U.S. Department of Transportation
Federal Highway Administration

# Proposed Ohio River Bridge

# Environmental Assessment and Draft Section 4(f) De Minimis Analysis

Brooke County, West Virginia
Jefferson County, Ohio

State Project No.: S205-2/23-0.00 00
Federal Project No.: HPP-0223(003)D
PID No.: 79353

July 2012

# PROPOSED OHIO RIVER BRIDGE
# BROOKE COUNTY, WEST VIRGINIA
# JEFFERSON COUNTY, OHIO

WVDOT STATE PROJECT NO.: S205-2/23-0.00 00
FEDERAL PROJECT NO.: HPP-0223(003)D
ODOT PID NO.: 79353

## ENVIRONMENTAL ASSESSMENT
## AND SECTION 4(f) DE MINIMIS IMPACT ANALYSIS

Prepared for:

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
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WV State Project: S205-2/23-0.00 00
OH State Project: PID 79353
Federal Project: HPP-0223(003)D

PROPOSED OHIO RIVER BRIDGE
BROOKE COUNTY, WEST VIRGINIA
JEFFERSON COUNTY, OHIO

**ENVIRONMENTAL ASSESSMENT**
**AND SECTION 4 (F) DE MINIMIS IMPACT ANALYSIS**

Submitted Pursuant to 42 USC 4332(2)(C)
U.S. Department of Transportation
Federal Highway Administration
and
West Virginia Department of Transportation, Division of Highways
Ohio Department of Transportation

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|---|---|
| 5/15/12 | Paul A. Mattox Jr. |
| DATE OF APPROVAL | FOR WEST VIRGINIA DEPARTMENT OF TRANSPORTATION |
| 5/11/12 | |
| DATE OF APPROVAL | FOR OHIO DEPARTMENT OF TRANSPORTATION |
| 5/11/12 | |
| DATE OF APPROVAL | FOR OHIO DEPARTMENT OF TRANSPORTATION |
| 5/11/12 | Roxanne R. Kane |
| DATE OF APPROVAL | FOR OHIO DEPARTMENT OF TRANSPORTATION |
| 7/19/12 | |
| DATE OF APPROVAL | FOR FEDERAL HIGHWAY ADMINISTRATION - WV |

The following persons may be contacted for additional information regarding this document.


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The proposed project consists of a new bridge over the Ohio River in the vicinity of Wellsburg, Brooke County, West Virginia and Brilliant, Wells Township, Jefferson County, Ohio.

Comments on this Environmental Assessment are due by September 28, 2012 and should be sent to:

Mr. Gregory L. Bailey, P.E., Director
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The West Virginia Department of Transportation (WVDOT), Division of Highways (WVDOH) and Ohio Department of Transportation (ODOT) in cooperation with the Federal Highway Administration (FHWA) is proposing to construct a new bridge over the Ohio River south of Wellsburg, West Virginia in the vicinity of Brilliant, Ohio.

This document is an evaluation of anticipated environmental impacts associated with the construction of a new Ohio River Bridge for highway vehicles located south of Wellsburg in Brooke County, West Virginia and in the proximity of Brilliant, Wells Township, in Jefferson County, Ohio. The level of environmental documentation presented herein is an Environmental Assessment (EA). This EA evaluates the anticipated socioeconomic, cultural and natural environmental impacts of the proposed project in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended; follows U.S. Department of Transportation FHWA guidelines (*Technical Advisory T 6640.8A, October 30, 1987 – Guidance For Preparing and Processing Environmental and Section 4(f) Documents);* and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) (Publication L. 109-59, August 10, 2005, 118 Stat. 1144) and related guidance.

A new Ohio River crossing, connecting WV 2 to OH 7, in this region would serve many purposes, but would most importantly provide a sustainable and flexible transportation system that will support the possibility of growth in the surrounding area and also increase safety to the travelling public by providing additional routes within the existing highway system. There are three specific needs identified for this project:

- Improve access and flexibility of the regional transportation system
- Enhance regional safety (mobility)
- Stimulate economic growth and development

The proposed project is consistent with the transportation planning process at the state and regional levels. The project is included in the BHJ Long Range Transportation Plan under the Fiscally Constrain[ed] List of Transportation Projects Planned for Brooke/Hancock County, West Virginia. That plan estimates $58,858,000 for construction funding in FY 2019-2024. The BHJ MPO Transportation Improvement Program (TIP) for Federal-Aid Projects 2012 through 2015 Four-Year Short Range Program, adopted May 25, 2011 (most recent update is Revision 4 dated March 28, 2012) also allocates $6,400,000 for engineering and $7,200,000 for right-of-way acquisitions. A portion of this allocation is funded by the SAFETEA-LU Earmark.

