

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Name of Property

County and State

Section number _____ Page _____

Name of multiple property listing (if applicable)

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 07000108 Date Listed: 3/09/07

Property Name: Depot Street Bridge County: New Haven: CT

Multiple Name:

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Patricia Andrews

Signature of the Keeper

3/9/07

Date of Action

Amended Items in Nomination: In section 5 of the form (category of property) nothing is checked. Following the recommended guidelines in the National Register Bulletin: How to Complete the National Register Form page 14, the Depot Street Bridge is categorized as a structure. This has been confirmed with the CTSHPO.

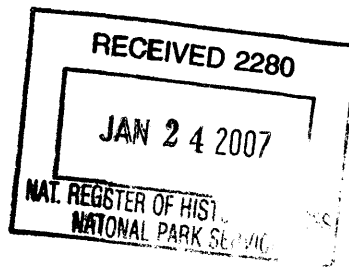
DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)

108

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 Depot Street Bridge

other names/site number Bridge # 3788

2. Location

street & number Depot Street not for publication

city or town Beacon Falls vicinity

state Connecticut code CT county New Haven code 009 zip code 06614

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.)

[Signature] 1/15/07
Signature of certifying official/Title Date
J. Paul Loether, Deputy State Historic Preservation Officer
Commission on Culture & Tourism, Historic Preservation & Museum Division
State or Federal Agency or Tribal government

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

Signature of commenting 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

Patrick Ardun

3/9/2007

Depot Street Bridge
Name of Property

New Haven, CT
County and State

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
<u>1</u>	_____	structures
_____	_____	objects
<u>1</u>	<u>0</u>	Total

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

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

TRANSPORTATION: road-related

Current Functions
(Enter categories from instructions)

TRANSPORTATION: road-related

7. Description

Architectural Classification
(Enter categories from instructions)

Other: Parker through truss

Materials
(Enter categories from instructions)

foundation N/A
walls N/A

roof N/A
other N/A

Narrative Description

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

**United States Department of the Interior
National Park Service****National Register of Historic Places
Continuation Sheet**Section number 7 Page 1Depot Street Bridge
Beacon Falls, New Haven County, CT**Description**

The Depot street Bridge (Bridge No. 3788) crosses the Naugatuck River in the town of Beacon Falls. The bridge consists of two Parker through trusses with a maximum span of 207 feet. The bridge itself is approximately 45 feet wide including pedestrian walks on both sides of the structure. The bridge is located on the western end of the town of Beacon Falls and links the commercial section of town found on the east side of the river to an industrial park located on the opposite side of the river. The bridge replaces a steel and wooden bridge that initially crossed the river in 1892. This bridge was modified from a wooden bridge that was constructed in 1856, itself replacing a wooden bridge located 300 feet downstream, originally built in 1835 and subsequently destroyed during the flood of 1855.

The Depot Street bridge is composed of nine steel panels which are placed 23 feet apart. Each panel consists of 7 stringers for a total of 63 stringers (Figures 1, 2, 3). The stringers, placed at five foot intervals on center, are supported by ten 4-foot deep floorbeams. Box girders with back to back channels constitute the end posts as well as the top chords of the bridge. These channels are tied with a welded connecting plate on top and lacing bars at the bottom. The box girders used as bottom chords are plated on all four sides and angled at each corner. The center panel is characterized by diagonals with two sets of paired angles which are connected by gusset plates. A pair of top and bottom channels with lacing constitute the other truss parts. The other portal struts and lateral bracing show the same configuration with angled lacing bars. The concrete slab deck with built and angled floor beams is supported by I-section stringers. The pedestrian walks on each side of the truss structure are supported by angled triangular brackets. The opposite railings are composed of a lattice of angled metal flat bars set in concrete footing.

The bridge was completed in 1935 and designed by engineers from the Public Works Administration and engineers from the Connecticut Highway Department. The original contractors were the Gammino Construction Company of Providence, Rhode Island. The Leake-Nelson Company of Bridgeport, Connecticut built the steel portion of the bridge. The truss members were fabricated by the American Bridge Company. The decking was repaced in 1986 on both pedestrian walks with a new concrete walk and curbing. At the same time, repairs were made to deteriorating end joints with the restoration of the pavement on each end of the bridge.

