

A Revised Draft Documentary History of the
Sanford and Treadway at Newland and Linville, North Carolina (1916 – 1924), and the
D.&H. McRae Lumber Company at Linville, North Carolina (1924 – 1944?)

By William C. Schneck, Jr.
(As of 24 July 2023)

Introduction

This is a draft documentary history of the Sanford and Treadway Company, which operated out of Newland and Linville, North Carolina from about 1916 until about 1924, as well as the D. & H. McRae/MacRae Lumber Company, which took over the Sanford & Treadway operation out of Linville, North Carolina, and operated until perhaps 1944. The revisions consist of some additional material on Sanford & Treadway and are annotated with “(added 24 July 2023)”. Additionally, I have made some minor updates/corrections to the text.

This history also provides information on other operations run by Sanford & Treadway (see Table 1, below). I have attempted to collect relevant documents and place them in roughly chronological order. Regrettably, I have failed to find or develop an accurate, comprehensive roster of the rolling stock or details of the band mills of either company. Perhaps more can be accomplished on this portion of the subject. Detailed coverage of Newland and Linville is not included in this document. However, “Newland, North Carolina,” by John R. Waite, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., provides a lot of good information on Newland.¹ Linville, A Mountain Home for 100 Years, by Howard E. Covington Jr., provides a lot of good information on Linville. I invite other members of the Historical Society to add any missing material to this document and discuss/correct any deficient interpretations of the information at hand (particularly the dating and interpretation of photos). For those who wish to research the documents and photographs further, I have provided links, when available, to expedite such attempts. In general, I have left the original spelling (sometimes autocorrect strikes, so I am unsure that all of it is original). I wish to thank Chris Ford for his assistance and encouragement to bring this document into a presentable state. I also wish to thank Ryan Rice for his assistance in providing additional articles on Sanford & Treadway. A list of open questions is given in Appendix A. And a list of references that could not be located or accessed is given in Appendix B.

Table 1. Locations and Dates of Known Sanford & Treadway Operations

Location*	Dates	Type
New Haven, Connecticut	1844 – 1931**	Headquarters
Menominee, Michigan	1899 – 1916	Mill and lumber yard
Elizabethton, Tennessee	1900 (?) – 1916	Lumber yard
Stony Creek, Tennessee (?)	1905	Logging
Roan Mountain, Tennessee (?)	1905	Logging
Mountain City, Tennessee	1906 – 1908	Mill (?)
Johnson City, Tennessee	1916 – 1921	Lumber yard
Wilbur, Tennessee	1913 – 1924 (?)	Logging railroad and mill (?)
Clifton, North Carolina	1915 – 1916	Mill
Newland, North Carolina	1916 – 1920	Logging railroad and mill
West Jefferson, North Carolina	1917 – 1921	Lumber yard
Linville, North Carolina	1919 – 1924	Logging railroad and mill
Toe Cane, North Carolina	1920	Mill

* One source claims that Sanford & Treadway “operates lumber mills in West Virginia, Tennessee and other sections”, but provides no additional information.

** Including the predecessor organizations, English & Holt (1844 – 1897) and E.H. English & Company (1897 – 1900).

Timeline

- 1844, the predecessor of Sanford & Treadway, the English & Holt Company, was established in New Haven, Connecticut.
- 1 July 1897, the English & Holt Company becomes E.H. English & Company.
- By May 1899, E.H. English & Company had decided to open a lumber yard in Menominee, Michigan. By 1904, the facilities at Menominee had been expanded into a plant. See Appendix C for additional information on Sanford & Treadway operations out of New Haven, Connecticut, and Menominee, Michigan.
- 1 January 1900, Charles E.P. Sanford and Charles F. Treadway formed a partnership and assumed control of E.H. English & Company.
- By November 1902, Sanford & Treadway had opened a lumber yard in Elizabethton, Tennessee.
- By April 1916, Sanford & Treadway had begun operating out of Newland, North Carolina.
- By June 1916, Sanford & Treadway had opened a lumber yard in Johnson City, Tennessee.
- 1 August 1916, Sanford & Treadway sold its facilities at Menominee, Michigan, to Walter C. Mansfield, their superintendent at Menominee.

- By 8 November 1919, Sanford & Treadway had ordered at least one log loader from the Raymond Log Loader Company, Escanaba, Michigan.
- By November 1919, Sanford & Treadway had begun to develop their operation out of Linville, North Carolina.
- By May 1920, it appears that Sanford & Treadway had moved their operation at Newland, North Carolina, to Linville, North Carolina.
- By March 1925 (perhaps as early as July 1924), D. & H. MacRae had taken over the Sanford & Treadway operation at Linville, North Carolina.
- 1931, Sanford and Treadway discontinued business.
- By the Late 1930s, the railroad tracks of the D. & H. MacRae Lumber Company railroad had been pulled up, with the exception for some trackage around the mill at Linville. After which the mill was supplied with timber brought in by truck.
- 13 and 14 August 1940, a flood severely damaged the Linville River Railway: “Bridges and fills were washed out along the Toe River between Minneapolis and Newland. The Linville River had overrun its banks, causing track damage near Linville...” This would have cut-off the D. & H. MacRae Lumber Company from its rail connection. On 4 September 1940, the Linville River Railway requested authorization to abandon its entire line, which the Interstate Commerce Commission authorized on 22 March 1941.
- 1944, at least two of the locomotives of the D. & H. MacRae Lumber Company were scrapped. Apparently, this marked the end of this logging railroad.

Sanford and Treadway Operations in Tennessee (1902 – 1919) and
Newland, North Carolina (1917 – 1920)

Equipment

Table 2. Locomotives used by Sanford & Treadway in Support of their Mills near
Newland and Linville, North Carolina.²

Type	Shop Number	Date	Remarks
17-ton Class A Shay	675	25 September 1901	Previously owned by the Chesapeake & Western Railroad Company and the Stiegel Lumber Company. 12 August 1920, sold to Sanford & Treadway at Newland, North Carolina. October 1924, sold to D. & H. MacRae Lumber Company at Linville, North Carolina.
10-ton Class A Shay	2203	1 January 1909	Previously owned by the W.J. Pate Lumber Company and White Lumber Company. In 1918, sold to Sanford & Treadway. By 10 March 1921, sold to Halsey Lumber Company. After which it had three other owners.
20-ton Class A Climax	882? or 892?	1908	Previously owned by the Whiting Manufacturing Company. Whiting only owned two 20-ton Class A Climaxes, shop numbers 892 and 882; both of which operated out of Judson, North Carolina, as #3 and #4 respectively. 892 was listed for sale in April 1914. One of these was transferred to the Boone Fork Lumber Company in 1915, where it served as engine #1. This Boone Fork Lumber Company engine was acquired by Sanford & Treadway for its operation out of Linville, North Carolina (probably around 1920). ³

“The Sanford & Treadway Company of Newland, North Carolina was an arm of the New Haven, Connecticut Sanford & Treadway organization. They operated a three-foot gauge railroad running north along a creek [apparently North Toe River]... The company had three 36-inch gauge locomotives. Lima Shay c/n 675 has been built in September of 1901 for the Chesapeake Western as its No. 1. Shay c/n 2203 had been the second H.S. White Shay No. 1 working at Elk Park, North Carolina. A small A-20 Climax that may have also come from Whiting Manufacturing also worked at Newland for Sanford & Treadway. [Perhaps this Climax arrived after Sanford & Treadway had moved this operation to Linville. This locomotive is assigned tracking number X512 and is listed as operating out of Linville]... Shay c/n 675 was sold to the D.&H. MacRae Lumber Company of Linville. Shay c/n 2203 was sold before January of 1921 to Halsey Lumber Company of Charleston, South Carolina. It then worked at the Beam Lumber Company of Lugoff, South Carolina and then Honaker & Jackson Lumber in South Carolina in the early 1930s as their No. 1.”⁴

Regrettably, the author has not found any information on the Sanford & Treadway mills and their machinery, as well as their rolling stock that was employed at Newland and Linville. Also regrettably, the annual production rates for the Sanford & Treadway mills at Newland and Linville could not be located. However, historian Johnny Graybeal's Along the ET&WNC, Volume IV: Freight Cars Part A, includes the general information included in Table 3, below. During the period, 1917 – 1924, when the Sanford & Treadway mills at Newland and Linville were in operation, the only other major lumber mill served by the E.T. & W.N.C.R.R. and the L.R.R. was the Boone Fork Lumber Company, which operated out of Shulls Mills, North Carolina. Consequently, it appears that the Sanford & Treadway mills at Newland and Linville, North Carolina, were an important source of traffic for the narrow gauge during this period.

Historian Johnny Graybeal wrote: “‘Other forest’ tonnage had declined in 1915 to 18,157 tons, but in 1916 the figure soared to 46,669 tons [on the E.T. & W.N.C. R.R.]. The trend continued in 1917, when 50,993 tons were carried. In 1918, 22,010 tons originated on the ET&WNC, along with 44,020 tons received from connecting carriers. Unfortunately, the Linville River did not begin keeping detailed commodity records until 1920, so it is unknown how much of this latter figure came from them, and how much came from the V&SW or the Laurel Fork...” “For the calendar year of 1917, the LR shipped 63,750 tons of forest products, 22,664 tons of which was finished lumber. Strangely enough, the ET&WNC only listed 56,600 tons of forest products coming from connecting carriers, and 33,996 tons of that was ‘other’ products of forest. It appears that 10% of the materials originating on the LR did not travel out of the mountains, at least as a forest product. That same year saw 33,996 tons of finished lumber originated on the ET&WNC. Lumber was big business during these years...”⁵

Table 3. “Linville River Railway [Freight] Tonnage... in tons – partial listing by Category”,
Year Ending 31 December, 1917 – 1920.⁶

	1917	1918	1919	1920
Forest Products	63,750	82,507	101,611	86,841
Mines	2,000	2,800	2,697	4,539
Misc.	19,210	9,570		
LCL		10,213	11,084	7,016
Total	85,000	105,205	115,861	94,544



Figure 1. Shay, Shop Number 675, in Operations for the Chesapeake & Western Railroad.⁷

Table 4. Shop Number 675 – Built for: Chesapeake & Western RR Co.⁸

Built: 9-25-1901	Class: A 17-2	Trucks: 2	Cylinders (#-Dia. x Stroke) 2 - 8 x 12
Gear Ratio: 3.071	Wheel Dia.: 26"	Gauge: 36"	Boiler (Style - Dia.) Boot – 44"
Boiler Pressure (PSI): 150	Tractive Effort: 10,205 Lbs.	Factor of Adhesion: 3.46	Maximum Safe Speed: 10.1
Fuel Type: Wood	Fuel Capacity: 0.75 Cord	Water Capacity: 800 Gallons	Empty Weight (As built): 29,000
Owners:			
Chesapeake & Western Railroad Company, Chesapeake Western RY #1, Bridgewater, Virginia			
Stiegel Lumber Company/Corporation, Stokesville, Virginia			
(8-12-1920) Sanford & Treadway, Newland, North Carolina			
(10-1924) D. & H. McRae Lumber Company, Linville, North Carolina			
(11-4-1926) Donald & Hugh MacRae (Trustees), Linville, North Carolina			
Disposition: (1944) Scrapped			



Figure 2. This and the following four images show Shay c/n 675 on the Chesapeake & Western Railroad, Before her transfer in 1920 to the Sanford & Treadway operation based out of Newland, North Carolina.⁹



Figure 2A.



Figure 3.
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Figure 3A.



Figure 4.
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sn-2203

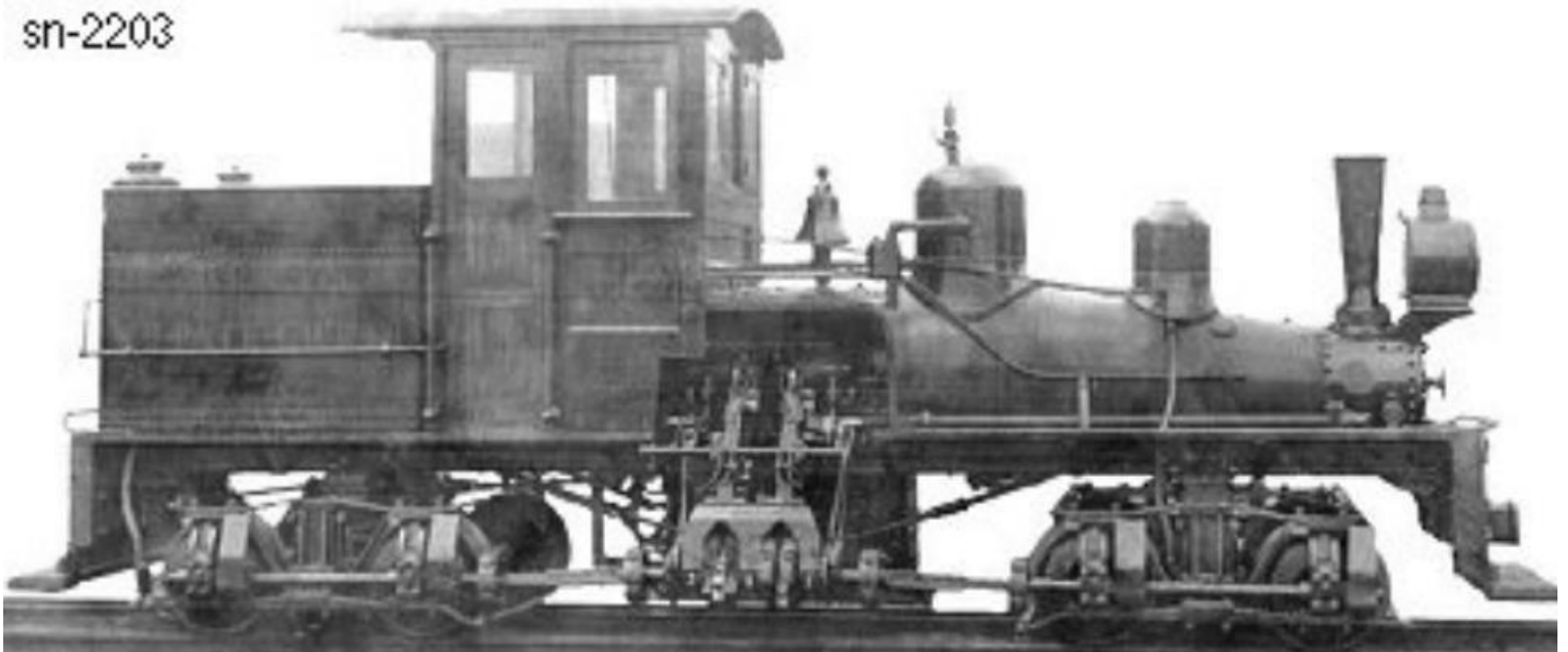


Figure 5. This 10-ton, Class A Shay with Shop Number 2203 was built for the W.J. Pate Lumber Company of Ascola, Mississippi, as standard-gauge, where it was engine #1. It was repossessed by the Lima Locomotives works and rebuilt to 3-foot gauge and sold to the White Lumber Company, Elk Park, North Carolina, where it served as White Lumber Company #2. By 1918, it had been acquired by the Sanford and Treadway Lumber Company for its operation near Newland, North Carolina.¹⁰ By 10 March 1921, it had been acquired by Halsey Lumber Company, Charleston, South Carolina.

Table 5. Shay, Shop Number 2203.¹¹

Built: 1-1-1909	Class: A 10-2	Trucks: 2	Cylinders (#-Dia. x Stroke): 2 - 5 x 8
Gear Ratio: 3.077	Wheel Dia.: 20"	Gauge: std.	Boiler (Style - Dia.): E.W.T. - 18.5"
Boiler Pressure (PSI): 150	Tractive Effort: 3,462 Lbs.	Factor of Adhesion: 6.70	Maximum Safe Speed: 7.7
Fuel Type: Coal	Fuel Capacity: 0.6 Ton	Water Capacity: 300 Gallons	Empty Weight (as built): 19,700
Owners:			
W.J. Pate Lumber Company #1, Ascola, Mississippi			
Lima Locomotive & Machine Company (Builder), Lima, Ohio, repossessed			
(Converted to 36" gauge) H.S. [H.L.?] White Lumber Company #2, Johnson City, Tennessee			
(1918) Sanford & Treadway, Newland, North Carolina			
(By 3-10-1921) Halsey Lumber Company, Charleston, South Carolina			
(11-29-1921) For sale Sumter Machinery Company, Sumter, South Carolina			
(2-12-1924) Beam Lumber Company, Lugoff, South Carolina			
(1-4-1932) Hanaker & Jackson Lumber Company #1, St. Matthews, South Carolina			
Disposition: Scrapped			
Additional Notes: Converted to wood burner			



Figure 6. “Log Train En Route to the Mill at Abingdon, Va., [Photo] From the Whiting Manufacturing Company.” *American Lumberman*, 15 January 1910.¹² Historian Thomas Fetters captioned this photograph: “This is Whiting Manufacturing Company’s No. 2 Class-A Climax (one of two ‘Black Satchels,’) hauling a string of log cars on their Cold Spring operation in Tennessee. This 3-foot gauge 18-ton engine was built in 1906. Their No. 1, a [20-ton] Class-B Climax [shop number 608], built about 1905, brings up the rear...”¹³ The Whiting Manufacturing Company based out of Abingdon, Virginia, actually operated five Class A Climaxes, each weighing 18 or 20 tons, one of the 20-ton Climaxes may have been acquired by the Sanford & Treadway for its operation based out of Newland, North Carolina. This photograph and the three below are included to give some indication of what the Sanford & Treadway 20-ton Class A Climax may have looked like.¹⁴



Figure 6A.

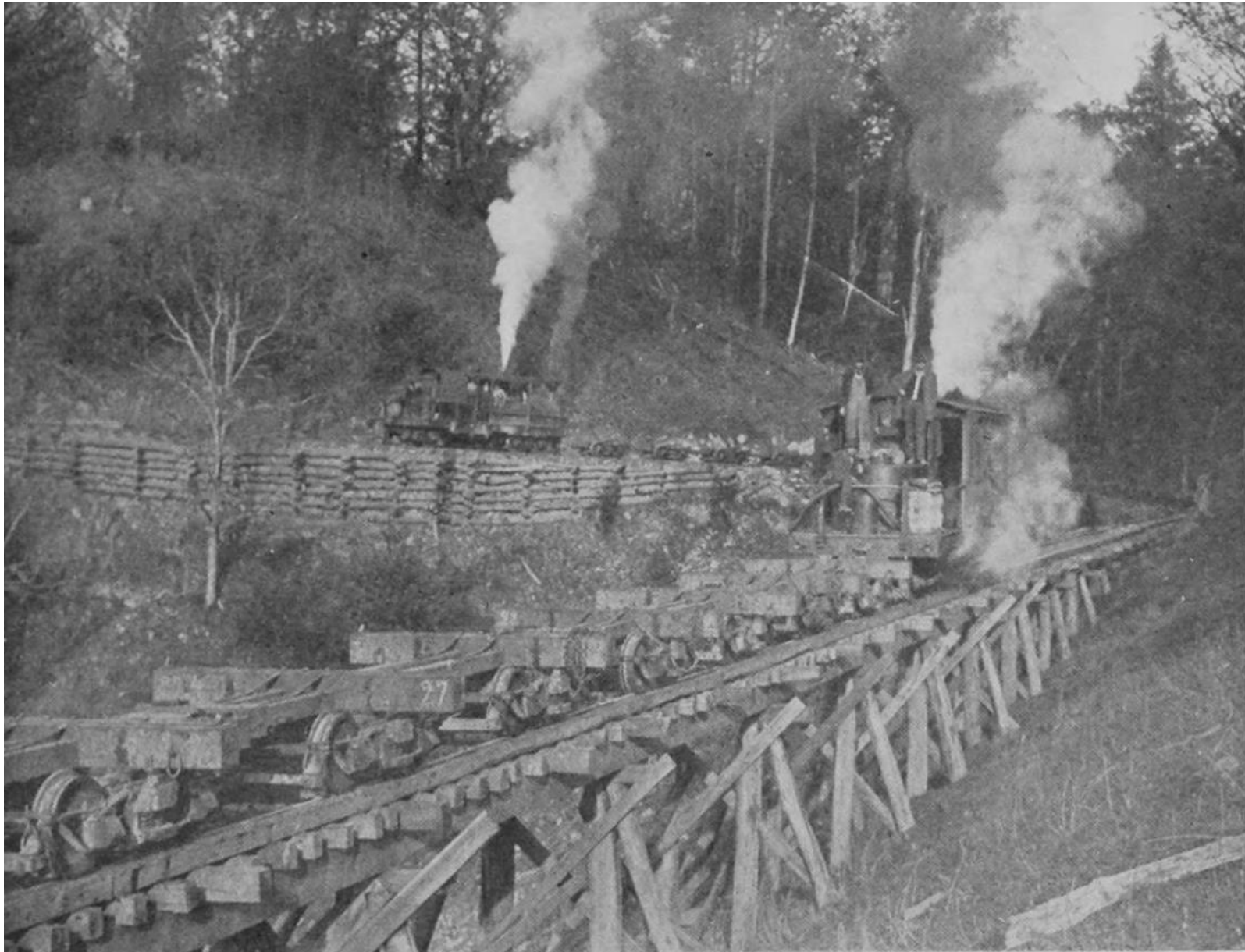


Figure 7. "Railroad Operations in Johnson County, Tennessee, From Which Point Logs are Brought out to the Mill of the Whiting Manufacturing Company at Abingdon, Va."¹⁵ Historian Thomas Fetters captioned this photograph: "A view of Whiting Manufacturing Company's 'Black Satchels,' two Class-A, 36-inch gauge Climax locomotives taking empties back to the woods. Whiting's Cold Spring line relied on heavy trestle work, log cribbing and switchbacks in order to negotiate the rugged terrain of Iron Mountain..."¹⁶

