

I. PRELIMINARY PROJECT INFORMATION

| | | | |
|-----------------------------|---------------|----------------------|------------------------|
| County: | Leslie | Item No.: | 11-1067.00 |
| Route Number(s): | CR-1214 | Road Name: | Stone Coal Branch Road |
| Program No.: | 7752401D | UPN: | FD52 066 1214 000-001 |
| Federal Project No.: | BRZ 1103(277) | Type of Work: | Bridge Replacement |

2012 **Highway Plan Project Description:**

Replacement of bridge (066C00024N) and approaches on CR-1214 over Beech Fork (C24, SR=4.0). Project funding dependent on bridge posting compliance.

Beginning MP: 0.024 **Ending MP:** 0.064 **Project Length:** 0.04 Miles

Functional Class.: Urban Rural
 Local
State Class.: Primary Secondary
Route is on: NHS NN Ext Wt

MPO Area: Not Applicable
 In TIP: Yes No
Truck Class.:
% Trucks: N/A

ADT (current): _____ (Year) _____
Terrain: Rolling
Access Control: None Permit Fully Controlled Partial Spacing:

Median Type: Undivided Divided (Type): _____
Existing Bike Accommodations: Shared Lane **Ped:** Sidewalk

Posted Speed: 35 mph 45 mph 55 mph Other (Specify): _____

KYTC Guidelines Preliminarily Based on : 35 **MPH Proposed Design Speed**

COMMON GEOMETRIC

| Roadway Data: | EXISTING | PRACTICES* | |
|-----------------------|-----------------|-------------------|---|
| No. of Lanes | 1 Lane / 2-Way | 1 Lane / 2-Way | Existing Rdwy. Plans available? |
| Lane Width | 12' | 12' | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Shoulder Width | N/A | 2' | Year of Plans: _____ |
| Max. Superelevation** | 0.00% | 8% | <input type="checkbox"/> Traffic Forecast Requested |
| Minimum Radius** | N/A | 350' | Date Requested: _____ |
| Maximum Grade | 0% | 10% | <input type="checkbox"/> Mapping/Survey Requested |
| Minimum Sight Dist. | N/A | 250' | Date Requested: _____ |
| Sidewalk Width(urban) | N/A | N/A | Type: <input type="button" value="v"/> |
| Clear-zone*** | N/A | N/A | |

Project Notes/Design Exceptions?: Based on AASHTO guidelines for geometric design of low volume roadways.

*Based on proposed Design Speed, **AASHTO's A Policy on Geometric Design of Highways and Streets, ***AASHTO's Roadside Design Guide

| | | | |
|-------------------------|--------------------------|-------------|---|
| Bridge No.*: | 066C00024N | (Bridge #2) | |
| Sufficiency Rating | 4 | | Existing Geotech data available? |
| Total Length | 85' | | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Width, curb to curb | 12' | | |
| Span Lengths | 2 | | Detour Length(s): N/A^ |
| Year Built | 1965 | | ^Deadend Road |
| Posted Weight Limit | 3 tons | | |
| Structurally Deficient? | Yes | | |
| Functionally Obsolete? | No | | |
| Existing Bridge Type | 2-span concrete box beam | | |

*If more than two bridges are located on the project, include additions sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

| | | | | |
|--|----------------|--------------|-------------|---------------|
| The following funding was used in the 2012 enacted Highway Plan. | <i>Funding</i> | <i>Phase</i> | <i>Year</i> | <i>Amount</i> |
| | - | D | - | - |
| | BRZ | R | 2012 | \$230,000 |
| | BRZ | U | 2012 | \$120,000 |
| | BRZ | C | 2013 | \$490,000 |

B. Project Status

Design funds have been authorized in the amount of \$300,000 in October 2013. Funding for Right-of-Way, Utilities, and Construction are available but not yet authorized.

C. System Linkage

Stone Coal Branch Road (CR-1214) is a rural local road. It begins at US 421 near Mozelle and terminates in a dead end at milepoint 1.713. There are three roads that branch off of it, all of which are also dead ends. The route provides no connectivity with other highways. This road primarily serves the residents along the route and the branching routes.

D. Modal Interrelationships

The only mode of transportation along the length of the project is vehicular traffic. There are no intermodal interactions with pedestrians, railroads, ferries, river ports, or bicycle routes.

E. Social Demands & Economic Development

There is no economic development along this section of CR-1214 or along the rest of the route. There are only private residences.

F. Transportation Demand

Due to the lack of economic development and no connectivity to other highways, there is a very low transportation demand for this route.

