RIVERS, RAILS & ROADS

TRANSPORTATION SYSTEMS USED DURING THE CHEROKEE REMOVAL, 1837-1839

Prepared by the MTSU Center for Historic Preservation

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[Logo of CHP - MTSU Center for Historic Preservation]
INTRODUCTION & ACKNOWLEDGEMENTS

This study was made possible by the Cooperative Ecosystem Studies Unit (CESU) Task Agreement P18AC01316 with the National Trails Intermountain Region (NTIR) of the National Park Service in Santa Fe, New Mexico. In 2018, the Center for Historic Preservation (CHP) at Middle Tennessee State University and NTIR entered into an agreement for the completion of a study into the diverse transportation conveyances used during the Cherokee removal from 1837-1839. During this time, the Cherokee traveled west on rivers, a railway, and roads, utilizing steamboats, keelboats, flatboats, ferries, train cars pulled by steam locomotives, and wagons to reach their destination. Building off of already existing research, such as the 2009 report North Alabama’s Tuscumbia, Courtland, and Decatur Railroad and Its Role During Cherokee Emigration/Removal Beginning in 1837, the 2003 report The North Little Rock Site on the Trail of Tears National Historic Trail: Historical Contexts Report, and National Register of Historic Places nomination forms for Trail of Tears road segments, this study further explores the diverse transportation methods used by the Cherokee to travel west.

The completion of this study is largely due to a number of individuals who enthusiastically shared their time, research, and knowledge. Special thanks are due to Jennifer Davis McDaid (Historical Archivist, Norfolk Southern Corporation), Larry Smith (Alabama Chapter of the Trail of Tears Association member), Michael Wren (Alabama Chapter of the Trail of Tears Association member), David Breland (Historic Preservation Commission Coordinator for the City of Decatur), John Allison (Director of the Morgan County Archives), and the staff of the Putnam History Museum in Cold Spring, New York, the Lawrence County Archives in Moulton, Alabama, and the Tuscumbia Depot Railroad Museum in Tuscumbia, Alabama, for sharing their time, research, and knowledge with us on the Tuscumbia, Courtland & Decatur Railroad and its early locomotives. Many thanks are also due to Russell Weisman (Senior Historic Preservation Specialist, Missouri Department of Transportation, Environmental and Historic Preservation Section, Design Division) for sharing information on Missouri’s early roads with us, the staff at the Foxfire Museum for sharing research with us on the Zuraw Wagon in their collection, and Vicki Rozema (Tennessee Chapter of the Trail of Tears Association) for sharing other pertinent research with us, as well.

Many thanks are also due to a several of the staff at the CHP. Fieldwork Coordinator Savannah Grandey and Historic Preservation Fellow Katherine Hughes visited the Historical Society of Pennsylvania in Philadelphia and the New York Historical Society in New York City, respectively, to assist with research for this report, while Assistant Director Antoinette van Zelm spent time to thoroughly edit this report.
STEAMBOATS

EARLY HISTORY OF STEAMBOATS IN THE UNITED STATES

Figure 1. Drawing of John Fitch’s boat with steam-driven oars, 1786. Source: Library of Congress.

On August 22, 1787, Revolutionary War veteran John Fitch successfully sailed his 45-foot steamboat, Perseverance, on the Delaware River in front of members of the United States Constitutional Convention, marking the early stages of a transportation revolution in the United States (see Figures 1 & 2). Over the next few years, Fitch refined his design and launched a 60-foot steamboat in June 1790 that carried up to 30 passengers between Philadelphia and Burlington, New Jersey, at a maximum speed of 7-to-8 miles-per-hour under favorable conditions. While Fitch’s steamboat was successful, he was unable to secure the broad monopoly patent he desired, thus losing investors and ultimately leading to financial struggles.

Robert Fulton, an American engineer and inventor, is widely credited with developing the first commercially successful steamboat, North River Steamboat of Clermont (sometimes known as Clermont), in 1807 (see Figures 3 & 4). This steamboat was built in New York City by Charles Brown with financial backing from New York statesman Robert R. Livingston. The North River’s engines were built by the British engineering firm of Boulton and Watt in England and drove the two, 15-foot-diameter side paddle wheels as the boat traveled on the Hudson River with

Figure 2. John Fitch. Source: University of Kentucky.
passengers between New York City and Albany, making the 150-mile, one-way trip in 32 hours, as opposed to about 60 hours by stagecoach. In the winter of 1807, the North River was substantially remodeled. The boat was enlarged in both length and width, a new deck and windows were added, and it was fitted with 54 sleeping berths, a new kitchen, bar, and boiler. With the success of the North River, Fulton and Livingston turned their attention westward to opportunities in the Mississippi Valley.

On October 20, 1811, Fulton and Livingston’s newest steamboat, New Orleans, departed Pittsburgh with the goal of reaching its namesake, a feat never before achieved by a steamboat. Historian William J. Peterson described the New Orleans as a:

side-wheeler, measuring between 300 and 400 tons burden. The bow of the boat was reserved for freight[,] the engine and smokestack stood exposed in the center; and the cabin was built in the rear. This cabin was divided, one aft for the ladies and a larger one forward for gentlemen. The ladies’ cabin contained only four berths, but was comfortably furnished. The New Orleans also carried two masts equipped with sails.2

Nicholas J. Roosevelt captained the New Orleans on this historic journey of more than 1,800 miles and was accompanied by his pregnant wife Lydia (who gave birth during the trip), his young daughter, and a small crew. Although the journey was not without incident, as the boat and crew endured the New Madrid earthquakes and a fire in the forward cabin, the steamboat arrived at the port of New Orleans on January 10, 1812 (see Figure 5).3 The success of the steamboat New Orleans ushered in a new
era of trade and transportation in the United States and helped fuel the settlement of the South and West.

The steamboats that traveled along the South’s rivers in the early-nineteenth century typically shared a common design: they had a shallow, wooden hull and a wooden paddlewheel driven by steam power. Steamboats with paddlewheels on the side were called sidewheelers (see Figures 6-8), and boats with the paddlewheel located on the rear were called sternwheelers (see Figure 9). Sternwheelers could usually operate more efficiently in shallower water, so this design was more popular in rivers, such as the White River, but sidewheelers were easier to maneuver and were faster. Steamboats were initially fueled by wood and coal. Pilot houses, multiple levels of decks, gangplanks, and smokestacks were also common features of early steamboats. Those used in the passenger or tourism trade had cabins with finely decorated state rooms.

While there were only two basic steamboat types, design varied by region and can be classified into four distinct categories: East Coast, Mississippi, West Coast, and Coastal. The design of Mississippi, or “Western Rivers,” steamboats pertinent to this study are described as follows:

Figure 6. Sidewheeler steamboat Maid of New Orleans, built in 1818, as depicted by artist Fleury Generelly in 1820. Source: steamboattimes.com.

Figure 7. Sidewheeler steamboat Caledonia, built in 1823. Source: steamboattimes.com.

Figure 8. Sidewheeler steamboat Tecumseh, built in 1826. This steamboat Tecumseh was destroyed by 1831 and was, therefore, not the one used in the Cherokee removal. Source: John H. White, “A Portrait of the 1826 Steamboat Tecumseh,” Ohio Valley History 9, no. 3 (Fall 2009): 60.

Tall, twin smokestacks forward, with a square pilothouse located amidship, are classic on the Mississippi-style steamer... The Mississippi steamboat required minimal draft and had the ability to dock at a muddy bank or a sloping levee when necessary, so it was ideal for these rivers. The hull of this type craft was a low freeboard with the main deck only a foot or two above the waterline. The vessels were equipped with long gangplanks, called stages, that were suspended on booms over the foredeck, ready to be lowered when needed to facilitate loading and unloading along the riverbank. Usually, the boilers were located out in the open on the main deck. Exhaust steam on these boats escaped through a pair of 'scape' piles aft of the pilothouse.\(^5\)

In addition to variations in type and design, steamboats fulfilled a number of specific jobs on the waterways. Towboats, for example, moved barges up and down rivers; ferries carried people across waterways; snagboats helped clear the river of dangers; packets carried people, goods, and mail down the rivers; and fuelers re-supplied steamboats on the rivers with wood, coal, or oil. Most, if not all, of the steamboats used in the Cherokee removal from 1838-1839 were classified as packet steamers, specifically designed to maximize the transport of people and goods up and down America's western and southern rivers.

River travel in the early-nineteenth century was not without danger, and as a result of this danger, steamboats did not survive long. In fact, between 1830 and 1839, 272 steamboats were destroyed after less than three years on the river each.\(^6\) Sand bars, snags, storms, fires, and boiler explosions were just some of the dangers steamboats, their crews, and their passengers faced. Keelboats and flatboats also faced many of these problems. Running aground on a sand bar, for example, took a tremendous effort from the crew to move the boat and happened on more than one occasion to the steamboats carrying detachments of Cherokee during the Trail of Tears.\(^7\) Snags, which were large debris in the water typically in the form of trees or stumps, posed another threat to steamboats,
keelboats, and flatboats. The invention of the first practicable snagboat by Henry Miller Shreve, patented in 1824, helped reduce this particular hazard, though, by the time of removal. By 1830, his snagboats, sometimes referred to as “Uncle Sam’s Tooth Pullers,” improved navigation of the rivers so much that only one flatboat was lost to a snag during that year.

Arguably, the biggest danger facing steamboats were boiler explosions, with nearly two-thirds occurring as boats departed from landings. From 1811 to 1851, boiler explosions caused 21% of river accidents.\(^8\) 1838 marked one of the worst years for steamboat explosions (relative to the amount of tonnage in service), with 342 fatalities from twelve explosions.\(^9\) While none of the steamboats used during the Cherokee removal suffered from a boiler explosion, the steamboat *Lucy Walker* owned by wealthy Cherokee businessman Joseph Vann, who emigrated to Indian Territory in 1837, suffered from a catastrophic boiler explosion on October 23, 1844 (see Figure 10). The explosion, burning, and sinking of the vessel occurred within just a few minutes. Captain L. B. Dunham, who witnessed the explosion, described the grim scene:

> At the moment of the accident, the air appeared to be filled with human beings, with dissevered limbs and other fragments of human bodies. One man was blow to the height of fifty yards…and fell with such force as to pass entirely through the deck. Another was cut in two by a piece of the boiler.\(^10\)

Gruesome scenes such as this, were a very real possibility on the river in the 1830s.
STEAMBOATS AND THE TRAIL OF TEARS

From 1837 to 1839, nine different steamboats were employed to assist in the transportation of six Cherokee detachments in reaching Indian Territory (present-day Oklahoma). These steamboats included the Knoxville, Newark, Revenue, Smelter, Little Rock, George Guess, Tecumseh, Itaska, and Victoria (see Figure 12). The first of these six detachments was initially led by General Nathaniel Smith, who was later relieved by Dr. John S. Young at Tuscumbia as the detachment conductor, and consisted of approximately 466 Cherokee. On March 3, 1837, the detachment departed Ross’s Landing (present-day Chattanooga, Tennessee) voluntarily for Indian Territory in a fleet of eleven flatboats. When the detachment reached Gunter’s Landing, Alabama, the flatboats were towed by the steamboat Knoxville to Decatur. Here, the detachment boarded train cars, traveling to Tuscumbia via the Tuscumbia, Courtland & Decatur Railroad. At Tuscumbia, the detachment departed on two keelboats pulled by the steamboat Newark. From Little Rock, the detachment continued aboard the steamboat Revenue and the two keelboats.

The second detachment that utilized steamboats was a small group of approximately 250 Cherokee. This group also voluntarily departed from Ross’s Landing and arrived in Waterloo, Alabama, on April 6, 1838, where United States Army Lieutenant Edward Deas took over as conductor of the detachment. Here, the Cherokee boarded the steamboat Smelter and one keelboat. When the detachment reached Little Rock, Arkansas, on April 11, 1838, Deas made arrangements to transfer the Cherokee to the steamboat Little Rock and two keelboats, as he believed the Smelter was too large to make it much further on the river. The Cherokee would have the entire use of one of the keelboats, the top of the other, and all areas of the steamboat Little Rock, with the exception of the cabins. The following day, Deas realized that it was unlikely the steamboat and keelboats with their heavy loads of freight would make it much further up the river, so arrangements were made to leave all of the freight and one keelboat behind. After difficulty with the steamboat making it over several bars, Deas decided to land the party on April 20, 1838, and make the rest of the journey by land.

Deas led one more detachment of Cherokee that utilized steamboats. This forcibly removed detachment, consisting of between 600 and 800 Cherokee, departed from Ross’s Landing on June 6, 1838, on the steamboat George Guess and six accompanying flatboats. At Decatur, the detachment boarded train cars to take them to Tuscumbia, where they boarded the steamboat Smelter and two keelboats. Eventually, both keelboats were left behind and the Cherokee were given use of the main cabin of the steamboat.

Another detachment that utilized steamboats was led by United States Army Lieutenant Robert H. K. Whitely. This detachment left Brown’s Ferry (present-day Chattanooga) on June 16, 1838, in eight flatboats pulled by the steamboat George Guess. The following afternoon, the group faced a three-hour delay as repairs were needed on the steamboat’s engine. Once the engine was repaired, the detachment continued on its journey towards Decatur. On June 21st, the detachment reached Decatur and boarded two trains for Tuscumbia. From Tuscumbia, the detachment boarded the steamboat Smelter and traveled to Little Rock where they boarded the light draft steamboat Tecumseh. The detachment became stranded near Benley’s Bar and took an overland route for the remainder of their journey.

The fifth detachment to employ steamboats for their journey to Indian Territory was led by Gustavus S. Drane. This detachment traveled overland from Ross’s Landing to Waterloo, Alabama. At Waterloo,
Figure 12. Map of the Water Route of the Cherokee Trail of Tears, depicting the segments of the route in which steamboats were used (identified by the yellow and blue dashed line). *Map courtesy of ArcGIS Online.*
they boarded the steamboat Smelter, used by three previous detachments. The Smelter grounded thirty miles south of Little Rock and some of the Cherokee were transferred to the steamboat Tecumseh, while others walked. The steamboat Tecumseh reached Little Rock, but could go no further due to low water levels. As a result, the Cherokee boarded the steamboat Itaska but were grounded again near Lewisburg, so they traveled overland for the last leg of their journey.

The final detachment to utilize a steamboat for their journey consisted of 231 Cherokee, including Principal Chief John Ross and his family, and was led by Captain John Drew. This detachment left Fort Cass (present-day Charleston, Tennessee) on four flatboats and hired pilots to transport them through some of the hazardous areas of the Tennessee River near present-day Chattanooga. They also paid tolls to use a canal to bypass some of the hazardous Muscle Shoals rapids. In Tuscumbia, John Ross purchased the steamboat Victoria for $10,000, and in Paducah a keelboat was purchased for $600. The detachment traveled on the Victoria until low water levels forced the group to stop near the mouth of the Illinois River. From here, the detachment traveled the last forty miles by wagon and disbanded on March 18, 1839, at the Illinois Campground near present-day Tahlequah, Oklahoma.

Although nine steamboats were used in the removal of the Cherokee from 1837-1839, there are few descriptions of what these vessels looked like. The following provides summaries of information uncovered during this study regarding the history of each of these steamboats, with the exception of the steamboat George Guess. Named after the creator of the Cherokee syllabary, little is known about the George Guess, save for the cost of Assistant Conductor John N. Reeves and Attending Physician Alfred M. Folger for their transportation aboard the vessel from Ross’s Landing to Decatur, which was $5.00 and $5.75, respectively.¹⁶

STEAMBOAT KNOXVILLE

The steamboat Knoxville was built in Cincinnati, Ohio, and had a burden of about 100 tons. It arrived in Knoxville, Tennessee, in April 1831 to much fanfare and celebration. An article in the National Banner and Nashville Whig reported on the Knoxville’s arrival:

She greeted our shore on Monday, last at 11 o’clock amid the firing of cannon and the joyful gratulations of an immense crowd of spectators, assembled to witness the pleasing spectacle…

The boat passed the town in handsome style, fell down again near the ferry landing, and came to at a place prepared for the purpose…

As the ‘Knoxville’ made its appearance, the steam boat company formed, and marched in procession to the banks of the river, from whence, after the speeches were delivered they returned in like order, with Col. Ramsey at their head, preceded all the time with music, to the Knoxville Hotel; from whence, after the interchange of a convivial glass, the company dispersed.¹⁹

The Knoxville traveled from Knoxville to Muscle Shoals and by 1835 had a regular scheduled service between Knoxville and Decatur during the wet weather seasons.²⁰ The steamer transported people and a diverse assortment of freight (see Figure 13 for rates). James King & Company of Knoxville, for example, regularly advertised goods received from the steamer, including window glass, sheet iron, hoop iron, tanners oil, nails, bottles, sugar, coffee, fish, alcohol, cigars, spices, and other items.²¹
Little is known about the *Knoxville*’s appearance, save for an account provided by M.J. Parrott of Strawberry Plains, Tennessee, in a letter he wrote on May 16, 1876, recounting his visit to the *Knoxville* in 1832. Parrott recalled that at the end of the season in 1832 the *Knoxville* became stranded as a result of low water levels near the “Suck,” a dangerous rapid on the Tennessee River near Chattanooga. The boat was helmed by Captain Bearden at the time, who discharged his crew and left Parrott’s brother, Lorenzo, in charge of the boat and cargo. With permission from Bearden, Parrott joined his brother aboard the *Knoxville*. He offered the following description of the steamboat from memory:

> Imagine my astonishment, when, in that dark night, my eyes first fell upon the magnificent proportions of the steamer *Knoxville*, her great tall chimneys[,] her painted white house looking cabin, two or three stories high, her wheel-house or paddle boxes away above her decks, another little house, the pilot house, stuck above all, long ropes running out from bow and stern, with the out end tied to some tree or rock, with great rocks behind her and great rocks before and greater rocks behind her on the shore, as she was stuck into a little cove in the shore. The waves of the suck ebbing and flowing continually, the continued rocking of the boat by the waves, the roaring and splashing of the wild waters, all conspired to fill me with wonder and astonishment not entirely free from awe and dread.22

After just three years on the Tennessee River, the Knoxville Steamboat Company advertised the sale of the steamer *Knoxville* in 1834, stating that “her engine is excellent, and with some repairs, can be made as good as new.”23

In 1837, the steamboat *Knoxville* transported a detachment of Cherokee led by Dr. John S. Young from Gunter’s Landing to Decatur. George Washington Harris served as captain of the *Knoxville*, rechristened the *Indian Chief*, at this time (see Figure 14). George Washington Harris was born on March 20, 1814, in Allegheny City (present-day Pittsburgh), Pennsylvania. He later moved to Knoxville with his half-brother Samuel Bell, Jr. Harris was twelve years old when he witnessed a steamboat for the first time. It inspired him to build a miniature steamboat of his own, which he successfully tested for the public in a shallow pond. Later, Harris entered into an apprenticeship at his half-brother’s jewelry shop, but
his interest in steamboats never left him. In 1835, he became the captain of the steamboat *Knoxville*, a position he held until 1838.

There are two anecdotes about Harris's participation in the Cherokee removal. One anecdote offers an account of Harris's strict enforcement of an alcohol ban among the Cherokee on his boat. The other, recounted by Dr. James Park, a pastor of the Presbyterian church to which Harris belonged, involved General Winfield Scott and was told as follows:

As a high-ranking officer of the United States Army, Gen. Winfield Scott had to do with the supervision of the removal of the Cherokees. While Harris, with his steamboat and barges, was on the way, Gen. Scott came on board down the Tennessee River, near Ross’ Landing now Chattanooga.

The sobriquet, “Old Fuss and Feathers” was eminently appropriate to General Scott. He criticised severely the arrangements of Capt. Harris, and peremptorily ordered changes. Harris, a little fellow whose steps measured about fifteen inches, in his quick, nervous way stepped up[,] informed the pompous Scott that he himself commanded the boat, and wanted to know the authority for interference. Looking disdainfully upon the insignificant youngster, Scott asked him who he was. Harris, without preliminaries or apologies told him that he was entrusted with that boat, with the barges and all on board, and that he would manage it to suit himself. Thereupon, Scott took off his hat, apologized, and refrained from intruding with his [sic] own orders.24

While little else is known about the steamboat *Knoxville*, Harris quit steamboating in 1839. He later became a popular humorist best known for his 1867 book, *Sut Lovingood’s Yarns*. His writing inspired well-known literary figures Mark Twain, William Faulkner, and Flannery O’ Connor.

**STEAMBOAT NEWARK**

Advertisements in newspapers in 1837 referred to the steamboat *Newark* as a “new light draught steamer.”25 Joseph Wantyn served as the captain and


Christian Simpson & Co. served as the agents of the *Newark* when the boat assisted in the transportation of a detachment of Cherokee led by Dr. John S. Young from Tuscumbia to Little Rock in 1837. General Nathaniel Smith instructed Dr. Young to make a contract with a steamboat company to transport the Cherokee to Fort Gibson, “or as high up the Arkansas as he could.” He did so with the owners of the steamboat *Newark*. 
Upon examination of the contract, Dr. Philip Minis, disbursing agent for the Cherokee removal, deemed that the contract was “very disadvantageous” to the United States and attempted to make a new contract with the Newark to no avail. He, then, attempted to find other means of transportation, but was unsuccessful. Minis reported the following:

Upon deliberate reflection, I thought it were better for the interests of the Government that I should make a contract in my own name with the Newark, and comply with her exhorbitant terms, than that the Cherokees should be relanded with all their baggage, which if it were done, I considered, would create dissatisfaction amongst them. This I wished to avoid...

On March 14, 1837, Minis entered into an agreement with Wantyn to transport on board the steamboat Newark and two keels “four hundred and sixty-six Cherokee Indians, with their baggage provisions, &c. to Little Rock” (see Figure 15). Upon reaching Little Rock, Wantyn would be paid $18.25 for each Cherokee on board at the time of departure from Tuscumbia under the following terms:

No unnecessary delay shall be caused to the boats without compensation. Nothing is to be construed in the above to prevent a

Figure 15. “Articles of agreement, made on the fourteenth day of March, eighteen hundred and thirty-seven, between Joseph Wantyn, captain of steamer Newark, of the one part, and Philip Minis, United States army, on the part of the United States, of the other part.

This agreement witnesseth:
That the said Philip Minis, for and on behalf of the United States of America, and the said Joseph Wantyn, for steamboat Newark, heirs, executors, and administrators, have mutually agreed, and by these presents do mutually covenant and agree to and with each other, in manner following, to wit:

First. That the said Joseph Wantyn agrees to transport, on board of the said steamboat Newark and two keels in tow, four hundred and sixty-six Cherokee Indians, with their baggage, provisions, &c. to Little Rock, on the Arkansas river. For and in consideration of which, he is to receive, on the arrival of the boats with the detachment of Cherokees at Little Rock, eighteen dollars and twenty-five cents for each Indian on board at the time of starting. No unnecessary delay shall be caused to the boats without compensation. Nothing is to be construed in the above to prevent a sufficient time for the burial of dead Indians, and to procure necessary provisions or supplies; and also agrees to prevent as far as practicable the sale of spirits, by any person attached to the boat, to the Indians; and also agrees not to make any stop at towns or villages, without there is a necessity for the same, which cannot be avoided.

Second. The said Philip Minis, for and on behalf of the United States, agrees to pay the amount of transportation as above, immediately on the arrival of the boats at Little Rock.
That the United States will be responsible for no accidents arising under, or growing out of, the foregoing stipulations.
In witness whereof, the parties have hereunto placed their hands and seals, the day and date above written.

JOSEPH WANTYN,
PHILIP MINIS, U. S. A.,
Disbursing Agent Cherokee Removal.

Witness:
J. A. CHAMBERS.
sufficient time for the burial of dead Indians, and to procure necessary provisions or supplies; and also agrees to prevent as far as practicable the sale of spirits, by any person attached to the boat, to the Indians; and also agrees not to make any stop at towns or villages, without there is a necessity for the same, which cannot be avoided.

In addition to the four hundred and sixty-six Cherokee, five Muscogee (Creek) also traveled aboard the *Newark* and its two sixty-ton keelboats. Upon arrival in Little Rock, the owners of the *Newark* were paid the agreed upon $8,504.50 for the four hundred and sixty-six Cherokee.

In late 1837, the *Newark* broke a shaft at the mouth of the Merrimack River and had to be towed for repairs. The following year, the *Newark* advertised to transport freight at the mouth of the Black River to Alexandria, Louisiana, in the event that the regular pack steamer *Livingston* was unable to make the trip due to low water levels. On January 21, 1839, the *Newark* struck a snag sixty miles above Alexandria and sunk within two minutes in fifteen feet of water. Reportedly, no lives were lost, but the boat and cargo were a total loss.

**STEAMBOAT REVENUE**

The steamboat *Revenue* was built in Louisville, Kentucky, in 1834 and measured 127’ from bow to stern, 18’ 5.5” wide, and the depth of the hold was 5’ 4.5”, with a weight of 122 tons. The boat had one deck, no masts, a pink stern, and a cabin on the deck. In July 1836, the steamboat *Revenue*, along with the steamboats *Majestic* and *Lamplighter* transported approximately 2,300 Muskogee (Creek) from New Orleans to Rock Roe on their forced removal to Indian Territory. The following year, the *Revenue* transported a voluntary detachment of 466 Cherokee on the last leg of their journey to Indian Territory. At this time, Shelldrick Gowen Moore was the captain and one of the owners of the *Revenue*. On March 22, 1837, Moore entered into an agreement with Disbursing Agent Minis to transport the Cherokee aboard the *Revenue* and two keelboats from Little Rock to Fort Gibson (present-day Oklahoma), which he successfully did, albeit with some difficulties ascending the Arkansas River. Moore was paid $5 for each Cherokee, for a total of $2,330 upon reaching Fort Gibson.

**STEAMBOAT SMELTER**

The steamboat *Smelter* was built in 1837 in Cincinnati, Ohio, and owned and operated by two brothers from Galena, Illinois: Daniel Smith Harris and Robert Scribe Harris (see Figure 16). Daniel served as the captain, and Robert served as the engineer. Lt. Deas described this light-draught, side-wheeler steamer as a “very good boat, over 150 Tuns Burthen, a fat vessel” and mentioned that it had a cooking-stove onboard. The steamboat *Smelter* was renowned for its speed and luxurious accommodations. In an effort to capitalize
off of the growing tourist trade, the Harris brothers wanted to make sure that their boat offered the best facilities. As a result, it was the first boat on the Upper Mississippi to have a cabin or “boiler deck” with private state rooms. The brothers decorated the Smelter with evergreens and, when approaching landings, or meeting with other boats, fired a cannon to announce its presence.

