



**Metropolitan Washington Council of Governments
“Status of the Region’s Infrastructure”
Highway and Bridge Infrastructure Presentation**

July 9, 2014

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Northern Virginia (NoVA) District



BRIDGES, CULVERTS, OTHER STRUCTURES

Mr. Gary Runco

Summary of Assets

Bridges, Culverts and other Structures

as of 6/30/2013

	Statewide	NoVA	%
Bridges	13,049	1,078	8.26 %
Culverts	7,948	1,014	12.76 %
Total	20,997	2,092	9.96 %
Ancillary Structures			
Sign Structures	3,520	1,248	35.5 %
Signal Structures	8,826	4,246	48.1 %
High Mast Light and Camera Poles	1,124	414	36.8 %
Luminaires	18,132	7,043	38.8 %
Sound Walls and Retaining Walls			
Sound Walls	114.7 miles	64.13 miles	55.91%

How is Structural Deficiency (SD) Measured?

Ratings from 0-9 for the:

- Deck
- Superstructure
- Substructure

“Any one rating of 4 or less places it in the category of Structurally Deficient.”

Code Description

N NOT APPLICABLE

9 - EXCELLENT CONDITION

8 - VERY GOOD CONDITION

7 - GOOD CONDITION

6 - SATISFACTORY CONDITION

5 - FAIR CONDITION

4 - POOR CONDITION

Advanced section loss, deterioration, spalling or scour.

