

EVALUATION CRITERIA USED IN 2014 PLANNING STUDY



Level 1: Evaluate how well each alternative meets the Purpose & Need.

- Improve river crossing (bridge deficiencies)
- Improve/maintain a cross-river link between Cairo and Wickliffe
- Address existing safety issues on the bridge and approaches

Level 2: Evaluate how well each alternative addresses the other project goals.

- Satisfy U.S. Coast Guard requirements
- Support local freight routes
- Constructible solution
- Minimize costs
- Minimize disruption to Wickliffe and Cairo during construction
- Minimize impacts to:
 - Tourism
 - Human and Natural Environment
 - Historic Resources
- Support consistent travel time between Wickliffe and Cairo
- Decrease delay due to incidents on the bridge
- Connectivity to bicycle facilities



PURPOSE AND NEED



The purpose of the US 51 Bridge Project is to improve cross river mobility between Wickliffe, Kentucky and Cairo, Illinois, by addressing the safety and reliability issues caused by the narrow lane widths, lack of shoulders and tight curve of the existing bridge and its approaches.



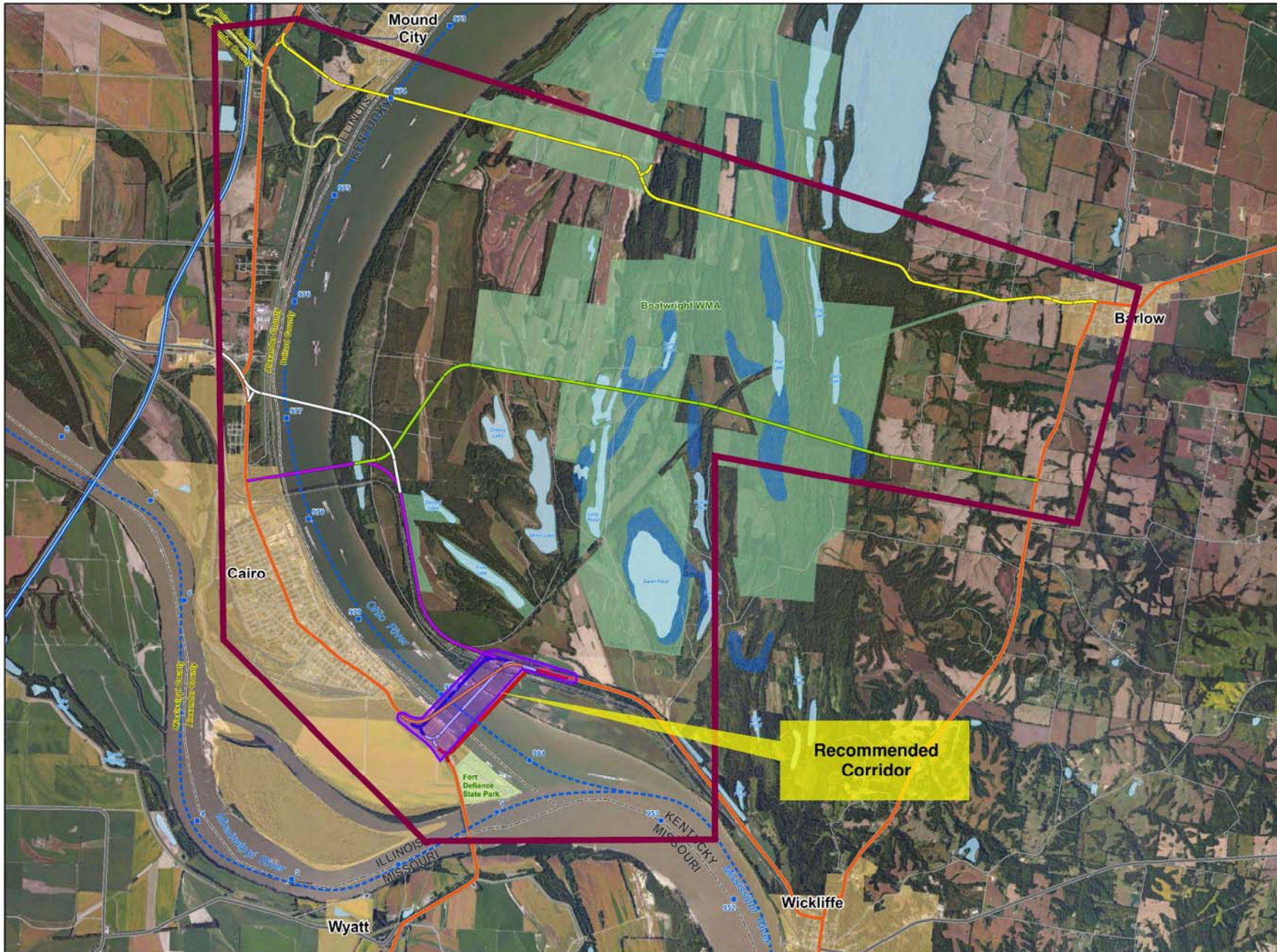
THE NEPA PROCESS



SECTION 106



2014 PLANNING STUDY AREA



- River Milepoint
- - - Sail Line
- Interstate
- US Highway
- State Highway
- Local Road
- Railroad
- State Boundary
- County Boundary
- Park
- City
- Lake/Pond
- Swamp/Marsh
- Wildlife Management Area

Proposed Alternatives

- Alternative 1
- Alternative 2
- Alternative 2A
- Alternative 2B
- Alternative 3
- Alternative 3A
- Alternative 4
- Alternative 5