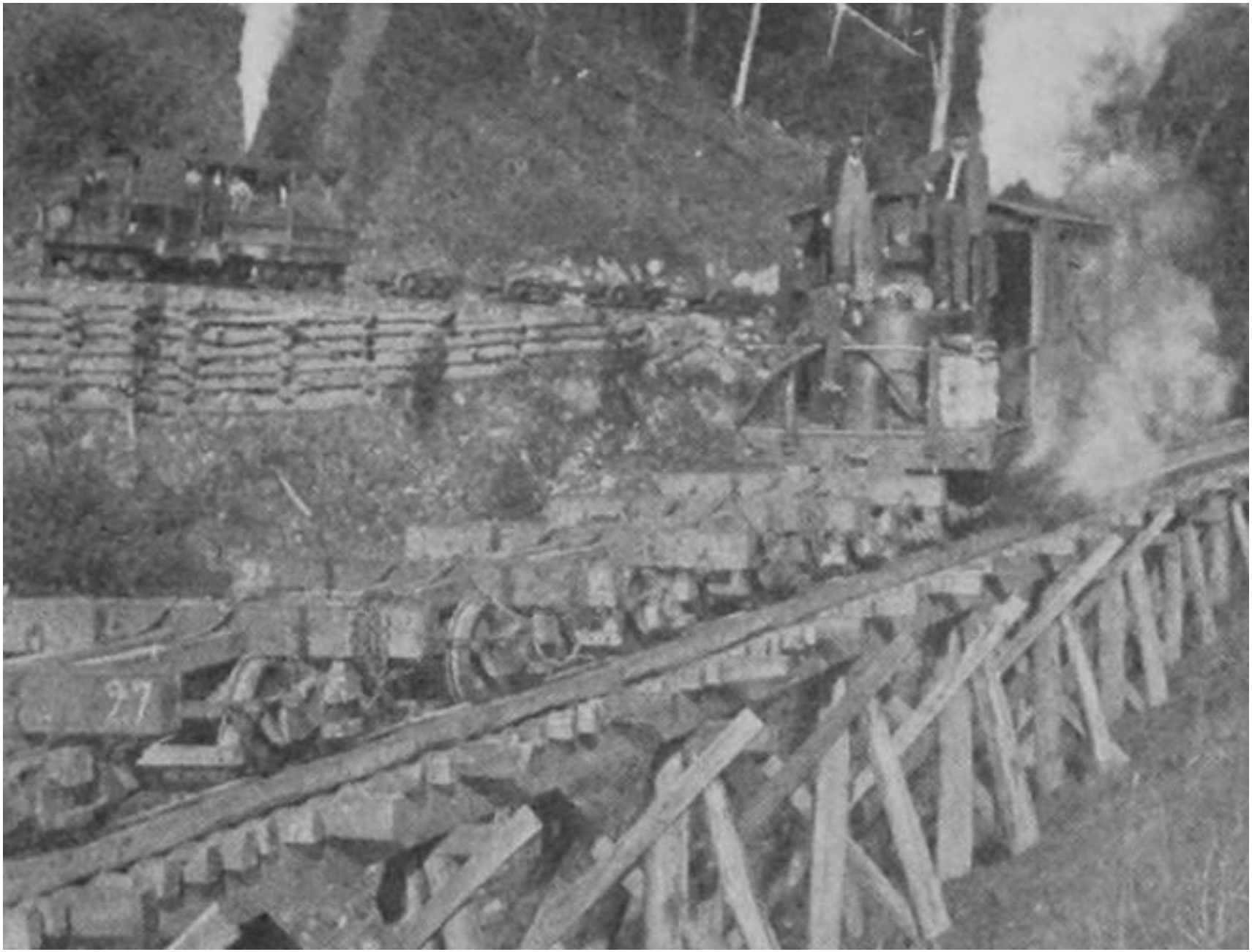
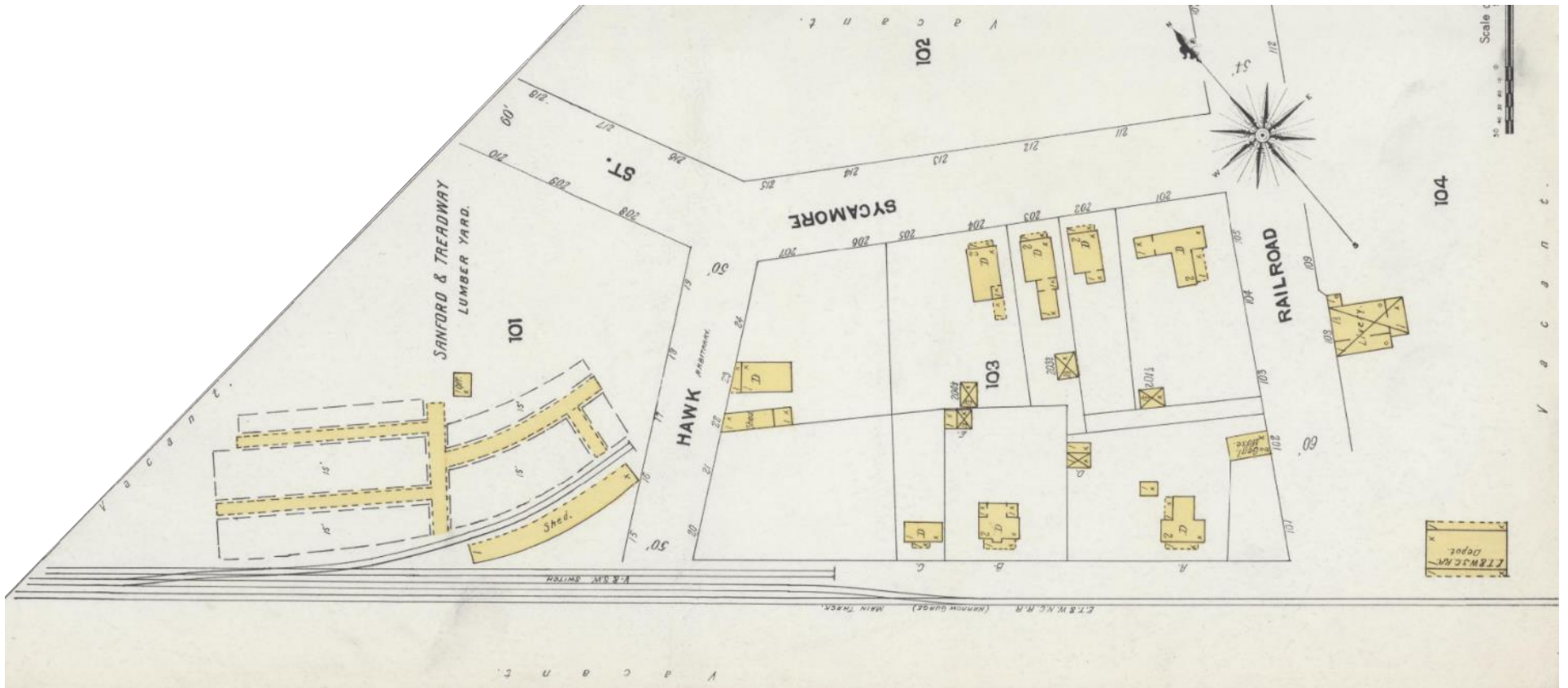
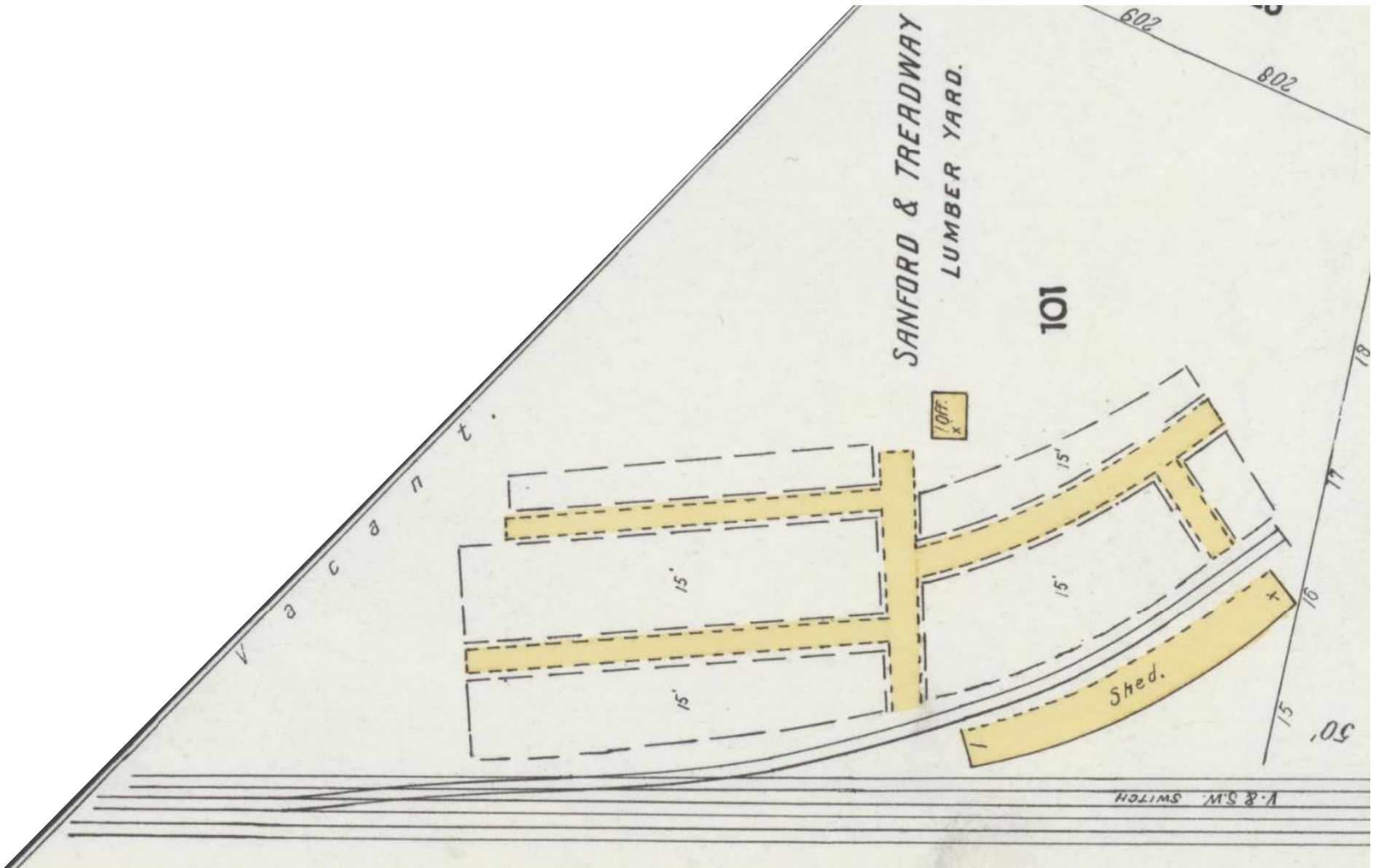


Figure 7A.
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Map 1. November 1902, Sanford & Treadway Lumber Yard on the E.T. & W.N.C. R.R. and V. & S.W. R.R. in Elizabethton, Tennessee. The Sanford & Treadway Lumber Yard was located south of the Watauga River and east of the Doe River at the junction of Hawk and Sycamore streets. Note the E.T. & W.N.C. depot in the lower right of this map.¹⁷



Map 1A.

1 May 1905. The Knoxville Journal and Tribune (added 24 July 2023).

“Elizabethton, Tenn., April 29. – A dispatch from Watauga Valley a few days ago stating that a large amount of lumber belonging to Sanford & Treadway on Stony creek was burned, and that their loss was three thousand dollars. This was a mistake as Sanford & Treadway did not lose a single board of lumber by fire on Stony creek [in Carter County]. This report perhaps grew out of a fire that burned up some logs and tan bark belonging to the Strong Lumber company. Sanford & Treadway do a large lumber business in this section with their headquarters at Elizabethton. They have recently purchased a large tract of timber containing more than four thousand acres from the Crab Orchar[d] Iron company [apparently near Roan Mountain, Carter County, Tennessee], paying a price of \$16,000 in cash and will enlarge their business at Elizabethton. They are also purchasing other tracts of timber and putting portable mills to cut the timber.”¹⁸

27 October 1906. American Lumberman.

Table 6. “For Sale by Sanford & Treadway
New Haven, Conn.

20,000 ft.	1 in.	1’s and 2’s quartered mountain oak.
30,000 ft.	1 in.	No. 1 common quartered mountain oak.
6,000 ft.	1¼ in.	1’s and 2’s quartered mountain oak.
12,000 ft.	1¼ in.	No. 1 common quartered mountain oak.
8,000 ft.	1¼ in.	No. 2 common quartered mountain oak.
25,000 ft.	1½ in.	No. 1 common and better quartered mountain oak.
20,000 ft.	2 in.	No. 1 common and better quartered mountain oak.
40,000 ft.	1 in.	1’s and 2’s Buckeye.
30,000 ft.	2 in.	1’s and 2’s Buckeye.

Piled at Elizabethton, Tenn., and Mountain City, Tenn.”¹⁹

29 December 1906. American Lumberman.

“Car shortage Heaviest in South. New Haven, Conn., Dec. 21. – Our greatest trouble from car shortage has been at our yards at Elizabethton and Mountain City, Tenn., both located on the Virginia and Southwestern railway, which is now controlled by the Southern railway.

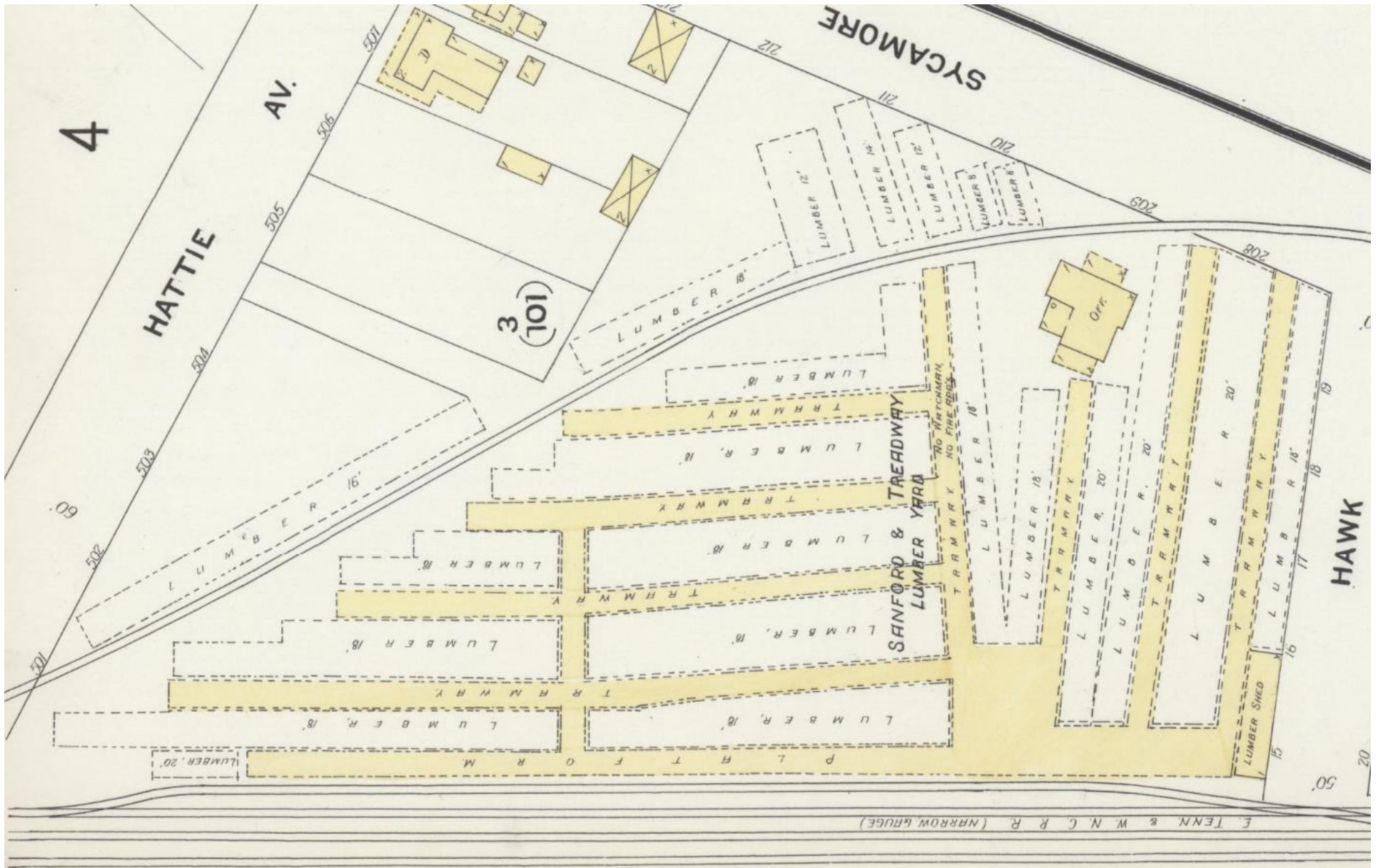
At Mountain City, although we have had a standing order in for all the cars they could give us, we were only able to get four during the month of November, and but one this month. We have never asked for a definite number of cars there, but repeatedly asked for all that they could furnish, and have a number of times told the railroad company that we ought to have not less than two cars a day.

At Elizabethton we have done a little better, but have not been able to get more than one car out of every four asked for, this dating back to about October 15.

The situation at our yard at Menominee, Mich., has been better and, although at times, we have been handicapped through inability to get cars promptly, we have succeeded in shipping about what we had to offer.

You have our best wishes for a successful meeting and one which will bring forth results.

Sanford & Treadway.”²⁰



Map 2. January 1908, the expanded Sanford & Treadway Lumber Yard in Elizabethton, Tennessee.²¹

10 February 1908. Hardwood Record.

“C.F. Treadway of Sanford & Treadway, New Haven, Conn., has returned to his home, after going over his firm’s yards and holdings at Elizabethton and Mountain City.”²²

15 February 1908. The Lumber Trade Journal.

“Charles F. Treadway, of Sanford & Treadway, New Haven, Conn., was in east Tennessee a few days ago and looked over properties of his company at Elizabethtown and Mountain City.”²³

15 April 1908. The Lumber Trade Journal.

“Sanford & Treadway, of New Haven, Conn., are operating several plants in the vicinity of Elizabethton and Mountain City, Tenn.”²⁴

7 June 1908. Bristol Herald Courier (added 24 July 2023).

“Sanford & Treadway – Another of Elizabethton’s prominent industries is the large lumber business of Sanford & Treadway. This firm was established in 1844, with main offices in New Haven, Conn. The southern business has been in charge of Mr. J.W. Williams, and for over eight years they have made Elizabeth...”²⁵

“Papa [Joseph Powell Bowers] was promoted to the depot agency [of the E.T. & W.N.C. R.R.] in Elizabethton, a big city of about 2,500 population and County Seat of Carter County. He bought the Carrier home near the depot, a big, two-story, white house with plenty of room... During the years many prominent people, the Hathaways, the Brumits, the Williams and others, had moved from Hampton and set up businesses. Uncle Johnie Williams managed the Sanford and Treadway Lumber Co., a real going concern.”²⁶

July 1908. The Wood-Worker.

“The Stiles Lumber Co., with \$10,000 capital, has been organized at New Haven, Conn., to manufacture lumber in Virginia. The incorporators are Chas. F. Treadway, C.E.P. Sanford and Henry E. Sanford, of Sanford & Treadway, wholesale dealers of New Haven, and Wm. H. Stiles, of Johnson City, Tenn.”²⁷

1 July 1908. American Miller.

“From East Tennessee. Editor American Miller: – **This town [Elizabethton, Tennessee]** is preparing for the new crop of wheat. Our farmers say that we have fine prospects for wheat this season. We have just installed another Double Monarch Scourer and now have a complete cleaning outfit. We hope to do good business this season. Our old crop is exhausted. Business has been crippled in this part of the country, but is beginning to get back to its regular run now, as the lumber business is improving, and if we can get our wheat crop harvested in dry weather we will be all right, as we have no storms or cyclones here to destroy our grain. As they do in the West. We have

another large furniture factory in our town that will employ from 50 to 100 men, and that means bread to feed them. When this factory starts up in full blast we will have one of the largest payrolls of any town in East Tennessee, as we have more industries for the size of the town than any other town in the country. Below I give you a list of some of our plants that are running full time and have run through the panic: Watauga Extract Company, employing from 75 to 100 men; Tennessee Line and Twine Company, from 30 to 40; Tennessee Cotton Mills, from 40 to 50; Empire Chair Company, from 75 to 100; John T. Dixon Lumber Company, from 15 to 20; **Sanford & Treadway (wholesale lumber), from 15 to 20**; J. Walter Wright Lumber Company, from 30 to 40; Holston Planing Mills, from 10 to 15; Bradley Lumber Company, from 50 to 75; Island Pants Factory, from 20 to 25; Watauga Bottling Works, from three to six; two 60-barrel flouring mills, from three to five each; Excelsior Brick Company, from 10 to 20; Suffins & Sons (turners of balusters, etc.), three; Acme Supply Company, from three to six; Sells Supply Co., from three to six; C.T. Stevenson (contractor and builder). From 50 to 75; J.F. Nance (contractor and builder), from 10 to 15; two large hardware companies, wholesale and retail; one large wholesale grocery company; one large wholesale and retail feed house; one large department store, and about 25 retail stores and groceries. We are now putting in waterworks by laying a 12-inch pipe six miles, under 250 feet pressure, and are laying 5-foot sidewalks all over town. We now have a population of about 3,000, which we expect to double in the next five years. We have two railroads running through our town into the timber, iron and coal counties. So you see we are ‘coming.’

C.T. Hendrix, Treasurer Monarch Milling Company, Elizabethton, Tenn.”²⁸

3 April 1909. American Lumberman.

“W.H. Stiles, formerly of Sanford & Treadway, of Hartford, Conn., and later with the Kingsport Lumber Company, in Bristol, has gone into business for himself and now has several mills in operation in Smyth county, Virginia. ‘There is much activity in the lumber industry in my section,’ said Mr. Stiles. ‘Timber lands are rapidly changing hands and passing to those who expect to operate, and the outlook is now very bright indeed, as I see it.’”²⁹

30 October 1909. “Sanford and Treadway v. Virginia and Southwestern Railway Company. October 30, 1909. Refund \$14.60 and waive collection of undercharge of \$10.01 on shipment of lumber from Elizabethton, Tenn., to Hanover, Pa., on account of misrouting.”³⁰

1911 – 1913. The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co.

“Avery County was created by an act of the state legislature ratified on February 23, 1911. The new county was formed from parts of Mitchell, Watauga, and Caldwell Counties and was named after Colonel Waightstill Avery. Avery served in the Continental Army during the American Revolution and received grants of land following the war; including large sections of what was to be Avery County... In the entire county, there were fewer than 10,000 people. There were about 2,500 residents in the eastern part of the county; most of whom lived in Linville, Pineola, and Crossnore. Another 2,500 people lived in the Cranberry and Elk Park area, with nearly 2,000 in Cranberry, a company town of the Cranberry Iron & Coal Company. Nearby Elk Park had about 400 people. The largest community in the north end of the county was Banner Elk and the largest in the southwestern section was Plumtree... Residents of the new county were soon

asked to choose where to put the permanent county seat. On July 1, 1911, four possibilities were presented to the voters: Elk Park, Minneapolis, Montezuma, and the Old Fields of Toe... Surprisingly, Old Fields of Toe won the election. The new town was to be named Newland after North Carolina Lieutenant-Governor W.C. Newland of Lenoir; who had championed the formation of the new county.

