



FHWA - MDOT P3 Training Course

Risk Assessment: Elizabeth River Crossings

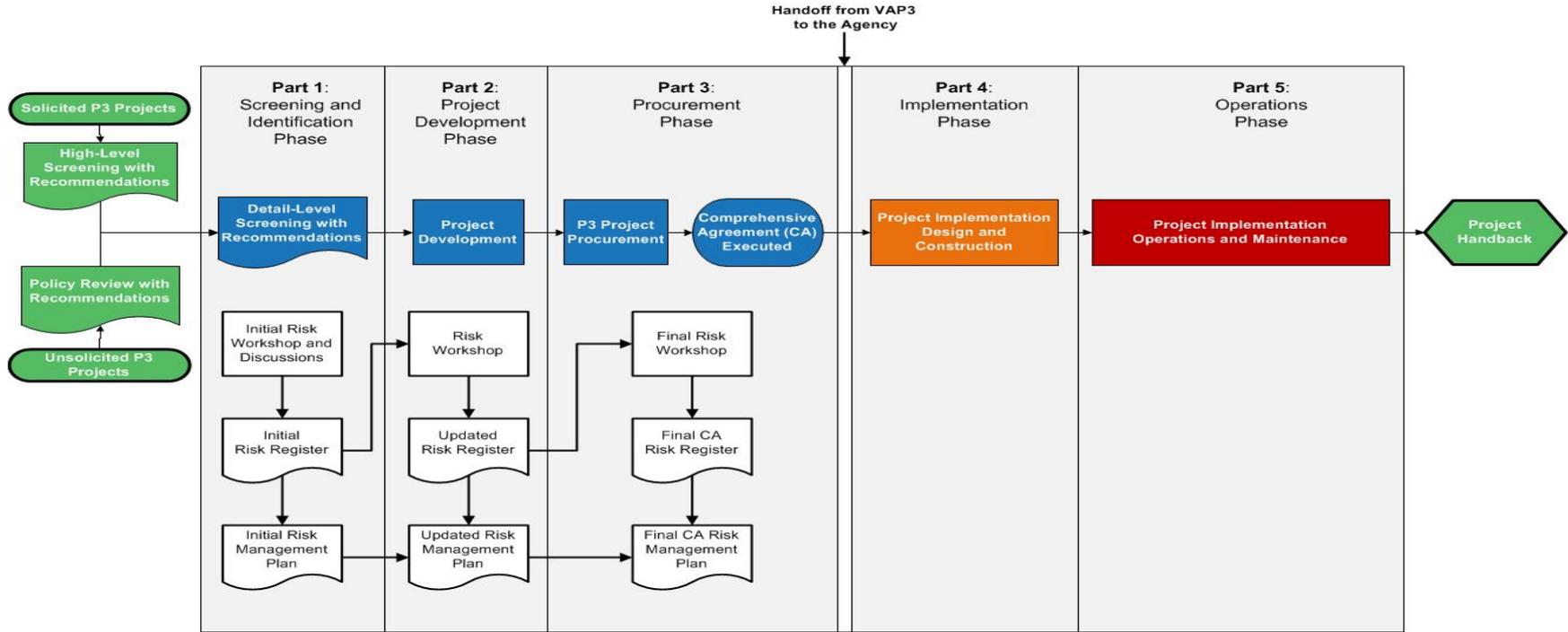
Dusty Holcombe/Deputy Director
October 21, 2014