0 2,000 4,000 Feet

0 0.5 1 Miles

**US 51
Ohio River Bridge**

Range of Alternatives
2014 Planning Study

TRAFFIC PROJECTIONS



Traffic Analysis and Projections for the US 51 Ohio River Bridge:

| HISTORIC TRAFFIC | | AADT |
|-------------------------------|--|-----------|
| 2013 Traffic Count (KYTC) | | 5,350 vpd |
| 2019 Current Year (Estimated) | | 5,500 vpd |

| TRAFFIC FORECAST | | AADT |
|------------------|--|-----------|
| 2025 | | 5,600 vpd |
| 2045 | | 6,200 vpd |

Notes: Future years forecast using 0.5% annual growth rate

AADT = Average annual daily traffic

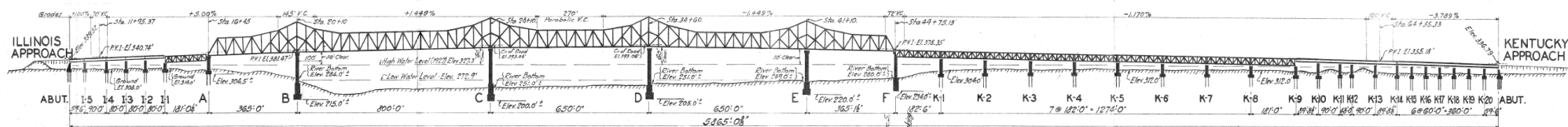
vpd = Vehicles per day

- Approximately 35% of traffic using bridge is truck traffic
- Two Lane Bridge is Adequate

PRELIMINARY ALIGNMENTS



EXISTING BRIDGE CONDITIONS



Bridge Facts

- Constructed between 1936 and 1938
- Longest cantilever truss in Kentucky
- 5,865 ft long (2380 ft truss spans)
- Only vehicular bridge crossing of the Ohio River west of Paducah
- Located within the New Madrid seismic zone
- Not designed for earthquake loads

Inspection/Rehabilitation Data

- Deck was replaced in 1980
- 1999 Rehabilitation
- Inspected every 2 years

Bridge Geometric Deficiencies

- Narrow 10 ft lanes
- Narrow 1'-3" shoulders
- Inadequate sight distance
- Sharp horizontal curve

| National Bridge Inventory Inspection Item | 2012 Condition Rating | 2018 Condition Rating |
|---|-----------------------|-----------------------|
| Deck | 6 | 5 |
| Superstructure | 6 | 5 |
| Paint Condition | 7 | 6 |
| Substructure | 6 | 5 |

