Concerns for Regional Transportation Planning

University of Virginia – Master Planning Committee
November 17th 2010

Charlottesville-Albemarle Metropolitan Planning Organization
Who are we?

What is an MPO

A Metropolitan Planning Organization is a federally-mandated planning jurisdiction, specifically created to facilitate transportation planning. A state is required to designate MPOs around urbanized areas with a population greater than 50,000.

What is the TJPDC?

The Thomas Jefferson Planning District Commission is a regional planning agency in central Virginia. This planning district serves the City of Charlottesville, Albemarle County, Fluvanna County, Greene County, Louisa County and Nelson County.
What does an MPO Do?

Coordinates Various Transportation Agencies
- The Charlottesville-Albemarle Metropolitan Planning Organization (MPO) is the forum for cooperative transportation decision-making among Charlottesville, Albemarle, state and federal officials.

Establishes Long Range and Short Range Funding Plans for Transportation
- The MPO is responsible for two major documents that prioritize all transportation funding projects; the Long Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP).

Implements the 3-C Process to Meet Federal (FHWA) Planning Requirements
- The 3-C process stands for *Continuing, Comprehensive and Cooperative* transportation planning. All agencies involved in transportation planning are stakeholders in the planning process. 3-C coordination allows all of these stakeholders to be heard; including members of the Public.
Transportation planning provides the information, tools, and public involvement needed for improving transportation system performance.

Transportation planning is a continuous process that requires monitoring of the system’s performance and condition.
Transportation and Land Use

- Land Use Change
- Increased Land Value
- Increased Traffic Generation
- Roadway Improvements
- Increased Traffic Conflict
- Increased Congestion
- Decreased Congestion

Traditional Land Use & Transportation Cycle
Transportation and Land Use

Land Use Change → Increased Trip Generation → Develop Sustainable Land Use Policy

Alternative Land Use & Transportation Cycle

- Increase Land Value
- Increase Use of Alternative Modes
- Encourage Compact Development
- Maintain Stable Traffic
Current Transportation Network

- **Primary Roads**: I-64, US 29, US 250, Route 20, Route 22, and Route 53.

- **Commuter Options**: RideShare and Park and Ride Lots.

- **Airports**: Charlottesville-Albemarle Airport.

- **Transit**: Charlottesville Area Transit (CAT), JAUNT, University Transit Service, AMTRAK.

- **Bicycle and Pedestrian Facilities**: The City maintains 255 miles of sidewalk and 14 miles of on-street bike lanes.
Major Transportation Documents in our area.

- **Transportation Improvement Program (TIP)**
  - Short term programming document for all transportation projects in the MPO.

- **Long Range Transportation Plan (LRTP)**
  - Both a vision document for the future transportation system and a fiscally-constrained project list with a 25 year outlook.

- **Localities’ Comprehensive Plans**
  - Includes sections devoted to transportation planning within the locality.

- **Targeted Transportation Plans**
  - Transportation plans that focus on improving a specific portion of the transportation system. For example, Places29, the Pantops Master Plan, the 29H250 plan, the UVA Bicycle Master Plan, and the Bicycle and Pedestrian Master Plan.
### Current Facts & Future Projections

#### Demographic Forecasts

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2035</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>69,607</td>
<td>101,447</td>
<td>+45%</td>
</tr>
<tr>
<td>Population</td>
<td>117,339</td>
<td>160,085</td>
<td>+36%</td>
</tr>
</tbody>
</table>

#### Travel Activity Forecasts

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2035</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Daily Persons Trips</td>
<td>553,097</td>
<td>684,038</td>
<td>+24%</td>
</tr>
<tr>
<td>Auto</td>
<td>491,164</td>
<td>599,985</td>
<td>+22%</td>
</tr>
<tr>
<td>Transit</td>
<td>6,972</td>
<td>9,414</td>
<td>+35%</td>
</tr>
<tr>
<td>Bicycle/Walk</td>
<td>54,961</td>
<td>74,639</td>
<td>+36%</td>
</tr>
</tbody>
</table>

#### Average Daily Vehicle Miles Traveled

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2035</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4,368,269</td>
<td>5,159,882</td>
<td>+18%</td>
</tr>
</tbody>
</table>

#### Average Miles per Vehicle Trip

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2035</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Person Trips</td>
<td>8.89</td>
<td>8.60</td>
<td>-3%</td>
</tr>
</tbody>
</table>

Source: Charlottesville Transportation Model
Timeline of a Transportation Project

1) Local Project Idea

2) Incorporating project into the Long Range Plan

3) Local Jurisdictions adopt Priority List

4) MPO Policy Board adopts Priority List for the MPO.

