NPS Form 10-900
(7-81)

OMB No. 1024-0018
EXP. 12/31/84

United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

For NPS use only
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date entered

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

1. Name

historic Iron Bridge at Howard Hill Road

and/or common Iron Bridge at Howard Hill Road

2. Location

street & number Howard Hill Road, end VT 131 at Vermont Route 131 N/A **not for publication**

city, town Cavendish N/A **vicinity of** ~~congressional district~~

state Vermont **code** 50 **county** Windsor **code** 027

3. Classification

Category	Ownership	Status	Present Use	
___ district	_x_ public	_x_ 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	N/A ___ in process	___ yes: restricted	___ government	___ scientific
	___ being considered	_x_ yes: unrestricted	___ industrial	_x_ transportation
		___ no	___ military	___ other:

4. Owner of Property

name Town of Cavendish

street & number N/A

city, town Cavendish N/A **vicinity of** **state** Vermont 05142

5. Location of Legal Description

courthouse, registry of deeds, etc. *No legal description of the Bridge exists. Please refer to Section 10. Office of the Town Clerk

street & number N/A

city, town Cavendish **state** Vermont 05142

6. Representation in Existing Surveys

title Vermont Historic Sites and Structures Survey **has this property been determined eligible?** ___ yes _x_ no

date 1973 ___ federal _x_ state ___ county ___ local

depository for survey records Vermont Division for Historic Preservation

city, town Montpelier **state** Vermont 05602

7. Description

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

Describe the present and original (if known) physical appearance

The Iron Bridge is a single-span, pin-connected, Pratt through truss fabricated of wrought iron and cast iron components. The 88-foot bridge crosses the Black River in its scenic narrow valley east of Cavendish village. Carrying only the light traffic of a dead-end gravel road, the bridge remains unaltered from its original (1890) appearance.

The Iron Bridge extends across the Black River on a north-south alignment, serving to connect Howard Hill Road (Town Highway 62) with Vermont Route 131; the intersection occurs near the north portal of the bridge. Cavendish village lies 2.3 miles to the west along the latter highway, which parallels the north bank of the river. In the vicinity of the bridge, scattered buildings occupy the narrow river valley flanked by forested hillsides.

The overall dimensions of the six-panel bridge include a length of approximately 88 feet and a width of 14 feet. The single-lane roadway provides an opening of 11.5 feet.

At the portals, riveted inclined end posts rise diagonally to the latticed portal struts and riveted top chords. The 14.5-foot panels are framed by latticed intermediate posts with single-intersection diagonal eye-bar braces; latticed lateral struts connect the top panel points. The bottom chords consist of twin eye bars pin-connected at the intersections with the intermediate posts and floor beams. The floor stringers are overlaid with a planked deck. Twin tubular railings attached to the upright members serve to protect the roadway.

The bridge's portals are decorated with curvilinear iron crestings and finials. Centered atop each portal strut, a segmental cresting displays in raised relief the date of the bridge together with (on one side) the name of the manufacturer and (on the other side) the names of the contemporary Cavendish selectmen, the town's legislative body: "1890 GROTON BRIDGE & M'F'G. CO. GROTON, N.Y." "1890 D.C. POLLARD, URIAL RUSSELL, H.S. KINGSBURY, SELECTMEN." Marking each upper corner of the truss, a finial with a fleur-de-lis motif rises slightly higher than the central cresting.

The abutments of the bridge are constructed of uncoursed or randomly coursed rubble laid without mortar. The south abutment possesses a curved wing wall on its west (upstream) flank to deflect the current. At the present time (1982), the flanks of the north abutment are being backfilled with rubble intended for reinforcement.

The bridge truss appears not to have been altered from its original fabrication. A modest attempt to reinforce the structure has been made by the addition of I-beams beneath the floor beams parallel to the stringers.