Name of Property _____

County and State _____

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.

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 Engineeringa

Areas of Significance

(Enter categories from instructions)

ENGINEERING

Period of Significance

1915-1940

Significant Dates

1935

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

Architect/Builder

Public Works agency and State Highway Dept., engineers
Gammino Construction Company, contractors
American Bridge Company

Primary location of additional data:

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

Name of repository:

Beacon Falls Town Hall

**United States Department of the Interior
National Park Service****National Register of Historic Places
Continuation Sheet**Section number 8 Page 1Depot Street Bridge
Beacon Falls, New Haven County, CT**Summary**

The Depot Street Bridge (Bridge No. 3788) which crosses the Naugatuck River in Beacon Falls, Connecticut, is significant because it reflects the distinctive characteristics of a Parker modified through truss structure typical of the last decade of extensive use of truss structures in Connecticut between 1930 and 1940 (Criterion C). The members of the bridge, constructed from steel and joined by rivets, emphasize the heavy construction distinctive of the period that reflected a need for greater structural strength to cope with the increased loading growth in automotive traffic. The massive top chords found on the bridge were constructed for such a purpose where engineers in the 1920s and 1930s designed larger truss members to sustain heavier vehicle loads. The modified Pratt through truss designed by Charles H. Parker allowed for the greater arch of the top chord to sustain greater load capacity without a loss of strength. Since the top chord was no longer parallel with the bottom chord, strength is concentrated in the center of the bridge, eliminating at the same time dead load at the ends. As well, the raised top chords allowed for more room for top lateral and sway bracing away from the roadway without jeopardizing the loss of vertical traffic clearance.

Historical Background

Beacon Falls was initially settled in the late 1600s and incorporated from the towns of Bethany, Naugatuck, Oxford and Seymour. Since the Naugatuck River bisects the town, the residents needed a crossing point that would allow them to access lands on eastern shore of the river. In 1835, a wooden bridge was erected at a point known as the "rock cut", with the towns of Oxford and Bethany providing the funds for construction. The bridge was unfortunately totally destroyed during the flood of 1855. Realizing the necessity of quickly providing a new crossing, the American Hard Rubber Company which had a factory in town decided to construct a new wooden bridge approximately 300 feet upstream from the original wooden structure. The bridge was then acquired by the Home Woolen Company, which with the town of Bethany, continued to make payments on the bridge. Following the incorporation of the town of Beacon Falls in 1871, the bridge became the property of the town.

The eastern portion of the bridge had deteriorated since its construction and in 1892 a 60-foot section was removed and replaced by a steel structure which extended from the shore to the first pier. However, the overall costs involved in the maintenance of the bridge became increasingly high and eventually the bridge was deemed unsafe. During the early part of 1935, the bridge was completely demolished to make way for a steel through truss bridge. The abutments were erected during the spring of 1935 and construction of the structure extended throughout the summer months of that year. The Depot Street Bridge was finally completed on October 26, 1935 at the approximate cost of \$75,000.00, of which \$21,500.00 was obtained from a federal grant, \$31,000.00 from the State Aid Road Funds, and \$17,500.00 from the Town of Beacon Falls. A \$5,000.00 contingent fund was made possible by the State of Connecticut.

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Section number 8 Page 2

Depot Street Bridge
Beacon Falls, New Haven County, CT

Engineering Significance

The use of iron and steel during the nineteenth century revolutionized the construction of bridges. As the price of steel slowly decreased, particularly after the end of the nineteenth century, it rapidly replaced iron as the material of choice for bridge construction. By the end of the first decade of the twentieth century, national standards for the reinforcement of steel had been put into place. For the first twenty five years of the twentieth century, the Pratt truss was the norm for the American bridge form. With increased competition, this period also saw the merger of smaller bridge manufacturers or the outright takeover of these firms by larger corporations. The largest of these takeovers occurred in 1900, when Andrew Carnegie of New York acquired more than twenty of the largest bridge companies in the country forming the American Bridge Company of New York. The subsequent domination of the American Bridge Company quickly led to the decline and eventual disappearance of the independent bridge manufacturer.

