Mobility First: Is Auto-Centrism Bad for America?

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Congestion in the Washington, DC region will exceed levels in today’s LA by 2030

(Note: $4 gas prices won’t change the long-term trend)
Why congestion is a problem

American Businesses
How Do We Expand the Opportunity Circle?

1. Manage the system more efficiently
   • Traffic signal optimization
   • Road pricing

2. Build more capacity

3. Redesign the transportation network
What About Transit?
Ballston vs. Clarendon
Context is Important to Transit Success
### Transit Ridership and Investment Around DART Stations: 1999-2005

<table>
<thead>
<tr>
<th>Station</th>
<th>Investment (thousands $)</th>
<th>Transit Ridership (annualized, unlinked)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park Lane</td>
<td>$610,000</td>
<td>26,219</td>
</tr>
<tr>
<td>Mockingbird</td>
<td>$270,000</td>
<td>38,859</td>
</tr>
<tr>
<td>Plano (downtown)</td>
<td>$260,000</td>
<td>8,890</td>
</tr>
<tr>
<td>Galatyn Park</td>
<td>$141,300</td>
<td>3,983</td>
</tr>
<tr>
<td>Cedars</td>
<td>$134,200</td>
<td>13,002</td>
</tr>
<tr>
<td>Convention Center</td>
<td>$130,000</td>
<td>9,881</td>
</tr>
<tr>
<td>City Place</td>
<td>$115,000</td>
<td>25,831</td>
</tr>
<tr>
<td>Pearl</td>
<td>$100,000</td>
<td>27,444</td>
</tr>
<tr>
<td>Arapaho</td>
<td>$70,000</td>
<td>16,696</td>
</tr>
<tr>
<td>Westmoreland</td>
<td>$50,000</td>
<td>30,316</td>
</tr>
<tr>
<td>VA Medical Center</td>
<td>$39,000</td>
<td>26,868</td>
</tr>
</tbody>
</table>
What About Washington D.C.?

- Metro is an “outlier” but surprisingly typical
  - 80% of Arlington residents don’t live within walking distance of a metro stop

- Public transit accounts for
  - 9% of commuting trips
  - About 40% of commuting trips to downtown
  - 40% of peak-hour trips are by federal workers

- 90+% of overall *regional* travel is by means *other* than public transit

- Transit use in the DC area is
  - highly localized, and
  - highly targeted
  - Corridor driven
Distribution of Public Transit Trips (including New York)

- Bus: 53%
- Heavy Rail: 35%
- Commuter Rail: 5%
- Ligh Rail: 4%
- Trolleybus: 1%
- Other: 2%
Density Drives Transit Market Penetration

Share of Commuting Trips
(including New York)

Population Density (Census Tract)

- > 25,000: 36.5% Bike/Walk, 20.3% Transit, 20.3% Automobile
- 10-25,000: 42.2% Bike/Walk, 17.9% Transit, 6.2% Automobile
- 4-10,000: 75.4% Bike/Walk, 10.9% Transit, 2.0% Automobile
- Under 4,000: 86.9% Bike/Walk, 7.5% Transit, 0.5% Automobile

16 April 2010
Critical Factors for Transit Success

✓ **Density**
  - Population
  - Mixed use
  - Employment

✓ **Economic growth**

✓ **Efficient transportation network**

✓ **Effective and reliable transit service**
  - But this alone won’t be enough to secure the benefits of TOD for the private sector
## Today’s Travel Is Complex

<table>
<thead>
<tr>
<th>Trip type</th>
<th>Share (2000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family &amp; personal business</td>
<td>22.5%</td>
</tr>
<tr>
<td>Shopping</td>
<td>19.8%</td>
</tr>
<tr>
<td><em>To &amp; from work</em></td>
<td>14.9%</td>
</tr>
<tr>
<td><em>All other</em></td>
<td>42.8%</td>
</tr>
</tbody>
</table>
Most regional urban transportation networks are not designed for current travel behavior

- Capacity has not kept pace with VMT
- Arterial network is among the least well developed
- “Hub and spoke” system doesn’t recognize complexity of modern travel patterns
We need to consider a new kind of transportation network

- A “spiderweb” approach to design
- More connections through local roads and arterials
- Fewer major “trunk” roads
- More balanced road network
Does building capacity work?

Building Roads Cuts Congestion
New Freeway Capacity and Congestion Delays in Houston

[Graph showing the relationship between new freeway lane miles added and delay per peak traveler over time.]
Can we build the new capacity?
It’s not just expressways
Can We Afford to Build New Capacity?

Hint:
Not if we rely primarily on taxes
The Inevitability of Road Pricing

- “Willingness to pay” becomes the standard for triggering new investments
- Prioritizes projects
  - Identifies value added
  - Monetizes value of projects
- A sustainable revenue stream is created
- Expands the potential for tapping into private capital
<table>
<thead>
<tr>
<th>Location</th>
<th>Project</th>
<th>Cost (est.)</th>
<th>Self Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Pasadena Tunnel</td>
<td>4.5 miles, 4 lanes each direction</td>
<td>$1.5 B</td>
<td>100%</td>
</tr>
<tr>
<td>Palmdale-Glendale Tunnel</td>
<td>21 miles (5 miles @ grade); double-deck</td>
<td>$3.7 B</td>
<td>100%</td>
</tr>
<tr>
<td>Riverside-Orange Co. Tunnel</td>
<td>14 miles</td>
<td>$7.4 B</td>
<td>59%</td>
</tr>
<tr>
<td>LA HOT Lane Network</td>
<td>1,009 lane miles (385 new)</td>
<td>$13.5 B</td>
<td>92%</td>
</tr>
<tr>
<td>San Bernardino-Riverside HOT Lane Network</td>
<td>410 lane miles (320 new)</td>
<td>$5.8 B</td>
<td>72%</td>
</tr>
<tr>
<td>Chicago Regional Congestion Mitigation</td>
<td>HOT Network, new expressways, 3 tunnels</td>
<td>$48 B</td>
<td>110%</td>
</tr>
<tr>
<td>Atlanta Congestion Mitigation Strategy</td>
<td>Four major projects; regional HOT Lane network; tunnel</td>
<td>$25 B</td>
<td>78%</td>
</tr>
</tbody>
</table>
What the Washington, D.C. Area Needs

1. Sufficient physical capacity to handle travel demand
   - New capacity where demand warrants the investment
   - ITS to ensure network efficiencies are maximized

2. Web-like connections to different components of the road network

3. Market-prices to manage regional flows along major corridors based on consumer demand and choice

4. Transit that works
   - Meets needs along corridors
   - Provides services to low-income riders
   - Sustainable revenues
Getting From Here to There

1. Public Private Partnerships
2. Road Pricing
3. Decentralizing transportation investment decisions