G. Capacity

There is no traffic count data available for this road. However, it can be reasonably assumed that there is a very low ADT due to the lack of economic development and no connectivity to other highways. An ADT can be estimated at approximately 120-140 vehicles per day using trip generation and assuming 10-12 residences being served.

H. Safety

This section of road experiences very few vehicular accidents. This is likely due to the fact that there is a relatively low ADT. Between January 1, 2008 and December 31, 2012 there were no accidents along this section of CR-1214.

I. Roadway Deficiencies

The existing bridge has a sufficiency rating of 4 and is structurally deficient. The existing roadway approach and bridge are only 12' wide, which is too narrow for 2 vehicles to pass. The approach to the bridge is currently unpaved. For the given ADT of the road, it is recommended that there be 2 - 9' lanes with 2' paved shoulders on either side.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

Project is in: Attainment area Nonattainment or Maintenance Area PM 2.5 County

STIP Pg. #: N/A TIP Pg. #: N/A

Leslie County is attainment for all monitored air pollutants. This project is not anticipated to significantly change traffic or add additional lanes. Structures will be inspected for asbestos containing materials. Division for Air Quality requires advanced notification prior to demolition and removal of the bridge. Air quality during construction will be controlled with good construction practices.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

A phase 1 archaeological survey will determine cultural significance and if eligible sites are located in the project footprint. Structures will be evaluated for historic inclusiveness.

C. Threatened and Endangered Species

Kentucky Division of Water has no waterways listed as sensitive in the area including Beech Fork Creek. Best Management Practices (BMPs) will be developed to adequately control erosion and run-off. USFWS has identified suitable habitat for threatened and endangered species in the project area. Current species listed for Leslie County are *Myotis sodalis*, Indiana bat, *Epioblasma triquetra*, snuffbox, *Villosa lianosa*, little spectaclecase, *Etheostoma sagitta spilotum*, and Kentucky arrow darter. Future review prior to construction will address the requirements of USFWS to prevent detriment to the protected species. A habitat assessment, biological assessment or mitigation measures will address potential impacts.

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

Project will be reviewed for UST/Hazmat issues such as active or prior active fuel station. Project does include a bridge that will be inspected for asbestos.

E. Permitting

Check all that may apply: Waters of the US MS4 area Floodplain Impacts Navigable Waters of the US Impacts
Are 401/404 Permits likely to be required? Yes No Impacts to: Wetlands Stream/Lake/Pond
 ACE LON ACE NW ACE IP DOW IWQC Special Use Waters

The USGS Quadrangle is Hoskinston. Wetlands are not identified on the project. No listed sensitive streams are identified. A water of the United States (Beech Fork and bridge 06600024N @ -83.399383 37.000709 Decimal Degrees) with impacts below ordinary high water will require coordination with the officers of the CORP and DOW. Construction activities may need a USACE 404 permit and a DOW 401 permit. Additionally, a surface water KYR 10 permit may be required for construction disturbances. Filling in a floodplain may require a permit.

F. Noise

Are existing or planned noise sensitive receptors adjacent to the proposed project? Yes No
Is this considered a "Type I Project" according to the [KYTC Noise Analysis and Abatement Policy?](#) Yes No

Noise issues will be temporary and limited to those associated with construction activity. It does appear that there are noise receptors within 150 feet of the project bridge replacement. Project will not increase capacity.

G. Socioeconomic

Check all that may apply: Low Income/Minority Populations affected Relocations Local Land Use Plan available

Relocations are not anticipated and construction is temporary, this project should not pose hardships to the community provided that traffic access is provided during construction. There appears to be no impacts to prime farmlands.

H. Section 4(f) or 6(f) Resources

The following are present on the project: Section 4(f) Resources Section 6(f) Resources

Should structures be accepted as eligible for the National Register of Historic Places, they could be afforded protection under section 4(f). KYTC has options to mitigate and avoid impacts to section 4(f) resources including a programmatic agreement for mitigating historic bridges, or using 'de minimus' guidance for properties with minor strip takings.

Anticipated Environmental Document:

CE Level 1



IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

Alternate #1 - No Build

The no build alternate would be the least expensive, only requiring the continuation of regular maintenance. However, it would not adequately address the issues in the project area. The existing conditions of the bridge and roadway pose potential hazards to the driving public due to the low sufficiency rating and structural deficiency of the existing structure.

Alternate #2 - Replacement on Existing Alignment

Alternate #2 includes removing the existing structure and building a new bridge on the same alignment. This would limit the amount of right-of-way that needs to be purchased, keeping the overall cost of the project to a minimal. This alternate would require the construction of a low-water crossing diversion to provide access during the removal of the existing bridge and construction of the new bridge.