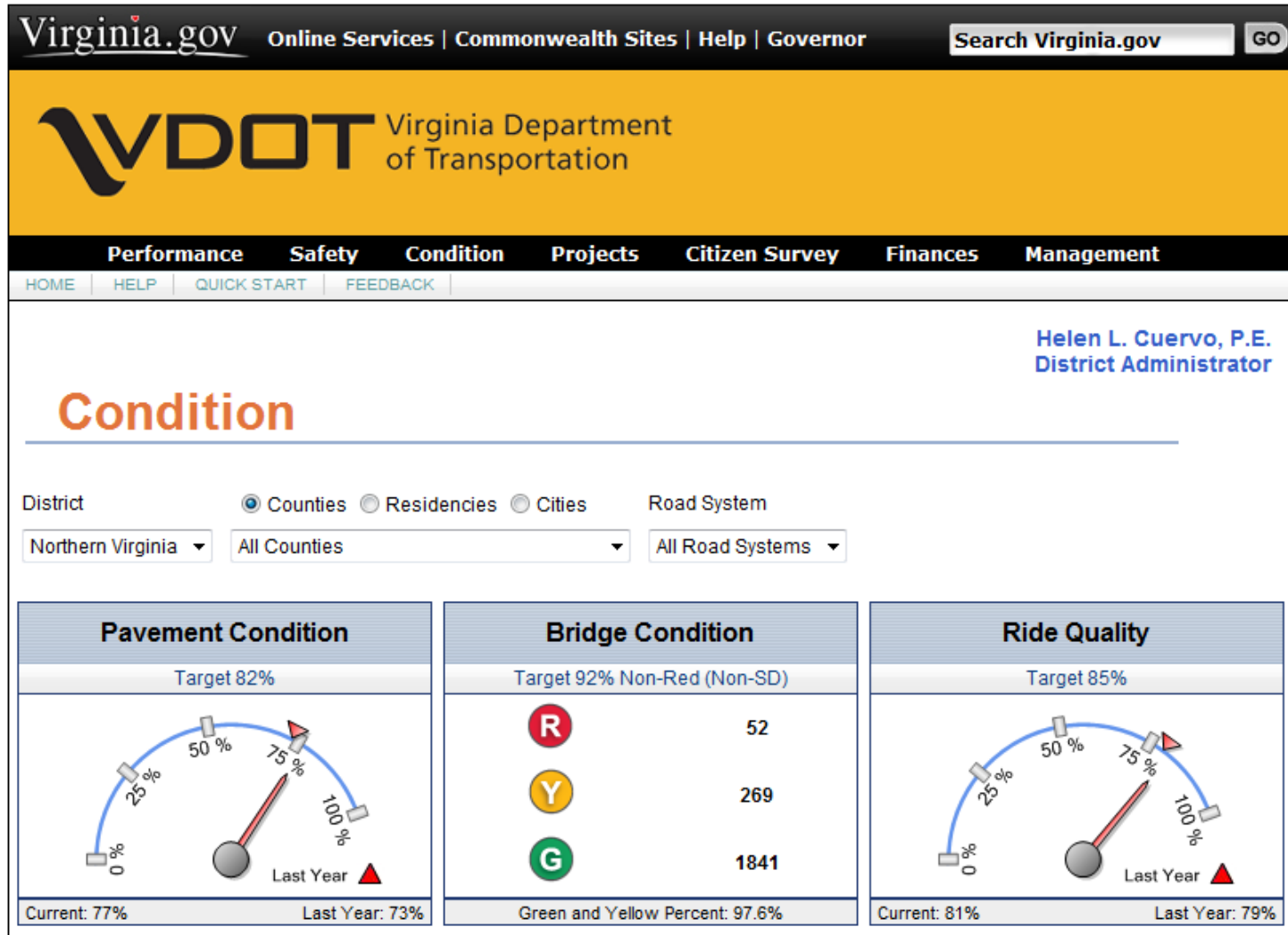
3 - SERIOUS CONDITION

2 - CRITICAL CONDITION

1 - "IMMINENT" FAILURE CONDITION

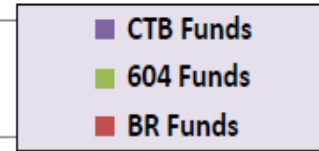
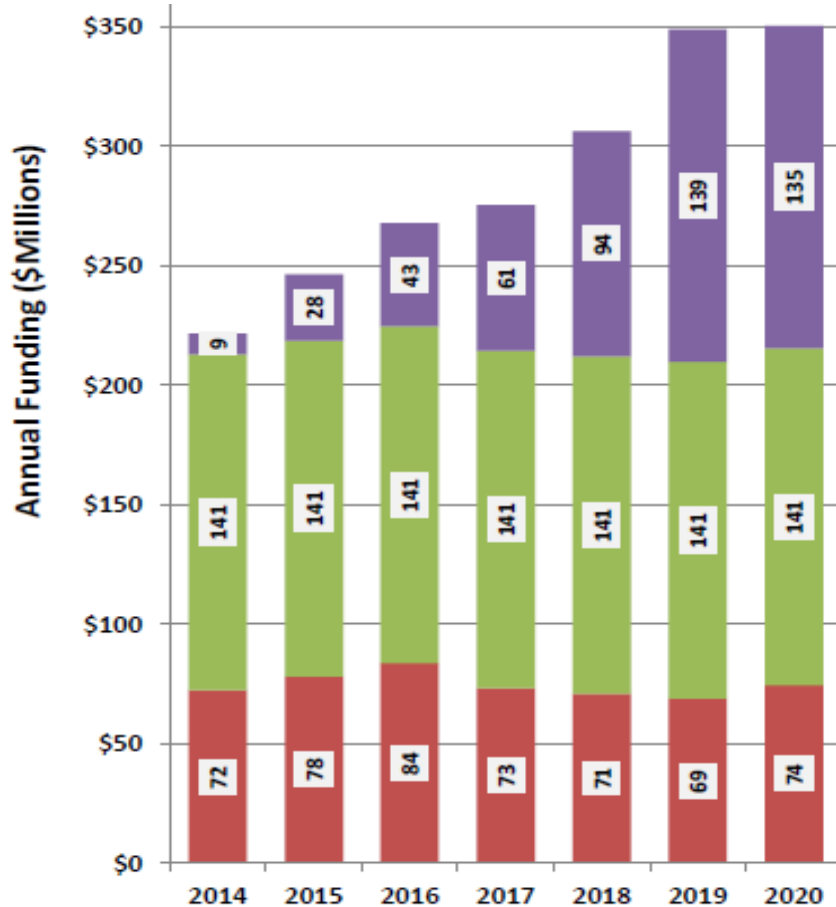
0 - FAILED CONDITION

