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The Blackstone Canal

By

Richard A. Wilson, Jr.

John Brown of Providence first conceived the idea of a Canal from Providence to Worcester. “In 1796, Brown advanced his idea; and using much of his own money and family influence, he called public meetings and aroused such enthusiasm and support that a charter was applied for, and received from the Rhode Island Legislature for the construction of a Canal.”¹

Permission for a similar private company to dig the Massachusetts link was denied by the Massachusetts Legislature because Boston merchants, fearful of losing its trade with Worcester and also fearing that Providence would take over as a major seaport proposed building a Boston to Worcester Canal. These proposals were not acted upon and the Blackstone Canal was delayed thirty years.

The loss of the Blackstone Canal at that time became one of the causes for the demise of the Canal in later years. “It is cause of deep regret, that an enterprise, from which a large section of our commonwealth would now have been reaping the most signal advantages, should have been thus unfortunately defeated. Much time, which would otherwise have been employed in improvements, has been wasted; and much capital, which would have been amassed, has been lost to the State. Since that period, the mill privileges upon the Blackstone have, to a great extent, been occupied by large manufacturing

¹ Blackstone Canal Folder, Worcester Public Library.

establishments that could not now be easily overcome, were not the proprietors favorably disposed towards the plan.”²

From the initial idea of a Canal in the 1790’s, to the resurfacing of the idea in the 1820’s, many manufacturing facilities had sprung up along the Blackstone River and transportation was required for all types of freight. This need for an inexpensive form of transportation led to the instigation of meetings in the Blackstone Valley to discuss the need for a Canal. The City of Worcester listed its reasons in a letter dated May 14, 1822. “There is now a strong disposition to open a Canal between this place and Providence, arising from a conviction of its practicability, at a moderate expense. The people here, in Providence, and in other places near the Blackstone River, as far as we have learned, feel a deep interest in carrying this plan into successful operation, as it is believed the extensive business done on the banks of that river, and in the adjacent country will justify such an enterprise. We cannot doubt also that this extensive tract of territory will be greatly benefited by opening a water communication -- as it will probably reduce the expense of transportation from here to Providence, Boston, New York, and many other places, from one-half to one-fourth of what it now is. It will probably open to us a market for many products, which we cannot now send abroad, by reason of the expense of transportation, and will enable us to carry on, with success, many branches of industry, which cannot now be pursued.”³

The sentiment of both Worcester and Providence at this time was that a Canal was necessary for moving goods from Worcester to Providence and also to move goods to Providence from the rapidly developing industries along the Blackstone River. Various committees were formed to investigate the costs and the problems associated with building such a Canal and the committees hired Benjamin Wright, Esq., (Chief Engineer of the middle section of the Erie Canal) to survey the route. The survey seems to have been done by a Mr. Hutchinson; however, Mr. Wright did work with Mr. Hutchinson on the difficult areas and did sign the report. Part of the report is given as follows:

² Israel Plummer, *History of the Blackstone Canal, Read Before the Worcester Society of Antiquity, June 4, 1878*. (Slatersville, RI: Slatersville Press, 1998), p. 4.

³ Letter Relating to Canal between Worcester and Providence, 1822, Worcester Public Library.

Mr. Hutchinson, accompanied by some of the gentlemen committee, has completed a level over the route for the proposed Canal; and they find the distance, by measure, 45 miles, as a Canal would run, and the descent 451 ½ feet from Thomas Street, in Worcester, to tidewater in Providence. The ground is remarkably favorable. The soil generally easy to excavate; the embankments neither large nor extensive; very little solid rock to be removed; the aqueducts and culverts are not numerous and expensive. On viewing the country intended to be benefited by this Canal, taking into consideration its probable future growth and increase of trade, I have come to the conclusion that a Canal 32 feet wide at the top, 18 feet at the bottom, and 3 ½ feet depth of water, would be the proper size to be formed; and that locks of 70 feet between the Gates, and 10 feet in width, would be sufficiently large for the trade intended, bearing in mind a proper economy in use of water and in the erection of locks.⁴

The Canal was incorporated in Massachusetts in 1823, during the January session of the legislature, and incorporated in Rhode Island during the June session of that same year. The individuals listed on the Massachusetts corporation charter were John Davis, William E. Green, John W. Lincoln, Edward D. Bangs, Lemuel Davis, John Warner, John M. Earl, Isaiah Thomas, Daniel Waldo, Rejoice Newton, Oliver Fiske, Reuben Sikes, Theophilus Wheeler, John Greene, Asa Hamilton, and Benjamin F. Heywood, while the individuals listed on the Rhode Island charter were Nicholas Brown, Edward Carrington, and Thomas P. Ives.⁵

⁴ Account of the Proposed Canal from Worcester to Providence containing the Report of the Engineer, Published by Order of the Committee for Worcester County, Providence, 1825, p. 4. American Antiquarian Society, Worcester, MA.

