



HRTAC Regional Financial Plan Initial Scenarios

November 19, 2015



HRTAC Planning Approach

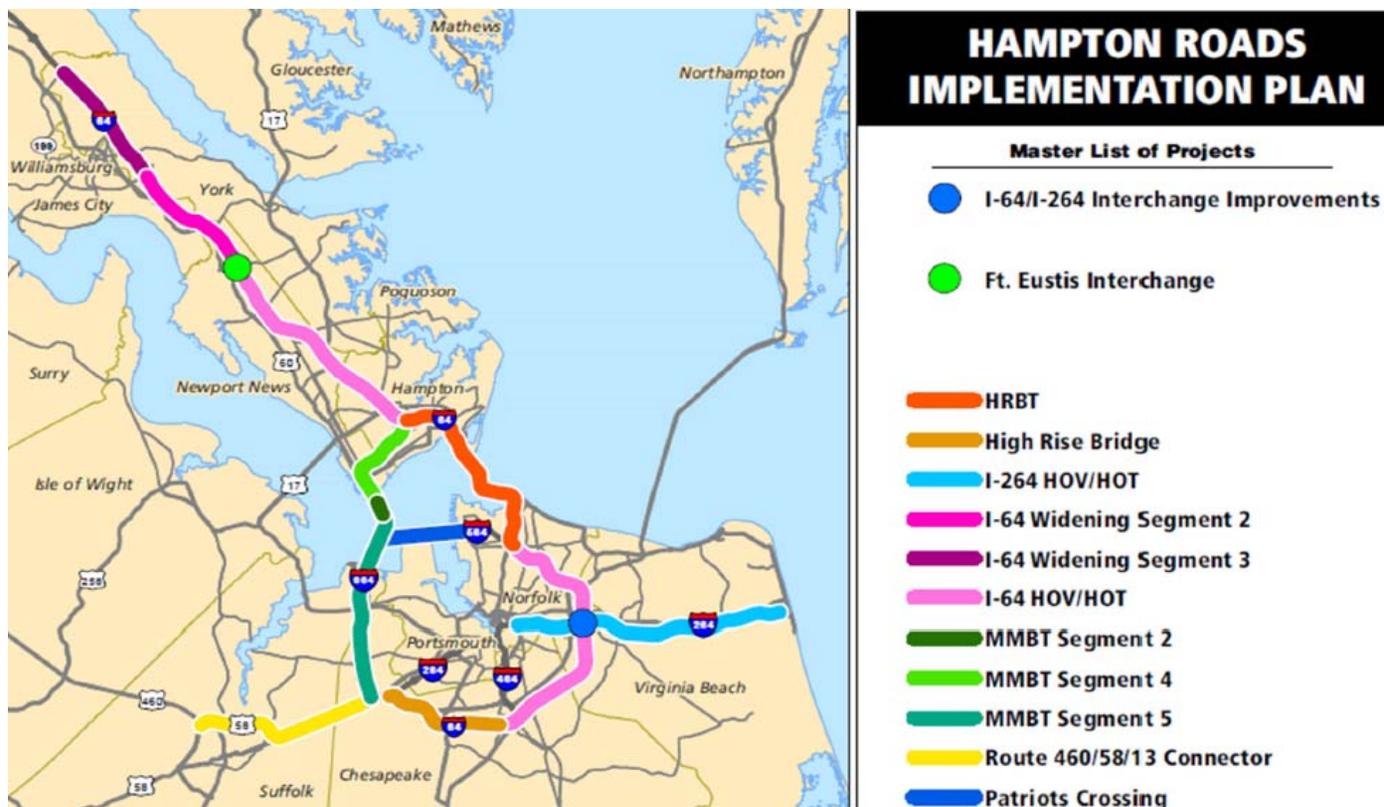
- ***Create a Regional Financial Plan to Fund All HRTAC Projects***
- Review all project schedules and cost estimates in year of expenditure dollars to support financial modeling.
- Decide on HRTF revenue growth projections, or range of growth projections, to analyze.
- Decide on bond covenants and structure, or appropriate range of bond parameters, to analyze.
- Develop a long term financial plan to determine HRTF funding capacity with a reasonable and fiscally unconstrained schedule for all projects.
- If all projects can't be afforded on a fiscally unconstrained basis, then analyze:
 - 1) Pushing projects further into the future, i.e. fiscally constrained schedule
 - 2) Additional state/federal funding needed to build on an unconstrained schedule
 - 3) Additional tax revenue needed to build on an unconstrained schedule
 - 4) Tolling needed to build on an unconstrained schedule
 - 5) Some reasonable combination of 1-4

