MINUTES

Programming Study – Initial Team Meeting
Graves County, Item No. 01-8100
KY 121 from Graves County High School Entrance to Intersection KY 440

Meeting Location: District 1 Office, Conference Room
Meeting Date: February 13, 2003

Introductions & Purpose

The meeting began at 12:30 PM local time. Handouts were distributed and attendees introduced themselves. Those present were:

Wayne Mosley	D-01 Chief District Engineer
Tim Choate	D-01 Preconstruction
Allen Thomas	D-01 Planning
Chris Kuntz	D-01 Design
Jeff Thompson	D-01 Planning
Johnny Wall	D-01 Utilities
Stephen Hoefler	CO Hwy Design
Mary Murray	FHWA (by telephone)
Stacey Courtney	Purchase ADD
Bruce Siria	CO Planning
Joe Tucker	CO Planning
Steve Ross	CO Planning

Original Project Description

Steve Ross described the project as a programming study to evaluate the need to reconstruct KY 121 in Graves County. The segment was described as beginning at the Graves County High School entrance and extending northward to the intersection of the KY 440 intersection. This is an in-house study except for the Environmental Footprint which will be contracted out. A total of $200,000 has been allotted for planning in the Six Year Highway Plan, however, it is expected that this will be under-run.

Changes to Original Description

The milepoints along KY 121 as originally described in the Six Year Highway Plan have increased by approximately 1.4 mile due to the extension of the KY 121 bypass. The new milepoints as now currently listed in HIS are shown in the meeting exhibits. Also due to the extension of the KY 121 bypass, the south end of the study segment is now under construction to convert from a two-lane to a five-lane urban, curb and gutter section. This portion extends just north of the Graves County High School entrance and is depicted in the meeting exhibits.

Wayne Mosley and Tim Choate explained that the reconstruction of KY 1830 will also affect this study's termini. As a result of the KY 1830 reconstruction, a portion of KY 121 will be three-laned from the north end of the five-lane section near the High School entrance to a point north of KY 1830.

Prior Studies and Reports

- KY 121 Corridor Planning Study, Existing Conditions Technical Memorandum, November 1997
- Mayfield Urban Area Transportation Study, February 1999
- KY 121 Corridor Planning Study, Final Report, February 2000

These reports were prepared by Wilbur Smith Associates for the Kentucky Transportation Cabinet. The February 2000, Corridor Planning Study used study information from the 1997 Existing Conditions

Technical Memorandum. It identified, analyzed, and prioritized improvement alternatives between Mayfield and Wickliffe. Copies from this report including the Executive Summary were provided at the meeting. The No. 1 priority identified in the 2000 report is the segment currently under consideration between the Julian M. Carroll (Purchase) Parkway and the intersection of KY 440. Recommendations from the 2000 report for this section of the KY 121 corridor, two-lane reconstruction on four-lane right-of-way, were estimated at $6.9 million. Priority No. 2, improvements to the KY 440 intersection, were estimated at $1.5 million. The rest of the KY 121 corridor was recommended for spot improvements with realignment closer to Wickliffe, but the study also recommended deferring these improvements until a more definite plan and location for the I-66 corridor was developed. It is not known why further study was deemed necessary for this priority segment between the Julian M. Carroll (Purchase) Parkway and KY 440. Note, however, that discussion from this meeting suggested that the two-lane recommendations made in the prior study do not provide an acceptable future level of service and these recommendations will be examined more closely in this study.

Crash Data

The crash data collected for the study corridor indicates that the segment between the Julian M. Carroll (Purchase) Parkway and KY 1830 has a Critical Rate Factor greater than one. There are also two "spots" within this segment with Critical Rate Factors greater than one. However, since the team is changing the termini for the study, this segment is no longer within the bounds and will have already been addressed by the reconstruction of the KY 121 Bypass and KY 1830 reconstruction. There are no other segments or spots within the study corridor with Critical Rate Factors greater than one, with the next highest being 0.47.

Traffic Data

The segment within the study corridor with the highest traffic numbers is between the Julian M. Carroll (Purchase) Parkway and KY 1830, and is therefore already being addressed by the KY1830 and KY121 Bypass improvements already discussed. AADT is 5,000 between KY 1830 and KY 1276 with 14.5% trucks. AADT is 3,970 for the remainder of the corridor to KY 440 with 14.5% trucks.

