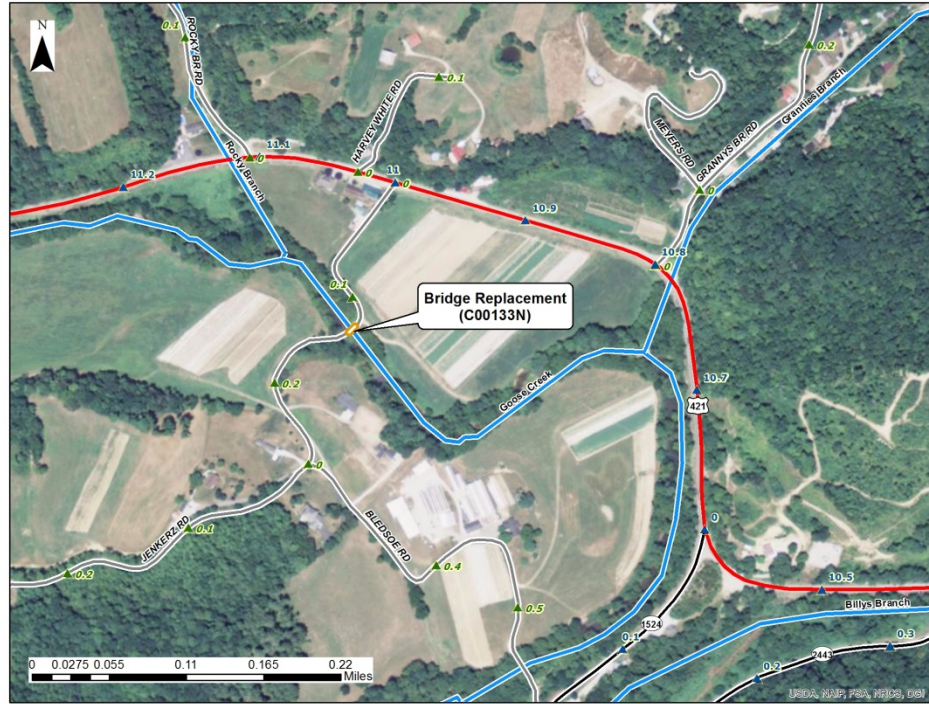
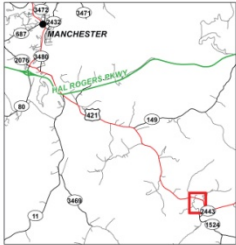


Data

Needs

Analysis



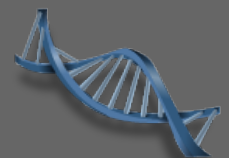
Scoping Study



CR 1172, Clay County
Replace Bridge (C00133N)
Over Goose Creek, 0.1 mile
South of US 421.
Item No. 11-8855.00

Prepared by the KYTC
Division of Planning
District 11

October 2014



I. PRELIMINARY PROJECT INFORMATION			
County:	Clay	Item No.:	11-8855.00
Route Number(s):	CR-1172B	Road Name:	Bledsoe Road
Program No.:	8965801D	UPN:	FD04 026 1172B 000-001
Federal Project No.:	N/A	Type of Work:	Bridge Replacement
2014 Highway Plan Project Description:			
Replacement of bridge (026C00133N) and approaches on CR-1172B over Goose Creek (C133, SR=17). Project is located 0.1 miles south of US 421.			
Beginning MP:	0.100	Ending MP:	0.146
		Project Length:	0.046
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural	State Class.:	<input type="checkbox"/> Primary <input type="checkbox"/> Secondary
 ▼	Route is on:	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt
MPO Area:	Not Applicable ▼	Truck Class.: ▼
In TIP:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	% Trucks:	N/A
ADT (current):	250 (estimated)	Terrain: ▼
Access Control:	<input checked="" type="checkbox"/> None <input type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial	Spacing: ▼
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):		
Existing Bike Accommodations: ▼	Ped:	<input type="checkbox"/> Sidewalk
Posted Speed:	<input checked="" type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph <input type="checkbox"/> 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	12.5'	12'	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Shoulder Width	0	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: _____ ▼
Clear-zone***	N/A	N/A	
Project Notes/Design Exceptions?:	Based on AASHTO guidelines for geometric design of low volume roadways		
<small>*Based on proposed Design Speed, **AASHTO's A Policy on Geometric Design of Highways and Streets, ***AASHTO's Roadside Design Guide</small>			
Bridge No.*:	026C00133N		
Sufficiency Rating	17		Existing Geotech data available?
Total Length	40		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Width, curb to curb	13		
Span Lengths	39		Detour Length(s): 1.2 mi
Year Built	1950		
Posted Weight Limit	3 Tons		
Structurally Deficient?	Yes		*If more than two bridges are located on the project, include additions sheets.
Functionally Obsolete?	No		
Existing Bridge Type	Precast concrete panel, Sub: Steel stringer/girder		

II. PROJECT PURPOSE AND NEED

A. Legislation

The following funding was used in the 2014 enacted Highway Plan.	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
	SPP	D	2015	\$250,000
	SPP	R	2016	\$75,000
	SPP	U	2016	\$75,000
	SPP	C	2016	\$550,000

B. Project Status

\$250,000 in Design funds has been authorized. Funding for Right-of-Way, Utility, and Construction funding is available but has not yet been authorized.

C. System Linkage

Bledsoe Road (CR-1172B) is a rural local road. It begins at US 421 near Goose Rock and connects to KY 1524. There is one route, Jenkerz Road (CR-1172A), that branches off of Bledsoe Road at the 0.261 milepoint. This road primarily serves the residents along the route and branching routes.