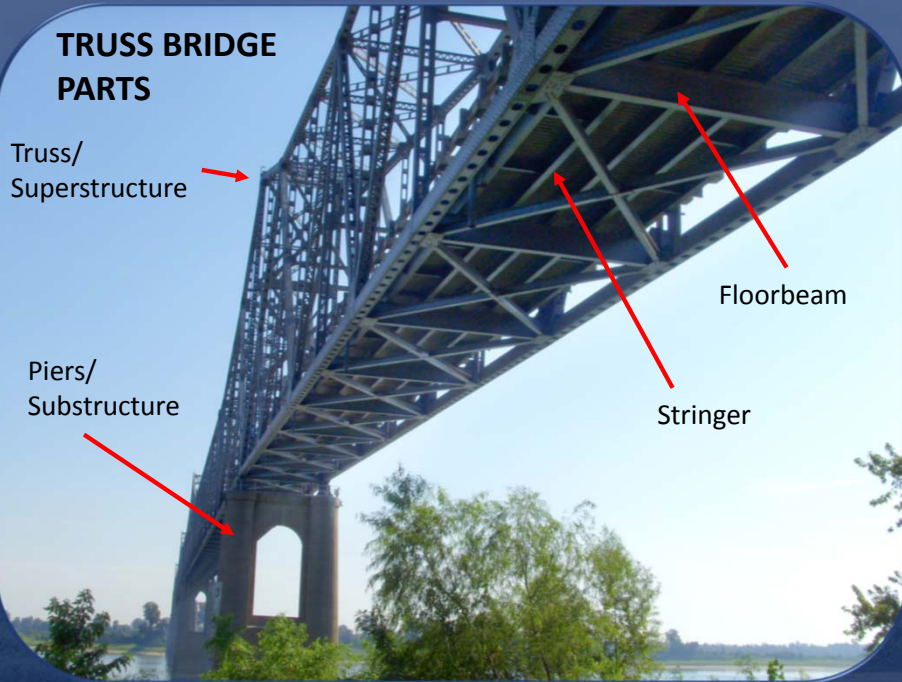


Proposed Design Criteria for New Bridge Alternative

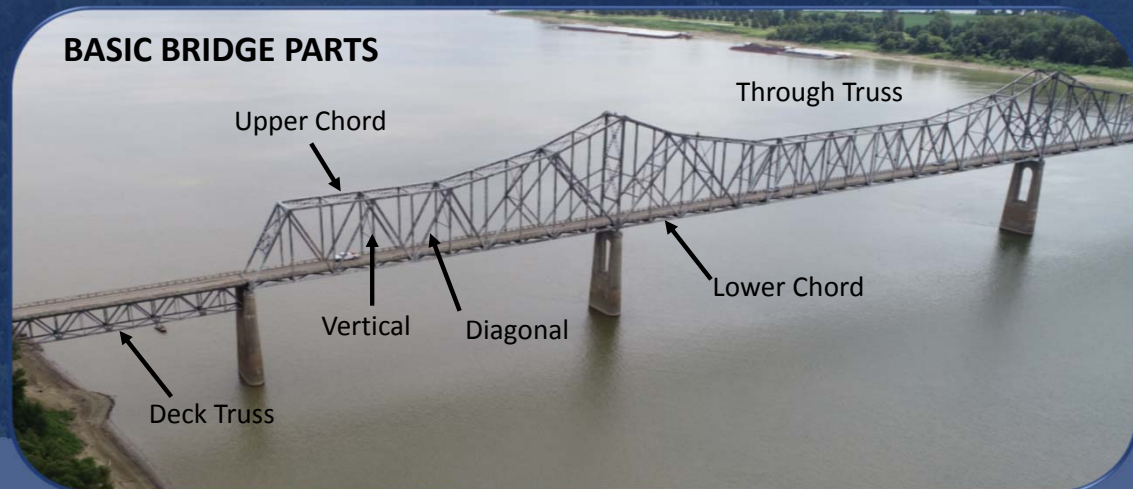
- Designed to modern standards
- 900' or greater main span horizontal length
- 2 lanes with wider shoulders

BRIDGE 101

TRUSS BRIDGE PARTS



BASIC BRIDGE PARTS



SCHEDULE AND OBJECTIVES



- Obtain field survey data
- Analyze existing structure
- Investigate alignment
- Typical section study
- Hydraulics analysis

