Transportation Planning 101
An Overview of the Role and Functions of Transportation Planning at VDOT
Overview

• This presentation will provide a general overview of the transportation planning process at VDOT. Specifically, we will cover:
  – Metropolitan Planning (MPO / Cities)
  – Rural Planning (PDC / County / Town)
  – Comprehensive Plans
  – Bike and Pedestrian
  – Special Studies
What is transportation planning?

**Textbook:** Transportation planning is a field involved with the evaluation, assessment, design and siting of transportation facilities (generally streets, highways, footpaths, bike lanes and public transport lines).

**Definition that better describes planning at VDOT:** Transportation planning is the process of identifying and understanding current and expected transportation problems and working with decision makers and citizens to reach consensus on solutions to those problems.

Planning is here

Programming → PE/Design → Construction → Maintenance

and here and here
Metropolitan Planning
What is an MPO?

- Metropolitan Planning Organization
  - Once the population of an urbanized area exceeds 50,000, as identified by the U. S. Bureau of the Census, an MPO must be designated through an agreement between the Governor and the local governments that together represent at least 75 percent of the affected population.
  - This agreement designates the policy body that is the forum for cooperative decision making and federally required actions.
  - Conducts a continuing, cooperative, and comprehensive (3C) transportation planning process.
  - This group is generally known as the “Policy Board” or “Policy Committee”
MPO Areas in Virginia

Northern Virginia (Multi-state)
Hampton Roads
Richmond
Tri-Cities
Roanoke
Lynchburg
Charlottesville
Danville
Bristol (Multi-state)
Kingsport (Multi-state)
Fredericksburg
Winchester
Blacksburg/Christiansburg
Harrisonburg
The MPO, in cooperation with the State and transportation operators, is responsible for carrying out the metropolitan transportation planning process within the MPO study area.

Required MPO products:
- Unified Planning Work Program (UPWP)
- Constrained Long Range Transportation Plan (CLRP)
- Transportation Improvement Program (TIP)
MPO Planning Process

Unified Planning Work Program
Outlines the planning activities to take place within the MPO study area

Long Range Transportation Plan
Financially constrained document outlining recommended improvements to the regional transportation system over next 20+ years

Air Quality Conformity
In non-attainment areas, the Federal Highway Administration and Federal Transit Administration give a conformity finding based on an EPA determination

Certify Planning Process
Every three years, FHWA and FTA conduct certification reviews of the MPO and its planning processes to assure that all the federal planning requirements are met

Transportation Improvement Program
Document includes all regionally significant projects – Document submitted to FHWA/FTA reflecting obligation amounts of federal funds for select transportation projects – projects must come from adopted Long Range Transportation Plan

State Transportation Improvement Program
VDOT compiles TIPs and other federally funding projects to create the STIP. Submitted to FHWA/FTA for approval. STIP obligates federal funds
Constrained Long Range Transportation Plan

Federal Requirements

- Maintain (at a minimum) a twenty year planning horizon
- Outlines long-range and short-range strategies to develop an intermodal transportation system that facilitates the movement of people and goods
- Must include a financial plan (demonstration of financial constraint) indicating that sufficient resources will be available to fund plan recommendations
- Show projected year of completion for recommendations
- Must be reviewed, updated and approved by the MPO every four or five years, depending on air quality status

For a project to receive Federal funding, it must first be in the CLRP

A project cannot move forward to design, right-of-way or construction unless it is included in the plan and TIP adopted by the MPO
Federal Requirements (Continued)

- Must consider all modes of transportation
- Must follow 3C process (Continuing, Cooperating and Comprehensive)
- Must address eight planning factors
  - Support economic vitality
  - Increase safety
  - Increase security
  - Increase accessibility for people and goods
  - Protect and enhance environment
  - Enhance connectivity across modes
  - Promote efficient operation of existing transportation network
  - Emphasize existing system preservation
Rural Planning
Almost 70% of Virginia’s state maintained roads are located in rural areas.

A disproportionate amount of traffic fatalities occur on rural roads.

Many disadvantaged groups live in rural areas, and have fewer transportation options.

A considerable amount of freight moves through rural areas impacting highway facilities (safety, maintenance, capacity) without providing economic benefit.

Rural areas are experiencing increasing land development outside of urban areas.

Continue to face transportation funding shortfalls.
The Rural Transportation Planning Program was created by TMPD in 1993 to provide funding to the 20 rural regions for transportation planning.