⁵ Charter – Granted by the Legislature of Massachusetts to the Blackstone Canal Company, 1823, Worcester Public Library, pp. 1, 12.

The Canal Charter authorized the Massachusetts Corporation to construct a Canal from Worcester to the Rhode Island line. It allowed for the building of locks, tow paths, basins, dams, wharves, embankments, and toll houses. It also allowed the use of North Pond and Quinsigamond or Long Pond in Worcester and Dority Pond in Millbury to serve as reservoirs to supply water to the Canal.

The Rhode Island Charter authorized the Corporation to build a Canal from the Massachusetts state line to tidewater in Providence. This Charter also allowed the Canal Company to build a Canal with locks, towpaths, etc. as described in the Massachusetts Charter, along with Scott's and Cranberry Pond to serve as reservoirs.

The charter of both states was similar in that they specify that the Canal Corporation must provide for the damages incurred by the Canal. The Rhode Island charter, however, dealt with the problem of low water. The Rhode Island charter states

that whenever said corporation shall draw from said river water sufficient for the passage of one or more boats, rafts, or other craft up or down said Canal, that it shall be their duty to cause as much water to be emptied into said river from the surplus water reserved by them within one hour from the time of taking.⁶

The above regulations were important in that the Canal Corporation could not use the water from the river for the Canal but had to use the water, which had been stored up in the various reservoirs. The following regulations, however, gave mill owners complete control of the water to be used in the Canal.

Be it further enacted, that notwithstanding the powers hereby granted to said corporation, it shall be the duty of said corporation to allow the same quantities of water to pass from said ponds, brooks and streams of water, constituting parts of the sources of the Blackstone River, whenever the same shall be necessary for the use of

⁶ *Ibid*, p. 14.

factories and mills now on said river shall have the benefit of the natural run of brooks and streams.⁷

The mill owners now had access to water from the Canal Corporation's storage reservoirs. If there was a drought, the Canal Corporation had to supply water to the river to keep the river at its usual run during various times of the year.

The two corporations were united in 1825 under the name of the Blackstone Canal Company, and commissioners were appointed from each state to manage the affairs. The commissioners were Edward Carrington, Moses B. Ives, and Stephen Smith from Rhode Island and John W. Lincoln and Sylvanus Holbrook from Massachusetts.⁸

Excavation was started in Rhode Island.

Early in 1824, the Blackstone Canal Company granted its first construction contracts. Most bids went to company officers or their merchant friends. These amateur officers then gathered a labor force of sturdy Yankee farmers, seamen and stevedores from the Rhode Island seaport and drew others from the poorer classes of the City of Providence. The digging was slow since construction had started without Mr. Wright, the chief engineer, to oversee the digging. Despite the fact that Mr. Wright had agreed to head the Rhode Island Canal's construction starting in 1825, the Providence merchants could not wait to get their Grand Canal underway. They began in 1824 by simply bringing laborers and equipment together and rushed into what would quickly prove to be a disaster.⁹

⁷ *Ibid*, p. 14.

⁸ Plummer, *History of the Blackstone Canal*, p. 7.

⁹ Vincent E. Powers, *Invisible Immigrants: The Pre-Famine Irish Community in Worcester, Massachusetts, From 1826 to 1860*. (New York: Garland Publications, 1989.), pp. 98-99.

The Canal was dug for only a short distance and the rains in the autumn washed out the first year's efforts; and a dam burst in December, which destroyed the rest of the Canal prism.

Benjamin Wright arrived in 1825 and promptly recruited the Irish diggers that had been at work on the Erie Canal. Many of the Irish diggers, known as "strollers," arrived in Providence and had to compete with the Yankee workers. The Irish, because of their past experience, won out over the inexperienced Yankees and most of the contracts were won by the Irish contractors.

In early 1826, contracts were awarded for the twenty-three miles of Canal to be built from Worcester to Uxbridge. Contractor Tobias Boland won the largest stretch. His sections were also the most complex and would bring over five hundred Irish Strollers to Worcester.¹⁰

When Tobias Boland received the contract for digging the Canal in Worcester, the citizens realized that the "Papist" was about to enter the community. As a result, the protests began. Resident Canal Commissioner and Worcester Selectman, Mr. Lincoln, dealt with the petition in an abrupt fashion. He noted that if Worcester refused to allow Boland's Irish workers access to the town then the company would terminate the waterway in the neighboring community of Millbury. Company officials in Providence confirmed that this was a possibility. Caught between dreams of wealth and the desire by some to retain the old and closed society, the people of Worcester quickly found economic motives stronger than religious scruples. The last remnants of opposition were overturned when the company announced that the Irish would not enter the village proper except to do their Canal work."¹¹

On July 8, 1826, ground was broken for the Canal in Worcester. After the groundbreaking ceremonies were completed, the Irish diggers, who had been waiting at a distance, began the Canal construction. Within a month, two commercial basins were cut out in rough fashion and a half-mile of prism between them was nearly completed.