In the 1820s, the Harris brothers had moved from Cincinnati to present-day Galena and amassed a fortune as lead prospectors, taking four million pounds of lead from their mine, known as West Diggings or Harris Diggins, which later helped financially back their steamboating enterprise. In 1829, Captain David G. Bates offered Daniel a position in the pilot house of the steamboat Galena. Robert was later hired as an assistant engineer. It was aboard the Galena that the brothers received the training that laid the foundation for their successful steamboating careers.

In 1832, the brothers constructed their first boat, Jo Daviess, with machinery picked from a scrap yard in Cincinnati. It was the first steamboat built north of St. Louis. In 1835, the brothers built the steamer Frontier in Cincinnati, followed by the Smelter, which made regular trips between Cincinnati and Galena and was reportedly purchased by the government. The Smelter was also used to transport four detachments of Cherokee to Indian Territory in 1838 (two of the detachments were led by Lt. Edward Deas, one was led by Capt. Robert H. K. Whitely, and the last was led by Gustavus S. Drane). The Harris brothers were also the first to navigate the Rock and Wisconsin rivers by steamer. In 1845, Robert left steamboating for the mercantile business, while his brother Daniel remained in steamboating until 1861. The twenty-third and arguably the most famous steamboat Daniel commanded was The Grey Eagle, launched in 1857. It held a steam speed record for travel on the Mississippi, which was not broken until 1945. The boat’s career ended in tragedy, however, when it crashed into the Illinois side of the Rock Island draw-bridge on the Mississippi River and sank immediately in twenty feet of water, killing at least six people. Daniel, then 52, devastated by the Grey Eagle’s accident, retired from steamboating.

Little else is known about the Harris brother’s steamboat Smelter, though. General Winfield Scott did travel on the Smelter, writing a letter aboard in Nashville on November 21, 1838, while the removal of the Cherokee was well underway. An advertisement for the auction of the “fast running light draught steamboat, Smelter” in The Tennessean in February 1840 (see Figure 17). Later that year, an advertisement for freight and passage bound for Nashville in the New Orlean’s Times-Picayune listed Thomas Bellsnyder as the captain. Advertisements in 1841 and 1842, suggest the Smelter had a regular route from New Orleans, offering passage and goods to Nashville.
STEAMBOAT LITTLE ROCK

The steamboat *Little Rock* was built in 1837 in Cincinnati, Ohio, and weighed 146 tons. It measured 144’ long, 20’ 6” wide, and the depth of the hold was 5’ 6”. It was a side-wheeler, had one deck with a cabin and no masts, and was described in 1837 as a “new and splendid upper cabin steamboat.” The *Little Rock* transported freight and offered a passenger service with “superior accommodations.” In addition to regular freight and passenger service, the steamboat transported $150,000 in specie for the principal disbursing agent of the government intended for the Chickasaws. At the time of the Cherokee removal, Philip Pennywit, nicknamed the “father of steamboating on the Arkansas,” was an owner of the steamboat *Little Rock* and served as its captain (see Figure 18). Pennywit was born in 1793 in Virginia and later moved west to Cincinnati, where he spent time operating a keelboat between Cincinnati and New Orleans before building one of the earliest steamboats constructed in Cincinnati, naming it after the city. On January 24, 1828, he arrived in Little Rock and took command of the 60-ton, side-wheeler steamboat *Facility*, which was among the first to ascend the Arkansas River. In December 1828, the *Facility*, helmed by Pennywit, towed a fleet of keelboats carrying approximately 200 Cherokees to the West. In addition to the *Cincinnati*, *Facility*, and *Little Rock*, Pennywit commanded a number of other steamboats during his long career, including the 117-ton *Waverly*, the 88-ton *Neosho*, the 115-ton *Arkansas*, and the 162-ton *Arkansas No. 5*, all of which were side-wheelers. Pennywit retired from steamboating in 1847 and established a successful mercantile business and large flour mills in Van Buren, Arkansas.

In addition to assisting in the transport of the detachment of Cherokee to Indian Territory in 1838, the steamboat *Little Rock* also assisted in the removal of a party of approximately 200 Seminoles in 1841, which included leaders Cooacoochee (“Wild Cat”) and Hospetakee. The party left Tampa Bay, Florida, on October 12, 1841, aboard the brig *Laurence Copeland* and were transferred to the steamboat *Little Rock* at New Orleans on October 24. The party arrived at Fort Gibson on November 12, 1841.

STEAMBOAT TECUMSEH

The steamboat *Tecumseh* was built in 1835 by James Howard in Jeffersonville, Indiana. It was a wooden-hull, side-wheeler steamer measuring 115’ long from bow to stern, 16’ wide, and the depth of the hold was 5’. It weighed 92 tons and was the third boat built by the Howard Shipyard. James Howard was born in 1814 near Manchester, England (see Figure 19). At age five, he emigrated to America with his family, settling in Cincinnati. Here, Howard worked in his family’s mill before he was apprenticed to
William Hartshorn, a local steamboat builder. He moved to Jeffersonville, Indiana, and at 19 years old, founded a shipyard on the banks of the Ohio River in 1834 and had a contract to build his first boat, *Hyperion*. In just three years of business, the Howard Shipyard was producing ten percent of all hulls launched on western waters. The Howard family operated the shipyard from 1834 to 1941, when it was sold to the United States Navy to build military craft for WWII. During its 107-year history, the shipyard built more than 3,000 vessels, and today it is the nation’s oldest continuously operated inland shipyard.

During the Cherokee removal, Mr. Gleason was an owner of the *Tecumseh*, which was contracted to transport the Whiteley detachment aboard the steamer and two keelboats from Little Rock to Fort Coffee or Fort Gibson for $5.50 per person. Unfortunately, days after its departure it grounded on Benton’s Bar near Lewisburg. The Drane detachment also utilized the *Tecumseh* for a leg of its journey but could not make it any farther than Little Rock. Three years later the *Tecumseh* reportedly snagged in 1841.

**STEAMBOAT ITASCA**

The light-draught steamboat *Itasca* was built in 1836 in Pittsburgh, Pennsylvania, at a cost of $10,000 and was used primarily for trade in southern states. Absalom Boyd initially served as captain of the steamer and co-owned it with G. C. Wilson of Zanesville, Ohio, and John Davis of Pittsburgh, Pennsylvania. It offered regular service from Memphis to Little Rock and was described in 1838 as “new and safe,” promising to “spare no pains in their attention to travelers.” The owners of the *Itasca* seemed to fulfill their promise of customer service as eighteen passengers endorsed the steamer in the *Arkansas Times and Advocate*, declaring that passengers “will find on board of her, good accommodations, attentive officers, excellent order and comfort.”

The *Itasca* played a significant role in the removal of southeastern American Indians to the West in 1837 and 1838. Newspapers reported that approximately 800 Muscogee (Creek) traveled from Memphis to Fort Gibson aboard the *Itasca* in November 1837 under the command of Gouverneur Morris; however, a letter from the Superintendent of Creek Removal R. E. Clements stated that the number was closer to 300. These Muscogees were those who had fled to the Chickasaws after the removal treaty of 1832. During this voyage from Memphis to Fort Coffee, Simeon Buckner was identified as commander of the *Itasca*. Buckner was a steamboat owner from Louisville, Kentucky, and was also hired to transport an estimated 5,662 Chickasaws from Memphis to Fort Coffee aboard his fleet of six steamers, including the *Itasca*.

In January 1838, R. B Crockett was tasked with overseeing the removal of a party of approximately 150-175 Chickasaws, identified as followers of Kin-hi-cha or the “Cleanhouse Indians,” to the West. Crockett
stated the following in regards to the party of Chickasaws under his direction:

_I made an arrangement with Capt. Boyd, Master of the Steamer Itaska, for the transportation of the Indians, their Stock and baggage, to the Post of Arkansas, and thence to Little Rock for as many of the Indians as might be disposed to go. The Steamboat Itaska was one of the boats employed under the Buckner Contract for transporting Chickasaws._

Later that year, the Itasca was also employed to assist in the transport of a detachment of 1,072 Cherokee under the direction of Captain Gustavus S. Drane. This detachment boarded the Itasca at Little Rock but grounded near Lewisburg. The Itasca was also employed to transport 674 individuals of the Micanopy’s, Emathla’s, and Jumper’s Bands of Seminoles from Little Rock to Fort Gibson, under the command of Lt. John G. Reynolds, Dr. James Simmons, and Lt. Terret. Reynolds also oversaw 67 members of the Halpata Hadjo’s (Alligator’s) Party in July 1838, which traveled aboard the Itasca from New Orleans to two miles below Fort Coffee.

The steamboat Itasca sailed on the rivers for just three years. On September 16, 1839, the steamer hit a snag and was grounded 140 miles from Little Rock. Her cargo and mail were saved, but an auction

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Figure 20. Itasca wreck auction advertisement, Weekly Arkansas Gazette, Little Rock, Arkansas, October 23, 1839.
was held in November for some of the steamer’s contents, including her boilers, cylinders, stoves, and anchors (see Figure 20).  

**STEAMBOAT VICTORIA**

The steamboat *Victoria* was built in Brownsville, Pennsylvania, in 1837 and purchased by Principal Chief John Ross in Tusculum, Alabama, for $10,000. It measured 123’ from bow to stern, 16’ wide, and the depth of the hold was 4’ 6”, with a displacement of 85 tons. It had one deck, no masts, a plain head, and a cabin on the deck. After removal, Ross drafted a letter to Boat Captain J. W. Hickle on July 1, 1839, stating the following:

> I regret that circumstances will not permit me to visit the boat at this time; and therefore, I have engaged the services of Mr. Runyan to go as clerk on Board and to attend to all the pecuniary interests in the running of the Boat—Expecting the continuance of the services, and such of the crew as may be required… will pay off the several sums due to yourself and the crew agreeably… I have directed Mr. Runyan to order the sailing of the Boat to such points on the Mississippi and Ohio Rivers, in connection with the Arkansas, as may be most profitable for freight and passengers…

Although Ross never mentions the boat by name, it is assumed to be the *Victoria*. Beginning in early 1840, advertisements for the sale of a steamboat *Victoria* appeared in Arkansas newspapers listing a C. Runyan, on board, as a contact. The advertisements provided some additional descriptions of the boat, stating that it was a “light-draught” steamboat “well adapted for freight and passengers” and that the “cabin is fitted up in good style, entirely state-rooms.” It was also noted that the “furniture and fixtures of every kind are good.”

The *Victoria* was eventually sold at Little Rock to Captain John Brown, owner of the John Brown and Company dry goods store in Batesville, Arkansas, in order to establish a regular trade route from Batesville to New Orleans. Although Brown only owned the steamboat for a brief time, he did make history with it. On May 10, 1841, with Captain John Brown at the helm, the *Victoria* became the first steamboat to travel to the mouth of the North Fork River, 100 miles above Batesville, with freight for Major William Wolf, beginning a new era of steamboating on the White River. The same year, Brown also signed a trade agreement with Noadiah Marsh of Elizabeth, Arkansas, stating:

> …Brown doeth agree to furnish the said Marsh…a good assortment of dry goods of all descripion [sic]… also Nails, iron, steel Hardware & cutlery Sugar Coffee & avry other article found necessary to compose an assortment for a Country Store… Said Marsh is to allow the Said Brown on Articles of Merchandise (Except sugar coffee & Salt ) fifty per cent over cost & charges. Sugar Coffee & Salt to be furnished at cost & charges of freight Insurance… Said Marsh is to pay the Said Brown in Marketable produce of the Country at the current market price. Such as Beef, Cattle, Stags & Bulls excepted, pork hogs, Horses, Tobacco, Cotton & free of any Extra Charge except the actual hire of Labour and hands to drive and assist in Loading…Should the Amount of goods purchased by said Brown exceed the amount of stock purchased by said Marsh and furnished to said Brown, he the Said Marsh agrees to pay the balance in good Current Money of the State of Arks…

Brown continued to operate the *Victoria* on the White and Black rivers until June 10, 1841, when he sold it to P. McD. Collins.
KEELBOATS

Figure 21. “A Keel Boat on the Mississippi,” 1838. Source: Library of Congress.

While steamboats and flatboats were used in the river transportation of a number of Cherokee detachments to Indian Territory from 1837 to 1839, four detachments were known to have utilized keelboats for their journeys (see Figures 21-23). Historian Michael Allen explains:

The keelboat was a sleek, probed upstream craft, averaging about sixty feet in length and eight feet in width. Equipped with sails and rigging, a keelboat resembled a miniature sailing vessel or small oceangoing frigate. Keels were propelled by wind, rowing, poling, or hand-winching upstream through the Herculean efforts of their crews. In 1819 it took sixty-seven days for one crew to propel its keelboat from New Orleans to Nashville; it once took keelboat entrepreneur Andrew Jackson and his crew sixteen days and a reported twenty gallons of whiskey to sail from Nashville to the mouth of the Cumberland River and back.62

Although steamboats soon supplanted the keelboat on southern inland waterways, this flexible vessel was kept in use to the mid-nineteenth century.

Keelboats took their name from their construction—long narrow boats built on keels with ribs and covered with planks. Being a light-draught boat, it was intended to navigate shallow waters. Keelboats ranged in length from 40’ to 80’ long, 7’ to 10’ in width, and came to a point at the bow and stern. These versatile boats transported people, food, materials, supplies, and stores of various commodities up and down western rivers. They were designed to move freight more so than people and carried perishable cargo, including sugar, coffee, tea, and flour (see Figures 24-25).63 Considering the number of people being transported, the keelboats used on the Trail of Tears were large, at least 60 feet and quite likely 80 feet, in length. They were towed, meaning that the space for rowers could be used by passengers.

When fully loaded, the average keelboat drew 2’ of water, which made it ideal for travel in shallow waters. The middle of the keelboat could be left open; however, the majority of boats had the middle partially or fully covered by a cabin or cargo box for shelter and storage. The cabin or enclosure normally was 6’ in height. On the perimeter of the boat or gunwales ran a 12”-to-18”
Figure 22. Felix Achille Saint-Aulaire, “Barge remontant le Mississippi largue vue par le travers,” 1832. Source: steamboattimes.com/keelboats.
cleated footway for the crew to walk when they were poling the boat. The bow of the boat was outfitted with four-to-twelve seats for oarsmen. In some cases, the keelboat employed the use of square sails to take advantage of any wind that might aid in navigation.  

Steering the keelboat was the job of the boat’s captain or patroon who stood on the roof of the cabin or on a block with notches cut out of it for foot placement. The boat was steered with a long oar which was on a pivot at the stern and an extended 10’ to 12’ beyond the boat. The most common method of moving a keelboat was poling. This method involved 10 to 20 men divided equally on either side of the boat using long poles to push the boat along. The men would push the keelboat with the poles by walking the length of the boat while pushing off the river bottom. Other methods of moving the keelboat included bushwhacking, which used branches of trees to pull the boat along. Rowing and sails were also used on
Keelboats when the wind was blowing to help navigate the boat. Navigation of keelboats was not an easy task, as described by historian Donald Jackson:

Going upstream there was no ideal way to keep it moving. If the wind was fair you ran up a sail. When the wind failed you broke out the iron pointed setting poles and started pushing. If the bottom was deep enough, you could row. If the current was too swift for rowing you could bend a forty-fathom length of cordelling (hemp rope) cable to the mast and put the crew ashore to haul in the line. Failing all this, you could tie up to the bank and wait for the wind to rise up and blow fair.

Sand bars, snags, storms, pirates, and on the rare occasion, wild animals, all posed dangers for keelboats and their crews. It was easy to become stuck on a sand bar and took a tremendous effort from the crew to move the boat. Snags were another obstacle frequently encountered on the rivers to hit. A “sawyer” was a distinct kind of snag that would swing up and down and threaten to hit the underneath of the boat. Storms were dangerous in that they could be violent, and the boats could capsize. Pirates posed a danger in that they could be ruthless in pursuit of the cargo transported by the keelboats. Reports were made of crews and passengers being killed and their possessions stolen; one such article warns of the dangers on the Mississippi: “It is not perhaps generally known to the people of the eastern states that certain portions of the wild and uncultivated banks of the Mississippi are infested by bands of banditti.”

KEELBOATS AND THE TRAIL OF TEARS

In 1837 General Nathaniel Smith, who was later relieved by Dr. John S. Young at Tuscumbia as the detachment conductor, led one of the detachments of Cherokee that used keelboats. Smith and Young were tasked with the transportation of approximately 466 Cherokee. On March 3, 1837, the detachment departed Ross’s Landing (present-day Chattanooga, Tennessee) in a fleet of eleven flatboats. When the detachment reached Gunter’s Landing, Alabama, the flatboats were towed by the steamboat Knoxville to Decatur. Here, the detachment boarded train cars, traveling to Tuscumbia via the Tuscumbia, Courtland & Decatur Railroad. At Tuscumbia, the detachment departed on two keelboats pulled by the steamboat Newark. At Little Rock, the detachment continued aboard the two keelboats pulled by the steamboat Revenue.

Another detachment that utilized keelboats was a small group of approximately 250 Cherokee. This group also departed from Ross’s Landing and arrived in Waterloo, Alabama, on April 6, 1838, where United States Army Lieutenant Edward Deas took over as conductor of the detachment. Born in South Carolina in about 1812, Deas graduated from West Point in 1832 and was appointed a second lieutenant in the Fourth Artillery division. He served a short time on the Black Hawk expedition and was later stationed at Fort Gratiot, Michigan. In September 1835, Deas was transferred to Fort Mitchell, Alabama, and deemed the disbursing agent to oversee the removal of 511 Creek. Deas boarded the Creek onto a steamboat and two keelboats to move them to Waterloo, then on to another steamboat and two large keelboats to continue their journey. Deas reports this event in his journal about the Creek emigration:

Two keelboats of nearly the largest size are also employed and have been put in good order for the comfort and health of the Indians. It is intended to stop at night allowing the people time for encamping and preparing their food. We have come
Figure 26. Map of the Water Route of the Cherokee Trail of Tears, depicting the segments of the route in which keelboats were used (identified by the red and blue dashed line). Records for the Drew detachment are incomplete, but it is presumed that the keelboat purchased for the detachment in Paducah accompanied the detachment past Fort Coffee and to the mouth of the Illinois River (this segment is identified by the pink and blue dashed line, as it is not confirmed).

Map courtesy of ArcGIS Online.
Figure 27. Keelboats were also used to transport Cherokee who voluntarily moved to Indian Territory in the early 1830s. Source: National Banner and Daily Advertiser, Nashville, TN, April 13, 1832.

The steam-boat Reindeer, capt. Miller, arrived on Thursday evening last, from New-Orleans, with a large keel-boat in tow, both deeply laden, and 35 or 40 passengers, about the same number of deck passengers, and between 70 or 80 emigrating Cherokees. She left on Friday evening, bound for Fort Smith, and perhaps for Cantonment Gibson, if the state of the river will admit of her ascending that distance.

We regret to learn, that, shortly after leaving the Mouth of White river, a respectable half-breed Cherokee woman, by the name of Vann, aged about 60 years, unfortunately fell overboard from the keel-boat, in the night, and was drowned. The steam-boat was stopped the moment the alarm was given, and the yawl sent to succour the sufferer, but she was not seen after falling into the water.

The steam-boat Elk, Capt. English, arrived yesterday morning, from Fort Smith, and left, this morning, for New-Orleans, from whence she may be expected to return in about 25 days.

The steam-boat Niagara, Capt. Simpson, left here on Friday last, for Cantonment Gibson.

today about 30 miles below Waterloo and landed accordingly. The Indians appear well pleased so far with this mode of travelling and appear to be well satisfied in all respects.\

Thus, Deas brought keelboat experience to his new assignment with the Cherokee at Waterloo, Alabama.

At Waterloo, the Cherokee boarded the steamboat Smelter and one keelboat. The following day, Deas reported that water washed into the keelboat as a result of waves in the Ohio River, and the Cherokee were “seized with a panic.” When the detachment reached Little Rock, Arkansas, on April 11, 1838, Deas made arrangements to transfer the Cherokee to the steamboat Little Rock and two keelboats, as he believed the Smelter was too large to make it much further on the river. The Cherokee would have the entire use of one of the keelboats, the top of the other, and all areas of the steamboat Little Rock, with the exception of the cabins. The following day, Deas reported that one of the keelboats “sprung a leak from running on a Bar or Snag, [whereupon] the Captain found it necessary to run ashore to prevent her sinking.” While repairs were underway on the keelboat, Deas received word that it was unlikely the steamboat and keelboats with their heavy loads of freight would make it much further up the river, so arrangements were made to leave all of the freight and one keelboat behind. After
difficulty with the steamboat making it over several bars, Deas decided to land the party on April 20, 1838, and make the rest of the journey by land.

Deas led one more detachment of Cherokee that used keelboats. This forcibly removed detachment, consisting of between 600 and 800 Cherokee, departed from Ross's Landing on June 6, 1838, on the steamboat George Guess and six accompanying flatboats. At Decatur, the detachment boarded train cars to take them to Tuscumbia, where they boarded the steamboat Smelter and two keelboats. Deas eventually decided that one keelboat was sufficient, so he left one of them at Paducah, Kentucky, on June 12, 1838. Eventually, the other keelboat was also left behind, this time at Little Rock in order to further expedite travel. As a result, those on the keelboat were moved to the main cabin of the steamboat.

The final detachment to utilize a keelboat for their journey consisted of 231 Cherokee, including Principal Chief John Ross and his family, and was led by Captain John Drew. This detachment left Fort Cass (present-day Charleston, Tennessee) on four flatboats and hired pilots to transport them through some of the hazardous areas of the Tennessee River near present-day Chattanooga. They also paid tolls to use a canal to bypass some of the hazardous Muscle Shoals rapids. In Tuscumbia, John Ross purchased the steamboat Victoria for $10,000, and in Paducah a keelboat was purchased for $600. The detachment traveled on the rivers until low water levels forced the group to stop near the mouth of the Illinois River. From here, the detachment traveled the last forty miles by wagon.

At least eight keelboats were used in the Cherokee Removal and there are contrasting descriptions of their appearance. Deas, for example, described the initial keelboat used in his April 1838 detachment as “one large Keel with double cabins” that was “commodious and appears convenient for the Indians,” as temporary cooking-hearths were constructed on the top of it. Deas described the keelboats used in his June 1838 detachment as simply “double deck keels.” One of the lengthier descriptions, however, comes from Dr. Young. He reported the following about the keelboats in his detachment:

I employed the steamboat Newark to take in tow two keel boats, of 60 tons burden, and 80 feet long each, at $13 per head, to take the detachment from Tuscumbia to Little Rock…[The keelboats] were spacious, well covered, painted, dry, kept constantly clean and well ventilated, by means of side doors, which afforded the Indians the means of sleeping without being exposed to the night air or inclement weather. On the top of each keel were three hearths, which added to the one in the deck of the steamboat, made fire-places which enabled the Indians to cook and eat at regular periods without it being necessary for the boat to stop.

A description from Dr. Clark Lillybridge, a physician employed to travel with the detachment led by Young, conveyed a more negative assessment, which also reflected his own cultural bias:

The Boats prepared for the transportation of the Emigrants, are entirely too limited in room and conveniences for the accommodation of the party. The Keel Boats are without Stoves or fires in them, water in the hold, & present to those accustomed as many of the Emigrants are, to many of the comforts of civilized life, rather a revolting spectacle.
While no images are known to exist of the keelboats used in the Cherokee removal, paintings and recreations of the keelboat from the Lewis and Clark Expedition of 1803-1806 are some of the most accurate depictions today of a keelboat’s appearance. But these boats used in 1803-1806 are likely smaller than those used on the Trail of Tears (see Figures 28-31).
Figure 31. Interior view of the cabin of the Lewis and Clark keelboat replica. Source: U.S. Army Center of Military History.
In the early nineteenth century, flatboats were one of the most common vernacular wooden boats used to transport people and cargo along the major southeastern rivers. They were known by a variety of names, such as: arks, Kentucky boats, flats, New Orleans boats, broadhorns, family boats, and hooppole boats. The term “flatboat” came into use in the late eighteenth century, as immigrants used them as a means of transportation from the East Coast into Kentucky and the Northwest Territory (modern-day Ohio, Indiana, Illinois, Michigan, and Wisconsin) after they were opened for settlement in 1770 and 1787, respectively. Although many people chose to build their own flats, they were built commercially as early as the late 1780s.

One of the fundamental characteristics of flatboat construction was that the planks were edge-joined rather than overlapping as in the construction of other contemporary vessels, such as schooners and brigs. Flatboats also were generally shell-built boats, meaning that the shell was built first, rather than the shell being built atop a wooden frame. According to archaeologist Mark J. Wagner’s book, *The Wreck of the “America” in Southern Illinois: A Flatboat on the Ohio River*, other characteristics of flatboats, included:

- the use of chine-girder construction in the shaping of the gunwales that formed the two long sides of the boat bottom, a flat edge-joined plank bottom, and edge-joined plank sides that varied in height from four to six feet. Chine-girder construction describes the technique whereby a single log is split in half to create two equal-sized timbers or girders. Nineteenth-century flatboat builders throughout the Ohio River valley consistently referred to these girders as “gunwales”...

  The inboard sides of the bottoms of the two gunwales were rabbeted to create a ledge that held the ends of the floor planks. The rabbet was cut to the same depth as
the thickness of the plank, creating a smooth bottom from one side of the boat to the other. Stanchions, or wooden uprights, were set into the gunwales and end girders to construct a framework to which the planks forming the sides of the boat were attached using wooden treenails. The planks were pegged end to end in strakes to form the sides and ends of the boat. The stern and sides of the flatboat hull consisted of vertical walls of planks that varied in height from 4 to 6 feet. The bow, in contrast, was canted, or angled, like that of a modern barge to allow the boat to float more easily through the water.  

In another account of flatboat construction on the Little Raccoon Creek in Indiana, the logs were marked with a chalk line down the length near the center to mark the widest plank, then:

one man took a chopping axe and another [a] maul and as the axe man held the edge of the axe on the line, the man with the maul struck the poll of the axe a blow sufficient to make a split or check in the log. The axe man moving his axe some few inches forward after every blow from the maul until the log was checked [its] whole length, when the other side of the log was treated in the same manner. The[n] some 3 or 4 dozen wooden wedges were required mostly on the small order perhaps...
from 4 to 10 inches long and 2 to 4 inches thick of some hard wood then a number of the smaller wedges were first driven in the checks made by the axe and maul. If the tree was not exactly strait grained the more wedges had to be used and the splinters cut with a wide thin bladed chisel and larger wedges used as became necessary until the log was split the whole length... (see Figures 33-34) 

This is identical to the way Vikings cut planks for their ships in Scandinavia and their colonies in the British Isles, Iceland, Normandy, Russia, etc., as early as the eighth century. By hewing the planks along the grain of the log, rather than sawing through the grain, the planks were far stronger, lighter, and more flexible. This method of plank production allowed Viking ships, and presumably flatboats, to have a shallow draft while being able to weather rough waters. European emigrants brought this boat style to the American colonies quite early. A 1638 account of flatboats in a southern colony characterized them as “flat-bottomed pull boats.”