Once the voters chose Old Fields of Toe as the site for the county seat, work began on building the new town of Newland. The county was too poor to pay for a court house and jail, so the state issued bonds to finance the structures. Work began on the county buildings in 1912...

The Linville River Railway purchased land from N.T. Fletcher and built a depot and freight siding next to the right-of-way south of the courthouse... There was also a water tank a couple of hundred yards east of the depot...

Cranberry Coal & Iron purchased the Linville River Railway in April 1913 and immediately began upgrading the line from Cranberry to Pineola. The line was no longer a ramshackle logging railroad, it was part of a first class narrow gauge system..."³¹

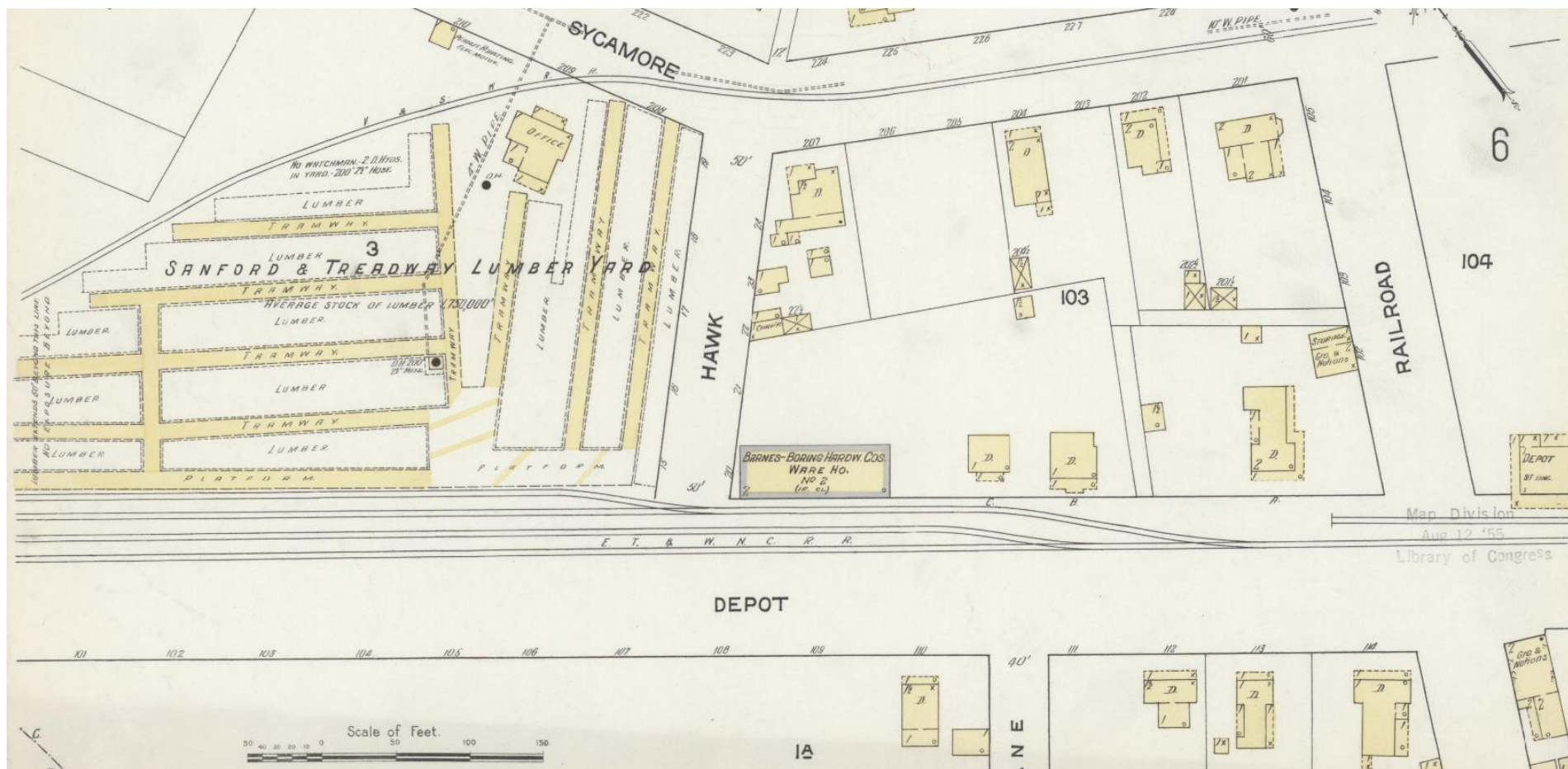
23 March 1912. American Lumberman.

"From The Maryland Metropolis. Baltimore, Md., March 20. – Among visiting lumbermen here in the last few days were L.H. Snodgrass, of Buck & Snodgrass, Johnson City, Tenn., and C.F. Treadway, of Sanford & Treadway, New Haven, Conn. Mr. Treadway's firm operates lumber mills in West Virginia, Tennessee and other sections. He stated that he found business quite good, the demand for stocks being active because of the curtailed production owing to the bad weather. The mills were still more or less handicapped, and the output was small, but the requirements of consumers were increasing."³²

6 June 1913. Logging Railroads of the Blue Ridge and Smoky Mountains...

"Two partners, C.E.P. Sanford and C.F. Treadway, doing business as Sanford & Treadway, were located in New Haven, Connecticut. They had two operations on either side of Elizabethton, Tennessee with one at Wilbur, Tennessee, on the mainline of the Virginia & Southwestern, and the other on the East Tennessee & Western North Carolina at Newland, North Carolina. While the latter was a three foot gauge line to match the ET&WNC, the line at Wilbur used standard gauge.

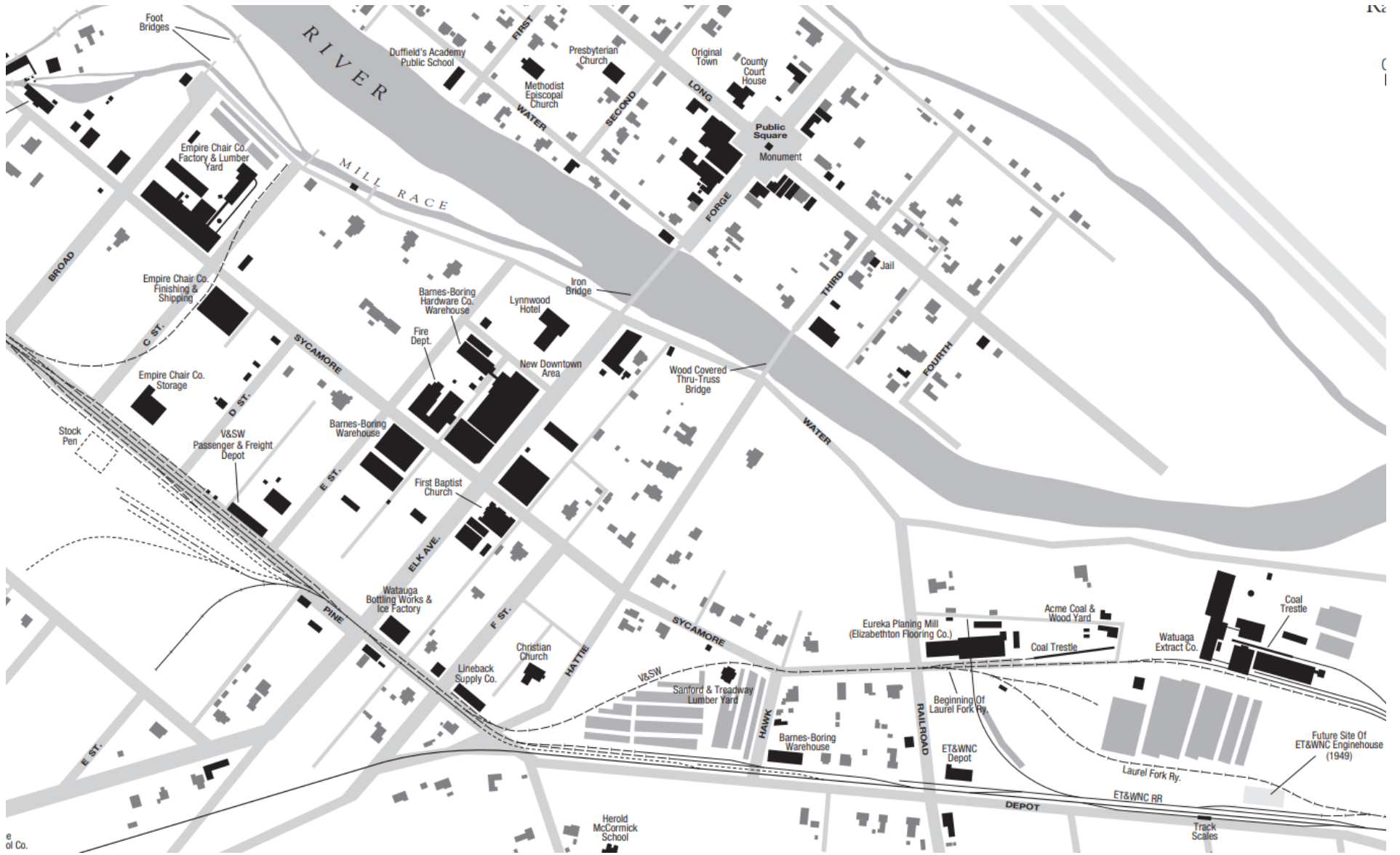
On June 6, 1913, Sanford & Treadway executed an agreement with the V&SW to have an industrial track installed by the V&SW at Wilbur on part of the old V&SW mainline which had moved slightly in a realignment. A map shows that this switch was just south of the V&SW bridge over the Watauga River and just east of a watertank along the mainline. The equipment used on this line remains unknown."³³



Map 3. June 1913, the Sanford & Treadway Lumber Yard in Elizabethton, Tennessee.³⁴
 The E.T. & W.N.C. R.R. depot at Elizabethton is located on the right side of this map.

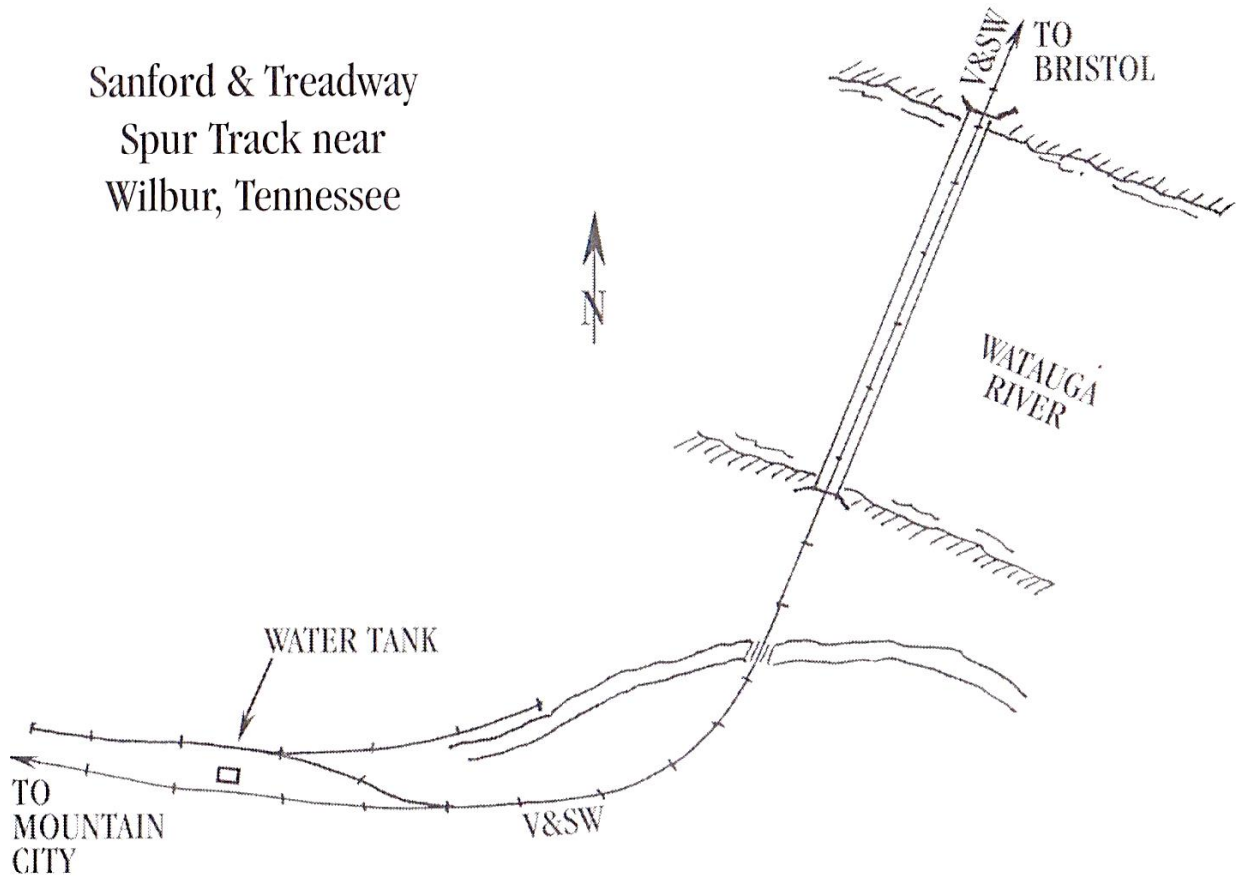


Map 4. Elizabethton, about 1915.³⁵



Map 4A.

Sanford & Treadway
Spur Track near
Wilbur, Tennessee



Map 5. "Sanford & Treadway Spur Track near Wilbur, Tennessee"³⁶

1915. The North Carolina Year Book and Business Directory.

"Ashe County... Saw Mills... Sanford & Treadway, Clifton."³⁷

25 February 1916. "Forest Fires in North Carolina during 1915, 1916, and 1917, and Present Status of Forest Fire Prevention in North Carolina"

"The Linville Forest Protective Association was organized at a call meeting held at Linville, N.C., February 25, 1916. This meeting was attended by a number of representative landowners of the region, who showed their interest in the movement by coming out on one of the coldest and most stormy days in the year. The tentative articles of association given below were adopted and the following board of directors elected: F.P. Howe, Johnson City, Tennessee, president; W.S. Whiting, Elizabethton, Tennessee, vice-president; J.P. Gibbs, Linville, N.C., secretary-treasurer; L.D. Ellis, Cranberry, N.C., and E.G. Underdown, Blowing Rock, N.C.

List of Members:

The following landowners and railroad companies subsequently signified their approval of the step by applying for membership and paying their dues."³⁸

Table 7.

Name	Post office Address	Acreage	R.R. Mileage
Boone Fork Lumber Company	Elizabethton, Tenn.	4,286	4
Brown, P. Maclay	Crosnore, N.C.	800	
Cone, Mrs. Moses H.	Blowing Rock, N.C.	3,700	
Cranberry Iron and Coal Company	Johnson City, Tenn.	3,700	
Daingerfield, Elliott	Blowing Rock, N.C.	27	
East Tenn. and Western N.C. Railway	Johnson City, Tenn.		2½
Galloway-Pease Lumber Company	Saginaw, Michigan	1,200	
Guy, E.C.	Newland, N.C.	563	
Hartley, J.L.	Linville, N.C.	200	
Highland Nursery Company	Pineola, N.C.	100	
Hughes, Edward W.	Blowing Rock, N.C.		
Linville Improvement Company	Wilmington, N.C.	16,000	
Linville River Railroad Company	Johnson City, Tenn.		26
MacRae, Hugh	Wilmington, N.C.	195	
Sanford & Treadway	Elizabethton, Tenn.	1,300*	
Webb, N.P.	Pineola, N.C.	190	

* Apparently, this area was associated with either the Sanford & Treadway operation based out of Wilbur, Tennessee or with the operation that they were planning to base out of Newland, North Carolina, with the latter seeming more likely.

11 April 1916. The Charlotte Observer (added 24 July 2023).

“T.J. Ray has closed a deal with Sanford & Treadway for the birch timber on 1,300 acres of land lying at the edge of Newland, and will be installing stills at once. We failed to note some weeks ago on the Cranberry Furnace Company’s land at Cranberry, of which there is 3,700 acres with several stills already installed. This makes a total of 5,000 acres of the best birch in the mountains, and the oil from such a vast quantity of timber means that many thousands of dollars will be brought to and scatted in this section from the central markets.”³⁹ This is the earliest contemporary mention of the Sanford & Treadway operating out of Newland, North Carolina, which the author has found.

18 May 1916. Watauga Democrat.

“Organized for Forest Protection. Timberland owners in Avery, Watauga and Caldwell counties will be very much interested in the formation of the Linville Forest Protective Association, which occurred in Linville a short time ago. This organization is formed by the principal timberland owners lying along the Blue Ridge and its outlying spurs between Blowing Rock, Grandfather Mountain and Cranberry. The object of the Association is the protection of the forest lands from fire of the members of the association.

Among the larger owners represented are the Cranberry Iron and Coal Company, Sanford and Treadway, the Linville River Railroad, Banner and Aldridge, the Linville Improvement Company, Boone Fork Lumber Co., and Mrs. Moses H. Cone. Among the smaller owners who are joining the association are Mr. N.P. Webb, J.L. Hartley, P.M. Brown, E.C. Guy and a number of others.

The organization of this association means a great deal for this part of the mountain country. Not only will they patrol for the prevention of fires, but they will post notices and prosecute offenders against the forest laws. The Federal Government which now owns nearly all of the land on the headwaters of Wilson's creek and John's river to the association lands will protect their own lands from fire and will cooperate to the fullest extent with the association in fire prevention.

All land owners within the area covered by the association, either joining or near to other lands, are cordially invited to join the association. The maximum cost to members is not to exceed one cent per acre per annum and ten dollars per mile for railroads. Interested parties who are not land owners can join upon payment of one dollar. Lenoir Topic.”

30 June 1916. Carolina, Clinchfield and Ohio Railway, For the Fiscal Year Ended June 30, 1916, Sixth Annual Report.

Table 8. “List of New Industries Established during the Year Ended June 30, 1916.”⁴⁰

Shipping Point	Name	Character
Johnson City	Sanford & Treadway	Lumber

3 October 1916. “Forest Fires in North Carolina during 1915, 1916, and 1917, and Present Status of Forest Fire Prevention in North Carolina”

“The first annual meeting of this association was held at Linville, October 3, 1916 Following the resignation of Mr. Howe as president, Jr. P. Maclay Brown of Crosnore was elected to this position. Mr. A.W. Wasey, manager of the Boone Fork Lumber Company, Shulls Mills, was elected vice-president in the place of Mr. Whiting, who had resigned. The other members of the board of directors were reelected.

The articles of association, comprising the constitution and by-laws, which were prepared and submitted to the president the previous spring, were carefully discussed, revised, and adopted. They were later sent out to all members of the association as having been adopted by the association at large. As these may hereafter form a basis upon which to organize similar associations in other parts of the State, they are here given in full.”⁴¹ See Appendix E.

1916. The North Carolina Year Book and Business Directory.

“Ashe County... Saw Mills... Sanford & Treadway, Clifton.”⁴²

SANFORD & TREADWAY
NEW HAVEN, CONN.
 MANUFACTURERS OF
HARDWOODS & HEMLOCK
 YARDS. Johnson City, Tenn. - West Jefferson, N. C. Newland, N. C.
 We have at Johnson City, Tenn., three cars of choice 10/4, common and better POPLAR, running 2/3—14 feet and 16 feet, and extremely wide, up to 47 inches. Write for prices.

Figure 8. The Lumberman's Review. September 1917.⁴³

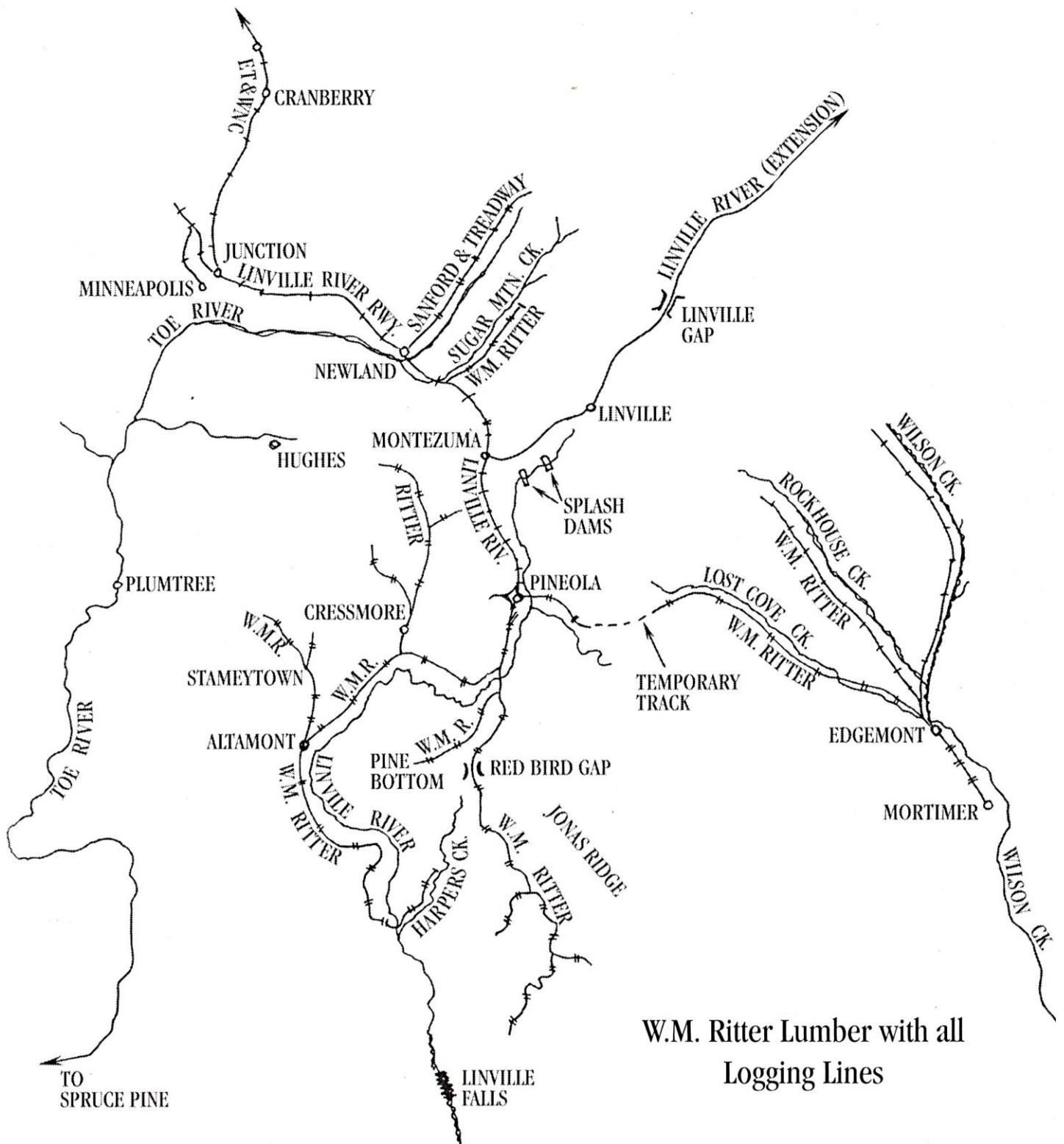
The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co.

