NPS Form 10-900
(3-82)

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Exp. 10-31-84

United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

For NPS use only
received JUL 3 1986
date entered

See instructions in *How to Complete National Register Forms*
Type all entries—complete applicable sections

1. Name

historic BLACKLEDGE RIVER RAILROAD BRIDGE

and/or common Blackledge River Railroad Bridge

2. Location

street & number Former Air Line Railroad Right-of-Way and Blackledge River — N/A not for publication

city, town Colchester — X vicinity of Bull Hill Road

state Connecticut code 09 county New London code 011

3. Classification

Category	Ownership	Status N/A	Present Use	
___ district	X public	___ occupied	___ agriculture	___ museum
___ building(s)	___ private	___ unoccupied	___ commercial	___ park
X structure	___ both	___ work in progress	___ educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
___ object	___ in process	___ yes: restricted	___ government	___ scientific
	___ being considered	X yes: unrestricted	___ industrial	___ transportation
	N/A	___ no	___ military	X other: Sewer line

4. Owner of Property

name Connecticut Department of Transportation

street & number 24 Wolcott Hill Road

city, town Wethersfield — N/A vicinity of — state Connecticut

5. Location of Legal Description

courthouse, registry of deeds, etc. Colchester Town Clerk

street & number 10 Norwich Ave., P.O. Box 146

city, town Colchester — state Connecticut

6. Representation in Existing Surveys

title State Register of Historic Places — has this property been determined eligible? X yes ___ no

date 1986 — ___ federal X state ___ county ___ local

depository for survey records Connecticut Historical Commission

city, town 59 South Prospect Street Hartford — state Connecticut

7. Description

Condition		Check one	Check one
___ excellent	___ deteriorated	___ unaltered	_x_ original site
_x_ good	___ ruins	_x_ altered	___ moved date _____
___ fair	___ unexposed		

Describe the present and original (if known) physical appearance

The Blackledge River Railroad Bridge is a steel, rivet-connected, double-intersection Warren deck truss, erected c.1912. The truss is made of built-up, or composite, steel members, and it rests on abutments of ashlar brownstone masonry; slightly lower, granite ashlar abutments that supported an earlier bridge stand between the stream and the newer abutments. The truss is 108 feet long, approximately 18 feet deep, and passes about 30 feet over the surface of the river. The site is located in the Salmon River State Forest; it is a heavily wooded area and no buildings are visible from the bridge. The rail line is abandonded, but the man-made embankment that supported the tracks is still evident as a landscape feature.

The top and bottom chords of the truss are built-up box girders. Their sides consist of plate-sections with angle-sections along the top and bottom. The top chord has another plate-section at its top and lacing bars at its bottom, and the bottom chord has lacing at both top and bottom. Like all the built-up members in the bridge, the chords were assembled with rivets. The sides of the truss feature two overlaid triangular web systems, both consisting of diagonal members built up of angle-sections. In one web the members are a pair of angle-sections assembled back-to-back. The other has two pairs of back-to-back angles connected by lacing bars. The struts (horizontal members that connect the sides and are located at the panel points) are lattice girders made of angles connected by lacing bars. All lateral bracing (diagonal bracing within panels at the top and bottom of the bridge) consists of single angles. Sway bracing extends the full height of the truss, from the inside of each top chord to the opposite bottom chord, and also consists of angles; the sway bracing now serves the additional purpose of supporting the sewer line that runs through the center of the bridge. Gusset plates add support to the riveted joints connecting all these members. As was typical for railroad bridges, the deck is open.

The structural and visual integrity of the bridge appears to be uncompromised. The only alteration--the addition of the sewer pipe--did not involve the loss of any significant historic material.

