

**United States Department of the Interior
Heritage Conservation and Recreation Service**

**National Register of Historic Places
Inventory—Nomination Form**

For HCRS use only
received **FEB 8 1980**
date entered

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

1. Name

historic Middlefield--Becket Stone Arch Railroad Bridge District

and/or common

2. Location

street & number Multiple ___ not for publication

city, town Middlefield, Becket, Chester ^{vicinity} vicinity of congressional district 1st

state Massachusetts code 025 county Hampshire, Berkshire, Hampden code 015, 003, 013

3. Classification

Category	Ownership	Status	Present Use
<input checked="" type="checkbox"/> district	<input type="checkbox"/> public	<input type="checkbox"/> occupied	<input type="checkbox"/> agriculture <input type="checkbox"/> museum
<input type="checkbox"/> building(s)	<input checked="" type="checkbox"/> private	<input checked="" type="checkbox"/> unoccupied	<input type="checkbox"/> commercial <input type="checkbox"/> park
<input type="checkbox"/> structure	<input type="checkbox"/> both	<input type="checkbox"/> work in progress	<input type="checkbox"/> educational <input type="checkbox"/> private residence
<input type="checkbox"/> site	Public Acquisition	Accessible	<input type="checkbox"/> entertainment <input type="checkbox"/> religious
<input type="checkbox"/> object	<input type="checkbox"/> in process	<input checked="" type="checkbox"/> yes: restricted	<input type="checkbox"/> government <input type="checkbox"/> scientific
	<input checked="" type="checkbox"/> being considered	<input type="checkbox"/> yes: unrestricted	<input type="checkbox"/> industrial <input checked="" type="checkbox"/> transportation
		<input type="checkbox"/> no	<input type="checkbox"/> military <input type="checkbox"/> other:

4. Owner of Property

name Multiple (See attached property owner's list)

street & number

city, town _____ vicinity of _____ state

5. Location of Legal Description

courthouse, registry of deeds, etc. Hampshire County Registry of Deeds

street & number 33 King Street

city, town Northampton state Massachusetts 01060

6. Representation in Existing Surveys

title Historic Resource Inventory of the Commonwealth has this property been determined eligible? ___ yes no

date 1979 ___ federal state ___ county ___ local

depository for survey records Massachusetts Historical Commission

city, town Boston state Mass. 02108

7. Description

Condition		Check one	Check one
<input type="checkbox"/> excellent	<input type="checkbox"/> deteriorated	<input checked="" type="checkbox"/> unaltered	<input checked="" type="checkbox"/> original site
<input checked="" type="checkbox"/> good	<input type="checkbox"/> ruins	<input type="checkbox"/> altered	<input type="checkbox"/> moved date _____
<input type="checkbox"/> fair	<input type="checkbox"/> unexposed		

Describe the present and original (if known) physical appearance

The Middlefield-Becket Stone Arch Railroad Bridge National Register District consists of a series of ten railroad bridges which cross the West Branch of the Westfield River within a 3.7 mile stretch as it flows between the towns of Middlefield and Becket, and through Chester. The district includes the railroad right-of-way along this stretch. The river follows a steep winding gorge that separates Middlefield and Becket.

Of the ten bridges in the district, nine are masonry, and one (#2), is a steel deck truss girder bridge. The ten bridges are of four different vintages, 1840, 1866, 1912, and 1928. All are in their original as-constructed condition, with the exception of the three 1840 stone arch bridges, which have lost stones from their parapet walls. The enormous approach walls for each bridge, which protect the abutments under each, are completely intact. The three stone arch bridges (3,5,6) that were built in 1840-41 by the Western Railroad Company for a single track railbed, are constructed of random ashlar granite forming a large single keystone arch. Bridge #6 survives nearly intact from its original condition. The only changes to the bridge have been the loss of several stones from the low parapet wall along each side of the earthen deck surface. These stones have been pushed out of the parapet walls into the river about 60 feet below. Bridge #5 has suffered the most, with nearly the entire walls on each side of the deck lost to the river 70 feet below the bridge. Bridge #3 has survived with its parapet walls nearly totally intact. The arches of all three rise approx. 70' above the water and are 50' at the springline. When the track was doubled in 1866, the new track replaced the old without altering the construction of the bridges. The 1840 bridges have not been used by rail traffic since 1912, when the right-of-way's geometry was improved to permit heavier and faster traffic, and the new trackbed by-passed them.

Bridge #1 was constructed of coursed ashlar granite in 1866, and is in use today. The keystones are approx. 30' above water and the springline about 40'. Bridge #8 is a hybrid structure. The north side of the bridge, built in 1866, is the same coursed ashlar granite as bridge #1. The south side of #8, which was widened in 1912, is a poured concrete arch, rising approx. 25'. Bridge #8 is in active service.

Bridge #2, built in 1912, is a steel deck truss girder bridge approx. 35' long with poured concrete abutments. These apparently encase the original 1840 stone abutments because several stone blocks are visible beneath. #2 is in active service today. Also completed in 1912, bridge #7 is a reinforced concrete structure with a 60' arch. Built to bypass #3 in 1913, bridge #4 is another reinforced concrete bridge whose arch rises approx. 70' above the river.

Bridges #9 and #10 were built in 1928. They are also reinforced concrete, single arched structures, replacing 1840 stone arch bridges which were damaged in the flood of 1927. Both have 30' spans and are 40' in height.

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Key to Sketch Map and Property Owners

<u>MAP NO.</u>	<u>STRUCTURE</u>	<u>OWNER</u>
#1	Double-arched granite railroad bridge	Conrail, Inc. 30th & Market Street Philadelphia, Pa. 19104
#2	Deck truss girder steel railroad bridge	Conrail, Inc. 30th & Market Street Philadelphia, Pa. 19104
#3	Stone arched railroad bridge	Conrail, Inc. 30th & Market St. Philadelphia, Pa. 19104
#4	Reinforced concrete arched railroad bridge	Conrail, Inc. 30th & Market St. Philadelphia, Pa. 19104
#5	Stone arched railroad bridge	Penn Central Corp. 100 Access Road Norwood, Mass. 02062
#6	Stone arched railroad bridge	Penn Central Corp. 100 Access Road Norwood, Mass. 02062
#7	Reinforced concrete arched railroad bridge	Conrail, Inc. 30th & Market St. Philadelphia, Pa. 19104
#8	"Siamese" railroad bridge- granite and reinforced concrete arches	Conrail, Inc. 30th & Market St. Philadelphia, Pa. 19104
#9	Reinforced concrete arched railroad bridge	Conrail, Inc. 30th & Market St. Philadelphia, Pa. 19104
#10	Reinforced concrete arched railroad bridge	Conrail, Inc. 30th & Market St. Philadelphia, Pa. 19104

8. Significance

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

Specific dates 1840-1, c. 1866, 1912, 1928
Builder/Architect George Washington Whistler

Statement of Significance (in one paragraph)

The Middlefield-Becket Stone Arch Railroad Bridge District possesses integrity of location, design, setting, materials and workmanship. The bridges are significant as engineering structures and for their association with the development of the railroad. The ten bridges within the district were constructed in 1840, 1865, 1912 and 1928 and represent several generations of stone bridge construction.

The Western Railroad built the three earliest bridges in the district (#3, 5, & 6) in 1840 and 1841. The Western was the key link in the first trunk line completed in the United States. This line included the Boston and Worcester Railroad, the Western Railroad between Worcester and W. Stockbridge at the Massachusetts-New York state line, and finally the Albany and West Stockbridge Railroad, which terminated at Greenbush, New York, across the Hudson River from Albany. The connection between Greenbush and Albany involved a large ferry-boat, owned by the Western Railroad. The Western's offices were in Springfield, Massachusetts.

The Western Railroad Company's Annual Report of 1840 states that the Summit Division, about 13 miles in length from Chester to Washington and of which this district is a part, required "by far the most difficult and expensive work upon the whole line." Work began in 1840 and was completed in 1841. The Summit Division required numerous rock cuts, and the construction of 21 bridges, nine of which were stone arches. The thirteen mile Summit Division section cost over one million dollars to build.

The Chief Engineer of the Western, Major George Washington Whistler (father of the artist James Abbott Whistler), supervised construction of the Summit Division through the rugged Berkshire hills. Whistler was a West Point graduate and had attained the rank of major in the Corps of Engineers. After surveying a portion of the Baltimore and Ohio Railroad line, he became in 1834 superintendent of the Locks and Canals Company at Lowell, Mass., where he concentrated on locomotive construction operations. In 1837-1840, he built and managed the New York, Providence, and Boston Railroad. In 1840, he was engaged by the Western to preside over its construction from Worcester to Albany. In 1842, with this tremendous task complete, he answered the call of the Russian government to build a railroad between St. Petersburg and Moscow. Seven years later, he died in Russia of cholera.

Of the nine stone arch railroad bridges originally constructed, only three remain standing (#3, 5, 6). The next earliest structures in the district are bridges #1 and #8. Bridge #1 is the only one in Chester, and the only double arch span in the district. It was constructed c. 1866, when the Western finished laying double track through the Summit Division. Bridge #8, through its hybrid construction, vividly illustrates the progression of bridge construction technology, as the earlier half is coursed ashlar granite, while the later section is poured concrete. This bridge was widened in 1912, when additional sidings were needed at Middlefield Station, as its woolen goods and paper industries flourished.

A 1912 reinforced concrete arched bridge (#4) by-passes the 1840 stone arch (#3) and carries the active right of way. In 1912 the first major change in the 1840 right of way occurred to accommodate heavier and faster rail traffic. Although the 1840 bridges' single tracks were replaced with double tracks in 1866, they were not designed to accommodate the additional load and were by-passed in 1912. Bridge #7 is another

(continued)

9. Major Bibliographical References

"Whistler's Railroad", Charles E. Fisher, The Railway and Locomotive Historical Society, Bulletin No. 69, May 1947.
 Bradbury and Guild's Railroad Charts, No. 1, Boston to Albany, 1847.
 Western Railroad Company's Annual Reports, 1840 & 1841.

