Policy Options for Secondary Road Construction and Management in the Commonwealth of Virginia

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Virginia Highways (2007)

Centerline Mileage

- Frontage, 330 miles, 0.5%
- Toll, 40 miles, 0.1%
- Urban, 11,346 miles, 16%
- Interstate, 1,119 miles, 1.6%
- Primary, 7,999 miles, 12%
- Secondary, 48,280 miles, 70%

VDOT maintained Lane Mileage

- Frontage, 661 miles, 0.5%
- Toll, 225 miles, 0.2%
- Urban, 0 mile, 0%
- Interstate, 5,402 miles, 4%
- Primary, 21,674 miles, 17%
- Secondary, 97,629 miles, 78%

Note: Centerline mileage and lane-miles for toll roads maintained by VDOT are for 2011 and were provided by Jennifer Debruhl, VDOT Local Assistance Division.

% State Ownership of Rural Roads

Policy Evaluation

• Programmatic outcomes - pavement quality, emergency response time, etc.
  – Not inputs and outputs (staffing, expenditures)

• Social and economic value of the roads
  – Environmental impact, community impact, etc.

• Road / Land Use Relationship

• Changing needs: “complete streets” - bikes, pedestrians, etc.
The Secondary Road System Challenge

<table>
<thead>
<tr>
<th>Functional Class</th>
<th>Miles</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Freeway/Expressway</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Urban Other Principal Arterial</td>
<td>356</td>
<td>0.074</td>
</tr>
<tr>
<td>Urban Minor Arterial</td>
<td>587</td>
<td>1.215</td>
</tr>
<tr>
<td>Urban Collector</td>
<td>1,136</td>
<td>2.352</td>
</tr>
<tr>
<td>Urban Local</td>
<td>6,364</td>
<td>13.181</td>
</tr>
<tr>
<td>Total Urban</td>
<td>8,122</td>
<td>16.822</td>
</tr>
<tr>
<td>Rural Principal Arterial</td>
<td>1</td>
<td>0.001</td>
</tr>
<tr>
<td>Rural Minor Arterial</td>
<td>21</td>
<td>0.044</td>
</tr>
<tr>
<td>Rural Major Collector</td>
<td>6,920</td>
<td>14.333</td>
</tr>
<tr>
<td>Rural Minor Collector</td>
<td>2,348</td>
<td>4.864</td>
</tr>
<tr>
<td>Rural Local</td>
<td>30,868</td>
<td>63.936</td>
</tr>
<tr>
<td>Rural Total</td>
<td>40,158</td>
<td>83.178</td>
</tr>
<tr>
<td>Grand Total</td>
<td>48,280</td>
<td>100.000</td>
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</tbody>
</table>


- Diverse physical and functional uses:
- Statutorily equivalent
The Secondary Road System Challenge

• Revenue sources:
  – Highway Maintenance and Operating Fund (HMOF)
  – Transportation Trust Fund (TTF)
  – Maintenance has priority

• VDOT required to accept all new roads if they meet VDOT standards:
  – 1,454 miles (3%) was added 1998 – 2007

• Large portion of the VDOT resource use:
  – $410M out of $3.3B FY2011 budget (12%)
The Secondary Road System Challenge

VDOT Secondary Road Budgets, FY 2006-FY2012

- Declining trend; rebound in FY 2011, 2012
- Maintenance has funding priority
- Budget decline due to:
  - Declining gas and vehicle taxes
  - Economic recession
The Secondary Road System Challenge

- Districts budgets drops in 2010
  - already depressed from previous years
- Some rebound in 2011
## Budgets vs. Expenditures