8. Significance

Period	Areas of Significance—Check and justify below				
prehistoric	archeology-prehistoric	community planning	landscape architecture	religion
1400–1499	archeology-historic	conservation	law	science
1500–1599	agriculture	economics	literature	sculpture
1600–1699	architecture	education	military	social/
1700–1799	art	x engineering	music	humanitarian
1800–1899	commerce	exploration/settlement	philosophy	theater
x 1900–	communications	industry	politics/government	x transportation
Criteria A,C		invention		other (specify)

Specific dates c.1912--built **Builder/Architect** not known

Statement of Significance (in one paragraph)

Blackledge River Railroad Bridge is significant as a representative example of the typical medium-length railroad bridge of the early 20th century (Criterion C), and because it was built as part of a major improvement program undertaken by the New York, New Haven and Hartford Railroad between 1907 and 1913, a program that sought to apply up-to-date engineering on a comprehensive basis to the many lines acquired by the Railroad during the prior three decades (Criterion A).

The New York and Boston Air Line Railroad built the first bridge at this location in the early 1870s. A late entrant into the competition for east-west traffic through Connecticut, and further hampered by substantially more difficult topography than its competitors, the Air Line never turned a profit as an independent railroad. By 1881 it had come under the control of the New York, New Haven and Hartford. The New York, New Haven and Hartford acquired more than three dozen other New England railroads in the late 19th and early 20th centuries, and by 1905 it held a virtual monopoly over rail transport in the region. The New York, New Haven and Hartford then set out to rationalize its system and simultaneously to upgrade many of its routes to serve trains that had become both heavier and faster since the acquired lines had been built. Among the major projects initiated between 1905 and 1910 were the electrification of the route along Long Island Sound and the construction of the Cedar Hill Freightyard in New Haven. In 1907 the railroad began designing improvements in the Air Line route, and in 1911 submitted the plans to the state Railroad Commissioners, which approved them. Construction began soon after. The changes included straightening curves, widening embankments and relocating stations. Several dozen new bridges went up, to achieve one or more purposes: eliminating grade crossings, increasing the clearance for floods below the bridges, or increasing load-bearing capacity. The Blackledge River Bridge accomplished the two latter goals.

The Blackledge River Bridge illustrates typical engineering of its day. Bridge builders had begun using steel, instead of wrought iron, for structural members in the early 1890s, once the open-hearth process of steelmaking had been perfected. Between 1895 and 1905 both materials were used, but by 1905 steel had achieved virtually universal use. Pinned joints had been favored by American bridge builders in the 19th century because they allowed easier assembly than riveting. But at the same time that steel was replacing wrought iron, improvements in field-riveting techniques overcame the advantages of pinning, and riveted joints became the standard. By the turn of the century, two truss types--the Pratt and the Warren--had supplanted the great variety of patterns used previously, largely because they were well-proven and reliable. The double-intersection Warren was highly appropriate for railroads because it was very stiff, and the two overlaid webs resisted the reversal of stresses as

(continued)

9. Major Bibliographical References

Connecticut Railroad Commissioners, Annual Report, 1873-1912.

Stanley M. Cooper, "The Air Line," 1970, typescript in The Middletown Collection, Russell Library, Middletown, CT.

10. Geographical Data

Acreage of nominated property less than 1

Quadrangle name Moodus Quadrangle scale 1:24000

UTM References

	Zone	Easting	Northing
A	1 8	7 1 4 8 ~~2 1 0~~ 60	4 6 ~~8 6 3 7 0~~ 06 580
B			
C			
D			
E			
F			
G			
H			

Verbal boundary description and justification The nominated property includes only the bridge and its abutments. See Figure 1.

List all states and counties for properties overlapping state or county boundaries N/A

state	code	county	code
state	code	county	code

11. Form Prepared By

name/title Bruce Clouette and Matthew Roth, partners, edited by John Herzan, National Register Coordinator

organization Historic Resource Consultants date February 4, 1986

street & number The Colt Armory 55 Van Dyke Avenue telephone (203) 547-0268

city or town Hartford state Connecticut

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national ___ state X local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89–665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