5) Commonwealth Transportation Board adopts State Priority List

6) Identifying and acquiring funding.

7) Construction

8) Monitoring and maintenance of the completed facility.

Timeline Breakdown
- 2 to 3 years of planning
- 2 to 3 years to identify funding
- 4 to 6 years for environmental review
- 2 to 3 years to design
- 1 to 2 years of ROW acquisition
- 2 to 3 years for construction

Total: 13 to 20 years for one project

The Commonwealth of Virginia is facing a significant budget shortfall.

52% of all Transportation Revenue Sources in Virginia come from Federal and State Fuels Tax. Fuels Tax, and other taxes that contribute to Transportation Revenue, typically fail to keep up with population and economic growth.

With people driving more fuel efficient cars and fewer people driving at all, the funds the state has received from the Fuels Tax have decreased.

Virginia State Fuels Tax: **17.5¢** per gallon since 1987.

Virginia has the 11th lowest fuels tax in the United States.

Average State Fuels Tax: **29¢**

The Commonwealth of Virginia maintains more than **125,000** lane miles.

The Commonwealth of Virginia gains **475** lane miles each year.

Virginia’s road system is the third largest State maintained system in the Country.

Virginia’s State Fuels Tax: Purchasing Power and Inflation Adjusted Tax

Currently, the Virginia State Fuels Tax has half the purchasing power it did in 1987.

VA Fuels Tax=17.5¢ (constant)
Purchasing Power 1987= 17.5¢
Purchasing Power 2010= 8.4¢

To match the purchasing power of 1987’s 17.5¢ today’s fuels tax would have to be increased to 36.2¢

Source: Transportation Funding Update, Virginia’s Secretary of Transportation Office, November 2009.
Commonwealth Transportation Allocations 2010
Total=3.75 Billion

- Highway Maintenance & Operations: 43.48%
- Earmark & Special Financing: 9.78%
- Highway Systems Construction: 17.71%
- Tolls, Admin & Other Programs: 10.56%
- Public Transportation & Rail: 9.17%
- Ports & Aviation: 1.39%
- Debt Service: 6.86%
- Other Agencies and Transfers: 1.04%

Source: Fiscal-Year Revised Budget Presentation, Commonwealth Transportation Board, December 16, 2009
## State Fuels Tax Comparison

### Comparison of State Gasoline and Diesel Taxes

<table>
<thead>
<tr>
<th>State</th>
<th>State Gas Tax</th>
<th>Diesel Tax</th>
<th>Indexed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia</td>
<td>17.5¢</td>
<td>17.5¢</td>
<td>No</td>
</tr>
<tr>
<td>North Carolina</td>
<td>30.2¢</td>
<td>30.2¢</td>
<td>Yes</td>
</tr>
<tr>
<td>Washington D.C.</td>
<td>23.5¢</td>
<td>23.5¢</td>
<td>No</td>
</tr>
<tr>
<td>West Virginia</td>
<td>32.2¢</td>
<td>32.1¢</td>
<td>Yes</td>
</tr>
<tr>
<td>Maryland</td>
<td>23.5¢</td>
<td>24.3¢</td>
<td>Yes</td>
</tr>
<tr>
<td>Tennessee</td>
<td>21.4¢</td>
<td>18.4¢</td>
<td>No</td>
</tr>
<tr>
<td>Kentucky</td>
<td>22.5¢</td>
<td>19.5¢</td>
<td>Yes</td>
</tr>
<tr>
<td>Average for All States</td>
<td>28.9¢</td>
<td>27.6¢</td>
<td>--</td>
</tr>
</tbody>
</table>

Source: American Petroleum Institute October 2010.
39 States have a higher fuels tax than the Commonwealth of Virginia.