¹⁰ *Ibid*, p. 143.

¹¹ *Ibid*.

The work they did was brutal and hard. Richard O’Flynn, who kept notebooks about the Irish in Worcester, recalled, “It was the rule to give a dollar a day and sixteen “Jiggers,” or glasses of new rum, thus keeping the men continually drunk at the utmost strain of work, from dawn to dusk. It is true a little money might be made in this questionable manner, but is the loss of body and soul, caused by such proceedings ever taken into account? Well that is a question no mortal can pass judgement on. God is the only infallible judge. In another passage O’Flynn remarked, “It is painful and sickening to see our young men, the hope and pride of the future, staggering along our streets, swearing and smoking, blasphemous and obscene. Oh, the sight and thoughts evoked are painful.”¹²

The Canal was completed in 1828, and the first boat to travel the full length of the Canal, arrived in Worcester on October 7, 1828. The *National Aegis* describes the event as follows: “The first Canal boat which has been floated through the extant of the Blackstone Canal was greeted on passing the locks by the cheers of the multitude assembled. On reaching the Front and Central Street Bridges, continued cheers hailed its approach. At 11 o’clock, the boat arrived in the basin and the commissioners and the crowd assembled was addressed by Col. Merrick, Chairman of the Board of Selectmen, who expressed the sentiments appropriate to the occasion. On the conclusion of his remarks, enthusiastic cheers, the thunder of cannon, and the peals of bells welcomed the visitants to the town. The commissioners and the other gentlemen of both states who were passengers in the boat and with the gentlemen of the town partook of the collation at the house of the Governor.”¹³

“The return trip was less glamorous. The *Lady Carrington*, having disposed of her cargo of dignitaries, who returned home over the road, was now loaded with such nondescripts as butter, chairs, paper and so on.”¹⁴

¹² Margaret Erskine, *Heart of the Commonwealth: Worcester*. (Windsor Publications, Woodland Hills, California, 1981), p. 53.

¹³ *National Aegis*, October 8, 1828. P. 2.

¹⁴ Brenton Dickson, “The Blackstone Canal,” *New England Galaxy*. XII (Summer, 1971), p. 8.

The ship news for the “Port of Worcester”, on October 8, 1828, describes the event as “Arrived yesterday - At the head of navigation for this port, packet boat *Lady Carrington*, having passed the whole distance on the Blackstone Canal from Providence. Cargo: Canal Commissioners, salt and corn.

Sailed - same day, at 2 p.m. the Canal Boat *Lady Carrington* for Burbanks Pond and returned at 4 p.m. Cargo - Miscellaneous.

The *Lady Carrington* will lie at the wharf at the head of navigation this day and until Thursday next, for the accommodation of parties.”¹⁵ The description of cargo for the departure of the *Lady Carrington* differs in the two accounts; the *National Aegis* doesn’t list a cargo, while the *New England Galaxy* lists numerous items.

The important point to remember, however, is the Canal Commissioners returned overland. The *New England Galaxy* explains this in their article and the *National Aegis* confirms it when it says the *Lady Carrington* will remain in port for a week. The trip along the Canal took too long to make it viable for transporting passengers.

The question of lockage becomes a very interesting point. Colonel Israel Plummer lists 62 locks in *History*, read before the Worcester Society of Antiquity, June 4, 1878. He states

...from Thomas Street in Worcester, to the point where a branch probably would go off to Long Pond, a distance of 11 miles, there would be 26 locks and 176 feet descent. The expense was estimated at \$88,748. From the last mentioned point to the north line in Rhode Island, 17 ½ miles, 15 locks and 107 feet descent, the expense was estimated at \$105,739. From the north line in Rhode Island to the south end of Scott’s pond to tide water, in Mooshassuck River, 4 ½ miles, 8 locks, 50 feet descent, expense \$26,699.¹⁶

Dave Barber points out in the *Prism*, newsletter of the Blackstone Canal Conservancy that Plummer’s figures do not add up.¹⁷ In checking

¹⁵ *National Aegis*, October 8, 1828. P. 2.

¹⁶ Plummer, *History of the Blackstone Canal*, p. 5.

¹⁷ *Prism*, The Newsletter of the Blackstone Conservancy, Dave Barber, April 1998.

these totals, it is found that Plummer has the Canal having 49 locks, 333 feet of descent, 33 miles long at an estimated cost of \$224,186. These figures are completely different from the total of 45 miles distance, 62 locks, and 451 ½ feet descent, at an estimated cost of \$323,319 that he gives as the totals for the Canal.