After the exterior of the flat was finished, it was caulked and sometimes the seams were tarred. Despite these precautions, flatboats frequently leaked. In order to protect cargo from water damage and to protect the planks, called “boards” once they were part of a boat, from damage by cargo, a floor was built a few inches above the bottom boards. In addition, flats could be outfitted with hand pumps to rid them of excess water. In a further effort to protect passengers and merchandise, cabins were often built on flats. These could be simple open-sided sheds to fully encased cabins that ran nearly the length of the boat. The cabins frequently had fireplaces built into them so that food could be prepared.

The boats could range anywhere between 12-to-20 feet wide and from 20 to more than 100 feet in length. Depending on the size of the boat, there were one or two long oars, called sweeps, on each side, a steering oar at the rear, and a “gouger” on the front of the flat. According to the first-hand account of James G. Daly, whose family moved 250 miles from Rising Sun to Alton, Indiana, the gouger:

...was used to throw the boat in any direction they wanted to go when they had to make a sudden change. It took a lot of strength to manage a gouger, because the boat was drifting down on to that oar and when they dipped into the water to take a bite of it they just had to fairly lift the boat sidewise from the end. They needed this in order to avoid snags, trees and stumps and all the other things...

In addition, some flatboats had a mast and sail to help speed the slow-moving boats down river.

Flats were typically used only for downstream travel. Farmers would load their goods onto a boat and head for ports as far south as New Orleans. Once they sold their cargo, they often sold the boat for lumber and would walk or ride a steamboat home. Occasionally, a flatboat would be loaded with goods at a southern port and it would be towed home behind a steamboat.

Floating down the rivers of nineteenth-century America was not without risk. Many boats sunk due to snags or unseen trees submerged beneath the water. Some flats purchased from commercial shipwrights were made of rotten wood which fell apart when struck by the least of the river’s obstacles. Pirates or Native warriors sometimes attacked boats, which were then often sunk, and sometimes, the ungainly flatboats collided with other boats, especially steamboats. Despite these many dangers, flatboats continued to be one of the most
popular forms of river transportation until after the Civil War, when competition from railroads and the lowering of steamboat prices made these alternative forms of transportation viable options for many people.\textsuperscript{100}

**FLATBOATS ON THE TRAIL OF TEARS**

From 1837 to 1838, four Cherokee detachments (one voluntary and three forcibly removed) are known to have utilized flatboats en route to Indian Territory on the Trail of Tears. Although twenty-nine flatboats were used between these four detachments, few descriptions of them are known to exist. Prior to the forced Cherokee removal in 1838, a party of Cherokee led by Dr. John S. Young left voluntarily from Ross’s Landing on March 3, 1837, aboard eleven flatboats. At Gunter’s Landing, the detachment was met by the steamboat \textit{Knoxville}, which towed the flats to Decatur, Alabama. Here the Cherokees boarded railcars to carry them past the Muscle Shoals and on to Tuscumbia.\textsuperscript{101}
Figure 38. Map of the Water Route of the Cherokee Trail of Tears, depicting the segments of the route in which flatboats were used (identified by the purple and blue dashed line). Map courtesy of ArcGIS Online.
The first forcibly removed detachment to use flatboats for its journey was led by United States Army Lieutenant Edward Deas. This detachment consisted of between 600-to-800 individuals and left from Ross’s Landing on June 6, 1838. Deas offered one of the most informative descriptions of the flatboats used in his detachment. On June 6, 1838, he recorded:

The number of the Party is about six hundred, but is not yet accurately known, as it was thought inexpedient to attempt to make out the muster rolls before starting. The Indians were brought into the boats under guard & being necessary somewhat crowded, any unnecessary delay while in that situation was by all means to be avoided on account of the health of the people. It was therefore though best to set out from the points of assembly without waiting to muster the Party, leaving it to be done by the conductor after starting, when more accurate books could probably be made than before setting out.

The route related by the Superintendent is by water, and the Party was turned over to me to-day at Ross’ Landing, after having been placed on board of the Boats provided for its transportation at Decatur [Alabama].

These consist of a small S[team] Boat of about 100 Tons burthen, [sic] and 6 Flat-Boats, one with double cabins (one upon the other) of a large size. The others are middle sized Boats, but appointed by capacity to transport the Party without being too much crowded.

The Boats having been lashed side by side, 3 on each side of the Steam Boat, all were got under way about noon and proceeded at about 4 or 5 miles an hour, until we arrived near the Suck when it was necessary to separate them in passing thro’ the mountains. The Suck, Boiling-Pot, the Skillet, and the Frying-Pan are names given to the different rapids.
formed in the Tennessee Basin as it passes through the Cumberland Mountains.

The river here follows a very circuitous course, a distance of 30 miles by water being only equal to 8 by land.

The Suck is the first and most difficult and dangerous of the rapids. The river here becomes very narrow and swift with the Banks on either side are rocky and steep, it being the point at which the stream passes thru’ a gorge in the mountains. The S[team] boat with one Flat on each side passed thro’ with most of the people on board, but after getting thro’ the most rapid water, it was found impossible to keep her in the channel, & in consequence was thrown upon the north Bank with some violence but luckily none of the people were injured although one of the Flats was a good deal smashed.

The other 4 boats came thro’ two by two and the party was encamped before dark as it was too late in the day to reach the foot of the rapids in daylight. Deas wrote that the boats finished traversing the rapids without incident the next day. The steamboat and the five remaining flatboats were once again lashed together and proceeded down river at four-to-five miles per hour. The boats traveled through the night of June 7th and only stopped when fog made the passage dangerous. Nonetheless, the detachment passed Gunter’s Landing around 9:00 AM on June 8th. They continued through the day, stopping shortly for wood, and arrived six miles from Decatur, Alabama, around dark. The Cherokee were allowed to go ashore to camp and cook. The morning of June 9th, the party arrived at Decatur.

The Reverend Daniel S. Butrick, who since 1818 had been a Christian missionary to the Cherokee under the auspices of the American Board of Commissioners for Foreign Missions and stationed at Brainerd Mission (present-day Chattanooga) at the time of removal, provided an account of the Deas detachment’s departure at Ross’s Landing. On June 10, 1838, Butrick wrote:

The first company sent down the river, including those dear trembling doves who spent a night at our house, were, it appears, literally crammed into the boat. There was, we understand, a flat bottom boat, 100 feet long, 20 feet wide, and two stories high, fastened to an old steam boat. This was so filled that the timbers began to crack and give way, and the boat itself was on the point of sinking. Some of the poor inmates were of course taken out, while this boat was lashed to the steam boat, and some other small boats were brought to take in those who had been recalled. Twelve hundred, it is said, were hurried off in this manner at one time.

Deas wrote that the number of Cherokees in Butrick’s account may be exaggerated, the dimensions of the large flatboat seems in keeping with other flats of the time.

Though the number of Cherokees in Butrick’s account may be exaggerated, the dimensions of the large flatboat seems in keeping with other flats of the time.

Another detachment that utilized flatboats was led by Lieutenant Robert H. K. Whitey. This party of 875 Cherokee left Ross’s Landing aboard six flatboats on June 13, 1838. They traveled a short distance to Brown’s Ferry where they stopped for supplies. Here, two more flatboats of Cherokees joined the detachment. On June 16, 1838, the party left Brown’s Ferry and tied the flatboats in pairs. They successfully negotiated the rapids that had endangered
Figure 40. “Muscle Shoals Canal – April 1877. No 20.” Courtesy of the U. S. Army Corps of Engineers Nashville District.

Deas’s detachment. They spent that night at Kelly’s Ferry before the steamboat George Guess towed the flatboats to Decatur, Alabama.¹⁰⁵

The final detachment that utilized flatboats was conducted by Captain John Drew. This detachment primarily consisted of the sick and infirm, as well as John Ross’s family. Due to the inability of most of the members of the Drew detachment to travel many hundreds of miles overland, they departed Fort Cass on four flatboats. Ross hired pilots to navigate the more dangerous parts of the Tennessee River below Chattanooga. Rather than taking the train from Decatur to Tuscumbia, the Drew detachment navigated the newly completed Muscle Shoals Canal. At Tuscumbia, Ross purchased the steamboat Victoria, which carried the detachment on the remainder of the Tennessee River, down the Ohio and Mississippi rivers, and up the White and Arkansas rivers. Once the steamboat reached the mouth of the Illinois River, the water level was so low that the detachment was forced to travel the last forty miles by wagon.¹⁰⁶
FERRIES

Figure 41. Ferry being rowed on the Delaware River from Philadelphia, Pennsylvania, to Camden, New Jersey, in 1779. Note the slope at the bow and stem and the ramps extending from each end. Courtesy of the Camden County Historical Society, Camden, New Jersey.

Before bridges were ubiquitous, rivers and large streams were typically crossed by ferries, and those who traveled the Trail of Tears over land, used ferries to cross the major waterways. Some of those ferries included Blythe’s Ferry (Tennessee), Brown’s Ferry (Tennessee), Ross’s Ferry (Tennessee), Kelly’s Ferry (Tennessee), Robinson’s Ferry (Tennessee), Hatchie River Ferry (Tennessee), Berry’s Ferry (Kentucky/Illinois), Willard’s Landing/Green’s Ferry (Illinois/Missouri), and Hamburg’s Landing/Bainbridge Ferry (Illinois/Missouri), among others. Ferry crossings, or landings, often attracted other commercial ventures, such as inns, taverns, blacksmiths, and shops, as well as settlers.107 Ferries were authorized and regulated by the Cherokee Nation, much like they were in neighboring states. Due to the potential wealth to be earned running a ferry, there was often stiff competition for business along some crossings. For instance, both Lewis Ross and John Walker, Jr., owned ferries at Calhoun, Tennessee, on the Hiwassee River at river mile 18.6 or 18.7.108 Since ferries were so common in the 1830s, their design and means of propulsion were rarely mentioned by the Trail of Tears chroniclers, unless there was a problem. Occasionally there are other first-hand accounts of ferries, particularly if new technology was involved.

According to the South Carolina Institute of Archaeology and Anthropology (SCIAA), by the 1830s most ferry boats were generally flatboats with modifications for the ease of loading and unloading passengers, their horses, carriages, wagons, and, later, automobiles. The boats had a slope at the bow and stem, that allowed them to pull right up to the bank of the waterway, since there were few docks or piers built at ferry landings on rivers and streams.109 To make it easier for passengers and vehicles to board, ferries typically had ramps on both ends. Some ramps were in a fixed position, but others could be raised or lowered. There was often
a good deal of erosion along ferry landings, as well, since the ferries pulled up to the bank. The seasonal and episodic flooding that happened along rivers and streams before modern flood control added to this problem. As a result, many ferrymen attempted improvements to their landings to make things easier for passengers.

Although most ferries shared some important characteristics, ferry boats were propelled across the water in a variety of ways. The simplest form of propulsion was for ferrymen to pole or row the boat from one shore to the other; however, easier methods that required fewer people to operate were often employed (see Figure 41).

ROPE OR CABLE FERRIES

In an effort to make ferries easy enough for one person to operate, rope or cables could be strung across a river or stream and pulled by hand or attached to a wheel that could be turned by the operator, which would then pull the boat across. This type of ferry was only feasible where there was little to no river traffic to get tangled in the ropes, such as where a waterway was shallow. According to the United States Army Corps of Engineers:

A rope ferry, which is used in streams with sluggish currents, consists of a floating support, either a raft or a suitable boat. It is drawn by hand along a rope or chain stretched from bank to bank. To facilitate a grip on the rope a handle may advantageously be employed. A rope ferry may be constructed by laying a
Figure 44. For large rope or cable ferries, it was easier to wind the ferry along the cable by the use of a wheel. Source: “Olds Ferry,” Historic Hood River, The History Museum of Hood River County.

cable or chain across the stream, anchoring its side of the barge. The safety of a ferry, especially when transporting animals, is materially increased by the construction of guardrails and end gates (see Figures 42-44). \(^{110}\)

**SWING OR FLYING FERRIES**

A swing ferry, also known as a flying ferry, reaction ferry, floating bridge, or a punt, was tethered to a stable point in the river by a cable, or heavy rope, and used the current and an elaborate set of pulleys to swing it from one bank to the other. Such a ferry connected Calhoun, Tennessee, to the Indian Agency at Fort Cass in present-day Charleston, Tennessee. On June 21, 1838, United States Army Lieutenant John Phelps, who participated in the removal, wrote about the ferry in his journal: “I crossed the [Hiwassee] river on a flying bridge the first I ever saw, tho’ I had demonstrated to the Board of vinters at West Point, the principle of its construction.” \(^{111}\) At least two other swing ferries were used during the Cherokee removal: one at Ross’s Landing and another at Savannah, Tennessee.

The Bell detachment was the only group of Cherokee to use the swing ferry at Ross’s Landing (see Figure 45). Principal Chief John Ross divested himself of this ferry and his warehouse at Ross’s Landing in 1826. \(^{112}\) Lieutenant Edward Deas, the disbursing agent for the Bell detachment, paid Samuel Hamill $50 for ferriage across the Tennessee River at Ross’s Landing on October 18, 1838. \(^{113}\) Samuel Hamill (also spelled Hamil or Hamel) was elected Justice of the Peace in Hamilton County, Tennessee in 1834, a position he maintained until his death. He was also the founding member of the Presbyterian Church of Chattanooga in 1840 and was a member of the County Court in 1857. \(^{114}\)

A contemporary description of exactly how a swing ferry worked was recorded in the May 2, 1832, edition of the Arkansas Gazette with regards to Rorer’s Ferry on the north shore of the Arkansas River across from Little Rock:

One end of a rope or wire chain, of sufficient strength for the purpose, and long enough to reach diagonally across the river, is made fast on one bank only, above the landing-place, at as great a height from the ground as practicable, and extended to within a few feet of the Ferry-boat, (an ordinary Ferry-flat), to which the other end of the rope or chain is connected by a rope passing through pulleys at each end of the boat, and over the steering wheel and round the upper gun-wail [sic], so as to form an angle above the boat. The main rope is kept out of the water by three buoy boats, built nearly in the form of a half-
Figure 45. Illustration of the swing ferry at Ross’s Landing by Harry Fenn, 1871. Note the buoys stretching along the river behind the ferry. Courtesy of the Chattanooga Hamilton County Bicentennial Library, Chattanooga, Tennessee.
The machinery of this improvement is very simple, and the boat may be managed with perfect ease and safety by any stout intelligent lad of 12 or 15 years old. One great advantage of it is, that the boat runs best where the current is strong–any increase in the velocity of the latter giving additional speed to the former. We crossed the river on this boat last week, when the river was low and the current weak and made the trip over and back in between 7 and 8 minutes. The river has since risen several feet, which has produced a stronger
According to local lore, the point that the Ross’s Landing swing ferry was tethered to was a tree on the western end of Chattanooga (now Maclellan) Island.\textsuperscript{116}

In 1821, James Rudd built a ferry at what is now Savannah, Tennessee on the Tennessee River (see Figures 48-49). By 1838, Rudd had sold his ferry to David Robinson, who operated it as a swing ferry. Though the Robinsons owned it, the ferry may have still been known locally as Rudd’s Ferry.\textsuperscript{117} Along with the ferry, David purchased James Rudd’s home. David’s son-in-law, William Cherry renovated and expanded the home into what is now Cherry Mansion, which still stands in Savannah above the ferry site (see Figure 50).\textsuperscript{118} David was also a wealthy planter, owning 24 enslaved people in 1830. He and his wife, Elizabeth Hooper Robinson, had a large family. At least one of their sons, Alexander F. Robinson, assisted with the running of the ferry during the removal. The Bell detachment crossed the swing ferry at Savannah, Tennessee, on November 11-12, 1838. Alexander signed one of the detachment’s receipts for $60.00 issued by Lieutenant Deas, “For the ferriage over the Tennessee River at Savannah Tenn. of a Party of Emigrating Cherokees in number about 6 – 700, together with the wagons & Teams, Saddle horses & also the Agents employed in the Emigration of the Party.”\textsuperscript{119}
NEW MEANS OF PROPULSION

The man who invented the first working steamboat in North America also invented the horseboat a few years later. In 1787, the inventor John Fitch and his business partner Henry Voight successfully sailed their steamboat on the Delaware River near Philadelphia. A few years later, Fitch told Voight of his idea for using cattle to power a boat. Voight filed the patent in 1791. Horses and mules soon replaced cattle as the creatures of choice to power the boats. It took both steamboats and horseboats a couple of decades to catch on with the American public, but both were popular by the 1830s. Though Fitch’s ideas helped change the way people traveled, and the speed with which they could do so, his constant fight to defend his patents eventually ruined him financially and mentally. Fitch died of a drug overdose 1798.120

STEAM FERRIES

Steam ferries were essentially steamboats that were used as ferries. They were smaller and less elaborate than their counterparts, which carried passengers and cargo up and down major American rivers, but by the 1830s steamboats of various kinds were fairly common. (See section on Steamboats for more information on their construction).

In addition to using swing ferries on their journey, the Cherokee in the Bell detachment also traveled on a steam ferry during their journey to Indian Territory. The detachment entered Arkansas by November 24, 1838, by ferrying across the Mississippi River at Memphis, Tennessee. Once across, Deas wrote to Commissioner C.A. Harris informing him:

\[ \text{Nothing of particular importance has occurred worthy of being mentioned since I last had the honor to address you upon this subject, on the 3rd instant. Every thing relating to our progress has gone on well since that time, excepting some delay in the crossing of the River at this place, caused by the breaking of the Steam Ferry Boat.} \]

The Bell detachment was lucky the steam ferry merely delayed them. Steam engines in this era were dangerous due to the fact that the boilers often exploded when there was too much steam pressure.122 Such an accident occurred as the detachment led by

Figure 51. Lithograph of Fulton Ferry Boat “Over” by George Hayward, 1859. Note the open, flat bow and stem for easily loading and unloading passengers and their vehicles. Courtesy of the South Street Seaport Museum, Print Collection, New York, New York.
Moses Daniel was crossing the Ohio River on Berry’s Ferry at Golconda, Illinois. One of the hired teamsters, a white man named Daniel Davis, wrote home after the incident. In his letter he stated:

“You have no doubt heard by this time the accident that happened [to] our detachment in crossing the Ohio River at Golconda. The ferry boat was cared [carried] by steam across the river. Barrys Ferry well known John [sic]. The boat had reached the west bank of the river and the wagons and load all taken off and the boat on starting after another load had gotten about thirty yards from the bank when the boiler bursted and scalded a great many persons. There was only too [sic] killed at all and these of our detachment, one a white man and the other a Cherokee. This happened the next load after I crossed the river in the evening.”

Davis’s description of the “John” alludes to a johnboat or jonboat. Modern johnboats are most commonly used for fishing, however the term was probably used to describe many types of flat-bottomed boats in the early nineteenth-century. Since it was hauling wagons and horses, along with people, it would have to have been easy for the wagons to drive onto. Berry’s Ferry likely had a high volume of passengers due to its location and the expense the owner had invested in the steam engine. Therefore, it is likely that Davis was describing a common steam ferry with a colloquialism.

HORSE FERRIES

For many ferrymen who wanted the ease of steam travel without expensive equipment or the danger of explosions at a ferry crossing, horseboats soon became popular. Horse- or mule-powered boats worked very well going down river; however, the animals could not sustain the energy and speed required to paddle upstream in a powerful river, like the Tennessee or Mississippi. For crossing these rivers, though, horseboats were ideal. These boats were first utilized in the Northeast, but by 1819, there was a horse ferry on the Ohio River at Maysville, Kentucky.
The first horse ferries used a horse-whim with multiple horses or mules walking in a circle to drive the boats' paddles (see Figure 53). These paddles initially moved either side-to-side or up-and-down, like a fish tail or whale tail, respectively. The horse-whim took up a good deal of deck space. To alleviate this problem, the owners often had multiple-hulled boats, or catamarans. This solution came with the challenge of maintaining multiple hulls instead of one. In addition, horses walking in tight circles, potentially for hours at a time, would have incurred injuries. Dizziness and disorientation were also cited as symptoms of the animals forced to labor at a whim for very long.

By 1819, patents had been filed for an inclined horse-wheel, an inclined power-wheel, and a horizontal treadwheel (see Figure 54). The inclined horse-wheel and the inclined power-wheel were essentially the same thing, an inclined treadwheel. They consisted of a "wheel canted to one side, forcing the horses to walk uphill and thereby contribute their weight to the force that turned the wheel." The horizontal-treadwheel horseboat (see Figures 45-56), was superior to the inclined-treadwheel horseboats. The mechanism was mechanically reliable and was relatively inexpensive and could be installed on a small, single-hulled boat. The inefficient paddles were also replaced with side-mounted paddlewheels. One passenger crossing the Hudson River wrote:

\textit{The ferry-boat is of a most singular construction. A platform covers a wide flat boat. Underneath the platform, there is a large horizontal solid wheel, which extends to the sides of the boat; and there the platform, or deck, is cut through, and removed, so as to afford sufficient room for two horses to stand on the flat surface of the wheel, one horse on each side, and parallel to the gunwale of the boat. The horses are harnessed, in the usual manner for teams – the whiffle trees being attached to stout iron bars, fixed horizontally, at a proper height, in the posts, which are part of the permanent structure of the boat. The horses look in opposite directions, one to the bow, the other to the stem; their feet take hold of channels, or grooves, cut in the wheels, in the direction of radii; they press forward, and although they advance not, any more than a squirrel, in a revolving cage, or than a spit dog at his work, their feet cause the horizontal wheel to revolve, in a direction opposite to that of their own apparent motion; this,}
by a connection of cogs, moves two vertical wheels, one on each wing of the boat, and these, being constructed like the paddle wheels of steamboats, produce the same effect, and propel the boat forward. The horses are covered by a roof, furnished with curtains, to protect them in bad weather, and they do not appear to labour harder than common draft horses, with a heavy load.130

By the 1830s, one more innovation in horse-powered boats was being experimented with – the revolving platform, otherwise known as a treadmill. It is uncertain when the first treadmill was used on a horseboat, but the earliest known working example was published in 1842. Afterwards, the treadmill began replacing horizontal treadwheels in horse ferries.131

Based on all of this information, it is likely that any horse ferries used during the removal were horizontal treadwheels with side-mounted paddlewheels. The only horse ferry that is known to have been used on the Trail of Tears was Green’s Ferry at Bainbridge, Missouri.132 Green’s Ferry was one of two ferries used to transport the Cherokees who traveled the Northern Route across the Mississippi River from Illinois during the winter of 1838-1839.133

FORDING RIVERS

Although ferries were often used by the overland detachments, they also forded rivers frequently. A first-hand account of the
Benge detachment crossing the White River near Talbert’s Ferry in Marion County, Arkansas, was written by a man over sixty years after the removal. This account illustrates the endurance and perseverance of the Cherokee. In his weekly column in *The Mountain Echo*, the Honorable W.B. Flippin stated:

*About the year 1839 or 40, a large detachment of Indians came through this county, said to be about three thousand men, women and children, moving west. They were Cherokees and Creeks. I am not certain as to the time, as there has been at least two moves, for some refused to go with the first immigration. Many of the Cherokees were well dressed and riding good horses; fine looking men, from their appearance I judged them to be half breeds, while the majority many of them were poorly clad. Some of the women only having blankets wrapped around them, several carrying papooses wrapped in a blanket or some kind of cloth and fastened to the back of their mothers. Seeing so many, I wondered that I did not hear a scream from a single papoose... It was winter when they came to White river [sic], ice was frozen over along the banks of the river. As I was to assist the ferryman in setting the host across the river, in a very ordinary ferry boat with two oars to row with. Instead of their stopping to make terms to cross the river in the ferry boat, they never pretended to halt, but waded across the river, women and men, all except the few who had horses or carriages. They did not pretend to let the women who had papooses ride. It reminded me of a drove of cattle crossing a stream. The river was unusually low at the time but it was over 200 yards wide... They camped shortly after crossing the river, and built up fires and remained all night.*134
THE TUSCUMBIA, COURTLAND & DECATUR RAILROAD

Figure 57. 1885 map of the Muscle Shoals area of the Tennessee River, where the elevation fell over 130’ in 34 miles. Between 1830 and 1890, a series of canals were constructed to help improve navigation through this dangerous area. Source: Tennessee River Valley Association: Tennessee-Cumberland Waterways Council, https://www.trva-tcwc.org/muscle-shoals-canal.

ENVISIONING AND BUILDING THE RAILROAD

From 1837 to 1838, three detachments of Cherokee traveled on the Tuscumbia, Courtland & Decatur Railroad in northern Alabama for a leg of their journey to Indian Territory (present-day Oklahoma). The Tuscumbia, Courtland & Decatur Railroad was among the earliest railroads in the United States and was the first railroad located west of the Allegheny Mountains. Its formation was born out of the economic need to bring goods efficiently into the local economy of northeastern Alabama and to transport cotton and other commodities year-round from Alabama to lucrative markets, such as New Orleans, by avoiding the dangerous Muscle Shoals area of the Tennessee River (see Figure 57). In the early-nineteenth century, the most efficient way to move cotton and other goods across the area to other markets was by the Tennessee River. Unfortunately, it was not very efficient at all.

During the early 1800s, transporting goods and supplies across Alabama via the Tennessee River was a seasonal operation,
RIVERS, RAILS & ROADS

at best. From Decatur to Florence, some sixty islands riddled the waterway, along with low-lying shoals of jagged rocks.\textsuperscript{135} Intense rapids caused by a 130’ drop in the river’s elevation over 34 miles made the journey even more dangerous.\textsuperscript{136} By contrast, the Tennessee River above Decatur dropped just 80’ along the 166 miles of the river between Chattanooga and Decatur. These hazards, in combination with low water levels for most of the year, made the area impassable and halted economic activity on the river on average for 9-10 months of the year. Given the Tennessee River’s growing economic importance, finding a solution to this problem was not just a local issue, but a national one, as well.

On April 30, 1824, the United States Congress passed the General Survey Act, which authorized the president to have surveys made of nationally significant transportation routes. The Army Corps of Engineers was tasked with this assignment, and Secretary of War John C. Calhoun, under whose authority the Corps of Engineers operated, proclaimed that a canal around Muscle Shoals was one of 96 projects identified as having “great national importance.”\textsuperscript{137} In order to help move the project forward, Congress appropriated 400,000 acres of public lands in Alabama, which were to be sold with the proceeds applied toward the creation of a canal on the north side of the Tennessee River to circumvent the dangerous Muscle Shoals. Construction on the 14.25-mile canal began in 1831 and lasted six years. Unfortunately, the canal was not long enough to bypass all of the dangerous shoals, and all attempts to gain additional funding or appropriations to extend its length failed. Thus, the ineffective canal was abandoned, and the problem of navigating the shoals remained. An alternative solution had to be found.