The corridor is operating now at LOS D. If no improvements are made, it will continue to operate at LOS D into the year 2030 given a 2.4% growth rate. The best that could be achieved by reconstructing with a two-lane section would be LOS C. But, if the corridor experiences a 2.4% growth rate, it would be less than two years before it would return to LOS D. 2.4% is the average annual growth rate calculated for a Rural Minor Arterial in the state of Kentucky, as reported in the 2002 Traffic Forecasting Report, Division of Multimodal Programs, Kentucky Transportation Cabinet.

Existing Geometry

Exhibits show a tangent horizontal alignment, and rolling vertical alignment through the study corridor. If the northern terminus is extended just beyond the KY 440 intersection to KY 945, this additional length will include one horizontal curve. There was also a sight distance problem noted with the crest vertical curve at the KY 440 intersection.

Trucks, Planned Industrial Park

One major factor affecting this study corridor is the high percentage of trucks, 14.5%. KY 121 is on the National Truck Network and is the only viable connector for freight movement between Mayfield and Wickliffe, as exhibited in the meeting handouts. Comments solicited from local trucking companies by the Purchase ADD indicate there is a problem with narrow lane and shoulder widths through this corridor. HIS data show eleven-foot lanes and two-foot shoulders.

Also noteworthy is a plan to develop a major Industrial Park to boost the region's economy, just north of Mayfield in the Folsomdale-Viola area along US 45. This would be a world-class, as large as 2,500 acre facility, capable of supporting a large national, or international firm (e.g. a Saturn type plant). The Industrial Park would provide economic development benefits to a multi-county region. It is not known

whether this plan will go forward, but, sentiment is, it is a likely possibility. Once begun, the Industrial Park might begin to see tenants within six to ten years.

Environmental Footprint

Qk4 will be preparing the environmental footprint for the study and has been provided with the project scope. Qk4 will be presenting a proposal to complete this work in the immediate future. Judging from the most recent study for the longer Mayfield to Wickliffe corridor, no significant problems are anticipated between Mayfield and the KY 440 intersection. Environmental Justice data will be provided by the Purchase ADD by request of KYTC Central Office, Division of Planning.

Real Estate/Relocation Information

A list of questions prepared by Environmental Analysis was presented to meeting attendees for review. The purpose is to obtain accurate, reliable information regarding real estate availability and value in a reasonable time frame. The plan presented is for the District Planning Engineer, working with the District Right-Of-Way Agent, to use their knowledge and local contacts to obtain this information. It was also noted that the intent is to spend no more than on-half man-day in this effort. Steve Ross asked Wayne Mosley if he would be agreeable to having his people provide this information and asked for other comments from the team on this proposal. There was a long pause from the group. Wayne Mosley pointed out that several of the items listed could take half a day to complete each, and that much of the information could be obtained from the local PVA. Steve Ross made a request to the District to make an attempt at the questionnaire one time for this study, spend no more than one-half man-day, and provide written comments on the form where information was too time-consuming to obtain. Stacey Courtney of the Purchase ADD volunteered to collect this information, since he would already be providing Environmental Justice data and Agency Coordination. Steve Ross indicated that his offer was appreciated, and that the Central Office may want to accept it.

Other (ITS/Bikes/Ped.)

The team consensus was that there does not appear to be a viable ITS solution for the identified problems and issues. The team also agreed that current bicycle and pedestrian guidelines will be followed, especially given the proximity of existing, and planned schools in the area.

Identify Logical Termini

South Terminus: As discussed early in the meeting, the KY 1830 project will include three-lane reconstruction of KY 121 beginning at the five-lane section and extending north beyond the KY 1830 intersection. Participants agreed that this study should begin at the north end of this proposed three-lane reconstruction. **The south terminus was identified during the meeting, as being approximately 400 feet south of the Harris Lane intersection.**

North Terminus: Problems at the KY 440 intersection include poor sight distance as a result of a combination of less than desirable horizontal and vertical alignment. Additionally, KY 945 intersects both KY 121 and KY 440 just north of this intersection. To more completely contain the elements pertinent to the intersection's problems, and solution, **the team agreed to extend the north terminus on KY 121 to the intersection of KY 945.**