10. Geographical Data **UTM NOT VERIFIED**

Acreege of nominated property _____ **ACREAGE NOT VERIFIED**
 Quadrangle name Becket-Chester Quadrangle scale 1:25000

UMT References

A	<u>1</u> <u>8</u>	<u>6</u> <u>6</u> <u>0</u> <u>8</u> <u>5</u> <u>0</u>	<u>4</u> <u>6</u> <u>8</u> <u>6</u> <u>4</u> <u>6</u> <u>0</u>	B	<u>1</u> <u>8</u>	<u>6</u> <u>6</u> <u>1</u> <u>2</u> <u>1</u> <u>0</u>	<u>4</u> <u>6</u> <u>8</u> <u>7</u> <u>0</u> <u>3</u> <u>0</u>
	Zone	Easting	Northing		Zone	Easting	Northing
C	<u>1</u> <u>8</u>	<u>6</u> <u>6</u> <u>5</u> <u>5</u> <u>0</u> <u>0</u>	<u>4</u> <u>6</u> <u>8</u> <u>6</u> <u>3</u> <u>5</u> <u>0</u>	D	<u>1</u> <u>8</u>	<u>6</u> <u>6</u> <u>4</u> <u>1</u> <u>9</u> <u>0</u>	<u>4</u> <u>6</u> <u>8</u> <u>4</u> <u>9</u> <u>6</u> <u>0</u>
E	<u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>	F	<u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>
G	<u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>	H	<u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>	<u> </u> <u> </u> <u> </u> <u> </u>

Verbal boundary description and justification

Refer to Continuation Sheet Page 2.

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

state	code	county	Hamden, Hampshire	code	013, 015
state	code	county	Berkshire	code	003

11. Form Prepared By

name/title Elizabeth Durfee, Preservation Planning Coordinator with Charles T. Lennon, Historic Preservation Planner, Lower Pioneer Valley Regional Planning Commission
 organization Massachusetts Historical Commission date November 1979
 street & number 294 Washington Street telephone (617) 727-8470
 city or town Boston, state Mass. 02108

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

national 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 Heritage Conservation and Recreation Service.

State Historic Preservation Officer signature Patricia L. Weslowski 1/22/80
 Executive Director,
 title Massachusetts Historical Commission date

For HCRS use only
 I hereby certify that this property is included in the National Register

[Signature] date 4/11/80
 Keeper of the National Register

Attest: Patrick Andrews date 4/10/80
 Chief of Registration

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reinforced concrete arched bridge from 1912. A few feet downstream are the abutments and approach walls of the 1840 stone arch bridge which was taken down when the concrete arched bridge by-passed it in 1912.

Bridges #9 and #10 were built following a 1927 heavy flood which damaged the 1840 stone arch bridges previously in use in these two locations. They were either demolished or encased within the present reinforced concrete arches in 1928.

The district contains an example of a steel deck truss girder railroad bridge (#2), in addition to the masonry bridges. It dates from 1912 and was manufactured by the Pennsylvania Steel Co. of Steelton, Pennsylvania.

The right of way itself is historically significant. Between bridges #1 and #2, the existing track follows the original layout, with its stone cuts and grading. Between bridges #2 and #6, the track was removed from the original layout in 1913. At that time, the right of way was shifted across the river into Becket, and the present long bend in the track layout was created. The original right of way has several deep stone cuts, as well as bridges #4 and #5. Between bridges #6 and #8, the existing track again occupies the original right of way, with extensive grading and frequent stone cuts. The present and original rights of way follow the West Branch of the Westfield River very closely, being carved into the steep banks of the gorge through the Summit Division. This was the steepest section of the Western Railroad, with a grade of 75-80 feet per mile over its entire length.

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10. Geographical Data

Beginning at a point on the northern boundary of the active railroad right of way owned by Conrail, Inc., 10 feet south of the southern end of the double-arched granite railroad bridge (No. 1) in Chester, thence crossing the right of way in a southwesterly direction to a point on the southern boundary of the right of way 10 feet south of the southern end of bridge No. 1, thence proceeding north westerly along this right of way boundary across the West Branch of the Westfield River, and along this right of way boundary westerly crossing the West Branch again, and southerly crossing the West Branch again, and westerly crossing the West Branch again, and westerly crossing Town Hill Road and Factory Brook, and northwesterly crossing the West Branch again, and westerly crossing the West Branch again, and proceeding along this right of way boundary westerly to a point on this boundary 10 feet west of the westerly end of the reinforced concrete arched railroad bridge (No. 10), thence crossing the right of way in a northerly direction to the northern boundary of the railroad right of way 10 feet west of the westerly end of bridge No. 10, thence proceeding easterly along this right of way boundary crossing the West Branch, and southeasterly crossing the West Branch again, and easterly crossing Factory Brook and Town Hill Road, and easterly crossing the West Branch, proceeding easterly along this right of way boundary to a point at the northwest corner of a parcel of surplus railroad property owned by Penn Central Corporation, thence easterly along the northern boundary of this parcel crossing the West Branch twice to a point at the eastern end of this parcel, thence northerly along the northern boundary of the Conrail right of way crossing the West Branch again, and northerly and easterly crossing the West Branch again, and southeasterly crossing the West Branch again, proceeding along this northern right of way boundary to the point of beginning, thereby including the present Conrail right of way and Penn Central properties between Bridge No. 1 and Bridge No. 10, a distance of approximately 3.7 miles.

SKETCH MAP

MIDDLEFIELD-BECKET STONE ARCH RAILROAD BRIDGE DISTRICT





11-00000-0000



1980 APR 11 REGISTER NATIONAL RECEIVED

Property Middlefield - Becket ~~Staple~~ ~~Rock~~ Railroad Bridge District
State Massachusetts Working Number 2-8-80 433
Hampshire also in Berkshire

TECHNICAL

CONTROL

Photos 4
Maps 3

HISTORIAN

This nomination is eligible for engineering and transportation - the nomination includes 10 railroad bridges built between 1841 and 1928. These bridges, crossing over the Westfield River, were built as a portion of the first trunk line completed in the U.S. They were built in 4 periods and show the development of arched railroad bridges from solid stone, to hybrid stone/concrete, to solid concrete. The latter bridges replaced original stone bridges.

accept
Patrick Andrew
4/9/80

~~ARCHITECTURAL HISTORIAN~~

- see telephone report of 4/9/80 for reasons for the name change of this district. The original bridges were built by a noted engineer - Geo. Wash. Whittier

ARCHEOLOGIST

OTHER

HAER

Inventory _____
Review _____

REVIEW UNIT CHIEF

BRANCH CHIEF

KEEPER

National Register Write-up _____ Send-back _____ Entered APR 11 1980
Federal Register Entry 2-3-81 Re-submit _____

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 any 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 MIDDLEFIELD-BECKET STONE ARCH RAILROAD BRIDGE DISTRICT (ADDITION)

other names/site number _____

2. Location

street & number _____ not for publication

city or town Middlefield, Becket, Chester _____ vicinity

state Massachusetts code MA county Hampshire, Berkshire, Hampden code 015,003,013 zip code

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, 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.)

Brona Simon

April 30, 2001

Signature of certifying official/Title Brona Simon
Massachusetts Historical Commission, Deputy State Historic Preservation Officer

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 this property is:

Signature of the Keeper _____

Date of Action _____

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): Additional Documentation Accepted

Edson H. Beall

6/28/01

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National Park ServiceNational Register of Historic Places
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Railroad Bridge HD Amendment
Middlefield/Becket/Chester
(Hampshire/Hampden), MASection number 8 Page 1**8. Statement of Significance**

Amendment for the nomination to the National Register of the Middlefield-Becket Keystone Arch Railroad Bridge District, originally listed April 11, 1980.

The purpose of this amendment is to increase significance of the Middlefield-Becket Keystone Arch Railroad Bridge Historic District by providing for Section 8, Historical Narrative, additional persons (William Gibbs McNeill and Alexander Birney) of significance and supplements to the historic context for the four remaining keystone arch bridges constructed between 1840-1844. The amendment also provides additional major bibliographical sources for Section 9.

Historical Context for Masonry Bridge Construction

The technology used by the engineers and masons of the keystone arch bridges was originated by the Romans whose stone viaducts on arched piers were built to carry water over vast distances and often at great heights. The suitability of this construction to provide a level surface with great longevity to pass over rugged terrain was recognized and the technology sustained throughout much of western Europe for centuries to come, and to this day, large masonry bridges, including the keystone arch bridges of this district, spanning distances at considerable length, are properly termed viaducts.

In the eastern United States this technology was widely put to use for the construction of turnpikes, canals, and then for railroads in the late 18th and 19th century when the region's deep valleys needed to be traversed. Massachusetts provided an early model of stone arch bridge construction. The oldest masonry bridge in the country is a double-arched road bridge constructed in 1764 by John Choate in Ipswich. In 1813 David Shriver Jr. constructed the Casselman Bridge in Grantsville, Maryland, as a mortared 80-foot span, masonry road bridge constructed with a keystone at the crest of its arch. But it was the Industrial Revolution making use of water power directed through canal systems, that brought numbers of skilled masonry workers to the country and prompted engineers to study bridge construction in Europe to apply their principles to the new projects. With the development of the steam engine for railroad use over long distances, the need for masonry bridge work increased. Chief of the Historic American Engineering Record Eric DeLony describes the use of viaducts for railroads as a response to the inability of these wood-burning steam locomotives to carry their freight up steep grades. The early railroads chose random-laid stone, usually durable granite or ashlar blocks, set in lime mortar. Carried by tall piers, the bridges were then able to keep a relatively level grade.