“The Linville River Railway purchased land from N.T. Fletcher and built a depot [for Newland] and freight siding next to the right-of-way south of the courthouse. There was another siding, a short distance east of the depot, for loading lumber from the Sanford & Treadway sawmill... Since the Ritter sawmill at Pineola was closed in 1912, Newland became the major source of traffic on the railroad... Regularly scheduled passenger trains were soon running between Johnson City and Pineola and Newland was listed on timetables starting in 1916...

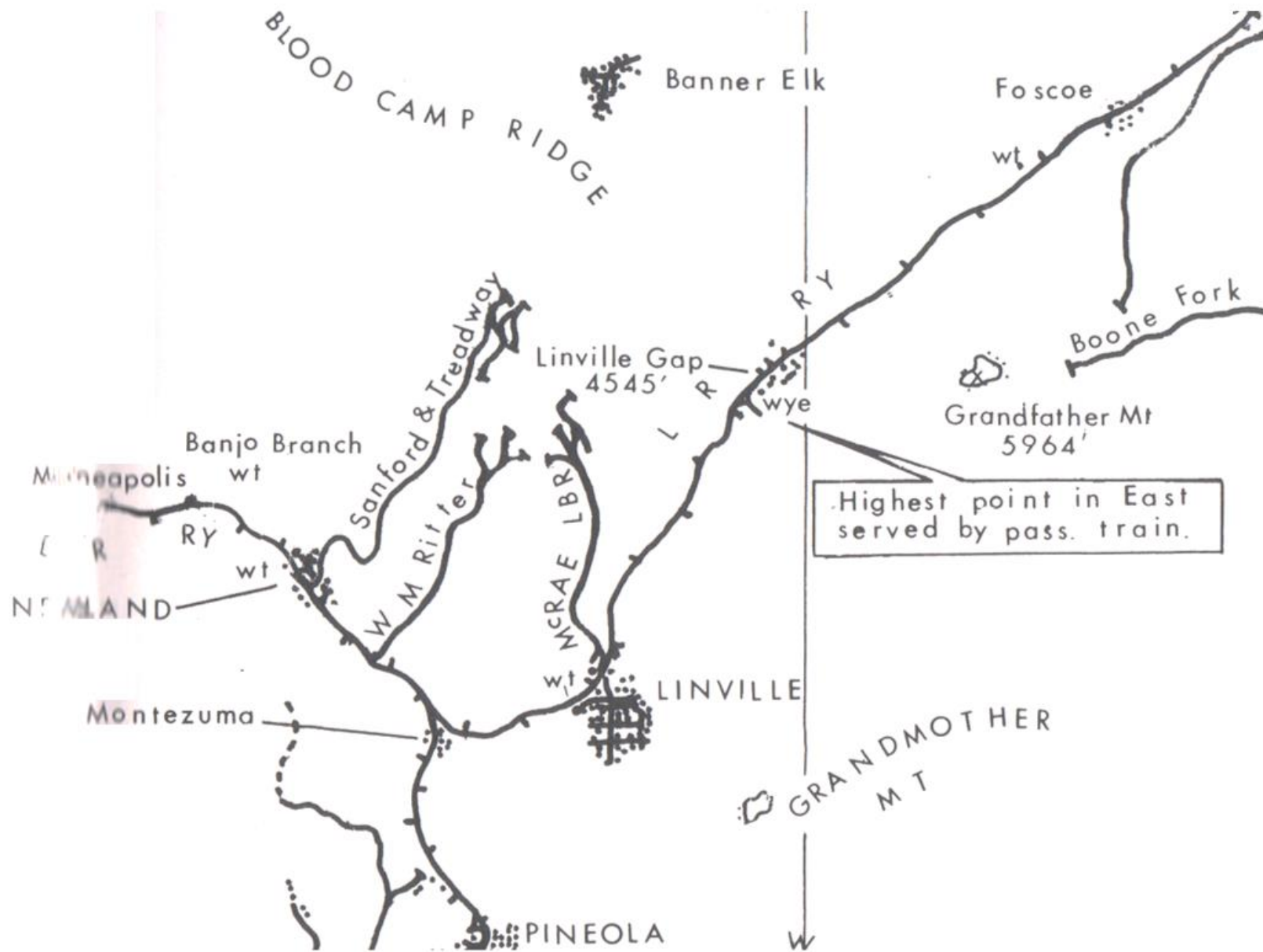
Forest products represented the largest amount of freight shipped out of Newland. Mountain flora was in demand in eastern cities and a number of local people gathered plants, galax, and herbs. Local wood cutters would bring their pulpwood to the depot for shipment. Each cutter had a designated area to stack four-foot lengths of wood...”⁴⁴

SANFORD & TREADWAY
NEW HAVEN, CONN.
 MANUFACTURERS OF
HARDWOODS & HEMLOCK
 YARDS. Johnson City, Tenn. West Jefferson, N. C. Newland, N. C.
AT NEWLAND N. C. { FULL LINE 2 x 4, 2 x 6 and 2 x 8
HEMLOCK in No. 1 and No. 2 grades

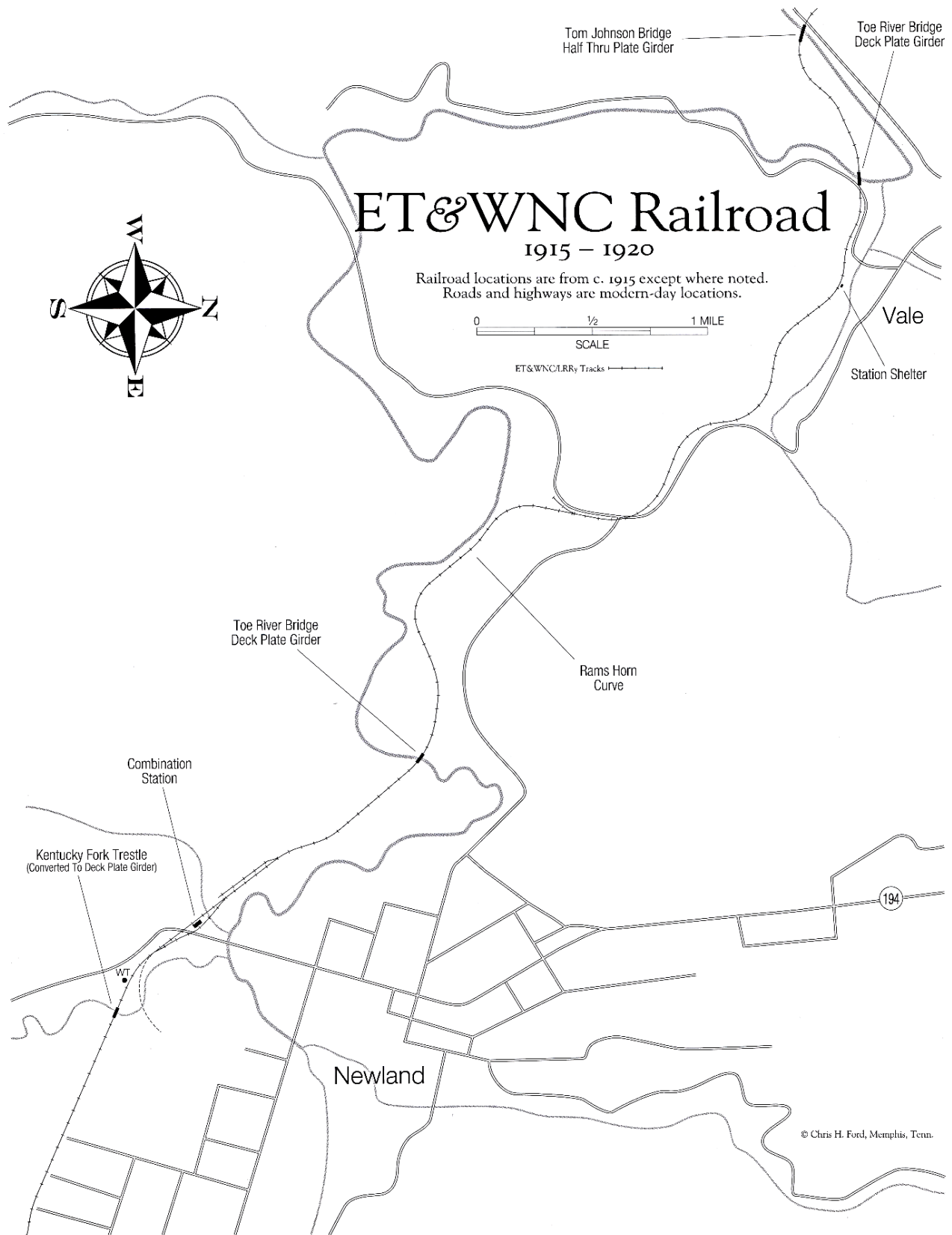
Figure 9. The Lumberman's Review. December 1917.⁴⁵



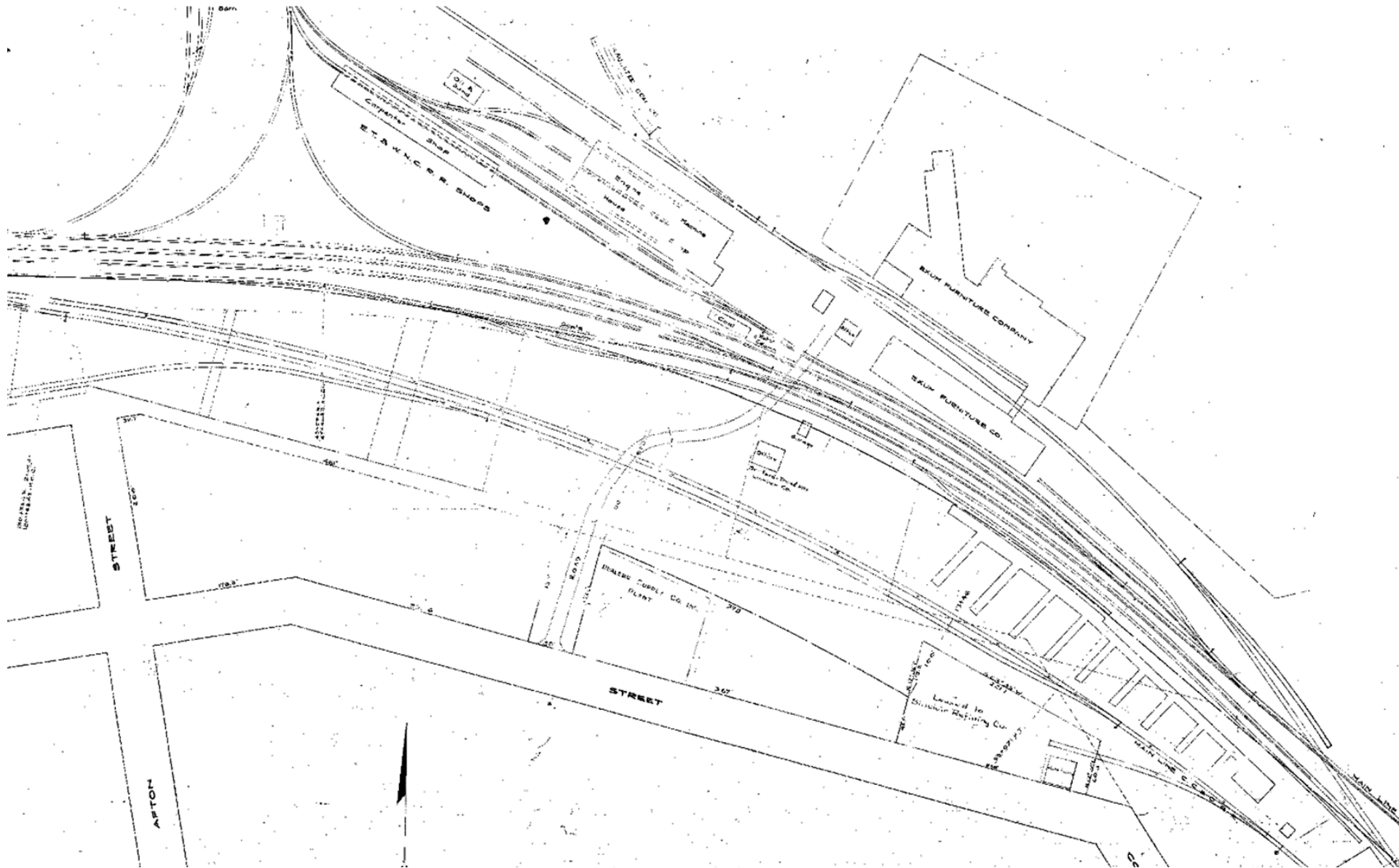
Map 6. This map shows the Linville River Railway and the logging railroads of William M. Ritter, as well as Sanford & Treadway (operating out of Newland).⁴⁶ Interestingly, the map printed in *Tweetsie Country* (below) seems to indicate the presence of switchbacks on the Sanford & Treadway logging railroad out of Newland.



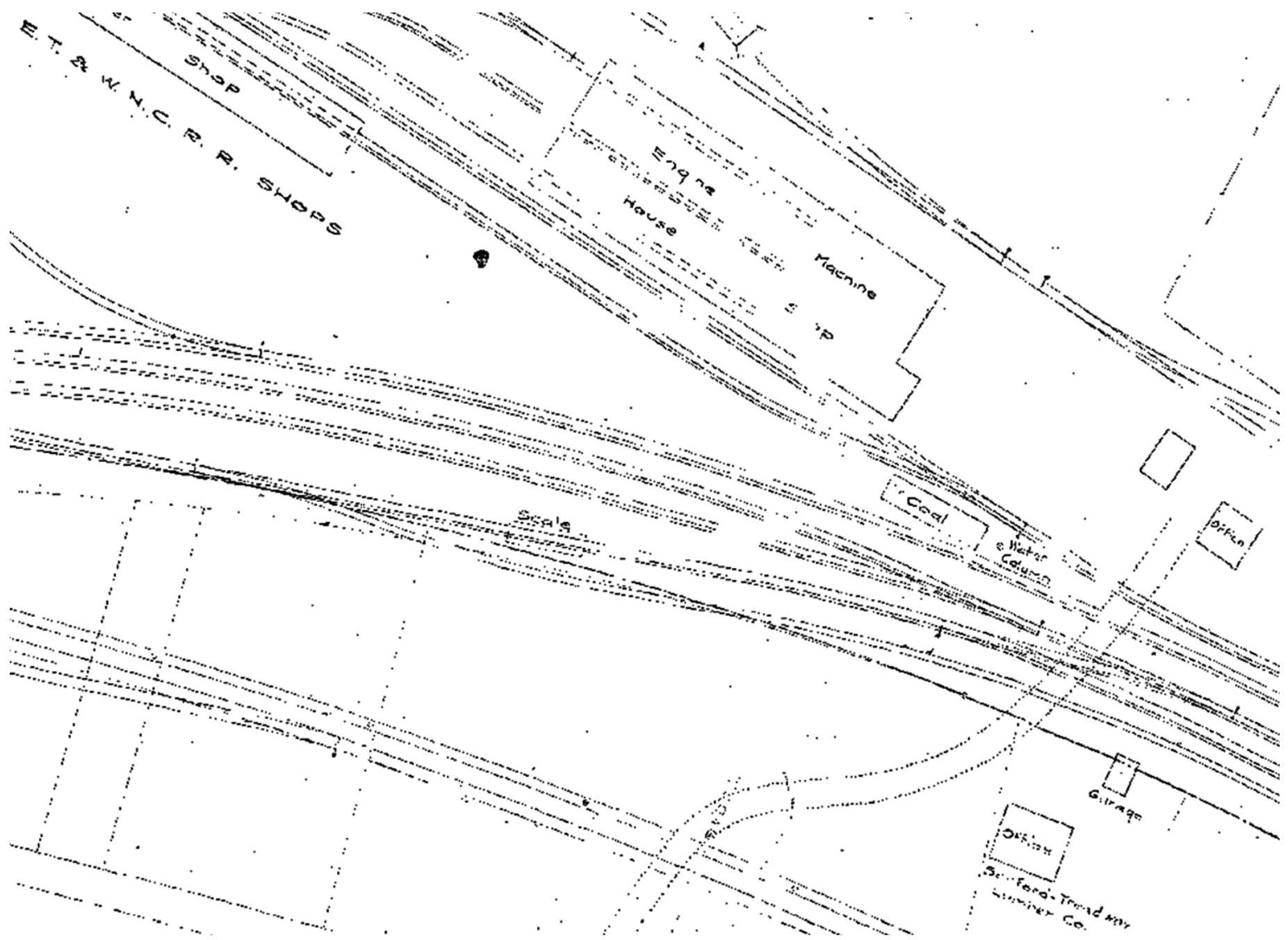
Map 7. This map shows the location of the Sanford & Treadway logging operation out of Newland, North Carolina, in comparison to the D. & H. McRae Lumber Company and one of the Ritter Lumber Company logging branches, as well as the Linville River Railway, and the towns of Minneapolis, Newland (partially obscured), Montezuma, Pineola, Linville, Linville Gap, Foscoe, and Banner Elk.⁴⁷



Map 8. The track to the Sanford & Treadway facilities at Newland, North Carolina, branched off from the Linville River Railway just southeast of the Depot.⁴⁸



Map 9. 29 August 1919, shows the shops of the E.T. & W.N.C. R.R., the Exum Furniture Factory, and the Sanford & Treadway Lumber Yard in Johnson City, Tennessee.⁴⁹



Map 9A. The Sanford & Treadway Lumber Yard in Johnson City, Tennessee, is shown in the lower right portion of this map.

8 November 1919. American Lumberman.

“Log Loader Maker is Busy. The plant of the Raymond Log Loader Co., Escanaba, Mich., is a busy place. More and more lumbermen and loggers are coming to realize the demonstrated advantages of the Raymond log loader and the company is securing orders from all sections of the country. Recently A. Cameron, of the Sutton Chemical Co., Sutton, W. Va., and John Hampton, of Sanford & Treadway, Newland, N.C., visited the plant and as a result both placed orders for Raymond log loaders...”⁵⁰



Figure 10. “Raymond Log Loader” from the “Archives of Michigan”

The “gasoline log loader made by the Raymond Log Loader Company of Escanaba, Michigan. This loader is mounted on runners and can spot its own cars. It has a swinging boom and can be operated on the ground as well as on cars. It can be used as a dredge. Since gasoline furnishes the power, it is ready for instant use – no time wasted in getting up steam; no coal or coke is wasted, as there are no fires to draw. In summer it eliminates the fire danger in the woods. It requires less skilled mechanics to operate a gasoline engine than a steam engine.”⁵¹ See Appendix D for additional information on Raymond Log Loaders.

Sanford and Treadway Operations in Tennessee (1920 – 1924?) and
Linville, North Carolina, 1919 – 1924

Historian Johnny Graybeal wrote: “The immediate post war demand for lumber continued to be high. In 1920, the LR originated 32,210 tons of lumber, which was carried in 2,560 carloads. That same year, the ET&WNC originated 1,422 car loads of lumber, for a total of 22,908 tons, forwarded the LR tonnage, and added another 896 carloads from other carriers. These tonnage figures are good representations of the Linville River’s lumber business for the next few years. On the other hand, the ET&WNC’s originating tonnage declined, due to the cutting out of the available lumber in the area. Timber is a resource that will renew itself, but not at the rate it was being cut at this time, however...”

“[The] two railroads began keeping carload as well as tonnage information for specific commodities in 1920. In that year, the ET&WNC received 219 carloads for 3,448 tons of cordwood from the LR. The ET&WNC itself contributed 181 loads for 3,813 tons. In addition to this, 2,346 carloads of pulpwood (34,953 tons) were produced on the LR, to go with 1,802 loads (28,503 tons) on the ET&WNC. This equals 4,548 carloads for just these two commodities in one year. It becomes obvious that the two railroads were handling a great deal of wood products other than lumber. In 1921, the LR originated 54 loads of logs/posts (867 tons), and 1,031 loads of pulpwood (14,946 tons). The ET&WNC originated 885 carloads of pulpwood (13,200 tons). This was the year post-WWI depression, so the demand for all forest products was down. In 1922, the LR handled 802 loads of pulpwood (12,073 tons), while the ET&WNC added 1,600 loads for 24,158 tons to these figures. Almost all of the LR tonnage was forwarded on to the ET&WNC for carriage to Johnson City. This represents a great deal of traffic over the narrow gauge...”

Tonnage figures began to gradually decline in 1924. In that year, the LR handled only 961 carloads of pulpwood (14,330 tons), while the ET&WNC contributed only 1,072 loads (16,057 tons). This was a drop of almost 50% in only one year...”⁵² See Table 9.

Table 9. “Linville River Railway [Freight] Tonnage... in Tons – Partial Listing by Category”,
Year Ending 31 December, 1921 – 1924.⁵³

	1921	1922	1923	1924
Logs/Posts	867	632	813	177
Pulpwood	14,946	12,073	32,835	14,330
Lumber	24,227	37,749	38,409	28,861
Other Forest	203	1,063	1,001	1,527
Coal	2,688	2,484	5,630	6,817
Clay/Gravel	15,452	15,676	11,476	3,847
Other Mines	2,798	438	2,764	7,505
LCL	6,285	5,876	7,335	6,151
Total	73,045	85,076	110,388	83,395

November 1919. "Forest Fires in North Carolina during 1918, 1919, and 1920, and Forest Protection in North Carolina."

