

**United States Department of the Interior
National Park Service**

National Register of Historic Places

Registration Form

1. Name of Property

historic name Winfield Toll Bridge

other names/site number Ross Booth Memorial Bridge

2. Location

street & number West Virginia Route 34, Milepost 21.34 not for publication

city or town Winfield vicinity

state West Virginia code WV county Putnam code 079 zip code 25213

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination
request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic
Places and meets the procedural and professional requirements set for in 36 CFR Part 60. In my opinion, the property meets
does not meet the National Register criteria. I recommend that this property be considered significant
 nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

West Virginia State Historic Preservation Office
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See Continuation sheet for additional
comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

entered in the National Register.

See continuation sheet

determined eligible for the
National Register.

See continuation sheet

determined not eligible for the
National Register.

removed from the National
Register.

other, (explain:) _____

Signature of the Keeper

Date of Action

5. Classification

Ownership of Property

Category of Property

Number of Resources within Property

- private
- public-local
- public-State
- public-Federal

- building(s)
- district
- site
- structure
- object

Contributing

Noncontributing

_____	buildings
_____	sites
_____	structures
_____	objects
_____	Total

Name of related multiple property listing

Number of Contributing resources previously listed in the National Register

6. Function or Use

Historic Functions

Current Functions

TRANSPORTATION/road-related (vehicular)

TRANSPORTATION/road-related (vehicular)

7. Description

Architectural Classification

Materials

Other: three-span cantilever Warren through-truss

foundation CONCRETE

walls _____

roof _____

other METAL: steel

Narrative Description

See Continuation Sheets

8. Statement of Significance

Applicable National Register Criteria

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

Property is:

- A** owned by a religious institution or used for religious purposes.
- B.** removed from its original location.
- C.** birthplace or grave of a historical figure of outstanding importance.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property
- G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance:

See Continuation sheets

Levels of Significance (local, state, national)

Local, State

Areas of Significance

ENGINEERING

TRANSPORTATION

Period of Significance

1955-1961

Significant Dates

1955

Significant Person

N/A

Cultural Affiliation

N/A

Architect/Builder

Harrington and Cortelyou, Inc.; John F. Beasley Construction Co.; Vincennes Steel Company

9. Major Bibliographical References

Bibliography

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- Previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering _____

Primary location of additional data:

- State Historic Preservation Office
- Other State Agency
- Federal Agency
- Local Government
- University
- Other

Name of repository:

West Virginia Division of Highways

Record # 40-34-21.34

Winfield Toll Bridge
Name of Property

Putnam County, West Virginia
County and State

10. Geographical Data

Acreage of Property <1 acre

UTM References

1	<u>17</u> Zone	<u>421710</u> Easting	<u>4265559</u> Northing	3	<u> </u> Zone	<u> </u> Easting	<u> </u> Northing
2	<u> </u>	<u> </u>	<u> </u>	4	<u> </u>	<u> </u>	<u> </u>

See continuation sheet

Verbal Boundary Description

See Continuation Sheets

Boundary Justification

See Continuation Sheets

11. Form Prepared By

name/title Courtney Fint
organization West Virginia Division of Highways date June 8, 2011
street & number Bldg. 5 Room 450, 1900 Kanawha Blvd. East telephone 304-558-7421
city or town Charleston state WV zip code 25305

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A **USGS map** (7.5 or 15 minute series) indicating the property's location
- A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

- Representative **black and white photographs** of the property.
- CD with electronic images if digital photographs.

Floorplans for individual listings

Additional items

(Check with the SHPO or FPO for any additional items.)

Property Owner

name West Virginia Division of Highways (attn: Gregory Bailey)
street & number Building 5 State Capitol Complex, 1900 Kanawha Blvd. East telephone 304-558-2885
city or town Charleston state WV zip code 25305

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listing. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*)

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P. O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20303.

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LOCATION and SETTING

The Winfield Toll Bridge is located over the Kanawha River in the town of Winfield, which is the Putnam County seat. The Kanawha River is a major navigable waterway and is lined on both sides with agricultural land and rolling hills. Winfield is a small town with a population of approximately 2000. The intersection of WV 34 and US Highway 35, which has been upgraded to a four-lane highway in this vicinity, is just south of the bridge, making this an active commercial area, with strip malls, convenience stores and fast food restaurants located near the bridge.

