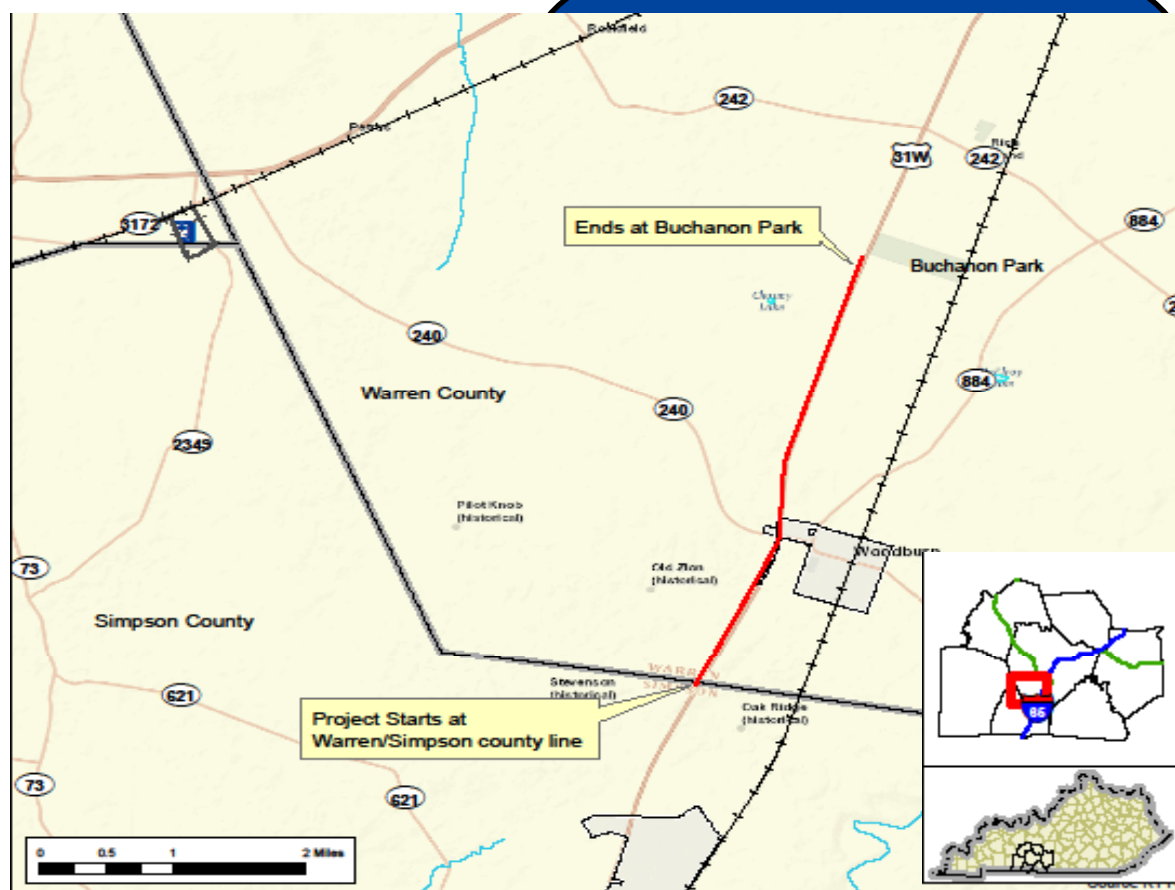


Data Needs Analysis



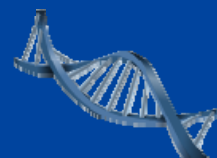
Scoping Study



US 31W, Warren County
From Simpson/Warren C/L
to Buchanan Park
Item No. 3-8853.00

Prepared by the KYTC
Division of Planning and
KYTC District 3

June 2015



I. PRELIMINARY PROJECT INFORMATION

County:	Warren	Item No.:	03-8853.00			
Route Number(s):*	US 31W	Road Name:	Nashville Road			
Program No.:	89632	UPN:	FD04	114	031W	001-005
Federal Project No.:	N/A	Type of Work:	Minor Widening			

(Year) Highway Plan Project Description:

Minor Widening (2+1 Concept) from south of KY-240 intersection (MP 1.464) to Buchanon Park (MP 4.258).

