THE HDO PLANNER -A Day in the Life

The nature of planning is that the result is not a finished product, but a constantly evolving process.

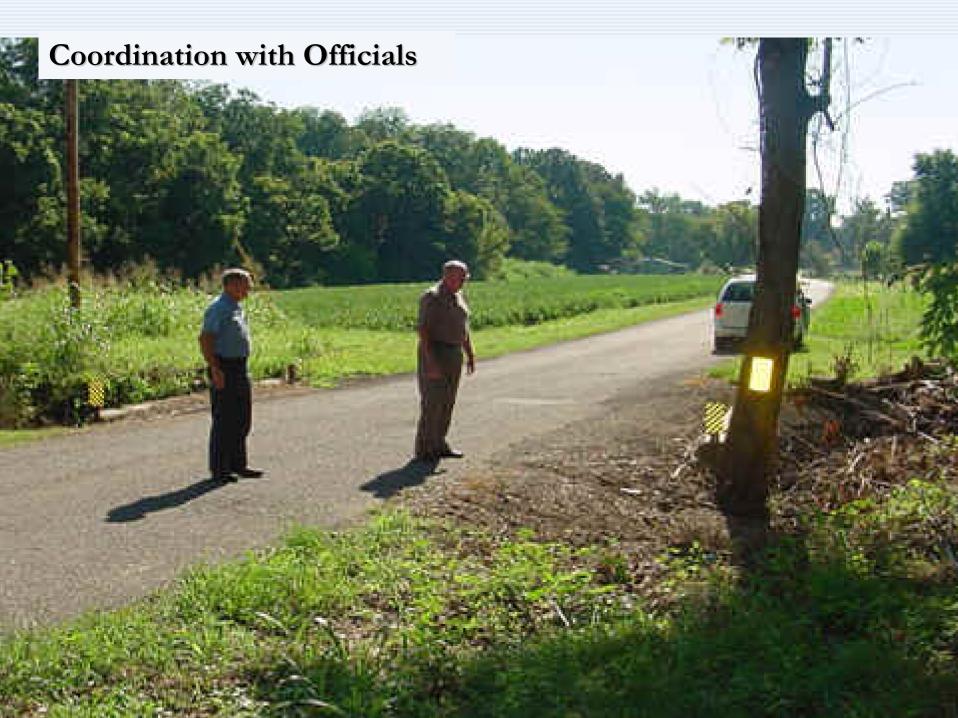
Local & State Officials Coordination

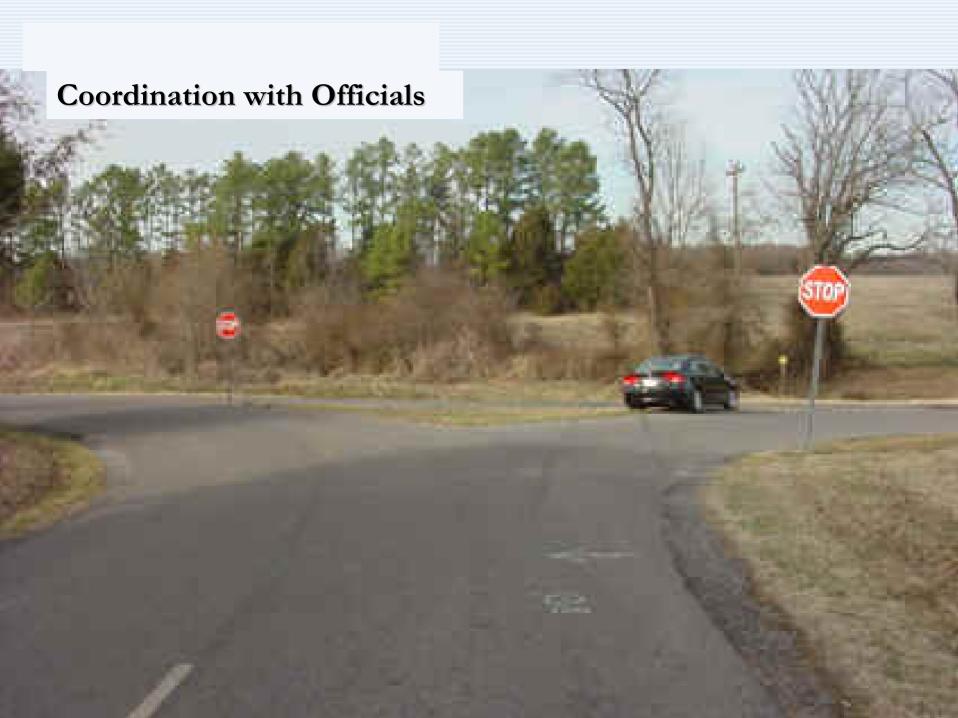
- What is out there?
- What do we want/need?
- What is it going to cost?
- What are ways to pay for it?