Given the short history of this technology in the United States there was a relatively small pool of trained craftsmen and engineers who had been working on turnpikes and canals and those few were then called to the new challenge of railroad viaducts. Two of the most prominent engineers

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were William Gibbs McNeill and George Washington Whistler. Whistler was a West Point graduate, and a Major in the Army Corps of Engineers who was sent to England to study masonry bridge work. His first railroad work in this country was begun in the late 1820s as a Corps of Engineers member, surveying for construction of the Baltimore & Ohio Railroad. Benjamin Henry Latrobe, Jr., architect, designed the Thomas Viaduct for this line in 1835, an arched masonry bridge of eight arches in a row, without keystones.

Both Whistler and McNeill worked on the Boston & Providence Railroad in the 1830s in Massachusetts. In fact, McNeill is credited with the Canton viaduct (NR) of 1835, a masonry railroad bridge composed of two parallel walls with filled-in arches between its piers. Working with McNeill and Whistler on the Boston & Providence Railroad in 1832 was a Scottish mason, Alexander Birney, who had emigrated to New Jersey in 1827 with his father George, a master mason. George Birney was under contract to construct the Morris Canal and was working on it with Alexander when he died a year into the work. His son completed the project and was subsequently called to work on his first railroad, the Patterson & Hudson River Railroad, followed by masonry work on the Passaic River Bridge.

After the B & O, the Boston & Providence, the Patterson & Hudson railroads, a fourth railroad project was that of the New York, Providence & Boston Railroad. An 1833 construction ledger for the N.Y., P. & B. Railroad has an account with McNeill and Whistler as construction engineers for the project, as well as an account of construction of masonry with A. Birney for the years 1835, '37-'38. Birney appears individually and in partnership with a McManus in this ledger. Prior to working on this line, Birney had moved to Massachusetts in 1832 to work on the Stonington Rail Road Line, further increasing his experience. In demand for his engineering skills, Whistler in 1834 became the superintendent of the Locks and Canals in Lowell and seems to have simultaneously managed the construction of the New York, Providence and Boston Railroad.

Construction of the Western Railroad

In 1833 a group of Boston-area investors began incorporating to construct the Western Railroad connecting Boston to Albany, New York. In their first annual report the incorporators note the scarcity of engineers for the survey and graduation work needing to be accomplished. A correspondence book maintained by the Western Railroad contains some of the early letters and sheds light on the process of choosing among the few available people. In January 1836 Thomas B. Wales, president of the company, wrote to George Washington Whistler whether he would serve as their engineer providing it would not conflict with his other obligations. Answering from Lowell two days later, Whistler said that his commitments were such that he could not accept their offer. Wales responded asking for a recommendation on a resident or constructing engineer. Whistler replied that he was going to be in Boston to meet with them and would discuss the question. The next letter in the correspondence book is to William Gibbs McNeill in New York, asking him to be consulting engineer, concerned with surveys and location of the road. McNeill

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responded favorably, February 1st, 1836. As resident engineer, McNeill chose topographical engineer W.W.Swift from New London, Connecticut. Although the correspondence arranging his hiring does not appear in the correspondence book, by 1837 the company's second annual report shows Whistler was working for the Western as Chief Engineer, once again sharing the position with McNeill. The latter was in charge of the layout and seems to have been in charge of construction of the line east of the Connecticut River. Whistler's role was not explicitly stated, however, his role as Chief Engineer clearly covered construction west of the river. Alexander Birney, listed as Birney, McManus & Co., had the Western Railroad Company's contract for all masonry work in Division 7, the most difficult territory of the Mountain Division, in which are located the stone arch bridges.

Documentary evidence strongly suggests that Whistler, McNeill and Birney, having worked on other railroad projects at the same time, knew of each other's work, had seen successful stone arch bridge construction or had designed it, in the case of McNeill. So when the Western route was finally selected and its topographical challengers revealed, the solution to construct nine keystone arch bridges emerged as a result of the men's common past experiences.

As part of the Western's development of cost estimates for constructing the line, the directors had engaged Boston architect Solomon Willard, who had designed St. Paul's Cathedral on Tremont Street in Boston and Divinity Hall in Cambridge, to travel the proposed route to look at granite quarries along the way to determine whether they were adequate to supply the railroad's masonry needs. In the "Report of Mr. Baldwin on the Rail-Road Surveys from Boston to the Hudson River," in volume one of George Bliss' Memoir, his findings were described:

"Before the estimate for the construction of the road were made, Mr. Willard, an eminent architect, who has been particularly conversant in the erection of edifices of granite, and with the quarrying of this kind of stone, was employed to examine, in company with Mr. Makepeace, one of the Directors, the quarries of granite near the line of the road. His report on this subject, which shows that abundant supplies of excellent stone are to be found along the line from Framingham to Palmer and from Russell to Washington is annexed to this report."

Alexander Birney's quotation for the work was a surprise to the Directors as it was below what they had anticipated. Excluding the cost of the Connecticut River bridge at Springfield, the masonry was estimate to cost \$438,419.82. At first they were going to build rubble masonry abutments and sidewalls, and planned to use ledge stone at the site, but they had to abandon this plan when they found the river's freshets were so strong they undermined the work and the ledge stone was found to be inadequate. According to company agent George Bliss, they had to dig further down to reach stable foundation stone, and they fond they needed to turn to more expensive stone arch bridges which required stone of a different quality. Bliss reported to the Directors that the masonry contractor had to quarry and haul stone "from a great distance," increasing expenses far beyond estimates.

(continued)

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation SheetMiddlefield-Becket Keystone Arch
Railroad Bridge HD Amendment
Middlefield/Becket/Chester
(Hampshire/Hampden), MASection number 8 Page 4

Shortly after Birney arrived in 1839, laborers were hired to begin the graduation and bridge construction. Just under a thousand Russian, Irish, and Italian immigrants, singly and among families, settled in the Mountain Division, often building their shacks from leftover construction materials. Middlefield's population, for instance rose from 720 in 1830 to over 1700 people ten years later.

Laborers used churn drills operated by horse power, and the stuffed the holes with black powder to blast away rock for passage across the hills in Division 7. The granite blocks hauled in each weighed more than 1000 lbs. And were lifted into place with steam derricks or by manual winches. According to David Pierce:

"Workers used 'derrick poles' to move the stones from the cars to near their point of use. These were poles, about 90-100 feet high, with a diagonal member, about 60-70 feet long joining the main pole near the bottom. This side pole could, by being winched closer to the center pole, lift the stones. The center pole could rotate 360 degrees to deposit the blocks anywhere within its range. There were also small steam-powered winches, mounted on rail cars which could be positioned on the in-progress bridge for stone placement. Other tools available werer horse and oxen teams, and black powder, which could be used for a limited form of blasting in soft rock. The most used tools were the star drill, hammer and chisel."

As the arches were put in place, the stonework was supported by wooden stanchions, or trestles, on which the tracks were laid so that the stone could be hauled to the site and unloaded, until the keystones were slipped in place. Engineers were firmly disposed to creating a double-track even though the Directors decided a single track was adequate. Consequently, the bridges, culverts, rock cuts, heavy embankments were graded and constructed to accommodate the second track in the future, even though the rail beds themselves were generally a single rail wide.

In its fifth annual report (1840), the Western Railroad Company's agent Geroge Bliss explained the great expense further, saying the line had to cross many spurs of a curving river often with oblique spans sometimes sixty to seventy feet above the water and constructed with very heavy and expensive masonry. Within the thirteen miles, he added, the river was passed by twenty-one bridges, nine of which were stone arches and three of these were sixty-foot spans (five more were forty-five foot spans). Embankments rose 40-50 feet above the water and many required heavy bank or river walls 60-70 feet high.

In addition to his work as chief engineer, Whistler also made drawings and specifications for the railroad engines and cars. These were constructed for the line so that regular trains began running to Chester on May 24, 1841, over rails imported from the Baring Brothers in Liverpool and Ghent. The line was extended further to Washington Summit four months later, and the final portion opened on October 4th. Historian Francis Parkman rode the route from Boston to Albany.

(continued)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Middlefield-Becket Keystone Arch
Railroad Bridge HD Amendment
Middlefield/Becket/Chester
(Hampshire/Hampden), MA

Section number 8 Page 5

in July of the following year. His occasional testy account written from Albany is one of the first descriptions of the experience:

"Left Boston this morning at half past six, for this place, where I am now happily arrived, it being the longest day's journey I ever made. For all that, I would rather have come thrity miles by stage than the whole distance by railroad, for of all the methods of progressing, that by steam is incomparably the most disgusting.... The view from the [Connecticut River] railroad-bridge was noble, or rather would have been so, had not the company taken care to erect a parapet on both sides, which served the double purpose of intercepting the view, and driving all the sparks into the eyes of the passengers....I have scarcely ever seen a wilder and more picturesque country. We caught tantalizing glimpses of glittering streams and waterfalls, rocks and mountains, woods and lakes, and before we could rub our scorched eyes to look again, the scene was left miles behind. A place called Chester Factory, which we stopped five minutes, is beautifully situated among encircling mountains which rise like an amphitheatre around it, to the height of many hundred feet, wooded to the summit. It almost resembled New Hampshire scenery....The whole is a succession of beautiful scenes. The Irishmen who worked on the road made a most praiseworthy selection of places for their shanties, which many of them are wise enough to occupy still. Three or four of these outlandish cabins, ranged along the banks of a stream flowing through a woody glen extending back among the hills, made with their turf walls and slant roofs a most picturesque addition to the scene."

Epilogue

A few facts concerning the bridges and their makers after 1841 when the line opened for business follow, with recommendations for further study.