Zealotes W. Coombs read his *History of the Blackstone Canal* before the Worcester Historical Society on January 6, 1914, and his figures for the totals were the same as Isreal Plummer's. Coombs states, "thus the report went on, touching on all details of excavation, locks, etc. estimating the total distance as a little over 45 miles. The total descent, as stated above, as 451 ½ feet, the number of locks as 62, and the total cost as \$323,319."¹⁸ Did Coombs use Plummer's figures and why don't Isreal Plummer's figures add up if the totals are the same as Coombs?

If one studies the estimate done by Mr. Hutchinson, it will be noticed that a distance of 12 miles, 13 locks, 117 feet descent, and a cost of \$99,133 is omitted from Plummer's figures. It should be noted that these figures are the same as is shown in the Hutchinson estimate. Plummer did look at the engineer's report, and his missing figures may have been left out when his paper was printed. Plummer's and Coombs' total figures for the Canal are the same, and these figures are the same as is given in the report by Hutchinson. An important question now becomes, did Coombs read Plummer's works or did he read the engineers report? There are no footnotes on Coombs' paper; however, he does state that "Holmes Hutchinson had personal charge of the surveys and these findings are well worth reading. I quote briefly from it." With this final statement, it shows that Coombs read the engineer's report.

The problem with both Coombs' and Plummer's work is that they take the estimate given by Hutchinson and relate this as being the true number of locks on the finished Canal.

A newspaper article in the *Providence Evening Press*; published on July 3, 1880, attempts to list the locks on the finished canal.

The first lock was at the start, after which they came in the following order: one at Lewis' Mill; one at the

¹⁸ Zelotes W. Coombs. "History of the Blackstone Canal," read before the Worcester Historical Society, January 6, 1914, Worcester Public Library, p. 461.

Franklin Foundry; one at Hoston's Grove, where the slaughter houses are now; one at Mill Spring Pike; one at Log Bridge; four at Scott's Pond; one at Albion; three at Manville; one at Hamlet; two at Woonsocket; one called the "Old Maids Lock", between there and Waterford; one at Waterford; two at Blackstone; one at Millville; one at Skull Rock; one at Uxbridge; one at Goat Hill; one at Plummer's Basin; one at Toadville; one at Northbridge; one at Farnumsville; one called Tafts Lock at Leland's Landing; two at Wilkinsonville; one at the head of the pond; eight at Millbury; and six between there and Worcester.¹⁹

Dave Barber in *The Prism*, the newsletter for the Blackstone Canal Conservatory (April 1998), lists 49 locks.(see Appendix I) The two figures of 47 and 49 locks differ greatly from the original estimate of 62 given by Hutchinson, and the actual numbers of 62 as listed by Plummer and Coombs. Where did the locks go? Some of this may be answered by comparing the actual lock lists with that of the engineering report. In doing this comparison, the Town of Blackstone is used as a starting point because all three lists refer to the locks in Blackstone. The Slatersville Press booklet has 19 locks from the inlet up to the town of Blackstone and 28 locks from Blackstone up to Worcester. Dave Barber lists 18 locks from inlet to the town of Blackstone and 31 from Blackstone to Worcester. In using the above figures, it can be seen that there is a major discrepancy between the actual and the estimated lockage between Worcester and Blackstone. Mr. Hutchinson estimates 41 locks from the Worcester to the Rhode Island line and 22 locks in Rhode Island. The lockage in Rhode Island varies by only a few between the actual and the estimated; while in Massachusetts, there is a great deal of difference in the number.

There are at least three reasons why the number of locks was reduced. The first is the actual slope of the Canal. Hutchinson does not allow for any slope at all. All the descent from Worcester to Providence is done through the locks. If one looks at the estimate signed by Mr. Wright, it will be noticed that the 451 61/100 descents listed for the locks

¹⁹ *The Blackstone Canal, History of its Construction and Abandonment*, Slatersville Press, Slatersville, Rhode Island, p. 8.

are equal to the descent between Worcester and Providence. Mr. Wright states in the report,

I have no doubt the resident engineer would so form his plane, in the detail, as to give a descent in the Canal of one and one-half or two inches in each mile: this would make the water from the upper end of any pond pass more freely to the lower without reducing any depth.²⁰

If a descent of one and one-half inches were used, it would eliminate 5.6 feet of lockage and if a 2 inch slope were used, the lockage elimination would be 8.5 feet.

A second area, which may have caused the elimination of some of the locks, was the increase in their length from the original estimate. Mr. Wright says

I have come to the conclusion, that a Canal 32 feet wide at the top, 18 feet at the bottom, and 3 ½ feet depth of water would be the proper size formed; and that locks of 70 feet between gates, and 10 feet in width, would be sufficiently large for the trade intended -- bearing in mind a proper economy in use of water and in the erection of locks."²¹

In measuring the distance between the gates on the Millville lock, the only complete lock of the Blackstone Canal still remaining, it is found that the distance between the heel of one hinge to the heel of a second hinge is 82 ½ feet.