State Historic Preservation Officer signature [signature]

title Director, Connecticut Historical Commission date June 24, 1986

For NPS use only

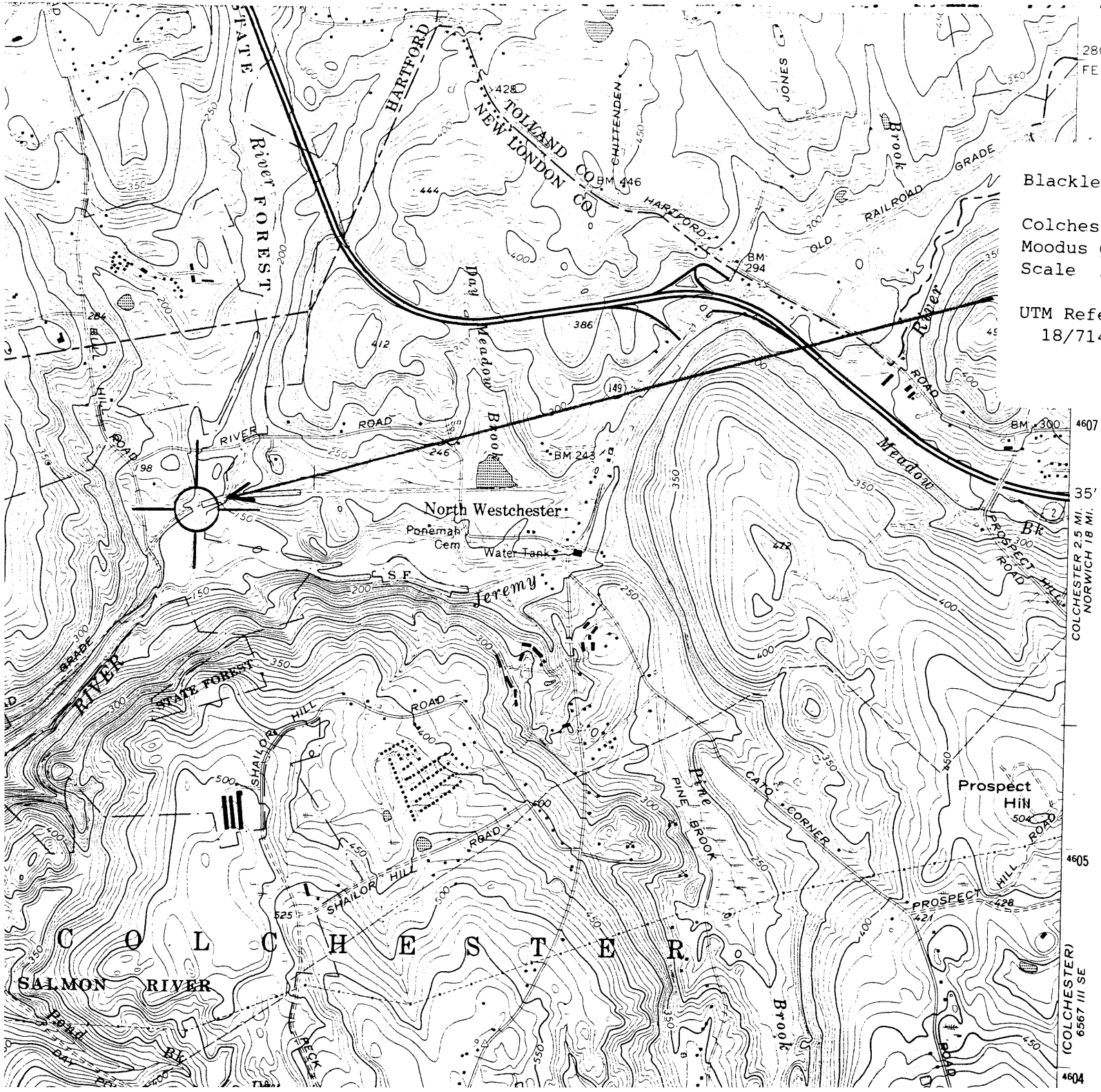
I hereby certify that this property is included in the National Register