DESCRIPTION

The structure which spans the Kanawha River was built in 1955 by John F. Beasley Construction Company and renovated in 2010 by Orders Construction Company. The structure consists of a three-span cantilever through-truss flanked to the south by four 76'-0" long continuous composite wide flange beam spans with the majority of Span Five being a new composite plate girder span 77'-5" long which is spliced to the continuous wide flange beams on the forward side of Pier Four. These plate girders are also coped up at their north end and run continuous over Pier Five and are framed (bolted to) the floorbeam at panel point one of the through-truss span. The north end of the truss is flanked by two new composite continuous plate girder spans 58'-2" and 33'-9" in length. The cantilever through-truss consists of two anchor spans each 245'-0" in length and the main span 462'-0" in length between pier centerlines. The main span is comprised of two 128'-4" cantilever arms and a 205'-4" suspended span. Truss members are made up of built-up or rolled steel sections. All truss connections are riveted except for the hangers and false chord members, which are pinned, with the exception of any new retro-fitted areas which are bolted. The truss floor system consists of four longitudinal steel stringers that frame into transverse steel floorbeams at each lower panel point of the truss except at panel points L0 and L38 where the four new plate girders of Spans Five and Nine run continuous over Piers Five and Eight and framed (bolted to) the floorbeams at panel points One and Thirty-seven of the through-truss span.

The structure is supported by reinforced concrete stub abutments and reinforced concrete rigid frame piers. The abutments and approach span piers are founded on steel piling, while the piers supporting the truss spans are founded on shale and gray sandstone. The approach span piers are double column open type frame piers, while the truss span piers have partial height concrete web walls.

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STATEMENT of SIGNIFICANCE

The Winfield Toll Bridge is locally significant under *Criterion A: Transportation* for providing a major new transportation link across the Kanawha River between Winfield and Red House. Prior to the construction of the bridge, the only way to cross the Kanawha River between Nitro and Point Pleasant, a distance of approximately 45 miles, was by ferry. The bridge represents evolving transportation modes from river navigation to automobile and served as a badly-needed direct connection between Winfield, the county seat and economic center of the area, and surrounding small towns. Winfield Toll Bridge is also eligible on a state level under *Criterion C: Engineering* for its method of construction and structure type. The continuous cantilever truss design was developed in the early twentieth century and allowed bridges to span greater distances, particularly over the Kanawha and Ohio rivers. Winfield Toll Bridge is one of seven cantilever through-trusses in West Virginia, and is exemplary in the use of this uncommon technology to provide better access to local residents. The period of significance ranges from the bridge's opening in 1955 through 1961, which is the National Register's 50-year cutoff and represents the bridge's continual significance as a transportation link.

HISTORY

Historical Context and Background

The history of the town of Winfield is intertwined with that of the Kanawha River and the waterway's boons and challenges to transportation. The Kanawha River links the Ohio River to the state capitol of Charleston and in the early development of the nation's transportation system, provided a water link between the Ohio River and the James River and Kanawha Turnpike at Charleston. Keel boats and other small vessels navigated the river prior to 1820; several difficult rapids, including the notorious Red House Shoals, prevented larger boats from making the journey. The first attempt at navigating the Kanawha from the Ohio to Charleston was made by the steamboat *Robert Thompson* in 1819, but the boat had to turn back at Red House Shoals. However, the *Albert Donnally* succeeded in making the trip the following year, and thus began a new era of river traffic and economic development for the area. Winfield quickly developed into a steamboat port, since it was very accessible and accommodating for the boat industry.

Putnam County was formed on March 11, 1848 from parts of Kanawha, Cabell, and Mason counties (Wintz:33). After the formation of the county, ten justices were appointed. The justices met at the house of Talleyrand P. Brown, which was located near Red House Shoals, and established the county seat of Winfield, named after General Winfield Scott, a Mexican War hero and one time Whig presidential candidate ("Coming In..."). The land for the courthouse was given by Charles Brown, who operated the ferry across the river. Winfield became a strategic control point during the Civil War due to the location of the steamboat channel off the town's riverbank. The town was officially incorporated on February 21, 1868.