June 2015 Amended 2034 Long Range Transportation Plan

- HRTAC Projects included in amended 2034 LRTP
 - I-64 Peninsula Widening - Segments 1,2&3 including Ft. Eustis Blvd Interchange
 - I-64/I-264 Interchange – Phases 1&2
 - High Rise Bridge
 - Patriots Crossing
 - Rt. 460/58/13 Connector
- HRTAC Projects not included in amended 2034 LRTP
 - MMBT
 - HRBT
- HRTAC Projects assumed to be tolled in amended 2034 LRTP
 - None
- Since June, HRTF revenue forecast has been reduced by \$2.0 billion through 2040 (\$1.4 billion in 2016 dollars discounted at 2.5%)

Current HRTAC Regional Financial Plan Effort

- Nine candidate projects endorsed by the HRTPO in October 2013, plus HRBT
- I-64 HOV to HOT Conversion is not included in the financial plain as it is not a HRTAC designated project.
 - PV of 40-year toll revenues is \$596M against capital cost of \$960M.
- HRBT is in the financial plan because it is part of the Hampton Roads Third Crossing SEIS and could be included in the Locally Preferred Alternative. In addition, forecasting a regional T&R requires an assumption be made regarding HRBT.



Potential HRTAC Tolled Projects

Initial Construction and Tolling Sequence

- HRBT is part of a single SEIS study with Patriots Crossing and MMBT may be determined to be included in the locally preferred alternative.
- It is assumed that the High Rise Bridge project will be constructed first, followed by Patriots Crossing, HRBT, MMBT, and Rt. 460/58 Connector.
- Tolling will take place upon construction completion for all the projects except HRBT.
- HRBT tolling commences with HRBT construction financing, which is when Patriots Crossing is scheduled to be complete and opened to traffic.
 - In the two identified congestion pricing scenarios, HRBT will be tolled at \$1.50/\$1.00 or \$3.00/\$2.00 (peak/off-peak) levels plus inflation to 2025; the rates will be increased by 50% from their respective levels in 2030 when HRBT construction is finished.
- The table below depicts initial assumed timing of project development.

	High Rise Bridge	Patriots Crossing	HRBT	MMBT	Rt. 460/58 Connector
Start Construction	2017	2020	2025	2030	2035
Finish Construction	2022	2025	2030	2035	2038
Start Tolling	2022	2025	2025	2035	2038

HRTAC Projects

Project Cost Summary

- All projects' **fiscally unconstrained costs** are shown below:
 - PV are in 2014/2015 dollars; Inflated costs assume 2.5% per annum
 - Projects assuming HOT tolling cost more than the Toll All Lane alternative

Non-Toll Projects

	PV \$	Inflated \$
I-64 Widening - Segment 1	\$125,098,045	\$128,046,468
I-64 Widening - Segment 2	\$213,592,853	\$224,097,790
I-64 Widening - Segment 3	\$311,303,870	\$333,094,762
Ft. Eustis Blvd Interchange	\$180,603,787	\$193,692,556
I-64/I-264 Interchange - Phase 1	\$153,709,251	\$162,935,186
I-64/I-264 Interchange - Phase 2	\$190,031,747	\$208,782,479

Toll Projects

	PV \$		Inflated \$	
	HOT	Toll All Lane	HOT	Toll All Lane
High Rise Bridge	\$1,285,930,000	\$1,202,857,000	\$1,448,727,063	\$1,354,680,271
Patriots Crossing	\$4,018,670,000	\$4,018,670,000	\$4,870,038,360	\$4,870,038,360
HRBT	\$3,734,400,000	\$3,647,495,000	\$5,088,449,877	\$4,970,034,138
MMBT	\$4,043,370,000	\$2,837,196,000	\$6,272,607,898	\$4,390,240,878
Route 460/58/13 Connector	\$220,010,000	\$183,258,000	\$376,846,034	\$313,561,982

All Projects

	PV \$		Inflated \$	
	HOT	Toll All Lane	HOT	Toll All Lane
	\$14,476,719,553	\$13,063,815,553	\$19,307,318,474	\$17,149,204,872

