

MEMORANDUM

TO: BILL GULICK, P.E.
DIRECTOR, DIVISION OF HIGHWAY DESIGN

ATTENTION: WENDY SOUTHWORTH, P.E.
LOCATION ENGINEER

FROM: JOE PLUNK, P.E.
T.E.B.M. FOR PROJECT DEVELOPMENT, DISTRICT 3

BY: DAVID ERICKSON, P.E.
DESIGN SECTION, DISTRICT 3

DATE: APRIL 4, 2016

SUBJECT: 3-0320.00, ALLEN COUNTY
KY 100 RECONSTRUCTION
emars no. 8962801D
FD04 002 0100 003-005

A Preliminary Line & Grade Inspection was held on April 1, 2016, in the Main Conference Room in the District 3 Office. The purpose of this meeting was to present three alternates to the project team and to recommend an alternate or alternates to present to the public and move toward a final design.

Attendance:

David Erickson – Design
Renee Slaughter – Environmental
Andrew Stewart – Design
Wes Watt - PIO
Deneatra Henderson – Planning
Mike Russell – R/W
Joe Plunk – Project Development
J.C. Puryear Jr. – Utilities
Kevin Gearlds – PD&P II
Greg Meredith – CDE
Wendy Southworth – CO Location
Daryl Price – Engineering Support
Mike Spain – Quality Assurance Branch
Lizabeth Likins - Design

A project background was given describing the existing conditions that warrant the project including horizontal and vertical deficiencies, resulting in very poor sight distance, and two bridges that have a structural rating classifying them as functionally obsolete. Some of the environmental impacts were noted including avoidance of cemeteries, historical properties, and stream impacts. The highway plan states the project limits were from MP 3.1 to MP 4.2. David Erickson proposed that the project limits be adjusted to MP 2.8 to MP 4.6 to allow for optimal tie-ins to the existing route. The project team agreed to make these the new termini.

A purpose and need statement was drafted and presented to the project team:

The Purpose of this project is to improve the safety and mobility of KY 100 in the community of Stoney Point in Allen County. As part of the Kentucky State Primary Highway Network, KY 100 is rural two-lane facility which connects Franklin in Simpson County to Scottsville in Allen County. This route also provides access to small communities and agricultural activities in western Allen County. KY 100 is functionally classified as a “rural major collector” linking US 31W and US 231 in Simpson and Allen counties, respectively. The need for this project is to improve sight distance by correcting several horizontal and vertical deficiencies and replace two bridges that are classified as structurally obsolete, as well as provide safe driving lanes and shoulders. Traffic in this section of the corridor consists primarily of passenger cars but there is also a significant presence of heavy trucks as well as horse and buggies. Inadequate sight distance is a primary concern and little to no shoulder results in very little room for driver error. The 2008 Planning Study of this corridor recommended this spot improvement as Priority #2. The public have also expressed concern about safety issues in the project area.

The typical section was discussed and the Project Team agreed to use the recommended 12’ lanes with 8’ shoulders, 4’ of that being paved. Also a truck climbing lane is warranted with all alternates. It should also be noted that the typical section selected is the same typical section used in other projects along the KY 100 corridor.

Three alternates were presented to the project team and discussion of the pros and cons of each was had.

Alternate 1: This alternate begins at MP 2.8 and reconstructs KY 100 to the north of the existing roadway until it crosses existing KY 100 at MP 3.8. There it will reconstruct the roadway and two bridges to the south of the existing roadway and ties back in to the existing roadway at approximately MP 4.1. It then overlays and widens the existing to MP 4.6.

Alternate 1A: This is the same alignment as Alternate 1 only with a shorter termini ending at MP 4.3.

Alternate 2: This alternate reconstructs KY 100 completely to the north of the existing roadway and further north than Alternate 1. It begins at MP 2.8 and ends at approximately 4.6. This alternate would only require one bridge due to the fact it is downstream of the confluence of the two branches that the existing roadway crosses.

Alternate 3: This alternate begins at MP 2.8 and reconstructs KY 100 to the north for approximately a half mile where it crosses the existing roadway at MP 3.3 and then reconstructs KY 100 to the south of the existing roadway. This alternate also reconstructs the two bridges to the south of the existing roadway and ties back in to the existing roadway at approximately MP 4.1. It then overlays and widens the existing roadway to MP 4.6 This alternate would require approximately 700 feet of possible channel change.