It has been reported that Whistler (b. 1800) died of cholera a few years after the completion of the Western Railroad, while working as an engineer on a railroad line connecting Moscow and St. Petersburg in Russia. It should be noted that Whistler's son was named James Abbott McNeill Whistler, suggesting that the long professional association between McNeill and Whistler had perhaps generated a close friendship. David Pierce in his Address to the Westfield River Watershed Association stated that the two were brothers-in-law. Further biographical study on McNeill is recommended.

Alexander Birney married Mary S. Adams of Providence in 1836. They had twelve children, seven of whom survived. When the work on the Western Railroad was completed, the family moved to Hastings, New York, where they built a stone house. In 1858, while blasting a rock to build a pond, Birney was accidentally killed. The identity of his company partner McManus has not yet been established and would fill a gap in the mason's history.

(continued)

United States Department of the Interior
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Continuation SheetMiddlefield-Becket Keystone Arch
Railroad Bridge HD Amendment
Middlefield/Becket/Chester
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Of the nine original keystone arch bridges, two were abandoned in 1912, while three were washed away in 1927 flooding. Four remain in use, and a fifth, a double-arched bridge constructed after 1841, is also in use. On one of the original bridges a capstone reads "1844" suggesting that perhaps the line was open before the bridges were entirely complete. Further research on construction of the tenth stone arch bridge is also recommended.

Plans for restoration of two of the original bridges (those abandoned in 1912), are being prepared under an ISTEA Enhancement Grant through funding by the Federal Highway Administration and the Massachusetts Highway Department. A part of this project involves a walking trail to provide safe public access to the bridges.

Copies of the relevant finding aids located at the Baker Library, Harvard University Business School, Allston, Massachusetts are attached to this amendment for future reference.

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United States Department of the Interior
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Continuation SheetMiddlefield-Becket Keystone Arch
Railroad Bridge HD Amendment
Middlefield/Becket/Chester
(Hampshire/Hampden), MASection number 9 Page 1

MAJOR BIBLIOGRAPHIC REFERENCES

Picturesque Berkshire South, Springfield, 1893.

Annual Reports of the Directors of the Western Railroad Corporation to the Stockholders, Boston, 1836-1874.

Bliss, George. Historical Memoirs of the Western Railroad, Springfield, 1863.

Boston & Albany Railroad Company, Western Rail Road Corporation, 1833-71. Engineering Department Journal, v. 117, September 1839-November 1847, located in the Boston & Albany Rail Road Company Finding Aid, Baker Library, Harvard University Business School, Allston, MA.

_____. Letter Books, v. 145, January 12, 1836-November 6, 1838. T.B.Wales, President (copies of letters) (location same as above).

_____. Diary, v. 159, July 1, 1841-March 22, 1842 Engineering Department (location same as above)

Deloney, Eric. Landmark American Bridges, American Society of Civil Engineers, New York, 1993.

Everts, Louis H. History of the Connecticut Valley, vol. II, Philadelphia, 1879.

Fisher, Charles E., "The Western Railroad," Railroad and locomotive Historical Society, Bulletin No. 69, 1987-88.

History of the town of Washington, Massachusetts, "The Western Railway - the B & A Railroad," ms. n.d., Berkshire Athenaeum, Pittsfield, Massachusetts.

King, Denise. "The Keystone Bridges - a Tribute to those who built them," Stone Walls, Spring, 1991.

New York, Providence & Boston Rail Road, 1832-1893, vol. 137A, Construction Ledger, 1833-1837, located in New York, New Haven & Hartford Finding Aid, Baker Library.

Parkman, Francis, letter of July 15, 1842, as quoted in The Berkshire Reader, the Secluded Paradise, 1810-1850.

Pierce, David. Address to the Westfield River Watershed Association, Inc. ms., 1995.

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BOSTON & ALBANY RAIL ROAD COMPANY

B. [WESTERN RAIL ROAD] CORPORATION, 1833-1871

495
Ms 724
1831-1898
B 747Corporation Records

v.1 Mar. 8, 1833 - Sept. 4, 1867 Act of incorporation; minutes of stockholders' meetings

Directors' Recordsv.2 Jan. 8, 1836 - Oct. 16, 1841
v.3 Nov. 11, 1841 - Mar. 23, 1844
v.4 Apr. 26, 1844 - Feb. 11, 1851
v.5 Feb. 20, 1851 - Feb. 8, 1865
v.6 Feb. 22, 1865 - Nov. 26, 1867Stock Journal

v.7 Feb. 1, 1836 - Feb. 28, 1842

Stock Ledgersv.8 Feb. 1, 1836 - Sept. 1, 1841
v.9 Feb. 1, 1836 - Jan. 28, 1842 B
v.10 Feb. 1, 1836 - Feb. 8, 1848 C
v.11 Feb. 1, 1836 - June 19, 1856 D
v.12 June 24, 1856 - Dec. 1, 1867List of Stockholdersv.13 Arranged to July 1, 1858
v.14 On Jan. 1, 1867
v.15 June 15, 1865 - July 27, 1866 New Stock Issued
v.16 June 4, 1867 - Dec. 19, 1874 New Stock Issued
v.17 June 4, 1867 - Dec. 14, 1870 Distribution of stockTax on Non-Resident Stockholders due July 1, 1863 and Jan. 1, 1864 unconstitutionalv.18 Mar. 18, 1867 - Aug. 17, 1870 Paid to stockholders
v.18a Old certificates canceled in 1840, 1 bundle.Certificate Stubsv.19 1 - 1,295 Mar. 1, 1842 - Dec. 30, 1842 (Numbers omitted used for halfshare)
v.20 1,296 - 2,302 Dec. 30, 1842 - Feb. 29, 1844
v.21 2,424 - 3,544 Mar. 1, 1844 - July 17, 1844
v.22 3,552 - 4,676 Jan. 17, 1845 - Nov. 22, 1845
v.23 4,681 - 5,827 Nov. 22, 1845 - Oct. 24, 1846
v.24 5,833 - 6,984 Oct. 24, 1846 - Apr. 29, 1847
v.25 6,985 - 8, 136 Apr. 29, 1847 - Sept. 8, 1847
v.26 8,137 - 9,288 Sept. 9, 1847 - May 25, 1848
v.27 9,289 - 10,440 May 26, 1848 - Sept. 11, 1848
v.28 10,441 - 11,665 Sept. 11, 1848 - Feb. 28, 1849
v.29 11, 666 - 12,667 Feb. 28, 1849 - Jan. 3, 1850
v.30 12,668 - 13,669 Jan. 3, 1850 - Sept. 11, 1850
v.31 13,769 - 14,677 Sept. 12, 1850 - Aug. 5, 1851
v.32 14,680 - 15,680 Aug. 6, 1851 - Aug. 22, 1852
v.33 15,681 - 16,679 Aug. 28, 1852 - Dec. 20, 1853
v.34 17,685 - 18,683 Sept. 28, 1855 - Aug. 17, 1857
v.35 18,684 - 19,684 Aug. 17, 1857 - Mar. 7, 1859
v.36 19,685 - 20,685 Mar. 8, 1859 - Sept. 6, 1861
v.37 20,686 - 21,786 Sept. 7, 1861 - Apr. 29, 1864
v.38 21,787 - 22,787 Apr. 29, 1864 - Sept. 20, 1865
v.39 22,788 - 23,787 Sept. 21, 1865 - Aug. 7, 1866
v.40 23,788 - 24,787 Aug. 7, 1866 - Sept. 3, 1867
v.41 24,788 - 25,787 Sept. 3, 1867 - July 12, 1867
v.42 25,788 - 26,786 July 12, 1867 - July 24, 1867
v.43 26,788 - 27,642 July 24, 1867 - Nov. 30, 1867

B. WESTERN RAIL ROAD CORPORATION

Cancelled Certificates

v.44 1867 Boston & Worcester and Western Rail Road holdings

Transfers

v.45	1 - 779	Feb. 9, 1836 - Apr. 20, 1839	
v.46	1,871 - 2,408	May 8, 1841 - Feb. 28, 1842	
v.47	1 - 1,316	Mar. 1, 1842 - June 13, 1843	(Missing numbers cut out and used for half shares)
v.48	1,361 - 2,716	Jan. 11, 1843 - Apr. 13, 1844	
v.49	2,731 - 4,090	Apr. 13, 1844 - Aug. 8, 1844	
v.50	4,091 - 5,438	Aug. 8, 1844 - Feb. 25, 1845	
v.51	5,451 - 6,810	Feb. 26, 1845 - Dec. 27, 1845	
v.52	6,811 - 8,130	Dec. 27, 1845 - Nov. 11, 1846	
v.53	8,239 - 9,580	Oct. 22, 1846 - June 5, 1847	
v.54	9,675 - 11,011	June 7, 1847 - Feb. 22, 1848	
v.55	1 - 1,336	Feb. 22, 1848 - Oct. 28, 1848	
v.56	1,337 - 2,668	Oct. 28, 1848 - May 10, 1849	
v.57	2,669 - 4,004	May 10, 1849 - Feb. 15, 1850	
v.58	4,005 - 5,372	Feb. 16, 1850 - Dec. 11, 1850	
v.59	5,373 - 6,706	Dec. 16, 1850 - Oct. 4, 1851	
v.60	6,707 - 8,057	Oct. 4, 1851 - Oct. 14, 1852	
v.61	8,058 - 9,408	Oct. 14, 1852 - Oct. 1, 1853	
v.62	9,409 - 10,560	Oct. 1, 1853 - Jan. 30, 1855	
v.63	10,561 - 11,560	Jan. 31, 1855 - May 10, 1856	
v.64	11,561 - 12,560	May 12, 1856 - Oct. 19, 1857	
v.65	12,561 - 13,560	Oct. 19, 1857 - Jan. 10, 1859	
v.66	13,561 - 14,560	Jan. 12, 1859 - Nov. 27, 1860	
v.67	14,561 - 15,552	Nov. 20, 1860 - Nov. 28, 1862	
v.68	15,561 - 16,560	Nov. 26, 1862 - Mar. 9, 1865	
v.69	16,561 - 17,560	Mar. 11, 1865 - June 3, 1867	
v.70	17,561 - 17,975	June 4, 1867 - Nov. 30, 1867	

