

NORTH RIVER NAVIGATION COMPANY

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With a Response by John W. Knapp

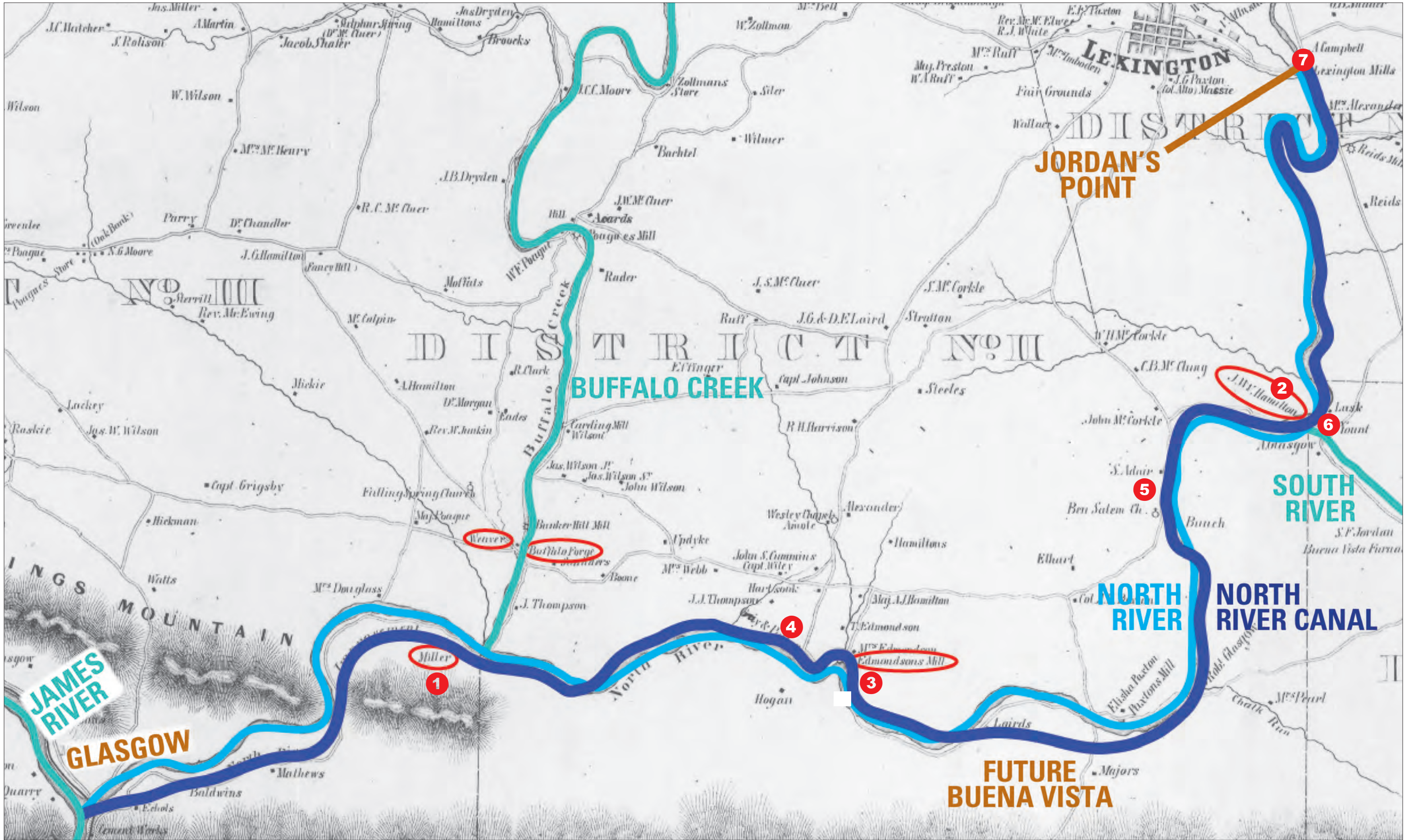
PREFACE

ONE CAN STAND in the yard at Buffalo Forge today and hear the sounds of three generations of transportation: aircraft overhead, trucks on Interstate 81, and trains along the Maury River. Had one stood in the same place in the third quarter of the nineteenth century, the sound would have been of a transportation mode that has passed except in the minds of a few buffs: the far-off blare of the horn or conch shell as the canal boat captain warned the lockkeeper of his approach.