Alternate #3 - Replacement on New Alignment

Alternate #3 includes the construction of a new structure to the south of the existing bridge. This would involve realigning the existing roadway. This would increase the amount of right-of-way that needs to be purchased, increasing the overall cost of the project. It would also add additional horizontal geometric deficiencies since the existing roadway approach is a tangent section. The advantage of this alternative would be the limited impacts to traffic since the existing structure would continue to provide access while the new structure is being constructed.

Summary

The project team analyzed the existing conditions of the bridge and roadway and established the following items as the main structural and geometric issues:

- > The existing bridge has a sufficiency rating of 4
- > The existing bridge is structurally deficient
- > The existing roadway and bridge are only 12' wide

Based on these factors and cost considerations, the project team recommends Alternate #2. Replacing the structure on the existing alignment will remedy the existing structural issues while improving safety and minimizing the overall cost of the project.

B. Draft Project Purpose:

The purpose of the project is to address the roadway approach and structural deficiencies of the bridge crossing at Beech Fork on CR-1214. The existing bridge has a sufficiency rating of 4 and is structurally deficient. The current bridge and roadway are too narrow for 2 vehicles to pass.

V. PROJECT ESTIMATE & METHODOLOGY

| Estimate Methodology: | Current Estimate | |
|--|-------------------------|--------------------|
| The estimate for this project was generated by prorating from other projects of similar size and scope in the same project area. It will be possibly to complete most of the work on existing state right-of-way, limiting the amount of additional right-of-way that needs to be purchased. Also, the amount of utilities that will require relocation will be minimized. | <u>Phase</u> | <u>Estimate</u> |
| | Planning | N/A |
| | Design | \$300,000 |
| | R/W | \$230,000 |
| | Utilites | \$120,00 |
| | Const | \$490,000 |
| | Total | \$1,140,000 |

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

| | |
|--|--|
| | Company Name - Delta Natural Gas Company Contact - Steve Lewis Address - 3617 Lexington Rd., Winchester, KY 40391 Phone No. - (859) 744-6171 |
| | Company Name - East Kentucky Power Cooperative Contact - Shaun Vance Address - 4775 Winchester Rd., PO Box 707, Winchester, KY 40392 Phone No. - (859) 527-3137 |
| | Company Name - Hyden TDS Telecom Contact - James Whitaker Address - 24014 N. Hwy. 421, Hyden, KY 41749 Phone No. - (606) 225-5837 |
| | Company Name - Hyden-Leslie Water District Contact - Leihman Howard Address - 325 Wendover Rd., Hyden, KY 41749 Phone No. - (606) 672-2791 |
| | Company Name - Contact - Address - Phone No. - |
| | Company Name - Contact - Address - Phone No. - |

VII. PRECONSTRUCTION STATUS REPORT

02-Apr-2013

Preconstruction Status Report

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Auth No. / Date 77524 02-Feb-2005 **Project No. 11 1067.00** Parent No. 11 1067.00
 County Name LESLIE
 BMP / EMP 0.024 / 0.064
 Route CR-1214-

Desc REPLACE BRIDGE AND APPROACHES ON CR-1214 OVER BEECH FORK (C24). (SR=6.0)(PROJECT FUNDING CONTINGENT UPON BRIDGE POSTING COMPLIANCE); (066C00024N)

Type Of Work BRIDGE REPLACEMENT(P) No. Lanes Length 0.10 Measurement Type E

Road Eng. DEPARTMENT Bridge Eng. DEPARTMENT
 Proj Mgr kytclerika.hubbard Bridge No. C00024 Suff. Rating

Letting Status / Date *****

Final Plans Contractor Notice

| Environmental | Name | Date | Type | Sched. Comp. | Actual Comp. | Expire Date |
|---------------|-----------------|-------------|----------|--------------|--------------|-------------|
| Assigned: | | | | | | |
| Requested: | District Office | 01-Apr-2009 | CE LVL 1 | | | |

Concerns EMARS PROGRAM CODE

Phase Code D R U C
 Stage PENDING ESTIMATED ESTIMATED ESTIMATED
 Fund Code BRZ BRZ BRZ
 Escalated Cost 300,000 230,000 120,000 490,000
 Fiscal Year 2012 2012 2013
 Auth Amt.
 Auth Date
 Current Cost 280,000 210,000 110,000 450,000
 Date Of Current Cost 02-Nov-2009 02-Nov-2009 02-Nov-2009 02-Nov-2009
 Year of Proj Auth Date 01-Nov-2010 01-Nov-2010 01-Nov-2010 01-Nov-2011