Source: Cost Estimate by CH2MHILL prepared in July 2014 and October 2015

Non Toll Funding Assumptions

- The projects will be financed with a combination of pay-go cash and debt proceeds supported by non-toll funds and toll revenues
- Non-toll funds include HRTF, HRTPO, and VDOT funds
- HRTF
 - Based on VDOT's forecast received in November
- Potential HRTPO and VDOT Funds
 - HRTPO controlled sources
 - VDOT includes HB2 District and Statewide Programs, State of Good Repair (HRBT rehabilitation costs), and provision of pre-construction and construction management services
 - In total, assumes a present value of \$2 billion over 20 years - annual funds of \$100M in 2016 and increase by 2.5% per year from 2017 to 2035

HRTF Preliminary Funding Analysis – Current Estimates

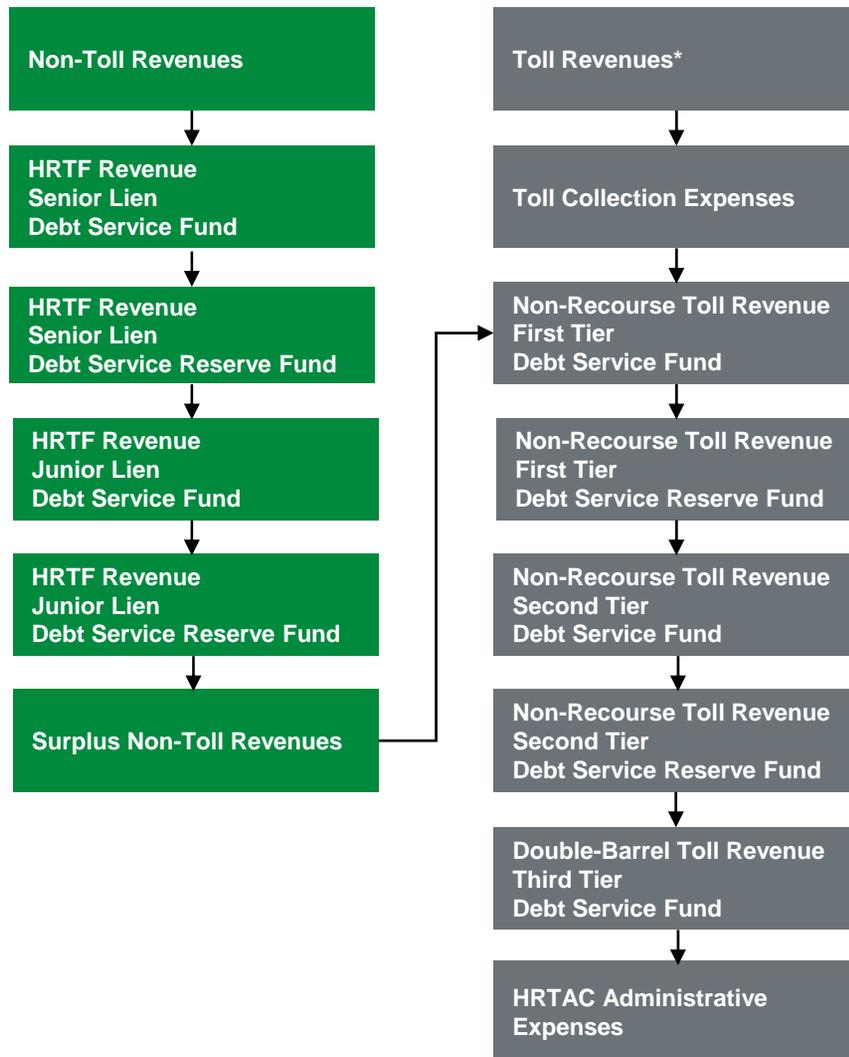
- HRTF Revenues
 - \$160,031,725 in FY 2014; \$165,088,591 in FY 2015
 - \$5.96 billion nominal total from FY 2016 to FY 2040
- HRTF Bond Issuance
 - Issuance every 2 years; first series in 2016 and last series in 2038 when final construction ends
 - 30-year level debt service
 - A rated credit; 10-year historical average interest rates
 - 1.25x minimum coverage ratio
- Total bond proceeds - \$4.7 billion
 - Plus unspent HRTF revenues from 2014 to 2016 - \$0.325 billion
- Residual revenues over 20 years (from 2017 to 2038)
 - Present value (discounted at 2.5% to 2015) - \$1.2 billion
- Total present value funding of \$6.3 billion from HRTF for 2014 to 2038