The importance of rivers in the development of the nation cannot be overstated. Even small and rough streams, such as the North (now Maury) River, were useful in carrying commercial batteau traffic. Shallow-draw batteaux could be built locally, and, with crews of four, were able to haul heavy loads.

A young George Washington first proposed building a canal from the Chesapeake Bay west to the Ohio River. In 1785 the James River Company, later James River & Kanawha Company, started work, aiming to open commercial transportation along the James River from Richmond over the mountains to the headwaters of the Kanawha River in Pocahontas County in what is now West Virginia. The canal would then follow the Kanawha, flowing northwest, past Charleston, and on to the Ohio River, thus connecting Ohio country to the Chesapeake Bay. Branching east from Richmond, the canal system would establish Norfolk as a major port.

By 1851 the James River & Kanawha Company canal had reached Buchanan, Virginia, on the James. Unfortunately, the completion of that portion of the canal coincided with the emerging rise of railroads, which proved to be a better transportation option, leading to the eventual demise of canals.



Previous spread: The North River Canal (dark blue) and major landmarks. Important points on the canal are indicated in the text and on the map by numbers. Adapted from "Map of the County of Rockbridge, Virginia, from Surveys Made by William Gilham, A.M., Professor of Agriculture, Virginia Military Institute, Assisted by Cadets," after 1860. From the Library of Congress.

NORTH RIVER NAVIGATION COMPANY

IN THE EARLY 1800S, large farms in Rockbridge County were producing more wheat, corn, flax, linseed oil, apples and whiskey than local markets could absorb. Iron was being smelted in the South River Valley and the upper North (now Maury) River areas. These goods had to be shipped on land by wagon and on river by batteaux — both of which were slow, expensive, and hazardous to the cargo.

By 1850 the James River & Kanawha Company had extended its canal to Balcony Falls, where the North

River joined the James. Rockbridge County caught canal fever: Although the southern part believed it was adequately served by the James River canal, the northern part of the county fervently wanted a canal along the North River, between Lexington and Balcony Falls. Lexington people saw the town becoming an important inland port, and some even predicted that Staunton would become a satellite of Lexington.

Thus was born the North River Navigation Company.

The company organizes itself

THE FIRST MEETING of the North River Navigation stockholders was held at the county courthouse in Lexington on July 6, 1850. Twenty-seven stockholders were present, representing 660 shares (of 717 outstanding) and 371 votes. The total capitalization was \$35,850. Rockbridge County had 300 shares and 130, votes and the town of Lexington had 200 shares

Lexington Va July 6th 1850

Pursuant to a public notice a meeting of the Stockholders of the North River Navigation Company, convened at the Court House in Lexington.

On motion of Bro Letcher, Doct Bro W Payne was called to the Chair, & Jacob Ruff was appointed Secretary.

On motion a Committee, consisting of Bro Letcher, J. G. Payton, and Doct A Graham were appointed to ascertain the amount of solvent stock taken in said Company, Committee reported, amt solvent stock taken to be \$35,850 or 717 shares

Excerpt from the minutes of the organizational meeting, 1850. Courtesy of Rockbridge Regional Library.



Left, Thomas H. Williamson. Portrait by Adele Williams, c. 1880. Right: Robert E. Rodes. Portrait by William D. Washington, 1863. Both from the Virginia Military Institute Archives.

with 110 votes). It is unclear how votes were apportioned. The norm seems to have been one share, one vote, but it didn't work that way for the two gov-

ernments or with a few other stockholders. Of the twenty-seven shareholders present, five were Jordans, and a Jordan voted Lexington's shares.