Program Code FD52

Remaining Balance

Right Of Way Parcel Information

Utility Information

Total Parcels: Completion Date
 Appraisals of Negotiated Starts 000 of
 Relocated of Agreement of
 Deeds Signed Relocated of

Suits Filed
 Right Of Entry

Parcels Cleared

| Milestone | Remarks | Status | Date | Scheduled |
|--|---------|---------|-------------|-----------|
| PRELIMINARY LINE AND GRADE | | UNKNOWN | 15-Dec-2004 | |
| DRAINAGE INSPECTION | | UNKNOWN | 15-Dec-2004 | |
| JOINT INSPECTION | | UNKNOWN | 15-Dec-2004 | |
| GEOTEC ENGINEERING - ROADWAY | | UNKNOWN | 15-Dec-2004 | |
| GEOTEC ENGINEERING - BRIDGES | | UNKNOWN | 15-Dec-2004 | |
| BRIDGE AND STRUCTURE PLANS TO CENTRAL OFFICE | | UNKNOWN | 15-Dec-2004 | |
| ADVANCE SITUATION TO CENTRAL OFFICE | | UNKNOWN | 15-Dec-2004 | |
| RIGHT OF WAY PLANS TO CENTRAL OFFICE | | UNKNOWN | 15-Dec-2004 | |
| ROAD PLANS TO CENTRAL OFFICE | | UNKNOWN | 15-Dec-2004 | |
| TRAFFIC PLANS - SIGNING | | UNKNOWN | 15-Dec-2004 | |
| TRAFFIC PLANS - LIGHTING | | UNKNOWN | 15-Dec-2004 | |
| TRAFFIC PLANS - SIGNALS | | UNKNOWN | 15-Dec-2004 | |
| TRAFFIC PLANS - TRAFFIC CONTROL | | UNKNOWN | 15-Dec-2004 | |