Structurally
Non-Deficient
= 97.6%!
exceeding our
target of 92%



Measure	Description	Target	Actual
On Time Inspections	Bridges & Culverts (VDOT & Local) Current	95%	99.7%

Statewide Annual Bridge Maintenance & Replacement Funds



Note:
 VDOT often uses other funding sources for bridge construction. These funds are primarily associated with new alignments and interchanges rather than maintenance or replacement of existing structures, so these funds are not included as part of this graph.

NoVA share of 604 Maintenance and BR Funds annually is approximately \$24M.

Recently Completed Projects

- **I-395 over the GW Parkway...April...\$4M**
- **Rt. 29 over tributary of Accotink Creek... May...\$550K**
- **Old Keene Mill over Accotink Creek...April...\$2.7M**
- **Collision damage repairs SB I-95 over Russell Rd...May...\$500K**

In Construction this summer / fall

- **Towlston Road Bridge ...\$1.5M**
- **Portsmouth Culvert...\$875K**
- **I-395 Retaining Wall...\$1.5M**
- **I-66 over Rt. 29...\$2.1M**
- **I-395 Seminary Rd. HOV Ramp and NB Aux. Lane...\$60M**
- **Bridge painting contract for 7 bridges \$3.3M**

Bridge Projects Status Cont.

In Design

- **Route 7 over the Dulles Toll Road ...\$34M (Design / Build advertised)**
- **Route 27 over Route 110 (adjacent to the Pentagon)...\$29M (9/2014)**
- **Old Centerville Road over Bull Run...\$3.3M ...2015**
- **Brentsville Road over Broad Run...\$2.75M ...2014**
- **Aden Road over NSRR...\$4.6M...2015**
- **Rt. 7 over I-395 (King Street)...\$6M ...2016**
- **Route 653 over Tuscarora Creek...\$3.3M...2020**
- **Hunter Station Road over Snakeden...\$500K (PE only)**
- **Hunter Mill over Difficult Run...\$2.1M...**
- **King Street Bridge over I-395...\$8M...**
- **I-395 Glebe Road and I-395 Army Navy Drive...\$8M...2015**
- **9 smaller bridges in Loudoun in design**

New Technologies

- Corrosion resistant reinforcing steel
- Corrosion mitigation systems
- Carbon Fiber wraps
- Elastomeric concrete

Our approach to Preservation

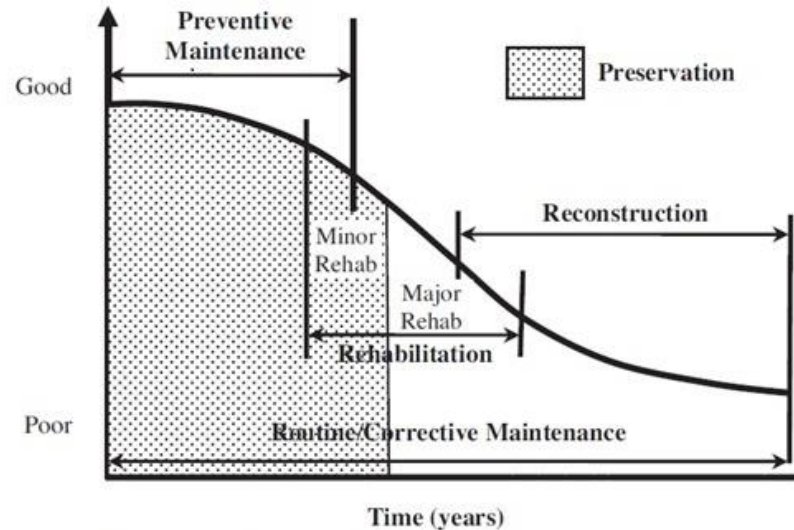
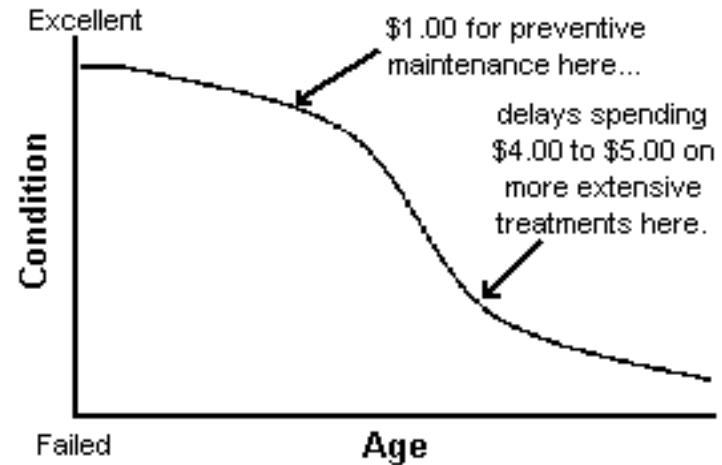
- Removal of bridge deck joints
- Bridge deck overlays