The idea of a railroad to move goods in Alabama was first conceived to solve an issue in the booming town of Tuscumbia. Seeing an opportunity to economically benefit from the increasing amount of steamboat travel on the Tennessee River from New Orleans in the 1820s, Tuscumbia merchants built large warehouses and a landing at the confluence of Spring Creek into the Tennessee River, which became known as Tuscumbia Landing.\textsuperscript{138} This location presented a major problem, though, as the city of Tuscumbia was located two miles from this new landing, and goods, in large quantities, needed to be transported from the city to the landing on a regular basis and in a timely manner.

On January 16, 1830, the Tuscumbia Railway Company was incorporated with capital of $20,000 to build a railroad from the town of Tuscumbia to the Tennessee River (see Figure 58).\textsuperscript{139} On May 1, 1830, thirteen prominent men from Tuscumbia and the surrounding area were elected to the Board of Directors.\textsuperscript{140} Work on the two-mile railroad started in June 1831 and was completed around June 1, 1832, at a cost of $4,523.85 per mile.\textsuperscript{141} In an 1834 letter to the American Railroad Journal, David Deshler, chief engineer and member of the board of directors for the Tuscumbia Railway Company, described the railroad as follows:

\begin{quote}
A good portion of the line is curved, and some of the curves are on radii of 400 feet. The maximum inclination in the grade is 20 feet per mile. The construction is of cedar sleepers laid transversely of the road, 5 feet from centre to centre. Oak string pieces, 5 by 7 inches; capped with an iron rail, 2 inches by $\frac{1}{2}$ an inch; width of track, 4 feet 9 $\frac{1}{4}$ inches, between the inner edges of the iron rails. One truss bridge 274 feet long, 36 feet high, (over a ravine), and several embankments of 15 feet in height, had to be built.\textsuperscript{142}
\end{quote}

While the rail cars were initially horse drawn and not powered by steam locomotives, the railroad proved a success and discussions
were already underway, even before its completion, to expand the railroad’s length to serve as an alternative transportation route around the dangerous Muscle Shoals.

In January 1832, a charter for the Tuscumbia, Courtland & Decatur Railroad was granted by the state legislature with a capital of $1,000,000 for a 43-mile expansion of the railroad from Tuscumbia through the communities of Leighton (Crossroads), Jonesboro (Town Creek), Courtland, Pond Spring Plantation, Hillsborough, and Fennel’s Turnout (Trinity), before concluding in Decatur. Soon after, the Tuscumbia Railway was absorbed into the Tuscumbia, Courtland, & Decatur Railroad, allowing for the coveted rights to access Tuscumbia Landing. The railroad expansion provided a solution around the most dangerous part of the Tennessee River and would greatly benefit the local cotton-planting industry, which was producing between 80,000 and 90,000 bales of cotton among the river valley’s seven counties (Franklin, Lauderdale, Lawrence, Morgan, Limestone, Madison, and Jackson).144

On March 1, 1832, stockholders for the Tuscumbia, Courtland and Decatur Railroad met in Courtland and elected a board of directors (see Figure 59). Courtland resident Benjamin Sherrod was chosen as president, and once again, David Deshler served as chief engineer.145 Sherrod was born on January 16, 1777, in Halifax County, North Carolina. He served in the War of 1812 as a contractor for the army in the commissary office and moved to Lawrence County, Alabama, sometime between 1818 and 1821.146 Four miles north of Courtland, he established a plantation he named Cotton Garden. He also co-owned Pond Spring Plantation (now known as Wheeler Plantation) with another prominent planter in the area, John Hickman.147 Sherrod was one of the most prosperous planters in the Tennessee Valley, owning thousands of acres and hundreds of enslaved African Americans before his death in 1847.148 With so much of his wealth tied to the cotton industry, Sherrod had a
vested interest in the completion and success of the Tuscumbia, Courtland & Decatur Railroad. The railroad's success would have only helped spur his own economic endeavors, and it is no surprise that its route passed by or near his own plantations.

After the board of directors was elected in March 1832, work progressed swiftly on the railroad, which was constructed by enslaved African Americans. In May 1832, grading for the section of railroad between Tuscumbia and Leighton was placed under contract and construction began a couple months later in July. Three months later, the grading and construction for the railroad between Leighton and Courtland was also placed under contract, and by January 1834, the grading and construction for the last section of railroad between Courtland and Decatur was under contract. Chief Engineer David Deshler described the construction of the railroad:

>The construction is in all respects the same as the Tuscumbia Railroad, excepting that the sleepers on this are only 4 feet apart from centre to centre, and that about one-third of the distance is, and will be, lined with cedar, (instead of oak,) string pieces. The cost of this road will average a little under $4,000 per mile. The whole length of the railroad, between its termini upon the Tennessee river, (inclusive of the Tuscumbia section,) will be…single track, with turn-outs and side-lines about every two miles.

On August 20, 1833, the track from Tuscumbia to Leighton was completed and opened. The following year, on July 4, 1834, the railroad track to Courtland was opened. Before the end of the year, the entire 43-mile section of railroad between Tuscumbia and Decatur was completed and ready for use with depots located in Tuscumbia, Leighton (Crossroads), Jonesborough (Town Creek), Courtland, Hillsborough, and Fennell’s Turnout (Trinity) (see Figure 60). In addition to the depots, the railroad built a number of other supportive structures along the route, including wharves, warehouses, water stations, and stables.
Figure 60. Detail of the Tuscumbia, Courtland, & Decatur Railroad. Source: John La Tourette, “Map of the State of Alabama and West Florida,” 1838, David Rumsey Map Collection.
While the grading and construction of the railroad seemed to move forward without much incident, acquiring efficient train engines to move goods along the new railroad proved to be a difficult task. In anticipation of the opening of the completed railroad, merchandise and goods were temporarily stored in Courtland. In Deshler’s words, “[U]nfortunately for the Community as well as the Company we had been disappointed in the receipt of Cars as well as Locomotives.”

The first two locomotives acquired for the railroad were the *Fulton*, manufactured by Edward Bury of Liverpool at a cost $4,915.04, and the *Pennsylvania*. The latter was purchased second-hand from the Philadelphia, Germantown & Norristown Railroad Company for $5,880.37 and arrived in February 1835 “without tender-car or tank.” Both were later furnished by the Tuscumbia, Courtland, & Decatur Railroad at its own expense. When the engine was finally placed on the tracks for the first time, Deshler noted that it was “found not to answer the purpose, being deficient in almost every important respect.”

Another engine, named the *Comet*, was ordered from the West Point Foundry in New York and cost $7,959.82. This engine was the first recorded iron-frame, American-made locomotive that was ever constructed, and it “performed well” during its first few weeks on the tracks, but a defect in the cylinder castings and “a bad arrangement in the slides that carry the crossheads” caused one of the cylinders to burst, rendering the engine useless. Deshler immediately contacted the manager of the West Point Foundry, requesting that new cylinders and slides be sent to him. The manager promised to do this for Deshler, but months went by and no parts arrived. Giving up hope, Deshler reported that “we set to work at our own shops and accomplished the job, so that said Engine has been in service since sometime in January last, and answers a good purpose.”

In addition to the problems acquiring sufficient engines, their rail car supply was only a fraction of what was needed. As a result, the Tuscumbia, Courtland, & Decatur Railroad was left with horse power to move train cars of goods and people while the *Comet* awaited repairs. Deshler reported on this less-than-ideal situation in August 1836:

> [T]he Railroad having been just completed as the winter set in, and the horse path [that parallels the tracks] not being graveled, the path very soon became almost impassable for horses. In consequence, it was entirely beyond our means to perform the transportation that was offered to us during the winter of 1834 and ’35, and a large portion of the business had to seek another channel…The community who has been disposed to patronize us from the first, not aware of the true causes producing the inability of the Company to perform what had so confidently been expected from them, became soured in the feelings towards the Railroad, and determined not to encourage the Company any further until it should prove itself fully adequate to the transportation of all the freights that should be offered.”

In order to address the dire situation, additional cars and another locomotive engine was ordered. The locomotive engine “Triumph” was made by W. M. Baldwin of Philadelphia and cost $7,091.66. Upon its arrival, it was placed on the tracks and operated without issue. In August 1836, Deshler optimistically reported:

> It is however, a gratifying fact to state, that since about the 1st of July, 1835, we have had the capacity to accomplish the business that was offered, although at an immense expense, owing to the mixture of
motive power used upon the road. From the period last above mentioned, up to this date, I presume about one third to one half of the business was done by horses, and the remainder by locomotives, viz: one small engine, the "Fulton," the "Comet," since January last, and the "Triumph," since about the 1\textsuperscript{st} of June. Since the latter engine was placed on the road, no horse power has been used in transportation between Tuscumbia and Decatur... we feel perfectly assured, that although the business the ensuing year is expected to be fully double what it was the last 12 months, yet we shall be enabled without difficulty to give it dispatch.\textsuperscript{161}

The Tuscumbia, Courtland & Decatur Railroad was finally achieving its goal as an economic driver and a much safer and more efficient transportation route than traversing the dangerous hazards of the Muscle Shoals. A few years after opening, the new railroad would play a key role in the removal of the Cherokee.

THE TRAIL OF TEARS

From 1837 to 1838, three detachments of Cherokee traveled on the Tuscumbia, Courtland & Decatur Railroad for a leg of their journey to Indian Territory (present-day Oklahoma).\textsuperscript{162} The Cherokee were given until May 23, 1838, to remove voluntarily, but only about 1,700 left before the deadline.\textsuperscript{163} Among those who voluntarily left was a group of 466 individuals who were predominately supporters of the Treaty of New Echota. Included in this group was Major Ridge, a main instigator of the treaty, and his family. On February 28, 1837, the group departed from present-day Charleston, Tennessee, under the charge of General Nathaniel Smith, and reached Ross’s Landing on March 2, 1837.\textsuperscript{164} The following day, the detachment departed from Ross’s Landing (present-day Chattanooga, Tennessee) in eleven flatboats stocked with provisions of cornmeal, flour, and bacon.\textsuperscript{165} Supporting the detachment were four assistant conductors, four interpreters, two nurses, three physicians, a muster clerk, an enrolling agent, a contractor, and an individual in charge of services.\textsuperscript{166}

On March 6, 1837, the detachment arrived at Gunter’s Landing (present-day Guntersville, Alabama). The next morning, the steamboat Knoxville was tasked with towing the flatboats to Decatur. The trip from Gunter’s Landing to Decatur was marred with rain, and the rain continued after the Cherokee arrived in Decatur around 6:30 p.m.\textsuperscript{167} In Decatur, Dr. John S. Young rendezvoused with the detachment. Young would relieve Smith as detachment conductor when the Cherokee reached Tuscumbia. The rain finally ceased by the time the detachment began boarding the first of two trains in Decatur the following morning. The Morgan Observer described the scene:

To the numerous spectators that thronged either side of the railroad, among whom were to be seen a goodly number of ladies, this aboriginal group presented a truly interesting spectacle. But their appearance, in connection with the locomotive and its train, was not more attractive to the spectators, then did the engine and cars seem to be to the Indians. Many of them could be seen examining, with their peculiar inquisitive silence and gravity, this great enigma to them, while others, apparently uninterested and thoughtless, amused themselves with an old fiddle or sat motionless, gazing at those around.\textsuperscript{168}

Unfortunately, this next leg of the journey did not go as planned. About half of the detachment boarded the first train to Tuscumbia around 8:00 a.m. and began their journey. The second locomotive was scheduled to arrive around 1:00 p.m. In
preparation for this, the remaining Cherokee waited in the train cars for the locomotive to arrive. By sunset, the locomotive still had not arrived and the Cherokee were becoming increasingly cold and uncomfortable. As a result, their departure was postponed until the following morning. One of the detachment’s physicians, Dr. Clark Lillybridge, noted the subsequent events:

The Indians were immediately and anxiously engaged in selecting their bedding for the night; before they accomplished this darkness closed in upon them. The Physician was not a little surprised to find that no one had made it his business to aid and direct the Indians, where they could lie for the night. It appears that no order or direction had been given in this particular, except that they would lodge in the Ware house. The train of Carrs from the West were momently expected, and the Indians were afraid to lie down for fear of being run over. No lights were furnished them, and they were grouping in the dark, in a pitiful manner. Not an Agent could be found at the Warehouse. The Physician, at this time took the responsibility upon himself, to request the R.R. Agent, to furnish lights, which was forthwith done. He also went around and directed where the Indians could make their Beds. Mrs. Archilla smith, whose family and effects were sent on in the morning Carrs, came to the Physician for aid. She pointed to three or four other females, in the same conditions as it respected their bedding. She also pointed to two or three cars that had been conveyed to the Engine House, and in broken English, gave him to understand that an old Woman was there.

The Physician repaired thither & found an old woman, nearly blind & but just able to stand from infirmity, standing in a puddle of water, into which she had step’d on descending from the Carr, and was unable to direct herself out. The Physician then went to the Rail Road Agent, and requested him to furnish a comfortable room for these females to lodge in for the night. He went a short distance from the Warehouse and showed a large & comfortable room, which he said was at our service and added, it would have saved us much inconvenience had it been earlier requested. To this room were conducted all of those who were without Bedding, and a number of others, that could not find comfortable places to lie. The Physician then left them for the night, with the hope of finding them all comfortable in the morning.169

The next morning, May 9, Dr. Lillybridge checked on the ill and made sure everyone had a warm cup of coffee in preparation for the train ride to Tuscumbia. With the exception of a small number of sick left behind, the detachment boarded the train cars and departed at 9:00 a.m. On March 10, the remaining Cherokee who were left behind the day before, traveled with Dr. Lillybridge, leaving Decatur at 9:00 a.m. and arriving in Tuscumbia at 8:30 p.m.170 From Tuscumbia, they continued west to Indian Territory.

After the May 23, 1838, deadline for the Cherokee to remove voluntarily to Indian Territory expired, 7,000 federal troops and state militia, under the command of General Winfield Scott, forcibly gathered the Cherokee from their homes and marched them to one of three main emigrating depots in Tennessee and Alabama, where they were divided into detachments for their journey. The first two detachments, consisting of approximately 1,475 Cherokee, including a small number of Creek, departed from the Ross’s Landing emigrating depot in present-day Chattanooga, Tennessee, via boats, on June 6th and June 12th respectively and traveled via the Tuscumbia, Courtland &
Decatur Railroad in Alabama for a leg of their journey, passing through the towns of Courtland, Town Creek, and Leighton.

United States Army Lieutenant Edward Deas led the first detachment, which consisted of approximately 600-800 individuals. In addition to Abraham Cox, J.N. Reeves, A.S. Harbin, and D.S. Walker, who served as Deas’s assistant conductors, two physicians (Barzallai Cottle and Clark C. Lillybridge), two nurses (Catharine Choate and Elizabeth Downing), three interpreters (James Bigby, Jr., Jesse Hicks, and William Reese), a contractor (Williamson Smith), and twenty-three armed guards assisted Deas with the detachment. On June 6th, the detachment boarded the steamboat George Guess and its six accompanying flatboats at Ross’s Landing, Tennessee, and traveled down the Tennessee River to Decatur, Alabama, for the first leg of its journey. The Reverend Daniel S. Butrick, who had been a Christian missionary to the Cherokee since 1818 under the auspices of the American Board of Commissioners for Foreign Missions, witnessed the detachment embark. Distraught over what he had seen, Butrick remarked:

_The first company sent down the river, including those dear trembling doves who spent a night at our house, were, it appears, literally crammed into the boat… Who would think of crowding men, women, and children, sick and well, into a boat together, with little, if any more room or accommodations than would be allowed to swine taken to market?_

As a result of dangerously low water levels from an extreme drought, and in an effort to avoid the hazardous Muscle Shoals, the detachment traveled via rail for the next leg of its journey to Tuscumbia, Alabama. The Cherokee arrived in Decatur on June 9th and boarded approximately thirty-two rail cars hauled by two separate trains the following morning. There was no relief from the congested quarters, though. Deas noted the train cars were “necessarily crowded” and that no other train cars could be obtained for “want of power in the Locomotive Engines.” As a result, Deas decided not to take his twenty-three man guard on the trains.

The first train arrived at Tuscumbia around three o’clock in the afternoon. Those arriving on this train boarded the steamboat Smelter. Unfortunately, the steamboat departed for Waterloo before the second train arrived between four and five o’clock in the afternoon. Thus, the other half of the detachment was temporarily left behind at Tuscumbia Landing and remained encamped there for the night. On June 11th, Deas reported, “As might be expected there was much drunkenness in camp last night and over one hundred of the Indians deserted.” That day, the remaining Cherokee were transported to Waterloo via boat and were reunited with the rest of the detachment, continuing down the Tennessee River on the steamboat Smelter and two keel boats.

United States Army Lieutenant Robert H. K. Whiteley led the second detachment of Cherokees forcibly removed from the Chattanooga area via boat and followed a route similar to that of the Deas detachment. In addition to Col. John A. Hooke, E.S. Curry, P.H. Price, George Stubblefield, and Thomas Jones, who served as Whiteley’s assistant conductors, two physicians (Dr. Robert Hodsden and George D. Morrow), four interpreters (James Brown, Robert Benge, and Betsy Woodward and her son), and hospital attendant Betsy McDaniel assisted Whiteley with the detachment.

According to Whiteley’s journal, the detachment left from a camp “five miles distant from the town of Chattanooga” on June 12th and proceeded downriver to Brown’s Ferry. Here, the detachment encamped and waited for others to join them, as Whiteley was hoping to increase the number of individuals in the detachment.
to one thousand. It is unclear exactly how many individuals were initially part of the detachment, since the Cherokees were uncooperative with Whiteley’s efforts to enumerate them. Whiteley noted, “Clothing was purchased & brought aboard; but [the Cherokee] would not be persuaded upon to take the articles, neither would they be mustered, as all attempts to obtain their names were without success.” While he could not get an accurate count, Whiteley estimated that there were approximately 875 individuals in the detachment.

The detachment left Brown’s Ferry on June 16th in eight flat boats pulled by the steamboat George Guess. The following afternoon, the group faced a three-hour delay as repairs were needed on the steamboat’s engine. Once the engine was repaired, the detachment continued on its journey towards Decatur. Unlike the Deas detachment, the Whiteley detachment encamped along the riverside nightly, so “as to give the Indians sufficient time to cook in the evenings & mornings the provision for the day.” Provisions were rationed and typically consisted of flour, corn meal, bacon, and occasionally fresh meat.

On June 21st, the detachment reached Decatur and boarded two trains for Tuscumbia. The train ride was not without incident, though. One mile from Tuscumbia, Whiteley reported that a Cherokee man named Chicken, who was on the second train, “had been drinking lost his hat jumped off the car to obtain it. He was crushed to pieces.” His death was not the first among the detachment. Whiteley recorded a death of a child on June 18th and of an older woman at Decatur on the 21st. In addition to the deaths, Whiteley noted that 25 Cherokee deserted between Ross’s Landing and Decatur. Tragedy and setbacks continued to plague the detachment. While encamped at Tuscumbia, the Cherokee were overcome with sickness. The detachment’s physicians believed that it was due to the fresh beef issued to them. Whiteley noted that four more children succumbed to death during this time. The detachment began moving again on June 27th, following the same course as the Deas detachment.

**PASSENGER CARS & LOCOMOTIVE ENGINES**

During the 1830s, the Tuscumbia, Courtland & Decatur Railroad utilized freight and passenger cars pulled by four steam locomotives, named Fulton, Pennsylvania, Comet, and Triumph, in order to capitalize on the transportation of both goods and people. While the steam locomotives Pennsylvania and Comet were most notably out of operation for a time due to mechanical issues, an Alabama newspaper article written in March 1838, the month before the Cherokee in the Deas and Whiteley detachments traveled on the railroad, stated that all four locomotive engines were in operation at that time, suggesting that all four were likely available for use to transport the Cherokee:

*One day this week we noticed that the TC&D had 4 locomotives with their train of cars, 51 in all, pass up the road with full loads of goods (about 110 tons) destined we believe for East Tennessee. The trip from Tuscumbia to Decatur and back again if[s] 12 hours, a distance of 80 miles.*

It should be noted, though, that Chief Engineer David Deshler did list a thirty-horsepower steam engine for sale in the newspaper in late 1836 and early 1837, but it is unknown what engine it was and if it was ever sold. Unfortunately, it is also unknown which engines were used to transport each of the detachments; however, records do indicate that two different locomotives were used to transport each of the three detachments of Cherokee that traveled on the Tuscumbia, Courtland & Decatur Railroad in 1837 and 1838.
Deas offered the most insight into the number of locomotives and passenger cars needed for his detachment’s journey on the railroad, noting that the Cherokee boarded approximately thirty-two rail cars hauled by two separate trains and that the train cars were “necessarily crowded” for the 600-800 individuals in the detachment, as no other train cars could be obtained for “want of power in the Locomotive Engines.”

Records for the Tuscumbia, Courtland & Decatur Railroad are scarce and scattered among archives and libraries in a number of states. Even more scattered and scarce are records pertaining to the specific locomotive engines and types of passenger cars used on the railroad during the 1830s; however, an examination of resources identified during this study helps illuminate what the passenger cars and engines used during the removal of the Cherokee may have looked like and further enhances our understanding of the removal experience.

**PASSENGER CARS**

Very little information survives today about the Tuscumbia, Courtland & Decatur Railroad’s passenger cars. Local historian Don Dobravolsky noted in his 1995 article in *The Historic Huntsville Quarterly of Local Architecture & Preservation* that the Tuscumbia, Courtland & Decatur’s passenger cars “had bannisters on top like stage coaches, and those that carried freight were small flat cars (called ‘Burden’ cars early on) with tarpaulins to cover the goods.” Some 60 years earlier, an article in *The Montgomery Advertiser* described the passenger cars as “stagecoach shaped, with benches across the width of the car, and each coach could accommodate 12 passengers. They were referred to as ‘pleasure cars’ to differentiate them from the ‘freight’ cars. All trains were ‘mixed.’” Mrs. J. M. Clark, a native of Moulton, Alabama, whose father worked on the railroad, offered the following description, “I remember the queer little engines, the funny little ‘freight wagons’ you have seen so often in school histories, of that day. Not less queer and funny were the passenger coaches of the day, a sort of exaggerated stage coach, as I remember it.” The earliest account of the railroad’s passenger cars uncovered during this study comes from Chief Engineer David Deshler in an August 3, 1833, article in the *American Railroad Journal*, in which he states:

*Since the completion of the road in June last, a pleasure car has been plying between town [Tuscumbia] and the river. A lumber car was also put upon it at the same time, and within a month there have been two other lumber cars received, and are now in use…*

[A]nother pleasure car has been engaged to be built by Mr. Williams, of this place, which is nearly finished. Patterns for turnout castings have been sent to the Russel’s Valley iron works, with an order for four sets to be immediately furnished. An order has also been given for eight wrought iron switches to be sent from Napier’s iron works in Tennessee.

The earliest passenger cars utilized on American railroads were open-air carriages mounted on four wheels and can be divided into three basic types: the traditional curve-sided or swell-sided stagecoach, the compartment style with three tandem bodies built as a unit, and the so-called Gothic cars. These early passenger cars were mostly built by established carriage-makers, who built what they already knew, constructing bodies identical to those used for road coaches. These stagecoach-style bodies were then mounted on wheels, appropriate for use on the railroad, that were usually manufactured
Figure 61. Tuscumbia, Courtland & Decatur Railroad Passenger Waybill, May 25, 1836. The upper left-hand corner features a drawing of a 0-4-0-type steam locomotive with a swell-sided, stagecoach-style passenger car. Source: Image made from original at the Chattanooga Public Library.
by a separate entity. Consistent with trends at the time, the Tuscumbia, Courtland & Decatur Railroad used either the traditional curve-sided or swell-sided stagecoach passenger cars (see Figures 65-71 for varieties of this type) or the compartment-style passenger cars (see Figures 72-74).

Tuscumbia carriage-maker Henry Williams manufactured at least one of the passenger cars for the railroad, as mentioned by Deshler in 1833. Williams was manufacturing and selling carriages from his shop in Tuscumbia as early as the mid-1820s and partnered with Wilson Northcross in 1837 (see Figures 63-64). In addition to offering repair work, Williams and Northcross made harnesses and sold a variety of both new and used vehicles, including barouches, buggies, mail coaches, and passenger coaches. On June 19, 1841, Williams announced that he “removed his shops to the country, about two miles South of Tuscumbia,” where he resided. By the end of the year, Williams had defaulted on his loan with the Branch of the Bank of the State of Alabama at Decatur (see Figure 62). As a result, the bank auctioned off his home, the 480-acre tract of land where Williams resided, four enslaved African Americans owned by Williams (a 42-year-old women named

Figure 62. The Branch of the Bank of the State of Alabama at Decatur, now known as the Old State Bank, was constructed in 1833 and currently operates as a museum.

Figure 63. Notice in the March 17, 1837, issue of the North Alabamian announcing the business partnership of Henry Williams and Wilson Northcross.

Figure 64. June 16, 1837 advertisement in the North Alabamian.
Patience and her three children (William, aged 10, John, aged 9, and Matilda, aged 2), nine horses, four mules, approximately 80 hogs, 18 cattle, a wagon, a buggy, various household furniture, and the Williams and Northcross carriage shops in Tuscumbia. The following year, both Williams and Northcross were declared bankrupt by the court.

While it is unknown exactly what the passenger cars looked like that Williams and presumably others constructed for the Tuscumbia, Courtland & Decatur Railroad, examining other known, early passenger car manufacturers and their designs may shed some light. Richard Imlay, for example, built some of the earliest rail passenger cars in the country for the Baltimore and Ohio Railroad (see Figures 65-66). Historian John H. White, Jr., described the interior of these swell-sided passenger cars:

Two transverse stationary seats were fitted opposite one another inside the body. Collapsible jump seats were placed astride the doors, to be opened up once the other passengers were seated. Leather straps were buckled in place for seat backs. This was an established arrangement in road coaches of the day. While it was not the most comfortable seating possible, it did
Figure 67. Engraving depicting a 4-2-0 steam locomotive (a type also used on the Tuscumbia, Courtland & Decatur Railroad) and swell-sided passenger cars with rooftop seating and canopies on the early Pontchartrain Railroad (chartered 1830 and commenced service in 1831), which connected Elysian Fields Street in New Orleans to the shores of Lake Pontchartrain at Milneburg, a distance of 5 miles. Source: Wikipedia.org.

increase the inside capacity to 12 seats. Six more passengers could be accommodated on the outside end seats. The roof bench held another 12, making a total seating of 30 passengers—an extraordinary load for a 13’ foot car.197

These rail cars were initially meant to be hauled by horse-power, which the Tuscumbia, Courtland & Decatur Railroad had to utilize before the arrival of dependable steam locomotives. Once steam locomotives were in use, however, passengers typically abandoned the roof section of these passenger cars due to the smoke and steam from the locomotive engines.198 As a result, the maximum passenger load of these types of cars decreased from thirty to seventeen (the eighteenth seat would have been occupied by a brakeman).199 According to U.S. Army Lieutenant Edward Deas, the 600-800 Cherokee traveling in his detachment were crowded into an estimated thirty-two rail cars, averaging about nineteen to twenty-five individuals per car.