What is out there? The Stuff

- Current/Future Traffic Volumes
- Existing Roadway Information
- Accidents: Type Location Frequency
- Commercial-Industrial Development Needs
- Intermodal Connections
- Cultural and Environmental Treasures
- Create book for Legislators that have the top 25
 District Projects to use in the SYP process















ADD & MPO Interaction

Act as Cabinet Representative/Planning Partner/Advisor to ADD's and MPO's providing:

- Active Project Updates & Information
- •6 Yr Plan Expertise
- Systems Knowledge
- Prioritization Assistance
- •Project Management Assistance (ADD/MPO funded studies)
- Cost Estimates for PIFs
- •Presentations when asked, on Projects, Programs, Trucks, Bridges, Traffic Counts, etc.

ADD & MPO Interaction

Attend as a Cabinet Rep. the following:

- •Regional Transportation Committee Meetings (ADD)
- •Technical Coordinating Committee Meetings (MPO)
- Policy Committee Meetings (MPO)
- Various Other Meetings
 - -Congestion Management
 - -Incident Management
 - -Bike/Ped
 - -Safety

ADD & MPO Interaction

MPO STP FUNDING

4 MPO's get special funding for Transportation Projects by their total population being over 200,000 (Transportation Management Areas)

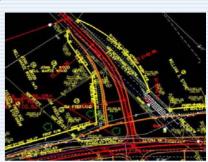
The Districts that are involved with these:

- -Help identify projects
- -Assist in managing total funding
- -Attend coordination meetings
- -Process Invoices
- -Coordinate Agreements
- -Determine eligibility of projects

Coordination with other Divisions-Distribute Information

Preconstruction

- Listens to Status of Active and Future Projects
- Coordinates meetings to determine future needs
- Project Development Team
 - Provide information on systems, traffic data, public and political input
 - Develop consensus on roads to be abandoned or transferred
 - Ensure compliance with MS4 Interlocal Agreements
 - Address issues concerning KYTC Bike and Pedestrian Policy



Coordinate with Other Divisions-Distribute Information

- Construction
 - Determine status of active projects
 - Address issues brought to our attention
- Traffic
 - Assist in obtaining traffic counts and crash data
 - Participates in HSIP
 - Reviews permit applications
- Maintenance
 - Inform of System Changes
 - Assist in Coal Haul Route Requests
 - Coordinate annual Rural Secondary Program

PLANNING STUDIES (not handled by district)

- Sit on Consultant Selection teams
- Act as KYTC project manager for consultant planning studies
- Help develop the project scope
- Help develop man-hour calculations for the contract between consultant and KYTC
- Review consultant project information before presenting it to the project team or public

PLANNING STUDIES (not handled by district)

- Develop and send out correspondence on behalf of KYTC to public and stakeholders
- Coordinate public information processes with ADDs/MPOs, consultant, and KYTC personnel
- Attend public and local officials meetings
- Provide accident, traffic count, intersection movement, aerial photography and historical data
- Review and distribute completed reports
- Oversee contract and manage payment requests

In-House Planning Studies

- Feasibility
- Programming
 - Corridor
 - Project
- Pre-Design Scoping
- Alternates
- Interchange Justification
- Special Studies

2 Types of In-house studies:

Type I: Performed by consultant, Managed by District

Type II: Performed and Managed by District

In-House Planning Studies Type I

Performed by Consultant - Managed by District

Q1: Why send out for a consultant?

- Larger project areas are involved
- District staffing insufficient
- A lot of public involvement anticipated

TIME OUT!

KYTC is <u>ALWAYS</u> the owner of the project regardless of who is performing the work tasks.

The <u>KYTC Project Manager is responsible</u> for the quality of the finished product.