D. Modal Interrelationships

Pine View Farm resides along this route, farm horses and tractors are used quite frequently as a method of transportation. There are no other intermodal interactions with pedestrians, railroads, ferries, river ports, or bicycle routes.

E. Social Demands & Economic Development

There is only one economic development along this section of CR-1172. A small Mennonite farm (Pine View Farm) with a greenhouse that sells produce and plants. All other are private residences.

F. Transportation Demand

Due to little economic development and few private residences. This route has a low demand for transportation.

G. Capacity

There is no traffic count data available for this road. It can be reasonably assumed that the ADT is very low in this given section. It is connected on both ends to state routes but wouldn't be considered a time saving route by traffic. An ADT can be estimated at approximately 200-250 vehicles per day using trip generation and assuming 8-10 residences and one economic development 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, 2009, and December 31, 2013, there were no accidents along this section of CR-1172.

I. Roadway Deficiencies

The existing bridge has a sufficiency rating of 17 and is structurally deficient. The existing roadway approaches are substandard with deteriorated edges that crumble every time the waters rise. Sight distance is an issue. Vehicles cannot pass each other on the 12.5' wide, one-lane bridge. The approaches are part pavement and part concrete. Roadway approaches along with the bridge structure are located at an elevation that is below the flood plain, when waters rise residents are unable to cross. It is recommended that there be 2 - 9' lanes with 2' paved shoulders on either side, plus raising the road up out of the flood plain.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg.#:

TIP Pg.#:

Clay County is attainment for all monitored air pollutants. Air quality during construction will be controlled with good construction practices.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

A Phase I archaeological survey will determine cultural significance and if eligible sites are located in the project footprint. No historic resources have been identified. Olge Quad, 1979, -83.695295 37.088358 Decimal Degrees.

C. Threatened and Endangered Species

The USGS Quadrangle is Ogle. Current species listed for Clay County are Indiana bat, Northern long eared bat, gray bat, rabbitsfoot, snuffbox and Kentucky arrow darter. Future study will address the requirements of USFWS and prevent detriment to the protected species.

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

Fueling stations, or where petroleum products have been used, can be identified for hazardous materials during Phase I investigations and determine if Phase II will be necessary. Other possible hazardous materials to investigate will be asbestos in structures. There does not appear to be relocations or hazardous or soil contamination.

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 IWOC Special Use Waters

The USGS Quadrangle is Ogle. This section of Goose Creek is not listed as a special use water. A water of the United States, Goose Creek, 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 disturbance.

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

Bridge replacement.

G. Socioeconomic

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

Do not expect relocations.

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

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

No 4f or 6f anticipated.

Anticipated Environmental Document:

None (Completely State funded)



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, this alternate does not satisfy the purpose and needs of the affected project area. The existing conditions of the bridge and roadway pose potential hazards to the driving public due to a low sufficiency rating and the structural deficiency of the existing structure.

Alternate #2 - Replacement on Existing Alignment

Remove and replace the existing structure and build a new bridge on the existing alignment. The horizontal alignment of the road would not have to change much to allow for the bridge and approaches to be raised up out of the flood plain. This alternate would limit the amount of right-of-way that needs to be purchased, keeping the overall project cost to a minimal amount.

Alternate #3 - Replacement on New Alignment

Construction of a new structure north of the existing bridge, this would involve realigning the existing roadway. With a new alignment, it would require the acquisition of more right-of-way that would ultimately drive up the overall cost of the project. The new structure along with approaches could then be constructed at an adequate level so that it would be out of the flood plain.

Summary

The project team analyzed the existing condition 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 17
- The existing bridge is structurally deficient
- The bridge and approaches are below the flood plain
- The existing roadway and bridge are only 12.5' wide

Based on these factors and cost considerations, the project team recommends Alternate #2. Replacing the structure on the existing alignment while raising the approaches out of the flood plain. This alternate should improve safety and provide the best option for residents while minimizing the overall cost of the project.

B. Draft Project Purpose:

The purpose of this project is to address the roadway approaches and structural deficiency of the bridge crossing at Goose Creek on CR-1172B. The existing bridge has a low sufficiency rating of 23 and is below the flood plain. The current bridge and roadway are too narrow for 2 vehicles to pass.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:

The estimate for this project was generated by prorating from other projects of similar size and scope in the same general project area. It will be possible 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 and utility relocation costs will be minimized.

Current Estimate

<u>Phase</u>	<u>Estimate</u>
Planning	N/A
Design	\$250,000.00
R/W	\$75,000.00
Utilities	\$75,000.00
Const	\$550,000.00
Total	\$950,000.00

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name - Jackson Energy Cooperative
 Contact - Joe Garland
 Address - 115 Jackson Energy Lane McKee, KY 40447
 Phone No. - 1.800.262.7480
 Email - mike@cityofmanchesterky.org

Company Name - Manchester Municipal Water
 Contact - Mike White
 Address - 123 Town Square Manchester, KY 40962
 Phone No. - 606.598.6043
 Email - joegarland@jacksonenergy.com

Company Name - Windstream Communications South District
 Contact - Russell Lambert
 Address - 719 North Main Street London, KY 40741
 Phone No. - 606.878.3270
 Email - Russell.A.Lambert@windstream.com

Company Name - Time Warner Communications
 Contact - Darrell Nave
 Address - 5026 US 27 Somerset, KY 42501
 Phone No. - 606.678.9215
 Email - dnave@newwavecom.com

VIII. TABLES AND EXHIBITS



Approaching the bridge from the south-west, looking north-east



Looking north-east at bridge