A number of small communities throughout Connecticut sought to replace their timber bridges with structures that would withstand the heavier loads brought about by the use of the automobile. Although nineteenth century truss types were diversified, they became more standardized at the turn of the next century. Pinned joints were replaced by rivets at connection points and steel came to be used instead of wrought iron. With the increase in vehicular traffic at the beginning of the twentieth century, engineers had to design trusses that would be able to sustain heavier loads.

Charles H. Parker of Boston, MA obtained a patent in 1870 for a bridge design that borrowed from the original Pratt truss, replacing the straight top chord with a polygonal or arched top chord. Parker, as a mechanical engineer, realized that the sheer stress forces applied to the ends were much less than the bending stresses being applied to the middle of the structure. Consequently, the vertical and diagonal members could be effectively shortened from the center to the ends without losing loading capabilities. This realization allowed Parker to create a truss design with an inclined top chord which used less metal than a straight chord Pratt truss. The design required, however, higher expenses related to fabrication and erection costs since varying length diagonals and verticals were necessary for each panel of the polygonal chords. Because trusses were priced by weight, the lighter materials in a Parker truss design offset the higher labor costs. Variations in the Parker design included the camelback truss which was characterized by five equally angled slopes in the upper chord and end posts.

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Depot Street Bridge
Beacon Falls, New Haven County, CT

Though the Parker curved chord appeared innovative, the design had been in existence even prior to the Pratt design of 1844. The ingenuity of the design resided in the minor alterations that allowed for simplifying the structural composition of the bridge. Bridge lengths could be altered by modifying or extending the slope of the end posts and the casting of these end points allowed for the connection between the top and bottom chords to be simplified. Because Parker truss bridges were much more economically efficient than the traditional Pratt truss, they gradually replaced the Pratt designs after the turn of the century with highway departments adopting the pony trusses for spans between 30 and 60 feet and the through trusses for spans extending from 100 to 300 feet.

Parker truss bridges that are still in existence today are significant because they represent a standard bridge type used by the Connecticut State Department of Transportation. Character defining features for these types of bridges include the characteristic polygonal top chord, the inclined end posts, diagonals present on each panel, and differing length verticals, becoming shorter from the central panel outward. The well preserved nature of the Depot Street Bridge illustrates all of these characteristics and represents as such a fine and increasingly rare example of the Parker truss.

Transportation History Significance

The end of the Great Depression saw the Federal government create a number of programs under the New Deal Act to provide for much needed economic support to state and local agencies. Established in May 1933, the Federal Emergency Relief Administration (FERA) was created to manage federal grants to be distributed to local and state governments for relief efforts to stimulate economic regrowth. Under the National Industrial Recovery Act of June 1933, the Public Works Administration was formed to stimulate economic recovery by allocating federal funds to large-scale construction projects. Funds were distributed for the building of schools, libraries, roads and highways to stimulate employment. The Hayden Cartwright Act, passed a few months later, allowed for the use of federal funds for transportation improvements at the municipal level. An executive order by Roosevelt in 1935 saw the creation of the Works Progress Administration which built more than 75,000 bridges and viaducts between the mid 1930s and the beginning of World War II.

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Depot Street Bridge
Beacon Falls, New Haven County, CT

In Connecticut, the State Highway Department, in an effort to bring employment to the various regions of the state, sought to revitalize the road infrastructure with the assistance of these federal programs. The construction of the Depot Street Bridge was one of several projects that were planned for Connecticut's more than 40,000 relief cases scheduled in 1935 to provide much needed work for the state's local communities. The construction of the Depot Street Bridge is a direct result of the federal government's efforts following the Great Depression to stimulate the local economy through various programs and therefore reflects this particularly difficult period of twentieth century American history.

United States Department of the Interior
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National Register of Historic Places
Continuation Sheet

Section number 8 Page 5

Depot Street Bridge
Beacon Falls, New Haven County, CT

References

Clouette, Bruce and Matthew Roth

- 1991 *Connecticut's Historic Highway Bridges*. Published by the Connecticut Department of Transportation in cooperation with the Federal Highway Administration. Hartford, Connecticut.