In-House Planning Studies Type I

Performed by Consultant - Managed by District

- Q2: If the consultant is performing the study what is there for the district to do?
 - Sit on Consultant Selection Committee
 - Help negotiate man-hours for contract
 - Help define scope of project
 - Act as KYTC project manager
 - Assemble project team
 - Provide consultant with pertinent information
 - Develop correspondence to stakeholders, resource agencies, project team
 - Review consultant's work
 - Review and distribute Final Reports

In-House Planning Studies Type II

Performed by District - Managed by District

Q1: What types of studies do we perform (usually)?

- **Programming** and **Pre-Design** (First Looks)
 - These studies do not provide detail analysis of solutions
 - Small in Scope or localized project
 - Requires little, if any, public input
 - Project is usually already in current Six-Year-Plan

In-House Planning Studies Type II

Performed by District - Managed by District

Q2: What are our responsibilities?

- Act as project manager
- Communicate with other divisions (usually Pre-Con) as to which projects need additional information
- Research and gather data on existing conditions within project limits. (HIS, Traffic Counts, Crash Data, etc)
- Develop a draft Purpose and Need Statement for further review by Design Project Team.
- Create and Distribute Final Report



PROJECT ID FORMS (PIF) New PIF & Coordination

- Help to advise Transportation Committee of whether or not a suggested project should become part of the UPL (At which time a PIF is completed)
- Work with ADD & MPO on completion of PIF forms
- Prepare cost estimates for PIF's handled by MPO and ADD
- Complete the district's responsibility of PIF's in a timely manner

PROJECT ID FORMS (PIF) Quality Control

- Review/Edit PIF's created by ADD & MPO
- Assure that the problem, description, and estimates are correct
- Review for accuracy and practicality on a regular basis
- Edit existing PIF's and update cost estimates on a 2-year cycle or as needed

Cost Estimates: Why Do We Need Them & How Do We Do Them?

- •PIF Forms
- •Legislative Request
- Various level of Planning Studies
 - Safety Projects
- •Local Government Transportation Enhancement Projects
 - Economic Development Projects
 - Bond program projects
 - County Road Aid Projects

ESTIMATING

Cost Estimate Information

- 1. Per Mile
- 2. Detailed

When do you use a per mile cost estimate?

- 1. Estimate is needed quickly.
- 2. Not much is known about the proposed project.
- 3. Project will mostly likely be a medium or low priority.

When do you use a detailed cost estimate?



1. Time allows.



2. Some specific details are known about the proposed project.(Not All Details.)



3. Project will mostly likely be a high priority and therefore could cause a need for re-estimating soon, if not performed correctly the first time.

<u>January 2007</u> Estimate Information:

PER MILE

Per Mile Average Construction

Two Lane \$3 –6 Million

Four Lane \$15 – 20 Million

Four Lane Interchange \$8-12 Million per Interchange

Turn Lane \$750 per foot

Per Mile Average R/W

Two Lane \$1.2 Million
Four Lane \$1.7 Million

Per Mile Average Utilities

Two Lane \$1.0 Million Four Lane \$1.2 Million

Per Mile Average Design

Two Lane \$0.5 Million Four Lane \$1.0 Million

PER MILE PROJECT TOTAL (All Phases):

Two Lane \$5.7 - 8.7 Million

Four Lane \$18.9 – 23.9 Million

DETAILED

I. Design

Per Mile – Two Lane \$500,000 Per Mile – Four Lane \$1,000,000

Bridge (Consultant) \$200,000 per Bridge (Min.)

Small Projects Varies \$100,000 - \$500,000

Stream Mitigation \$250 per Foot

II. Right of Way

Relocation \$100,000 per Home (min. i.e. Value Home less \$50,000)

Commercial \$75,000-\$125,000 per Acre

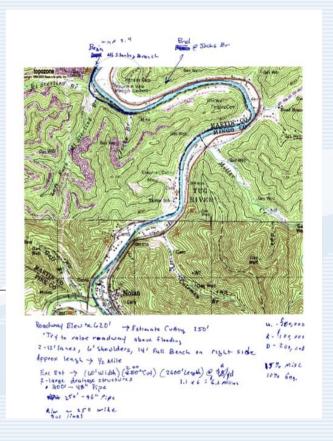
Buildable Land \$60,000 per Acre

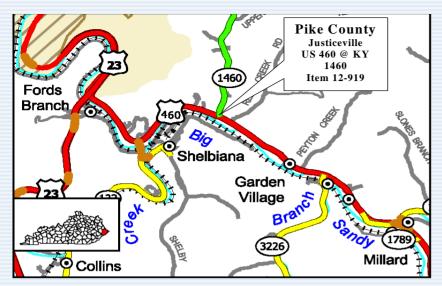
Farm/NonCommercial \$15,000-\$50,000 per Acre

Hillside Acreage (Non-Buildable) \$1000-\$3000 per Acre Grave Relocation \$3,000 per Grave

Cost Estimates:

How Do We Do Them?