Sept - Jan

Feb - March

Spring 2020

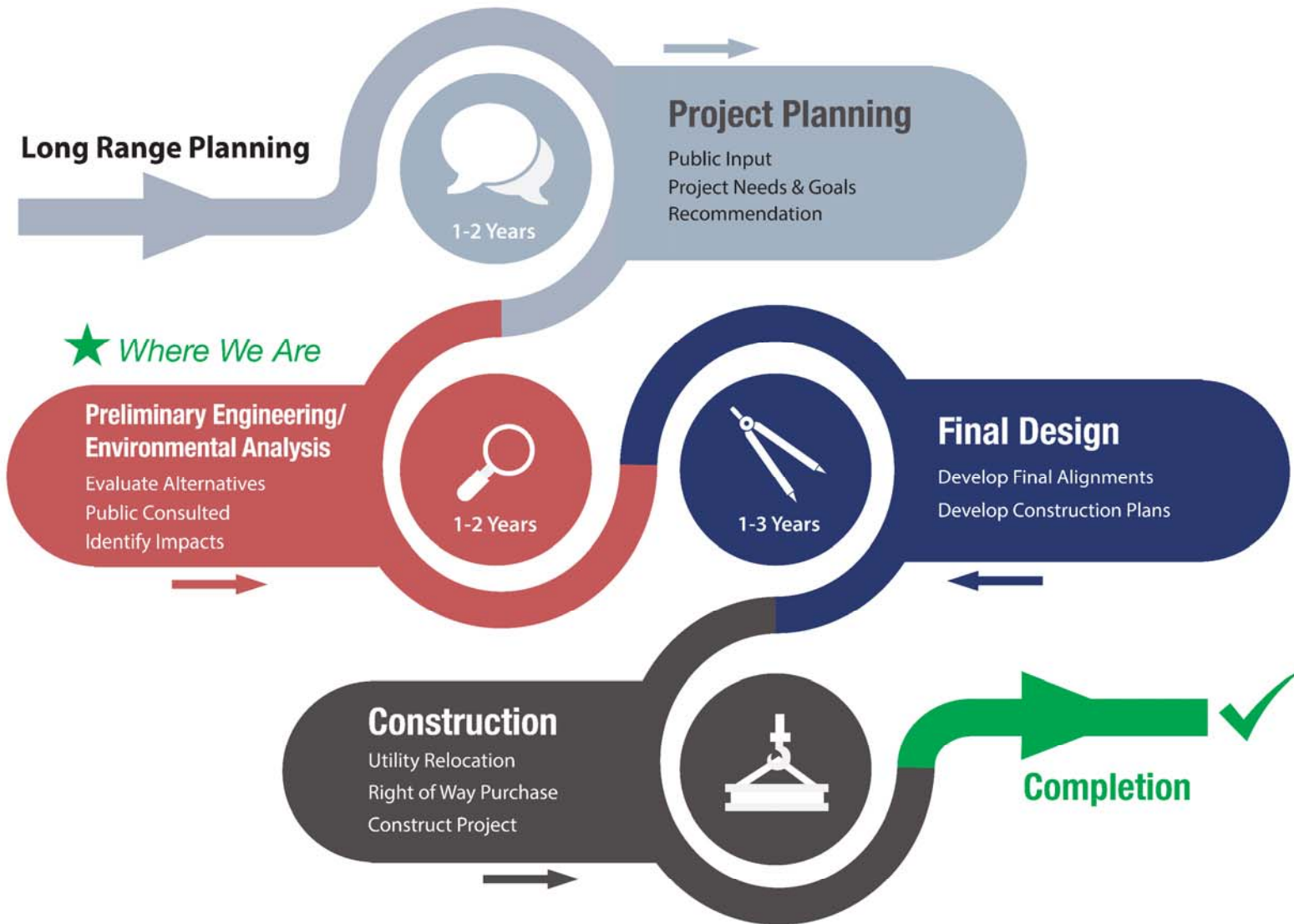
Feb - July

- Evaluate alternatives
- Public meeting #2

- Navigation simulation
- Span length determination

- Finalize environmental study
- Preliminary line and grade

TYPICAL PROJECT DEVELOPMENT PROCESS





For More Information

Website

<https://us51bridge.com/>



Facebook

<https://www.facebook.com/KYTCDistrict1/>



How to Get Involved



Attend Future Public Meetings



Help Identify Historic Properties as a Section 106 Consulting Party



Citizens Advisory/Environmental Justice Group