PAVEMENT

Mr. Andrew Glenn

Pavement Preservation Program (benefits)

- An effective pavement preservation program:
 - Preserves investment on the state's roads
 - Enhances pavement performance
 - Maximizes cost effectiveness
 - Extends pavement life
 - Reduces user delays
 - Provides improved safety and mobility



Source: Adapted from Peshkin et al. 2007.

Recommendations to Implement an Effective Preventive Maintenance Program

- Dedicate at least 20% of paving allocation to performing proactive preventive maintenance activities
- Reserving a portion of the budget for preventive maintenance will ensure that the right “mix of fixes” is used on the road network
 - Pavements in poor condition are improved while pavements in good condition are prevented from deteriorating



VDOT FY 2015-2020 Planned Funding for Paving - Statewide

(\$ million)

Roadway System	Program	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total
Interstate	Construction	\$38.9	\$97.9	\$162.7	\$46.2	-	-	\$345.8
	Maintenance	49.3	45.4	52.3	48.0	51.6	52.6	299.2
	Sub-Total	88.3	143.3	215.0	94.2	51.6	52.6	645.0
Primary	Construction	25.0	64.6	40.7	17.5	-	-	147.8
	Maintenance	83.4	81.9	128.7	134.0	158.9	161.9	748.8
	Sub-Total	108.4	146.5	169.4	151.5	158.9	161.9	896.6
Secondary	Construction	-	-	-	-	-	-	0.0
	Maintenance	193.7	192.6	206.5	213.2	192.0	188.3	1,186.3
	Sub-Total	193.7	192.6	206.5	213.2	192.0	188.3	1,186.3
Total	Construction	64.0	162.5	203.4	63.7	-	-	493.5
	Maintenance	326.5	320.0	387.5	395.3	402.5	402.8	2,234.6
	Grand Total	\$390.5	\$482.5	\$590.9	\$459.0	\$402.5	\$402.8	\$2,728.1

Note: Components may not sum to totals because of rounding and excludes funding for primary extensions.

VDOT Maintained Lane Mileage in NOVA

(as of December 31, 2012)

COUNTY	INTERSTATE	PRIMARY	SECONDARY	FRONTAGE ROADS	TOTAL
ARLINGTON	71.04	153.77	0.00	8.56	233.37
FAIRFAX	489.40	820.93	5,532.48	51.92	6,894.73
LOUDOUN	0.00	379.31	2,402.36	6.78	2,788.45
PRINCE WILLIAM	165.76	370.36	2,528.51	9.38	3,074.01
DISTRICT TOTALS	726.20	1,724.37	10,463.35	76.64	12,990.56

Pavement Performance Percent Rated Fair or Better