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/ humanitarian	
___ 1700–1799	___ art	x engineering	___ music	___ theater	
x 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation	
___ 1900–	___ communications	___ industry	___ politics/government	___ other (specify)	
		___ invention			

Specific dates 1890 **Builder/Architect**

Statement of Significance (in one paragraph)

The Iron Bridge in Cavendish is an excellent example of an increasingly rare type of bridge - a pin-connected, Pratt through truss fabricated of wrought iron and cast iron components. Erected in 1890 at the advent of steel construction, the Cavendish bridge represents the last generation of iron truss bridges, few of which survive in Vermont. Furthermore, the Cavendish bridge retains intact its original design complete with decorative elements, making it an outstanding example of its type, period, and method of construction.

Fabricated by the Groton Bridge and Manufacturing Company of Groton, New York, the bridge was erected on its Black River site during the summer of 1890. The Town of Cavendish paid $850.00 for the 88-foot structure, which became known locally as the "Iron Bridge." Little other information has been recorded about its history.

The survival of the bridge relates largely to the nature of the lightly used farm road that it serves, thereby spared the tide of ever heavier traffic that overwhelmed many of its contemporaries. Relatively high abutments have also protected it from washouts in major floods. Only a few other iron truss bridges survive in Vermont, and the Cavendish bridge ranks among the most completely intact examples of the type.

In the larger context, the Iron Bridge constitutes an increasingly rare representative of the late nineteenth century epoch when commercial fabricating companies dominated American bridge technology and construction. Presumably, the methods of the Groton Bridge and Manufacturing Co. were similar to those of many contemporary companies. A bridge was fabricated in the company shop from standard metal forms and parts, and then dismantled for shipment to the construction site. There the accurately precut and machined components were readily reassembled into the completed bridge, probably within a few days by a trained crew from the factory.

The modest cost of the Cavendish bridge, $850.00, undoubtedly reflects the intense competition prevailing in 1890 among the many active bridge companies. Although such competition in price led occasionally to serious compromises in quality and durability, the Cavendish bridge appears not to have suffered that result.

The erection date of the bridge falls within the transitional period when steel replaced iron in American bridge construction. The Cavendish bridge, therefore, represents the late phase in the use of iron for such structures. By 1900, the Groton firm itself had switched to steel for the fabrication of a longer Camelback truss bridge that remains standing in West Woodstock, some twenty miles to the north.

A potential threat to the Cavendish bridge exists from a major hydroelectric development being planned for the downstream reach of the Black River. The principal storage reservoir of the project would inundate the bridge site; the bridge, however, would be moved onto higher ground north of the river and there preserved in a small public park.

9. Major Bibliographical References

Annual Report of the Town Officers of the Town of Cavendish, Vermont for the Year Ending February 6, 1981. Ludlow, Vt., 1891. 1865-
Deibler, Dan Grove, A Survey and Photographic Inventory of Metal Truss Bridges in VA.1932
Virginia Highway and Transportation Research Council, Charlottesville, 1975.

10. Geographical Data

Acreage of nominated property .03 acre

Quadrangle name Cavendish, VT **Quadrangle scale** 1:24000

UMT References

	Zone	Easting	Northing		Zone	Easting	Northing
A	18	696310	4808365	B			
C				D			
E				F			
G				H			

Verbal boundary description and justification

The property being nominated consists only of the space occupied by the Iron Bridge and abutments, approximately 0.03 acre within the right-of-way of Town Highway 62. No deeds of ownership have ever been recorded for the bridge; in Vermont, deeds are not commonly written for publicly owned bridges.

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

state	N/A	code	county		code
state		code	county		code

11. Form Prepared By

name/title Hugh H. Henry

organization Historic Preservation Consultant **date** July 1982

street & number Green Mountain Turnpike **telephone** 802-875-3379

city or town Chester **state** Vermont 05143

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

___ national x state ___ 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 William B. Finney

title Director/Deputy State Historic Preservation Officer **date** August 4, 1982

For NPS use only

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

for Keeper of the National Register **date** 9/9/82

Attest: **date**

Chief of Registration

Representation in Existing Surveys (continued)

Historic American Engineering Record Inventory

no date

Depository: Historic American Engineering Record
Washington, DC

Edwards, Llewellyn Nathaniel, A Record of the History and Evolution of Early American Bridges, University Press, Orono, Maine, 1959.

Steinman, David B. and Watson, Sara Ruth, Bridges and Their Builders, Dover Publications Inc., New York, 1957.