Darnell, Victor C.

- 1979 Lenticular Bridges form East Berlin, Connecticut. *IA, The Journal of the Society for Industrial Archaeology*, 5:1, 19-32.

- 1998 The National Bridge and Iron Works and the Original Parker Truss. *Journal of the Society for Industrial Archeology*, 24:1, 12.

Mead and Hunt

- 1999 *Contextual Study of New York State's Pre-1961 Bridges*. Prepared for New York State Department of Transportation. November 1999.

Parsons and Brinckerhoff and Engineering and Industrial Heritage

- 2005 *A Context for Common Historic Bridge Types*. NCHRP Project 25-25, Task 15. Prepared for The National Cooperative Highway Research Program, Transportation Research Council, National Research Council. October 2005.

Roth, Matthew and Bruce Clouette

- 1990 *Bridge # 3788*. Historic Bridge Inventory Form. State of Connecticut, Department of Transportation, Hartford, Connecticut.

Town of Beacon Falls

- 1935 *Beacon Falls, New Bridge*. Commemoration Program, October 1935.

Depot Street Bridge
Name of Property

New Haven, CT
County and State

10. Geographical Data

Acreage of Property less than one _____

UTM References

(Place additional UTM references on a continuation sheet.)

1 | 18 | 661800 | 4589430 |
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 Luc Litwinionek, Archaeologist
organization Historical Perspectives, Inc. date _____
street & number P. O. Box 3037 telephone 203-226-7654
city or town Westport state CT zip code 06614

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 Beacon Falls
street & number 10 Maple Ave telephone (203) 729-4340
city or town Beacon Falls state CT zip code 06403

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.). A federal agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number.

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 Keeper, National Register of Historic Places, 1849 "C" Street NW, Washington, D.C. 20240.

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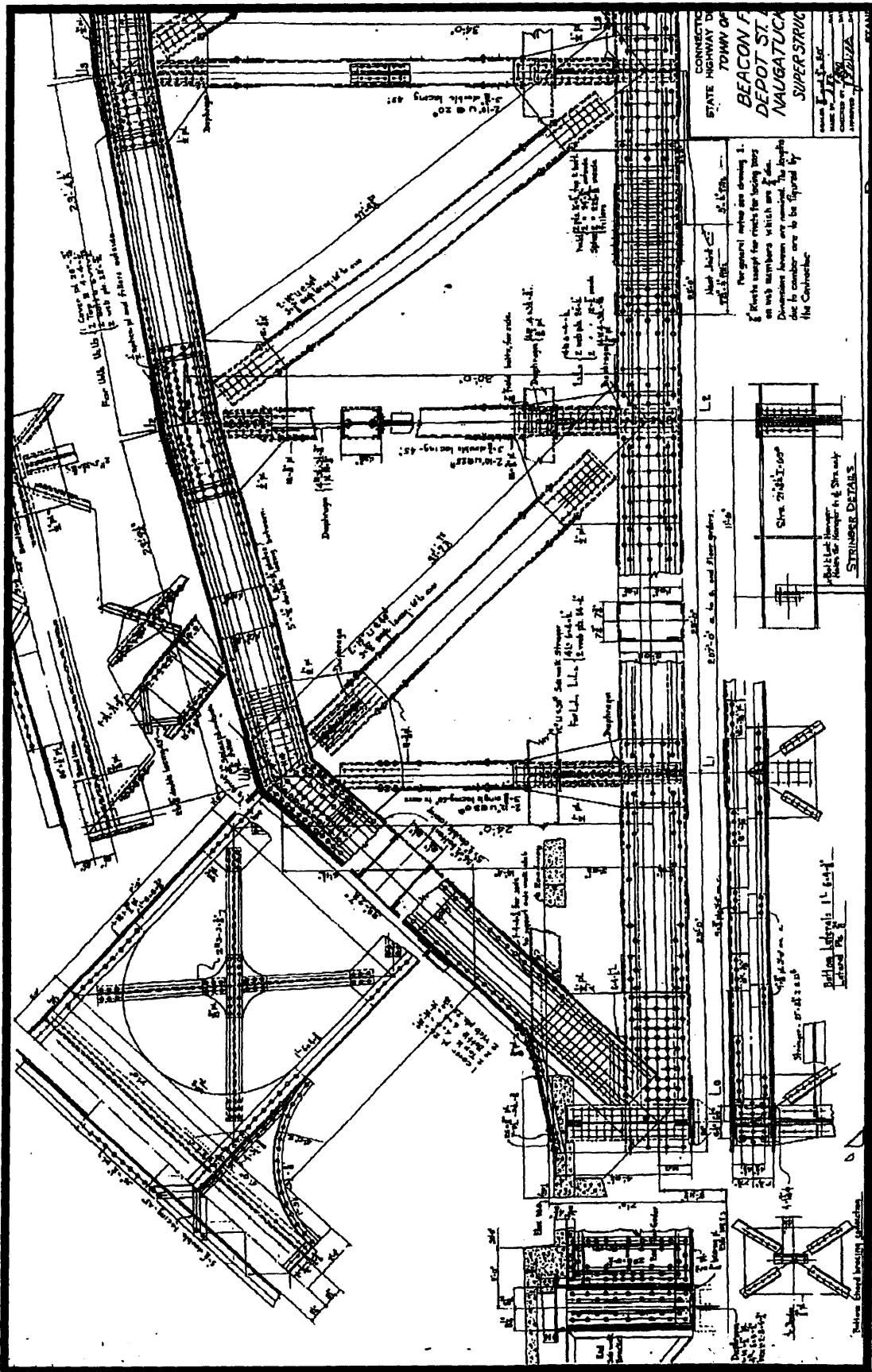
Depot Street Bridge
Beacon Falls, New Haven County, CT