Dividends Payable

v.71	No. 1 - 6	Feb. 10, 1845 - July 1, 1847
v.72	No. 7 - 10	Jan. 1, 1848 - July 1, 1849
v.73	No. 11 - 14	Jan. 1, 1850 - July 1, 1851
v.74	No. 15 - 18	Jan. 1, 1852 - July 1, 1853
v.75	No. 19 - 22	Jan. 2, 1854 - July 2, 1855
v.76	No. 23 - 27	Jan. 4, 1856 - Jan. 4, 1858
v.77	No. 28 - 33	July 5, 1858 - Jan. 2, 1861
v.78	No. 34 - 37,40,41	July 1, 1861 - Jan. 2, 1865
v.79	No. 38	July 1, 1863
v.80	No. 39	Jan. 1, 1864
v.81	No. 42 - 47	July 1, 1865 - Jan. 1, 1868

Massachusetts Sterling Bonds, dated Apr. 1, 1838, Oct. 1, 1839, Apr. 1, 1840, Apr. 1, 1841 payable in 30 years and Albany bonds due July 1: 1866, 1870, 1871, 1876

v.82	July 11, 1840 - May 17, 1843	Albany Bonds (dates sold)
	Aug. 1, 1842 - Apr. 19, 1843	Mass. Sterling (dates sold)
v.83	July 11, 1840 - May 17, 1843	Albany Bonds (dates sold)
	Aug. 1, 1842 - Apr. 19, 1843	Mass. Sterling Bonds (dates sold)
	July 21, 1855 - Feb. 24, 1858	Mass. bonds dated Oct. 1, 1855 payable in 20 years (dates sold)

Sinking Fund - Journal

v.84 Jan. 1, 1839 - Oct. 4, 1862

Loan Sinking Fund - Journal

v.85 Jan. 1, 1855 - Nov. 14, 1871

B. WESTERN RAIL ROAD CORPORATION

Loan Sinking Fund - Ledger

v.86 Jan. 1, 1855 - Nov. 14, 1871

Sinking Fund - Interest due on Bonds and Mortgages

v.87 Dec. 1, 1854 - Dec. 1, 1871

Report to the Mass. Commissioners on the Sinking Funds

v.88 Dec. 1, 1848 - Dec. 31, 1855

Receipts for Notes or Bonds from Commissioners of the Western Rail Road Sinking Fund

v.89 May 3, 1839 - Nov. 28, 1856

Journals

v.90	Feb.	1836 - Aug.	15, 1840	Boston	
v.91	Aug. 15,	1840 - Nov.	29, 1843	"	B
v.92	Dec. 1,	1843 - Nov.	30, 1856	"	C
v.93	Dec. 9,	1856 - Nov.	30, 1868	"	D

Ledgers Jan. 1836

v.94	Dec. 30,	1843 - July	31, 1854	
v.95	July 31,	1854 - Nov.	30, 1868	

Cash - Treasurer's Books

v.96	Nov. 1,	1836 - Sept.	18, 1848	
v.97	Sept. 18,	1848 - Oct.	31, 1859	
v.98	Nov. 1,	1859 - May	31, 1867	

Cash to Sundries, Boston

v.99	Dec.	1847 - Aug.	1849	
v.100	June 29,	1861 - May	30, 1863	

Cash, Transportation Account Current

v.101 June 1, 1853 - Oct. 25, 1864 Monthly by Henry Gray, Supt.

Cash, Expense Account Current

v.102	Dec.	1854 - May	1859	
v.103	June	1859 - Nov.	1864	
v.104	Dec.	1864 - Nov.	1867	

Reports

104a	Aug. 15, 1836	McNeil - Swift
104b	Sep. 30, 1836	" " Whistler - Swift
104c	Jan. 15, 1837	" " " "
104d	Jun. 12, 1837	Morgan " "
104e	Mar. 16, 1836	Chesbrough, etc.

ENGINEERING DEPARTMENT

Surveys, Topography, Experimental Lines

v.105	No. 2 from Grout's Summit, Spencer, west to Gallup's Mills in Brookfield
v.106	No. 4 " " " " west
v.106a	No. 5 " " " " Paxton

Topography H. Stebbins, Assistant Engineer

v.107	No. 2 June 15, 1836 - Aug. 17, 1836	Spencer
v.108	No. 4 Aug. 18, 1836 -	Charlton to Spencer (?)

Compass Books

v.109	May 12, 1836 - June	1836	Station 63 to Charlton
v.110	Oct. 28, 1836 - Nov. 10, 1836		Monson to Springfield
v.111	Aug. 10, 1836 -		Northern Route Station 788 around Teloa Mt to Becket
v.112	?		(Hoosac River only place mentioned)
v.113	Nov. 24, 1845 - Nov. 29, 1845		to Brookfield

Field Book of Final Location

v.114 1837 West Springfield to Becket

B. WESTERN RAIL ROAD CORPORATION

495
 1831-1848
 B747

Levels

v.115 1
 v.116 1840? From West Brookfield to Barre
 Main valley line

Journal

v.117 Sept. 1839 - Nov. 1847

Ledger

v.118 Apr. 16, 1836 - June 30, 1840 Monthly Accounts of Engineering Department
 v.119 Jan. 29, 1837 - Sept. 30, 1837 By Contractors
 v.120 Jan. 29, 1837 - Mar. 31, 1839 By Contractors
 v.121 Jan. 29, 1837 - Dec. 1844 By Contractors
 v.122 Jan. 29, 1837 - Sept. 30, 1838 By Sections

Cash

v.123 Apr. 1, 1837 - Oct. 1848 Engineer's Office
 v.124 Oct. 12, 1843 - Mar. 22, 1845 a/c with R. D. Morris

Monthly Estimates of Work

v.125 Aug. 9, 1838 - Oct. 1840 Sections, 106, 107, 109 - 113

Bills for Contingencies of Graduation

v.126 May 1, 1840 - July 2, 1842

See also unbound

Expenditures on account of Construction

v.127 Jan. 1, 1844 - Nov. 1848

TRANSPORTATION DEPARTMENT

Journal

v.128 Mar. 1859 - Apr. 1860 J

Ledger

v.129 Apr. 1, 1837 - Dec. 1, 1850
 v.130 Nov. 30, 1850 - Nov. 30, 1859
 v.131 Nov. 30, 1859 - Nov. 30, 1867
 v.132 Dec. 31, 1855 - Feb. 5, 1866 Wood chopped

Transportation Ledger Balances at Springfield

v.133 Nov. 30, 1850 - May 31, 1862
 v.134 June 30, 1862 - Nov. 30, 1867

v.134a Cash book, Charlton, 1841-1901

v.134b Freight allowances, 1850-51
 Freight balances, 1852, 1854

v.134c Ticket sales, 1850-52
 including B & W and P & N A

(From Dec. 1867 on, Boston & Albany)
 v.134d Conductors' books, etc.
 c.1838-39 (4), 1855(2),
 1857-58 (5)

Recapitulation of Transportation

v.135 Mar. 1861 - Sept. 1866
 v.136 Oct. 1866 - Dec. 1870

(From Dec. 1867 on, Boston & Albany)

Abstract of Vouchers

v.137 July 1841 - May 29, 1843
 v.138 July 31, 1843 - Feb. 28, 1846
 v.139 Nov. 1843 - Dec. 1, 1848
 v.140 Mar. 19, 1846 - Nov. 1848
 v.141 Dec. 1848 - Nov. 30, 1854
 v.142 Dec. 1, 1854 - Nov. 30, 1860
 v.143 Dec. 1, 1860 - Nov. 30, 1867

and Statement of Expenditures

Monthly Check Roll

v.144 Jan. 1843 - Apr. 1843 Albany and West Stockbridge divisions

B. WESTERN RAIL ROAD CORPORATION

Letter Books

v.145 Jan. 12, 1836 - Nov. 6, 1838 T. B. Wales, President (copies letters)
 v.146 Mar. 10, 1851 - Oct. 16, 1852 W. H. Swift, President
 v.147 Oct. 16, 1852 - Dec. 17, 1853 " "
 v.148 Dec. 19, 1853 - Apr. 1, 1863 W. H. Swift and C. W. Chapin, Presidents
 v.149 Aug. 24, 1847 - Dec. 30, 1848 Josiah Quincy, Jr., and S. Fairbanks, Treasurers
 v.150 Jan. 17, 1854 - Jan. 29, 1856 S. Fairbanks, Treasurer
 v.151 Jan. 30, 1856 - Jan. 25, 1858 " "
 v.152 Jan. 25, 1858 - Jan. 4, 1860 " "
 v.153 Jan. 4, 1860 - Nov. 27, 1861 " "
 v.154 Nov. 28, 1861 - May 20, 1865 " "
 v.155 May 24, 1865 - Aug. 6, 1866 " and C. E. Stevens, Treasurers
 v.156 Aug. 6, 1866 - June 18, 1867 C. E. Stevens, Treasurer
 v.157 Mar. 18, 1836 - Aug. 10, 1837 Engineering Department
 v.158 July 16, 1851 - Dec. 25, 1854 G. Twitchell, Supt. (letters traced)

Diary

v.159 July 1, 1841 - Mar. 22, 1842 Engineering Department

Cases

v.160 June 1, 1853 unsettled by Phelps

Farmers Bank, Hudson, N. Y., in account with G. C. Power

v.161 July 8, 1848 - Dec. 21, 1853

Unbound material; see p.11-

v.162 John Firth, grocer, in account with, 1847

C. ALBANY & WEST STOCKBRIDGE RAIL ROAD CO., 1834-1877

Minutes of Directors' Meetings

V.1 May 5, 1834 - July 26, 1844

Executive Committee Records

v.2 June 1, 1840 - Feb. 13, 1844

Stock Ledger

v.3 July 28, 1835 - Jan. 27, 1877

Script Book

v.4 1 - 37 1835 - June 8, 1847

Transfer Book

v.5 1 - 159 Aug. 13, 1835 - Jan. 27, 1877

Journals

v.6 June 1, 1840 - Nov. 15, 1864 Boston, Mass.
 v.7 June 6, 1840 - Mar. 31, 1843 Springfield, Mass.
 v.8 Dec. 3, 1840 - Dec. 2, 1843 Construction expenses

Ledgers

v.9 June 1, 1840 - Jan. 1, 1859 Boston, Mass.
 v.10 June 1840 - Mar. 31, 1843 Springfield, Mass.