The Jordans were naturally interested in the canal, for they were business owners, contractors, and iron workers, and all their holdings would benefit from a canal. At the meeting, a committee was appointed to draw up bylaws. The meeting was recessed briefly, and soon the committee brought back a lengthy document containing proposed bylaws, slates of candidates for officers, and rules of operation. Obviously much work had been done before the meeting. The bylaws were adopted, directors elected, and Colonel John Jordan was elected president.

Two days later, the directors elected Jacob Ruff secretary and appointed Thomas A. Williamson, longtime professor of civil engineering at the Virginia Military Institute, as engineer, at a salary of \$300. For this amount he was to survey and locate the whole line of improvement as well as prepare and furnish specifications and estimates for the proposed canal. He was also authorized to employ two assistants and to buy a boat.

I have heard it said that he had already done much of the preliminary work using cadet surveying classes, but unless there was a summer program, it does not seem possible for cadets to have operated that far from the VMI post and still have met class schedules.

On September 9, the engineer recommended that the canal locks be made of wood. No action was taken, but on October 14, without giving a reason for not

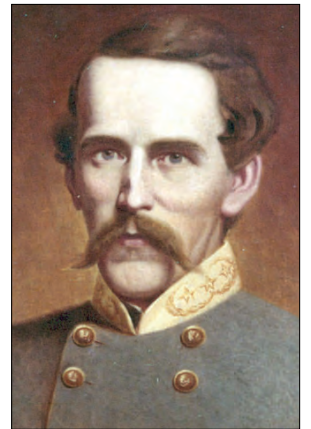
accepting Williamson's plan, the directors decided that the locks should be made of hammered masonry laid in hydraulic cement.

William Weaver, a farmer and ironmaster in the southern part of the county, had vigorously opposed the concept of wooden locks, even publishing a tract expressing his views. He believed that a wooden lock would have a short life span and be subject to flood damage, while a stone structure would suffer neither problem. Weaver's view won out. Hindsight wonders if the change was for the best. The canal system operated only about twenty years. The wood structure might have lasted that long; it would have been less expensive; and — who knows? — with the lower cost the canal may have shown a profit. Using wood might have therefore been good business, although doing so would have left little for canal buffs to admire.

On September 23, 1850, young Robert E. Rodes, a graduate of VMI who taught civil engineering there, was appointed engineer. No mention is made of Williamson's having resigned. On November 29, D. S. Walton was appointed principal engineer. It appears that Walton was an employee of James River & Kanawha who was given permission to take the North River Navigation Company job and that Rodes remained as his assistant.

Challenge and adaptation

AN INITIAL DECISION had been made to begin construction across the entire length of the canal. This plan was changed, however, and a new one called for construction to commence at the James River terminus near Glasgow, moving northward. As portions were completed, they would be put into operation.



One problem was technical. Where could the builders get cement that would set and remain hard under water? A team was sent to investigate, and it identified several sites where the proper type of stone could be mined. Throughout the project, however, cement was purchased from C. H. Locher, who operated a plant at Balcony Falls.



William Weaver.
From *Special Collections,*
Washington and Lee
University.

Another early issue involved William Weaver, who owned land at Miller's Landing, ❶ the canal depot at the mouth of Buffalo Creek on the west side of the North River. He worked out a deal under which the canal company would erect a bridge across the river, which would benefit Weaver by giving him better access to farm and charcoal lands he owned on the east side of the river as well as easier hauls of his iron products

to the landing on the same side.

Weaver would hardly be the only beneficiary. Much of the county, including Lexington, would be served by Miller's Landing, and the bridge would be helpful at the river crossing. The bridge was never built, although is mentioned occasionally in the minutes until James River & Kanawha took over. The project was then referred to Virginia's Division of Public Works, where it died.