This measurement alone shows that the lengths of the locks were increased and possibly could have caused the elimination of some of the locks, especially where the locks were grouped as steps in the Millbury area.

²⁰ Account of the Proposed Canal from Worcester to Providence containing the Report of the Engineer, Published by Order of the Committee for Worcester County, Providence, 1825, p. 8. American Antiquarian Society, Worcester, MA.

²¹ *Ibid.*, p. 4.

The third reason, which may have caused the elimination of some locks, is the change from wood to stone. This change in material is also an important point in the overall cost and will be addressed later. Mr. Hutchinson's estimate was for 62 locks made of wood. Mr. Wright refers to Mr. Hutchinson's estimate of the first 11 miles from Worcester when he says, "The above statement is for wooden locks, as being the cheapest; but in order to enable the committee to make a comparative estimate of wood and stone locks, I have made the following estimate for stone locks; The walls of the locks will be 92 feet long, 13 feet high, and 6 feet average thickness."²² Mr. Wright does not specify the distance between the gates; however, the 82 ½ feet distance between the gates at the Millville Lock would fit into Mr. Wright's specifications. Since there was a change in the length, could there also be a change in the lift? A call to Riverbend Farm helped prove this when the ranger said he believed the lift for the Millville lock was 9 ½ feet. This idea was changed a few days later when another ranger said he believed the lift to be 9 ½ feet; however, in order to prove this, the lock would have to be excavated, and this hasn't been done. These statements are borne out, however, by Plummer, when he reads from an account of the *Rhode Island American*, of July 1, 1828. "The average height of the locks is 10 feet."²³

The last point that could be made regarding the locks is a statement made by Mr. Wright. I have drawn, and herewith present, a plan of a wooden or timber lock, projected with due regard to economy, usefulness, and strength. Let me observe, at the same time, that having no such erections on the Erie Canal, I have no experience as to the best and the cheapest. Some good mechanic may probably suggest important alterations for the better.²⁴

²² *Ibid.*, p. 6.

²³ Plummer, *History of the Blackstone Canal*, p. 6.

²⁴ Account of the Proposed Canal from Worcester to Providence containing the Report of the Engineer, published by Order of the Committee for Worcester County, Providence, p. 8. American Antiquarian Society.

Some of Mr. Wright's above statement may be challenged, because there were locks on the Erie Canal. He may have meant that he had no experience with wooden locks. However, if one studies the work of the Erie Canal, they would find that a gentlemen by the name of Canvas White was sent over to England to study lock engineering by the Erie Canal Committee, and he was given complete charge of building the locks on the Erie Canal. It appears that both Mr. Hutchinson and Mr. Wright had little experience with locks. Mr. Wright made the key statement about what happened to the missing locks when he said, "Some good mechanic may probably suggest important alterations for the better."²⁵ These alterations were made as the Canal was being built.

Now that the area of the locks has been addressed, another issue, which is interesting, is that of the Canal Boats. It is important now to describe the *Lady Carrington*. "The boat is the largest size that can be admitted into the locks, being seventy feet long, nine and a half feet wide, and as high as will admit of a safe passage under the bridges crossing the Canal. She is covered on top, having below a cabin nearly the whole extent of the boat, conveniently and neatly arranged. Her draft, when filled with passengers, does not exceed eight or nine inches.... The boat was drawn up the Canal by a towline attached by two horses that traveled with rapidity on straight levels. She might be conveyed with ease at the rate of four or five miles per hour."²⁶

Another description of the *Lady Carrington* was found in a folder in the Worcester Public Library. This description is out of a newspaper, but no description of the paper is given. It states, "there were cargo boats, and one steamer, the *Lady Carrington* which made the opening trip to this city in October, 1828".²⁷

There are two different descriptions of the *Lady Carrington*, one being pulled by horses, as described by Plummer, and one as being steam driven. There also is a description saying the boat is 70 feet long, the largest that can be admitted into the locks. Plummer also quotes Hutchinson, however, saying the locks are 70 feet long. In studying the

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ Blackstone Canal Folder, Worcester Public Library.

workings of a lock, it is found that one set of doors must open inward, therefore, a 70 foot lock, 10 feet wide would accommodate a 65 foot long boat, with no allowance. A 65-foot boat would touch both doors; and therefore, the boat would have to be shorter than 65 feet. If we take and look at the measurements of the Millville Lock at 82 ½ feet and a 10 foot width, it could be said that a boat about 77 feet long could move easily through it. The *National Aegis*, on May 6, 1829, adds to the mystery of the actual boat size when it states: “The dimensions of the boats are fixed at a length of not less than 45 feet nor more than 70 feet, the width not exceeding seven feet six inches.”²⁸ If this were the case, the description of the *Lady Carrington* as noted earlier is wrong. The *Lady Carrington* could only be 7 ½ feet wide and not 9 ½ feet wide as described earlier. (There were numerous boats on the Canal. For a listing of some of the boats, see Appendix II.)