Alternate 3A: This is the same alignment as Alternate 3 only with a shorter termini ending at MP 4.3.

The alternate exhibits can be found on ProjectWise in the following location:
 pw:\\KYTCP00W02.kytc.ds.ky.gov:KYTC-Main\Documents\Projects\District 03\03-0320.00 - ALLEN - KY 100 Stony Point to Alonzo\Working Folders\Highway Design Working Folder\Phase 1 Design Working Files\PL&G\

One of the maintenance of traffic issues discussed was the need for a temporary diversion to construct the tie-in from the existing roadway to the proposed roadway at the beginning of the project. The diversion will go to the south of the existing and proposed roadways and be approximately 950 feet long. This diversion will be needed for all alternates.

The following matrix was presented to show a quick comparison of alternatives:

<u>Alternate</u>	<u>Length</u>	<u>Earthwork</u>	<u>R/W</u>	<u>Structures</u>	<u>Stream Impacts</u>	<u>Construction Estimate</u>
Alternate 1	1.75mi	640,000 cut 290,000 fill	39.15 acres 1 relocation	2 bridges 2 box culverts	900 lf \$180,000	\$10,500,000
Alternate 1 Truck	1.75mi	672,000 cut 290,000 fill	39.85 acres 1 relocation	2 bridges 2 box culverts	900 lf \$180,000	\$10,800,000
Alternate 1A	1.44mi	630,000 cut 285,000 fill	36.02 acres 0 relocation	2 bridges 1 box culvert	585 lf \$150,000	\$9,500,000
Alternate 2	1.75mi	631,000 cut 576,000 fill	45.51 acres 0 relocation	1 bridge 3 box culverts	1405 lf \$215,000	\$9,300,000
Alternate 2 Truck	1.75mi	648,000 cut 577,000 fill	46.0 acres 0 relocation	1 bridge 3 box culverts	1430 lf \$216,000	\$9,500,000
Alternate 3	1.82mi	160,000 cut 390,000 fill	34.15 acres 5 relocations	2 bridges 2 box culverts	1680 lf \$235,000	\$9,100,000
Alternate 3A	1.50mi	150,000 cut 390,000 fill	31.45 acres 4 relocations	2 bridges 1 box culvert	1410 lf \$190,000	\$8,500,000

Mike Russell provided the following Right of Way Estimates:

Alternate 1: \$1,050,000
Alternate 1A: \$750,000
Alternate 2: \$880,000
Alternate 3: \$1,700,000
Alternate 3A: \$1,400,000
6-year Plan: \$500,000 (SPP 2018)

Clint Puryear provided the following Utility Estimates:

Alternate 1: \$1,040,000
Alternate 1A: \$820,000
Alternate 2: \$715,000
Alternate 3: \$1,200,000
Alternate 3A: \$980,000
6-year Plan: \$900,000 (SPP 2018)

Clint Puryear stated that the following Utility Companies have utilities on in the project limits: Allen Co. Water, Simpson Co. Water, North Central Telephone, Tri-County Electric.

David Erickson provided the following Construction Estimates:

Alternate 1: \$10,500,000
Alternate 1A: \$9,500,000
Alternate 2: \$9,300,000
Alternate 3: \$9,100,000
Alternate 3A: \$8,500,000
6-year Plan: No Funds listed in 6YP

The project team discussed which alternates it would like to take to the Public Meeting. The project team agreed that Alternate 2 and 3 should be presented to the public. The public meeting will be scheduled sometime in early May.

There was discussion concerning the ownership of the existing bridge over Middle Fork Drakes Creek on existing KY 100 and if the county would be willing to assume ownership of the bridge if Alternate 2 was constructed. Deneatra Henderson stated that more than likely the county would not want to take ownership of the existing bridge. Therefore it was recommended that an additional connection from proposes KY 100 (Alt 2) to existing KY 100 would be necessary when the existing bridge is removed during the construction of Alternate 2. Also it was recommended that improvements be made to the existing intersection of KY 100 and Calvert Dr.