

United States Department of the Interior  
National Park Service

National Register of Historic Places  
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name \_\_\_\_\_

other names/site number Woodstock Warren Through Truss Bridge

2. Location

street & number Town Highway 24 N/A not for publication

city or town Woodstock N/A vicinity

state Vermont code VT county Windsor code 027 zip code 05091

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 forth 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.)

Eric G. [Signature], DSHPO July 1, 1992  
Signature of certifying official/Title Date

State of 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 Michael [Signature] ~~removed in the National Register~~ Date of Action 8/18/92

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**5. Classification**

**Ownership of Property**  
(Check as many boxes as apply)

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

**Category of Property**  
(Check only one box)

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

**Number of Resources within Property**  
(Do not include previously listed resources in the count.)

| Contributing | Noncontributing |            |
|--------------|-----------------|------------|
| _____        | _____           | buildings  |
| _____        | _____           | sites      |
| 1            | _____           | structures |
| _____        | _____           | objects    |
| 1            | _____           | Total      |

**Name of related multiple property listing**  
(Enter "N/A" if property is not part of a multiple property listing.)

Metal Truss, Masonry & Concrete  
Bridges in Vermont

**Number of contributing resources previously listed  
in the National Register**

0

**6. Function or Use**

**Historic Functions**  
(Enter categories from instructions)

TRANSPORTATION/road-related  
\_\_\_\_\_

(vehicular)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Current Functions**  
(Enter categories from instructions)

TRANSPORTATION/road-related  
\_\_\_\_\_

(vehicular)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**7. Description**

**Architectural Classification**  
(Enter categories from instructions)

OTHER: Double-intersection Warren  
through truss bridge  
\_\_\_\_\_

**Materials**  
(Enter categories from instructions)

foundation stone  
\_\_\_\_\_

walls \_\_\_\_\_

\_\_\_\_\_

roof \_\_\_\_\_

other steel  
\_\_\_\_\_

\_\_\_\_\_

**Narrative Description**

(Describe the historic and current condition of the property on one or more continuation sheets.)

See continuation sheet for description

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**National Register of Historic Places  
Continuation Sheet**

Section number 7 Page 1

Woodstock Warren Through Truss Bridge  
Woodstock, Windsor Co., Vermont

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Located about two miles southwest of the green in Woodstock, Vermont, among a scattering of buildings, this steel double-intersection, Warren through-truss bridge crosses the Ottauquechee River along Town Highway 24, just off of US Route 4. Measuring 121 feet long, by 12.2 feet wide, with a portal clearance of 16.4 feet, the single-lane, single-span bridge exemplifies a relatively rare version of the Warren through-truss - the double-intersection truss - which utilizes more diagonal members than the basic Warren through-truss, by overlapping them. This method of increasing the structure's strength and load carrying capacity is evident in the Woodstock example, which is comprised of a series of overlapping diagonals, as well as a box-girder top chord, a bottom chord of paired angles, a plank floor over rolled I-section floor beams, a lattice rail and inclined end panels. Probably constructed in 1925, the bridge serves its original function as a highway bridge, and maintains its integrity of location, design, materials, workmanship, feeling and association.

The bridge spans 14.7 feet above the Ottauquechee River in a north-south direction, connecting Town Highway 24 to US Route 4, which winds its way along the northern banks of the river. Its numerous steel members are bolted together and sit atop rubble abutments. The top chord of the bridge is composed of a box girder measuring 5 1/2 x 10 inches, with stay plates on the underside, spaced 40 inches on center. Six T-section struts span the top of the bridge, perpendicular to, and connecting the chords. Angle cross-bracing between the struts further stabilizes the top chord.

The web contains a series of diagonals, with four hip vertical members - comprised of paired angles - inside the framework of the four inclined end posts. The smaller of the diagonal members are paired angles, situated 5 inches apart and joined by stay plates 36 inches apart. The angles that comprise the other diagonals are situated 10 inches apart, which allow the smaller diagonals to cross through these larger ones that are further apart - characterizing this truss as a double-intersection Warren truss. The portal bracing consists of lattice between T-section struts, with T-section kneebraces. Lighter latticework extends along the sides of the bridge, between angles bolted to the trusses, to form a rail.

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## National Register of Historic Places Continuation Sheet

Section number 7 Page 2

Woodstock Warren Through Truss Bridge  
Woodstock, Windsor Co., Vermont

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The paired angles that serve as the lower chords are joined by stay plates, which are 36 inches apart. Rolled I-section floor beams run perpendicular to the chords, at each end of the seven panels, which are defined by the lower junction of the diagonals. I-beam stringers and angle section bottom cross-bracing also make up the floor system. The end stringers are channels rather than I-beams, and the floor is covered by 3 inch planks with treads.

**8. Statement of Significance**

**Applicable National Register Criteria**

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- 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**

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- 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.

**Areas of Significance**

(Enter categories from instructions)

Engineering

Transportation

**Period of Significance**

c. 1925

**Significant Dates**

c. 1925

**Significant Person**

(Complete if Criterion B is marked above)

N/A

**Cultural Affiliation**

N/A

**Architect/Builder**

N/A

**Narrative Statement of Significance**

(Explain the significance of the property on one or more continuation sheets.)