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In the mid 1920s the town began to decline. People were now using automobiles for transportation, and since the main road through town was still not paved, travel was difficult. In 1928, adding to the adversity, a fire destroyed a block of the town including the bank, newspaper office, and the post office. Concurrent with the national economic depression, in 1931 the bank failed and many people lost their savings (Wintz:185). This led to the economic decline of Winfield; however, the town took a better turn when Winfield locks and dam were constructed from 1934-1936. This was a significant time period for Winfield. Due to a jump in economic growth resulting from the locks and dam, people began migrating to the area and small businesses began to set up shop again.

SIGNIFICANCE

Transportation Significance

In December 1957, the Winfield Toll Bridge was opened to traffic, which ended the 138-year era of the ferryboat that transported people and goods over the Kanawha River for access between WV Rt. 34 and WV Rt. 35 ("New Putnam..."). According to "The Charleston Gazette", dated July 9th, 1953, the bridge location was to be between Bridge and Waters Street and connect with Route 17 between the Fire Station and the Fountain. On the Red House side, the approaches were to be located over and beyond the New York Central Tracks (Winfield Bridge). Several hundred people showed up for the bridge dedication ceremony on November 30, 1957. Winfield Mayor Harold Bright cut the ribbon in the dedication ceremony and praised the current Governor Underwood and previous Governors Marland and Patterson for their hard work for making the new bridge a reality. After working approximately 40 years toward this goal, the citizens of Putnam County were excited to see it become a reality. Construction of the bridge occurred under the 1927 Oldfield Act; only a handful of bridges were constructed under this act. The act provided federal aid to be used to construct toll bridges owned and operated by states or their political subsidiaries. In the case of the Winfield toll bridge, this funding paid for half of the cost of the bridge, and the state paid the remaining amount ("Dedication Honors..."). The expectation was that the state would get the other half back in tolls once the bridge was paid off and became free. Tolls were 20 cents for one automobile and its occupants (Ibid). The building of Winfield Toll Bridge, in part, helped the development of town.

Since that time, Winfield has continued to grow. The construction of the Winfield Toll Bridge in 1955 made access easier and more business introduced itself to the area, resulting in sub-divisions and population growth. In addition, Winfield Road (WV 17) was renamed US Route 35 sometime between 1958 and 1989 and more recently US 35 was changed to WV 817, due to the construction of an four-lane upgraded US 35. Putnam County and the surrounding area is now part of the Huntington-Charleston metropolitan area and includes housing, businesses, and services to support the population.

The Winfield Toll Bridge was renamed in honor of Ross Booth in June of 2006. Mr. Booth worked as a carpenter on the bridge and also helped with the construction of many bridges located in the western section of I-64. It was on one of those bridges that Mr. Booth was injured, thus ending his career as a carpenter.

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Engineering Significance

Winfield Toll Bridge is a cantilever through truss. This type of bridge uses spans that cantilever out a distance over the piers; the weight of the fully supported end spans hold up the center cantilevered portions that meet in the middle from both sides. This technology was developed in the 1870s for railroads, but only came into more frequent use for highways after World War I. As of 2011, there are seven cantilever through-trusses in West Virginia. The oldest extant is the Dick Henderson Bridge over the Kanawha River between Nitro and St. Albans, built in 1934. The other cantilever through-trusses were built primarily in the 1950s. The West Virginia Statewide Historic Bridge Survey currently being conducted (as of 2011) by the West Virginia Division of Highways considers both a main span of greater than 200' and the cantilever design to be significant unusual design elements based on the historic context prepared for the survey. Under these criteria, Winfield Toll Bridge has statewide significance for its engineering design. Indeed, the use of cantilever through-trusses for highway bridges indicates major large-scale projects over substantial waterways such as the Kanawha and Ohio Rivers. These projects were no small feat, as indicated by their relative rarity. Providing crossings over these large rivers was essential for economic development, interstate commerce and regional travel, and Winfield Toll Bridge was part of the continued improvement of regional transportation links.

The Winfield Toll Bridge was designed by Harrington and Cortelyou, Inc. It was constructed in 1955 by the John F. Beasley Construction Company and the Vincennes Steel Corporation fabricated the steel. Harrington and Cortelyou was founded in 1928 in Kansas City, Missouri by John Lyle Harrington, a mechanical engineer and Frank M. Cortelyou, Sr. Beginning in 1895, Harrington worked with John Alexander Low Waddell, one of the country's most prolific bridge designers at the turn of the century and became business partners with Waddell in 1907. The pair became known for designing vertical lift bridges. After the partnership ceased in 1914, Harrington formed the firm of Harrington, Howard and Ash before finally partnering with longtime colleague Cortelyou in 1928. The firm continued to specialize in moveable bridges and designed over 40. Harrington died in 1942, but the firm continued under the leadership of Cortelyou, who retired in 1968 and died in 1976. The firm was acquired in 2010 by Burns and McDonnell.