Virginia Office of Public-Private Partnerships

600 E. Main Street, Suite 2120, Richmond, Virginia 23219

www.p3virginia.org

ADDRESSING RISK FOR P3s



Typical Risk Allocations

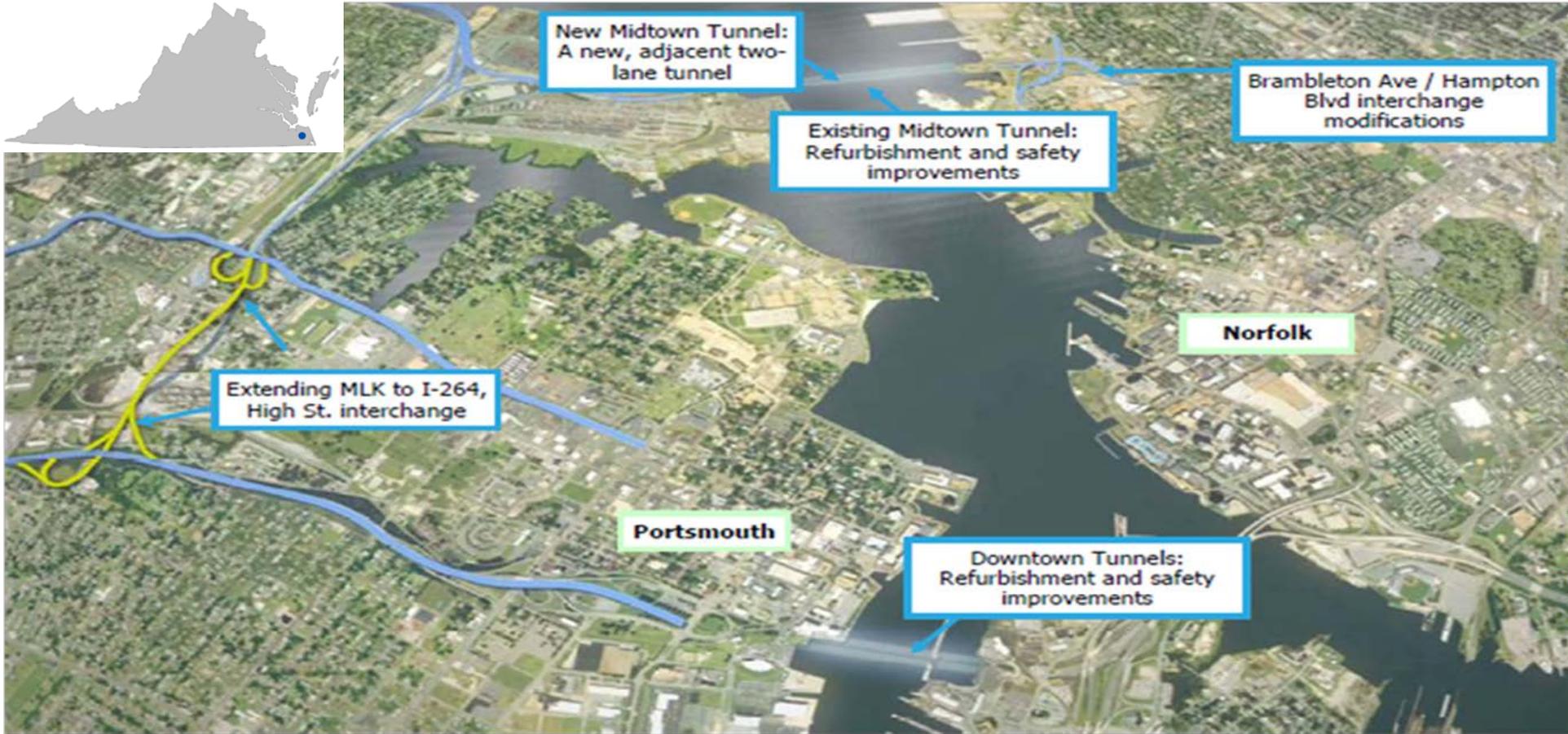
Risk	DBB	DB	DBFOM
Change in Scope	Public	Public	Public
Planning & Approvals	Public	Shared	Private
ROW	Public	Public	Shared
Utilities	Public	Shared	Shared
Design	Public	Private	Private
Ground Conditions	Public	Public	Private
HazMat	Public	Public	Shared
Construction	Private	Private	Private
QA/QC	Public	Shared	Private
Final Acceptance	Public	Private	Private
O&M	Public	Public	Private
Financial	Public	Public	Private
Force Majeure	Public	Shared	Shared

Assessment of Cost and Schedule Impacts

			Schedule Consequence				
			Greater than 12 months	4 to 12 months	1 to 4 months	1 week to 1 month	0 to 1 week
	Scale		5	4	3	2	1
Probability	Greater than 70%	5	Very High	Very High	High	High	Low
	40% to 70%	4	Very High	High	High	Medium	Low
	20% to 40%	3	High	High	Medium	Low	Low
	5% to 20%	2	High	Medium	Low	Low	Very Low
	0% to 5%	1	Low	Low	Low	Very Low	Very Low

			Cost Consequence				
			Greater than 25%	10% to 25%	3% to 10%	1% to 3%	Less than 1%
	Scale		5	4	3	2	1
Probability	Greater than 70%	5	Very High	Very High	High	High	Low
	40% to 70%	4	Very High	High	High	Medium	Low
	20% to 40%	3	High	High	Medium	Low	Low
	5% to 20%	2	High	Medium	Low	Low	Very Low
	0% to 5%	1	Low	Low	Low	Very Low	Very Low

Project Location and Scope



Tunnel Typical Section

- ❑ 4,200 feet portal to portal plus two each 700 foot “boat” sections
- ❑ Immersed Tube Tunnel
 - ❑ Two lane highway tunnel
 - ❑ 11 tubes each 340’ long by 54’ wide by 28’ high
 - ❑ Weight of 16,000 tons per tube
 - ❑ Reinforced Concrete tube (second in USA)



Project Risk Review

- ❑ Risk Issue: Public Oyster Beds
 - ❑ Required an Easement for Dredging Work and Tunnel Installation
- ❑ Risk Mitigation: Requires General Assembly Action
- ❑ Risk Management Plan:
 - ❑ Identify Sponsor
 - ❑ Develop Language
 - ❑ Coordinate with Committee on General Laws
- ❑ Risk Allocation: VDOT
- ❑ Risk Monitoring:
 - ❑ VDOT to monitor construction limits of easement