Source: American Petroleum Institute October 2010.
City of Charlottesville: State and Federal Transportation Funding

Source: Six Year Improvement Program: Provided by City Staff.
Albemarle County:
State and Federal Transportation Funding

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Dollars in Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2006</td>
<td>4.0</td>
</tr>
<tr>
<td>FY2007</td>
<td>4.5</td>
</tr>
<tr>
<td>FY2008</td>
<td>4.5</td>
</tr>
<tr>
<td>FY2009</td>
<td>3.0</td>
</tr>
<tr>
<td>FY2010</td>
<td>1.5</td>
</tr>
<tr>
<td>FY2011</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: Six Year Improvement Program: Provided by County Staff.
Transportation Issues in the Region

- Improve intersections along Route 29 Corridor
- Increase capacity and improve interchanges along Interstate 64
  - Improve Route 250 East near Pantops Mountain
  - Expand reach Transit facilities
- Improve Bicycle and Pedestrian options throughout the region
# Committed Projects

These projects are anticipated to receive funding in the next 20 years.

<table>
<thead>
<tr>
<th>General Improvements--LRTP</th>
<th>Project Description</th>
<th>Conceptual Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvements to Intersections and Interchanges on Route 29 North</td>
<td>Adding Grade-Separated Interchanges at Rio Road. Improvements to Route 250 Interchange.</td>
<td>54 Million</td>
</tr>
<tr>
<td>Berkmar Drive Extended</td>
<td>Constructing and improving a parallel roadway on the west side of the Route 29 North corridor.</td>
<td>58 Million</td>
</tr>
<tr>
<td>Improving Interstate 64</td>
<td>Major Interchanges at 5th Street, Shadwell, and the route 29 exits.</td>
<td>37.3 Million</td>
</tr>
<tr>
<td>Improving Route 250</td>
<td>Improvements to Route 250 East at Pantops.</td>
<td>43 Million</td>
</tr>
<tr>
<td>Establishing a Regional Transit Authority</td>
<td>Improving Transit in the Region by Establishing a Regional Transit Authority</td>
<td>Oper. $16.7mil Cap. $42.0mil</td>
</tr>
<tr>
<td>Bus Rapid Transit</td>
<td>Enhancing Transit Facilities Infrastructure; including Bus Rapid Transit.</td>
<td>10 Million</td>
</tr>
<tr>
<td>Improving Bicycle and Pedestrian Facilities</td>
<td>Constructing facilities throughout the Urban Area, and building a commuter bike trail parallel to Route 29 North.</td>
<td>10 Million</td>
</tr>
<tr>
<td>Transportation Demand Management</td>
<td>Constructing and Enhancing Park and Ride Lots, enhancing Intelligent Transportation Systems,</td>
<td>2 Million</td>
</tr>
<tr>
<td>Sunset/Fontaine Connector</td>
<td>Connector Road between Sunset Avenue and Fontaine Avenue.</td>
<td>29 Million</td>
</tr>
<tr>
<td>Hillsdale Drive Extended</td>
<td>A new road connecting the southern terminus of Hillsdale Drive to Hydraulic Road</td>
<td>25 Million</td>
</tr>
<tr>
<td>Belmont Bridge</td>
<td>Replace the bridge that connects 9th Street and Avon Street.</td>
<td>9 Million</td>
</tr>
</tbody>
</table>

Source: MPO Fiscally-Constrained LRTP and Virginia Department of Transportation.
Alternative Strategies

These projects do NOT have a planned funding source at this time.

<table>
<thead>
<tr>
<th>General Improvements—not in LRTP</th>
<th>Project Description</th>
<th>Conceptual Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Connector</td>
<td>Constructing a roadway that connects Route 29 North to Route 250 East.</td>
<td>11.7 Million*</td>
</tr>
<tr>
<td>Western Bypass</td>
<td>Constructing a Bypass to Route 29 North.</td>
<td>232 Million</td>
</tr>
<tr>
<td>Southern Connector</td>
<td>Constructing a roadway that connects Avon Street and 5th Street Extended</td>
<td>3.3 Million*</td>
</tr>
<tr>
<td>Hydraulic Road/Route 29 Interchange</td>
<td>A grade separated interchange at Hydraulic Road and Route 29 North.</td>
<td>50 Million</td>
</tr>
<tr>
<td>Northern Free State Road</td>
<td>Constructing a parallel road to Route 29 North extending from Rio Road to the South fork of the Rivanna River.</td>
<td>31.3 Million*</td>
</tr>
</tbody>
</table>

Funding amounts with an asterisk (*) are current planning cost estimates and have NOT been grown to a future build year.