The John F. Beasley Construction Company was founded in Dallas in 1947. Little additional information could be found regarding this company. The Vincennes Steel Corporation began in Vincennes, Indiana in 1898 as the Vincennes Bridge Company. It was established by three school teachers, Frank L. Oliphant, John T. Oliphant and Jacob L. Riddle. For the first several decades of its existence, the company specialized in the design and construction of metal through- and pony trusses, primarily for counties and towns in the Midwest. The company was able to expand into the Southeast due to its competitive pricing. The growth of state highway transportation systems in the 1920s also benefitted the company's growth and it was one of the few bridge companies that continued to provide design, fabrication and construction services in the post World War I era. It was reorganized in 1932 as the Vincennes Steel Corporation and continued to grow into the

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1950s, participating in the construction of a great many bridges, large and small, in several states. The company was acquired in 1956 by Industrial Enterprises, Inc.

Integrity

The Winfield Toll Bridge was renovated by the West Virginia Division of Highways in 2010. At that time, as a result of the environmental review process, it was determined eligible for the National Register of Historic Places. Care was taken to preserve the significant historic characteristics of the bridge, in particular its truss configuration. A replacement pedestrian railing was selected that resembled the original. The following work was completed as part of the renovation project.

- Replaced selected stringers (longitudinal floor system)
- Replaced selected floor beams (transverse floor system beams)
- Replaced selected bearings
- Deck replacement
- Cleaning and painting of the existing truss to resemble the original paint color
- Sidewalk was added with new pedestrian railing
- Installed a redundant hanger system for the suspended middle span of the bridge
- Substructure work on the abutments and piers

These and other general repairs and isolated replacement of parts are a common part of a structure's life, and allow the bridge to continue functioning in its intended purpose, and thus do not compromise the structure's integrity. The overall design of the truss and its continued structural function as a cantilever truss remain intact and are the essential aspects of integrity that convey the bridge's significance under Criterion C. Its location and setting are the same, as well as its scale in relation to its surroundings, and thus it still conveys its significance as a transportation link under Criterion A.

SUMMARY

Winfield Toll Bridge is eligible at the local level under Criterion A for providing a major new transportation link across the Kanawha River between the Putnam county seat of Winfield and the surrounding area. Prior to its construction, the river could only be crossed by ferry for a distance of over 40 miles. Furthermore, as one of seven cantilever through-trusses in West Virginia, Winfield Toll Bridge is eligible at the state level as a significant example of this innovative engineering technique in the state. This type of structure was constructed for large-scale projects requiring long spans. Its period of significance is 1955 to 1961.

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VERBAL BOUNDARY DESCRIPTION

The boundary for Winfield Toll Bridge extends along the material edges of the bridge between the end joints of the outer spans a distance of 1427' in length and a width of approximately 35'.

BOUNDARY JUSTIFICATION

The boundary encloses the superstructure, piers and abutments of the Winfield Toll Bridge.

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Name of Property: Winfield Toll Bridge

City or Vicinity: Winfield

County: Putnam County

State: WV

Name of Photographer: Sondra Mullins

Date of Photographs: January 2011

Location of Original Digital Files: Building 5, Room 450, 1900 Kanawha Blvd. E, Charleston, WV 25305

Photo 1 of 3

WV_PutnamCounty_WinfieldTollBridge_0001

Overall view of truss from Winfield shore, downstream side.

Photo 2 of 3

WV_PutnamCounty_WinfieldTollBridge_0002

View of abutments, railing and approach from Winfield shore, downstream side.