Contrary to description, the project will begin at the county line (MP 0.00)

Beginning MP:	0	Ending MP:	4.258	Project Length:	4.258
In TIP:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Reconcile Project Information in Clearview				
State Class.:	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary		Route is on:	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt	
Functional Class.:	<input type="checkbox"/> Urban <input checked="" type="checkbox"/> Rural Collector		Truck Class.:	AAA	% Trucks: 13.90%
MPO Area:	Bowling Green		Terrain:	Rolling	
ADT (current):	7305 2014				
Access Control:	<input type="checkbox"/> None <input checked="" 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:	Shared Lane		Ped:	<input type="checkbox"/> Sidewalk	
Posted Speed:	<input type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input checked="" type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):				
KYTC Guidelines Preliminarily Based on :	55 MPH Proposed Design Speed				

COMMON GEOMETRIC

Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	3	Existing Rdwy. Plans available?
Lane Width	10'-11'	12'	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Shoulder Width	varies	8'	Year of Plans: 1941
Max. Superelevation***	N/A	6%	<input checked="" type="checkbox"/> Traffic Forecast Requested
Minimum Radius***	5729'	1060'	Date Requested: 5/28/2015
Maximum Grade	3%	7%	<input checked="" type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.	>495'	495'	Date Requested: 5/15/2015
Sidewalk Width(urban)	N/A	N/A	Type:
Clear-zone [†]	varies	26'-32'	
Project Notes/Design Exceptions?	Shoulder width may require an exception.		

Bridge No.:	(Bridge #1)	(Bridge #2)	
Sufficiency Rating	N/A		Existing Geotech Data Available?
Total Length			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Width, curb to curb			
Span Lengths			
Year Built			
Posted Weight Limit			Detour Length(s): N/A
Structurally Deficient?			
Functionally Obsolete?			
Existing Bridge Type			

*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 following funding was listed in the 2014 Enacted Highway Plan.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
SPP	D	Auth	\$1,200,000
SPP	R	2018	\$1,800,000
SPP	U	2019	\$2,000,000
SPP	C	2020	\$13,500,000

B. Project Status

This project was identified as No. 4 on the 2013 District Transportation Plan. Design funds were authorized 8/22/2014. Adjacent to the subject project, a project to widen US 31W from Buchanan Park (MP 4.2) to Dillard Road (MP 6.6) - Item No. 03-199.00 - is in the right of way and utility phases with a scheduled letting date of November 2016.

C. System Linkage

US 31W is a Rural Minor Collector that connects the incorporated areas of Franklin, Woodburn, and Bowling Green along with the community of Rich Pond. South Warren Middle and High School opened in 2010 two miles north of the subject project along US 31W. The roadway provides access to the large industrial park properties in both Simpson and Warren counties and also serves as a major commuter route. US 31W also serves as a detour route for Interstate 65 when incidents close the interstate between Exit 6 and Exit 20. At the north end of the project limits, a major tourist attraction, Chaney's Dairy Barn is located along US 31W along with the recreational facilities of Buchanan Park.

D. Modal Interrelationships

Because of the large percentage of industrial uses along the US 31W corridor, the movement of large trucks (freight) needs to be considered. The adjacent highway project (Item No. 03-199.00) is constructing a shared-use path from South Warren High School to Buchanan Park, and a sidewalk was recently constructed along KY 240 in Woodburn as part of a Greenways Trail. The subject project may also involve a shared-use path from KY 240 to Buchanan Park.

E. Social Demands & Economic Development

Southern Warren County has experienced rapid growth with both industrial (southern Bowling Green) and residential (South Glen Gables, McClellan subdivisions) growth. The tourist operations of Chaney's Dairy Barn and Buchanan Park continue to expand along with the Octagon House (a Civil War Site) within the project limits.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The last actual traffic counts for the section of US 31W within the project limits are Section 1: MP 0 to MP 1.464 = 7,350 (2010); Section 2: MP 1.464 to 5.283 = 7,305 (2014). These counts have been on a moderate increase in the past two decades (4500-5200 vpd in the late 1980s). Further growth is anticipated, particularly if a new I-65 interchange at KY-240 is constructed in the future.