Another early railroad-passenger car-maker was James Goold of Albany, New York. In 1831, he was contracted to build six curve-sided, stagecoach-style cars for the Mohawk and Hudson Railroad (see Figures 69-70).200 Goold, a carriage- and coach-maker since 1813, utilized an ordinary carriage design for his railroad cars, which were similar in size to Imlay’s cars, measuring approximately 13’ 9” long and 5’ wide, but with a smaller seating capacity. Unlike Imlay, Goold took steam locomotives into consideration when building his cars, so rooftop seating was much more limited than Imlay’s design.

Baltimore carriage-maker John Lightner designed another variation of the swell-sided, stagecoach-style passenger car for the Boston & Providence Railroad. The only known original stagecoach-style passenger car in existence in the United States is on display at the National Museum of Transportation in St. Louis and was designed and built by Lightner between 1834 and 1836 (see Figure 68 & 71). Lightner’s design differs from Imlay’s and Goold’s designs in that the body is both wider and longer. Lightner’s passenger cars were approximately 2’ longer and 1’ wider than Imlay’s and Goold’s designs.201

Stagecoach-style passenger cars were a temporary solution to the transportation of people on early American railroads. Many of the design considerations
needed for horse-drawn road coaches were not needed, or even desirable, for the railroad, particularly the curved form of the car, which was specifically designed to provide clearance for the high spoke wheels used on roads. As historian John H. White, Jr., notes, “It was superfluous in railway cars, since wheels larger than 36 inches in diameter were rarely used. Furthermore, it was expensive and difficult to build because of the many compound curves.”

White estimates that fewer than one hundred stagecoach-style passenger cars saw use on American railways.

Composite or tandem-body cars soon replaced the swell-sided or curvesided cars and became the most used four-wheel railroad passenger cars in the United States by the mid-1830s. The design for the composite-style cars

Figure 68. This swell-sided passenger car was built between 1834 and 1836 by John Lightner for the Boston & Providence Railroad and is now displayed in the National Museum of Transportation in St. Louis. It is the oldest surviving original railroad passenger car in North America and is approximately 2' longer than Imlay’s swell-sided cars for the Baltimore & Ohio Railroad shown on page 57. Image Source: rgusrail.com.

Figure 69. Drawing of a curve-sided stagecoach-type passenger car for the Mohawk & Hudson Railroad, 1831. Source: John H. White, Jr., The American Railroad Passenger Car (Baltimore, MD: Johns Hopkins University Press, 1978), 4.

Figure 70. Reproduction of an 1831 Mohawk & Hudson passenger car built for the 1892 Columbian Exposition. Source: John H. White, Jr., The American Railroad Passenger Car (Baltimore, MD: Johns Hopkins University Press, 1978), 53.
Figure 71. Drawing of the Boston & Providence passenger car, built between 1834 and 1836, that is on display at the National Museum of Transportation in St. Louis. Source: John H. White, Jr., The American Railroad Passenger Car (Baltimore, MD: Johns Hopkins University Press, 1978), 55.
originated in Europe, but was quickly adopted by American railways. Among the earliest examples of the composite-style car were those constructed for the Camden & Amboy Railroad in 1831 by M. P. and M. E. Green of Hoboken, New Jersey (see Figure 72). These cars contained three compartments, were mounted on four wheels, and seated thirty-six passengers. The design of the composite-style cars was influenced by the design of stagecoaches and the swell-sided passenger cars and gave the appearance of a multi-compartment, elongated stagecoach. It retained the bannister on top, the bowed side panels, and utilized curtains on the windows. This design was not just used on northern railways. The Green shop in New Jersey built these types of passenger cars for the New Orleans & Carrollton Railroad in Louisiana, as well (see Figure 73). This style, along with the swell-sided passenger car, were commonly featured in newspaper advertisements and notices for railroads during the 1830s and 1840s, including for the Tuscumbia, Courtland & Decatur Railroad (see Figures 74-76).
Figure 75. Notice for the TC&D Railroad showing both a swell-sided passenger car and a composite passenger car in the January 20, 1837, issue of the North Alabamian.

Figure 76. Notice for a lease of one of the TC&D Railroad’s passenger cars showing a swell-sided-style car with rooftop seating in the March 19, 1846, issue of the Franklin Democrat.
While the Tuscumbia, Courtland & Decatur Railroad most certainly utilized stagecoach-style passenger cars in the 1830s, an examination of the third and fourth annual reports of the officers of the railroad, the Tuscumbia, Courtland & Decatur Railroad Minutebook of the Stockholders and Directors from 1832-1843, period newspaper articles, and the various updates and reports provided by David Deshler for the American Railroad Journal has not uncovered any descriptions of what these passenger cars looked like or what variation(s) of the stagecoach-style car they may have utilized. Records for the railroad are incomplete, but the examination of early railroad-passage passenger car-makers and the overall design trends at the time help give some idea of what the Tuscumbia, Courtland & Decatur Railroad’s earliest passenger cars and those that the Cherokee traveled on during removal may have looked like.

THE STEAM LOCOMOTIVE FULTON

The first steam locomotive used on the Tuscumbia, Courtland & Decatur Railroad was named Fulton and was a 0-4-0-type engine (see Figure 77). In the December 31, 1836, edition of the American Railroad Journal and Advocate of Internal Improvements, David Deshler offered the following description of this steam locomotive:

The “Fulton,” made by Edward Bury, of Liverpool, stands charged at $4,915.04. She was first put upon the road about the 1st of June 1834, and has been a useful engine for her class. She is small, weighing only about 5 tons; 8 inch cylinders, and 16 inch stroke, driving wheels 4 ½ feet diameter.

With a light load, the engine was reportedly capable of attaining a velocity of 40 miles per hour and was fueled with pine and ash, although Deshler contemplated using exclusively coal, since it could be cheaply obtained and was “safe from sparks.”

Edward Bury established a manufacturing works in Liverpool under the name of Edward Bury and Company (later Bury, Curtis & Kennedy) in about 1823. In 1829, he began construction of his first steam locomotive, a 0-6-0 type named Dreadnought, for the Liverpool & Manchester Railway, but it repeatedly broke down. His second engine, Liverpool, proved to be a success. The Liverpool was a 0-4-0-type engine, meaning it had two axles and four coupled wheels, all of which were driven, and measured 15’ 5” in length (see Figure 78). The wheels were initially 6’ 9” in diameter, but that large size was thought to be too dangerous, so they were reduced to 4’ 6”, the same size as those on the Fulton. The Liverpool, in many ways, served as a prototype, featuring many design elements included in Bury’s subsequent engines, such as the bar frame, domed or hemispherical boiler, inside cylinders, and four wheels on a short wheel base.

Bury was an early rival of prominent English railway engineers George Stephenson and his son Robert. The Robert Stephenson & Company manufactured the
Figure 78. 0-4-0 Bury bar-frame steam locomotive *Liverpool*, built in 1830 by Edward Bury & Company for the Petersburg Railway in the United States. It had the following dimensions: boiler barrel length 6' 9"; diameter 3'; length of dome casing 4'; length of fire-box casing, 3' 6"; height of frame from rails, 3'; height of center of boiler from rails 4' 8". The *Fulton* likely had a similar design to the *Liverpool*. Source: “Edward Bury and Co: Liverpool,” Grace’s Guide to British Industrial History, [https://www.gracesguide.co.uk](https://www.gracesguide.co.uk).

The only other British-built steam locomotive, named *Pennsylvania*, for the Tuscumbia, Courtland & Decatur Railroad. Author Robert P. Bradley notes that “Bury’s designs differed from those of Stephenson mainly in the use of lightweight bar frames, a feature decided upon not so much for technical reasons, but in order to allow Bury, Curtis & Kennedy to undercut Stephenson’s prices.” Another feature pioneered by Bury and prevalent on his engines in the 1830s and into the 1840s was a hemispherical boiler. Historian John H. White, Jr., describes the benefits of this boiler design:

> The ample space for steam allowed for dry steam and thus prevented priming, a characteristic detrimental to American roads using poor water. The ‘Dome’ or ‘Round-top’ boiler as it was known in this country was quickly adopted by several major builders. Norris, Rogers, and Baldwin, the largest locomotive manufacturers [in the United States], used it almost exclusively between 1838 and 1855.

While the Bury boiler design was a popular feature for locomotive engines on American railroads, the design itself was complex, expensive, and only the most skilled boiler-makers could successfully manufacture it. Between 1831 and 1837, Bury supplied twenty locomotives to various railroads in the United States. Both his bar-frame and domed boilers became standard features of many American-built locomotives at the time.

Unfortunately, period drawings of the steam locomotive *Fulton* were not uncovered during this study, and none are
known to exist. Despite the lack of drawings and only a brief description of the engine, it is possible to surmise that the engine was similar in appearance to Bury’s other 0-4-0 locomotive engines built around the same time, such as the *Liverpool*.

**THE STEAM LOCOMOTIVE PENNSYLVANIA**

![Figure 79. 2013 drawing by Rich Larkins of what the steam locomotive Pennsylvania may have looked like. Source: Drawing is on display at the Tuscumbia Depot and Roundhouse Museum, Tuscumbia, Alabama.](image)

The steam locomotive *Pennsylvania* was purchased second-hand from the Philadelphia, Germantown & Norristown Railroad Company for $5,880.37 and arrived in February 1835 “without tender-car or tank.”218 Both were later furnished by the Tuscumbia, Courtland, & Decatur Railroad at its own expense. On August 1, 1836, David Deshler described the engine and its shortcomings in a report to the President and Directors of the Tuscumbia, Courtland & Decatur Railroad Company:

*This engine has been of no service on the road; weighs about 9 or 10 tons, and about 3-4 of her weight on the driving wheels, which renders it altogether too heavy for the good of the road; her boiler is also deficient in fire-surface, so that she is not capable of generating a sufficiency of steam. Her cylinders [sic] 10 inches diameter, 18 inches stroke, driving wheels 4 ½ feet in diameter. After a trial on the road with this engine, she was taken off and placed along side of the machine shop, where she has been used to this day, to drive the machinery about the works. A common engine is being put up to answer this purpose, and as soon as this is effected, we design taking her to pieces, enlarging the boiler, and putting her on eight wheels, carrying the front part on four small wheels [4-4-0 type]. (two and 1-2 feet diameter,) and using four adhesion or driving wheels, by means of outside cranks and connexion [sic]; when this is accomplished she will without doubt, answer a good purpose, and will be easy on the road.*219

The Pennsylvania, Germantown & Norristown Railroad also had substantial
Figure 80. Replica of the Stephenson and Company’s Planet, a 2-2-0-type locomotive that served as a prototype for other 2-2-0 types built by Stephenson and Company in the 1830s. This replica was built in 1992 by the Friends of the Manchester Museum of Science and Industry. The Pennsylvania may have looked similar to this before it was redesigned by the Long and Norris Company and, presumably, by the Tuscumbia, Courtland & Decatur Railroad. Image courtesy of “Woodytyke,” Flikr.com, August 30, 2010.

issues with the engine. Deshler complained, “[They] were no doubt, pleased at the opportunity of disposing of it.”

The Pennsylvania, a 2-2-0-type engine (a wheel arrangement of two leading wheels on one axle, two powered driving wheels on one axle, and no training wheels), was initially constructed by British manufacturer Robert Stephenson and Company of Newcastle-upon-Tyne in 1833 for the Philadelphia, Germantown & Norristown Railroad (see Figure 79). The Robert Stephenson and Company was established in 1823 by George Stephenson, his son Robert, Edward Pease (who also held the shares of Thomas Richardson), and Michael Longridge. Although it is often thought to have been a new engine, the Pennsylvania was likely a conversion of an earlier locomotive, also named Pennsylvania, built by Stephenson and Company in 1831 and tried on the Newcastle & Frenchtown Railroad. It failed its test, was rebuilt with a new boiler, and tested again the following year, but was still unsuccessful. It is likely that parts from this engine were reused to make the Pennsylvania for the Philadelphia, Germantown & Norristown Railroad.

The Pennsylvania originally had 60” drivers and a cylinder/stroke of 11x16. The Pennsylvania, Germantown & Norristown Railroad reportedly disliked the engine and had the Long and Norris Company of Philadelphia, Pennsylvania, rebuild it as a 2-2-0 tank engine, presumably changing the drivers to 48” and the cylinder/stroke to 10x18. The engine was then sold to the Tuscumbia, Courtland & Decatur Railroad, which was presumably unaware that these changes had been made.

Although records are incomplete, it is assumed that Deshler went ahead with his plan to rebuild the Pennsylvania as a 4-4-0-type engine, thus doubling the number of wheels from four to eight. 4-4-0 engines had four leading wheels on two axles, four powered and coupled driving wheels on two axles, and a lack of training wheels. Henry R. Campbell, former chief engineer of the Philadelphia, Germantown & Norristown Railroad, designed the first 4-4-0-type engine and secured a patent for it on February 5, 1836 (see Figure 81). He immediately began work constructing his new, eight-wheel engine. It was finished in 1837 with cylinders 14”x16”, 54” wheels, a
weight of 12 tons, and steam pressure of 90 lbs.\textsuperscript{227} The 4-4-0 type became the most popular locomotive-wheel arrangement in the nineteenth century and was commonly referred to as the “American type.”\textsuperscript{228} As Historian John H. White, Jr. notes:

\textit{It succeeded because it met every requirement of early United States Railroads. It was well suited to all service, including passenger, freight, and switching. It was flexible, having three-point suspension and a leading truck, and it operated well on uneven tracks. It was simple, having relatively few parts, which made it easy to repair. It was low in first cost, and it was relatively powerful because of its four connected driving wheels.}\textsuperscript{229}

Unfortunately, period drawings of the steam locomotive \textit{Pennsylvania} were not uncovered during this study, and none are known to exist.\textsuperscript{230} Despite the lack of drawings and only a brief description of the engine, it is possible to surmise that the engine may have initially looked similar to the Stephenson and Company’s \textit{Planet}, and if altered to a 4-4-0, may have looked similar to the drawings in Figures 81 and 82.

**THE STEAM LOCOMOTIVE \textit{COMET}**

The steam locomotive \textit{Comet} was purchased from the West Point Foundry in New York for $7,959.82 and was placed on the railroad in June 1835.\textsuperscript{231} Like the steam locomotive \textit{Fulton}, it was a 0-4-0-type engine. The \textit{Comet} had 54” drivers and a cylinder/stroke of 10” x 20”.\textsuperscript{232} It was also the first all-iron frame locomotive built in the United States.\textsuperscript{233} An anonymous letter written on January 15, 1835, to the editor of the \textit{American Railroad Journal and Advocate of Internal Improvements} offered a detailed description of the engine:

\textit{A few days since I was invited by one of the managers of the West Point Foundry to inspect a locomotive engine just completed at that establishment, designed for the Tuscumbia, Courtland and Decatur Railroad; and as its construction is somewhat different from others, perhaps a description of it will be}
interesting to your readers. It is raised on four 4 ½ feet wheels; the hubs are of cast iron, with wrought iron spokes and tires; the outside frame is entirely iron, securely bolted; the inside rails are of wrought iron – (hitherto, in all engines made in this country, they have been made of wood); all the working parts are of east steel, and appear to have been finished with great care. The weight of the engine, with the boiler, is 6 ½ tons, it will carry 80 tons at the rate of 18 miles per hours on a level railroad. The appearance of the engine is by far the handsomest I have ever seen, either in this country, or in Europe; and the managers state that the West Point Association will guarantee that any that they may hereafter build shall be equal to any made in the world.234

While the Comet was the most expensive steam engine purchased for the Tuscumbia, Courtland & Decatur Railroad, it too did not initially perform to expectations. On August 1, 1836, David Deshler described the problems with the engine in a report to the President and Directors of the Tuscumbia, Courtland & Decatur Railroad Company:

[The Comet] had the appearance of a good article, and indeed performed well for a few weeks—but owing to a defect in the castings of the cylinders, as well as a bad arrainment in the slides that carry the crossheads, one of the cylinders gave way on the 15th day of June, immediately under the exhaust passage, bursting open nearly its whole length; the metal in that part being only about an eighth of an inch in thickness. The Engine of course was perfectly useless until new cylinders could be procured. Not being prepared with tools at our own works to remedy the difficulty, I wrote to Mr. Kemble, the manager of the West Point Foundary, advising him of the deficiency of the Engine, and requesting that he would, with all practicable dispatch, make a new pair of Cylinders, as well as slides, and forward them to us. Which he promised to do. We waited on his promise till quite late in the fall, say Oct. or November, expecting daily to hear of the anxiously looked for articles; till at least despairing of any further news from the West Point Foundary, we set to work at our own shops and accomplished the job, so that said Engine has been in service since sometime in January last, and answers a good purpose. From the West Point Foundary we have not even to this day heard a word of excuse or apology for the treatment given us.235

Little else is known about the Comet. No drawings of the steam engine were uncovered during this study, and a review of the “West Point Foundry Association Collection, 1817-1878” at the New York Historical Society did not reveal any information about the steam locomotive.

THE STEAM LOCOMOTIVE TRIUMPH

The steam locomotive Triumph was purchased from the Baldwin Locomotive Works in Philadelphia for $7,091.55 and placed on the railroad on June 1, 1836.236 The Triumph was a 4-2-0-type engine, weighing 6.5 tons (without water) and had a cylinder/stroke of 10.5” x 18” with 54” drivers (see Figure 83).237 4-2-0-type engines were also known as “Jervis types,” and they were distinctly an American design.238 The first was named the Experiment (later renamed the Brother Jonathan) and was built for the Mohawk & Hudson Railroad by the West Point Foundry after a design by John B. Jervis.239 The 4-2-0 type was most popular in America between 1835 and 1842, and as historian John H. White, Jr, notes, “It was built almost to the exclusion of any other wheel arrangement” during this time.240

Deshler noted that the Triumph “performs well” and is “remarkable for the great simplicity of her gearing, and at the same time, for the strength of all her parts.”241 Compared to the Pennsylvania and the Comet, the Triumph had few mechanical
issues and only required $11.16 in repairs in its first couple of months on the railroad.\textsuperscript{242} It did have one issue common to 4-2-0-type engines at the time: lack of adhesion between the driving wheels and the rails. Deshler discussed his idea to solve this problem in his 1836 report to the President and Directors of the railroad:

\textit{The plan proposed is this: \textemdash Let a sort of hopper, (to hold a gallon or so,) be arranged just forward of the driving wheels, and above the frame of the engine, from which a tube will be projected downwards to within a small distance of the face of the rail. The hopper being filled with dry sand, will feed through the tube upon the rail. A cock, or regulator will be constructed in the tube to allow the sand to run in such quantities as may be desirable, or shut off entirely; for want of sand, water may be used\textemdash as it is a fact well known, that the adhesion is quite as good with a perfectly wet rail as when perfectly dry.\textsuperscript{243}}

Deshler’s idea to fix the \textit{Triumph}’s traction problem was known as a sandbox, and it is the earliest-known mention of the apparatus, which became widely adopted for 4-2-0 type engines.\textsuperscript{244}

The Baldwin Locomotive Works was founded by former jeweler’s apprentice Matthias W. Baldwin in 1831 and became the largest locomotive builder in the world.\textsuperscript{245} As historian John K. Brown notes, “By 1837, Baldwin employed three hundred men in a $200,000 factory, a scale of industrial production with few precedents or parallels in America beyond the textile manufacturers of Lowell, Massachusetts.”\textsuperscript{246} Baldwin’s first locomotive was named \textit{Old Ironsides} and was inspired by the “Planet”-class design by Robert Stephenson and Company, but he quickly made alterations to the design to better suit the lighter tracks and curves more commonly found in American railroads, adopting the leading pony truck of four unpowered wheels ahead of the drivers developed by John B. Jervis.\textsuperscript{247} This design was utilized in the \textit{Triumph}, the twentieth locomotive constructed by Baldwin Locomotive Works (see Figure 84).\textsuperscript{248}

Little else is known about the \textit{Triumph}, with the exception of a few surviving documents. The majority of
Baldwin Locomotive Works records and drawings were disposed of when locomotive production ceased in the mid-1950s at the company’s Eddystone, Pennsylvania, plant, and its archives were subsequently destroyed. The little that remains is due to the action of former employees and interested individuals, who took items from the company’s trash in order to save them. While many records are part of widely scattered private collections, some documents and drawings survive in publicly accessible archives and museums, but much is from the twentieth century.

The Historical Society of Pennsylvania’s collection, “Baldwin Locomotive Works Records, 1825-1869,” contains a small number of documents regarding the Triumph, including a list of costs associated with the engine and several letters written to David Deshler from Matthias Baldwin and others (see Figure 85). On January 11, 1836, for example, Baldwin and George Hufty wrote to Deshler to inform him that the Triumph was finished on December 10, 1835, but “laid on the wharf until Dec 22d at which date – the vessel sailed with it, the navigation not permitting it sooner.” They also sent Deshler extra tubes and gave him instructions on how to connect parts. Another letter from Baldwin and Hufty, dated December 21, 1836, informed Deshler that a pair of wheels and crank, along with fifty tubes, for the Triumph were “shipped on board Brig Franklin to New Orleans.” The letter also addressed Deshler’s concerns with the Triumph’s lack of adhesion between the driving wheels and the rails. Baldwin and Hufty acknowledged that they were aware of
this issue and that it could be fixed by “putting the Centre Pins Truck Guide in the smoke box by that means throwing more of the weight on the Driving Wheels.” Baldwin and Hufty stated that they “now make all the Engines in that manner with the most beneficial results.” This was an entirely different approach to the sandbox idea outlined by Deshler in his 1836 report.

Deshler contacted Baldwin for more than just parts and advice for the Triumph. He also contacted Baldwin to help him find a skilled laborer for the Tuscumbia, Courtland & Decatur Railroad. Baldwin responded to Deshler:

*Immediately after the recpt. of your letter I made an effort to obtain such a man as you wanted and after some delay I found one [Thomas Riley] who I thought would answer. I applied to him and after much conversation, I succeeded in getting his promise to go on the following terms. His salary is to be 1100 dollars per year and found and his expenses paid to your place. I was induced to offer this because of the difficulty of prevailing on any good man to go to the South at any rate. And he is a man who now is filling a situation similar to the one you want him for and is sober, steady and industrious man.*

Historian Walter Licht argues that early southern railroads often faced problems attracting skilled engineers and machinists and had to lure them with higher wages from the North, where skilled laborers knowledgeable in the railroad were more plentiful. As Licht notes, “In the antebellum period, hired slaves formed the backbone of the South’s railway labor force of track repairmen, station helpers, brakemen, firemen, and sometimes even enginemen. The southern railroads, however, faced strong competition for slave labor from the agricultural sector.” The Tuscumbia, Courtland & Decatur Railroad, built in a major agricultural area, did utilize enslaved labor. According to Deshler’s 1836 report, $9,575 was invested in enslaved African Americans. At the time of its construction, the Tuscumbia, Courtland & Decatur Railroad was one of the earliest railroads in America, the first railroad in Alabama, and the first railroad west of the Allegheny Mountains, so it is no surprise that Deshler would have contacted trusted colleagues in the North to help him find the skilled labor he needed in order to efficiently and effectively maintain the railroad and its locomotives.

While the “Baldwin Locomotive Works Records, 1825-1869” collection at the Historical Society of Pennsylvania provided some additional information on the Triumph, it is possible that more information exists in private or uncatalogued collections. The Pennsylvania Historical and Museum Commission, for example, has two truckloads of unprocessed materials that may contain additional information.
EARLY NINETEENTH-CENTURY ROADS & TURNPIKES IN THE SOUTHEAST

The majority of Cherokee traveled overland during their forced removal to Indian Territory on foot, with some traveling on horses and in wagons, using a network of well-known, established roads that linked major towns and settlements. These roads, however, varied in width, quality, and condition. Some roads at the time were only passable by horseback or on foot, while others were significantly wider, allowing enough room for wagons and stagecoaches to pass one another or containing pull-over spaces to allow traffic to pass.256 Since all Cherokee detachments traveling overland contained wagons, carriages, or carryalls to transport both people and supplies (there was approximately one wagon per twenty people), the wider wagon roads were predominately used to reach Indian Territory; however, detachments occasionally found themselves on hard-to-navigate, narrow roads.257 The Richard Taylor detachment found itself in this situation while en route to the foot of Walden’s Ridge in Tennessee. On November 1, 1838, the Rev. Daniel S. Butrick, who was traveling with the detachment, wrote the following in his journal:

After crossing the river, our road ran on a side hill, and was scarcely wide enough for a waggon to pass. The road formerly ran at the foot of the hill but the man who owned the land turned it on the side. The court would not for some time accept the road…He said the road, in the narrowest place, was eight feet wide, though by actual measurement, it was about 5 ½ feet, of firm ground.

One loaded waggon ran off, but was caught, & propped up, till unloaded, & then got onto the road: another turned over entirely, through nothing was broken. At length, all the waggons which had crossed the river, got over this dangerous place and camped, having about a quarter of a mile to go for water.258

Research indicates that most of the roads used for removal likely had dirt or gravel surfaces, while some were macadamized, a process in which single-sized crushed stone layers are compacted, with a slope from the center to the drainage ditches on the side, to create a durable road surface. Regardless, condition varied greatly, and there were numerous reports that detachments, at one time or another, faced poor road conditions along their journey. Evan Jones, for example, reported to Principal Chief John Ross on October 27, 1838, at McMinnville, Tennessee, that “the detachment was “somewhat fatigued with passing so rapidly over the bad roads.”259 On the same day, United States Army Lieutenant Edward Deas reported the following near Winchester, Tennessee, “[O]ur progress has been necessarily slow, in consequence of the obstructions in the roads over which we have passed.”260 A week later, on November 3, 1838, Lieutenant Edward Deas continued to complain about the condition of the roads, reporting, “[W]e have pursued the direct road thro’ Fayetville [sic] and Pullaski leading to Memphis part of which we found very rough.”261 Two days later, Butrick reported in his journal that while passing a particularly “narrow & dangerous part of the road” in the Walden’s Ridge area a wagon overturned, causing fatal injuries to a member of the detachment.262 As the journey progressed through the winter months, rain, ice, and snow further deteriorated the roads.