VIII. TABLES AND EXHIBITS

Exhibit A - Bridge Inventory and Appraisal Report

| NATIONAL BRIDGE INVENTORY KENTUCKY INVENTORY AND APPRAISAL REPORT | | | |
|--|------------------------------|---|-----------|
| <i>Use of this document is subject to 23 USC SEC 409</i> | | | |
| IDENTIFICATION | | CLASSIFICATION | |
| (8) STRUCTURE NUMBER | 066C00024N | (112)NBIS BRIDGE LENGTH: | Y |
| (1) STATE NAME: | KENTUCKY | (104)HIGHWAY SYSTEM: | 0 |
| (5) INVENTORY ROUTE: | CR- 1214 | (26)FUNCTIONAL CLASS | 09 |
| (2) DISTRICT AGENCY DISTRICT: | 11 | (100)STRAHNET HIGHWAY: | 0 |
| (3)COUNTY CODE: 131 | (4)PLACE CODE:0000 | (101)PARALLEL STRUCTURE: | N |
| (6)FEATURES INTERSECTED : | BEECH FORK | (102)DIRECTION OF TRAFFIC: | 3 |
| (9)LOCATION: | .1 MI W OF JCT US 421 | (103)TEMPORARY STRUCTURE: | |
| (7)FACILITY CARRIED: | STONE COAL BRANCH | (105)FEDERAL LANDS HIGHWAY: | 0 |
| (11)MILEPOINT: | 0.044 | (110)DESIGNATED NATIONAL NETWORK: | 0 |
| (12)BASE HIGHWAY NETWORK: | 0 | (20)TOLL: | 3 |
| (13)LRS INVENTORY ROUTE&SUBROUTE: | | (21)MAINTAIN: | 02 |
| (16)LATITUDE: | 37.00 N DEGREES | (22)OWNER: | 02 |
| (17)LONGITUDE: | -83.40 W DEGREES | (37)HISTORICAL SIGNIFICANCE | 5 |
| (98)BORDER BRIDGE STATE CODE: | % shared: Unknown Unknown | CONDITION | |
| (99)BORDER BRIDGE STRUCTURE NO.: | | (58)DECK: | 4 |
| STRUCTURE TYPE AND MATERIAL | | (59)SUPERSTRUCTURE: | 3 |
| (43)STRUCTURE TYPE MAIN: | 5 | (60)SUBSTRUCTURE: | 4 |
| (44)STRUCTURE TYPE APPR: | ! | (61)CHANNEL AND CHANNEL PROTECTION : | 5 |
| (45)NUMBER OF SPANS IN MAIN UNIT: | 3 | (61)CULVERTS: | N |
| (46)NUMBER OF APPROACH SPANS: | 0 | LOAD RATING AND POSTING | |
| (107)DECK STRUCTURE TYPE: | 2 | (31)DESIGN LOAD : | 5 |
| (108)WEARING SURFACE PROTECTION SYSTEM: | 0 | (63)OPERATING RATING METHOD: | 1 |
| (108A)TYPE OF WEARING SURFACE: | 0 | (64)OPERATING RATING: | 3 Tons |
| (108B)TYPE OF MEMBRANE: | 0 | (65)INVENTORY RATING METHOD: | 1 |
| (108C)TYPE OF DECK PROTECTION: | 0 | (66)INVENTORY RATING: | 3 Tons |
| AGE AND SERVICE | | (70)BRIDGE POSTING: | 0 |
| (27)YEAR BUILT: | 1965 | (41)STRUCTURE OPEN,POSTED OR CLOSED: | B |
| (106)YEAR RECONSTRUCTED: | 0 | APPRAISAL | |
| (42A)TYPE OF SERVICE-ON: | CODE: 1 | (67)STRUCTURE EVALUATION: | 2 |
| (42B)TYPE OF SERVICE-UNDER: | CODE: 5 | (68)DECK GEOMETRY: | 2 |
| (28)LANES ON STRUCTURE : 1 | LANES UNDER STRUCTURE: 0 | (69)UNDERCLEARANCE,VERTICAL & HORIZONTAL: | N |
| (29)AVERAGE DAILY TRAFFIC: | 300 | (71)WATERWAY ADEQUACY: | 8 |
| (30)YEAR OF ADT: 2006 | TRUCK ADT % | (72)APPROACH ROADWAY ALIGNMENT: | 6 |
| (19)BYPASS, DETOUR LENGTH: | 199mi. | (36)TRAFFIC SAFETY FEATURES: | 0000 |
| GEOMETRIC DATA | | (113)SCOUR CRITICAL BRIDGES: | 8 |
| (48)LENGTH OF MAXIMUM SPAN: | 38 ft. | PROPOSED IMPROVEMENTS | |
| (49)STRUCTURE LENGTH: | 85 ft. | (75)TYPE OF WORK: | 311 |
| (50)CURB OR SIDEWALK LEFT: 0.50 | RIGHT:0.50 | (76)LENGTH OF STRUCTURE IMPROVEMENTS: | 8.2 |
| (51)BRIDGE ROADWAY CURB TO CURB: | 9.20 ft. | (94)BRIDGE IMPROVEMENT COST: | 123000 |
| (52)DECK WIDTH OUT TO OUT: | 12.00 ft. | (95)ROADWAY IMPROVEMENT COST: | 0 |
| (32)APPROACH ROADWAY WIDTH(W/SHOULDERS): | 12.10 ft. | (96)TOTAL PROJECT COST: | 122000 |
| (33)BRIDGE MEDIAN: | CODE: 0 | (97)YEAR OF IMPROVEMENT COST ESTIMATE | 1994 |
| (34)SKEW: | 0 | (114)FUTURE ADT: | 300 |
| (10)INVENTORY ROUTE MIN VERT CLEAR(VdIrv): | 99.99 ft. | (115)YEAR OF FUTURE ADT: | 2026 |
| (47)INVENTORY ROUTE TOTAL HORIZ CLEAR (VdIrv): | 11 ft. | INSPECTIONS | |
| (53)MIN VERT CLEAR OVER BRIDGE RDWY(vCLOVER): | 99.99 ft. | (90)INSPECTION DATE: | 10/2/2013 |
| (54)MIN VER UNDERCLEAR REF(Refvuc): | (a) N (b) 0 | (91)FREQUENCY: | 12months |
| (55)MIN LAT UNDERCLEAR RT REF(Refhuc): | (a) Nft. (b) 0 ft. | (92A)FRACTURE CRITICAL DETAIL: | Y24 |
| (56)MIN LAT UNDERCLEAR LEFT(Hclruit) | 0 ft. | (92B)UNDERWATER INSPECTION: | Y24 |
| NAVIGATION DATA | | (92C)OTHER SPECIAL INSPECTIONS: | N |
| (38)NAVIGATION CONTROL: | 0 | (93A) FC DETAILS INSP DATE: | 10/2/2013 |
| (111)PIER PROTECTION: | 0 | (93B)UW DETAILS INSP DATE: | 1/1/1901 |
| (39)NAVIGATION VERTICAL CLEARANCE: | 0 | (93C)OTHER SPECIAL INSP DATE: | 10/2/2013 |
| (116)VERT-LIFT BRIDGE NAV MIN VERT CLEARANCE: | 0 | | |

VIII. TABLES AND EXHIBITS (cont.)

Exhibit B - Vicinity Map