Two of the boat companies were the Worcester Boat Company and the Union Line. A third boat company is listed in the accounts of the *National Aegis* but no boat names are listed with this company. The company is the “S. R. Jackson & Co.”²⁹

The boats belonging to the “Worcester Boat Company are The *Salisbury*, the *Lafayette*, and the *Washington*.”³⁰ The *Washington* is a boat built in Worcester. This is described in the diary of Columbus Baldwin as

The Canal boat ‘*Washington*’, the first built in Worcester, is carried through the street on wheels from near the Goal to the basin near the distillery, where it is to be launched; there are banks of snow yet in the Main Street and the going is very bad.³¹

²⁸ *National Aegis*, May 6, 1829, p. 3.

²⁹ *National Aegis*, June 26, 1833, p. 3.

³⁰ *National Aegis*, May 4, 1831, p. 1.

³¹ *Diary of Christopher Columbus Baldwin*, Providence Press, July 3, 1880, Blackstone Canal Folder, Worcester Historical Society.

The boats of the “Union Line are the *John Davis*, the *Superior*, the *Smithfield*, the *Woonsocket*, the *Uxbridge*, and the *Providence*.”³²

The Canal now allowed Worcester to receive and ship goods to Michigan or Ohio or any place else in the world. Although the growth of Worcester was greatly favored by the Canal, it didn’t fare well at times in the matter of transportation. There was a tendency for the boats to service the lower end of the Canal, leaving the upper sections without service. Also, problems by way of water route with the Canal itself would leave Worcester without service. Breaks in the embankments were frequent, and then the level in which the break occurred would be closed for repairs, often for weeks. At times, the mill owners along the Canal, fearing loss of water or other encroachment of the rights, cut embankments and let water into the river.

Three such problems are pointed out in the *National Aegis*. On July 1, 1829, an account states “A small extant of the embankment of the feeder of the Blackstone Canal in Millbury, was thrown down by a party of men, who were under erroneous impressions of their civil rights and criminal responsibilities. The prompt interposition of the commissioners prevented any interruption in navigation, and we are happy to learn that the repair of the injured work and compensation for the injury done to the satisfactory of the commissioners prevented prosecution.”³³

A situation, which did cause navigation problems, is listed in the *National Aegis* on June 26, 1833. There are two ads, which say about the same thing except for the company names. The ads state that “the Canal boats of the Worcester Boat Company and the S. R. Jackson, Company, will commence running when the Canal is put in order.”³⁴

A third incident is given in the *National Aegis* on August 1, 1832. “The gates of lock 34 were opened and allowed enough water into the lower section to cause a breach in the Canal. A reward of one hundred dollars is offered and will be paid when the person that caused this is convicted.”³⁵

³² *National Aegis*, August 31, 1831, p.3.

³³ *National Aegis*, July 1, 1829.

³⁴ *National Aegis*, June 26, 1833, p. 3.

³⁵ *National Aegis*, August 1, 1832, p. 3.

The last area to be addressed will be the cost in money of the Canal. If one looks at the estimate, it explains that the distance is about 45 miles, the number of locks is 62, the descent is 451 feet, and the estimated cost is \$323,319. Is this a true estimate?

It should be noted that the engineer's total cost is incorrect. Mr. Wright states that the first 11 miles will cost \$88,748., the second section of 17 ½ miles will cost \$105,739., the third section of 12 miles will cost \$99,133. And the last section of 4 ½ miles will cost \$26,629. If these figures are added, we find the total cost for the original estimate should have been \$323,249, instead of \$323,319. It appears that the engineer added incorrectly and there is a difference of \$70 in the figures. A mistake in addition causes one to wonder if there are other mistakes in this estimate. If one looks at the estimate for the section from Scott's Pond down the Valley of the Mochassuc River, one can see another mistake in addition. The total figure for this section of the Canal is given as \$29,199. However, the figures add up to \$29,699. This error is compounded when it is moved to another section of the estimate. The figure of \$29,199 is changed to \$29,629. This is probably where the \$70.00 noted above is lost; however, mistakes in simple arithmetic should not be made in an estimate.

It is interesting to note that Plummer used the correct figure for the last 4½ miles of the Canal and didn't use the figure shown in the recapitulation. He did, however, omit the 12-mile section from the N. line of R. Island to the S. end of Scott's Pond, which totaled \$99,133. If Plummer had not omitted this section in his paper, his totals would have added up to Hutchinson's estimate of \$323,319.