Width, quality, condition, and maintenance varied from road to road and from state to state on the Trail of Tears. The following sections provide general information on road construction in a number of states the Cherokee traveled through en route to Indian Territory. It has been sourced
used, road widths, maintenance requirements, and other information about roads and turnpikes in the southeastern United States during the early nineteenth century. It should be noted that while many of these sources are primarily focused on the 1830s, they ultimately span from the 1810s to the early 1840s, with only one contributing period document dating as late as 1858.

It should also be noted that these sources, even the charters, vary on the amount of specification given for the construction of each road and turnpike. While there are some consistencies in American road construction, it does appear that most of the guidelines are ultimately at the discretion of the company or the state in which the road is built. Although some of these differences appear to be negligible, like a road being angled at three rather than four degrees to ensure water run-off, the road widths can range from twenty to sixty feet. To best demonstrate the differences between standards of road construction and the topography of the different regions, the research will be separated by state, and it will conclude with a comparison of all of the states investigated during this study.

GEORGIA

A number of roads connected major Cherokee communities at the time of removal in northern Georgia. One of the most important roads was known as the Federal
Road or the Georgia Road. It not only connected Cherokee communities but was also used as a “roundup route” during the Trail of Tears. In 1805, the Cherokee agreed to allow a road to be constructed across their land, closely following existing trading paths. From Athens, Georgia, the road followed a northwestern course and entered Cherokee lands near what is now Lake Lanier. After passing through a number of Cherokee communities along a northwestern route, the road split near the town of Ramhurst, Georgia, with one branch leading to Eton and then toward Knoxville, Tennessee, and another branch leading to Spring Place, and then eventually Nashville, Tennessee (see Figure 86). While the route of the road was planned to avoid fordings as much as possible, due to the delays and dangers crossings might cause, the road still crossed approximately eighty bodies of water throughout its course.

The construction of the Federal Road brought economic benefits to the Cherokee. Initially, the federal government wanted to control the ferries necessary to cross larger bodies of water along the road and have the Cherokee maintain the road, but the Cherokee insisted on retaining ownership of the ferries and their earnings to help pay for the road, as no state or government funds were used to pay for its construction. In fact, no records have been found that suggest the United States ever became deeply involved in the construction or maintenance of the road, and in addition to ferries, the Cherokee built taverns, inns, and stores along the road, capitalizing on the economic benefits that increased travelers brought to the area as much as possible (see Figures 87-88).

Despite the significance of the Federal Road in Georgia, little is known about the road’s actual construction and maintenance beyond its width and toll fares. The Cherokee Council, not the federal or state governments, dictated how the road should look:

_The road to be cut and opened twenty-four feet wide, clear of trees, and the causewaying to be covered with dirt, together with the digging of mountains and hills, to be fourteen feet wide, clear of rocks, roots and grubs, and the banks of all water courses to be put in complete order._

In addition to information on the width of the road, the Cherokee were known to have two tollgates on the road, charging the following fares:

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Figure 87. James Vann built this two-story, hand-hewn log tavern around 1805 on the Federal Road. It has a single room on the first floor and three rooms on the second floor accessible by an external staircase at the rear. A one-story, board-and-batten room was added to the east at a later date. It was moved to New Echota State Historic Park in 1955.

Figure 88. Originally located along the Federal Road, the ca. 1804 Buffington’s Tavern was moved, rebuilt, and restored at the Cumming Fairground. Image courtesy of Jeff Bishop.
Wagon and team $1.00
Wagon and two horses $.75
Wagon and one horse $.50
Two-wheel carriage $.50
Man and horse $.12 ½
Loose horses $.06 ¼
Hogs, sheep, goats $.01 each

In 2007, Ted Ownby and David Wharton of the Center for the Study of Southern Culture at the University of Mississippi completed a comprehensive study of the Federal Road's history and significance. They noted:

The state of Georgia did not begin funding private companies to build roads until the early 1820s, and the state’s board of public works first met in 1826, so by the time Georgia had formal political structures to deal with road-building, the Federal Road was already an important part of transportation in North Georgia.

One of these early companies was the Washington Turnpike Company. In 1821, the Georgia General Assembly approved its incorporation and their intention to build a road from Augusta to Athens. The act specified that this road was to be fifty feet wide (double the width of the Federal Road), “and twenty five feet thereof shall be an artificial road, bedded where necessary, with wood, stone or other material, so as to be solid in its foundation, and faced with gravel or other firm material so as to furnish a surface as firm and even as practicable.” The same term and phrase were also used in the 1822 Act of Incorporation for the Milledgeville, Greensboro, and Eatonton turnpike companies.

While other acts and charters of roads in other states also denote the appropriate building materials, Georgia is the only state in this research that describes a road as “artificial” if it uses additional materials.

In 1834, another legislative act specified that a road in northern Georgia from the Tennessee state line to the Hightower River was to be twenty feet wide with an elevation of at most eight degrees. Furthermore, the turnpike company was required to “remove from said road all trees, stumps, grubs, roots, rocks, and other obstructions” and build bridges where it was deemed necessary. While other documents discovered during this research related to Georgia turnpikes do not mention removing trees, stumps, etc., it was a common practice for other turnpike charters and acts of incorporation in other states.

The 1822 Act of Incorporation for the Milledgeville, Greensboro, and Eatonton turnpike companies also provided a great deal of information concerning other issues surrounding turnpikes and road conditions in Georgia during this time. The company and its workers had permission to “to enter upon and pass over the lands and inclosures [sic] which may be contiguous to said road, and to cut, dig, and remove any timbers, earth, or stone, which they may require.” If they did use materials from someone else’s land, the company was required to pay the owner, and if there was a disagreement, a justice of the peace could appoint three “disinterested freeholders” to assess the damages and determine the appropriate compensation.

It was common in other turnpike and road charters to allow the companies and construction workers to source the materials from their immediate environment as long as compensation was paid to the landowners.

When comparing the 1839 Henry Burr Map of Georgia and Alabama to the 1822 Act of Incorporation for the Milledgeville, Greensboro, and Eatonton turnpike companies, it appears the road was documented on the map as a four-horse post.
Figure 89. Detail of the Milledgeville, Greensboro, and Eatonton Turnpike (with map key added), identified as a four-horse mail post coach road on David H. Burr’s “Map of Georgia & Alabama exhibiting the post offices, post roads, canals, railroads & c.,” published in 1839. Source: Library of Congress.
coach road (see Figure 89). While not all of the roads found in this research are as easily located and confirmed on Burr’s maps, this one appears to be the same one or at least along the same route. Furthermore, it appears that the large width of fifty feet of this road was meant to accommodate the larger wagons and parties that traveled it. Even though the 1821 Act of Incorporation for the Washington Turnpike Company does not give construction specifications, a road on Burr’s 1839 map appears to align with the road’s trajectory. On the map it is a one-horse sulky road which implies that the width would have most likely been much narrower than the previously mentioned fifty-foot-wide road.

Despite the specifications given in some legislation and charters, at other times it was left solely to the opinion of the turnpike company. In 1823, the Georgia General Assembly approved the charter for the construction of a turnpike across the Buffalo swamp in Washington County. Instead of specifying how the road should be built, the commissioners were allowed to hire someone at their discretion, and they were to also “direct the materials of and manner in which the same [the turnpike] shall be completed.”273 It was also not unusual for acts of incorporation and charters to make it punishable to “maliciously injure or destroy” a turnpike, its tollgates, or other parts of the road. In 1833, the Georgia General Assembly passed an act that applied to all public roads in which someone could be sentenced to one to four years in prison after being convicted of damaging or destroying a turnpike.274

Early nineteenth-century roads in Georgia varied in their construction and maintenance and lacked any universal standards. Roads of this time period should be looked at individually, particularly in the context of the road’s purpose.

ALABAMA

There were a number of roads located within Cherokee lands in the state of Alabama at the time of removal (see Figure 90). The locations of these roads were thoroughly documented in the 2007 report Alabama Collection Camps, Forts, Emigrating Depots and Travel Routes Used During the Cherokee Removal of 1838-1839, by Lamar Marshall, Larry Smith, Michael Wren, and Gail King.275 The authors of the report note, “By the time of Removal there was a developed wagon road system in place in the Cherokee territory in northeast Alabama. Some of these roads were built by Cherokee Turnpike Companies who cleared and widened horse paths into wagon roads and operated toll gates and ferries.”276 Although little is known about the construction and maintenance of these roads, many of which followed earlier Native trails, one of the most significant to the Trail of Tears was a wagon road that entered Cherokee lands near Bennettsville, Alabama, and continued northeast to Wills Town (or Willstown) Mission in present-day Fort Payne. From there, the road continued northeast into Georgia and then on to Ross’s Landing (present-day Chattanooga). The section of this road from Wills Town Mission to Ross’s Landing is one of several roads within Cherokee lands in Alabama considered a “roundup route” of the Trail of Tears National Historic Trail.

Another wagon road of significance, known as the Gunter’s Landing Road, connected Fort Payne via Lebanon to Gunter’s Landing and was used by the Benge detachment on the Trail of Tears (see Figures 91-92). After crossing the Tennessee River via John Gunter’s ferry, the Benge detachment continued northwest on a road known by a number of names, including Deposit Road, the “Big Road,” and Huntsville Road.277 The road continued through the Little Paint Rock Valley, New Hope, Owens Crossroads, Big Cove, and Blevin’s Gap, before reaching Huntsville. The most
Figure 90. Detail of “Map of the State of Alabama and West Florida,” by John LaTourrette, 1838, showing the network of roads in the Cherokee lands (outlined in red) within the state of Alabama at the time of removal. Source: David Rumsey Map Collections, davidrumsey.com.

Figure 91. Unimproved section of the Gunter’s Landing Road between Lebanon and Gunter’s Landing. Source: Lamar Marshall, Larry Smith, Michael Wren, and Gail King, Alabama Collection Camps, Forts, Emigrating Depots and Travel Routes Used During the Cherokee Removal of 1838-1839 (Muscle Shoals, AL: Southeastern Anthropological Institute, Northwest Shoals Community College, 2007), 483.

Figure 92. Improved section of the Gunter’s Landing Road between Lebanon and Gunter’s Landing. Source: Lamar Marshall, Larry Smith, Michael Wren, and Gail King, Alabama Collection Camps, Forts, Emigrating Depots and Travel Routes Used During the Cherokee Removal of 1838-1839 (Muscle Shoals, AL: Southeastern Anthropological Institute, Northwest Shoals Community College, 2007), 481.
detailed description of the road from Gunter’s Landing to Huntsville was recorded by Lucius Bierce in April 1823:

April 6.
Resumed my march…I found myself on the banks of the Tennessee River, at Gunter’s landing. Ten miles from the Tennessee river I came to Big Honey comb spring which is a large limestone spring and very noted in this part of the Country. Five miles from Big honey comb, I crossed Paint rock, a deep but narrow river…the road here was through a rich can[e] bottom…Nine miles from Paint rock I crossed the Flint, similar in size to the former. These rivers empty into the Tennessee…29 miles.

April 7.
Leaving Flint, which is the boundary between Decatur and Madison Counties, I went five miles, when I came to Blevins Gap, an opening in another-wise impassable mountain, and after wading through creeks and mud holes eight miles farther I came to Huntsville and the County Seat of Madison county, being the first village I had seen for two hundred and eight miles and containing the first brick dwelling house I have seen since leaving Virginia.278

Maintenance of this road was a community effort, as were all public roads in Alabama at the time of the Trail of Tears. A man named, Noah E., for example, was appointed overseer of a portion of the this road in 1831, and was responsible for overseeing the maintenance of the road and insuring all able-bodied and qualified individuals assist with the maintenance of the road.279 According to an Alabama state law in 1833, “All free white male persons, between eighteen and forty-five years of age, and all male slaves and other persons of color over sixteen and under fifty years of age, shall be liable, and it is hereby made their duty, to work on, clear out, and repair the public roads” in the state, with the exception of ministers, teachers, students, “keepers of grist-mills that grind for toll, public ferryman, commissioners of revenue and roads, the directors of the bank of the state of Alabama, judges of the county court and justices of the peace.”280 New roads could not be cut between May 1st and July 10th, and individuals were not allowed to work on more than one road in a single year or more than ten days.281

In addition to maintaining the road, state law required the installation and maintenance of mile marker posts along public roads, including the distance in miles to the nearest courthouse or noted place.

While the 1833 state laws for public roads in Alabama do not specify a standard road width, they do specify a grading system based on road widths:

[T]hose of the first grade shall be cleared of all trees, at least thirty feet wide, with all stumps cut within six inches of the surface, all causeways at least fifteen feet wide. Second grade, to be not less than twenty feet wide, with all stumps cut within six inches of the surface, all causeways...
at least twelve feet wide. Third grade, to be not less than fifteen feet wide, with all stumps cut within six inches of the surface, all causeways at least ten feet wide; Provided, That lanes through which public roads may pass, shall be at least thirty feet wide.\textsuperscript{282}

When repairs were necessary for a road, state law dictated the overseer had to make the repairs in accordance to the grade of the road, and the earth needed to make the repairs had to be taken from “either side of the said causeway, at the discretion of said overseer, so as to make a drain on either or both sides” of the road.\textsuperscript{283}

Charters and acts of incorporation for roads in Alabama in the 1820s and 1830s are similar to other state charters and acts of incorporations of the same time. Most of the roads stay at a minimum of 18-20 feet wide, with a few roads extending to 30 feet wide. In 1825, for example, a turnpike road in Franklin County, Alabama, that branched off of the Military Road was 20 feet wide with 12 feet to be cleared of all natural obstructions like “stumps and trees” and “grubs and roots.” Furthermore, any sloping ground and creek banks were to be levelled off to ensure safe passage, and any marshes, swamps and creeks were required to be causewayed or bridged with ditches on either side.\textsuperscript{284} In 1830 and 1832, four more roads required 20-foot-wide roads with 12 feet cleared of natural obstructions, levelled off ground, and bridges and causeways where necessary. The language in these acts are almost identical.\textsuperscript{285} The 1827 Act of Incorporation for the public road from Tuscaloosa County to Jefferson County required a 20-foot-wide road with the same specifications as the previous two mentioned roads; however, it states that the 12-foot-wide bridges must also have “good substantial railing to the sides.”\textsuperscript{286}

Two years later in 1827, the public road from Elyton to Montevallo, Alabama, was to be between 18 and 30 feet wide. The road required almost identical maintenance as the Franklin County road, including clearing 12 feet of the road of natural obstructions, levelling off any sloping ground, and bridging or causewaying any marshes, swamps and creeks. Bridges and causeways were to be built with “good and durable timbers in a substantial and workman like manner” and they also had to be at least 12 feet wide.\textsuperscript{287} Although they were built after removal, two Acts of Incorporation in 1844 and 1846 required 30-foot-wide roads, making them a first-grade road, as well with 15 feet being cleared of obstructions.\textsuperscript{288} As with other states, roads in Alabama at the time of the Trail of Tears varied and should be looked at individually, particularly in the context of the road’s purpose.

**TENNESSEE**

Similar to other southeastern states in the early nineteenth century, Tennessee’s roads varied in width and condition. Beginning in 1821, the state legislature created a three-tier system to classify Tennessee’s roads. First-class roads were typically stage roads and were generally between 20 feet and 30 feet wide, contained mile markers, were bridged, indexed, and usually well-maintained. Second-class roads were 12 feet in width, mile marked, indexed, and “cleared of obstructions so as to afford loaded wagons safe passage.” Third-class roads were wide enough for a horse and rider. In addition, trees along these roads were notched, so the traveler knew the class of road they were traveling on: marginal trees along first-class roads had three notches; trees along second-class roads had two notches; and trees along third-class roads had a singular notch. It is believed that third-class roads were identified by only one notch, instead of three, because third-class roads were the most predominant type at the time, and therefore, cutting three notches to identify all of them would be cost prohibitive.\textsuperscript{289}
During the Trail of Tears, the Cherokee traveled primarily on first- and second-class roads in Tennessee. Little is known about the early history and construction methods of many of these early stage and wagon roads. The Hill Road over the Cumberland Plateau, for example, was constructed in the 1820s to connect McMinnville with the Sequatchie Valley. The Brown and Taylor detachments traveled on this road, a portion of which is listed in the National Register of Historic Places. Based on the extant segment, this road was likely a second-class road and between 10’ and 15’ wide at the time of the Trail of Tears. Little else is known about its early history. The same is true for other roads the Cherokee traveled on, including Kelly’s Ferry Road (road class unknown), Port Royal Road (first-class road), Reynoldsburg-Paris Road (second-class road), and many others (see Figures 94 & 95).

By the end of the 1820s, road construction in the state began to evolve with the introduction of turnpikes, but state funds were not used for turnpike construction until 1836 and were limited to macadamized roads, which were difficult to construct in the western part of the state due to the lack of stone in the soil. These turnpikes, or toll roads, served as the highways of the era, helped to better facilitate movement and trade between major towns and cities, and were utilized by Cherokee detachments on the Trail of Tears. The Reverend Evan Jones, for example, who traveled with the Situwakee detachment on the Trail of Tears, reported the following to Principal Chief John Ross on October 27, 1838, while encamped at McMinnville, Tennessee:

We paid Forty dollars at the Walerns [sic] Ridge gate, and the man agreed to let the other Detachments pass at half price viz 37 ½ for four wheeled Carriages & 6 ¼ for a horse. On the Cumberland Mountain they fleeced us: 75 Cents a wagon & 12 ½ Cents
Figure 96. Tollgates, such as the one shown here, were located at various points on turnpikes in Tennessee. Courtesy of MTSU Center for Historic Preservation.

a horse without the least abatement of thanks. We will avoid several gates on the road to Nashville (see Figure 96).

The number and location of tollgates were unique to each turnpike; however, tollgates could typically not be erected within two miles of the boundary of a town or less than four to five miles apart from one another. Seeking routes around toll gates, such as the Situwakee detachment did in Tennessee, along with the Bushyhead, Old Fields, and Daniel detachments, was known as “shunpiking,” and was not uncommon at the time.

Tolls were not a popular idea among everyone. There is a story about a resident of Sumner County, for example, who traveled daily on the Nashville and Gallatin Turnpike for business. He found himself involved in a lawsuit over his debts to the turnpike company and refused to pay tolls while the suit was pending. After he was refused passage on the road several times, the resident “stowed away in the bottom of his buggy an axe and when he reached the gate and was again refused passage, he proceeded to cut the tollgate down.”

This occurred
Figure 98. While the Situwakee, Bushyhead, Old Fields, and Daniel detachments chose a route through Jefferson, instead of Murfreesboro, to reach Nashville and avoid a number of toll gates, they did still have to pay a toll in Nashville to cross the covered bridge over the Cumberland River, as all detachments did that traveled the Northern Route. Source: Matthew Rhea, “A Map of the State of Tennessee Taken from Survey,” 1832, Courtesy of Library of Congress

several more times before the company decided that repairing the gate was more expensive than letting him pass. Despite the inconvenience of tolls, turnpikes were among the best roads in an area. They were also built with specific construction requirements to ensure their designation as first-class roads. While information on the construction, width, and maintenance of all the turnpike roads in Tennessee that the Cherokee traveled on is not available, an examination of those requirements outlined for turnpikes within the state in the early nineteenth century that are available helps illuminate how a number of Tennessee’s major roads were constructed in the 1830s and 1840s. As always, condition of these roads varied from place to place and road to road.

While the records for turnpikes often note specific construction requirements, the details vary depending on the location and the company. Some of the construction requirements are very specific, though. The Lebanon and Nashville Turnpike (1837), for example, had fourteen specifications, including that the road had to be graded 30 feet wide with additional 3-foot-wide ditches on either side to ensure water run-off. The road was to be paved with stone, and “[c]ulverts must be introduced whenever, in the judgment of the committee, they are necessary to carry off the water. The culverts to be made of good stone work, to have a stone bottom, and sufficiently large enough to carry off the water.” In addition, the specifications noted that “the road [is] to be a segment of a flat ellipsis, being nine inches higher at the centre than at the edges. All embankments to be a full thirty feet wide at top, the sides being at an angle of at least forty-five degrees.”

The Columbia, Pulaski, Elkton, & Alabama Turnpike Road (1838) shared almost identical construction requirements as the Lebanon and Nashville Turnpike, but it included an additional four more requirements detailing payments to contractors and requiring that the road “be made sufficiently high to be protected from
the effects of the water” in areas subject to overflow (see Figure 99 & 100). Another difference was that a committee, instead of a superintendent, had the power to settle any disputes, lead the contractors, and determine the size or needs of the road’s construction. In 1842, the Tennessee General Assembly also authorized the Columbia, Pulaski, Elkton and Alabama Turnpike Company to construct ten toll gates on the road between the Alabama State Line and Columbia, as outlined in the company’s act of incorporation. Tollgates could not be constructed any “nearer than one mile and three quarters of the courthouse in the town of Columbia, nor any gate nearer the court house in the town of Pulaski than two miles.” It was common for turnpikes to be governed by the same rules and regulations that were given to previous companies and individuals. The Shelbyville, Winchester, and Jasper Turnpike Company (1839), for example, was held “to the same liabilities, and be in all respects governed by the same provisions” of the act of incorporation for the Lebanon and Nashville Turnpike company. Therefore, it is possible that it was also held to the same construction specifications.

The Nolensville Turnpike Road (1839) was directed to be thirty feet wide and all trees, stumps, roots, and other natural obstructions to be cut down within six inches of the ground across the width of the road and an additional five feet on each side. It had a few similar requirements as the

Figure 99. “Specifications for Constructing the Columbia, Pulaski, Elkton, & Alabama Turnpike Road.” Courtesy of Tennessee State Library and Archives, Nashville, Tennessee.
Lebanon and Nashville Turnpike as well, including a minimum of 3-foot ditches, and culverts. However, the culverts for the Nolensville Turnpike were “to be built of good masonry, the walls to be two feet thick and placed on a good and firm foundation.” Stone was also to be used to cover or arch the openings and the bottom of the culvert. The road itself was also to be covered with broken stone. Furthermore, “The bed of the road [was] to be compressed or hardened either by hauling, travelling or time, and to be made smooth before putting on the first coat of stone.” This specification gives unique insight into how the contractors intended to smooth the road for travel.

Other charters and acts of incorporation gave specifications, but not typically to those previously mentioned. Two men in Marion and Hamilton counties, Tennessee, for example, were granted the right to open a turnpike road from a small town in Marion County to near Chattanooga in Hamilton County. It was to be opened 18 feet wide and up to 30 feet wide when the county allowed for it. When the road crossed swamps or required bridges, the road was to be reinforced with stone or wood. In all cases, the men were to clear the road of “obstructions” which included trees, shrubs, and other natural barriers.

While the Cherokee did travel on some turnpike roads in Tennessee, they also utilized stage roads, some of which were in the process of transitioning into turnpike roads, such as the Somerville-Bolivar Stage Road and the Jefferson Road. On November 18, 1838, the Bell detachment traveled on the Somerville-Bolivar Stage Road en route to Indian Territory. Construction on this road began in 1825. Eight citizens of Fayette County were tasked with laying out the road “beginning at some point in the line between Hardeman and Fayette in a direction from Somerville to Hatchy (now Bolivar) running westward the nearest and best way to Shelby County the east boundary, in a direction to Memphis.” It took several years to complete construction on the road, with the final section to Memphis completed in 1829. Shortly after completion, a regular mail and stage coach service utilized this road, and it was identified as an “important road” in a map drawn by Matthew Rhea in 1832 (see Figure 101 & 102).

In January 1838, the Tennessee General Assembly passed an act to incorporate the Memphis, Somerville and Bolivar Turnpike Company. According to the act, the Memphis, Somerville, and Bolivar Turnpike was to be built:
Figure 101. Detail of the Matthew Rhea Map showing the Bolivar-Somerville Stage Road, used by the Bell detachment en route to Indian Territory. Courtesy of Library of Congress.
Figure 102. A 2.3-mile segment of the Bolivar-Somerville Stage Road (shown here) was listed in the National Register of Historic Places on August 7, 2005 for its significance to the Trail of Tears.

at least twenty-five feet wide, with sufficient ditches on each side to convey off the water and drain the same; shall gradually descend from the centre to the ditches; shall have substantial and sufficient bridges when necessary; and in all respects shall be completed in a faithful and complete graded turnpike road manner.303

The Memphis, Somerville, and Bolivar Turnpike Company was also authorized to construct ten toll gates along the road at points of their choosing. Tolls for the road were as follows, provided that the road was completed within five years:

For every twenty head of sheep, thirty cents; for every twenty head of hogs, thirty cents; for every twenty head of horned or neat cattle, fifty cents; for every horse or mule not in a drove, six and a fourth cents, if in a drove, three cents, and so in proportion for every greater or less number of said animals; for every pleasure carriage, eighteen and three fourth cents; for every loaded wagon, eighteen and three fourth cents; for every empty wagon, twelve and a half cents; and for every cart, twelve and a half cents; and for every foot passenger, six and a fourth cents at each and every gate erected.304

The president and directors of this turnpike company were also authorized to “lay down a covering of hewn timber and blocks on the whole or any portion of said road of sufficient width for wagons.” As was typical in other charters across various states, the company was allowed to take materials from nearby landowners, as long as compensation was provided. Furthermore, the company could lay the road through private land as long as the landowner consented, and, if he did not, the company could procure the necessary land.305

The Jefferson Road, utilized by the Bushyhead, Situakee, Old Fields and Daniel detachments to avoid additional toll gates on their way to Nashville en route to Indian Territory in 1838, was identified as a “common road” on Matthew Rhea’s 1832
Figure 103. Courtesy of Library of Congress
map (see Figure 103 & 104). While little is known about the road’s early construction, it was built in 1805 and was referred to as the “Old Jefferson Road” as early as 1817. By the time the Cherokee traveled on this well-established road, it still had not attracted the attention of turnpike companies. According to the National Register nomination draft for a portion of the Old Jefferson Road, it was “the only route to Nashville from McMinnville that avoided turnpikes” at the time. The other two major routes to Nashville had toll houses placed every four miles. Jefferson Road’s lack of turnpikes would be short-lived, though.

The Jefferson Turnpike Company was incorporated in 1838, but the act of incorporation did not give construction specifications like other roads; however, this was not uncommon at the time. An examination of an extant segment of the Jefferson Road does indicate that the turnpike company followed turnpike road design guidelines common in Tennessee during the 1830s. For example, extant segments of the road measure 24’ in width, contain drainage ditches, and have evidence of macadamization. In addition, an 1840 advertisement in The Tennessean sought bids to construct two bridges for the Jefferson Turnpike over the Stones River and Stewart’s Creek. Although the Jefferson Turnpike Company was incorporated in 1838, Jefferson Pike was not finished until 1849. One of the factors causing the late completion date was likely a lawsuit involving the turnpike company, which required the temporary suspension of work on the road in 1841 until the case was settled.

