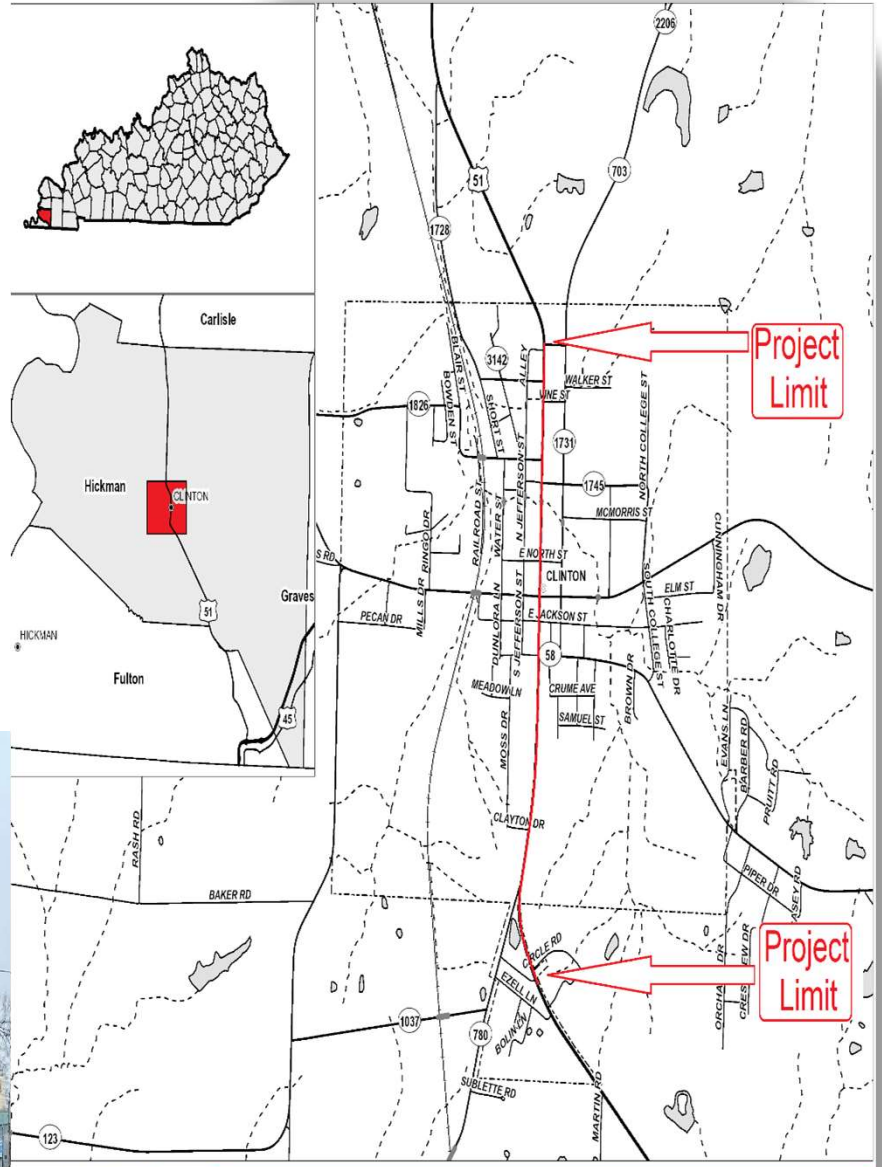


Data Needs Analysis

Preliminary Design



US 51
Hickman County
From KY 780 to KY 703
Item No. 01-80203

Prepared by the KYTC
Division of Planning and
KYTC District 1

January 2023



KENTUCKY
TRANSPORTATION
CABINET

I. PRELIMINARY PROJECT INFORMATION

County:	Hickman	Item No.:	01-80203
Route Number(s):*	US 51	Road Name:	
Program No.:		UPN:	STP 053 51 6.9-8.275
Federal Project No.:		Type of Work:	Safety and Road Rehab

2020 **Highway Plan Project Description:**

Correct geometric deficiencies and improve safety, access and regional connectivity from Clayton Street to KY 703 in Clinton (2022CCN)

Beginning MP:	6.9	Ending MP:	8.275	Project Length:	1.375
In TIP:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Use PDP/CHAF to Verify Project Data		
State Class.:	<input checked="" type="checkbox"/> Primary <input type="checkbox"/> Secondary		Route is on:	<input type="checkbox"/> NHS <input checked="" type="checkbox"/> NN <input type="checkbox"/> Ext Wt	
Functional Class.:	<input checked="" type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural Arterial		Truck Class.:	AAA	% Trucks: 17.70%
MPO Area:	Not Applicable		Terrain:	Rolling	
ADT (current):	4437	2020			
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial		Spacing:	3	
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):				
Existing Bike Accommodations:	Shared Lane		Ped:	<input checked="" type="checkbox"/> Sidewalk	
Posted Speed:	<input checked="" type="checkbox"/> 35 mph <input checked="" 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	2	2-4	Existing Rdwy. Plans available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Year of Plans: _____
Lane Width	10'	10'-12'	
Shoulder Width	0.5'	2'-4'	<input type="checkbox"/> Traffic Forecast Requested Date Requested: NA
Max. Superelevation***	NA	4%	
Minimum Radius***	NA	510'	<input type="checkbox"/> Mapping/Survey Requested Date Requested: _____
Maximum Grade	5%	8%	
Minimum Sight Dist.	494'	250'	Type: Lidar
Sidewalk Width(urban)	3'-4'	4'-8'	
Clear-zone [†]	5'	15'-30'	
Project Notes/Design Exceptions?	NA		

