


# Setting the Stage for the Future: Division of Planning

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2007 Partnering Conference  
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# What does Planning provide???

- Data Management - HIS data, GPS Roadway centerlines
- Traffic and Classification Counts
- Transportation Systems - Roadway Classification, NHS, Truck Routes, Coal Haul
- Mapping - GIS, State Map, County Maps
- Traffic Forecasting and Modeling
- Freight and Intermodal Planning
- Air Quality Analysis
- Statewide, Regional, and Metropolitan Planning
- Project Planning




# Data Management

- GPS/GIS road centerlines. Must be updated in a timely manner.
- All major road assets (lane, median, shoulder width, speed limit, accidents, road roughness, traffic counts, etc.) maintained in HIS
- Link to other management systems such as OMS, eMARS, PONTIS, etc.
- Reports of the condition of Kentucky's highway system (HPMS, mileage, etc.) accounts for many millions of dollars to KYTC annually
- Analyze the condition of the highway system



# Traffic Counts

- Perform counts (volume, class, turning, special, weigh-in-motion, radar, NILAD) at approx. 13,500 sites
  - 78 permanent ATRs (24/7/365)
  - Approx. 400 semi-permanent sites (sensors in pavement)
  - 13,000+ portable sites (road tube)
- Install and maintain loops, piezos, etc.
- Maintain and certify ADR inventory
- Write specifications for contracts and coordinate sensor installations
- Perform site inspections
- Maintain loop inventory database complete with pictures, drawings, etc.
- Store traffic data for future retrieval
- Maps of traffic count stations and actual counts
- Analysis of traffic trends for reporting



# Why do we Count Traffic?

- Budgeting
- Capacity analyses
- Economic decisions
- General public use
- Traffic forecasts
- Traffic models
- Signal timing
- Air quality budgets
- HPMS
- Federal funding
- Performance Measures
- Safety Studies
- Bridge designs
- Pavement depth

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# Systems

- **State Primary Road System (SPRS)**
  - State Primary, State Secondary, Rural Secondary, Supplemental
- **Functional Classification System**
  - Interstate, Principal Arterial, Minor Arterial, Major Collector, Minor Collector, Local
  - (Rural and Urban)
- **National Highway System (NHS)**
  - Carries 44% of traffic and 80% of trucks (2850 miles in KY)
- **National Truck Network (NN)**
- **Truck Weight Classification**
- **Coal Haul Road System**



# Systems

- Keep system up to date with changes
- Issue Official Orders accepting roadway into State System – this links to having accurate and up to date data in HIS
- Address requests to change Systems
- Determine eligibility for routes (i.e., Truck Network)
- Publish Maps as appropriate



# Cartography

- Produce maps (paper and web site)
  - Counties
  - Cities
  - Urban areas (revise every 10 yrs. based on Census)
  - Highway Districts
  - NHS, NN, Weight Class, and others
- Official State Highway Map
- Other maps and exhibits (Bridges, Homeland Security, Legislature, Military, etc.)





# Modal Programs

- Freight
- Air Quality
- Congestion Management
- Traffic Forecasting and Modeling



# Intermodal & Freight

- Ferries (8 with 6 state subsidized)
- Riverports (11 public)
- Railroads
- Intermodal Connectors
- Coordinate with Other Areas
  - Bike/Pedestrian - Office of Special Programs
  - Airports - Division of Aeronautics
  - Transit - Office of Transportation Delivery

# Freight via Truckloads

- Notice two things
  - The lines get considerably thicker with time.
  - Kentucky is in the midst of the greatest increases.

Estimated Avg. Daily Truck Traffic - 1998



Estimated Avg. Daily Truck Traffic - 2020



# Air Quality

**8 - Hour Ozone  
Nonattainment Areas**



As of July 2005

**PM<sub>2.5</sub>  
Nonattainment Areas**



As of July 2005

Projects in any of the above counties must be analyzed to see how they affect **REGIONAL** and/or **PROJECT LEVEL** air quality. Any changes to projects in these areas must be evaluated **BEFORE** federal funds can be used.



# Traffic Forecasting and Modeling

- Projects begin and end with Traffic Forecasting
  - How much traffic is on a road today and in the future?
  - What happens if we add a bypass or close a road??
- We use the data you collect along with trend analysis and computer models to predict present and future traffic.
- Data includes traffic counts, land use, width of lane, number of lanes, speed limit, driving speed, population, employment, and number of housing units to name just a few.
- We have models that analyze a single corridor, a city, a county, or the statewide model which includes the better part of 8 states.