Although the Jefferson Road was not macadamized when the Cherokee traveled on it, it is possible that the Cherokee did
travel on some macadamized roads in Tennessee, the first of which was constructed in the state in 1831. Named for Scottish engineer John Loudon McAdam, who pioneered this method of surfacing roads around 1820, “macadamized” refers to a process in which single-sized crushed stone layers are compacted, with a slope from the center to the drainage ditches on the side, to create a durable road surface (see Figure 106). McAdam’s process was revolutionary and became the standard for road-building. Beginning in 1836, macadamized roads in Tennessee were encouraged by the state, as they were eligible for state funds, but all macadamized roads may not have been built to the same standards. In 1835, the Tennessean reprinted a letter written to the editors of the Journal of Commerce. The anonymous subscriber declared, “There is so little apparent resemblance between the roads that are termed M’Adamized here, and those of England, that I am induced to send you an extract from this letter, in the hope that it may be of use to the public.” The letter the subscriber attached was written to him by John Loudon McAdam and outlined the process of constructing a macadamized road:

A road should not be sunk below the adjacent ground, as is too common, but rather elevated above it, if possible.

The ground upon which the artificial road is to be placed, called by us the bed of the road, must be made quite dry, and must be kept always dry.

There are two sources of wet which are to be avoided—under water which oozes from the adjacent soil, and which is the most mischievous and the most difficult to be dealt with, and rain water or that which comes from above. The first must be kept out by side drains, that are several inches lower than the bed of the road. They may be open or covered, according to circumstances. A well constructed road will no more admit rain water than it will find its way through the roof of a house.

Figure 106. Painting by Carl Rakeman depicting the construction of the first macadamized road in the United States. Courtesy of U.S. Department of Transportation, Federal Highway Administration.
The road must be constructed by first shaping the bed into the form of a road, having a slope from the centre to the sides of not more than an inch in a yard. The bed is to be broken stones; each coat is to be three inches thick, making nine inches in all, which will settle to seven inches. This covering laid upon a clay bed, will carry any weight that could be brought upon a road. Each of the two first layers of stone must lie to be compressed by the Traffic, or if there be no Traffic, by a roller, until it gets to be nearly solid, and yet not so solid as to prevent incorporation with the succeeding coat of layer. This is a nice point; and practice alone can ensure it being well executed. In the absence of this practical skill you must, of course, make use of your own judgement.

After the road is made, it must be closely attended to, until it is quite smooth and solid, by a man, or men, whose business shall be to rake the stones after every wheel track in such a way as completely to erase every sign of a rut. But as yours is to be a private road, I recommend the use of the roller both to settle and smooth the lower coat so as to be ready to receive the upper, and in compress the upper until the passage of the wheel shall make no impression.

The stones should be broken so that no piece shall exceed three ounces in weight, and to leave as many and as sharp angles as possible. These angles are the means of rendering a road solid. Use no gravel of any size or description unbroken. Smooth stones of any size will not be [remain] fixed, and your road will loosen. I have not allowed any stone above three ounces in weight to be put on the Bath or Bristol roads for the last three years, and we have found the benefit of the plan, in the smoothness and durability of our work, as well as in economy. Do not allow any one to persuade you to try coats of stones of different sizes, as is often done. Larger below and smaller above is plausible and fanciful, but it never succeeds. The stones change places, the larger getting uppermost, and by moving those, they keep the road loose and admit the water.\textsuperscript{313}

Just as in Georgia, the Tennessee General Assembly made it punishable to damage or destroy a public road or bridge in 1833. The fine in Tennessee was less severe, and the convicted person was to be fined five dollars.\textsuperscript{314} In 1836, the Tennessee General Assembly expanded what constituted damage to a road to include damage to road signage, and it applied both to road overseers and the general public. The act stated that it was illegal to post “any false sign or label, misrepresenting the character of said road either as to excellence or distance, or shall make false representations about said road, calculated to induce strangers to travel said road.” It was punishable by a fine of fifty dollars, with half going to the county and the other half going to the person affected by the sign.\textsuperscript{315} Because turnpikes required tolls that could easily accrue depending on the size of a person’s traveling party, it is possible that overseers or other persons posted misleading signs to entice travelers to use their roads.

Despite the strict requirements for some of the roads and turnpikes in Tennessee, many of the conditions were still rugged for other roads and passages across the state. In Noland’s \textit{Cherokee Diary}, he notes that when they left Athens, Tennessee, and were traveling toward the Chil-how-i Mountains, they encountered “very rough” roads and the “country [is] very broken.” He added that “the country [is] a continual series of mountain roads scarcely passable.”\textsuperscript{316} Noland’s entries are important because they show that despite the intention of turnpike companies and the acts of incorporation, the quality of the roads was very inconsistent depending on the topography, location, and
even how frequently the road was used. It is probable that even roads that had maintenance requirements suffered when they were not being monitored by the overseers, board of internal improvements, or whomever was directed to be in charge.

KENTUCKY

Turnpikes and requirements for roads in Kentucky during the early nineteenth century had similar stipulations as those in Georgia and Tennessee. Companies, for example, were usually allowed to gather materials from nearby property as long as the landowner was compensated, and if the landowner did not agree with the compensation, a justice of the peace could determine the appropriate amount. The width of the road varied depending on the company and location. The Maysville and Bracken Turnpike (1837), for example, was instructed to be sixty feet wide “except when it passes through towns” and thirty feet of this road had to be at an elevation “not to exceed three and one half degrees.” Interestingly, the Act of Incorporation noted that “eighteen feet of the same [road] shall be covered with stone or metal, broken and placed upon the road, in the most approved M’Adamized plan, nine inches thick.” While other road charters sometimes note the use of stone or gravel to cover the road in the McAdamized style, Kentucky is the only state this research has found that mentions the use of metal in road construction. It is also mentioned as an appropriate material for the Green River Turnpike Road (1834).

The Crab Orchard and Cumberland Gap Turnpike Company (1836) notes the use of limestone when it “can be conveniently procured, or any other material equally as durable, and when such material cannot be procured, it shall be sufficient to grade said road in the manner, and to the grade, the board of internal improvement may direct.” As seen with the charters in other states, a group in higher position, in this case the board of internal improvement, had the power to step in when the desired materials could not be used. When this company was determining the final location and route of this road, it was also instructed to “tak[e] into consideration the population and business of the country through which it may pass.” Other charters also mention that the companies are to find the most practicable and desirable route, but it is interesting that this charter makes specific mention that the company is to consider the public when creating this route, which likely means that this road was intended to carry a great deal of traffic.

The Green River Turnpike Road Company (1834) was permitted to build a road from Hopkinsville to “some point on the Ohio River.” It should be noted that those traveling the Northern Route of the Trail of Tears did travel through Hopkinsville to the Ohio River, passing through Princeton, Fredonia, and Salem, before crossing the river via Berry’s Ferry. The Green River Turnpike Road, though, was instructed to be between 30 and 50 feet wide, with at least 16 feet of the road being covered with metal or McAdamized stone at 9 inches thick. Furthermore, the pieces of stone had to be less than 2 inches in diameter as well. It is possible that specifying the smaller size of the stone was a way to ensure that the road would eventually have a somewhat smoother surface for travel. The Green River Turnpike Road Company’s Act of Incorporation also made it punishable to intentionally harm trees within 150 feet of the road. If anyone was caught “beltling or deadening timber” they could be fined up to $10. Owners of property within this area were also required to cut down any decaying trees that were near the road, and they could also “be charged $1 per dead tree standing.”
While other charters sometimes granted free travel on the turnpikes if someone donated land or material to the project, the Green River Turnpike Road went a step further and granted multiple exemptions from toll payment. These exemptions included people whose land the road passed through, and for “their horses, cattle, or servants, passing on said road from one part of their farm to another,” people participating in a funeral procession, citizens traveling for general elections, militiamen “upon day of muster or attending courts of assessment,” and anyone attending on public worship in the area on the Sabbath. Furthermore, persons or families who frequented the road could opt for an annual toll to avoid daily charges. While this may not be uncommon, this is the first in-depth exemption list and annual toll option that this research has uncovered. It should also be mentioned that Kentucky is the only state this research has found that specifically requires a turnpike company to pay African Americans damages done by turnpike construction. The Lexington and Georgetown Turnpike company made a note in their logbook that the “Treasurer is directed to pay to Billy (a Black man) eight dollars as damages for the changing the location of the road through his land.”

While charters and acts of incorporation are inconsistent in mentioning the maintenance of the road, sometimes state general assemblies passed encompassing measures that applied to various regions. In Campbell County, Kentucky, for example, an act was passed that required all free white males between 16-21 years old and all male slaves between 16-50 years old to work on the road. If they did not work on the road, the white males or the owners of the enslaved had to pay a $2 poll tax to be relieved of their duty. The emphasis on the nearby neighborhood and public seen in Kentucky turnpike records emphasizes how populated some of these roads were during removal. The detachments would have encountered people from all socio-economic backgrounds, including white settlers, free black settlers, and enslaved people.

While it is interesting to note the similarities and differences in some of Kentucky's turnpike requirements with those of other southeastern states, what is known about some of the roads the Cherokee actually travelled on in Kentucky? Located approximately 60 feet east of the Newsom-Dunning House off KY-91 in Caldwell County is an unpaved, intact segment of a historic roadbed located to the east of the Newsom-Dunning House.
roadbed, known over the years as the Hopkinsville and Princeton Road, Princeton Pike, Princeton Road, and Hopkinsville Road, among others, which connected the present-day Christian County seat of Hopkinsville to the present-day Caldwell County seat of Princeton (see Figure 107). More than 10,000 Cherokee traveling on the Northern Route of the Trail of Tears journeyed down this extant roadbed.

Princeton, formally known as Eddy Grove, has a long history as both a prehistoric and early settlement site centered around the natural spring source, commonly known as the Big Spring, of Eddy Creek. Long before Virginian William Prince settled in the area in 1799, early trails, including the Nashville-Saline River Trail and the Palmyra-Princeton Trail, converged at this site. These early trails often began as buffalo paths, were later utilized by Native Americans, and sometimes developed into modern roads by pioneers. Evidence suggests that the Hopkinsville and Princeton Road, which was largely absorbed into present-day Highway 91 in the early twentieth century, roughly follows the original route of the Nashville-Saline Trail, a buffalo path and route used by Native Americans that connected Nashville with salt licks in Illinois and passed through Hopkinsville and Princeton.324

When Caldwell County was established in 1809, it was one of only two Kentucky counties that claimed land recognized by the federal government as Chickasaw tribal lands, and with its establishment, Princeton became one of the westernmost towns in the state.325 After the 1818 Jackson Purchase, Princeton was capitulated into the forefront of Kentucky’s western growth as the town developed into a hub of land and supply sales for those preparing for settlement in the Jackson Purchase region.326 According to Kentucky historian Ron D. Bryant, Princeton’s role in the western movement was further enhanced with the construction of a state road in the late 1820s from Elizabethtown through Princeton to the Mississippi River crossing at Columbus and another state road from Hopkinsville through Princeton to various other crossings of the Ohio River.327 These roads were crucial to the settlement of the region.

While the road between Hopkinsville and Princeton was improved into a state road in the late 1820s, it had already existed for decades in some form, and, as previously

Figure 108. Detail of road to Eddy Grove (present-day Princeton). Source: John Melish, Kentucky, Map (Philadelphia: Thomas and George Palmer, 1812), David Rumsey Map Collection.
Figure 109. Detail of map indicating the road from Hopkinsville to Princeton as a four-horse mail post coach road. Source: David H. Burr, “Map of Kentucky & Tennessee exhibiting the post offices, post roads, canals, rail roads, & c.”; by David H. Burr Late topographer to the Post Office, Geographer to the House of Representatives of the U.S., London: [Publisher not identified], 1839), Library of Congress, Map Collections.

mentioned, its origins may have been rooted in the Nashville-Saline River Trail. The General Assembly of Kentucky mandated the construction of state roads. Commissioners were first appointed to conduct a survey of the land within the counties the proposed road would be located. Once the road was completed, control of it was turned over to individual county courts. County-level officials oversaw the majority of the construction of state roads, even though the state had to first create the laws to establish them. While the county commissioners collected the funds to maintain the roads, landowners that lost part of their land for the roadways could receive compensation if they reported in a timely manner. Furthermore, the state government granted the county legal power in the maintenance of the roads. County courts could alter any portion or make additions, such as bridges, to the state road so long as the alterations stayed within their own county and the appropriate number of people were appointed in order to keep the road clear and in good repair.

At the time of the Trail of Tears, public roads mandated by the state were regulated. State law dictated that roadbeds must be at least forty feet wide when cleared, any tree stumps had to be cut low and rounded at the top, and branches and banks of creeks graded. After heavy rains, state roads were treated, and two-horse carriages could use four horses, while four-horse carriages could use six horses, in order to get through the mud. As a roadbed became too muddy, eroded, or steep to traverse, though, a new roadbed was formed next to the original. This is reflected in an extant segment of the State Road near Hill Cemetery that the Cherokee traveled on between Princeton and Fredonia in Caldwell County (see Figures 110-111). The intact segment of the State Road, a certified site on the Trail of Tears National Historic Trail, remains wide and contains side-by-side parallel tracks, each measuring close to the forty-feet standard.

One of the earliest maps depicting a road between Hopkinsville and Princeton is John Melish’s 1812 map of Kentucky (see Figure 108). While it is unclear if this was an improved road at the time, plans to improve the road into a turnpike would follow.
Figure 110. View of an extant segment of the State Road near Hill Cemetery from the eastern embankment, facing west.
Figure 111. Northern terminus of the extant segment of the State Road near Hill Cemetery showing its distinctive U-shape, a common feature of early roadbeds.
in the coming decades. On February 16, 1838, the Kentucky General Assembly approved an Act to incorporate the Logan, Todd, and Christian Turnpike Road Company “for the purpose of constructing a turnpike road from Russellville, through Elkton, to Hopkinsville, thence to Princeton, thence to Eddyville, on the Cumberland river.” R. C. Hewett, engineer for the project, shed some light on the difficulties he faced in a November 5, 1840, letter to the president and managers of the turnpike company:

“Up to November, 1839 45 ½ miles have been put under contract, including all the work necessary to complete the road, excepting the bridges, at a cost of $233,446.56. Since that time, the contracts of 14 sections have been abandoned by the failure of the contractor to commence work. The grading of the whole line, from Russellville to Eddyville, excepting one section has been under contract, and the work has been commenced, but is suspended, and the contract abandoned, by the death of a contractor. The metaling of 33 miles is contracted for—of which 8 miles are between Russellville and Elkton; 12 ½ between Elkton and Hopkinsville; 6 between Hopkinsville and Princeton, and 6 ½ between Princeton and Eddyville. By consent of the contractors, the metaling of 28 of the 33 sections has been suspended for the present.”

Although some work was accomplished on this ambitious project, it was never completed, as the state withdrew aid around 1841 as a result of the recession.

Interest in turning the road into a turnpike in the nineteenth century did not quell with the failed attempt by the Logan, Todd, and Christian Turnpike Road Company. In 1858, the Kentucky General Assembly approved an Act to incorporate the Hopkinsville and Princeton Turnpike Company for the purpose of building a turnpike road between the two towns. Then, in 1870, the General Assembly approved yet another act to incorporate the Christian County Turnpike Road Company in order “to locate, construct, make, and finally complete, turnpike, plank, or otherwise improved roads” from Hopkinsville to Princeton and a number of other areas in the county. While more in-depth archival research is needed to determine the success of either of the companies, evidence suggests the condition of the road deteriorated through the beginning of the twentieth century, but efforts were made to improve it.

On February 4, 1915, the Christian County Fiscal Court adopted a resolution asking for state aid for the construction of a road sixteen miles in length to the Caldwell county line on what was known as the Princeton Road. The Hopkinsville Kentuckian reported:

The resolution declared the said road a state highway. It is already piked about 10 miles but the road is in bad repair. The proposition is to rebuild 10 miles and construct a new pike for the six miles from Bainbridge to the Caldwell county line. Under the state aid law, the state will pay dollar for dollar, with the county.

Committees were appointed to canvass the territory near the road and convince property owners to support the project and help build the road. Road engineer James H. Dillman worked on supplying nearby farmers with split log drags, which were used to grade dirt roads (see Figure 113). This allowed locals the ability to help maintain roads, rather than wait for government graders. This stretch of road was reportedly the last road out of Hopkinsville to a county seat in need of improving at the time. Work on the turnpike began by mid-October 1915 at a cost of a little over $4,000 per mile and was completed the following year.
While these improvements to the Princeton Road were focused on the segment lying within Christian County, it is unclear if Caldwell County worked to improve, in any way, the portion of the road within its jurisdiction during this time. Regardless, the improvement to the road did not last long. The 1928 "Map of Kentucky Showing Condition of State Roads" indicates that the segment of the Princeton Road from Hopkinsville to the Caldwell County line had "poor surfacing," while the section of the road from the Caldwell County line to Princeton consisted of "poor earth" (see Figure 112). Within the next ten years, the road was improved again and largely absorbed into the new Kentucky State Route 91. During this process, the road was slightly realigned in certain places. This realignment left a .25-mile remnant of the original roadbed to the west side of present-day Kentucky 91, near the Newsom-Dunning House.

MISSOURI

Some of the Missouri road charters and acts of incorporation are similar to those found in other states. In 1836, the Missouri General Assembly passed an act concerning all public roads, requiring that they be between 20 and 40 feet wide, cleared of all trees and limbs, and stumps could not be more than eight inches high. Bridges and causeways were also to be constructed when it was deemed necessary, and the failure to build these could result in a $50 fine to the overseer. Even so, an 1840 amendment to the 1837 act creating the
State Road from Ste. Genevieve to Caledonia and Curtois Mines called for a road between 30 and 60 feet wide.

The same 1836 act also made it a requirement for all males between 16-45 years old who had lived in the state for at least 60 days and in a road district for one month to work on public roads and highways “as often as any road division shall need opening and repairing.” If they failed to do so, they could be fined between $1 and $2. Just as in Arkansas, the overseer could also create a list of delinquents who “have failed or refused to work, having had the necessary notice,” and have them fined. However, anyone who furnished “a plough, cart, or wagon, with a pair of horses or oxen and driver” could receive either credit of 3 days work or be monetarily compensated by the overseer instead of physically working on the road. Anyone who intentionally obstructed the roads could also be fined $10.344

Although John C. Darr’s 1858 diary is 20 years past the year of Cherokee removal, it does reveal the physical terrain on which many Missouri roads were located. When traveling near Charleston, Missouri, he encountered a “fine sandy road” as well as numerous swamps “which had been overflowed the previous spring and summer, settlers’ cabins showing the water marks on many above the doors.”345 Jacob Lanius’ 1838 Journal also describes the area near Rock Levee Road as “a land of swamps and earthquakes, so that you have no access to the circuit save by crossing a swamp. I crossed on a levee three miles long. The land is very fertile but the country sickly.”346 Other memoirs also make mention of the swamps in Missouri, including a seven-mile wide swamp near King’s Highway from New Madrid to Cape Girardeau, Missouri.347 In 1819, the Reverend Timothy Flint wrote about the same swamp:

There is one curiosity in the configuration of the country as you approach Cape Girardeau, ascending from New Madrid – the great swamp. It is, at the place of crossing, three miles wide. The waters of St. Francis rise in it. They commence within a few rods of the Mississippi in a swamp, considerably lower than the ordinary level of the river. The swamp begins with the width of half a mile, diverges to three miles’ width, where the road from New Madrid crosses it, which is a few miles from the Mississippi, and continues to widen until it becomes in some places sixty miles wide. It meanders, like the Mississippi and extends three hundred miles, before it discharges the St. Frances into the Mississippi, although it arose not a hundred yards from its banks. Its soil is deep, black, in summer dry, except where the waters of St. Francis find a kind of channel among the grass, and is a vast rice swamp, fitted by nature for the cultivation of that valuable grain to an indefinite extent.348

Later Missouri turnpike charters called for increasingly wider roads, including a 40-foot-wide road349 and an 80-foot-wide road in 1841,350 multiple 60-foot-wide roads in 1847,351 and a more standard 30-foot-wide road in 1847, as well.352

ARKANSAS

As with other states researched in this study, road widths in Arkansas varied. In 1824, the General Assembly of the Territory of Arkansas repealed a previous law that required all roads to be at least 20 feet wide. The new act stated that it was now at the discretion of the local courts “to direct how wide said road shall be opened, or if it shall only be a good bridle-way.”353 The Washington and Little Rock Turnpike (1838), for example, was to be 40 feet wide and “be freed from stumps and all other obstructions.” Twenty feet of the road was to have an elevation “not to exceed three and a half degrees, and thrown up in the centre so
that the water will pass off on either side, and in low land and swampy places, so thrown up as to keep it dry." Any bridges built were to be of “ordinary size,” but it does not give any indication as to what constitutes “ordinary.” The turnpike road from Carrollton to Dardanelle Rock, on the other hand, was to be 18 feet wide and cleared of any obstructions, and commissioners were to assess any maintenance needs every 3 months. Just as with other turnpikes, there was a penalty for trying to damage the road or obstruct passage, which included a fine of $100 per offense.

It should be noted that the Act of Incorporation for the Van Buren and Fayetteville Turnpike Company reinforces how local materials were procured to build the roads. In the case of this turnpike, the act specifically states that stone, gravel, or clay would be appropriate materials to build the road. Again, there are often provisions in the Act of Incorporation to allow the company to take any necessary materials as long as the landowner is compensated. For the Washington and Little Rock Turnpike road, a disagreement could be settled by 12 householders who had no interest in the company or turnpike.

Similar to the act that applied to roads in Campbell County, Kentucky, the Arkansas General Assembly passed an act that made it obligatory for all free males, assuming both white and black, between 16-45 years old and all male slaves of the same age to work on the public roads in their townships when the overseers called them for duty. The only men exempt from this requirement were those who were also exempt from military duty. Interestingly, if the overseer found the worker to be “delinquent,” he was fined $2. However, laborers could be paid up to $1.50 for their work. The only person who could determine if a worker or laborer was considered delinquent was the overseer. Because of the power of the overseer role, it is probable that corruption and bribery were problems in the days of the early American transportation system.

One of the major roads used by the Bell detachment to travel through Arkansas on the Trail of Tears was the Memphis to Little Rock Road, also known as the Military Road (see Figure 114). It was authorized on January 31, 1824, when the United States Congress passed an act for the construction of a road from the Mississippi River, opposite...
Memphis, through the swamps of east Arkansas, and on to the territorial capital at Little Rock. Surveyors Joseph Paxton and Thomas Mathers, along with Memphis contractor Anderson B. Carr, were initially hired to lay out the route of the proposed road. On January 27, 1826, Lt. Frederick L. Griffith was appointed superintendent of the Memphis to Little Rock Road and was instructed to make the road "at least twenty four feet wide throughout" with all timber and brush removed and stumps cut as low as possible, marshes and swamps to be 'causewayed with poles or split timber,' and ditches four feet wide and three feet deep to be dug on either side of the road. 'The hills on the route are to be dug down and wound round in such a manner as to make them practicable for carriages or loaded wagons.'

Griffith entered into private contracts with A. Carr, N. Anderson, and W. Irwin to construct the first 60 miles of the road, beginning at a point 4 miles above Memphis on the Mississippi River at a rate of $160 per mile. These controversial contracts deviated from the original proposal of the road and spent everything remaining from the Congressional appropriation for building the entire road. Nevertheless, the first section of the road was finished and the second section was started by September 14, 1826. The following month, Lt. Charles Thomas replaced Griffith as superintendent.

A number of extant segments of the Memphis to Little Rock Road are listed in the National Register of Historic Places for their significance to the Trail of Tears. These nominations summarize the history of the road’s construction:

Despite problems with the health of workers in swampy eastern Arkansas, Thomas reported to Quartermaster General Thomas S. Jesup on January 17, 1827, that Carr was making good progress on his road contract, which was to continue to the 64th mile from the Mississippi River, located west of the Languille River. The lieutenant complained bitterly of the Paxton and Mathers report, reporting inaccuracies in both their blazing of the trail and their description of the land through which it passed. “For instance,” Thomas complained, “they ‘positively aver’ after crossing the Saint Francis ‘that the road will no where be subject to inundation from any river &c’ when they were informed by persons well acquainted with the country & it is also evident from the water marks on the trees, that the county is subject to be overflowed in some places as much as eight feet and by the Mississippi & St. Francis Rivers.” While Blackfish and Shell Lakes could be traversed by ferries, Thomas concluded that the areas west of the ridge around Bayou de View and the Cache River were impenetrable and that a new route would be needed to reach the crossing of the White River.

While seeking approval for the change in the route, Thomas went ahead and contracted for 15 miles of road to be built between Little Rock and Bayou Two Prairie near present-day Lonoke. After the route change was approved, Thomas contracted with William Strong to bridge the Languille River and build the road from the 64th miles to the White River ferry at present-day Clarendon. Strong had established a home at the eastern base of Crowley’s Ridge in 1827, constructing a house that was “four stories high, contained 20 rooms, with a veranda extending entirely around it, supported by red cedar posts, eight inches in diameter... It was the largest and most costly of any structure in the State at that time.” The pioneer obviously planned to profit from the traffic that would traverse the only road between the territorial capital at Little Rock and Memphis.
Strong bid $1,600 to “open the road from the sixty fourth mile to White River in 93 ½ mile” in January 1828 and Thomas reported that he had completed the rugged stretch by June 1, 1828. Carr also finished his contracts by mid-1828, including the section that traversed Crowley’s Ridge above Strong’s place. By the end of August, the remaining sections between White River and Little Rock were completed and Little Rock and Memphis were connected.360

Although the road was finished, it faced severe flooding and was reportedly impassable for several months each year. In 1832, Representative Ambrose Hundley Sevier, a delegate from Arkansas to the United States Congress, gave a lengthy appeal on behalf of Arkansas to plead with Congress to properly repair the Memphis to Little Rock Road. He stated that the “Little Rock and Memphis road is no new measure” and it was first worked on eight or ten years prior, however, it was never completed. Since that time, “the citizens of Arkansas, every session for four or five years, have been begging and begging you to finish this work until they have nearly lost all hope.” Rep. Sevier further implored the committee to finally take action and appropriate the means and labor to complete the road because it “is the only direct communication with the States.” He also mentioned the numerous Native Americans passing through Arkansas going “to their new homes with excited and unfriendly feelings towards us,” but if the government will open the road, they “shall have then nothing to fear” because they can receive aid from across the Mississippi river.361 Congress did agree to appropriate an additional $120,000 for repairs and a new survey of the road from Memphis to Strong’s place.