***Alternatives***

To meet the objective of connecting WV 2 with OH 7, multiple alternatives were developed and studied. Public and agency outreach was conducted throughout the alternatives development and impact analysis process to obtain input from interested parties. Seven alternatives were

developed and evaluated based on their ability to meet the project need. These include the Transportation System Management (TSM) Alternative and six Build Alternatives. The No-Build Alternative served as a baseline for which to compare alternatives.

Initially, three Build Alternatives were developed and presented to the public in September 2009. These include Build Alternatives 2, 4A and 7. Build Alternative 8 was developed subsequent to the public workshops to address comments regarding the proximity of Build Alternative 7 to the schools, park and residential areas of Brilliant. Additionally, Build Alternatives 2B and 8B were developed to provide direct access to OH 7.

Based on the preliminary assessment of the alternatives shown in Tables E-1, E-2 and E-3 for Combined, West Virginia and Ohio, respectively and comments received during the public involvement process, three alternatives were eliminated from further consideration. These include the TSM Alternative, Build Alternative 4A and Build Alternative 7. Build Alternatives 2, 2B, 8 and 8B were carried forward for further analysis and comparison to the No-Build Alternative. Build Alternative 8B has been identified as the Preferred Alternative.

***Preferred Alternative***

Build Alternative 8B connects WV 2 to OH 7 approximately 1.20 miles south of Buffalo Creek in West Virginia and 0.50 miles north of the existing Riddles Run interchange in Brilliant, Ohio. The West Virginia approach to the proposed bridge has a straight alignment which connects at a "T" intersection with WV 2. In Ohio, a new diamond interchange with OH 7 would be constructed in addition to a connection to 3rd Street at Cleaver Street. As a result, the existing Riddles Run Interchange ramps would be removed. It is anticipated that minor modifications, such as turn lanes or signalization, may be required on 3rd Street.

Since this alternative has a connection to 3rd Street, it could be constructed in phases. As the first phase, the connections to WV 2 and 3rd Street could be constructed along with the main river bridge and independent bridge over OH 7. Traffic would utilize 3rd Street and the existing Riddles Run Interchange to access OH 7. The proposed ramps could be added at a later time when either funding is available or traffic increases.

This EA considered impacts to the socioeconomic, natural, and physical environment. A summary of the key impacts are identified in Tables E-1, E-2 and E-3 for Combined, West Virginia and Ohio, respectively.

Within West Virginia, the land within the Preferred Alternative footprint is undisturbed with the exception of the existing transportation facilities including WV 2, the former trolley line, and Brooke-Pioneer Trail. The West Virginia landscape is primarily wooded with a steeply sloping hillside adjacent to WV 2. There are no displaced residences or businesses in West Virginia.

In Ohio, the land within the Preferred Alternative footprint has been previously disturbed by transportation facilities (OH 7, Norfolk Southern Railroad, and Wheeling & Lake Erie Railway)

and commercial/residential development. The Preferred Alternative will impact wetlands and streams in Ohio, namely near the pond and adjacent to the proposed OH 7 SB Exit Ramp. There are no displaced residences or businesses in Ohio. Based on coordination with the United States Coast Guard, the Preferred Alternative will require an 800 foot horizontal navigational clearance in the Ohio River. With the placement of piers in the river, there will be impacts to surface waters and the floodway of the Ohio River.

The construction of the Preferred Alternative results in a temporary use of a Section 4(f) property, the Brooke-Pioneer Trail. To maintain safety of both the contractor and trail users, the trail will be closed during construction. Considering the temporary closure of the trail, FHWA has made the preliminary determination that the proposed project would have a de minimis effect on this Section 4(f) resource. Concurrence that the project would not adversely affect the activities, features and attributes that qualify the resource for protection under Section 4(f) from the Brooke-Pioneer Trail Association, as the official with jurisdiction over the trail, is pending. A detailed Section 4(f) *de minimis* analysis, including a review of applicable regulations is provided in Appendix C.

