Colorado High Performance Transportation Enterprise Board Meeting

US36 Managed Lanes

Delivery Options Analysis

Preliminary Results

December 14, 2011

COLORADO HPTE

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Overview of Project Scope

- A variety of alternatives were developed in order to determine the optimal project scope utilizing a variety of project delivery models
- Two project scope scenarios were developed based on industry feedback

Project Alternatives Analyzed						
	Scope Options			Delivery Options		
	Construction	O&M	Lifecycle	Availability Payment	Concession	Public Delivery
Scenario 1				X	X	X
US36 Phase 1		X	X			
US36 Phase 2	X	X	X			
I-25 Express Lanes		X	X			
Scenario 2				X	X	X
US36 Phase 1		X	X			
US36 Phase 2	X	X	X			
I-25 Express Lanes		X	X			
Interim I-25N	X	X	X			

Overview of Operations and Maintenance Scope

- Two operations and maintenance scope alternatives were considered
- Fence-to-Fence maintenance includes both General Purpose (GP) and Managed Lanes (ML)
  - Fence-to-Fence maintenance eliminates interface issues between CDOT and a developer
- It is assumed that CDOT will reimburse HPTE at CDOT's maintenance rate for maintenance of the GP Lanes in the Fence-to-Fence scenarios

O&M Scope Alternatives Analyzed		
	Fence to Fence	**Managed Lanes Only**
Scenario 1		
US36 Phase 1	X	X
US36 Phase 2	X	X
I-25 Express Lanes	X	X
Scenario 2		
US36 Phase 1	X	X
US36 Phase 2	X	X
I-25 Express Lanes	X	X
Interim I-25N	X	X

Cost and Revenue Assumptions

- Construction cost estimates were developed by CDOT
- Routine maintenance costs were developed by Jacobs

Construction Costs	
Nominal ($000)	
US 36 Phase 2	$126,487
Interim I-25 North	$47,052

Maintenance Costs Per Lane Mile	
$2011	
CDOT maintenance	$8,648
Developer maintenance	$23,578

- Revenue estimates were developed by WSA
  - US36 revenue estimates are based on the US 36 Phase 1 investment grade traffic and revenue study
  - I-25 Express Lanes revenue estimates are based on historical traffic
  - Interim I-25N revenues are sketch level and do not appear to add value to the Project
  - Base Case (P-50) toll revenues are assumed in the Public Delivery model
  - Risk Case (P-90) toll revenues are assumed in the Concession model
  - Availability Payment analysis compares both the Base and Risk Case toll revenues against the expected annual availability payments

Project Delivery Model Assumptions

- **Concession Model**
  - 50 year operating term
  - Developer assumes all project risks including revenue, construction, financing and O&M
- **Availability Payment Model**
  - 35 year operating term
  - HPTE retains toll revenue risk
  - Developer assumes construction, financing, O&M and lifecycle risks
- **Public Delivery Model**
  - HPTE issues 35 year tax-exempt bonds to finance construction
  - HPTE retains all risks including revenue, financing, construction, and O&M risks
- **Financing Assumptions**
  - A Phase 2 TIFIA loan is available
  - Phase 1 TIFIA loan remains in place and investment grade rating is maintained
  - $20 million of funding is available for Interim I-25N
  - Other financing assumptions included in the Appendix

Summary of Preliminary Results

- In all scenarios analyzed, preliminary results indicate that funding in addition to toll revenues will be required
  - Concession model funding may be contributed during the construction period
  - Public Delivery model funding will be required at financial close
  - Availability Payment model results in a shortfall of toll revenues to make AP payments therefore additional funds will be required until toll revenues exceed AP payments
- Public Delivery results do not consider the cost of risks retained by HPTE that are transferred to the developer in the Concession and Availability Payment models
  - Risk adjustments to the Public Delivery model will assist HPTE in assessing the potential cost of retaining all project risks
- The inclusion of Interim I-25N does not improve project economics although further refinement of revenue estimates may be warranted

Next Steps

- Determination of the best delivery model for the US36 Corridor may be guided by the following criteria
  - Value to HPTE of long term risk transfer
  - P3 delivery model as simply a financing tool
  - Availability of additional funds to meet funding shortfalls under each model
- The exact scope of the Phase 2 project cannot be defined until after receipt of Phase 1 DB proposals
- Significant differences in O&M cost estimates between Developer and CDOT will need to be resolved in order to effectively evaluate the delivery alternatives
- Further sensitivity analyses could be performed in order to further refine the optimal project scope under the different delivery models