Source: UnJAM 2025 Visioning Project List and the Virginia Department of Transportation
Land Use Map Data

- Orange Circle: Six-Year Capital Project
- Blue Circle: Building Demolition
- Brown Square: Archaeological Site
ITC Data Center

- Project Cost: $14.8 M
- Architect: Hypertect, Inc./TEC
- Contractor: Holder
- LEED Status: Design Application; LEED Target: Gold
• Presidential Library, office space, conference space and additional parking
Baseball Stadium Expansions

- Project Cost: TBD
- Architect: VMDO
- Contractor: TBD
- Construction Start, Finish: TBD
- LEED Status: Not Registered  LEED Target: Silver
Klöckner Stadium Expansion

- **Project Cost:** $10.5 M
- **Architect:** VMDO
- **Contractor:** TBD
- **Construction Start, Finish:** TBD
- **LEED Status:** Not Registered
  LEED Target: Certified

Current Planning & Projects Report

State Land Use Plan – Klöckner Stadium Expansion 2010
- 120 Yards Long
- Climate Controlled
- Provide Indoor Field Space
52,000 GSF

State Land Use Plan – JAG School Addition 2010
**Bookstore Expansion**

- **Project Cost:** $10.5 M
- **Architect:** Bowie Gridley Architects
- **Contractor:** W.M. Jordan
- **Construction Start:** May 2010, **Finish:** October 2011
- **LEED Status:** Design Application; LEED Target: Certified
Newcomb Hall Dining Addition

- Project Cost: $18 m
- Architect: Cole & Denny Incorporated
- Contractor: R.E. Lee & Sons, Inc.
- Construction Start: TBD, Finish: TBD
- LEED Status: Design Application; LEED Target: Certified
Rehearsal Hall

- **Project Cost:** $10.7 M - $12.7 M
- **Architect:** William Rawn Associates
- **Contractor:** DPR, Inc
- **Construction Start:** December 2009  **Finish:** August 2011
- **LEED Status:** Design Application; LEED Target: Silver

Current Planning & Projects Report

State Land Use Plan – Band Rehearsal Hall 2010
**Thrust Theatre**

- **Project Cost:** $13.5 M
- **Architect:** William Rawn Associates
- **Contractor:** Nielson
- **Construction Start:** January 2011, **Finish:** May 2012
- **LEED Status:** Not Registered; LEED Target: Silver
Rotunda Restoration

- Architects: Thomas Jefferson (1822-26)
- Maintenance & Restoration Cost: $50,000,000
- Historic Structure Report: complete
- Project Timeline: 2011-2015
• 13,500 GSF of Renovation and 20,000 GSF, addition

• Expanded space for galleries, collection/exhibit support, education and offices
A. Maupin House (2011)
B. Webb House (2011)
D. Tuttle House (2013)
E. Lile House (2013)
F. Dunnington House (2015)
Alderman Road Residence Area, Phase III

- **Project Cost:** $46.5 M
- **Architect:** Ayers Saint Gross
- **Contractor Design/Build:** W.M. Jordan
- **Construction Start:** May 2011, Finish: August 2013
- **LEED Status:** Not Registered; LEED Target: Certified
Alderman Road Residence Area, Phase IV

- **Project Cost:** $36.5 m
- **Architect:** Ayers Saint Gross
- **Contractor Design/Build:** W.M. Jordan
- **Construction Start:** TBD, **Finish:** TBD
- **LEED Status:** Not Registered; **LEED Target:** Certified
SEAS Student Projects/FM Shops Building

- **Project Cost:** $3.5 - $4.2 M
- **Architect:** TEC Inc.
- **Design/Build:** Barton Malow
- **Construction Start:** TBD, Finish: TBD
- **LEED Status:** Not Registered; LEED Target: Certified

*Current Planning & Projects Report*

State Land Use Plan – SEAS/FM Building 2010
Ivy Translational Research Building

- **Project Cost:** $90M
- **Architect:** Perkins and Will
- **Contractor Design/Build:** TBD
- **Construction Start, Finish:** TBD
- **LEED Status:** Not Registered; LEED Target: TBD
• 90,000 GSF
• Space for instruction, research and offices
• Potential to partner with Arts & Sciences
Questions?

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