"The report for 1919 shows that there were practically no fires during the year, the only expenditure for fire fighting being \$5.00 in October. Those fires which did occur were caused by the railroad and in several cases were extinguished before spreading more than a few yards. Regular rains materially reduced the fire risk, and it was not deemed necessary to put out regular patrolmen.

At the annual meeting in 1919 the association area was divided up into six patrol districts, and in case of dangerous weather patrolmen will be employed to take the following routes:

(1) One going out on trains from Cranberry to Gap and walking back along track; (2) one following trains from Linville to Gap; (3) one patrolling Pineola and Grandmother Mountain; (4) one at Boone Fork; (5) one at Hodges Gap; and (6) one from Foscoe to Linville Gap.

During the year the association installed a protective telephone system from Poplar Siding to a point one mile beyond Linville Gap, a total distance of three miles. This line, in conjunction with the Linville Improvement Company's line, has phones at a number of points, including the railroad sidings, railroad station, Sanford & Treadway's office, Improvement Company's office, Davis's and Morton's. In case of alarm (which may be turned in day or night) a large number of fire fighters may be assembled at short notice. Fire fighting tools have been located in boxes at the following points:

West Linville Railroad Station,
Linville (Sanford & Treadway),
Linville Gap (Tate Davis's house),
Yonahlossee Road (Finley Gragg's).

At this same meeting it was explained that Andrew Calhoun had assisted several times in extinguishing forest fires, and in appreciation of his services the treasurer was instructed to pay him \$5.

The constitution was amended to provide for seven directors instead of five. The following officers were then elected for the ensuing year:

President, T.W. Hampton, General Manager, Boone Fork Lumber Company, Shulls Mills, N.C.

Vice-President, F.M. Allison, Linville River Railroad Company, Cranberry, N.C.

Treasurer, L.D. Ellis, Cranberry Iron and Coal Company, Cranberry, N.C.

Secretary-Manager, J.W. Morton, Linville Improvement Company, Linville, N.C.

Directors: J. Frank Hampton, General Manager Sanford & Treadway, Newland, N.C.

G.W. Hardin, General Manager Linville River Railway Company, Johnson City, Tenn.

Ed. Robbins, Pineola, N.C.

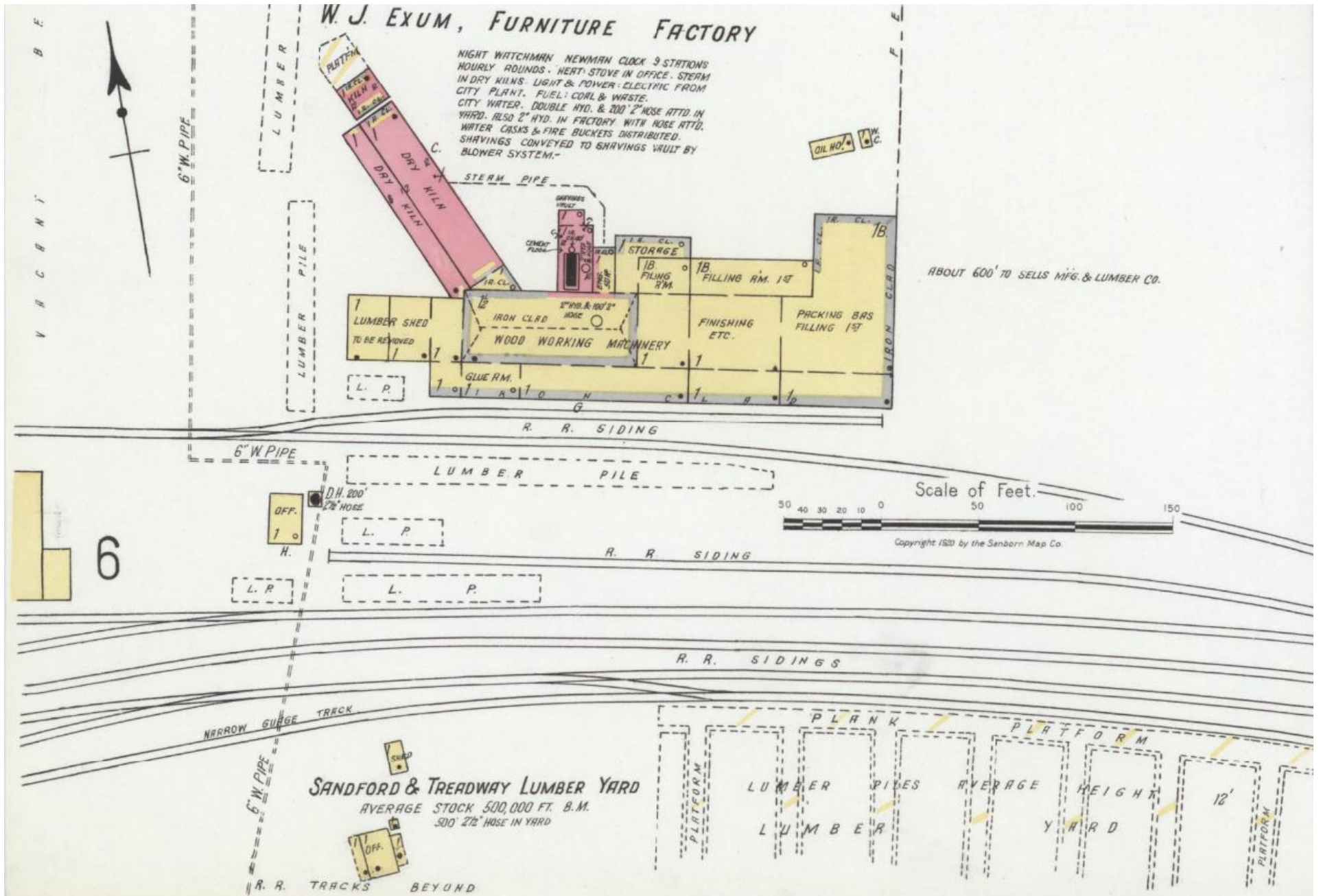
T.W. Hampton, Superintendent Boone Fork Lumber Company, Shulls Mills, N.C.

E.G. Underdown, Superintendent Cone Estate, Blowing Rock, N.C.

L.D. Ellis, Cranberry Iron and Coal Co., Cranberry, N.C.

J.L. Hartley, Linville, N.C.

On motion the secretary was allowed \$50 per year to pay for any necessary clerical help.⁵⁴ See Appendix E for information on forest fires and their prevention in Avery County from 1917 – 1920.



Map 10A.



Figure 11. “Sells Lumber Company is in the foreground of this view looking west toward the ET&WNC’s Johnson City engine house. The Exum Furniture plant is between Sells and the Engine House” in this undated photograph. The lumber yard across the tracks from Sells Lumber Company and the Exum Furniture plant is located in the same place as that of Sanford & Treadway, and may be their yard (see detail below).⁵⁶

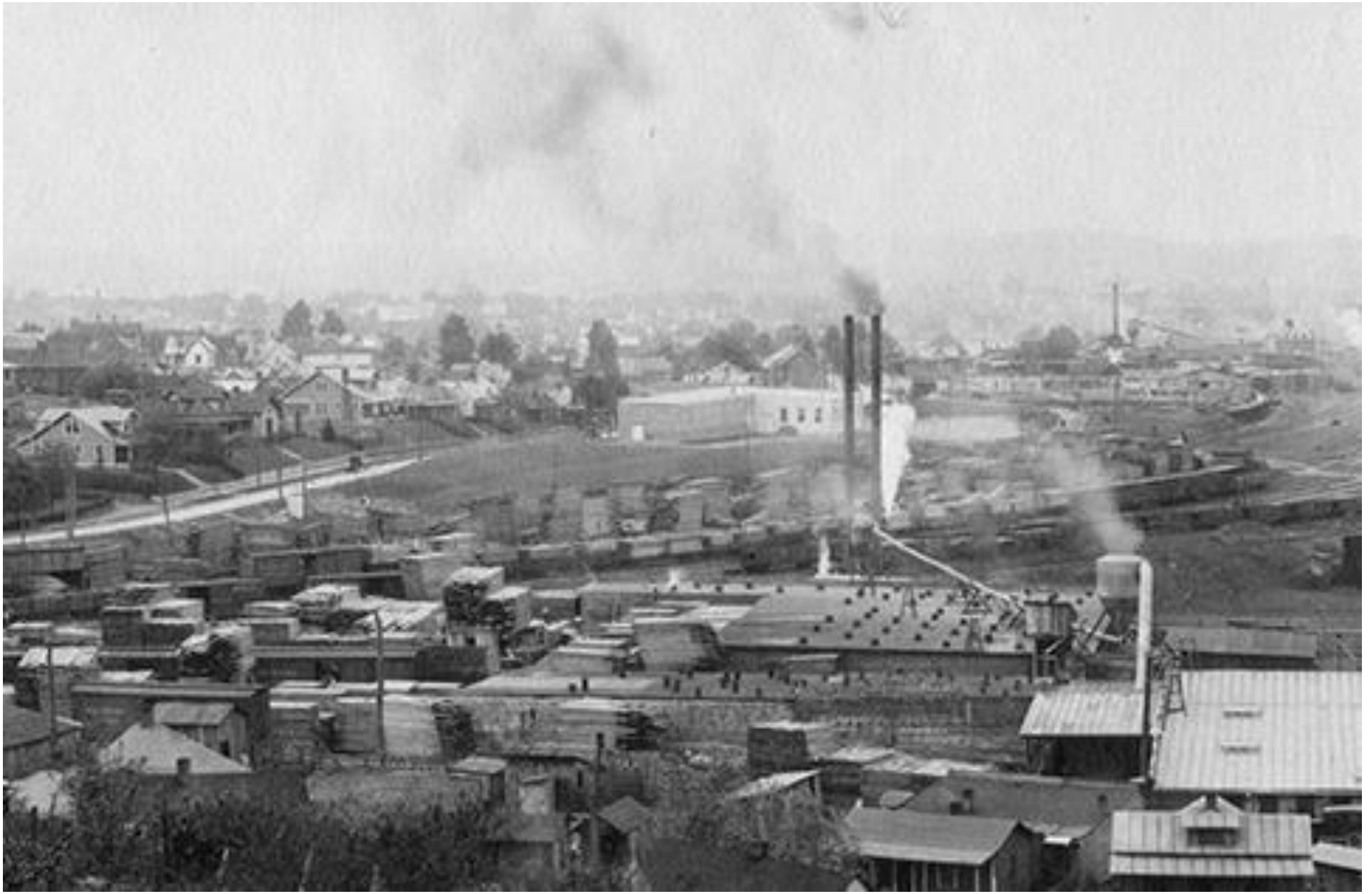


Figure 11A. Apparently the road entering from the left is East Maple.

1920. Grandfather Mountain: The History and Guide to an Appalachian Icon.

“Modest timber harvesting, sawmilling, and stumps were facts of life on the fringes of Grandfather Mountain, but by 1920 Connecticut-based Sanford and Treadway Lumber Co. had set up shop in Linville. They were aiming north of town where the West Fork of the Linville River reaches onto Sugar Mountain and Flat Top. Sanford and Treadway’s big timber mill sat in meadows just beyond Ruffin Street/Jo Hartley Road junction north of Old Hampton Store. A logging camp higher up housed and fed workers. Like Whiting’s plant at Shull’s Mill and Ritter’s at Mortimer, this was a highly mechanized logging railroad operation unlike anything that would be used later on most of Grandfather Mountain. Until it was dismantled, the enterprise engaged the entire town and fueled welcome employment.

Loggers fanned out up the slopes in teams of five men called ‘wood hicks,’ writes Joe Quinn. A ‘fitter’ calculated the best direction for the tree to fall, and two ‘sawyers’ felled it with a six-foot, two-handled crosscut saw. ‘Swampers’ would limb it, then sawyers ‘bucked’ the tree into logs. (These logging terms are still used today.) Then ‘teamsters’ and their teams of horses dragged the logs to trains. All this was done with the famously powerful Shay and Climax logging locomotives. A steam-powered, flatcar-mounted crane stacked logs on cars for the trip to the mill. Logs were dumped in a pond, then dragged up a ramp into the mill by a massive bull wheel. An employee rode the carriage that fed the logs to a saw powered by scrap- and sawdust-fueled boilers. After separate machines edged the planks and trimmed the ends, the boards were graded and stacked in the lumberyard for shipment on Tweetsie. Avery High School teacher Thomas Webb and Linville residents wrote a newspaper article in the early 2000s that named the people behind the process. With horses dragging timber, a blacksmith was needed, and that was Willie Stout. We also know Ed Lewis and Johnny Riddle ran the steam log loader and that Riddle died in a log fall. The sawmill was eventually [in 1924] purchased by Donald and Hugh MacRae and operated as the D&H MacRae Lumber company, then Linville Lumber Company. The names on the locomotives changed, but the workforce didn’t, managed by John Frank Hampton, an able man always seen in coat and tie above rough pants and high boots below.”⁵⁷



Figure 12. The Lumberman’s Review, May 1920.⁵⁸

Table 10. “Showing Estimated Value of plant, Yearly Output, and Pay roll; Days in Operation; Power and Number Horsepower; Working Hours and Number Employees.”

No.	Factory	Postoffice	Estimated Value of Plant	Estimated Value of Yearly Output	Estimated Yearly Pay Roll	Number Days in Operation During Year	Power	No. H.P.	Number Hours Constitute Days Work	Number Hours Constitute Weeks Work	Number Employees			
											Male	Female	Children	Total
266	Sanford & Treadway	[W. Jefferson]	24,370	114,270	38,165	275	steam	95	10	60	12 – 40	-	-	40
330	Sanford & Treadway	Newland	38,863	96,063	5,102	160	steam	110	10	55	35 – 68	-	-	58
3291	Sanford & Treadway	Toecane	6,550	39,800	17,360	170	steam	25	10	55	13	-	-	13

Table 11. “Miscellaneous Factories”

No.	County	Postoffice	Factory	President	Secretary	Articles Manufactured	Invested Capital
266	[Ashe]	[West Jefferson]	Sanford & Treadway		H.E. Sanford	Rough Lumber	56,805
330	[Avery]	Newland	Sanford & Treadway		A.E. Sanford	Rough Lumber	50,800
3291	[Mitchell]	Toe Cane	Sanford & Treadway			Rough Lumber	12,425

24 January 1924. Odom versus Sanford & Treadway.

“Sanford & Treadway, a partnership, owned a large boundary of timber in Carter county. On January 29, 1924, they entered into a written contract with Birchfield & Garland for the cutting and hauling of said timber. Subsequently, Birchfield & Garland sublet a part of said work to the defendant, Mann Hughes, and petitioner was engaged in cutting said timber for Mann Hughes when a tree fell on him and seriously injured him. In the written contract, Sanford & Treadway were referred to as parties of the first part & Garland as parties of the second part.

The contract provided that parties of the second part were to cut, skid, log and deliver to a certain mill site all of the timber on the described tract of land, estimated to be 1,500,000 feet. The contract then proceeds:

‘The second parties agree to cut this timber into logs, cutting 50 per cent, or more 14 and 16 feet long, the oak and chestnut to be cut 16 inches and over in diameter measuring 12 inches above the ground, the balance of the timber and different varieties growing on this property is to be cut 8 inches and over in diameter measuring 12 inches above the ground.

All this timber is to be cut under the direction and supervision of the first party or their agent, all to be sound timber, and special care is to be taken in cutting and falling the timber so as to do as little damage in splitting and breaking the trees in felling them as it is possible to do.

All the logs and timber that the first parties want cut to this set for the sum of \$7.50 per thousand feet, measurement to be made by log scale and the scale to be made by the first parties or their agents, second parties can be present if they so desire when the measurements are made. All logs to be measured straight and sound cutting out all defects...

The second parties agree and bind themselves to keep logs on the skidway and the log yard at all times in sufficient quantity to keep the mill running until the job has been completed.

The contract then provides where the parties of the second part are to begin cutting, and provides for advances to parties of the second part. The contract contains this provision:

It is understood and agreed that the second parties are to be continuously on this job and at work until it has all been completed and the job of cutting, skidding and delivering the logs has been looked over by the first parties and the contract is released.

The contract then provides that if the second parties fail or refuse to deliver this timber as agreed to, the parties of the first part are authorized to have said timber cut and delivered, etc.

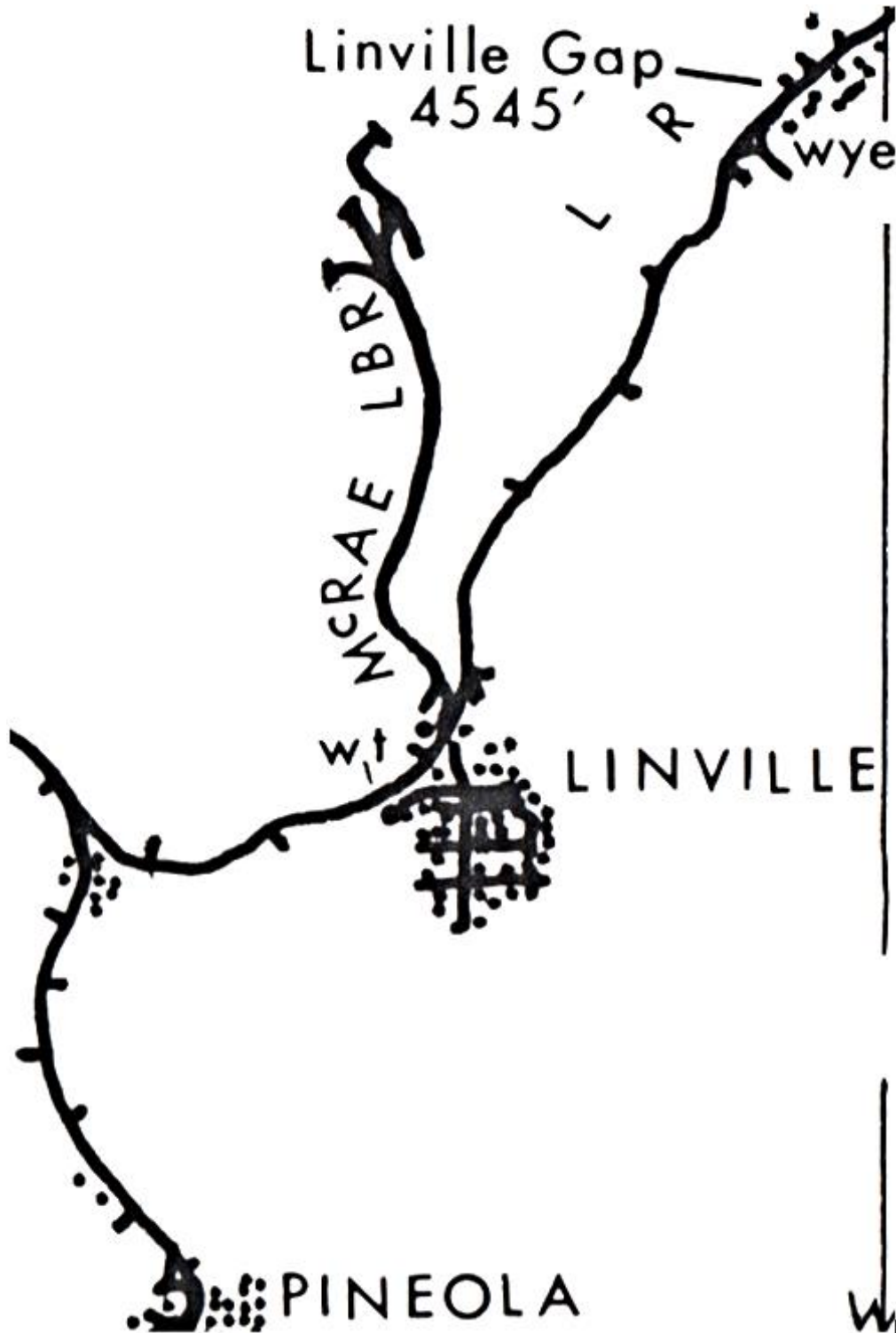
Finally the contract provides the following:

‘It is agreed that in cutting and logging and delivering this timber to the mill that the second parties shall cut and deliver such logs and trees as the first parties want and leave what they do not want standing in the woods, and this all to be done under the supervision and directions of the first parties.’

So far as exercising active control over the operations by Sanford Treadway, Miller, who was in charge for them, testified that he called their attention to the fact that they began cutting at a different place from that provided in the contract, and that when they had finished he pointed out to them four or five trees that had been overlooked, and that, with these two exceptions, he gave no instructions or directions with respect to the cutting and hauling of said timber. This testimony, under the rule, must be accepted as true, and affords some evidence in support of the Chancellors decree.