Abstract

v.11 Dec. 31, 1840 - Dec. 2, 1843 Construction expenses

Cash and Invoices

v.12 (June 1, 1840 - Apr. 25, 1845 Cash
 (May 8, 1848 - Jan. 2, 1867 Invoices of iron

Unbound vouchers
 1841 case
 1842, 1843 case

N.Y., N.H. & P., & Corp. #24 Hampshire & Hampden Canal Co., 1822-1836 (1825-1828), 2 vols., complete

Vol.	Old No.	Description	Period	Notes
127	384	Day Book A	July 1825-Nov. 1828	bundle
1283	384	1/2 Cash Book	1825-1828, 1854	

See list of unbound mss. at end

Corp. #36 New York, Providence & Boston R.R., 1832-1893 (1833-1893), 9 vols.

129	485	Ledger 1	Mar. 1832-Mar. 1844	(ledgers only)
130	486	" 2	Mar. 1844-Mar. 1844	Index
131	487	" 3	Dec. 1843-Aug. 1857	
132	488	" 4	Aug. 1857-Oct. 1878	Index
133	489	" 5	Oct. 1878-Sept. 1881	
134	490	" 6	Oct. 1881-Sept. 1883	
135	491	" 7	Sept. 1883-Sept. 1886	
136	492	" 8	Sept. 1886-June 1889	
137	493	" 9	1889-1892	
			Apr. 1892-Feb. 1893	

Corp. #45-47 Boston & New York Central R.R., 1834-1858 (1854-1866), 3 vols.

138	675	Ledger	Jan. 1854-Mar. 1866	Index
139	676	" (D.N. Pickering)	Feb. 1855-Mar. 1866	Index
140	677	Journal	Jan. 1854-Mar. 1866	
141	678	" (D.N. Pickering)	Feb. 1855-Mar. 1866	

See list of unbound mss. at end

CASE 6 ->

Corp. #49 Charles River Branch R.R., 1849-1853 (1851-1855), 3 vols., complete

142	685	Ledger (Treas. Cash)	Apr. 1851-May 1852	bundle
	689	Cash Book	May 1852-Aug. 1855	
143	686	Ledger	June 1852-Aug. 1855	
144	688	Journal (Treas. Cash)	Apr. 1851-May 1852	

See list of unbound mss. at end

SEE L ->

Corp. #50 Charles River R.R., 1851-1855 (1852-1856), 3 vols., complete

145	695	Journal	July 1854-Aug. 1855	bundle
	696	Cash Book	1855-1856	
146	697	Bills Payable	Nov. 1854-Mar. 1856	
147	698	" & Receivable	Feb. 1852-Apr. 1855	

See list of unbound mss. at end

IN CASE 6

Corp. #50 New York & Boston R.R., 1846-1865 (1853-1866), 7 vols., complete

148	705	Genl. Ledger	Aug. 1855-June 1865	
149	707	Journal	Aug. 1855-July 1865	
150	708	Blotter A	Sept. 1853-May 1866	
151	709	Cash Book B	Mar. 1853-May 1855	bundle
152	710	" "	Dec. 1862-Apr. 1865	
153	711	Notes & Bills Pay. & Rec.	1854-1856 & 1860-1864	
154	712	" " " " " "	1855-1866	

See list of unbound mss. at end

Corp. #55 Boston, Hartford & Erie R.R., 1863-1866; Trustees, 1866-1870; Receivers, 1870-1873 (1864-1877), 8 vols.

155	784	Journal A	Dec. 1864-July 1870	
156	785	Ledger (Comb. prepared by J.H. Luce)	Jan. 1868-Jan. 1879	Index
157	786	Journal " " " " " "	Jan. 1868-Jan. 1873	
158	800	Ledger Trustees	Aug. 1871-Jan. 1877	
159	801	" " " " " "	Aug. 1871-Oct. 1874	Index
160	802	Journal " " " " " "	Aug. 1871-Oct. 1874	
161	810	Ledger Receivers	Aug. 1870-Sept. 1872	
162	811	Journal " " " " " "	Aug. 1870-Sept. 1872	

See list of unbound mss. at end

A note in the finding aid (NY, New Haven + Hartford Find A

Ms 724

1822-1927

MS 32

Book No. 6 is the gift of Thomas W. Streeter to the Business Historical Society. It appears to be the construction account of the New York, Providence and Boston Railroad Company from 1833 to 1842. This railroad appears to have been the predecessor of the Boston and Providence Railroad, as there is an item on January 7, 1841 of a draft on the Boston & Providence Railroad Company.

It appears that the engineers of the construction work were McNeil & Whistler, the Whistler being the father of the great artist. There are two letters from Major George W. Whistler, dated 1841, written at Springfield, Massachusetts, referring to his work on the Western Road. These letters are in the files of the Manuscript Room under the head of "Transportation."

This could be B.

^{1st}
See highlighted entry in
finding aid. I think this
is the same item.

By R.D. Ware
Feb. 14, 1930.

Ms 705
1833-1838
N532

ms. 726
1822-1927
N 532
v. 1379

Streeter, Thomas W.
Gift 7450
B H S

Railway construction 1833-1838
New York, Providence & Boston R.R.
McNeill & Whistler, engineers.

One ledger 1833-1838. There is a reference in the
ledger to McNeill & Whistler, construction engineers
of the railroad.

See Collection Folder, Boston & Providence



^{2nd}
see highlighted item in
finding aid. This is same
item.

Proprietors of Locks & Canals Finding Aid

MSS 393

1792-1947

P966

Locks and Canals, 10
Index, cont'd.

- Safford, A. T. RC-3, C-11
- Sewers 74 (1878), 87 (1890), 112 (1890)
- Sprinklers 109 (1852-87)
- Stockholders' records EB (1792-1847, incomplete) Shattuck, Moses, RG-1, S-2
- Storrow, J.J. 72 (1877)
- Suffolk Mill 63 (1874), C-8 (1926-1947), S-2
- See also Tremont Mills
- Suffolk Mfg. Co. 12 (1847)
- Swain water wheels 49 (1870), 52 (1869-71), 53 (1871), 267 (1872),
57-61, 63, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 (1883) /
425 (1872-73), 431-433 (1869-70), 139-440 (1874),
448 (1874)
- Swain turbine 60 (1874-75), 437-38 (1874), and other files
- Taxes 135 (1886-88), 460 (1859)
- Thornely, Liverpool 187 (1841-43)
- Tolls PA 1-32, S-1
- Tremont & Suffolk Mills 134 (1873), 224 (1869), 235-236 (1866-68),
286 (1872), 407 (1847), 450 (in S-1)
- Tremont Co. 95 (1848)
- Troy Nail Factory 58 Turnpike Co. EB-3, EB-4
- Tucker, Payson 83 (1884)
- Tug -engine 70 (1875)
- Turbines 17, 96 (1847-83), 60 (1874-75), 232 (1870),
290 (1875), 411 (1851), 412 (1846), 414 (1850),
416 (1850), 422 (1855), 423 (1857), 426 (1859),
427 (1858), 430 (1869),
See also Swain Turbine
Not all refs. given
- Water notices 311-332 (1852-80), 346 (1881), 350 (1882),
352 (1883), 354 (1884), 360 (1885), 361 (1886),
367 (1887)
- Water wheels 31 (1860), 49 (1870), 52 (1869-71), 53 (1871),
58, 96 (1845-48)
See also Swain
- Weir 13 (1851), 419 (1852)
- Wendell, O.C. 265 (1872)
- Whistler, G.W. 136 (1834-37), 1151
- Whitney, Abel, Paymaster EE-1
- Winnepesaukee Lake Cotton
& Woolen Mfg. Co. 118 (1878), 119, 129 (1879), 202 (1852-57),
251 (1875), 275 (1877), KB-2
- See also French, Hutchinson

Winnepesaukee

Manuscript Vertical Files - Balt + Chicago

CARTON 5 (cont'd)

- Mss: 724
1854-1874
S728 Report of tickets (1864-1865)
Gift, P.J. Christie
vol. 6
- Mss: 724 Steam RR (misc.), A-H
- Mss: 724 Steam RR (misc.), I-Z
- Mss: 724 Western Railroad Corporation
Newspapers - clippings, 1846-1878
relating to railroads
- Mss: 724 Railroads, general
n.d., 1849-1856
- Mss: 724
1822-1927
N532 New York, New Haven, and Hartford RR
vol. 39u
- Mss: 724
1824-1900
F-7-12 Delaware & Hudson RR
Ry. & Loc. Hist. Soc.
- Mss: 724
1825-1842(58)
F-7-14 Allegheny Portage RR
History of Ry. & Loc. Hist. Soc.
- Mss: 724
1826-1830
G759 File
F-7-15 Granite Railway
- Mss: 724
1830-1886
F-7-16 Boston & Lowell RR
Ry. & Loc. Hist. Soc.
- Mss: 724
1830-1951
F-7-17 Boston & Maine RR
Ry. & Loc. Hist. Soc.
- Mss: 724
1830-1953
F-7-18 Baltimore & Ohio RR (Manuscript Guide includes ref to Geo Whistler)
Ry. & Loc. Hist. Soc. FYI and the dates there end at 1933

Missing
 ← Carton 5
 Mss: 724 1830-1886
 F-7-16

CARTON 6

- Mss: 724
1831-33
F-7-19 Liverpool & Manchester RR
L787 File
- Mss: 724
1835-1859 Misc. Railroads: RR stocks in 1844
Gift Charles E. Tuttle 2/3/39

William Jackson Finding Aid

Card 1

MSS:705
1809-1853
J14

Baker Library
Purchase 1/5/34 from
Charles E. Goodspeed

Railway construction 1809-1853
Hon. William Jackson
Newton, Massachusetts

1 vol. of unbound manuscripts, comprising papers of the Western R.R., Boston and Worcester R.R., Millbury Branch R.R.: semi-annual accounts of superintendents; correspondence on "kyanizing" railway ties; agreements; "Sabbath" remonstrance; personal letters from S.W. Dana to William Jackson;



Card II

MSS:705
1809-1853
J14

one letter, dated 1834, addressed "Hon. William Jackson, Member of Congress, Washington, D.C.;" miscellaneous papers; newspaper clippings.



UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: ADDITIONAL DOCUMENTATION

PROPERTY NAME: Middlefield-Becket Stone Arch Railroad Bridge District

MULTIPLE NAME:

STATE & COUNTY: MASSACHUSETTS, Hampshire

DATE RECEIVED: 5/14/01
DATE OF 16TH DAY:
DATE OF WEEKLY LIST:

DATE OF PENDING LIST:
DATE OF 45TH DAY: 6/29/01

REFERENCE NUMBER: 80000502

NOMINATOR: STATE

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 6/28/01 DATE

ABSTRACT/SUMMARY COMMENTS:

Additional Documentation Accepted

RECOM./CRITERIA _____

REVIEWER _____ DISCIPLINE _____

TELEPHONE _____ DATE _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N



Middlefield--Becket Stone Arch Railroad
Bridge District

Chester, Mass. *Hampshire, Hampden and
Berkshire counties*

Charles T. Lennon

7/79

Lower Pioneer Valley Regional Planning Comm.

W. Springfield, Mass.

Photo #1 of 4

Bridge #1 Northeastern elevation

FEB 8 1980

APR 11 1980

BRIDGE NO. 1

NORTHEASTERN
ELEVATION

PHOTO NO. 1



BRIDGE No. 2

LOOKING EASTWARD

PHOTO No. 2

Middlefield--Becket Stone Arch Railroad
Bridge District

Hampshire & Hampden, Mass.
and Berkshire counties

Charles T. Lennon 7/79
Lower Pioneer Valley Regional Planning Comm.
W. Springfield, Mass.

Photo #2 of 4
Bridge #2 looking eastward

FEB 8 1980

APR 11 1980



Middlefield--Becket Stone Arch Railroad
Bridge District
Middlefield & Becket, Mass.

Hampden, Hampshire and Berkshire Counties

Charles T. Lennon

7/79

Lower Pioneer Valley Regional Planning Comm.
W. Springfield, Mass.

Photo #3 of 4

Bridge #4-foreground

Bridge #3-background

Western elevations

APR 11 1980

FEB 8 1980

BRIDGE NO. 4 - FOREGROUND
BRIDGE NO. 3 - BACKGROUND

WESTERN
ELEVATIONS

PHOTO NO. 3



Middlefield--Becket Stone Arch Railroad
Bridge District
Hampshire & Hampden, MASS.

and Berkshire Counties

Charles T. Lennon 7/79
Lower Pioneer Valley Regional Planning Comm.
W. Springfield, MASS.

Photo #4 of 4
Bridge #6 southern elevation

FEB 8 1980

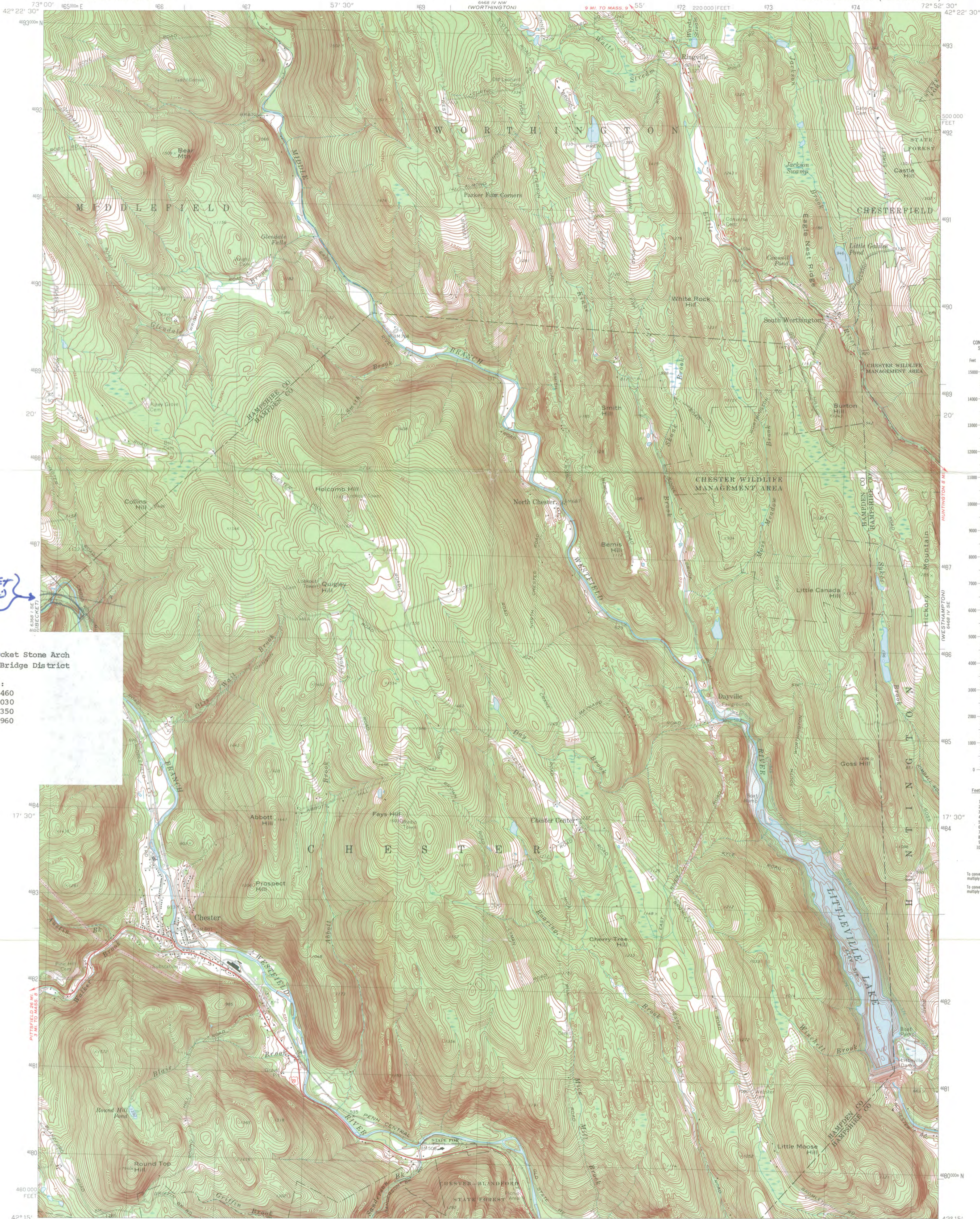
APR 11 1980

BRIDGE NO. 6

ELEVATIONS

SOUTHERN
ELEVATION

PHOTO NO. 4.



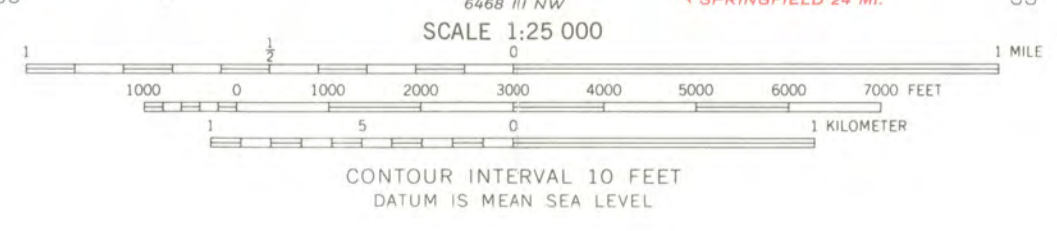
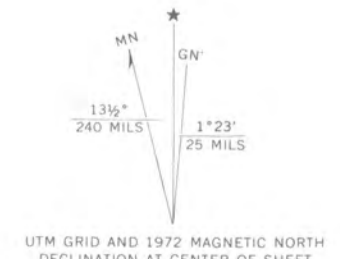
EASTERN END OF
MIDDLEFIELD-BEKET
STONE ARCH RAILROAD
BRIDGE DISTRICT

Middlefield-Beket Stone Arch
Railroad Bridge District

- UTM REFERENCES:
A 18/660850/4686460
B 18/661210/4687030
C 18/665500/4686350
D 18/664190/4684960



Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS.
Planimetry by photogrammetric methods from aerial photographs
taken 1941. Topography by planeable surveys 1944 and 1945
Revised from aerial photographs taken 1971. Field checked 1972
Projection and 10,000-foot grid ticks: Massachusetts coordinate
system, mainland zone (Lambert conformal conic)
1000-meter Universal Transverse Mercator grid,
zone 18
Fine red dashed lines indicate selected fence and field lines where
generally visible on aerial photographs. This information is unchecked
Area covered by dashed light-blue pattern is subject to controlled
inundation