G. Capacity

During the peak travel periods in the morning and afternoon, congestion is experienced. Additional passing opportunities will help relieve the congestion until traffic demands major widening.

H. Safety

The proposed improvement is located along the US 31W Safety Corridor which was identified as a corridor of concern because of its high incidence of crashes. Twenty percent of the collisions reported on this corridor in the last five years involved injuries half reported as rear end collisions. Collision types most commonly reported included rear end, single vehicle, and sideswipes. Of the single vehicle and sideswipe type collisions reported, many occurred while attempting to pass another vehicle or commercial truck.

I. Roadway Deficiencies

The existing roadway has two 10'-11' lanes with 2' shoulder which does not meet current KYTC design standards. At the intersection with KY 240, left turning lanes have been constructed along with channelizing islands. For the majority of the project, the roadway is tangent and flat. The south end of the project has a slight grade to the crest vertical curve at the county line. For most of the project, an adequate clear zone exists with flat sideslopes and wide unpaved ditch. The south end of the project does contain a few rock cuts that may be within the clear zone. There does not appear to be any significant drainage issues within the project.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW	
A. Air Quality Project is in: <input checked="" type="checkbox"/> Attainment area <input type="checkbox"/> Nonattainment or Maintenance Area <input type="checkbox"/> PM 2.5 County STIP Pg. #: TIP Pg. #: 	
B. Archeology/Historic Resources <input checked="" type="checkbox"/> Known Archeological or Historic Resources are present There are several historic homes along the US 31W corridor. A survey will be required if we must obtain a US Army Corpy Permit for stream impacts.	
C. Threatened and Endangered Species Federal Threatened and Endangered Species listed for Warren County: Kentucky Cave Shrimp (KCS-201), Gray Bat (GB-902), Indiana Bat (IB-903), Northern Long-eared Bat (NLEB-904), Catspaw (EPM-407), Clubshell (CM-416), Fanshell (FSM-403), Northern Riffleshell (NRM-408), Orangefoot Pimpleback (OFPM-414), Pink Mucker (PMM-409), Ping Pink (RPM-412), Rough Pigtoe (RPTM-417), Sheepnose (SNM-415), Snuffbox (SNB-427), Spectaclecase (SCM-402), and Price's Potato-bean (PPB-101)	
D. Hazardous Materials <input checked="" type="checkbox"/> Potentially Contaminated Sites are present <input type="checkbox"/> Potential Bridge or Structure Demolition There is a potential for under ground storage tanks at the corner of KY 240 and US31W. There were stores/gas stations located in this area in the past.	
E. Permitting Check all that may apply: <input checked="" type="checkbox"/> Waters of the US <input checked="" type="checkbox"/> MS4 are: <input type="checkbox"/> Floodplain Impact: <input type="checkbox"/> Navigable Waters of the US Impacts Are 401/404 Permits likely to be required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Impacts to: <input type="checkbox"/> Wetlands <input checked="" type="checkbox"/> Stream/Lake/Pond <input type="checkbox"/> ACE LON <input checked="" type="checkbox"/> ACE NW <input type="checkbox"/> ACE IP <input type="checkbox"/> DOW IWQC <input type="checkbox"/> Special Use Waters	
F. Noise Are existing or planned noise sensitive receptors adjacent to the proposed project? <input checked="" type="checkbox"/> Ye <input type="checkbox"/> No Is this considered a "Type I Project" according to the KYTC Noise Analysis and Abatement Policy? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
G. Socioeconomic Check all that may apply: <input type="checkbox"/> Low Income/Minority Populations <input type="checkbox"/> Relocations <input checked="" type="checkbox"/> Local Land Use Plan available There is potential for a relocations or impact to a business. Warren County does have plans for a bike path from Woodburn to the Buchanan Park.	
H. Section 4(f) or 6(f) Resources The following are present on the project: <input checked="" type="checkbox"/> Section 4(f) Resources <input type="checkbox"/> Section 6(f) Resources	
Anticipated Environmental Document: None (Completely State funded) ▼	

IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

Design will require geotech and structure design for three smaller RBCs (5x3, 6x3, 8x8). Survey will be combination aerial and mobile LIDAR. The project is approx. 4.2 miles long. Approach road construction should be minimal except at Perry Martin Road - anticipate short realignment to intersect US 31W perpendicular. Anticipate transition to typical section occurring in Simpson County with the goal of minimizing right of way and utility impacts in Simpson County. Southern terminus should be designed in a way to tie-in to future sections of 2+1 roadway in Simpson County with minimal reconstruction of overlap. Northern terminus will transition to five lane facility, currently proposed to begin 200' south of the entrance to Buchanan Park.

Existing right of way is 100' wide. ROW involves approximately 90-100 parcels. Acquisitions should be mostly strip takings although this could change if a shared use path is included in the project scope.

Utilities will be impacted but may be minimized due to minor widening and 100' right of way corridor. Project Team may elect to include a utility easement corridor along one or both sides of roadway similar to adjacent project.

A large channel exists along the west side of the roadway from MP 2.3 to MP 3.1 that includes two large entrance pipes. Clear zone will need to be scrutinized within this area. Anticipate one passing lane from the county line to just south of Woodburn (approx. 1 mile in length), then one passing lane in each direction from just north of Woodburn to the end of the project (approx. 1 mile each direction). Project Team must consider median width - anticipate 12' lanes with 4' flush median.

B. Draft Project Purpose:

US 31W is a vital and heavily traveled connection between Bowling Green and Franklin. The increasing traffic is creating safety and mobility issues for motorists and commercial vehicles along the corridor. The project was identified as the No. 4 transportation need for District 3 in the 2013 District Transportation Plan. Resulting from that recommendation, a project was identified in the FY 2014 Enacted Biennial Highway Plan. The purpose of the project is to address safety and mobility issues along US 31W and to provide a reliable connection between Bowling Green and Franklin.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
Estimate assumes three lane typical section for alternative passing lanes with equal widening. Project Team may consider avoiding any construction within the KY 240 intersection since the existing typical section matches the context of the proposed project and channelization already exists within the intersection. Project Team may consider shifting crown point of the roadway from existing center of road to median. (Original estimate in Highway Plan assumed 5-lane typical section from KY-240 to Buchanon Park.)	<u>Phase</u>	<u>Estimate</u>
	Planning	0
	Design	\$1,200,000
	R/W	\$1,800,000
	Utilities	\$2,000,000
	Const	\$7,250,000
	Total	\$12,250,000

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name -	AT&T
Contact -	Travis Parsley
Address -	1150 State St., Bowling Green, KY 42101
Phone No. -	270-846-3196
Company Name -	Level 3 Communications
Contact -	Tim Boyken
Address -	1025 Eldorado Blvd, Suite 43C-420, Broomfield, CO
Phone No. -	720-888-7280
Company Name -	Warren RECC
Contact -	Jonathan Lindsey
Address -	P.O. Box 1118, 951 Fairview Ave., BG, KY 42102
Phone No. -	270-842-6541
Company Name -	Warren County Water District
Contact -	Ryan Leisey
Address -	P.O. Box 10180, 532 Hwy 31W Byp, BG, KY 42102
Phone No. -	270-842-6541
Company Name -	Atmos Energy
Contact -	Ryne White
Address -	3275 Highland Point Drive, Owensboro, KY 42303
Phone No. -	270-685-8140
Company Name -	Time Warner Cable
Contact -	Tom Mracek
Address -	P.O. Box 659, 515 Double Springs Rd, BG, KY 42102
Phone No. -	270-780-2186

VII. TABLES AND EXHIBITS



Existing roadway at county line, looking north. Rock cuts exist at the southern end of the project.



Turn lanes exist at the intersection with KY-240 in the community of Woodburn.

VII. TABLES AND EXHIBITS (cont.)



A wide channel is located on the west side of the roadway north of Woodburn. Two large entrance pipes exist.



Existing alignment is mostly flat and straight with wide clear zone. Ex. ROW is 100' total width.

VII. TABLES AND EXHIBITS (cont.)