<table>
<thead>
<tr>
<th>County Type</th>
<th>Total M&amp;O Expenditures Net Emergency Expenditures (2005 $000)</th>
<th>Total Secondary Lane Miles</th>
<th>$/lane-mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Virginia</td>
<td>$58,501</td>
<td>9,555</td>
<td>$6,123</td>
</tr>
<tr>
<td>Urban/High Growth</td>
<td>$32,977</td>
<td>11,112</td>
<td>$2,968</td>
</tr>
<tr>
<td>Rural Low Traffic</td>
<td>$42,494</td>
<td>17,672</td>
<td>$2,405</td>
</tr>
<tr>
<td>Rural High Traffic</td>
<td>$48,509</td>
<td>18,006</td>
<td>$2,694</td>
</tr>
<tr>
<td>Rural Mountain Low Traffic</td>
<td>$55,900</td>
<td>18,812</td>
<td>$2,972</td>
</tr>
<tr>
<td>Rural Mountain High Traffic</td>
<td>$68,653</td>
<td>20,903</td>
<td>$3,284</td>
</tr>
<tr>
<td>Total Expenditures or Average $/lane-mile.</td>
<td>$307,034</td>
<td>96,060</td>
<td>$3,196</td>
</tr>
</tbody>
</table>

*Source: Derived from Virginia Department of Transportation, Feasibility Model for Secondary System Assumption by Virginia Counties (March 2007).*
The Secondary Road System Challenge

• Deteriorating conditions – deficient pavement:
  – 25% in 2007
  – 31% in 2009 (some counties over 50%)
• Total cost to restore payments $1.3B
• Continued deterioration increases cost of returning to “state of good repair” exponentially
• Additional considerations:
  – Potential value and benefit of local control
  – Employment associated with secondary roads operations of VDOT
Virginia Secondary Road Policy History

- Byrd Road Act (1932):
- Most counties welcomed the change
- Arlington and Henrico counties manage road systems
- Counties could contribute to the secondary road program for additional construction and maintenance, though only few cases
Urban Densities in Some Counties

Population Density (Persons per Square Mile of Land Area):
Counties and Cities in Virginia 2010 Census*

(*Only counties and cities with a higher population density than the average population density in Virginia are shown here.*)
<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Type</th>
<th>Density Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandria</td>
<td>City</td>
<td>9,220</td>
</tr>
<tr>
<td>Arlington</td>
<td>County</td>
<td>8,026</td>
</tr>
<tr>
<td>Falls Church, Manassas Park, Norfolk, Charlottesville, Manassas, Fairfax, Richmond, Portsmouth, Lexington, Winchester, Harrisonburg</td>
<td>Cities</td>
<td>2,786-6,197</td>
</tr>
<tr>
<td>Fairfax</td>
<td>County</td>
<td>2,738</td>
</tr>
<tr>
<td>Hampton, Newport News, Colonial Heights, Fredericksburg, Roanoke, Hopewell, Virginia Beach, Salem, Radford, Williamsburg, Lynchburg, Petersburg, Bristol, Waynesboro</td>
<td>Cities</td>
<td>1,368-2,654</td>
</tr>
<tr>
<td>Henrico</td>
<td>County</td>
<td>1,289</td>
</tr>
<tr>
<td>Martinsville, Staunton</td>
<td>Cities</td>
<td>1,205-1,261</td>
</tr>
<tr>
<td>Prince William</td>
<td>County</td>
<td>1,190</td>
</tr>
<tr>
<td>Covington, Franklyn, Danville, Buena Bista, Bedford, Emporia, Galax, Poquoson</td>
<td>Cities</td>
<td>783-1,051</td>
</tr>
<tr>
<td>Chesterfield</td>
<td>County</td>
<td>743</td>
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<tr>
<td>Chesapeake</td>
<td>City</td>
<td>652</td>
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<tr>
<td>York</td>
<td>County</td>
<td>620</td>
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<tr>
<td>Loudoun</td>
<td>County</td>
<td>601</td>
</tr>
<tr>
<td>Norton</td>
<td>City</td>
<td>526</td>
</tr>
<tr>
<td>Stafford</td>
<td>County</td>
<td>477</td>
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<tr>
<td>James City</td>
<td>County</td>
<td>469</td>
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<tr>
<td>Roanoke</td>
<td>County</td>
<td>368</td>
</tr>
<tr>
<td>Spotsylvania</td>
<td>County</td>
<td>305</td>
</tr>
<tr>
<td>Montgomery</td>
<td>County</td>
<td>243</td>
</tr>
<tr>
<td>Suffolk</td>
<td>City</td>
<td>211</td>
</tr>
<tr>
<td>37 other counties</td>
<td>Counties</td>
<td>50-200</td>
</tr>
<tr>
<td>Average County Density</td>
<td></td>
<td>68</td>
</tr>
<tr>
<td>47 other counties</td>
<td>Counties</td>
<td>6-67</td>
</tr>
</tbody>
</table>
Restructuring Initiatives