Yet another problem arose with John W. Hamilton, who owned land on both sides of the river at what is now called Hidden House. ❷ The best engineering advice called for a dam in the vicinity of Hamilton's house. But the dam would have flooded farmland on both sides of the river and perhaps his house, which of course Hamilton found unacceptable. Next-best was a canal at the rear of Hamilton's house near the foot of the hills. Hamilton, however, wanted the canal to be situated near the river in front of his house, so he demanded a high price for the land in the rear. The canal on less expensive land in front would have been costlier to build and subject

to floods, and after much discussion the board decided to pay the higher price for the better solution. The canal was built at the rear of Hamilton's house. This was the only actual canal built between Buena Vista and Lexington, the rest being open river from one dam to the next.

Edmondson's Mill ❸ posed another problem. It was a busy community with a dam and mill in the path of the canal below what is now Buena Vista. The canal company agreed to enlarge the dam and adapt the mill. When all of this was complete, Edmondson's Mill would be able to resume operation, drawing water from the canal. The plan was sound, but it took so long to do the work that there was a large cost to the company for reimbursing the mill for its loss of business.

On top of this, not all stockholders were diligent in paying assessments. One of the Jordans, who was also a contractor on the canal, fell in this category. The directors attempted to make his arrears a part of his payment for contracted work, but it is unclear whether the scheme worked.

By 1853, the canal company's financial situation had worsened and the board began to petition the legislature and James River & Kanawha Company for aid. Directors spent years in these negotiations.

In August 1857, ownership of the North River Navigation Company was transferred to the James River & Kanawha Company. The North River Company board of directors would, however, continue to manage the subsidiary for the benefit of the new parent.

Nevertheless, some successes

THE SECTION from Balcony Falls to the mouth of Buffalo Creek was the first to be completed. Notices were put out that the canal would be "watered" on May 15, 1854. By June, however, this had not happened, although a subsequent newspaper account tells of an opening celebration that was held soon after.

Work then moved upstream toward Thompson's Landing. ❹ Here were a post office, a store, almost certainly a warehouse, and likely a ferry to provide a river



The James River Canal at Glasgow, near the mouth of the North (Maury River), 1857. From Edward Beyer, Album of Virginia, Library of Congress.

crossing. This landing served the Wesley Chapel area as well as farms and woodlands to the east. The lumber for the construction of Wesley Chapel, as well as the bishop who dedicated the chapel, were brought in by canal.

Little mention in the canal records is made of Moomaw's Landing ❺ at what is now Buena Vista. In the area were mills, a ferry and farms. The canal did considerable business there with the Jordans. Iron ore from the nearby mountains was loaded there and hauled to Jordan's furnace on South River. After Union General David Hunter's army destroyed the furnace in the Civil War, the ore was hauled down stream to a furnace below Snowden in western Amherst County.

The next landing, South River, ❻ completed in 1859, was one of the most important on the system. Here were installations on both sides of the river. On the south side, Lexington and the surrounding county had access to the canal. The lock was on that side and when boats had passed through it, they could cross the river for access to additional docking facilities that included a warehouse, known then as a lumber house.

There were many iron works along the South River that shipped their output through the South River landing. Farm products from as far as Augusta County were also shipped to the landing here. The records contain one entry for a number of bales of dry hay plus a number of bales of wet hay. (There is no record of how the wet hay

was used.) A mill operated here, powered by water from the dam. The village that grew up in the area continued into the twentieth century, remaining a shipping center even after the coming of the railroad.

Finally, the canal approached its terminus at Jordan's Point, ❼ in East Lexington. The board decided to survey Jordan's Point, lay out lots and auction them. The canal company reserved those lots it needed for its operations. Here again the need arose to serve both sides of the river.

One merchant set up his business on the north side with his own dock. He advertised that customers in the northern part of the county would not have to pay bridge



Remnants of North River Canal dam and lock at South River. From Library of Congress.