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**Table E-1: Impact Assessment of Build Alternatives, Combined**

| Screening Criteria | Build Alternative | | | | | |
|---|---|---|---|---|---|---|
| | **2** | **2B** | **4A ELIMINATED[1]** | **7 ELIMINATED[1]** | **8** | **8B PREFERRED ALTERNATIVE** |
| **Navigational Clearance** | 800 feet | 800 feet | 1,000 feet | 700 feet | 800 feet | 800 feet |
| **Section 4(f) Impacts** | 1 | 1 | 2 | 3 | 1 | 1 |
| **Residential Displacements** | 0 | 0 | 2 | 0 | 0 | 0 |
| **Business Displacements** | 1 | 1 | 5 | 0 | 0 | 0 |
| **Historic Resources** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Waste Sites** | 4 | 4 | 16[2] | 10[2] | 4 | 4 |
| **Farmland Impacts (acres)** | 0.37 | 0.37 | 4.71 | 0.00 | 0.00 | 0.00 |
| **100-year Floodplain Impacts[3] (acres)** | 6.58 | 10.88 | 50.61 | 4.10 | 4.69 | 11.18 |
| **Wetlands Impacts[4] (acres)** | 0.00 | 1.77 | 0.00 | 0.00 | 0.82 | 2.95 |
| **Cost Estimate** | $96.0 M | $116.8 M | $132.0 M | $83.0 M | $96.4 M | $124.6 M |

**Table E-2: Impact Assessment of Build Alternatives, West Virginia**

| Screening Criteria | Build Alternative | | | | | |
|---|---|---|---|---|---|---|
| | **2** | **2B** | **4A ELIMINATED[1]** | **7 ELIMINATED[1]** | **8** | **8B PREFERRED ALTERNATIVE** |
| **Section 4(f) Impacts** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Residential Displacements** | 0 | 0 | 2 | 0 | 0 | 0 |
| **Business Displacements** | 0 | 0 | 1 | 0 | 0 | 0 |
| **Historic Resources** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Waste Sites** | 0 | 0 | 6[2] | 0[2] | 0 | 0 |
| **Farmland Impacts (acres)** | 0.37 | 0.37 | 4.71 | 0.00 | 0.00 | 0.00 |
| **100-year Floodplain Impacts[3] (acres)** | 0.54 | 0.54 | 7.31 | 0.39 | 0.21 | 0.21 |
| **Wetlands Impacts[4] (acres)** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

**Table E-3: Impact Assessment of Build Alternatives, Ohio**

| Screening Criteria | Build Alternative | | | | | |
|---|---|---|---|---|---|---|
| | **2** | **2B** | **4A ELIMINATED[1]** | **7 ELIMINATED[1]** | **8** | **8B PREFERRED ALTERNATIVE** |
| **Section 4(f) Impacts** | 0 | 0 | 1 | 2 | 0 | 0 |
| **Residential Displacements** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Business Displacements** | 1 | 1 | 4 | 0 | 0 | 0 |
| **Historic Resources** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Waste Sites** | 4 | 4 | 10[2] | 10[2] | 4 | 4 |
| **Farmland Impacts (acres)** | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **100-year Floodplain Impacts[3] (acres)** | 6.04 | 10.34 | 43.40 | 4.71 | 4.48 | 10.97 |
| **Wetlands Impacts[4] (acres)** | 0.00 | 1.77 | 0.00 | 0.00 | 0.82 | 2.95 |

*Note 1: See Section 2.3 for Alternatives Eliminated from Further Consideration.*
*Note 2: Value represents number of potential waste sites based on database serach. Alternative was eliminated prior to ESA Screening and Phase I ESA studies.*
*Note 3: Based on conservative estimate. See Section 3.3.1 for details.*
*Note 4: Wetland Impacts do not include the Ohio River which is considered a Water of the United States and is listed on the National Wetland Inventory (1971)*

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