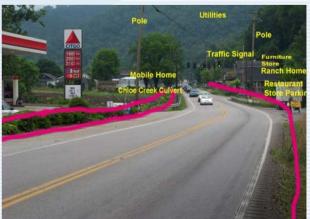


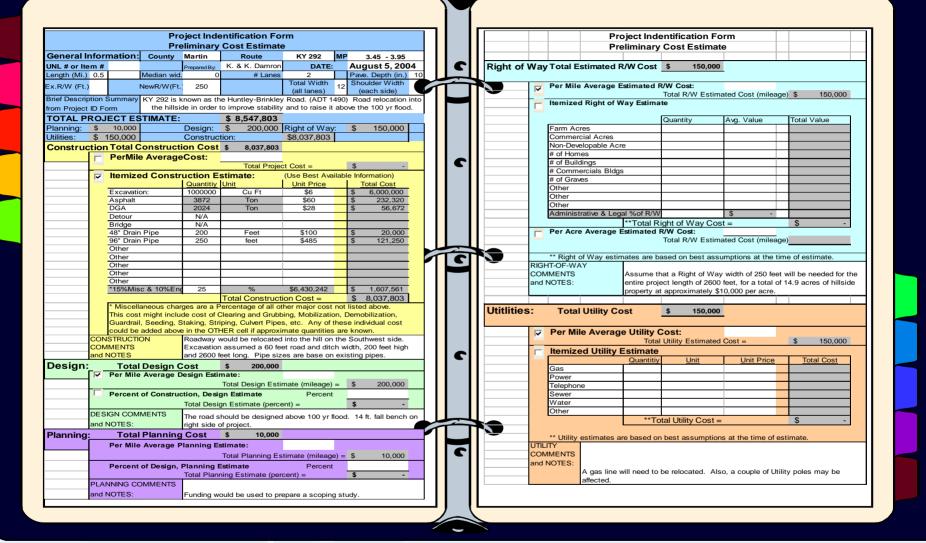


Cost Estimates:

How Do We Do Them?







Unscheduled Projects List Prioritization

- Education, Communication, Reporting
- Attend ADD/MPO Meetings
- •Work with ADD/MPO on Regional Priorities
- Coordinate HDO Priorities

UPL Prioritization

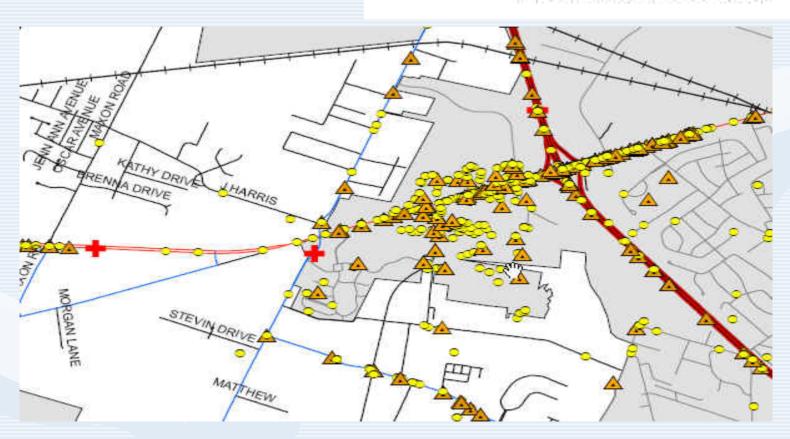


Safety Programs

- •Partner with Area Development Districts Safety Programs
- •Highway Safety Improvement Programs (HSIP)
 Team Member or District CoordinatorServe on
 District Teams that review High Crash Locations,
 Perform Road Safety Audits, Serve on Safety
 Corridor Teams.
- Identify Possible Safety Projects within District, and Prepare Cost Estimates for these Projects.