Verbal Boundary Description:

The nominated property includes the bridge, abutments, and piers.

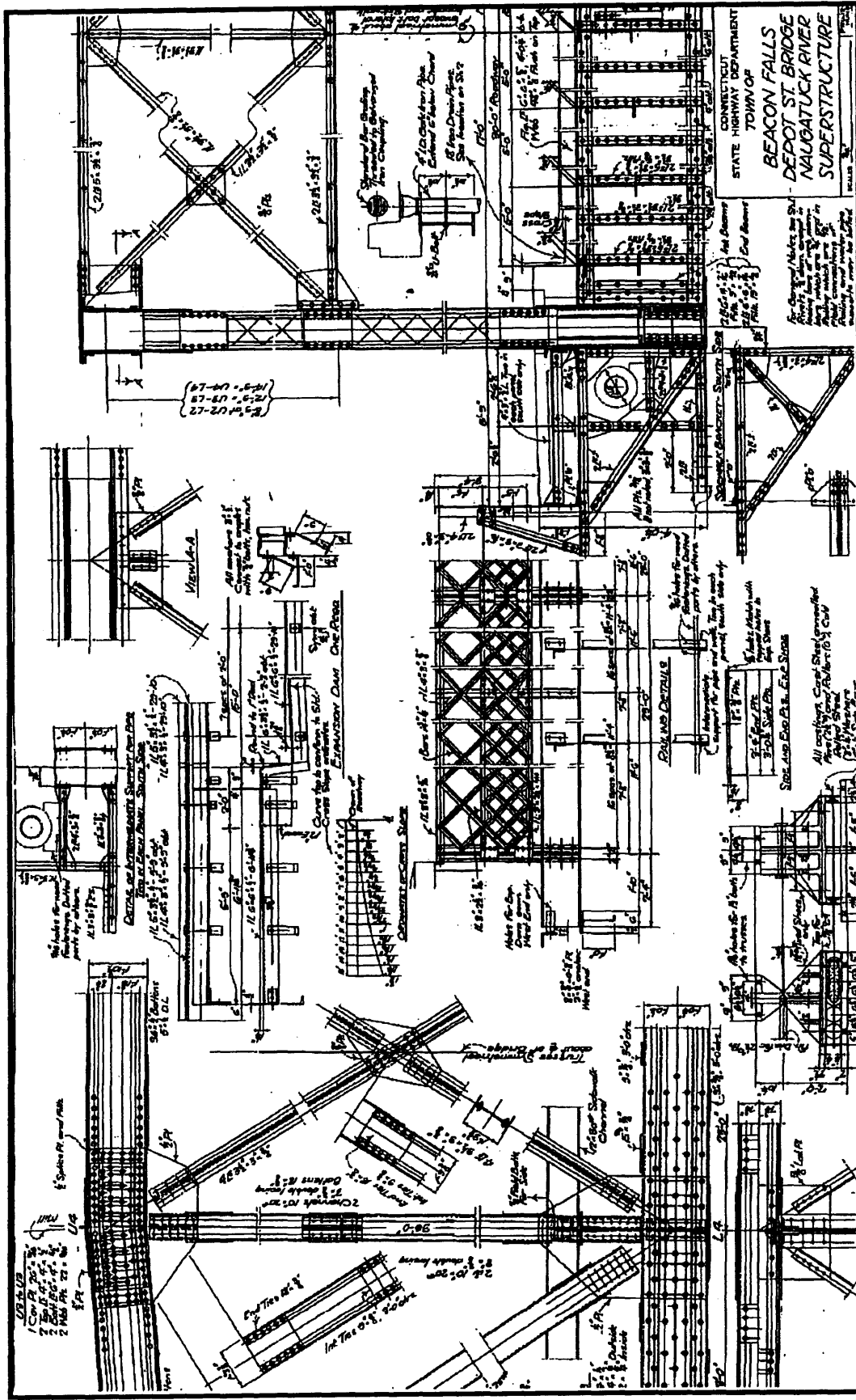
Boundary justification:

The nominated property embraces the entire structure.



Source: Connecticut State Highway Department, Plan for the Construction of Depot St. Bridge in the Town of Beacon Falls.

FIGURE 2. PLAN OF SUPERSTRUCTURE (SHEET A).



Source: Connecticut State Highway Department, Plan for the Construction of Depot St. Bridge in the Town of Beacon Falls.

FIGURE 3. PLAN OF SUPERSTRUCTURE (SHEET B).

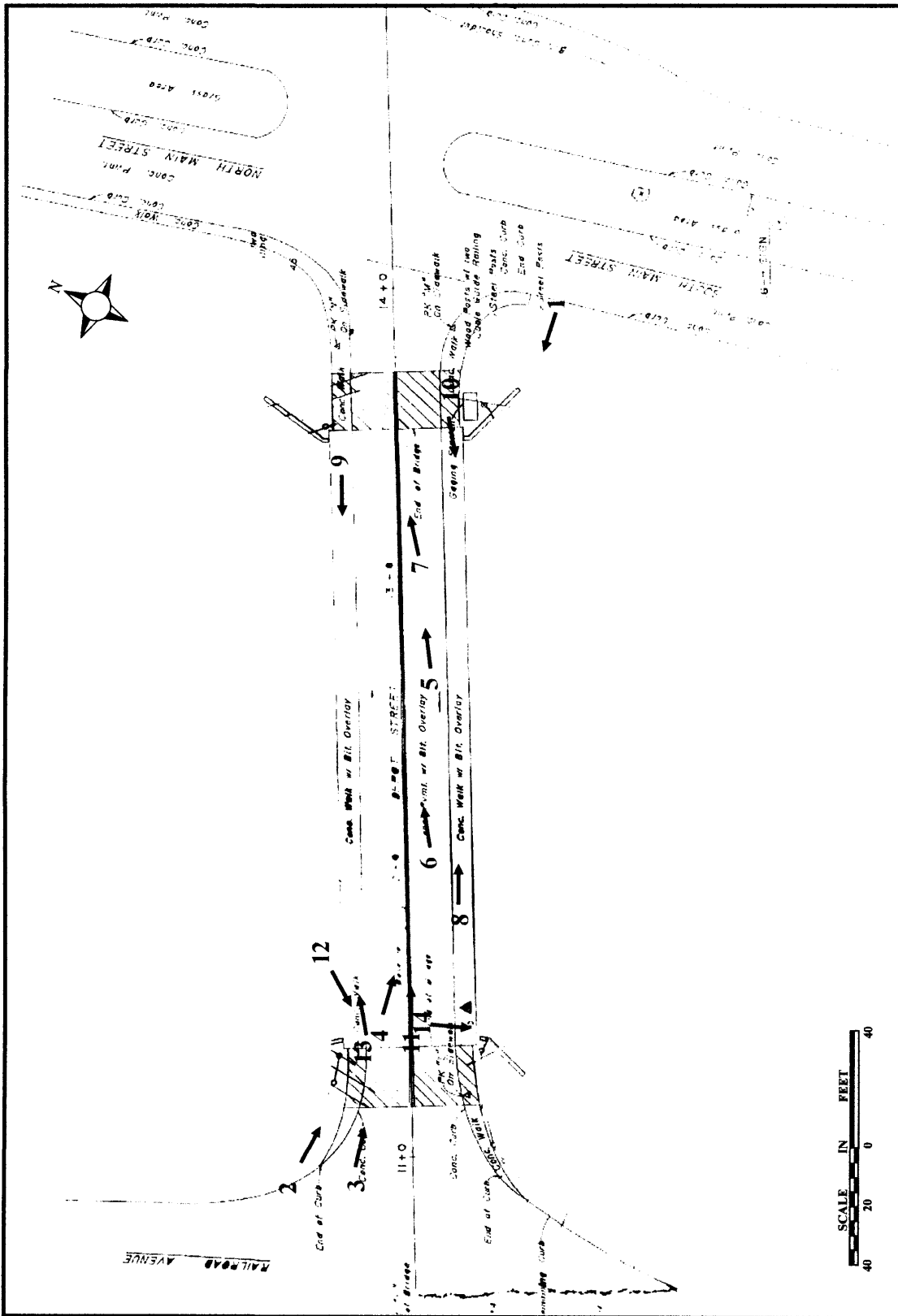


FIGURE 5. PHOTO KEY MAP.

Depot Street Bridge
Beacon Falls, New Haven County, CT
Photographs taken by: Luc Litwinionek
Photographs taken on: 10/30/05
Original Negatives stored at: Historical Perspectives Inc.
P.O. Box 3037
Westport, CT 06880

LIST OF PHOTOGRAPHS

- Photograph 1. South truss section of Depot Street Bridge illustrating Parker truss design. View from east bank of the Naugatuck River towards the west.
- Photograph 2. North truss section of Depot Street Bridge from the west bank of the Naugatuck River toward the east.
- Photograph 3. Box girders of end posts at western extremity of Depot Street Bridge. View from west bank of the Naugatuck River towards the east northeast.
- Photograph 4. Truss members of south section of Depot Street Bridge and box girders of top chords towards the east.
- Photograph 5. Center panels of Depot Street Bridge with diagonals with one of two sets of paired angles towards the east northeast.
- Photograph 6. Lateral bracing on top chords in central portion of Depot Street Bridge towards the east northeast.
- Photograph 7. Lattice bracing on end posts on eastern end of Depot Street Bridge towards the east northeast.
- Photograph 8. Diagonal with lattice bracing in center portion of Depot Street Bridge towards the east.
- Photograph 9. Rivets of diagonals of end posts of Depot Street Bridge towards the west southwest.
- Photograph 10. South pedestrian walk with lattice and angled metal flat bars towards the west southwest.
- Photograph 11. Stringers and floor beams of Depot Street Bridge towards the east northeast.
- Photograph 12. Concrete slab deck at western extremity of Depot Street Bridge towards the southwest.

Depot Street Bridge
Beacon Falls, New Haven County, CT
Photographs taken by: Luc Litwinionek
Photographs taken on: 10/30/05
Original Negatives stored at: Historical Perspectives Inc.
P.O. Box 3037
Westport, CT 06880

LIST OF PHOTOGRAPHS (CONTINUED)

- Photograph 13. Steel plate marker of American Bridge Company placed on diagonal of northwest end post on north side of bridge. View towards the east northeast.
- Photograph 14. Date marker engraved in southwest concrete post at end of pedestrian railing on southern side of bridge towards the south.