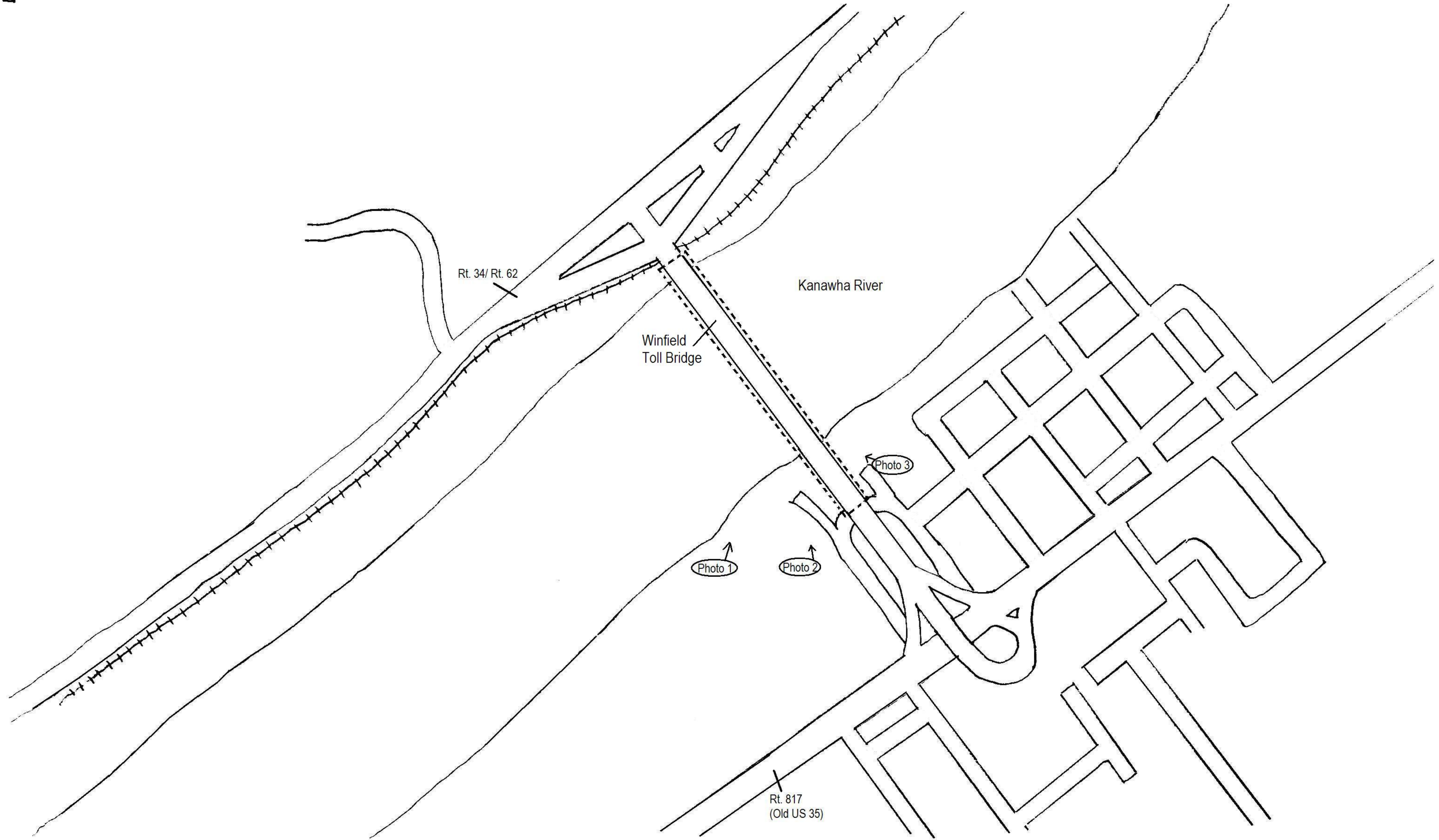
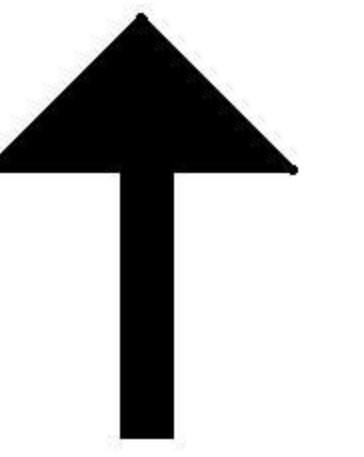
Photo 3 of 3