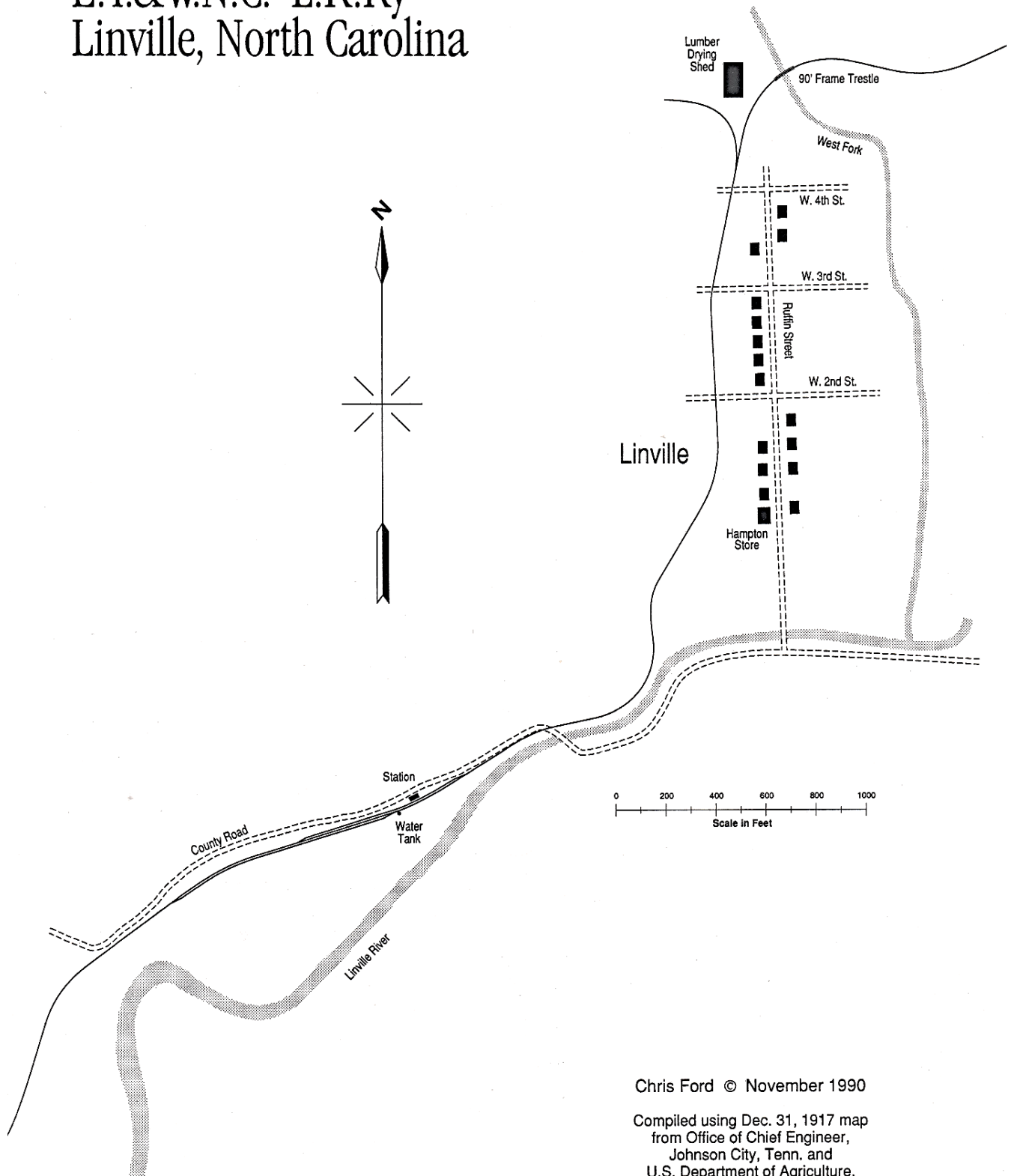
It follows, therefore, that unless the written contract constitutes Birchfield Garland employees of Sanford Treadway they must be treated as independent contractors.”⁶⁰ The only known Sanford & Treadway logging operation in Carter County, Tennessee, was the one based out of Wilbur.

Logging Railroad Operations Based out of Linville, North Carolina (1917 – 1944?)
Sanford & Treadway (1919 – 1924), and the
D.&H. McRae Lumber Company (1924 – 1944?)



Map 11. This map shows the location of the D. & H. McRae logging operation out of Linville, North Carolina.⁶¹ Interestingly, this map does not show the D. & H. MacRae Lumber Company railroad operating in the vicinity of Linville Gap, as mentioned by historian Randy Johnson in Grandfather Mountain: The History and Guide to an Appalachian Icon (see below).

E.T.&W.N.C.-L.R.Ry Linville, North Carolina



Chris Ford © November 1990

Compiled using Dec. 31, 1917 map
from Office of Chief Engineer,
Johnson City, Tenn. and
U.S. Department of Agriculture,
1952 aerial photos

Map 12. Linville River Railway at Linville, North Carolina.⁶²



Map 13.⁶³ Note that north is to the left of the page for this map.



Map 13A.

23 July 1924. The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway.

“The Whiting developments and a temporary shutdown of several extract plants in 1924 hurt lumber traffic on the narrow gauge. However, some new traffic was generated when the McRae family purchased a sawmill and logging equipment from Sanford & Treadway and set up operation at Linville to harvest their own timber tracts.”⁶⁴

6 March 1925. The Lumber Manufacturer & Dealer.

“Linville – McRae Donald & Hugh recently began.”⁶⁵

1924 – late 1930s. Logging Railroads of the Blue Ridge and Smoky Mountains...

“Formed by the brothers, Don and Hugh McRae, the D. & H. McRae Lumber Company was located at Linville, North Carolina about 1920 [apparently 1924 would be more accurate] on the East Tennessee & Western North Carolina associated Linville River Railway narrow gauge railroad. The McRaes acquired the old Sanford & Treadway operation which operated out of Newland, North Carolina [and moved to Linville in 1920] and owned two Shays and a small Climax. The McRaes may have been trustees of the property.

The original railroad was seven miles long and was built as a 36-inch narrow gauge line. The rails were a slim 35-lb weight. This was not a casual romp in the woods, but had a ruling grade in both directions that was a staggering 6% and the maximum curve was a whopping 60 degree elbow. This line was designed to be handled by Shay locomotives.

Two Shays have been identified as working for the McRae Lumber Company. Lima Shay c/n 675, that had been built in September of 1901, was part of the Sanford and Treadway purchase and had come from the Chesapeake Western at Elkton in Maryland. The other Shay, c/n 2131, built in January of 1909, had been purchased by the W.G. McCain Lumber Company which operated it as No. 2 at both Neva and Butler, Tennessee. These were located on the Virginia & Southwestern Railroad south of Mountain City. The Shay obtained from the associated Peter McCain Lumber Company was its No. 1.

The Climax, which operated as McRae No. 5, was acquired from the H.S. [H.L.] White Lumber Company of Elk Park, North Carolina.

The late Dick Andrews visited the mill at Linville in the late 1930s and found the little ‘boot-boilered’ Shay being fired up by a mill boy who was using scrap slabs from the ground. The engine was going to be used to move some lumber on flat-cars into the kiln to be dried.

The logging railroad had been pulled up by this time and the mill was supplied with timber which was trucked into the mill. The mill trackage consisted of a wye, mill tracks serving the buildings and some yard tracks. A 25-ton Shay was found to be in good condition (probably the c/n 2131) and Andrews found a small Climax [No. 5] with a pilot that had been smashed.

Andrews asked why there were so few log cars around the property and was told that Whiting Manufacturing at Butler, Tennessee had taken all the best remaining cars for that operation [which began in 1928], the last logging by rail in the area.”⁶⁶

Equipment

Table 12. Locomotives used by the D. & H. MacRae Lumber Company, in Support of their Operations out of Linville, North Carolina

Type	Shop Number	Date	Remarks
17-ton Class A Shay	675	25 September 1901	Previously owned by the Chesapeake & Western Railroad Company and the Stiegel Lumber Company. 12 August 1920, sold to Sanford & Treadway at Newland, North Carolina. October 1924, sold to D. & H. MacRae Lumber Company at Linville, North Carolina.
24-ton Class B Shay	2131	12 January 1909	Previously owned by Peter McCain Lumber Company at Butler, Tennessee. Sold to D. H. MacRae Lumber Company on 4 November 1926. It was scrapped in 1944.
23-ton Class B Climax	unknown	1906	Previously operated by the H.L. White Lumber Company, based at Elk Park, North Carolina. Acquired by D.&H. MacRae Lumber Company by 1937 (almost certainly much earlier). It was scrapped in 1944.

Regrettably, the author has not found any information on the D. & H. MacRae Lumber Company mill and machinery, as well as their rolling stock that was employed at Linville. Also regrettably, the annual production rates for the D. & H. MacRae Lumber Company at Linville could not be located. However, historian Johnny Graybeal's Along the ET&WNC, Volume IV: Freight Cars Part A, includes the general information included in table 13 and 14, below. During the period, 1925 – 1940, when the D. & H. MacRae Lumber Company operated out of Linville, the only other major lumber mill served by the E.T. & W.N.C.R.R. and the L.R.R. was the Boone Fork Lumber Company (and its successors), which operated out of Shulls Mills, North Carolina, until 1926. Consequently, it appears that the D. & H. MacRae Lumber Company at Linville, North Carolina, was an important source of traffic for the narrow gauge during this period.

Historian Johnny Graybeal wrote: “In 1925, the LR shipped 3,193 carloads, or 40,245 tons of lumber. A year later, the figure declined to 2,304 loads, or 20,988 tons. In 1927, only 942 carloads went out, reflecting the closure of the Shulls Mills operation. In 1928, 1,706 carloads and 16,943 tons of lumber were handed over to the ET&WNC at Cranberry, but this was really the last hurrah, for the following year the totals were 822 loads for only 6,901 tons.”

“In 1925, the LR originated only 244 loads (3,648 tons) of pulpwood, and the ET&WNC only added 344 more (5,180 tons). Figures were better in 1926, but only marginally so. On the Linville River, 534 carloads (7,961 tons) of pulpwood were loaded, while the ET&WNC produced 642 loads for 9,630 tons. The lumber tonnage had also declined... and it appeared that the days of heavy freight traffic were coming to an end on the narrow gauge...

In 1928, the LR forwarded only 17 carloads of pulpwood to the ET&WNC. That railroad only had 678 loads that year. The following year, the LR sent out 293 carloads (4,395 tons), while the ET&WNC sent out 1,033 loads (15,454 tons). The lumber shipments had dropped off precipitously, so pulpwood and other ‘stick’ types of forest products were taking the lead in forest shipments.”

“One increased use of flat cars occurred as a result of the Shulls Mills sawmill closing. The mill shut down in 1926, but W.S. Whiting did not begin the process of moving the operation to Butler, TN, until 1928. In that year, several loads of rail were shipped from Shulls Mills to Elizabethton, and transferred to standard gauge cars for the trip to Butler...”

“The year 1930 saw the LR return to a less stringent reporting method due to the drop off of business. All forest products totaled only 12,635 tons, which was fully three-fourths of the total tonnage carried that year. This tonnage far exceeded what the ET&WNC reported as receiving from connections, so some of this could have been logs that were transported to [D. & H. MacRae Lumber Company saw mill at] Linville for processing before being shipped out as lumber. This process would have had the same tonnage counted twice! The Great Depression had come to the narrow gauge.”

“Tonnage figures remained low, and shipments of forest products began to come into the mountains rather than be supplied locally. The Great Depression virtually ended all lumber operations on the Linville River Ry. Local farmers cutting cord and pulpwood off their own property was the only business left.

In 1930, the ET&WNC forwarded 418 carloads of pulpwood, more than double the loads of timber for the same year. The figures were slightly higher in 1931 (458 loads), but lumber shipments were down to 103 loads. In 1932, pulpwood represented only 148 loads, and only 172 loads were carried in 1933...”

“By the mid-point in the decade, the shift from finished lumber to cordwood and other second-growth was complete. In 1935, the ET&WNC received 1,067 carloads of pulpwood from connections, but only 20 loads of lumber. Pulpwood and cordwood was carried in gondolas, wood cars, and even boxcars... This gulf widened in 1936, with 2,071 carloads of pulpwood, but only eight loads of lumber. Only two loads of lumber originated on the ET&WNC that year. In 1937, no lumber was carried at all. In 1938, only 78 loads of lumber came from all sources. This also allows for incoming shipments to Elizabethton from the outside world on standard gauge cars, for only one carload originated online, and seven came from one connection and delivered to another...”

“Pulpwood shipping totals continued to decline throughout the decade. In 1935, 239 carloads were originated on the ET&WNC. The following year, 144 loads were noted. No pulpwood was listed as carried in 1937, but this could have been an oversight in reporting. The year 1939 saw 109 carloads originate on the railroad. The Linville River would have contributed some loads also, but exact figures could not be determined...”⁶⁷

Table 13. “Linville River Railway [Freight] Tonnage... in Tons – Partial Listing by Category”, Year Ending 31 December, 1925 – 1929.⁶⁸

	1925	1926	1927	1928	1929
Logs/Posts	610	4,732	3,888	4,053	669
Pulpwood	3,648	7,961	24,165	136	4,395
Lumber	40,245	21,352	13,435	17,852	7,118
Other Forest	1,086	1,583	3,424	105	550
Coal	7,921	7,970	6,701	7,289	7,056
Clay/Gravel	1,937	14,841	21,255	903	1,211
Other Mines			154	11,854	
LCL	18,640	8,411	6,350	3,597	2,859
Total	81,398	73,169	88,617	44,986	39,043

Table 14. “Linville River Railway [Freight] Tonnage... in Tons – Partial Listing by Category”,
Year Ending 31 December, 1930 – 1940.⁶⁹

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
Forest Products	12,796	24,346	2,153	11,869	15,668	14,633	27,450	13,231	2,877	252	442
Mine Products	21,059	17,972	12,133	5,217	4,353	4,476	3,739	12,177	12,672	10,626	9,472
Agricultural Products	366	214	1,915	112	43			17	20	129	43
Manufactured	5,430	21,905	4,241	4,868	10,177	15,745	15,944	6,740	6,238	6,138	5,199
LCL	3,661	1,174	733	1,092	825	725	1,337	589	946	479	324
Total	43,312	65,611	21,175	35,410	31,066	35,579	51,520	32,754	22,753	17,624	15,480

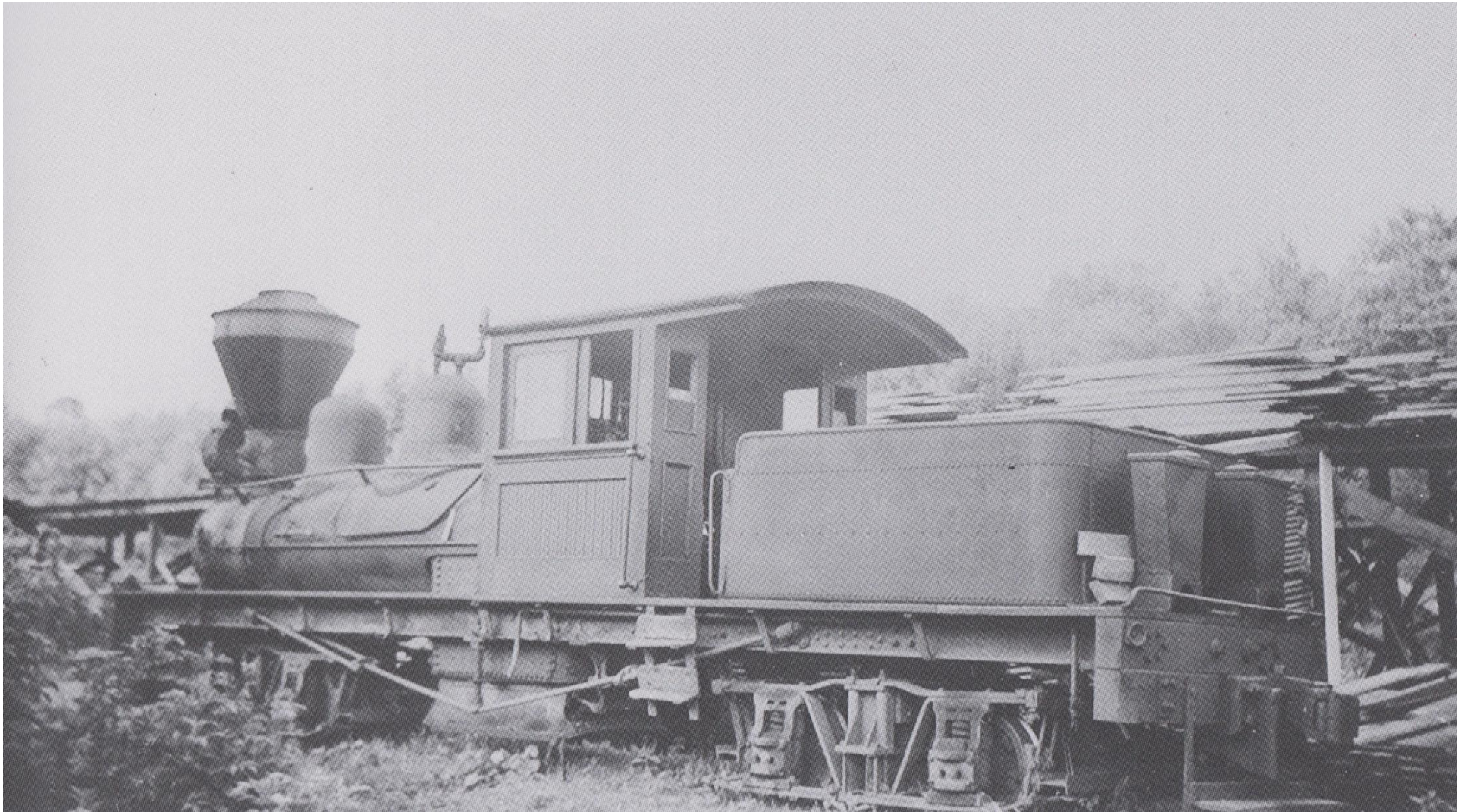


Figure 13. "The MacRae Lumber company operated this narrow gauge Shay (Lima 2131 – 1909) as well as a small Climax out of their Linville mill. The Shay was photographed by L.L. Norton on August 15, 1937. – Tom Lawson, Jr. Col."⁷⁰

Table 15. Shop Number 2131 – Built for: W.G. McCain & Sons⁷¹

Built: 1-12-1909	Class: B 24-2	Trucks: 2	Cylinders (#-Dia. x Stroke): 3 - 8 x 8
Gear Ratio: 3.071	Wheel Dia.: 26.5"	Gauge: 36"	Boiler (Style - Dia.): E.W.T. - 33.5"
Boiler Pressure (PSI): 160	Tractive Effort: 10,680 Lbs.	Factor of Adhesion: 5.32	Maximum Safe Speed: 10.3
Fuel Type: Coal	Fuel Capacity: 1.25 Tons	Water Capacity: 830 Gallons	Empty Weight (As built): 46,500
Owners:			
W.G. McCain & Sons #2, Neva, Tennessee			
(2-12-1919) Peter McCain Lumber Company #1, Butler, Tennessee			
(10-13-1925) For sale			
(11-4-1926) D. & H. MacRae Lumber Company, Linville, North Carolina			
Donald & Hugh MacRae (Trustees), Linville, North Carolina			
Disposition: (1944) Scrapped			



Figure 14. "The W.G. McCain Lumber Company of Butler, Tenn. operated this three-foot gauge 1909 Lima Shay [s/n 2131] which posed with the crew at the millsite. In 1929 this engine was transferred to the D&H MacRae Lumber Company at Linville, North Carolina along the ET&WNC mainline. (Collection of Tom G. King, Kingsport, Tenn.)"⁷²



Figure 15. This appears to be a later photograph of the locomotive in Figure 13, above. Of note, it has “D. & H. MacRae” written on its tender.⁷³

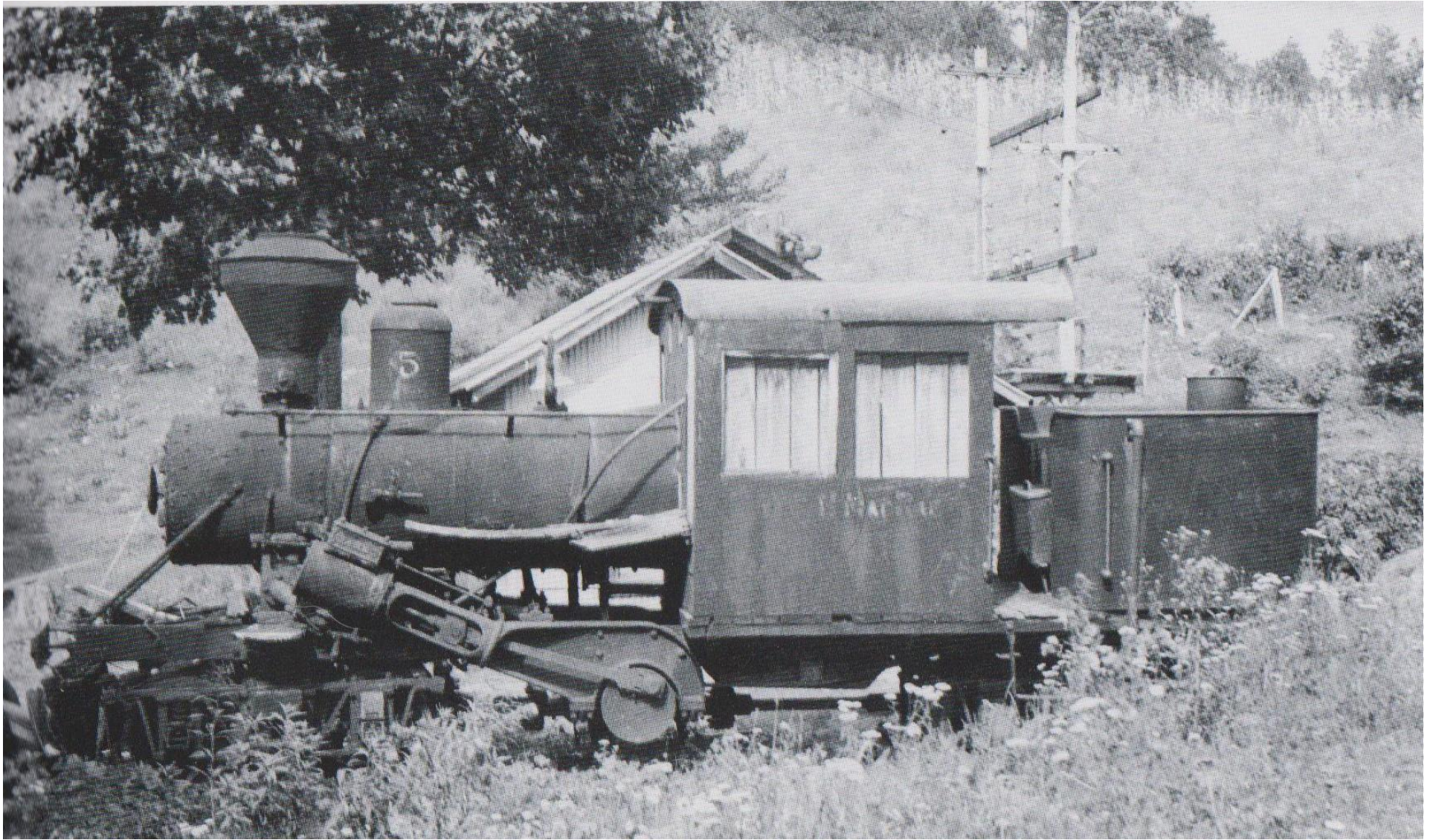


Figure 16. This 23-ton, Class B Climax locomotive (shop number unknown), was built in 1906 for an unknown organization. In 1911, it was acquired by the White Lumber Company, for its operation out of Elk Park, North Carolina, perhaps to replace Shay #2. It some point no later than 1937, it was acquired by the D. & H. McRae Lumber Company at Linville, North Carolina as their #5. It was scrapped in 1944.⁷⁴ This photograph, which shows the cab with faded “D. & H. MacRae” lettering, was taken at Linville, North Carolina, on 15 August 1937.