Jordan's Point across the Maury River, after the railroad replaced the North River Canal. In the distance is the Virginia Military Institute. From The William D. Hoyt Photographic Collection, Leyburn Library, Washington and Lee University.

or ferry tolls to make and receive shipments. In November 1860, the first canal boat arrived at Jordan's Point.

Inevitably, Decline

When James River & Kanawha took over the North River Navigation Company in 1857, the parent company was already in financial trouble. Even so, it carried out its North River obligations, completing the canal and operating it until it in turn sold its assets to the Richmond & Allegheny Railroad in March 1880.

Some canal dams were converted to produce electric power. Only one remains in the river: the dam by the Bontex plant near the western edge of Buena Vista. That dam is higher now than it was as a canal dam because it was enlarged in the 1890s to provide more power for the paper mill then on the site.

The usual reason given for the demolition of the dams is that landowners feared floods. Another explanation is that the farmers wanted to plant on the rich, silt-covered soil that had been flooded to create the dams. In addition, shad fisheries existed near the mouth of Buffalo Creek and on James River near Natural Bridge Station before the dams were constructed, and there is some indication that the dams restricted the movement

of the fish upstream, causing severe reduction in catches. Petitions were circulated asking that the canal dams be removed or fish ladders installed.

THE CANAL may have been a financial disaster, but there is no way to calculate its benefit to the people of Rockbridge County. Lexington did, for a time, become an important inland port. Farmers gained considerably, and even formed companies to own batteaux and thus have some control over shipping costs and schedules. The canal brought the world a little closer.

Its death was inevitable. It was constructed just as railroads, more efficient by far, were gaining commercial ascendancy. Soon railroad track was being laid on the tow path, and, poignantly, one of the last canal boats delivered supplies for the track-laying operation.

Douglas E. "Pat" Brady was a leader of Historic Lexington Foundation and the Rockbridge Historical Society. Beyond that, he was mayor of Lexington from 1965 to 1971 and, earlier, a town and city council member. Owner during his lifetime of Buffalo Forge, a National Historic District, he died in 2001. This article is based primarily on his 1996 presentation to The Fortnightly, but merges information from a March 13, 1987, presentation to That Club, a more informal organization.

RESPONSE BY JOHN KNAPP TO MR. BRADY'S PAPER

MR. BRADY has given us a straightforward account of a noble community effort, not without controversy, to be sure, yet one that was successfully completed and met its purpose in a physical sense, but, alas, one that was a complete failure commercially — doomed from the start.

How could so many distinguished citizens — engineers, businessmen, politicians, and investors — have been wrong? The answer lies in refusal to accept advances in technology: both as to means and to timing — bad timing. And in the case of Rockbridge there was a geopolitical disadvantage as well.

Some internal waterway improvements in the early nineteenth century, built to connect the interior to Tidewater, had been profitable. The Erie Canal is the most noteworthy example, and then for a time the C&O Canal along the Potomac. Even the work on the James and its tributaries, which included the North River, were successful when the improvements by the James River Company consisted mainly of clearing the river of snags and fashioning sluices at difficult points with major construction work restricted to the falls, as at the Falls of Richmond and passage through the Blue Ridge water gap below Balcony Falls. These efforts permitted a thriving navigation by batteaux — sturdy craft guided by hardy boatmen that ran the river with six to eight tons of cargo. But again the dates are critical. All of these made money or remained solvent before the 1820s. Canal boats in controlled slack water could increase the cargo load ten times, up to 60 to 80 tons. But except for steamboat traffic on major rivers, the advantage shifted after the 1820s to steam propelled trains on railroads.