Project Risk Review

- ❑ Risk Issue: Acquisition of Right of Way
 - ❑ Property Assessment escalation due to knowledge of the project
- ❑ Risk Mitigation: How can a cost premium be alleviated?
- ❑ Risk Management Plan:
 - ❑ Develop property assessments
 - ❑ Identify the cost and probability of risk
 - ❑ Coordinate right of way allowance for the purchase of right of way
 - ❑ Develop contractual language allocating risk obligations
- ❑ Risk Allocation: Shared
- ❑ Risk Monitoring:
 - ❑ VDOT to monitor allowance use and distribution of allowance funds



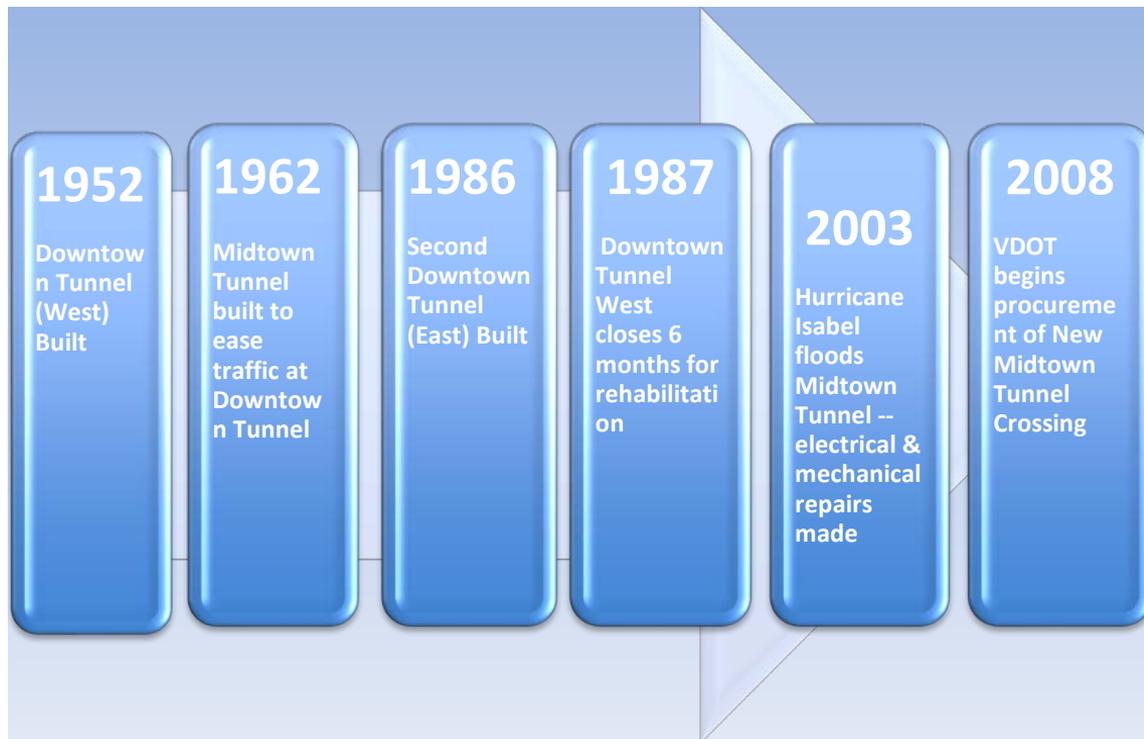
Project Risk Review

- ❑ Risk Issue:
 - ❑ Latent Defect in Existing Tunnels
- ❑ Risk Mitigation: Existing Asset Inspection Program
- ❑ Risk Management Plan:
 - ❑ Private Sector to conduct full Asset Inspection of Midtown and Downtown Tunnels
 - ❑ Coordinate risk allowance for hidden latent defects
 - ❑ Develop contractual language allocating risk obligations
- ❑ Risk Allocation: Shared
- ❑ Risk Monitoring:
 - ❑ VDOT to monitor allowance use and distribution of allowance funds



Project Risk Review

- ❑ Risk Issue:
 - ❑ Long Term Operation of Facility
- ❑ Risk Mitigation: How do the parties price and allocate the long term maintenance for a 58 year term?
- ❑ Risk Management Plan:
 - ❑ Private Sector to conduct full asset inspection of existing Tunnels.
 - ❑ Private Sector resolves identified latent defects during Rehabilitation Phase
 - ❑ Private Sector develops annual and long term maintenance plans for existing and new tunnel
- ❑ Risk Allocation: Private Sector
- ❑ Risk Monitoring:
 - ❑ VDOT to monitor performance requirements within the Technical Requirements of the Comprehensive Agreement.





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