Bridge No.:#	053B00075N	(Bridge #2)	
Sufficiency Rating	58.1		Existing Geotech Data Available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Total Length	27.9		
Width, curb to curb	24.9		Detour Length(s): 98.2
Span Lengths	12', 12'		
Year Built	1927		
Posted Weight Limit	N/A		
Structurally Deficient?	N/A		
Functionally Obsolete?	Yes		
Existing Bridge Type	Culvert		

*If more than one road is included in the project, include additional sheets.
 **Based on proposed Design Speed
 ***AASHTO's A Policy on Geometric Design of Highways and Streets
 +AASHTO's Roadside Design Guide
 †If more than two bridges are located on the project, include additional sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

The project received funding in the 2022 Six Year Plan. The Judge and city officials are pushing for this project.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
SPP	D	2022	\$1,000,000
SPP	R	2024	\$1,500,000
SPP	U	2025	\$2,500,000
SPP	C	2026	\$6,500,000

B. Project Status

Design funds have been requested 11/2022 and the project is being advertised in Jan 2023.

C. System Linkage

This is an urban arterial linking the western counties to I-69. This is a direct route to the paper mill in Wickliffe allowing trucks access from/to I-69 and I-57.

D. Modal Interrelationships

This route does not provide direct access to a multi modal facility such as a riverport, airport or rail facility. It is about 30 miles from a riverport, a paper mill and about 16 miles from the closest interstate. This is a direct route to the Purchase Parkway/I-69. It does contain a sidewalk throughout most of the project. The sidewalk stops short of the newly constructed park on the south side, and continues north to the end of the project. The sidewalk connects the extents of the city to the heart of the city.

E. Social Demands & Economic Development

The Phoenix Paper Mill south of Wickliffe has reopened. With this being a direct route to an Interstate/Parkway, the truck traffic has increased which aids in the deterioration of the pavement condition. The Hickman County Rotary Park on the south end of the project is a local destination and would have increased access as a result of this project. Updating the sidewalks and extending the length of the sidewalk to the south should increase use of the park, the farmers market and the grocery stores.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The most recent count from CTS for this segment of US 51 is from 2020. The ADT was 4437 with 17% trucks. This is an increase from the 2017 count with an AADT 3859.

G. Capacity

The capacity will need to be examined. There has been growth of about 13% from the last traffic count in 2017.

H. Safety

5 years of crash data showed 46 collisions. Some of the collisions involve utility poles. There is a pedestrian presence that crosses the road from Hickman County High School to the gas station at a mid block cross. The sidewalks are not built to and from the park. The sidewalks are crumbling in multiple places. There are sight distance concerns from local officials at KY 780 and KY 703, there may be others that weren't mentioned.

I. Roadway Deficiencies

Starting at the south end of the project near the park, there is a "Y" intersection that causes one to look almost completely behind and not allow one to turn left easily/efficiently. The narrow shoulders leading into the city. Coming into the city there is not a sidewalk leading to the park, the utility poles are close to the road and cause accidents when cars/trucks are turning. With the large truck increase, the current asphalt design needs to be examined. There are sight distance locations, ADA compliant crosswalks and possible turning lane locations.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg.#: Not in current book

TIP Pg.#:

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

Numerous historic resources are present along the corridor. However, impacts should be minimal if only implementing safety improvements. Archaeological impacts are unlikely.

C. Threatened and Endangered Species

Tree cutting likely, so potential for bat habitat to be affected.

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

3 service stations are present within corridor, but encroachment upon USTs are unlikely.

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

May require Division of Water KPDES notification if ground disturbance reaches 1 acre.

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 [KYTC Noise Analysis and Abatement Policy?](#) Yes No

Not a Type 1 project if no addition of lanes.

G. Socioeconomic

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

Relocations unlikely.

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

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

Hickman County Rotary Park has been awarded funds from LWCF (land and water conservation funds). Consultation with DEA & Dept. of Local Government required at minimum, if project reaches that far South.

[Anticipated Environmental Document:](#)

CE Level 1



IV. PROJECT NEED, PURPOSE & SCOPE

A. Need:

This segment of US 51 serves as a direct link from Missouri to I-69. There is a papermill that has reopened about 16 miles north of the project. It serves as a direct route to I-69 and Missouri. I-69 connects Western Tennessee to Indiana through much of Western Kentucky. These factors have led to the increase in truck traffic and is expected to increase with the completion of I-69. The recently developed Rotary Park at the south end of the project will attract cars and pedestrians. There is a current lack of bike/ped facilities and accomodations leading to the park.

B. Purpose:

Enhance the pavement condition to account for increased truck traffic. Increase safety, access and repair existing conditions for bicyclists/pedestrians. Increase safety of intersections.

C. Scope:

Pavement, culvert replacement, sidewalk, bicycle, curb, drainage, utility poles near the edge of the road, sight distance and alignments should all be evaluated from the park to KY 703.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
Comparison to similar projects	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$1,000,000.00
	R/W	\$1,500,000.00
	Utilities	\$2,500,000.00
	Const	\$6,500,000.00
	Total	\$11,500,000.00

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name -	E.ON U.S. - KU
Contact -	
Address -	
Phone No. -	800-500-4904
Company Name -	Gibson Electric Membership Corporation
Contact -	
Address -	
Phone No. -	270-236-2421
Company Name -	Western Kentucky RECC
Contact -	
Address -	
Phone No. -	270-247-1321
Company Name -	Commonwealth Gas
Contact -	
Address -	
Phone No. -	270-335-3116
Company Name -	U.S. Utilities Inc
Contact -	
Address -	
Phone No. -	502-653-3621
Company Name -	Water Service Corp. of Kentucky
Contact -	
Address -	
Phone No. -	270-653-3621

VII. TABLES AND EXHIBITS