Benefits of the proposed project – Goals and Objectives

- Improve Safety

The primary goal suggested by the team was to improve safety. The KY 121/KY 440 intersection, on the north end of the study corridor, is skewed, and contains a combination of horizontal and vertical curvature. Team members noted sight distance problems at this intersection. Just north of this intersection, KY 945 intersects both KY 121 and KY 440 at skewed angles. One other highly used, but skewed intersection

noted, was KY 121/KY 1276. KY 1276 is a two-lane road that currently carries more than 1,100 vehicles per day on the west end, at KY 121, and 1,450 vehicles per day, two miles to the east, near its intersection with US 45. The KY 1276/US 45 intersection is the location of Continental General Tire, one of the areas largest employers. Crash data indicates less than critical crash rate factors, that is, crash rates less than the state average for routes of similar functional class, for the revised study corridor. However, an existing high school and a planned elementary school along KY 121, just south of the study corridor, make safety a concern. That these educational facilities are accessed directly by a two-lane roadway with relatively high percentages of truck traffic also raises safety issues. There is also a middle school located on KY 1830, in the vicinity of the other two schools. Addressing the needs of pedestrians and bicyclists along KY 121, as well as accommodating high percentages of trucks will be a challenge.

- Relieve congestion, improve capacity and level of service

Secondary goals suggested include improving level of service, improving capacity, and relieving congestion. Much has already been done to relieve congestion on KY 121 at the Julian M. Carroll (Purchase) Parkway, south of the study corridor. For the segment currently under consideration, two-lane improvements would increase the level of service from D to C. Once achieved, this level of service could only be maintained for two years before falling back to D. Four-lane improvements, however, achieve level of service A for year 2030 traffic projections. While the study corridor is located in a predominantly rural area, there are segments with residential dwellings and private driveway access continuous along both sides of KY 121. Other section alternatives need to be explored before finalizing any recommendations.

- Accommodate increased truck use and promote regional connectivity

Both Wickliffe and Mayfield are home to companies that generate substantial numbers of trucks that travel along the study corridor. Questionnaires completed by trucking agencies, solicited by the Purchase ADD, point to problems with narrow lanes and shoulders. HIS data show eleven-foot lanes and two-foot shoulders through the corridor. KY 121 is on the National Truck Network and is the primary connector between Mayfield and Wickliffe. A Regional Industrial Park proposed north of Mayfield along US 45, if completed, would have a significant impact on traffic levels and truck percentages in the study corridor.

Benefits tend to overlap when addressing the goals noted above, for example, a safety improvement could also affect level of service, and vice versa. Some of the possible solutions suggested by the team that address the above noted deficiencies include, improving the alignment at the KY 121/KY 440 and KY 121/KY 1276 intersections. Also suggested was reconfiguring KY 945 into any realignment plan for the KY 121/KY 440 intersection. Other suggested solutions include adding, and/or widening lanes and shoulders. Each of these suggested improvements would address all of the goals identified above. Whether such improvements are justified, and whether they will address the future needs of the area, without adversely impacting other areas, will require further consideration. The team must still review Environmental Footprints, Environmental Justice data, and Agency Coordination responses.

Probable Design Criteria

Functional Class

The team did not see the likelihood that it would recommend that the functional class of this segment of KY 121 change from Rural Minor Arterial.

ADT/DHV

As exhibited, traffic is projected to be as high as 9,700 ADT through most of the study corridor by the year 2030 given an average growth rate of 2.4% per year. It was pointed out during the meeting that there are plans for a new elementary school on KY 121 immediately south of the study area with a planned enrollment of 500 children. 25% of these students are estimated to live north of the study area and will generate additional traffic through the study corridor. It will be

necessary, as part of this study, to estimate the amount of traffic this will generate and add this amount to the current traffic projection.

Design Speed

The speed limit through the study corridor is currently 55 miles per hour. The team agreed that a 55 mph design speed is appropriate for reconstruction. If during the course of this study it is determined that a significantly different roadway section is called for, a lower design speed may be necessary.

Typical Section

- Two-Lane - It was noted that the highest LOS attainable for a two-lane section given the current traffic is LOS C. At a growth rate of 2.4% per year, this LOS could only be maintained for approximately two years before it would revert back to LOS D and remain at D through the year 2030.

- Four-Lane - It was noted that for four-lane improvements, LOS A would be achieved for year 2030 traffic projections.

Two issues here: (1) Future year LOS D for a two-lane segment, and A for a four-lane begs the questions "why" and what options (three-lane?) do we have other than those two, and (2) If KY 121, from the existing five-lane section through the KY 1830 intersection, is being designed as a three-lane segment, is that adequate/appropriate? If so, then the options further out are more restricted.