Regional Toll System Concept

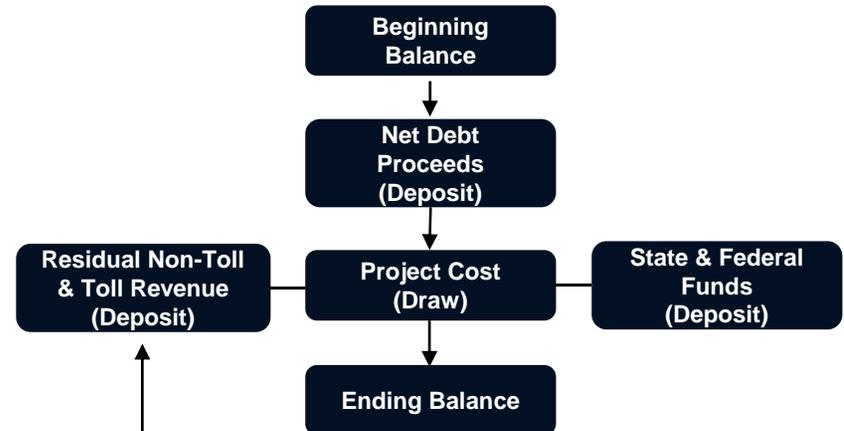
- Common approach to project planning and phasing for toll roads and other revenue generating infrastructure
- Common approach to setting toll rates considering both financial feasibility and traffic management
- Consolidated toll collection system and back office
- Ability to implement a regional toll system financing / bonding approach, as opposed to individual “stand-alone” project financing
- Integrated plan for toll projects and leveraging HRTF revenues
- Over time, significantly improved credit ratings and expanded bonding capacity
- System revenues can fund system preservation costs over time

Potential HRTAC Bonds Structure

Flow of Funds



Capital Funding



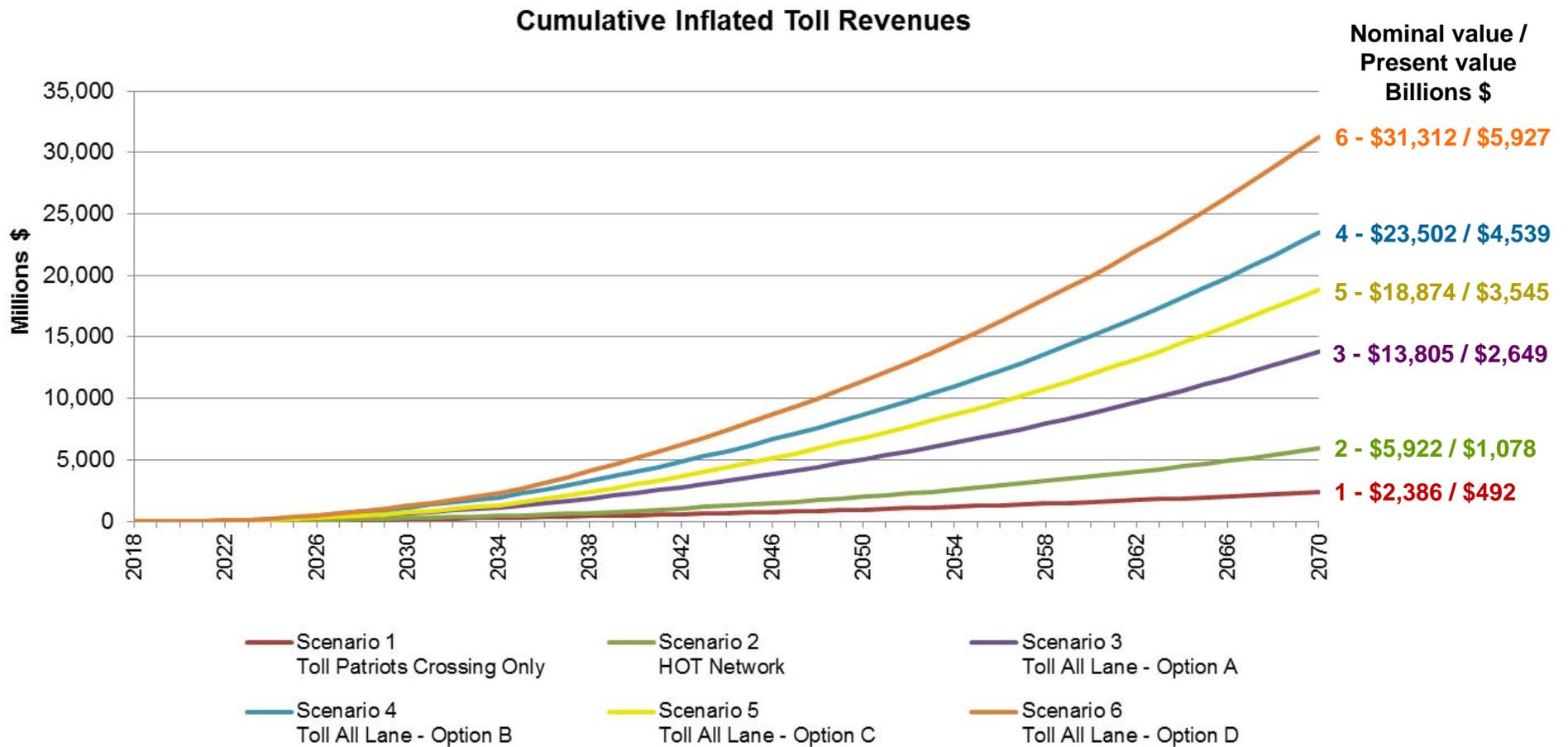
- Assumes toll collection costs paid by HRTAC and roadway O&M / R&R costs paid by VDOT
- Assumes some Commonwealth 9(c) and/or 9(d) credit enhancement capacity