• *Beyond the Byrd Road Act* (1998, VTRC)
• Secondary Devolution Policy Since 2001
  – Allows counties to take some or all responsibility
    • Estimates what VDOT “would have spent”
  – James City and Stafford County Studies
  – Fairfax County self studies – 1975, 1990, 2010
• Bond Study
• System Reclassification
Other Relevant Policy Developments

• Transportation and land use coordination
• Local option transportation taxes
• Urban Construction Initiative (First Cities Initiative)
• Performance-based maintenance outsourcing
Findings

• Current secondary system not appropriate admin system for policy
• Deteriorating condition
• Minimal funding for construction in recent years
• Low priority for funding by current budget process
• “Devolution mechanism” of the current statute has not attracted any counties
• State payments not sufficient to cover costs
Findings (cont’d)

• Most counties have limited capacity to assume fiscal/admin responsibility today
• Local control allows integration of transportation and land use in developing areas
• Local option taxes successful elsewhere but somewhat limited in Virginia
• Secondary acceptance policy continues to enlarge size of system and associated problems
Options
Option 1: Maintain Current Policy

• Construction:
  – Counties could supplement VDOT construction, if not need to replace the role of VDOT in construction

• Maintenance:
  – The policy does not guarantee future payments
  – Counties face the uncertainty

• Counties could expand their transportation departments, though unlikely

• This option would allow the conditions of the secondary system to continue deteriorating
Option 2: Maintain Current Policy with Enhanced Budgetary Priority for Secondary Roads

• Raising the priority of the secondary system
• Clear counties’ uncertainty about future
• Budgetary trade-offs
  – What gets downgraded?
Option 3: Restructure the Secondary Road System

- Restructure the secondary system as part of a broader reclassification
- Adoption of a “core network” system
- What to do with the remainder of the secondary roads
  - Continue VDOT responsibility
  - Partial or complete performance based outsourcing
Option 4: Consider Performance-Based Maintenance Contracting on the Secondary System

• Introduce performance-based maintenance contracting (PBMC) for secondary road system

• Possible challenges:
  – Definition of right-of-way limits
  – Interaction of contractors with households, businesses served by the system

• A quality bid selection process
Option 5: Empower Counties to Raise Revenues

• Allow local option transportation taxes:
  – Counties may more readily embrace responsibility for secondary road construction and maintenance

• Currently:
  – Counties have limited capacity
    • Referendum required for bond issuance
  – Cities have greater authority
Option 6: Impose Devolution on All Counties

- Allocate secondary road maintenance funds by a legislative formula
- Possible concerns to counties:
  - Current state of repair of the assets
  - Level of funding
  - County fiscal and institutional capacity
Option 7: Impose Devolution for Select Urban Counties

• Transfer responsibility to select “urban” counties
• Metrics to identify capable counties
• VDOT focus on the links to larger intercity and regional traffic flows of traffic
• Benefit:
  – Better responsiveness, local control, transportation/land use
  – Focused attention to the different types of roads
Option 8: Performance Audit Findings

• Funds carryover: possible higher spending levels
• Close the time lag of asset condition data collection and budget allocation
• Target maintenance “Projectization”
Option 9: Possible Hybrid Policy Options

• Example 1: A combination of:
  – performance based maintenance contracting (PBMC)
  – System reclassification
  – Devolution for select urbanized counties and guarantee a payment stream for an initial contract term

• Example 2: A combination of:
  – PBMC
  – System reclassification
  – Contract out for a group of rural counties
Questions?