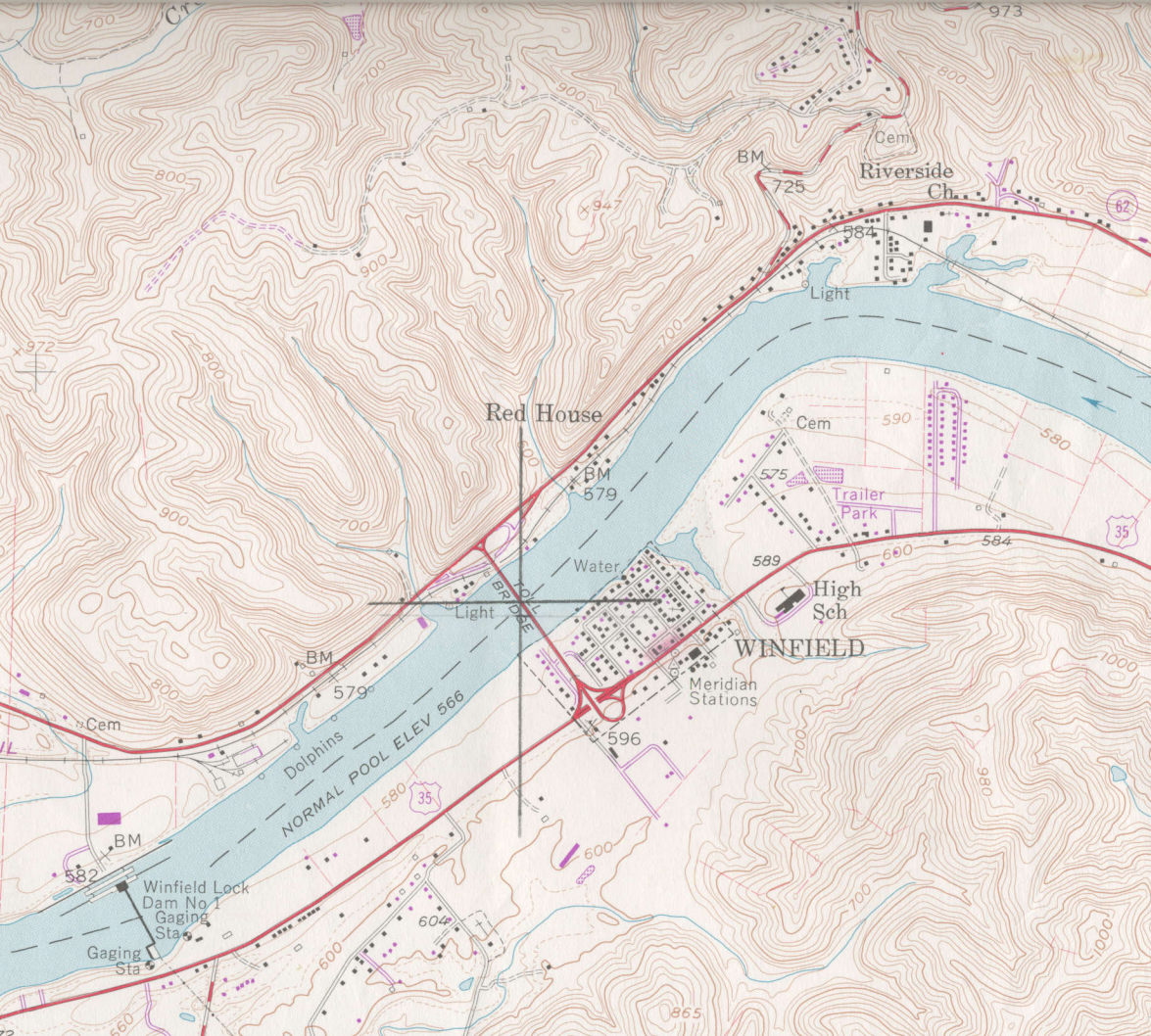
WV_PutnamCounty_WinfieldTollBridge_0003

Oblique view of truss from Winfield shore, upstream side.

Winfield Toll Bridge
Winfield, Putnam County, West Virginia

----- National Register boundary
Photo 1 Photo vantage points





BANCROFT 3.4 MI.
CHARLESTON 22 MI.

SCARY 8 MI.
CHARLESTON 19 MI.

32'30"
4266

WINFIELD
TOLL BRIDGE

UTM REFERENCE
ZONE 17
E: 421710
N: 4265559

4264