In 1837, the road was still being worked on, and the contractor advertised for the hire of one thousand laborers. One of the segments was specified to be “twenty four feet wide at the top, with suitable slopes, which shall be three feet above highest water.” It was apparent that this Eastern section of the road near Grandee Lake was prone to flooding, and an 1837 Arkansas Gazette article reported, “Emigrants continue to flock to this part of the country but they do so at the risk and cost of passing the most disgraceful bogs, wilderness, and swamps that can be found.”362 The same article made similar points to Rep. Sevier’s remarks five years earlier, and stated that “The general government owes it to us as a duty, and about which it can have no choice, to complete the military roads in our limits at once – and it is almost the first object of interest to the state, to second its exertions, in giving us a decent and passable set of highways such as every state in the Union boasts, and which will be found in every enterprising and well governed community.”363 Regardless of its condition, Cherokee in the Bell detachment traveled on this road in 1838 during their forced removal.

From Little Rock, the Bell detachment continued their journey west on the Little Rock to Cantonment Gibson Road. Congress approved a bill to establish this “wagon road” on March 3, 1825, a year after the Memphis to Little Rock Road was authorized. Arkansas residents Benjamin Moore, Morgan Maness, and Edward McDonalds were appointed commissioners to survey and mark the road between Little Rock and Fort Gibson in Indian Territory. The commissioners left on an expedition to identify the best route for the road, returning on December 17, 1825, with success in outlining a route estimated at “208 miles, 7 chains, and 72 links.”364

On March 15, 1826, Colonel Matthew Arbuckle, commander of Cantonment Gibson was ordered to employ troops under his command to begin work on the road from Little Rock to Cantonment Gibson. Arbuckle and Lieutenant James L. Dawson, an assistant quartermaster general, both opposed the route of the road between Fort Smith and Cantonment Gibson. Dawson
reported, “[I]t is not only 10 Miles longer than is Necessary, but passes over exceedingly rough Country, and Crosses all the Water Courses So Near their outlets, as Not to admit of their being forded in Wet Seasons.”

As with the Memphis to Little Rock Road, extant segments of the Little Rock to Cantonment Gibson Road are listed in the National Register of Historic Places. These nominations summarize the history of the construction of this road:

A more sensible route selected by Dawson was approved, and soldiers from Cantonment Gibson commenced work in the spring 1827 after Arbuckle received a blunt order directly from the General in Chief to start building the road. Dawson also received orders to seek proposals for contracts to construct the road between Little Rock and Fort Smith…

On August 28, 1827, Dawson reported that he had completed contracts for the road between Little Rock and Fort Smith, that Arbuckle’s troops had completed their section, and that a ‘Considerable part of this distance has been opened by the County of Crawford, and the remainder being principally prairie land, will render the Completion of the intermediate portion, a work of little difficulty...The whole route will be completed by the end of the Current year.’ The lieutenant estimated that $4,900 would be needed to build six bridges along the route, nearly three times [the] amount predicted by the commissioners, and that the contracts for the five-mile increments would total $6,096. Adding another $1,250 for extra laborers, the construction job, minus the bridges, could cost $7,346, using up the remainder of the Congressional appropriation for the road.

Despite the added costs, the Little Rock to Cantonment Road was considered complete in early 1828.

The Springfield to Fayetteville Road was yet another road in Arkansas used by Cherokee detachments during removal, specifically those traveling the Northern Route. This road was part of the State Road, which led from Fayetteville, Arkansas, to Missouri’s southern border, and was to be built twenty feet wide. While little else is known about its construction, portions of the road are listed in both the Arkansas Register of Historic Places and the National Register of Historic Places (see Figure 115).
GENERAL OVERVIEW

While this research has provided specifications for many roads in the early nineteenth-century Southeast, many turnpike charters and acts of incorporation often failed to provide any construction details at all. Most of these documents were concerned with stock subscription and the organization of the company. The range of specification depended on the will of the company, the county, or the state. As this research shows, many roads, however, did try to maintain a road width, but it often fluctuated between 18 feet and 40 feet wide. Additionally, the specifications did not usually call for the grading of the entire road either. Instead, only part of the road was required to be covered with stone, gravel, etc. In most cases, the turnpike or road company was allowed to access nearby lands in order to source material, and they were required to pay the appropriate landowner. Because construction often called for this, the materials of the road varied from stone, masonry, clay, limestone, metal, timber, and other materials. This is likely due to the fact that certain resources were more accessible than others depending on the region. The environment also impacted whether or not bridges or causeways were required, at what elevation the road needed to be, if ditches were required, and other concerns. As this research shows, roads and turnpikes in Missouri and Arkansas especially had to contend with swamps and make construction allotments that would allow for easier wagon and horse passage. Nevertheless, as the memoirs and journal entries have shown, this did not always work.

There is also an inconsistency as to who maintained the roads. Some states made it a general requirement for all able-bodied men of a certain age, both white, black, free, and enslaved, to work on the road, and other times no specifications were given. It is noteworthy to mention, though, that since states did require local citizens and slaves to work on their townships’ roads, it is possible that detachments might have encountered these types of crews during removal.

As an additional note, after comparing the required widths of various road segments to the key on Burr’s 1839 maps, it is likely that 4-Horse Post Coach roads had to be at least 30 feet wide. This information could be useful when a road can be located on Burr’s map, but the specification is either not mentioned or cannot be located in period documents.
WAGONS, CARRIAGES, & CARRYALLS

Primary sources make it clear that animal-powered wooden vehicles were a constant presence in the decade-long effort to remove the Cherokee westward. After Congressional passage of the Indian Removal Act in 1830, relatively few Cherokee families headed west. A new federal commitment to removal started in 1834. That January, Joseph W. Harris of the Cherokee Agency published a newspaper announcement calling for sixteen wagons to be either built or brought to the agency to assist in the removal process (see Figure 116). Harris called for the wagons to be “first rate Road Wagons with bodies of the largest kind” with the ability to hold a maximum of 3500 pounds of weight. Harris left in March with a small group that used the wagons to carry goods, the old, and the infirm on flatboats and then steamboats for their trip on the rivers to the West.

In 1835, federal officials intensified the removal process once they negotiated the Treaty of New Echota with a splinter group of Cherokee leaders. This treaty ceded the last remaining Cherokee land to the United States, in exchange for five million dollars and land in Indian Territory. This treaty also included several articles about how the logistics of removal should be handled, including a promise from the federal government that “a sufficient number of steam boats and baggage wagons shall be furnished to remove them comfortably,” as seen in a June 1836 issue of the Nashville Whig (see figure 117). Orders for the Headquarters at the Cherokee Agency in Charleston, Tennessee, also specified that horses and ponies would provide a resource for removing the Cherokee, and “If the horses and ponies be not adequate to the above purposes, wagons must be supplied.”

Some Cherokees with means were able to make the journey west in carriages or carryalls. For example, Alexander Blair Cathey wrote about watching the Benge detachment travel in front of his family’s home in Maury County, noting, “A great many people went to see them, some of the Indian half-breeds were quite wealthy, owned slaves and rode in fine carriages.” The vast majority walked on foot though, while those too sick or injured to walk rode in wagons (covered or otherwise exposed).

Figure 116. Source: Cherokee Papers Manuscript Collection, Gilcrease Museum, Tulsa, Oklahoma, https://collections.gilcrease.org/object/4126541.
In total, seventeen detachments of Cherokee were forced to make the long journey to Indian Territory during the Trail of Tears from 1838 to 1839. When the removal began, a shortage of wagons and horses forced most people to walk the entire way, and available wagons were reserved for supplies or transporting those people who could not make the journey by foot. Despite the promises by the United States government to furnish the Cherokee with supplies and provisions, these wagon shortages persisted. According to historian Ronald N. Satz, “Some federal officials complained that the Cherokees were spending too much money on transportation and supplies... This occurred, however, not because Chief Ross ‘lined his pockets’ but, rather, because of the greed of white merchants, traders, ferry operators, and toll road keepers with whom the Indians had to deal with along the route.”

A lack of monetary reserves perpetuated the shortage of necessary provisions. Jesse Bushyhead, one detachment leader, wrote about the lack of resources while en route to McMinnville, Tennessee, from the Sequatchie Valley with 48 wagons, between 864 and 950 Cherokee, and 430 horses: “We have a large number of sick, and very many extremely aged, and infirm persons in our detachment, that must of necessity be conveyed in the waggons.”

Historian Vicki Rozema further explains, “The Indians [of the detachment led by Captain G.S. Drane] traveled by wagon, train, and foot from Ross’s Landing across Mocassin Bend to Brown’s Ferry, then on to Waterloo, Alabama. From Waterloo, they went by water to Little Rock. They then traveled overland by wagon to the Cherokee Nation West.”

These wagons, carryalls, and carriages, which crossed rough terrain or expensive mountain toll roads, were meant to make traveling easier. For example, “Elijah Hicks conducted the first detachment that passed over the [Cumberland] plateau between October 9 and 10, 1838. His group included forty-six wagons, six carryalls (a light, covered carriage with seats for several people), and eleven rifles.” The largest group that traveled through Van Buren County, Tennessee, included eighty-eight wagons with teams of horses or oxen. During the Trail of Tears, wagons were used to not only cross mountainous areas, but also to transport Cherokees and what belongings they were able to salvage from their homes.
It is difficult or perhaps impossible to calculate an exact number of wagons, carriages, or carryalls used during the Trail of Tears. Some estimates include “645 wagons, one for every eighteen to twenty people. Each was pulled by a double span of oxen, or by mules or horses. The wagons carried a family’s supplies, equipment, and clothing.” Historian Duane King has created statistics for the number of wagons, including estimated numbers of people per wagons—about 20—the number of people per horse, and the total cost of those supplies.

To make matters worse, some wagons were unfortunately involved with preventable injuries along the trail, including one incident of a child who was wounded in a wagon accident. This incident was simply recounted on March 15, 1839, in the journal of Dr. W. J. J. Morrow: “A wagon ran over a little Indian’s head; had to go to camp and see him.”

Aside from dealing with sick, injured, or elderly people who needed to ride in a vehicle for the journey, detachment leaders and wagon masters also had to circumnavigate the poor roads available for such an undertaking. For example, one journal entry from Reverend Daniel S. Butrick reported, “After crossing the river, our road ran on a side hill, and was scarcely wide enough for a waggon to pass. The road formerly ran at the foot of the hill, but the man who owned the land turned it on the side.”

Rough roads were notoriously difficult for maintaining the wooden vehicles. Wagons, carriages, and carryalls were prone to problems such as broken spokes or lost linchpins (a fastener to prevent the wheel from sliding off the axel). Reverend Daniel S. Butrick recorded one example of the latter on December 24-25, 1838: “Tuesday about noon, the linch pin came out of one end of the fore axletree, the wheel came off and the end of the axletree, falling on the frozen ground broke, so that we had much trouble to get on to a waggon maker 6 miles forward.”

The weather was also a determinant for the difficulty of the journey, in that the dirt roads became extremely muddy after rain, preventing the wagon teams from making much progress. Flooding was another concern for the detachments heading to Indian Territory. Rivers were all but impassable if they were not frozen over, and they were even worse if excess rain brought water levels up.

Even if the wagons, carriages, and carryalls were generally maintained through the challenges that the weather and roads presented, detachment leaders also had to worry about the health of the animal teams that were vital for pulling the vehicles that were full of people, provisions, and other household supplies. Lieutenant Edward Deas, military escort for the detachment led by John Bell, recorded in his journal that “some of the Indians have lost a number of oxen from eating poisonous weeds.” Difficulties truly persisted for the Cherokees every step of the way, with or without wooden vehicles present.

Understanding the Cherokee removal calls for a better understanding of the types of wooden vehicles that could have been used in the process. Today, there are a handful of pre-Civil War wagons in public and private collections. This overview will consider those remaining artifacts but also range into primary sources to better understand who could have been supplying the animal-powered wooden conveyances used during the Trail of Tears.

THE MAKERS

Many towns produced wagons, carriages, and carryalls, usually through a local carpenter or blacksmith. The Industrial Revolution began to reshape wagon production by the 1830s and 1840s, as skilled German crafters established wagon-
manufacturing businesses in such midwestern cities as Cleveland. But these early industrial outposts for wagon-making did not make substantial inroads into the earlier crafter-dominated period until after the Civil War. Our working assumption is that most of the wagons and wooden, livestock-powered vehicles used in the Cherokee Trail of Tears came from two sources: they were older vehicles that the Cherokees and wagon masters had acquired from sources in Pennsylvania, Virginia, and North Carolina, or they came from the hands of local companies and from local crafters and blacksmiths.

The largest local company in the Cherokee region was probably that of John Philip Nissen in Salem, North Carolina. The Moravian settlement at Salem had long ties both culturally and economically with the Cherokees, and trading relationships dated to the 1790s. Nissen came from a family of wagon makers, who dated to the Moravian settlement of Bethania in the 1770s. Interestingly, Nissen established his Salem wagon-making factory in 1834, sometime after the Cherokee Agency’s January 1834 announcement about the need for wagons to implement removal. Within a decade, the Nissen Wagon would dominate the region. In 1850, Nissen’s six-man workforce produced 50 wagons a year. The company became a brand name that survived to the Second World War.

Another Moravian crafter was wheelwright Ernst Henry Meinung, who operated a carriage-making business in Salem with six employees in the 1830s. In Charlotte, crafters J.G. Morse and Daniel Button were making wagons from the late 1820s into the 1830s. In Lincolnton, the primary wagon-maker was Samuel Lander, active from 1826 to 1864, while in Salisbury, the primary wagon-maker in the 1820s and 1830s was Cyrus W. West. Another identified crafter who lived on the boundary of Cherokee country was George Huffman in Catawba County, North Carolina. Huffman was a wagon-maker and cooper, as was his son Langdon, and his son George was a blacksmith. Family wagon makers like the Hufmans probably produced wagons used on the Trail of Tears.

More research is needed into Tennessee wagon-makers. A useful source for the number of makers is Eastin Morris’ *Tennessee Gazetteer*, which was published in 1834. Morris’s book details the number of crafters in both large and small communities. Around the Cherokee settlements in the 1830s, a number of wagon-makers were active. According to Morris’s numbers, three carriage- and wagon-maker shops operated in Winchester, one wagon maker was active in Athens, and one in Washington in Rhea County. At least some wagons used in the Cherokee removal came from Winchester. Cherokee leader John Ridge gave missionary William Chamberlin $3,000 to travel to Winchester to purchase wagons for his family. Calhoun had no listed wagon-makers but Morris counted “five or six mechanics.” Knoxville, the largest town in East Tennessee, had two coach-makers and two wagon-makers.

### TYPES OF WOODEN VEHICLES IN USE IN THE EARLY NINETEENTH CENTURY

#### CONESTOGA WAGONS

Developed by Swiss and German wagon-makers in and around Lancaster County, Pennsylvania, in the late eighteenth century, the name for Conestoga wagons comes from the Conestoga River than runs through that area of central Pennsylvania. Thousands were built, and no doubt thousands made the trip down the Great Wagon Road from Pennsylvania into Virginia, Tennessee, North Carolina, and Georgia. The Conestoga was designed to carry freight more so than people, although it did both. According to wagon historian David Sneed, “The Conestoga is recognized by its curved bed, raked ends, sizable wheels and network of bows.” The curved bed meant that freight and passenger weight was centered, giving the wagon more stability, as...
well as more storage capacity. A mid-nineteenth-century Conestoga wagon, held in a private collection by Bill Wiley of Mosheim (Greene County), Tennessee, has been photographed and documented in the wheelsthatwonthewest.com website (see Figure 118). According to David Sneed, “The Wiley Conestoga measures eleven and a half feet from the ground to the top of the rear bows and the top side panel is fourteen feet in length.” It retains its original woodwork in the bed along with hand-forged ironwork.

THE NISSEN “CROOKED BED” WAGON

The Nissen Wagon Works produced a variation of the Conestoga wagon known as a “crooked bed” wagon. It was smaller and lighter in weight, used more

Figure 118. Wiley Conestoga Wagon, Mosheim, Tennessee. Source: wheelsthatwonthewest.com.

Figure 119. After he acquired the company from his father, George E. Nissen produced this broadside to advertise the distinctive Nissen wagon. Source: Duke University Archives, Digital Collections.
for farm use rather than long-distance freighting. At the time of the Cherokee removal, only a handful of Nissen wagons would have been available, since the company only began in 1834. But this type of farm wagon, rather than freight wagon, was probably common along the Trail of Tears. The Lewisville Historical Society in North Carolina has a surviving mid-nineteenth-century Nissen wagon, as shown below in two photographs from the society’s Web site.

“CARRYALLS”

The Reverend Daniel S. Butrick, who traveled with the Richard Taylor detachment to Indian Territory from 1838-1839, repeatedly referred to his vehicle as a “carryall,” as opposed to a wagon or carriage, which were terms he used to identify other vehicles in the detachment. He also mentioned in his journal that there was at least one other carryall in the detachment. While the term “carryall” is seldom used today, it was once commonly used in the first half of the nineteenth century to describe a form of light, family wagon used in the central Atlantic states, and later used to describe light Rockaways. Although historian Ron Vineyard defines Rockaways as “a four-wheeled, covered carriage with either paneled or curtained sides [and] having a driver’s seat that is included in the body proper…and a common roof that projects over the driver’s seat,” the term carryall was used interchangeably with a myriad of other names used to identify slightly different types of wooden vehicles at the time, including Germantown, Depot wagon, Station wagon, Pittsburgh Cut-under, Dearborn wagon, and Jersey wagon (see Figures 122, 124, 125). As author Richard E. Powell, Jr., notes, the carryall generally
refers to “a light, covered four-wheeled family carriage, with two seats, drawn by one horse.”

There are a number of period references to these vehicles. Frances Trollope, for example, stated that “almost every resident in the country has a carriage they call a carryall... It is clumsy enough, certainly, but extremely convenient, and admirably calculated, with its thick roof and movable draperies for every kind of summer excursion,” while an 1836 account identified a carryall as “a carriage which holds four.” Northern newspaper advertisements listed two types of carryalls: extension-top carryalls and standing-top carryalls. There is also evidence to suggest that carryalls were more often used to transport people than heavy loads, had convertible tops and stuffed seat cushions, and were painted.

Figure 122. Design for a Jersey Wagon by Brewster & Company, c. 1850-1870. Source: Gift of William Brewster, 1923, Metropolitan Museum of Art.

Figure 123. Advertisement for a carryall in the Knoxville Register, Knoxville, Tennessee, March 6, 1821.
While Butrick never described his carryall in detail, he did comment on its use throughout the journey to Indian Territory. On November 14, 1838, for example, he wrote that he traveled to Woodbury, Tennessee, to acquire “new oil cloth” to put on the top of his carryall as a result of the rainy weather.\textsuperscript{392} Rain water getting inside the carryall was a regular issue during inclement weather on the journey. On one occasion, Butrick noted, “Soon after dark it commenced raining, and the wind drove the water into our carryall so that our bed and clothes became quite wet on one side. The weather also became very cold, and our blankets over the waggon [sic] were covered with snow when we arose.” On another occasion Butrick wrote:

\begin{quote}
\textit{Soon after dark the wind arose almost to a tempest. We retired to rest as usual in our little carryall, but were awakened in the night by a severe storm. The wind drove with such violence, that a part of our tent was thrown down, and the rain beat in between the curtains of our carryall & wet our bed. We arose and partly dressed us, but could not think of going entirely into the open air, and therefore again wrapped ourselves in our bed clothes and fell asleep.}\textsuperscript{393}
\end{quote}

Butrick and his wife often slept in their carryall on the journey, but stored their bedding and tent in a larger wagon during the day.

\textbf{STAGECOACHES}

A research report prepared for the Colonial Williamsburg Foundation is an excellent source for the great variety of wooden stage wagons and coaches in use during the early nineteenth century. According to the report’s author, Ron Vineyard, stage wagon is more of an eighteenth-century term whereas stagecoach is more common in the nineteenth century. In about 1820, the earlier stage wagon “evolved into an oval-bodied, rounded top Stagecoach with at least one door on the side. This body was suspended by thoroughbraces on a three-perch running gear. The driver sat on a seat outside the body.”\textsuperscript{394} This form evolved into what is known as the American Mail Coach or the Concord Coach by the end of the decade. The name Concord comes from the location of the Abbott, Downing Company that built many of these coaches in Concord, New Hampshire.\textsuperscript{395}
According to Vineyard, the Concord coach came in “six, nine, and twelve passenger sizes” while passengers “were seated on two transverse, facing seats, in the usual coach fashion, and one or two additional benches between the fixed seats.” Other companies built less expensive passenger coaches, often called “Passenger Wagon, Overland Wagon, Mud Wagon and Mountain Wagon.” It is possible that these coaches could have been used on the Trail of Tears. They had more square boxes on the wheels and open sides—rarely did they have doors. The brand name most often found in the South in the 1830s, however, was the Troy Coach, identical to the Concord in its shape and orientation, but built by multiple firms in Troy, New York. A stagecoach line operating from Nashville in 1838 advertised that it used Troy coaches. Another popular southern form was the coachee, a family carriage “that might be compared to a light-weight, curtain-quarter coach” that placed the driver and passenger under the same roof.
The Zuraw Wagon is the last remaining documented wagon with ties to the Trail of Tears. A former North Georgia owner described it as a “tar-grinder” wagon, originally owned by Green B. Daves (or Davis). It is referred to as a tar-grinder because the wheel hubs were periodically greased with a pine sap substance to keep everything lubed for travel. It may have been built in Pennsylvania during the late eighteenth century, evidenced by its general Conestoga wagon design. The wagon was kept in the same family until Retta Picklesimer Zuraw donated it to the Foxfire Museum & Heritage Center in Rabun County, Georgia.

The donor letter for the Zuraw Wagon, kept in the archives at the Foxfire Museum, was written by Retta P. Zuraw and recounts some of the oral history surrounding the artifact. This history included the use of the wagon in the removal of the Cherokee from Fannin County, Georgia, when Green Daves’s family settled on land that was taken from the Cherokee. She went on to recount that “the old ‘tar grinder’ wagon pulled by oxen was used in this move of the late 1830’s . . . to help move the Indians out of the state.”

Green B. Daves served as a private in Captain Benjamin Cleveland’s Georgia Mounted Militia from February 1838 to July 1838 and used the Zuraw Wagon during this time for the removal of Cherokees. As a part of his service, he helped to forcibly round up Cherokees using the wagon, in order to transport them to one of the fortified posts nearby. From the fortified posts, the Cherokee were transported once more to
larger emigration depots, including Ross’s Landing, Fort Cass, or Fort Payne. Most people were detained at these larger camps for months in terrible conditions until they were forced to leave their ancestral homelands for Indian Territory.

Considering the age of the Zuraw Wagon, it is in good condition. The most notable change to the Zuraw Wagon is the tongue, used to tether teams of animals to the front for pulling. It is still stored with the wagon but had to be sawed off in order to fit in the storage shed at the Foxfire Museum. Other small changes are probably from earlier periods, including repairs in the wheel spokes and replaced bows for a canvas or linen cover. One specific example of a repair includes wood shims placed between the metal tire and the curved wooden wheel frame, called a felloe (see Figure 131). The wagon hubs, or caps of the wheel axles, are in good condition, with minimal rust present on the metal. The metal does have surface debris in the form of dust or dirt. Remnants of red paint are clearly visible on components of the undercarriage. This color has faded with time and use but reflects the historic accuracy of the item. Wagons were typically painted in a variety of colors. Other condition items to note are smooth grooves on one side of the wagon, probably worn away gradually from continued use over time (see Figure 133).

In 2003, the Dollywood theme park donated a replica of the Zuraw Wagon to the Eastern Band of Cherokee Indians. It is...
Figure 133. Worn grooves on side of wagon from continued use.

currently on display at the Museum of the Cherokee Indian in Cherokee, North Carolina. The Foxfire Museum is currently working with the Museum of the Cherokee Indian to redesign the interpretive space which the Zuraw Wagon occupies. Plans are already underway to replace the canvas cover on the wagon, and to place interpretive text panels inside and around the artifact.
## APPENDIX A: Water Route Detachments & Vessels Chart

<table>
<thead>
<tr>
<th>Conductor</th>
<th>Departure Location</th>
<th>Flatboats</th>
<th>Keelboats</th>
<th>Steamboats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. John S. Young</td>
<td>Ross’s Landing, Tennessee</td>
<td>11</td>
<td>2</td>
<td>Knoxville, Newark, Revenue</td>
</tr>
<tr>
<td>Lt. Edward Deas</td>
<td>Ross’s Landing, Tennessee</td>
<td>0</td>
<td>3</td>
<td>Smelter, Little Rock</td>
</tr>
<tr>
<td>Lt. Edward Deas</td>
<td>Ross’s Landing, Tennessee</td>
<td>6</td>
<td>2</td>
<td>George Guess, Smelter</td>
</tr>
<tr>
<td>Capt. Robert H.K. Whiteley</td>
<td>Ross’s Landing, Tennessee</td>
<td>8</td>
<td>0</td>
<td>George Guess, Smelter, Tecumseh</td>
</tr>
<tr>
<td>Capt. Gustavus S. Drane</td>
<td>Ross’s Landing, Tennessee</td>
<td>0</td>
<td>0</td>
<td>Smelter, Tecumseh, Itasca</td>
</tr>
<tr>
<td>Capt. John Drew</td>
<td>Cherokee Agency Area/Fort Cass, Tennessee</td>
<td>4</td>
<td>1</td>
<td>Victoria</td>
</tr>
</tbody>
</table>
3 Ibid., 63-65.
5 Ibid., 16.
7 Peterson, “Keelboats Once King of River.”
11 Vicki Rozema, ed., *Voices from the Trail of Tears* (Winston Salem, NC: John F. Blair, 2003), Appendix I.
13 Ibid., 254-255.
15 Ibid.
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“Miscellaneous: General Scott.” *Niles National Register*, St. Louis, Missouri, December 8, 1838.


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59 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.


61 Switzer, Arkansas, Forgotten Land of Plenty, 60.


64 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.


66 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

67 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

68 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.


71 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.


73 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

74 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

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78 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

79 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

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84 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

85 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

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88 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

89 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

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91 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

92 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

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94 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

95 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

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97 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

98 Huddleston, et. al., Steamboats and Ferries on the White River, 24-25; Switzer, Arkansas, Forgotten Land of Plenty, 60.

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Ibid.

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Ibid.

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Ibid.

Ibid.

Ibid.

Ibid.

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Ibid.

Ibid.


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It is possible that additional information on the Pennsylvania could exist in the archives at the National Railway Museum in the United Kingdom. It was not possible to visit the museum and archives as a part of this study.

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