- Each Rural PDC currently receives $58,000 annually + $14,500 local match = $72,500 to conduct rural transportation planning
- Since the inception of the Rural Planning Program, VDOT has invested over $20,000,000 to support rural transportation planning activities throughout the Commonwealth
Background of Virginia’s Rural Transportation Planning Program

Virginia Planning District Commission Boundaries

1. Lenowisco
2. Cumberland Plateau
3. Mount Rogers
4. New River Valley
5. Roanoke Valley-Alleghany
6. Central Shenandoah
7. Northern Shenandoah Valley
8. Northern Virginia
9. Rappahannock
10. Thomas Jefferson
11. Region 2000 Regional
12. West Piedmont
13. Southside
14. Piedmont
15. Richmond Regional
16. Radco
17. Northern Neck
18. Middle Peninsula
19. Crater
22. Accomack-Northampton
23. Hampton Roads

Not eligible for rural planning funds
Rural Transportation Planning Program

• District Planning Sections oversee the rural planning program for their respective PDCs
  – Reviewing/Approving Annual Work Programs
  – Reviewing/Approving/Processing Invoices

• District Planning Sections represent VDOT on Rural Technical Committees and oversee the development of Rural Long Range Plans
Regional Long-Range Plans for Transportation

• VDOT instituted a new initiative for the Rural Transportation Planning Program aimed at creating regional transportation plans in rural areas that complement those in the metropolitan areas of the state.

• By partnering with Virginia’s PDCs and the local governments each represents, VDOT is better able to coordinate with local governments to identify regional needs and priorities.

Link to RLRP Webpage
Comprehensive Plans
Comprehensive Plans

- Landuse Linkage
Comprehensive Plans

• Comprehensive Plan and Plan Amendment Reviews
  • Chapter 527, 2006 (§15.2-2222.1 and 24 VAC 30-155)
  • VDOT focus: potential impact to state highway network
  • http://www.virginiadot.org/info/traffic_impact_analysis_regulations.asp

• Transportation Plan Review for Consistency
  • Chapter 729, 2012 (§15.2-2223 and §33.1-12)
  • VDOT focus: consistency with SYIP, VTrans, location of routes
  • http://www.virginiadot.org/info/local-state_plan_and_program_consistency.asp

• Comprehensive Plan Preparation Assistance
  • Chapter 691, 2004 (§15.2-2223 )
  • Generally accomplished through:
    Grants to PDCs
    Providing project cost estimates (district offices)
• Required by Code – § 33.1-23.03
  – CTB to develop statewide multimodal long range plan
  – Facilitate by Office of Intermodal Planning & Investment and modal agencies

• VTrans creates policy framework
  – Policy document that frames the vision for the future and identifies critical steps that must be taken to make that vision a reality

• Provides framework for other planning efforts
  – Surface Transportation Plan
  – Transportation agency plans
  – Rural long range plans
  – Regional/MPO plans
Surface Transportation Plan

• Provides recommendations to support VTrans goals and corridor strategies

Secretary of Transportation directed VDOT and DRPT to coordinate the development of a Surface Transportation Plan that:

– Identifies highway, transit, travel demand management (TDM), and rail recommendations
– Identifies concurrent recommendations
– Improves the coordination of recommendations
– Represents recommendations from state agency staff to Secretary of Transportation
From a Plan to a Program

Going from a long range plan to the construction program
Project Level Planning
Planning’s Role in Project Development

• Transportation Planner’s are the source of traffic forecasts and analysis used for project-level design and environmental analysis (air and noise studies)
  – LD-104
  – Environmental traffic requests

• Planner’s are responsible for overseeing and approving the forecasts and traffic analysis used in NEPA documents and Interchange Justification Requests (IJRs)
Statewide Planning Activities

- Highway Needs Assessment
- Surface Transportation Plan
- Travel Demand Model Development/Maintenance
- Office of Intermodal Planning/VTrans Support
- Bicycle and Pedestrian Program
- Safe Routes To School Program
- STARS Program
- Functional Classification\NHS
- Maintain Statewide Planning System (SPS)
Quick Recap – Core Functions of District Planning Sections
Core Functions

- Represent Commonwealth in metropolitan planning process
- Ensure federal planning requirements are being met
- CLRP development (recommendation development, model application, funding projections, recommendation cost estimates, project list for air conformity)
- TIP amendments/updates
Core Functions

– Bike and Pedestrian Coordination
– Technical Assistance to localities (traffic, comp plans, cost estimation)
– Maintenance of data in Statewide Planning System (SPS)
– Assistance with Federal Certification Reviews
– Recommending future Park and Ride Lot sites
– Park and Ride Lot inventory maintenance
Responsibilities of District Planning Section

Core Functions

– Project Development
  • Document Purpose & Need info in planning phase
  • Scoping Meetings (traffic data needs for project)
  • Traffic forecasting for scoping, roadway design, signal design, environmental studies (data collection, analysis, forecasting, capacity analysis, etc)
  • Representation at project and public meetings

– Support statewide / District planning initiatives
  • VTrans/Surface Transportation Plan
  • STARS
  • Bike/Ped Program/SRTS
  • Prioritization
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