A second reason that the estimate is incorrect is that Mr. Wright seems to be vague in giving the exact figure. He says, "the above statement is for wooden locks, as being the cheapest; but in order to enable the committee to make a comparative estimate of wood and stone locks; -- The walls of the locks will be 92 feet long, 13 feet high, and 6 feet of average thickness." And the estimated cost is \$3070.30 per lock of 8 feet lift." This estimate is given for the first 11 miles only. Mr. Wright estimates "\$124,344.39 for this distance, while Mr. Hutchinson, using wooden locks, gives an estimate of \$88,748.00."³⁶ Since stone

³⁶ Account of the Proposed Canal from Worcester to Providence containing the Report of the Engineer, published by Order of the Committee for Worcester County, Providence, 1825, p. 6. American Antiquarian Society, Worcester, MA.

locks were used on the Canal, the cost estimate for the first eleven miles should have been raised by \$36,595.39. Mr. Wright did not give an estimate for stone locks on the remaining 34 miles in his engineering report dated October 2, 1822. Since there were no estimates for the remaining stone locks, then this report should have been changed at a later time, noting an increase in price.

A third reason why the cost estimate could possibly have been changed is the cost of labor. Mr. Wright states

In making these estimates, Mr. Hutchinson has been governed by prices as paid on the Erie Canal, in the State of New York, where labourers could be obtained for 10 to 12 dollars per month, exclusive of board, etc. Any alteration in the state of the country could raise the value of common labour above that price.³⁷

It was noted earlier by Erskine that: "It was the rule to give a dollar a day..."³⁸ If this statement were true, then a labourer working six days a week and four weeks per month, would be paid \$24, which is twice what is allowed for wages in the original estimate.

A fourth problem, which is not related to the engineer's report, but was alluded to earlier, was the haste in which the work was started. It seems to have been started without the resident engineer available and the first year's work was washed away.

The engineer pointed out the possibility of cost increases on the change from wood to stone locks and the possible difference in wages. He also had no control of the poorly dug Canal in 1824. All of these may have helped to inflate the final cost of the Canal to "\$662,000.00,"³⁹ but the chief engineer should not be absolved of all the blame for the cost overrun because he submitted an estimate with numerous simple mathematical errors.

³⁷ Account of the Proposed Canal from Worcester to Providence containing the Report of the Engineer, for Worcester County, Providence, 1825, p. 6. American Antiquarian Society, Worcester, MA.

³⁸ Erskine, "Heart of the Commonwealth: Worcester," p. 53.

³⁹ Letter describing the Canal Cost, Worcester Public Library.

In spite of the problems with the Canal, Worcester's population grew.

In 1765, the population of Worcester was 1,475; in 1775, it was 1,925. During the War of the Revolution there was little growth. From 1790 to 1800, four hundred souls were added; from 1800 to 1810, one hundred and fifty; from 1810 to 1820, again four hundred, the total standing at 2,962 in 1820. In 1825, we find a population of 3,650; and in 1830, 4,172. In 1835, 6,624, a leap of 3,000 in ten years.⁴⁰

Coombs states that the Blackstone Canal failed because it was partly located in the river. High water or low water in the river often detained boats for weeks at a time, the Canal was closed by ice four or five months out of the year, and thirdly, in times of drought there wasn't enough water to operate the locks.⁴¹ All of these items would cause the Canal to have difficulty competing with the railroad; but was the real cause of the demise of the Canal the low estimate and the haste in which it was put together. In the opening paragraph of this paper, I stated that the idea of the Canal was first advanced in 1796. I also stated further on that in 1822, Worcester described its reasons for a Canal. What happened to change the minds of the people of Boston during the ensuing years? I believe that the Canal Charter was passed by the Legislature because Levi Lincoln of Worcester wielded enough power in the Legislature to have the Canal Charter passed. It might be said that there were two states involved; however, Rhode Island seemed to always want the Canal, and their Canal Charter was a foregone conclusion.

"Levi Lincoln was Speaker of the House in Massachusetts in 1822, Lieutenant Governor in 1823, Associate Justice of the Supreme Court in 1824, and elected Governor of Massachusetts in 1825, having received 35,000 of the 37,000 votes cast."⁴² Here was a very powerful political

⁴⁰ Coombs, "History of the Blackstone Canal," p. 469.

⁴¹ *Ibid.*, pp. 469-470.

⁴² Charles A. Nutt, "History of Worcester and Its Peoples," (New York: Lewis Historical Publishing Company, 1919). P. 173.

figure, who had signed a petition to the Legislature on May 14, 1822, for a Canal from Providence to Worcester.