Some specific questions raised were:

1. For a two-lane section, what factor(s) is (are) driving the LOS to D?
2. How would a three-lane improvement affect the future LOS?
3. Would five-lane improvements be appropriate given the location and traffic projections for this area?
4. If five-lane improvements are justified, compare curb and gutter, flush, and combination improvements out to KY 440.

Other Criteria

- The team agreed that KY 1276/KY 121 intersection improvements should be included in the study recommendations. It was noted that 2002 ADT on KY 1276 was 1,130 on the west end, at KY 121, and 1,450 on the east end, at US 45. The KY 1276/US 45 intersection is where Continental General Tire is located, one of the area's major employers and traffic generators.
- No intersections within the study corridor are signalized. There are no plans to signalize KY 1830 at KY 121 but KY 1830 will be signalized at US 45.
- There is a new elementary school planned on KY 121 to be located immediately north of the existing High School entrance.
- There are tentative plans for a major Regional Industrial Park in the Folsomdale-Viola area, as large as 2,500 acres. Such a facility would have a dramatic effect on the local economy, as well as traffic generation north of Mayfield.
- KY 945 intersects KY 440 and KY 121 immediately north of the KY 121/KY 440 intersection and will be included in plans to improve this intersection. There is a water tank located to the east of the KY 121/KY 440 junction. The intersection improvement plan included in the 2000 study would have some turning movement storage issues to be resolved. Also, the actual vertical alignment at this intersection (crest vertical curve) creates sight distance problems that cannot be visualized in the two-dimensional plan

view depicted in the 2000 report. The intersection may need to be cut down to correct deficiencies.

- Access is currently by permit, and, by team consensus, should remain so.

Agency Coordination Needs

Our standard letter and distribution list will be used for agency coordination. Stacey Courtney will supply additional names from the Purchase ADD's list of contacts.

Public Involvement Needs

There are no Public Information Meetings or Officials Meetings planned for this study. Mary Murray questioned whether these meetings were being omitted in an attempt to save money. Bruce Siria explained that these meetings were not in the scope of this study and that we did not want to unnecessarily upset a group of citizens over a project that might not materialize. Public involvement will be handled through agency coordination. Depending on the agency responses received, further public involvement could be added.

Documentation/Reports

Information to include/not include in report

The study report will include existing and future traffic and LOS data, Crash data, recommendations for improvements and estimated costs.

Level of Detail

The level of detail will be low for this study and report. No detailed plans or cost/benefit analysis will be included. Only general recommendations will be made.

Distribution

Reports will be distributed to the groups represented by the team members including the District, Department of Highways, Purchase ADD, and FHWA.

Field Review of Project Area

The office portion of the meeting was adjourned at 3:10 PM local time. All interested team members were invited to a field review of the study corridor. The majority of the team was already familiar with this section of KY 121. Tim Choate, Stacey Courtney, Bruce Siria, Joe Tucker and Steve Ross participated. Steve Ross took photographs. Several empty log trucks were noted travelling southbound on KY 121. There was one business noted within the triangle created by the KY 121/KY 440 intersection. Also, at the approximate midpoint of the study corridor, there is about a quarter mile length of continuous residential development with private driveway access on each side of the roadway. Although there are no bridges within the study corridor, there was one drainage feature noted utilizing a culvert under the roadway. All other items discussed in the office portion of the meeting were confirmed where possible.

AGENDA
Initial Team Meeting – KY 121 Graves County

Meeting Location: District 1 Office, Conference Room
5501 Kentucky Dam Road
Paducay, KY 42002-3010

Meeting Date: February 13, 2003,
Meeting Time: 12:30 PM CT

1) Introduction and Purpose

2) Project Goals and Objectives
   a) Project area
   b) Prior reports
   c) Roadway Conditions
      i) Traffic data
      ii) Crash data
      iii) Existing geometry
      iv) Other
   d) Identify additional information needed to document problems
      i) Environmental Footprint
      ii) Real Estate/Relocation Information
      iii) Other (ITS/Bikes/Ped.)
   e) Identify logical termini
   f) Benefits of proposed project
   g) Develop project goals and objectives

3) Probable Design Criteria
   a) Functional class
   b) ADT/DHV
   c) Design speed
   d) Typical section
   e) Other criteria

4) Agency Coordination Needs

5) Public Involvement Needs

6) Documentation/Reports
   a) Information to include/not include in report
   b) Level of detail
   c) Distribution

7) Field Review of Project Area