Initial Project Financing Scenarios

- Six project financing scenarios are identified including HRBT.
- CDM Smith and CH2MHILL have provided T&R and capital cost estimates for all scenarios.
 - 1) **Toll Patriots Crossing Only** assumed \$2.00 fixed toll rate
 - 2) **HOT Network**
HOT on existing I-64 HOV lanes, High Rise Bridge, HRBT, MMBT, and Rt. 460/58 Connector; \$2 fixed toll rate all lanes on Patriots Crossing
 - 3) **Toll All Lanes – Option A**
\$1 on High Rise Bridge, Patriots Crossing, HRBT and MMBT; HOT on Rt. 460/58 Connector
 - 4) **Toll All Lanes – Option B**
\$2 on High Rise Bridge, Patriots Crossing, HRBT and MMBT; HOT on Rt. 460/58 Connector
 - 5) **Toll All Lanes – Option C**
Same as Scenario 3 except peak & off-peak congestion pricing at \$1.5 & \$1 on HRBT
 - 6) **Toll All Lanes – Option D**
Same as Scenario 4 except peak & off-peak congestion pricing at \$3 & \$2 on HRBT

** All stated toll rates are in 2015 dollars; toll rates are inflated by 2.5% annually*

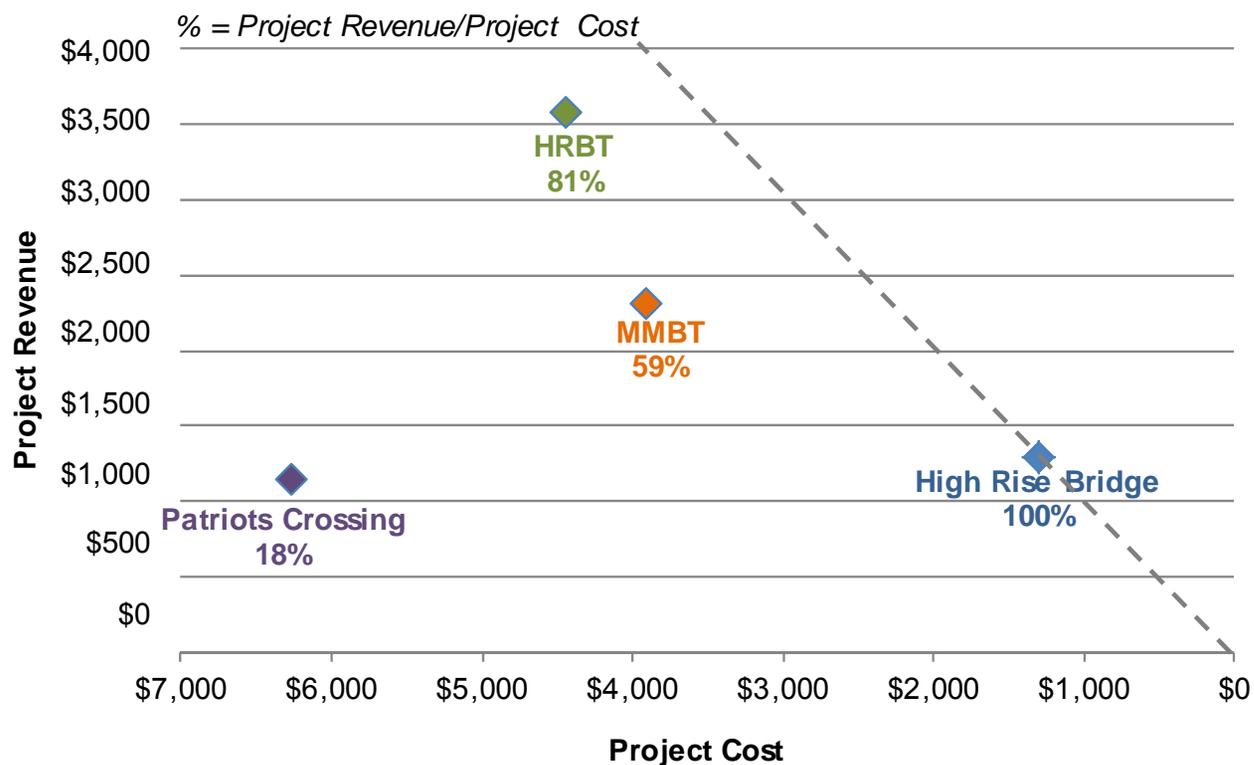
Preliminary T&R Estimates



*Revenues through 2070 discounted to 2016 @ 5.0%

Toll Revenue to Cost Efficiency

- The ratio of toll revenues/project costs is an indication of how self-supporting each project can be and how it impacts the network financing.



- Project Cost in millions = construction costs inflated to respective construction start years @ 2.5%
- Project Revenue in millions = 40-year toll revenues discounted to respective construction start years @ 5.0%

HRTAC Scenario 1 – 6 Results (Present Value; 2016 \$s)

- Scenario 1-6 are not financially feasible with the previously discussed non-toll and toll revenues and other assumptions.
- In order to have all projects completed by 2040, PFM has analyzed the following:
 - 1) Additional grant funds, OR
 - 2) Increase annually recurring tax revenues

	Scenario 1 Toll Patriots Crossing Only	Scenario 2 HOT Network	Scenario 3 Toll All Lanes Option A	Scenario 4 Toll All Lanes Option B	Scenario 5 Toll All Lanes Option C	Scenario 6 Toll All Lanes Option D
<i>\$ millions</i>						
Present Value of Additional Grants Needed*	6,122	6,971	3,773	1,874	2,948	751
Additional Tax Revenue Needed**	229	265	133	60	104	19

Note:

*PV of grants net of residual revenues through 2040 discounted to 2016 @ 2.5%

**Additional HRTF revenue in 2016 needed; annual revenues thereafter are based on the new assumed 2016 revenue and grow at the growth rates as the current estimates.

Ideas for Potential Solutions to Close the Funding Gaps

- HRTF revenue “floor” at original projections or new source(s) of regional revenue
 - Requires General Assembly Approval
- VDOT funds HRBT rehabilitation entirely from State of Good Repair
 - Need to determine how much of total cost is rehabilitation of existing facilities
- VDOT provides and separately funds all construction management (~10%)
 - Present value \$1.3 billion and future value \$1.7 billion
- Consider toll rates higher than studied
- Direct all HB2 District funds to HRTAC projects
 - Need to determine what is reasonably expected for the region
- Consider alternate project construction & tolling sequencing
 - For example, constructing High Rise Bridge, HRBT, and MMBT prior to Patriot Crossing allows for toll revenue capacity to finance all projects before 2040 using the toll system
- Consider eliminating projects from the 2040 LRTP
 - Not as simple as subtracting costs as you also subtract toll revenue and/or change traffic & revenue patterns on other facilities