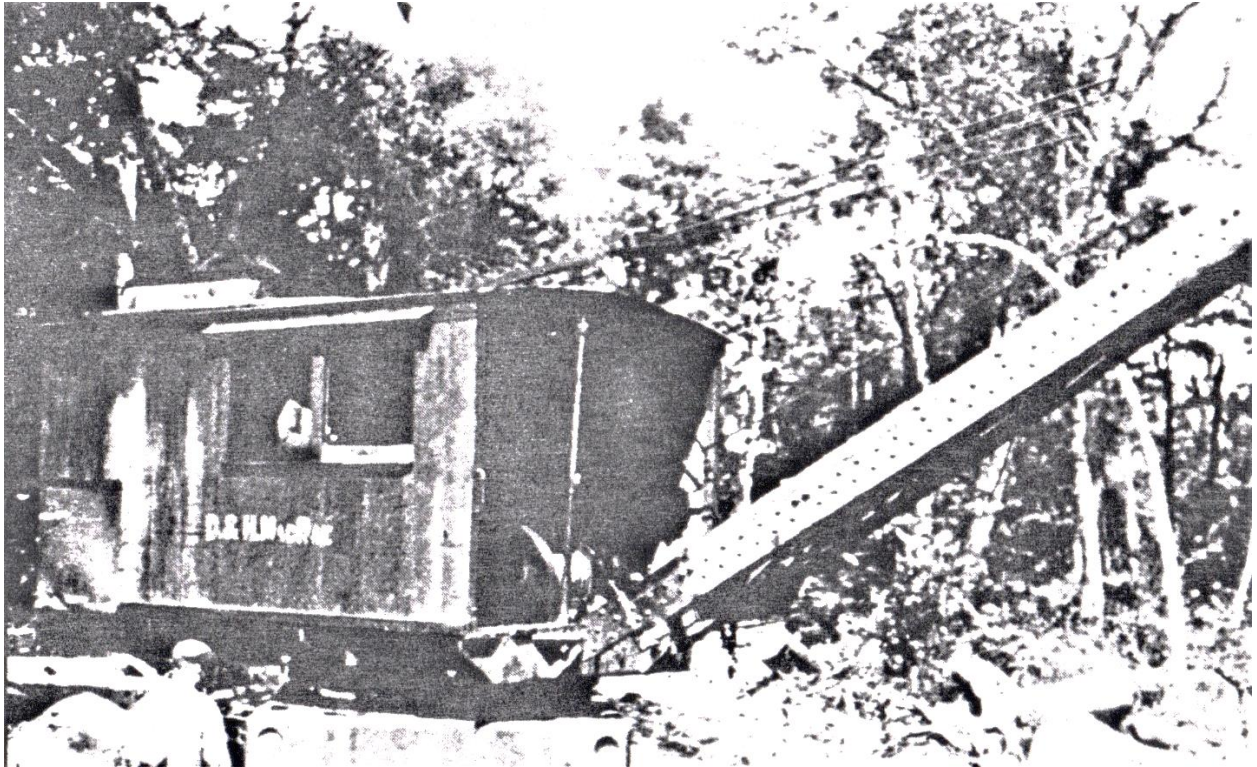


Figure 17. "A steam-driven [?] crane owned by 'D&H MacRae' at the Linville Improvement Co. sawmill."⁷⁵ Perhaps this was a Raymond log loader, which may have been acquired from Sanford & Treadway.



Figure 18. "The Linville company sawmill turned out lumber of the growing North Carolina furniture industry as well as the houses and buildings in Linville. The bark of the huge chestnut trees was stripped in the spring, flattened, stacked and then cut to size for use on houses in Linville and elsewhere."⁷⁶



Figure 19. “The Linville Improvement Co. sawmill on West Fork Creek was one of the valley’s largest employers. The company’s steam engine pulled huge logs of pine, hemlock and chestnut to a mill pond where they were cleaned before being fashioned into lumber.”⁷⁷ The engine appears to be an unidentified Class A Climax locomotive, perhaps acquired from Sanford & Treadway.

Mid-1920s. Grandfather Mountain: The History and Guide to an Appalachian Icon.

“Avery High School teacher Thomas Webb and Linville residents wrote a newspaper article in the early 2000s that named the people behind the process. With horses dragging timber, a blacksmith was needed, and that was Willie Stout. We also know Ed Lewis and Johnny Riddle ran the steam log loader and that Riddle died in a log fall. The sawmill was eventually purchased by Donald and Hugh MacRae and operated as the D&H MacRae Lumber company, then Linville Lumber Company. The names on the locomotives changed, but the workforce didn’t, managed by John Frank Hampton, an able man always seen in coat and tie above rough pants and high boots below.

Timber came from more distant MacRae tracts, a process embodied by George Tate Davis (1878 – 1946). The Linville Improvement Company timber warden lived in Linville Gap amid meadows cleared in the late 1800s by Walter Waightstill Lenoir. Tate, as they called him, got \$100 a month and farmed rent-free to keep an eye on the area, which he did with one of Avery County’s first telephones. Tate’s crews of woodsmen worked Sugar Mountain and the river valley toward ‘Grandfather City’ as Lenoir called Linville. Tate marked trees to be cut and spared and managed activity at the gap, the logical place to gather logs, prep them at small sawmills, then load them

onto trains. The gap had a wye, a Y-shaped track arrangements where an engine could turn around. Davis coordinated crews for more than a decade using small notebooks to record hours worked and species and board-feet cut. He listed the locations of the logging and the men he worked with. There was trail work, too. ‘Building trail on Grandfather’ noted one 1923 entry. He also tallied activity at the small mills. ‘Mill stopped six times,’ one entry read, usually ‘for logs’ – meaning the saw outpaced teamsters dragging timber. Telling vignettes emerged. ‘Mill stopped for logs at 9:35. Mill burnt down on night of October 23, 1923. 3 inches of snow on Ground.’ Tate’s crew got back to work in snow-covered autumn color.

The men of the High Country who claimed the ‘timberworked’ trade were pros. Outside companies recruited them with ads in the *Watauga Democrat*. The job was dangerous. Soon after Tweetsie reached Boone [in 1918], Tate injured his right arm in a log loading accident and ‘refused to go to a doctor until the pain became unbearable,’ recalled his granddaughter Carolyn Davis Curtis. ‘By then it was too late to save the arm.’ He did everything left-handed afterward, including writing his logging records. Reports of accidents were rife in newspapers of the time. A man from the Grandfather Community ‘working at a [log] skidder last Saturday was caught with some logs and badly injured.’ Arley Cornett of Mabel was riding a logging train near Boone when he fell and had both legs cut off. He died at the Shull’s Mill hospital. Brakeman Thomas Harmon tried to jump between cars and fell to the tracks. ‘No one saw the accident and the train didn’t stop. The unfortunate man was dragged and luckily dropped where some men were cutting wood near the tracks,’ quite possibly Tate’s crew. A train at the Linville Gap wye rushed Harmon to Shull’s Mill. He lived by lost a leg. Tate relied on neighbors, the men of the Grandfather Community, where there’s still a lane named Sawmiller’s Way. His notebooks are full of surnames that fill the cemeteries under the Grandfather: Berry, Fox, Porch, Presswood, and others.”⁷⁸



Figure 20. “Loading Hemlock Bark used in Tanning: Near Linville”, “Photograph by Clifton Adams”, *The National Geographic Magazine*, May 1926.⁷⁹ Note the (Raymond?) log loader in the background and below, which indicates that this photograph was probably taken at the D. & H. MacRae Lumber Company or, perhaps, its predecessor, the Sanford & Treadway operation out of Linville.



Figure 20A.

Early 1930s. Linville, A Mountain Home for 100 Years.

“Across the Linville River and out beyond Hampton’s Store and the post office, and on up West Fork Creek could be found the most profitable operation of the Linville Improvement Co. Several very large crude buildings, with smoke stacks three stories tall, housed the company’s sawmill.

Since the inception of the [Linville Improvement] company [as the Linville Land, Manufacturing & Mining company in October 1887], income from timber sales and finished lumber had helped subsidize development of the resort. Lumber sales to North Carolina’s growing furniture industry had brought cash and the mill had provided materials for the construction of the Eseeola and the early houses.

In the early 1930s, the company’s sawmill still turned out wood products from the great chestnut and white pine logs pulled off the surrounding mountains and hauled by rail to the mill by the company’s steam engine. There, the flat-bed cars were stopped at a point where the rails tilted toward a muddy mill pond. The logs were then rolled off into the water, where they were cleaned of mud and rocks before being pulled into to spinning blade inside.

Out the other side of the mill that John Frank Hampton managed for the Linville company came rough lumber that was dried and planed before shipment north by rail or south by truck to furniture factories in Hickory and Lenoir. Like farmers who use every part of the pig but the squeal, Hampton’s workmen used virtually every scrap of wood, particularly the chestnut.

After logging crews felled the chestnut trees in the spring, workers at the sawmill carefully stripped the bark from the great logs, some of which were more than two feet across at the butt. The bark was pliable and easily removed at that time of year, and could be stacked, pressed and baled. When dry, the bark was trimmed to size for use as siding to cover Chestnut Lodge and the new houses being built at Linville. Some was sold to builders in Blowing Rock, where bark exteriors had become popular. The balance was shipped to tanning operations out of state.

Some of the wood from the mill also went to a furniture shop operated by the company. Located on the side of Pixie Mountain near Columbus ‘Lum’ Hughes’ store, the shop was managed by a local carpenter and skilled furniture maker, Esten Lambert, and by Julian Morton. The traditional style of furniture produced at the plant was used to furnish many of the early Linville homes.

As many as thirty men worked at the Linville sawmill when it was running at its peak, providing one of the few sources of steady income for locale families. Jobs there were prized because most other labor, except for the furniture shop, was seasonal...”⁸⁰

1931. The Lumber Manufacturer and Dealer.

“Connecticut New Haven — Sanford & Treadway, discontinued business.”⁸¹

March 1938. “Riding the ET&WNC.”

Dick Andrews, “a well known railfan and columnist for the Narrow Gauge and Shortline Gazette”, wrote about a trip on the Linville River Railway from Boone, which included: “After passing through the [Linville] gap, we began to drop down into Linville. On a long left hand curve, we saw tracks branching off into a mountain cove, which formed a large wye; with the main line as one leg. A saw mill sat inside the wye and there on a bit of track sat an odd little locomotive. It was all one unit with a short tank fixed to the back of the cab, as on the Forney locos so familiar

to me on two foot gauge in Maine. There were no drivers under the boiler and the cylinders were cocked up at a wild angle! What could it be?”⁸² This seems to be a description of D. & H. MacRae Lumber Company #5, a 23-ton, Class B Climax.

13 – 14 August 1940. The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway.

“The Linville River Railway had suffered heavy damages all along its route. Bridges and fills were washed out along the Toe River between Minneapolis and Newland. The Linville River had overrun its banks, causing track damage near Linville. The worst damage was along the Watauga River near Foscoe and Shulls Mills, where large sections of track were ripped from the roadbed and fills were washed out leaving track dangling in the air.”⁸³



Figure 21. “Linville Valley Railroad Damaged on the Upper Watauga. Track was washed from the roadbed, roadbed severely scoured and washed away, and trestles were carried out by the flood.”

13 – 14 August 1940. Floods of August 1940 in Tennessee River Basin.

“The Linville River Railway... follows the upper Watauga River from its head at Linville Gap to Shulls Mills and then follows Laurel Fork to Hodges Gap where it crosses over into the Atlantic drainage. Damage was heavy throughout this entire length, In the Watauga Basin west of Boone, five steel bridges and six timber bridges were washed out, two miles of track were washed out, many fills were washed away, and numerous large slides occurred. According to estimates of the General Manager and Vice President W.H. Blackwell of Johnson City, damages to the railroad amounted to about \$50,000. No amount is added to the railroad damage for loss of business as the trucks normally operated by the railroad company served the area following the flood without much loss.

After the flood, a petition was made to the Interstate Commerce Commission for permission to abandon the line. Mr. Blackwell states that the investment in the road is approximately \$500,000 with an estimated salvage value of about \$20,000, so that if the road is abandoned the actual capital loss will be considerably in excess of the flood damage loss...”⁸⁴

Table 16. Adapted from “Summary of Flood Damages, Watauga River Basin, Mid-August Flood... Linville River Railway”⁸⁵

Bridges, 4 steel bridges, 5 wooden bridges, and other small bridges and culverts	15,000
Roadbed and track, several miles have been scoured and washed away at innumerable points, and innumerable large and small slides block the track	35,000
[Total]	50,000

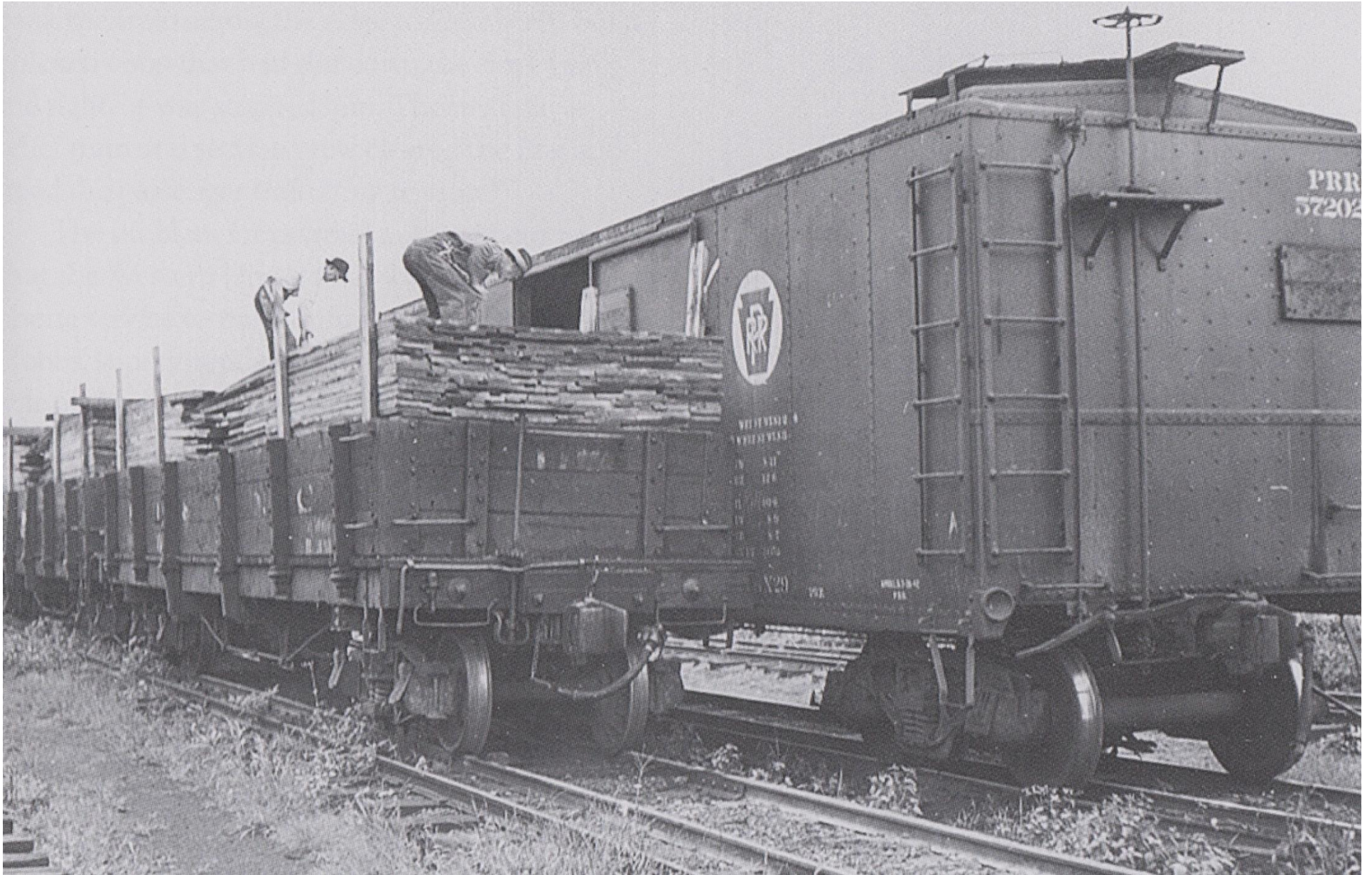


Figure 22. “Workers transfer rough-sawn lumber from narrow gauge gondolas to standard gauge box cars at the Johnson City yard in the mid-1940s. Such labor-intensive transfer of freight helped doom the narrow gauge railroads throughout the country. Photo by Jack Anderson, Jack Anderson – Vince Ryan Collection.”⁸⁶

Appendix A.
Open Questions

1. What was the roster of rolling stock for Sanford & Treadway during its operations out of Newland? Linville? D.& H. MacRae at Linville? Manufacturers? Specifications? Periods of Service? Is there any more information available on the locomotives used by Sanford & Treadway, as well as D.& H. MacRae?
2. What was the paint scheme used on the rolling stock of Sanford & Treadway? D. & H. MacRae?
3. What specific equipment was used inside these mills? How was this equipment arranged? Do any plans or photographs exist of the mills and the surrounding areas?
4. Is there any additional information on the log skidders and log loaders used by Sanford & Treadway? D.& H. MacRae?
5. Are any more photographs available of the operations of Sanford & Treadway near Newland and Linville? D.& H. MacRae near Linville? Are there any other photographs in the Nelson MacRae collection that pertain to the logging operations based in Linville?

Appendix B.
Missing References

1. Avery Vim newspaper
2. Elizabethton Mountaineer newspaper
3. Johnson City Comet newspaper – The last extant edition of this newspaper, available through *Chronicling America*, is from 12 July 1917. The Library of Congress states that “The Comet remained in publication at least through 1918, but the exact date of its demise is not known.”
4. Are there any extant records pertaining to the operations of Sanford & Treadway in Newland, Linville, Elizabethton, or Johnson City?
5. Are there any extant records pertaining to the operations of D.& H. MacRae near Linville?
6. The logging notebooks of George Tate Davis.

Appendix C.
The Operations of Sanford & Treadway, and its Predecessor Companies,
at New Haven, Connecticut (1844 – 1931)
and Menominee, Michigan (1899 – 1916)

HOUSE ESTABLISHED 1844.

E. H. ENGLISH & CO.,
FORMERLY ENGLISH & HOLT.
Manufacturers and Shippers of

Hardwood Lumber,
126 WATER ST., NEW HAVEN, CONN.

Figure C – 1. New Haven City Directory (Including West Haven), 1899.⁸⁷

20 May 1899. American Lumberman.

“Michigan... Menominee – E.H. English & Co., of Hartford, Conn., will open a yard in this city.”⁸⁸

29 July 1899. American Lumberman.

“A caller at the Lumberman office this week was Charles F. Treadway, representing the firm of E.H. [Edwin Holt] English & Co., formerly English & Holt, hardwood lumber dealers of New Haven, Conn. Mr. Treadway states that business in the east is fully as good as in the west and the dealers there are having the same difficulty is securing supplies and to do so are going further away from home than before.”⁸⁹

3 January 1900. The Daily Morning Journal and Courier (New Haven Connecticut).

“Legal notice is given of the dissolution of the firm of E.H. English & Co. by the death of Mr. English, and at the same time announcement is made of the formation of the new firm of Sanford & Treadway for the continuation of the business of the former firm, C.E.P. Sanford of the old firm and Charles F. Treadway being the new partners.”

“Dissolution of Partnership.

The partnership heretofore existing tween Edwin H. English and Charles E.P. Sanford, under the firm name of E.H. English & Co., has become dissolved by reason of the death of the said Edwin H. English. The affairs of said firm will be adjusted by Charles E.P. Sanford, and all

claims against said firm should be presented to him for payment, and proper receipts will be given by him upon payment of accounts due said firm.

New Haven, Conn., January 1, 1900.

Notice of Partnership.

The undersigned have this day formed a partnership under the firm name of Sanford & Treadway, and will continue the hardwood lumber business formerly carried on by E.H. English & Co.

Charles E.P. Sanford,

Charles F. Treadway.

New Haven, Conn., Jan. 1, 1900.”⁹⁰

1 January 1900. Southern Lumberman.

“A change in a New Haven (Conn.) firm, well known in the Nashville market and throughout the South, occurred On January 1. E.H. English & Co. is succeeded by the firm of Sanford & Treadway. It will be remembered that Mr. E.H. English, the founder and head of the old concern, died in October last. The new firm is organized by men long connected with the old firm, and who will carry on the business along the same line as heretofore. The new firm is composed of C.E. Sanford and C.F. Treadway. The latter gentleman represented the old firm in the South for a number of years and is particularly well known in the Memphis territory. The old firm was one of the veterans in the hardwood lumber business. The business for many years was conducted under the name of English & Holt, and this firm was succeeded by the firm of E.H. English & Co. only a few years ago [1897].”⁹¹

HOUSE EST. 1844.

SANFORD & TREADWAY

Successors to E. H. English & Co.

OFFICE SUITE 6, RAMSAY & JONES BLOCK. WALTER C. MANSFIELD, MGR.

MENOMINEE, MICH.

WHOLESALE **HARDWOOD LUMBER** YARDS:
ALLENTOWN, TENN.
NEW HAVEN, CONN.
MENOMINEE, MICH.

WHITE WINTER SAWED BASSWOOD CORRESPONDENCE
MOULDING AND SIDING A SPECIALTY. SOLICITED.

Figure C – 2. Official Directory and Atlas... 1902.⁹²

23 January 1904. American Lumberman.

“Menominee, Mich., Jan. 20. – C.E.P. Sanford and Charles F. Treadway, of the lumber firm of Sanford & Treadway, New Haven, Conn., were here this week looking over their Menominee plant, which is under the management of Walter Mansfield.”⁹³

15 August 1904. Twenty-Second Annual Report of the Bureau of Labor and Industrial Statistics...

Table C – 1. “showing factories inspected in 1904...”⁹⁴

Date of inspection.	Name of factory or firm.	Where located.	Kinds of goods manufactured or handled.	Number males employed.
Aug. 15	Sanford & Treadway	Menominee	Dressed lumber	20

13 July 1905. Twenty-Third Annual report of the Bureau of Labor and Industrial Statistics...

Table C – 2. “showing names of factories inspected in 1905...”⁹⁵

Name of factory or firm.	Location.	Goods manufactured or handled.	Year established.	Outlook for business.	Number males employed.	Number females employed.	Date of inspection.
Sanford & Treadway	Menominee	Dressed lumber	1903	G.	21	-	July 13

Sanford & Treadway
Menominee, Mich.