Just reviewing the physical advantages, we find that even the earliest trains could carry double or more the

tonnage of a canal boat, and in time a great deal more. But the real advantage came in the horsepower delivered, simply because the train was so much faster than the leisurely barges and packets. And increasing the speed meant almost nothing in increased resistance for steel wheels on steel rails. Increased speed in a boat, however, sends resistance up with the square of the velocity. Then too trains could run day and night through almost any weather, whereas canal boats had to be tied up or at best slowed down during darkness — and bad weather simply stopped them altogether. Finally, a point hard to prove to determined canal enthusiasts: the construction cost of a railroad line was less expensive than that of a dug canal, and the damage from floods was generally less severe.

The need was acute in our area to get refined agricultural and industrial products to market. A dominant eastern faction in the legislature was parsimonious in making improvements in the west, and the works they did approve were largely turnpike roads that were not aligned to our advantage. The Valley Turnpike was started in the northern Shenandoah but never got below Staunton. There an east-west road connected allowed trade to cross over Afton, first to Richmond and later to Scottsville, when the James River Canal reached that point on the river.

H. B. Jones of Brownsburg was a contract hauler and he sought the best means to get his own and his customers' goods to market. With difficulty in the 1830s he wagoned his loads all the way to Richmond. Then he went on to Scottsville, and later, while serving as an original commissioner of the North River Navigation Company, with such prominent men as John Letcher, he shifted his delivery point to Balcony Falls, then to Miller's Landing — all the while continuing to press for the Lexington terminus.

The pattern of neglect, if that is the correct term, continued well into the railroad era, and it wasn't until the 1880s that the railroads reached Lexington and the then-depleted canal works were completely abandoned.

Major General John Knapp was superintendent of the Virginia Military Institute from 1989 until 1995. Previously he had been head of VMI's civil engineering department and dean of the faculty. He lives in Lexington.

Who could have convinced the promoters otherwise? No one, it seems, judging from events. One voice argued in the early 1850s that even the bailout by the James River and Kanawha Company was an unsound investment. The earnest young professor at VMI, Major Thomas J. Jackson, took the negative on this issue when it was debated before our predecessor group, the Franklin Society, and he lost by one vote in the end. Major Williamson had bailed out early as the chief engineer of the project — and, I should add, after providing an estimate that turned out to be too low by one-half of the eventual costs.

THE MAN who had it right before the 1820s were out was Claudius Crozet, the principal architect of VMI's educational system.

In 1824, on his first inspection trip of the James as the new principal engineer of the state, he visited the ongoing work at Balcony Falls where John Jordan had begun construction of the head works on the Blue Ridge Canal. In his reports for the years 1826 and 1828, he proposed lock and dam improvement only as far as the Blue Ridge and consideration of the “new-fangled” railroad west of the Blue Ridge. By the time of his 1831 report he recommended only railroads west of the mountains. The legislature thought so little of this that it

cut his salary in half, and he resigned and went to Louisiana. He returned to the office in 1837 when the issue seemed decided — decided everywhere except along the James, which continued as a full-blown canal system. Although he avoided work on the James, Crozet's enemies felt that he impeded the James project by his mere presence and, one supposes, by the faint praise he could give such work in his reports. He was ousted again in 1843.

By 1850, when the work got under way on the North River Canal and up the James River toward Buchanan, Crozet had begun his crowning work as chief engineer on the Blue Ridge tunnel at Afton Mountain on the line of the Virginia Central Railroad. As his tunnel neared completion in 1857, the James River canal work had pro-

ceeded above Buchanan, where the ambitious Marshall tunnel was being driven. When Crozet holed through, the work on the Marshall stopped cold. By 1860, when the first canal boat reached Lexington, there was already train service to Clifton Forge, the superior system had bypassed Rockbridge completely, and nearly a century's dreams of controlled water transport up to Covington and on to the Ohio were permanently dashed.

For all the lessons here in economic history, we still have to admire the stout fellows who pressed so hard to improve our lot.



*Claudius Crozet, daguerreotype, c. 1855.
From Virginia Military Institute Archives.*