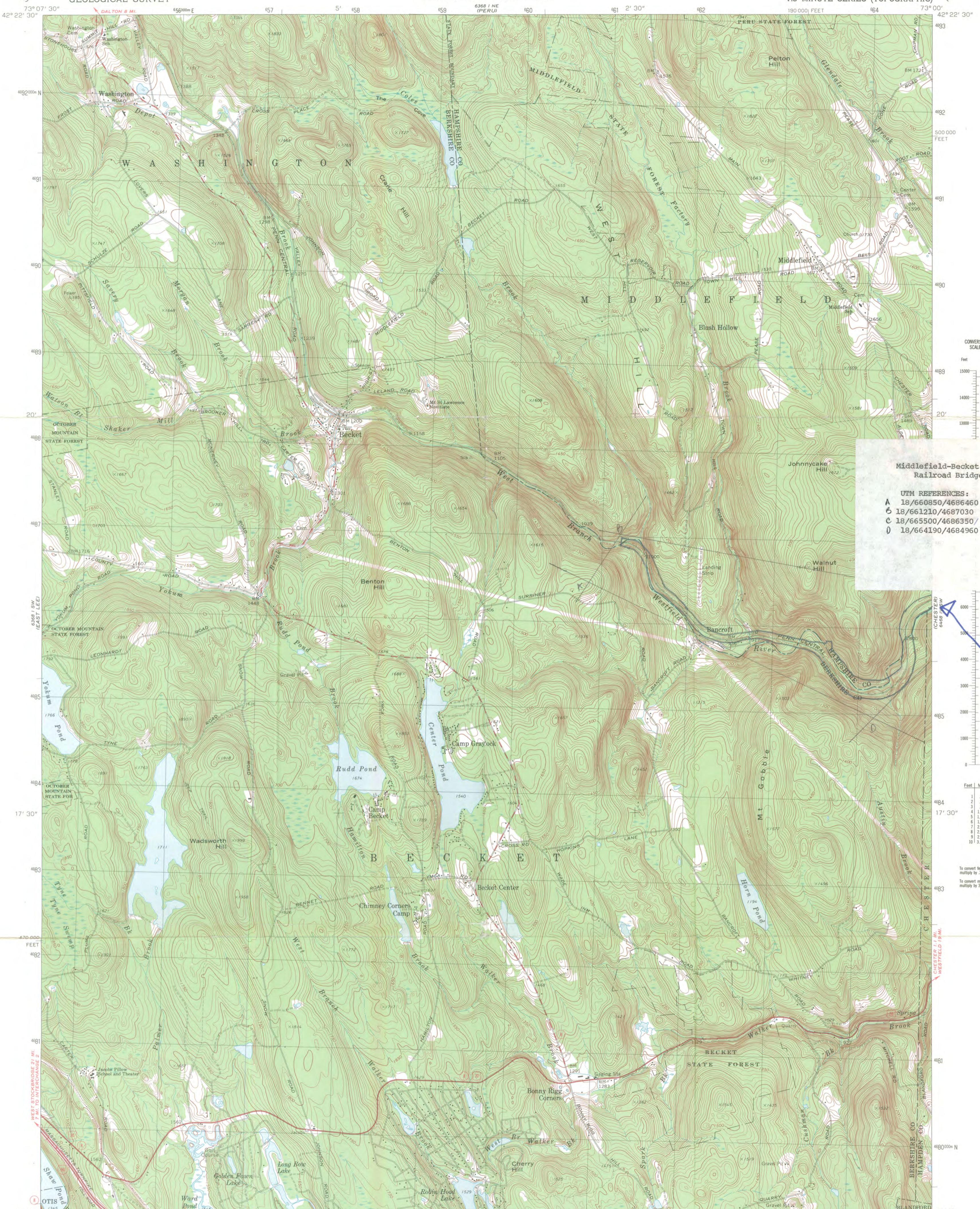


ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route
U. S. Route
State Route

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

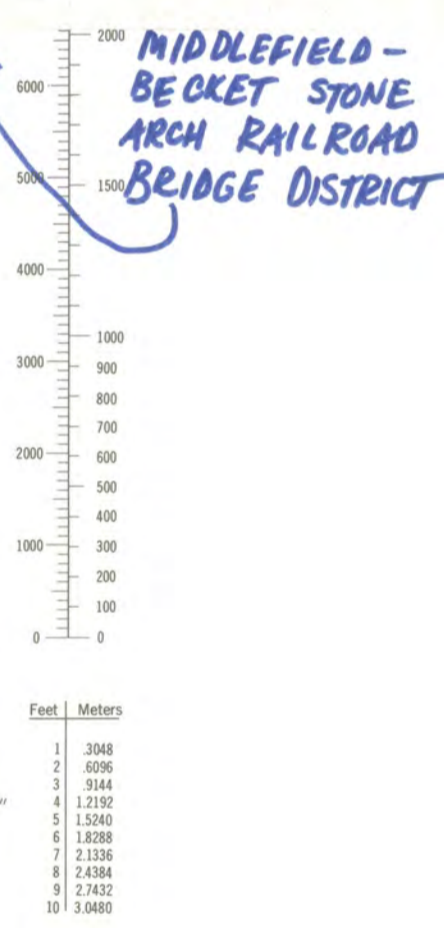
CHESTER, MASS.
N4215-W7252.5/7.5
1972
AMS 6468 IV SW-SERIES V814



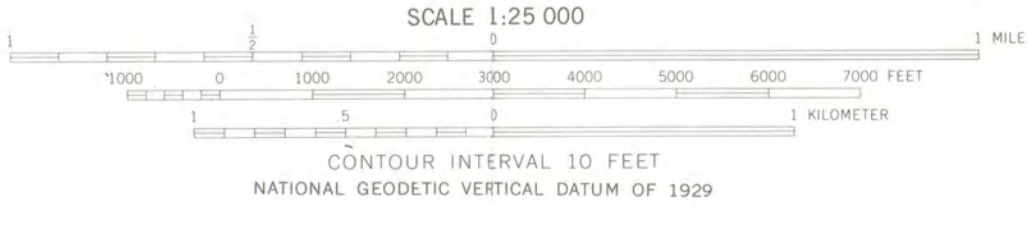
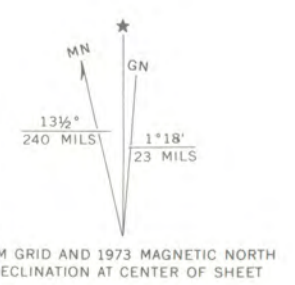


Middlefield-Becket Stone Arch
Railroad Bridge District

UTM REFERENCES:
A 18/660850/4686460
B 18/661210/4687030
C 18/665500/4686350/
D 18/664190/4684960



Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and Massachusetts Geodetic Survey
Planimetry by photogrammetric methods from aerial photographs
taken 1941. Topography by planimetric surveys 1945. Revised from
aerial photographs taken 1971. Field checked 1973
Polyconic projection, 1927 North American datum
10,000-foot grid based on Massachusetts coordinate system,
mainland zone
1000-meter Universal Transverse Mercator grid,
zone 18



ROAD CLASSIFICATION

Primary highway, hard surface	Light duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U. S. Route
	State Route

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

BECKET, MASS.
N4215-W7300/7.5
1973
AMS 6368 I SE-SERIES V814



DATE

4/9/80

TELEPHONE REPORT

TIME OF CALL

AM
PM

1. CALL TO: FROM (Name)

Candy Jenkins

2. ADDRESS (Tel. No. if needed)

MASS. SHPO

3. SUBJECT, PROJECT NO., ETC.

Middlefield-Becket Stone Arch Railroad District - Hampshire/Berkshire/Hampden
counties

4. DETAILS OF DISCUSSION

I expressed my concern that the name of this district may not accurately reflect the contents of the nomination. Of the ten bridges included in the nomination only five are constructed of stone. She agreed that the best course is to change the name of the district to the - Middlefield-Becket Railroad Bridge District.

NAME OF PERSON PLACING/RECEIVING CALL

TITLE

OFFICE

Patrick Andrews

ENTRIES IN THE NATIONAL REGISTER

STATE MASSACHUSETTS

Date Entered

APR 11 1980

Name

Location

Hill School

South Dartmouth
Bristol County

Middlefield-Becket Railroad Bridge District

Middlefield vicinity, Becket and
Chester
Berkshire, Hampshire and Hampden
Counties

Also Notified

Honorable Paul Tsongas

Honorable Edward M. Kennedy
Honorable Gerry E. Studds
Honorable Silvio O. Conte

State Historic Preservation Officer
Mrs. Patricia L. Weslowski
Executive Director, Massachusetts
Historical Commission
294 Washington Street
Boston, Massachusetts 02108

NR

Byers/bjr

4/21/80

For further information, please call the National Register at (202)343-6401.



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

April 30, 2001

Ms. Carol Shull
National Register of Historic Places
National Park Service
Department of the Interior
Mail Stop 2280, Suite 400
1849 C Street, NW
Washington, DC 20240

Dear Ms. Shull:

Please accept the enclosed supplementary material to the existing National Register district:

Middlefield-Becket Stone Arch Railroad Bridge District, Chester/Middlefield/Becket
(Hampden/Hampshire/Berkshire), MA originally listed April 11, 1980.

The enclosed material expands section 8 by providing greater information relative to the construction and engineering history of the line and the bridges; and provides an expanded section 9 (bibliography). No changes are required of the boundary, properties listed, or description.

A revised cover sheet signed by the SHPO is also included.

Thank you for your attention in this matter.

A handwritten signature in cursive script that reads "Betsy Friedberg".

Betsy Friedberg
National Register Director
Massachusetts Historical Commission

enclosure

cc: Constance Mulholland, Becket Historical Commission
Chester Historical Commission
Jack Cobb, Middlefield Historical Commission
Bonnie Parsons, PVPC, consultant