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# Statewide, Regional, and Metropolitan Planning

- 15 Area Development Districts (ADDs)
- 9 Metropolitan Planning Organizations (MPOs)
- KY Statewide Rural Transportation Planning Program first established through the ADDs in November of 1994.
- First Statewide Transportation Plan in 1995, most recent update is 2006
- Statewide Transportation Planning Process incorporated the MPOs in 2000.
- ADDs and MPOs have Committees that oversee the transportation planning processes in their areas

# Area Development Districts

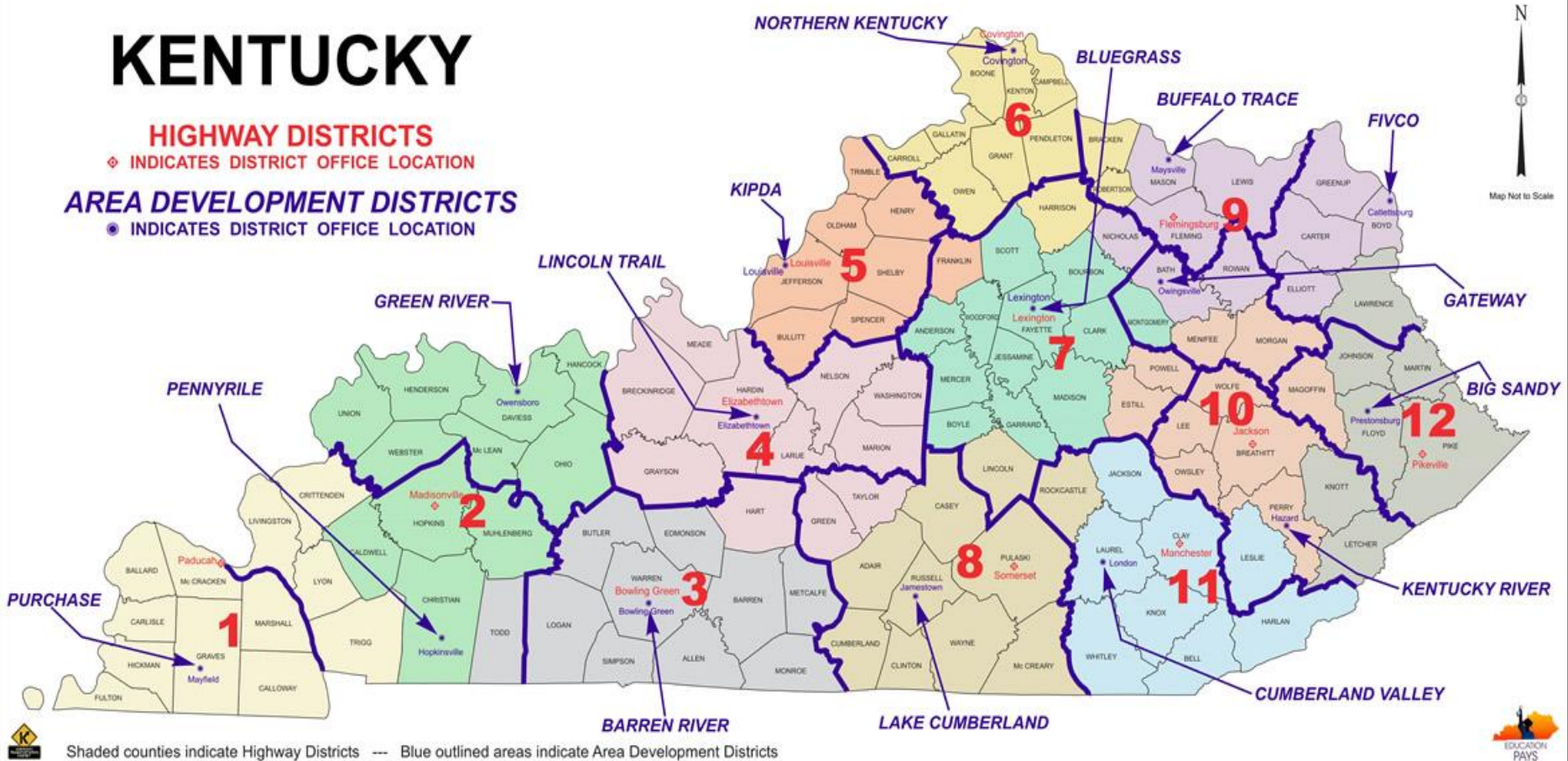
## KENTUCKY

### HIGHWAY DISTRICTS

◆ INDICATES DISTRICT OFFICE LOCATION

### AREA DEVELOPMENT DISTRICTS

● INDICATES DISTRICT OFFICE LOCATION

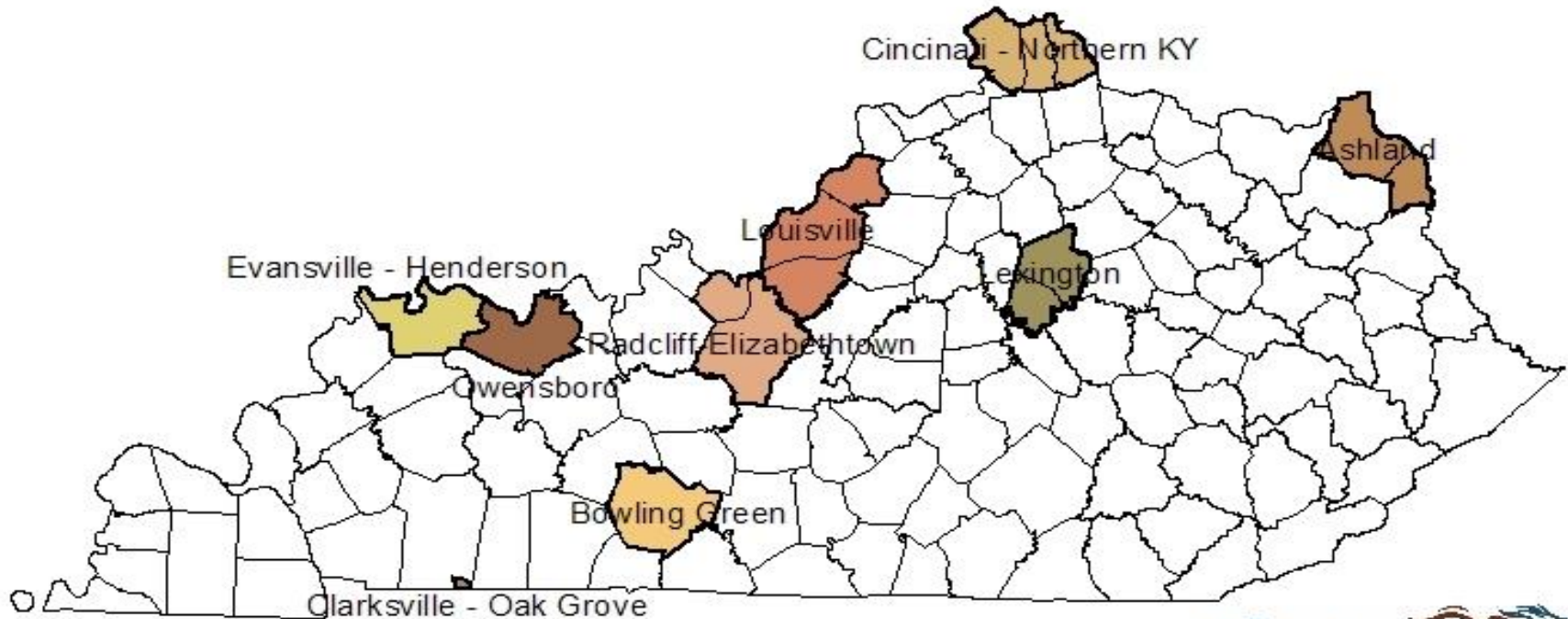


Shaded counties indicate Highway Districts --- Blue outlined areas indicate Area Development Districts



# Metropolitan Planning Organizations

## MPO Planning Boundaries



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# MPOs have responsibility for planning in their areas

- 50,000+ population
- Over 200,000 are Transportation Management Areas and get dedicated funding
- Policy and Technical Committees
- Develop Long Range Plans and Transportation Improvement Programs
- Coordination with the Cabinet
- Plans and Programs must be fiscally constrained
- Many Federal Regulations affect projects in these areas



# Unscheduled Projects List (UPL)

- First established in 1988
- 2483 projects
- \$63 billion (at present)
- Over 8500 miles of roadway
- Have a Project Identification Form for most projects

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# Project Planning

- Examine existing conditions - Data!!!!
- Define Purpose and Need - “What are the proven problems based on the data?”
- Discuss needs with public officials, government agencies, and other groups
- Identify known environmental concerns to link Planning and NEPA
- Listen to and share information with the public
- Identify project termini
- Identify possible project locations or solutions
- DOCUMENT, DOCUMENT, DOCUMENT!!!



# What type of studies are done?

- Feasibility Studies
- Programming Studies
- Pre-Design Scoping Studies (formerly known as Intermediate Planning)
- Alternative Studies (previously known as scoping studies)
- Interchange Justification Studies
- Special Studies

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*Thanks for your attention!*



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