**9. Major Bibliographical References**

**Bibliography**

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

**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 Record # \_\_\_\_\_

**Primary location of additional data:**

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:

Bailey-Howe Library, University of VT

Woodstock Warren Through Truss Bridge  
Name of Property

Windsor Co., Vermont  
County and State

**10. Geographical Data**

Acreage of Property Less than one acre

**UTM References**

(Place additional UTM references on a continuation sheet.)

|   |      |         |       |          |       |
|---|------|---------|-------|----------|-------|
| 1 | 18   | 69 4    | 5 7 5 | 4 8 3 0  | 1 0 0 |
|   | Zone | Easting |       | Northing |       |
| 2 |      |         |       |          |       |

|   |      |         |  |          |  |
|---|------|---------|--|----------|--|
| 3 |      |         |  |          |  |
|   | Zone | Easting |  | Northing |  |
| 4 |      |         |  |          |  |

See continuation sheet

**Verbal Boundary Description**

(Describe the boundaries of the property on a continuation sheet.)

**Boundary Justification**

(Explain why the boundaries were selected on a continuation sheet.)

**11. Form Prepared By**

name/title Tracey S. Aldighieri, Univ. of Vermont Historic Preservation Program

organization University of Vermont date May 1, 1992

street & number Wheeler House telephone (802)656-3180

city or town Burlington state VT zip code 05401

**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.

**Additional items**

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

**Property Owner**

(Complete this item at the request of SHPO or FPO.)

name Town of Woodstock

street & number \_\_\_\_\_ telephone \_\_\_\_\_

city or town Woodstock state Vermont zip code 05091

**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 listings. 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 20503.

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## National Register of Historic Places Continuation Sheet

Section number 8 Page 1

Woodstock Warren Through Truss Bridge  
Woodstock, Windsor Co., Vermont

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The Woodstock Warren Through Truss bridge, probably built in 1925, qualifies for statewide significance under National Register criterion A and C and is being nominated under the Multiple Property Documentation Form: "Metal Truss, Masonry and Concrete Bridges in Vermont" as part of the property type for metal truss bridges as an example of a double-intersection, Warren through truss. For criterion A, the bridge is significant as indicative of the transitional period during which it was constructed - the early 20th century - when changes were evolving in the motor vehicle industry and transportation industry, as a whole. For criterion C, the bridge serves as an example of a relatively rare design of metal truss bridges, the double-intersection, Warren through truss, distinguished from the widely employed original Warren truss design by utilizing additional diagonal members.

The double-intersection Warren Through truss design did not persist much past the first years of the 20th century, other than for railroad use, or heavy motor vehicle use, making the Woodstock Warren Through Truss bridge rare for its time and function as a vehicular bridge. The truss system reflects the "modern," 1920s need for increased load capacity and durability, but the narrow width of 12.2 feet and the wooden floor deck continue late 19th through early 20th century bridge design elements.

Based on the original Warren truss design, patented in 1848, the double-intersection Warren through truss increases the number of diagonals by overlapping them, forming a series of x's. This method of construction increased the strength and rigidity of the bridge, making it appropriate for railroad traffic and heavy motor vehicle usage. Although criticized for their indeterminacy and excessive use of metal over a simple truss, multiple-intersection trusses, such as the Woodstock example, were favored by some engineers for their superior rigidity.

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## National Register of Historic Places Continuation Sheet

Section number 8/9 Page 2

Woodstock Warren Through Truss Bridge  
Woodstock, Windsor Co., Vermont

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The 1926 Woodstock Biennial Report suggests that this bridge may have been one of the Woodstock bridges built in 1925. It was during this period that the town of Woodstock was improving their road system, and transportation system, in general.<sup>1</sup> Two other double-intersection, Warren through trusses listed in the Vermont survey were constructed earlier than the Woodstock example, and are dated 1908 and c.1915. The Woodstock Warren Through Truss bridge is intact and functional, and retains its integrity of location, design, setting, materials, workmanship, feeling and association.

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<sup>1</sup>Peter Jennison, The History of Woodstock Vermont:1890-1983. Woodstock, VT: Countryman Press, 1985.

### 9. Bibliography

Vermont Division for Historic Preservation. Historic Sites and Structures Survey. Woodstock, Vermont. (on file Montpelier, Vermont)

Jennison, Peter. The History of Woodstock, Vermont: 1890-1983. Woodstock, Vt.: The Countryman Press, 1985.

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## National Register of Historic Places Continuation Sheet

Section number 10 Page 1

Woodstock Warren Through Truss Bridge  
Woodstock, Windsor Co., Vermont

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The boundary for this property is the bridge and its abutments. The bridge carries Town Highway 24 across the Ottaquechee River, just off of US Route 4 and is located approximately two miles southwest of the green in Woodstock, VT, at UTM reference point: 18/694575/4830100. It is 122 feet long and 12.2 feet wide.

The boundary includes all the land historically associated with the bridge.