for Delores Byers date 7-31-86

Keeper of the National Register

Attest: date

Chief of Registration



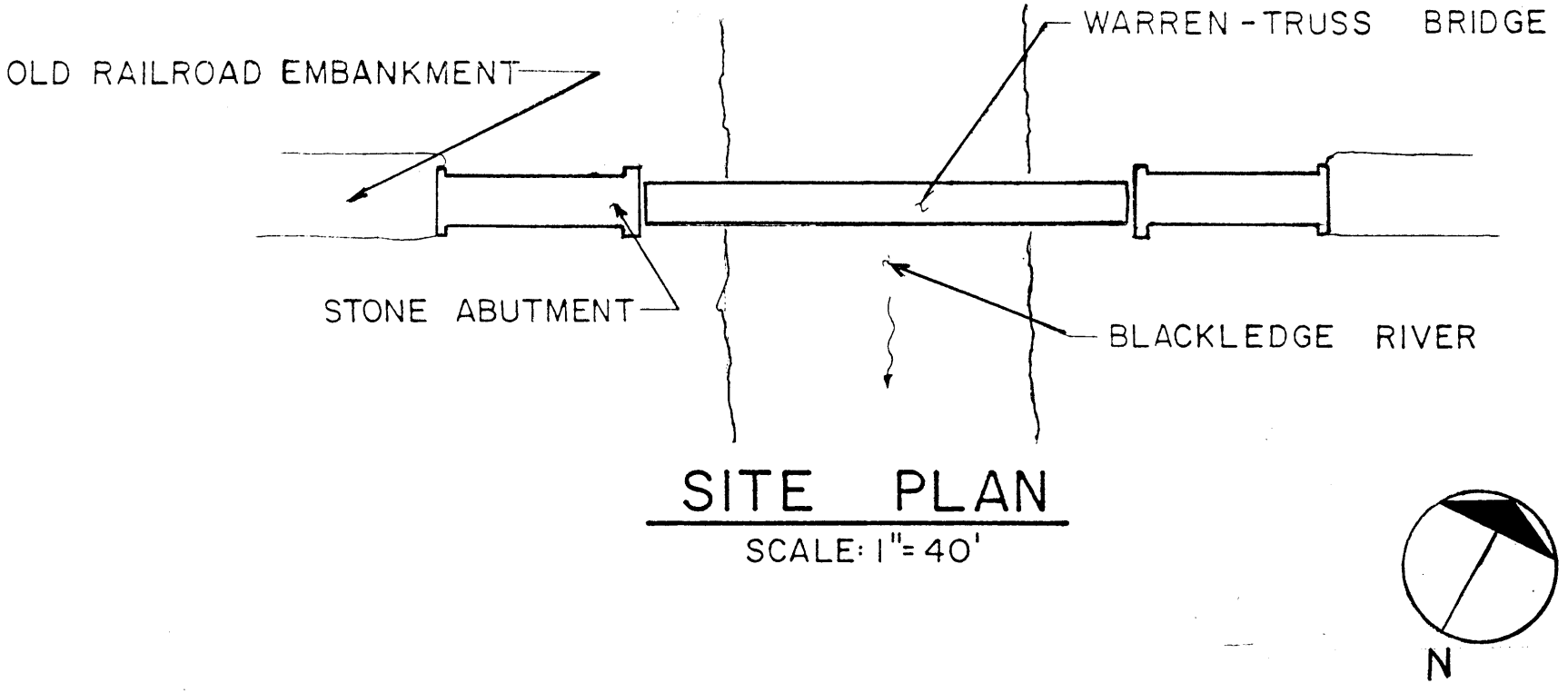
Blackledge River Railroad Bridge

Colchester, Connecticut
Moodus Quadrangle
Scale 1:24000

UTM Refernce:
18/714820/4606370

FIGURE 1

BLACKLEDGE RIVER RAILROAD BRIDGE, COLCHESTER, CONNECTICUT



SITE PLAN

SCALE: 1"= 40'