Safety Programs

- Fatality (s)
- Injury (s)
 - Non-Injury Crash



For < \$80,000: Widen Roadway to 12', Add Paved Shoulders with Rumble Strips, Correct Adverse Superelevation, Re-grade Ditch to Eliminate Drop Offs, and Revise Ditch Back slope





Before

&

After

Safety Improvements

HES Project on KY 39





Before & After

• Higher Cost project to reconstruct high accident "S Curves". Before and After pictures.

Traffic Counts

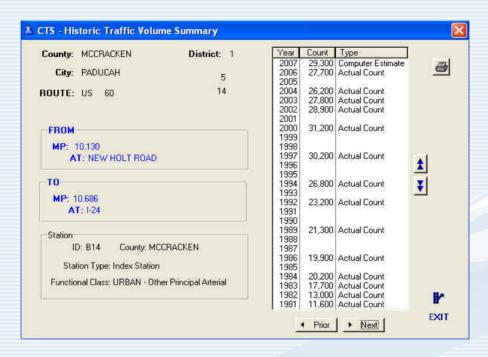
This job is easy...just get me a tube count and turning movements at the intersection below...



Traffic Counts

- Ensure Regular Traffic Counts are Obtained on all State Routes(3 year cycle)
- •Complete special counts for Planning Studies or Design Projects -
 - -ADT
 - -Classification Counts
 - -Intersection Turning Movements
- Inspect ATR's

Traffic Counts



Provide Traffic Count Numbers to:

- -Other divisions with the district
- -Central Office
- -ADD's, Local Officials, and the General Public

How is a Roadway System defined?

- ☐ In 1968, FHWA established a Highway Functional Classification System for public roads and streets that defines a hierarchy based on how much mobility and/or access each one provides. A Roadway System is a subgroup of such roads & streets within a city or state.
- ☐ Major Functional Classifications:
- Arterials High level of mobility/low degree of access to adjacent properties.
- Collectors Provide a balance between mobility and access.
- Locals- High level of access to properties/low level of mobility.
- A classification system ensures that roads serving the most people get the most attention (\$).

What is Kentucky's State Primary Road System (SPRS)?

- ☐ State Law gives the Department of Highways authority to provide and maintain a roadway system serving statewide and or inter-regional mobility. SPRS is the network of roads that fulfills this requirement.
- Division of Planning is assigned to make recommendations, prepare official documents and maintain the records for the ever evolving SPRS.
- ☐ The SPRS consists of about 27,450 miles (35.6%) of Kentucky's approximately 77,000 miles of public roads.

More about the SPRS:

• The SPRS network is further classified by the type of service and function each facility provides relative to the State's needs:

State Primary Routes
State Secondary Routes

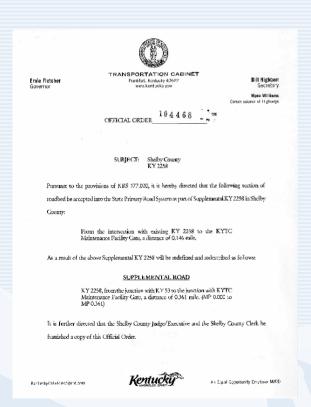
Rural Secondary Routes
Supplemental Routes

Changes to the SPRS:

• Acceptance into, reclassification or elimination from the SPRS is done by Official Order. The Official Orders designating the SPRS are the official records of the Transportation Cabinet.

District level planning responsibilities include:

- Identifying and coordinating changes in the SPRS or functional class of new and existing roads with the Division of Planning's Central Office.
- Coordinating road ownership transfers between local governments and the Department of Highways when roads no longer meet SPRS needs.
- Preparing maps and support material that explain the nature of changes to the system.
- Maintaining records of all SPRS changes and transfers within a District.



Fage II
OFFICIAL ORDER 10 4 4 6 8

Shelby County
KY 2258

Signed and approved on this the 1/4 day of October , 2007.

Commissioner of Highways

Approved as to form and legality

Office SLLigal Services



Example Official Order and Project Map

Various Activities

- E-Clearinghouse
- Drive Smart and Keen Coordinators
- RS Program
- MS4 Coordinator
- Surplus Property Review
- MOA/Agreements for Road Transfers
- Special Projects as Directed by CDE

In Conclusion--Tomorrow

- For the District Planning Engineer
- Different Problems Different Day (No two days are ever alike.)