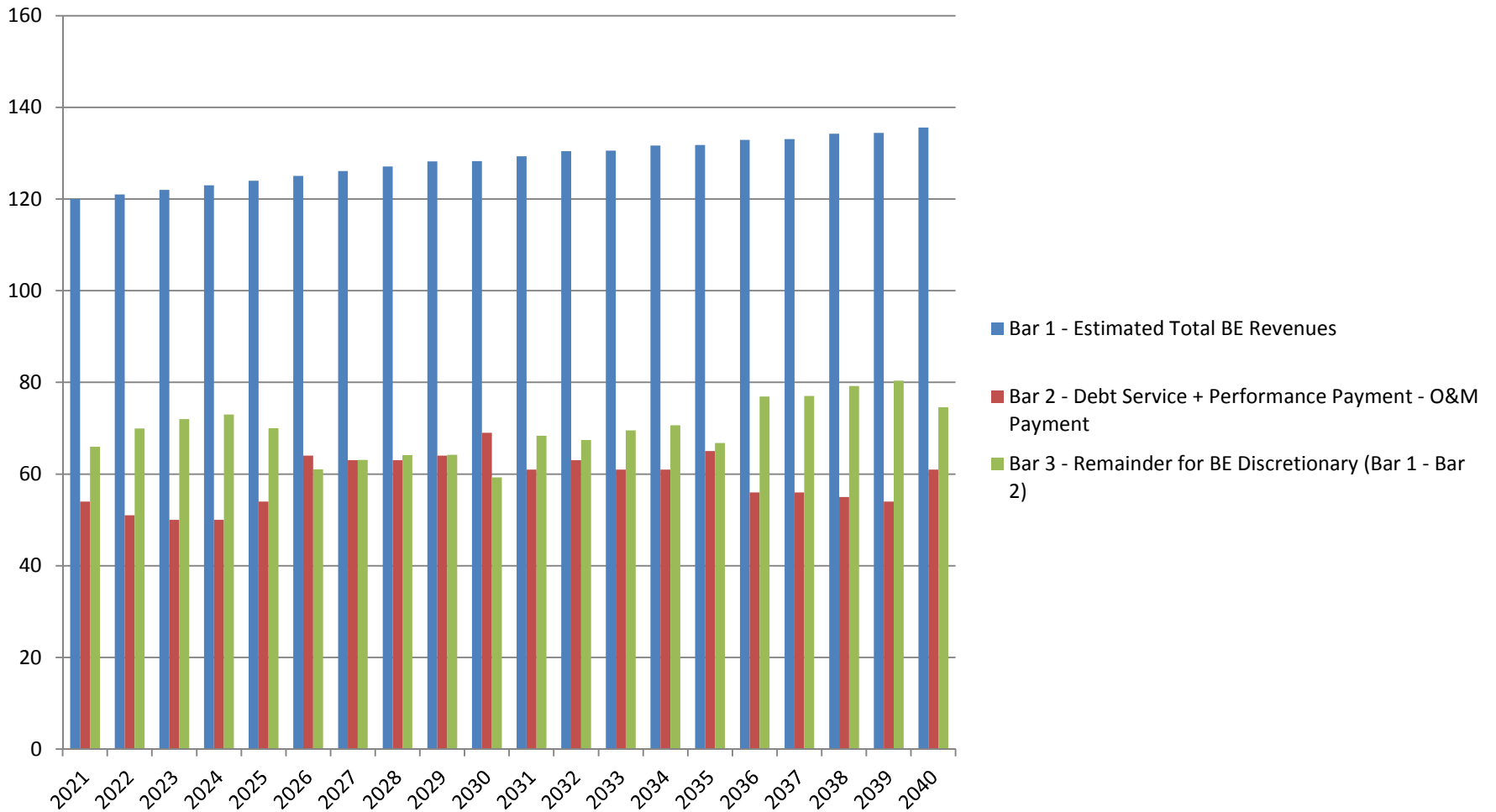
Indicative Annual Capital and OMR Performance Payments during operations



¹ All dollars are nominal; rounding accounts for errors in calculation
 VfM assumed January 2016 construction start date; current schedule suggests June 2016 financial close.



Estimated Impact on Bridge Enterprise





I-70 East PCL Alternative Project Scope

- The following scope represents the minimum project to request in the RFP. The cost of this project varies from the EIS estimates noted earlier but using competition to drive value this is believed achievable.
- Anticipated Procurement Scope to discuss with potential bidders includes the following:
 - Base Project: Brighton Blvd. to I-270 constructed to full width but initially striped for only one managed lane in each direction.¹
 - Extended Project to I-270: Construct EB I-270 to EB I-70 flyover connection also initially striped for only one managed lane in each direction¹
 - Extended Project to Pena: Develop one managed lane each direction from I-270 to Pena Blvd.¹
- If this scope is achievable as a minimum project, the request for proposals may also include a scope ladder of a limited number of Additional Requested Elements (AREs) that will materially improve the functionality of the project to expand closer to the full project build out.

¹ Operationally cannot compress from two lanes to none, so initially constructing just one. Doing this bidirectionally will minimize confusion.



Public Private Partnership

Lifecycle Considerations

- P3 project considers the whole life cycle of the asset and integrates design and construction with operations and maintenance to achieve cost savings and asset performance.
- Outcome based design, construction and operational effort with an emphasis on opportunities for innovation through the use of Alternative Technical Concepts (ATCs) that focus on total lifecycle costs rather than completion of construction.
 - While ATCs are common in DB procurements, in a P3 whole of life considerations are taken into account resulting in better ATC's that generate savings during operations as well as in construction.



Overview of US P3s Performance Payment Projects

There have been 6 performance payment transportation P3 projects to reach financial close in the US

Project	Public Department(s)	% Savings	\$ Savings
Eagle P3 Project	Denver RTD	13%	\$300M
I-595 Corridor Roadway Improvements	Florida DOT	14%	\$300M
Ohio River Bridges East End Crossing	Indiana DOT	20%	\$230M
Port of Miami Tunnel	Florida DOT	12%	\$120M
Presidio Parkway (Phase 2)	Caltrans	20%	\$120M
Goethals Bridge Replacement	Port Authority of NY & NJ	14%	\$225M



Support for the PCL Alternative

- Denver City Council Proclamation
- Combined Letter of Support
 - Mayor Ford, City of Commerce City
 - Commissioner Henry, Adams County
 - Mayor Hancock, City of Denver
- Denver Metro Chamber of Commerce
- Metro Denver Economic Development Corporation
- Downtown Denver Partnership
- National Western Stock Show
- Elyria Swansea Globeville Business Association
- North Area Transportation Alliance (NATA)
- Colorado Motor Carriers Association
- Union Pacific Railroad



EIS Outreach

- Monthly “Community Leaders” Meetings
- Continued coordination with City of Denver and City of Commerce City on key design elements for EIS
- 45-day comment period and public hearings following release of SDEIS (Summer 2014)
 - Aurora
 - Commerce City
 - Denver



HPTE Outreach

“New Era” Presentation w/CDOT (See information item in TC packet)

- DRCOG, JEFFTAAG, NATA, etc.

1st Public Town-Hall Meeting

July 8th

Swansea Recreation Center

Telephone Town Hall

June 25th

Calls to I-70 Corridor residents, surrounding communities and users



Next Steps

- HPTE town halls (June, July)
- Release of SDEIS (summer 2014)
- Delegate project administration to HPTE (July TC Action)
- Finish reorganization of staff
- Bring on additional consultants as required
- Hold industry forum (3Q14)
- Release RFQ (4Q14)