This now becomes purely conjecture and could allow a researcher another avenue of study regarding the Blackstone Canal. Could Levi Lincoln, with his massive political power alone, muscle through the Legislature, a charter for the Blackstone Canal? If this were the case, then the charter would always be a heartbeat away from being revoked. Under these circumstances, one would want the cheapest estimate for a canal, so as not to have the Legislature rise against it, and the easiest and most direct route to complete the Canal as quickly as possible, even if this route meant entering and exiting the Blackstone River numerous times.

Appendix I

This article lists a total of 47 locks.

Dave Barber in the prism lists the locks as follows:

- 1 "From the "Basin", Providence**
 - 2 Just north of Mill Street, Providence**
 - 3 North of Randal Street**
 - 4 At Cemetary Street**
 - 5 South of Mineral Spring Ave.**
 - 6 Weeden Street at Lockbridge Street**
 - 7-9 South edge of Scott's Pond**
 - 10 Albion**
 - 11-13 Manville**
 - 14 South of Woonsocket**
 - 15-17 Center Woonsocket (Allen Street and Market Square)**
 - 18 Lower end of River Road**
 - 19-20 Near Monument Square Blackstone**
 - 21 Just north of old Mendon Road, Blackstone**
 - 22 Millville**
 - 23 Skull Rock Lock**
-

- 24 South of Cocke & Kettle Inn
- 25 South of Uxbridge Village
- 26 Goat Hill Lock
- 27 Church Street, Northbridge
- 28 Riverdale
- 29 Near Sutton Street, Rockdale
- 30 North of Rockdale
- 31 South of Depot Street, Farnumsville
- 32 Fisherville
- 33 East of Leland Landing
- 34-35 Wilkersonville
- 36 Follett Street, Sutton
- 37 West of Cross Street, Millbury
- 38 East of Grafton Street, Millbury
- 39-40 Riverlin Street, Millbury
- 4144 Between Main and Howe Streets, Millbury
- 45 Just North of U.S. Route 20
- 46-47 in American Steel and Wire site
- 48 out of Burbanks Pond, Worcester
- 49 North of Kelly Square, Worcester⁴³

Appendix II

The following is a list of some of the Canal Boats, along with the names of the captains. It should also be noted that some of the captains did transfer from one boat to another.

NAME	CAPTAIN	SOURCE
Salisbury	Capt. Jones	<i>National Aegis</i> Sept. 2, 1829
Gov. Lincoln	Capt. Norwell	<i>National Aegis</i> Sept 2, 1829
John Davis	Capt. Morton	<i>National Aegis</i> Sept 2, 1829

⁴³ *Prism*, The Newsletter of the Blackstone Canal Conservancy, Dave Barber, April, 1998.

Lady Carrington	Capt. Aldrich	<i>National Aegis</i> Sept 2, 1829
Superior	Capt. Jackson	<i>National Aegis</i> Arrival Date in Worcester, Friday, July 24, 1829
Massachusetts	Capt. T. Brownell	<i>National Aegis</i> Sept 2, 1829
Lark	Capt. Wilcox	<i>National Aegis</i> Sept 2, 1829
Independence	Capt. Mowry	<i>National Aegis</i> Sept 2, 1829
Lafayette	Capt. Poor	<i>National Aegis</i> Sept. 2, 1829
Smithfield	Capt. Stack	<i>National Aegis</i> Sept. 2, 1829
	Capt. Breed	<i>National Aegis</i> May 6, 1829
General Green	Capt. Brigham	<i>National Aegis</i> Sept. 2, 1829
	Capt. Green	<i>National Aegis</i> June 3, 1829
Woonsocket	Capt. Burgess	<i>National Aegis</i> Sept 2, 1829
Washington	Capt Nowell	<i>National Aegis</i> Arrival Date in Worcester July 20, 1829
	Cap. Poor	<i>National Aegis</i> May 6, 1829
Uxbridge	Capt. T. Brownell	<i>National Aegis</i> Arrival Date in Worceter July 27, 1829
Providence		<i>Worcester Gazette</i> , Feb.28, 1964
Rhode Island	Capt. Slack	<i>National Aegis</i> June 3, 1829
Mendon	Capt. B. Brownell	<i>National Aegis</i> May 27, 1829
Worcester	Capt. Mauran	<i>National Aegis</i> May 27, 1829
The Lincoln	Capt. Brigham	<i>National Aegis</i> May 6, 1829
Pawtucket		Document Worcester Historical Society
Albion		Document Worcester Historical Society
Millbury		Document Worcester Historical Society
Blackstone		Document Worcester Historical Society
William Wirt		Document Worcester Historical Society
Enterprise		Document Worcester Historical Society
John Capron		Document Worcester Historical Society
John Brown	Capt. Gate	<i>National Aegis</i> May 27, 1829