Our Planing Mill is running entirely on
BASSWOOD
Mixed Case Mouldings,
Siding and Finishing Boards.

Figure C – 3. American Lumberman, 13 January 1906.⁹⁶

5 May 1906. American Lumberman.

“Menominee River Notes. Menominee, Mich., May 1... The Sanford & Treadway Lumber Company has decided to enlarge its plant in this city by the addition of a large dry lumber storehouse and a new office building. The main plant of the company is at New Haven, Conn., the Menominee factory being used in preparing the stock and shipping it rough... The headquarters of the company are at New Haven and the branch factory in Menominee is a charge of Walter Mansfield.”⁹⁷

7 July 1906. American Lumberman.

“W.C. Mansfield, of the firm of Sanford & Treadway, Menominee, Mich., was a visitor in Chicago during the early part of the week and paid the Lumberman a call. The firm with which Mr. Mansfield is connected is one of the big factors in the distribution of basswood and other upper peninsula hardwoods. Mr. Mansfield gave an interesting review of changes which gradually are taking place in the basswood situation and cited many instances tending to show the general firming up in prices occasioned by the increased demand for this wood. Basswood, he said, was being shipped to eastern markets, log run, with the mill culls in. A year or so ago the mill culls were left on the hands of the producer to dispose of in whatever manner he could devise. He said his concern was satisfied with the present volume of business offered and the prices they were able to secure for the lumber it had to sell.”⁹⁸

5 September 1906. Twenty-Fourth Annual Report of the Bureau of Labor and Industrial Statistics...

Table C – 3. “List of inspections made in 1906, giving date of inspection, names of establishments, etc...”⁹⁹

Date of inspection.	Name of establishment.	Where located.	Goods manufactured or handled.	Number males employed.	Number females employed.	Whole number employed.
Sept. 5	Sanford & Treadway	Menominee	Dressed lumber	17	-	17

17 October 1907. Twenty-Fifth Annual Report of the Bureau of Labor and Industrial Statistics, Including the Fifteenth Annual Report of State Inspection of Factories.¹⁰⁰

Table C – 4. “List of inspections made in 1907, giving date of inspection, names of establishments, etc...”

Date of inspection.	Name of establishments	Where located.	Goods manufactured or handled.	Number males employed.	Number females employed.	Whole number employed.
Oct. 17	Sanford & Treadway	Menominee	Dressed lumber	16	1	177

6 November 1908. Twenty-Sixth Annual Report of the Bureau of Labor and Industrial Statistics Including the Sixteenth Annual Report of State Inspection of Factories.

Table C – 5. “Factory Inspection...”¹⁰¹

Date of inspection.	Name of establishment.	Where located.	Goods manufactured or handled.	Number of males employed.	Number of females employed.	Whole number employed.
Nov. 6	Sanford & Treadway	Menominee	Mouldings, etc.	15	1	16

25 December 1908. Hardwood Record.

“More than 400,000 feet of basswood timber has been purchased by Sanford & Treadway at Marinette from the firm of Crawford & Sons of Cedar River and the lumber is now being hauled to the Menominee, Mich., branch of the company.”¹⁰²

Sanford & Treadway
MENOMINEE, MICH.

BIRCH
 1 & 2 and Common
 4-4 & 8-4
SOFT ELM
 8-4 Culls.

Figure C – 4. American Lumberman, 9 January 1909.¹⁰³

OUR PLANING MILL IS RUNNING ENTIRELY ON **BASSWOOD**

Moulding, Bevel Siding, Ceiling, Finishing Boards, Leather Frames, Cloth Boards, etc.

SANFORD & TREADWAY :: MENOMINEE, MICH.

Figure C – 5. American Lumberman, 20 February 1909.¹⁰⁴

8 November 1909. First Annual Report of the Department of Labor of the State of Michigan.

Table C – 6. “Factory Inspections...”¹⁰⁵

Date of inspection.	Name of establishments.	Where located.	Goods manufactured or handled.	Number males employed.	Number females employed.	Whole number employed.
Nov. 8	Sanford & Treadway	Menominee	Lumber and mouldings	16	1	17

6 October 1910. Second Annual Report of the Department of Labor of the State of Michigan.

Table C – 7. “Factory Inspection...”¹⁰⁶

Date of inspection.	Names of establishments.	Where located.	Goods manufactured or handled.	Number males employed.	Number females employed.	Whole number employed.
Oct. 6	Sanford & Treadway	Menominee	Mouldings and sash	14	1	15



Figure C – 6. American Lumberman, 8 July 1911.¹⁰⁷

24 August 1911. Twenty-Ninth Annual Report of the Department of Labor of the State of Michigan.

Table C – 8. “Factory Inspection...”¹⁰⁸

Date of inspection.	Names of establishments.	Where located.	Goods manufactured or handled.	Number of males employed.	Number of females employed.	Whole number employed.
Aug. 24	Sanford & Treadway	Menominee	Interior finish	14	1	15

8 October 1912. Thirtieth Annual Report of the Department of Labor of the State of Michigan.

Table C – 9. “Factory Inspection...”¹⁰⁹

Date of inspection.	Names of establishments.	Where located.	Goods manufactured or handled.	Number males employed.	Number females employed.	Whole number employed.
Oct. 8	Sanford & Treadway	Menominee	Interior finish	14	1	15



Figure C – 7. Lumber World Review, 10 July 1913.¹¹⁰

6 September 1913. Michigan Manufacturer and Financial Record.

“Sanford & Treadway, of Menominee, last week shipped a consignment of 5,400,000 lineal feet of molding to New York. The total length is over 1,000 miles. The company’s planing mill is enjoying one of its busiest seasons and the outlook is particularly bright. The company makes a specialty of basswood piano key stock and in July alone shipped 226,000 feet to Connecticut manufacturers. The company handles more basswood than any other northern firm.”¹¹¹

8 November 1913. Thirty-First Annual Report of the Department of Labor of the State of Michigan.

Table C – 10. “Factory Inspection...”¹¹²

Date of inspection.	Names of establishments.	Where located.	Goods manufactured or handled.	Number males employed	Number females employed	Whole number employed.	Year business was established.
Nov. 8	Sanford & Treadway	Menominee	Lumber	18	1	19	1901

Basswood

Lumber and Millwork

We want to reach retail yards and sell them Kiln Dried **BASSWOOD** Trim, Mouldings, Siding, Ceiling or anything in Basswood, from our own Basswood Mill.

Your orders will be filled promptly and faithfully. Let us hear from you.

Sanford & Treadway Menominee Michigan

Figure C – 8. American Lumberman, 3 January 1914.¹¹³

24 November 1914. Thirty-Second Annual Report of the Department of Labor of the State of Michigan.

Table C – 11. “Factory Inspection...”¹¹⁴

Date of inspection.	Name of establishments.	Where located.	Nature of business.	Number males employed.	Number females employed.	Whole number employed.	Year business was established.
Nov. 24	Sanford & Treadway	Menominee	Lumber	10	-	10	1901

1914. The Indicator.

“The Michigan Inspection Bureau has issued special hazard reports upon the following risks... Sanford & Treadway Lbr. Co., Menominee...”¹¹⁵

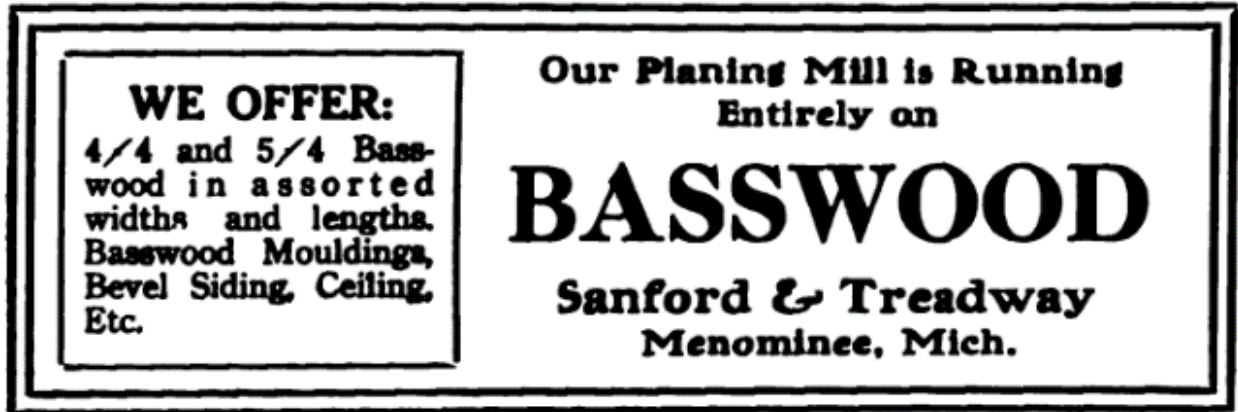


Figure C – 9. Lumber World Review, 25 June 1914.¹¹⁶

24 November 1915. Thirty-Third Annual Report of the Department of Labor of the State of Michigan.

Table C – 12. “Factory Inspections...”¹¹⁷

Date of inspection.	Name of establishments.	Where located.	Nature of business.	Number of males employed.	Number of females employed.	Whole number employed.	Year business was established.
Nov. 24	Sanford & Treadway	Menominee	Lumber	12		12	1898

10 August 1916. Hardwood Record.

“Announcement – New Haven, Coon., Aug. 1, 1916. We have sold our planing mill and lumber yard at Menominee, Mich., to Mr. Walter C. Mansfield, who has been our agent there for eighteen years. He has taken over that branch of our business and we are pleased to commend him to the trade. Sanford & Treadway.

Announcement – Menominee, Mich., Aug. 1, 1916. Having purchased the planing mill and yard of Sanford & Treadway, at Menominee, Mich., I propose to continue the business and furnish the same high grade of stock for which the mill has become noted, and trust to be favored with a liberal share of the trade. Walter C. Mansfield.”¹¹⁸

10 August 1916. Lumber World Review.

“Unique Among Woodworking Plants. The plant of Walter C. Mansfield, at Menominee, Mich., is unique among woodworking plants throughout the country, in that it manufactures basswood lumber into mill work of various kinds, either of regular or special design and also handles basswood lumber at wholesale, in other words making an exclusive specialty of basswood and its products. The items which the plant manufactures are so diversified as to defy specific enumeration, but in a general way they may be classified as mouldings of every description, drawer slides and partitions, rubber stamp backing and a thousand and one types of special work which might be needed for novelties. The plant is thoroughly equipped with machinery of all kinds for turning out these various items.

Mr. Mansfield’s long experience in this line of business and his free rein in the development of the trade along these lines have conspired to make it a really individual undertaking and accordingly he recently purchased their Menominee plant from Sanford & Treadway, its original owners and is now operating it under his own control. The other business of Sanford & Treadway, with headquarters at New Haven, Conn., of course, continues on the same large scale as before.

Walter Carrington Mansfield was born over two score years ago in New Haven, Conn., coming from an old New England family which dates back to the New Haven colonists of 1635. After completing his studies at school and college, his father, who was a newspaper publisher, desired him to go into that business, but he preferred lumber and secured a position with the Halstead & Harmount Co., which concern operated a retail and wholesale yard and also manufactured sash and doors at New Haven. After five years’ experience with that concern, he accepted a position with Sanford & Treadway and came to Menominee March 1, 1898, as that firm’s buying representative. Four years later he started the plant which he recently purchased and the business has grown steadily and heavily. It fills a peculiar niche of its own, there being few, if any, establishments in the country of similar character. Mr. Mansfield reports that he is well supplied with orders and says that his business prospects are good. He caters largely to the retail and manufacturing trade, shipping mill work and lumber, basswood exclusively, in carload lots.”¹¹⁹



Figure C – 10. “Walter C. Mansfield, of Menominee, Mich.”

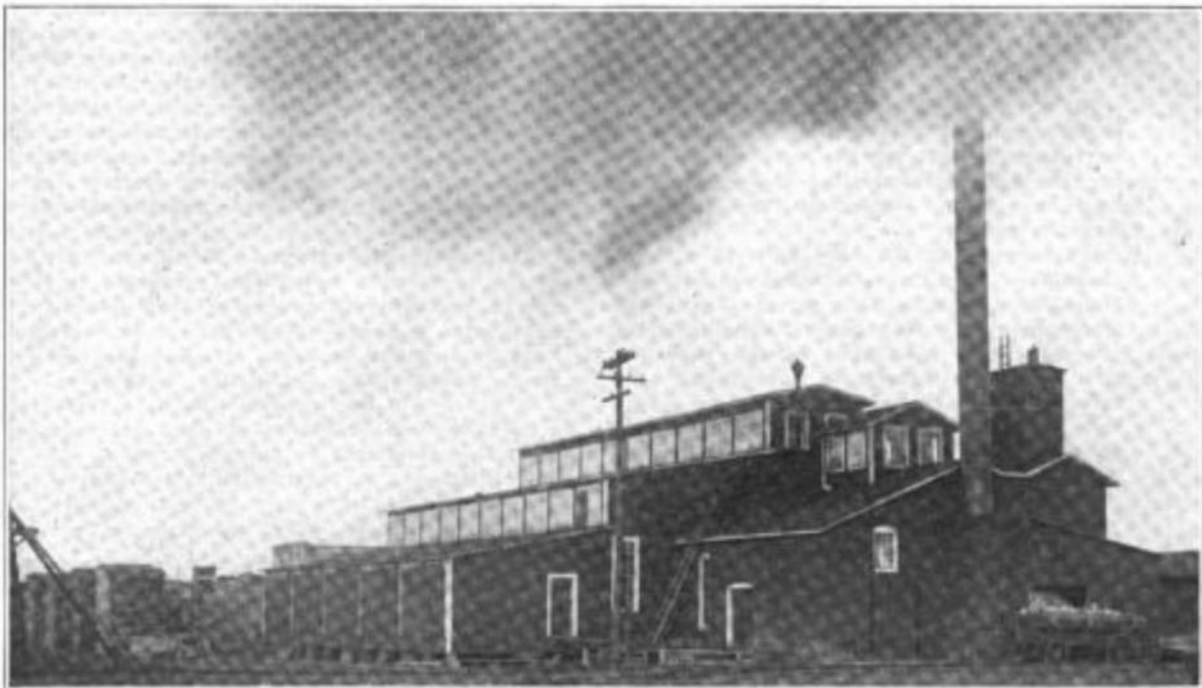


Figure C – 11. “Plant of Walter C. Mansfield, at Menominee, Mich., recently purchased from Sanford & Treadway, of New Haven, Conn. Mr. Mansfield handles exclusively basswood lumber and millwork and has built up an excellent business during his fourteen years of capable management.”



Figure C – 12. “A Sample Basswood Shipment Made by Sanford & Treadway.”
Lumber World Review, 10 October 1914.¹²⁰

1 September 1916. The Lumber Trade Journal.

“Sanford & Treadway, Menominee, have sold their planing mill and lumber yard to Walter C. Mansfield.”¹²¹



Figure C – 13. “Sanford & Treadway Lumber...” at Menominee, Michigan.¹²² (Added 24 July 2023).



Figure C – 13A. Notice the sign at the top of the Mill lettered “Sanford & Treadway,” (added 24 July 2023).



Figure C – 13B. (Added 24 July 2023).



Figure C – 13C. (Added 24 July 2023).



Figure C – 13D. (Added 24 July 2023).

Appendix D.
Raymond Log Loaders



Figure D – 1. “The Raymond Gasolene Log Loader”, American Lumberman, 19 July 1919.¹²³

“Raymond Gasoline Sliding Car Loader”



Figure D – 2. “L. Stephenson Co., Wells, Mich. Capacity 100,000,000 feet annually. All their loading is done with Raymond Gasoline Loaders, as shown. Cleveland Cliffs Iron Co., Marquette, Mich., are using nine Raymond Log Loaders. They are also heavy operators. Our Loaders are the most economical operated of any Loaders on the market.”¹²⁴



Figure D – 3. “Raymond Gasoline Loader with shovel attachment, now owned by Fountain-Campbell Lumber Co., Ladysmith, Wis. No logging concern is complete without a Raymond combination Log Loader and Excavator.”¹²⁵



Figure D – 4. “Oval Wood Dish Co., Tupper Lake, N.Y. Raymond Gasoline Car Derrick does switching and general yard work. It is equipped with air brakes and electric lights.”¹²⁶

“Raymond Log Loader Co. Manufacturers
Escanaba, Mich.”¹²⁷

Appendix E.
Forest Fires and their Prevention in Avery County from 1917 – 1920.

“Articles of Association, Constitution and By-Laws

ARTICLE I

Name: The name of this Association shall be The Linville Forest Protective Association.

Object: And its object the preservation of the forests of Avery, Caldwell, Watauga, and adjoining counties in North Carolina from loss or damage by fire.

ARTICLE II

Place of Business

Headquarters: The principal place of business of this association shall be Linville, Avery County, North Carolina.

ARTICLE III

Government

Control: The affairs of this association shall be controlled by a board of directors, and five members shall constitute a full board.

ARTICLE IV

Membership

SECTION 1. Any person, firm or corporation, who either as owner, agent, lessee, or in any other capacity is interested in the ownership or management of forest lands within the limits specified in Article I shall be eligible to membership in this association. Those executing this instrument on or before... 191..., shall be considered charter members.

Sec. 2. Any person, firm, or corporation, in addition to those executing this instrument, or any acting as agent for such person, firm, or corporation, desiring to become a member of this association, shall apply to the secretary in writing, which writing shall state the location and approximate forest acreage of such land and miles of railroad or tram road operated or under construction by him.

Sec. 3. Applications for membership must be passed upon and the proposed members elected or rejected by the board of directors at their next meeting after receipt thereof, and it shall take a majority affirmative vote to elect to membership.

SEC. 4. No person, firm, or corporation shall exercise the rights or be entitled to the privileges of membership until he, or it, shall have signed the roll and subscribed to these Articles of Association and By-Laws.

Sec. 5. The interest of each member shall be equal to that of any other member, and no member can acquire an interest which will entitle him to a greater voice, authority, or interest than any other member.

Sec. 6. Membership in the association may be terminated by formal withdrawal of the member, which shall be in writing, delivered to the secretary, by death or ex. pulsion, pr vided that termination of membership shall not relieve the member of the liabilities of the association then existing.

SEC. 7. A member may be expelled from the association for any of the following reasons:

- a. Failure to timely pay any assessment levied by the association.
- b. Failure by a member to observe and conform to the by-laws of this association.
- c. The board of directors shall have the power to expel members, but it shall take a majority vote of all directors to expel, and then only after due hearings and for cause.

Sec. 8. When an individual, firm, or corporation ceases to be a member of the association for any cause, he shall receive no remuneration for any interest he may claim in the property of the association. Membership in the association gives no interest in the property of the association, or in the land or timber holdings of any other member of the association.

Sec. 9. Any person interested in forest protection in western North Carolina, even though owning no acres of woodland within the limits specified, nor being pecuniarily interested in any woodland, may become an honorary member of this association upon the majority vote of all members present at any regular meeting.

Sec. 10. Dues for honorary membership shall be one dollar (\$1) per annum, but donations in excess of this amount may be contributed.

Sec. 11. Honorary members may take part in all meetings, discussions, and other activities of the association, but their vote may be suspended on questions of policy and finance.

ARTICLE V

Assessment

SECTION 1. The funds to defray the expenses of the association shall be raised by assessment of the members thereof, as shown by the roll of membership.

Sec. 2. The board of directors shall have the power to levy and enforce the payment of assessments to defray the expenses and maintenance, and to promote the objects of the association.

Sec. 3. The amount of assessments shall be determined by the board of directors, and shall be made uniform, based on the total acreage of lands of the members and upon the total mileage of railroad lines either operating or under construction, owned or operated by members. In no case shall an assessment exceed the sum of one-half of one cent per acre and \$5 per mile of railroad, nor shall more than two such assessments be made during one calendar year; provided: That in cases of emergency seventy-five per cent of the membership may vote an additional necessary assessment. Each member shall be required to pay assessments on the basis of the numbers of acres and miles of railroad each controls, owns or is interested in. Members who own no land or lines of railroad shall not be required to pay an assessment of more than \$1 per year, though contributions exceeding that amount may be accepted.

Sec. 4. When assessment shall have been levied by the board of directors, notice thereof shall immediately be sent to the members of the association, and all such assessments must be paid within thirty days from notice thereof, and no additional assessments shall be called until at least thirty days after the previous assessment.

ARTICLE VI

Meetings

SECTION 1. There shall be an annual meeting of the association, held at its principal place of business on the second Tuesday of August of each year, for the election of directors to manage the affairs of the association for the ensuing year and for the transaction of such other business as may properly come before it.

Sec. 2. Notice of the time and place of the annual meeting shall be sent at least ten days prior thereto by the secretary to each member to the address appearing on the records of the association as the postoffice address of such member, and such notice shall be sufficient.

SEC. 3. Special meetings of the association may be called at any time by resolution of the board of directors, by the president, or by the secretary upon request of not less than four regular members. Seven members shall constitute a quorum for the transaction of business.

Sec. 4. The order of business at all meetings of the association and of the board of directors shall be, as far as practicable, as follows:

- a. Call to order
- b. Calling of roll
- c. Reading of minutes of previous meeting
- d. Approval of minutes of previous meeting
- e. Report of secretary-treasurer
- f. Report of manager
- g. Reports of committees
- h. Election of members
- i. Election of directors and officers
- j. Unfinished business
- k. Communications
 1. New business
- m. Adjournment.

Sec. 5. The board of directors shall hold meetings on the second Tuesday of August of each year at the principal place of business of the association, and such other meetings as they may deem proper and wise. The president or a majority of the directors may at any time call a meeting of the board of directors.

ARTICLE VII

Board of Directors

SECTION 1. The board of directors shall have power to fix the time and place of all regular (and special) meetings, to appoint committees, either from their own members or members from the association or their representatives, or in such cases as in their discretion seem advisable, to authorize the president to do so.

Sec. 2. They shall have power to adopt and carry into effect such measures as they deem proper to promote the object of the association.

Sec. 3. They shall have power to levy all assessments, based upon the acreage and railroad mileage of each member, compared with the whole acreage and mileage of the entire membership.

Sec. 4. They shall have power to appoint and to fix the salaries of any and all agents or employees of the association, except such as are fixed by law; to authorize the payment of all obligations incurred by the association; and to transact all other business of said association.

Sec. 5. A majority of the members of the board of directors shall constitute a quorum for the transaction of general business, and the president shall be chairman of the board of directors.

Sec. 6. The directors may elect members of the association to fill vacancies on the board caused by death, resignation, or other causes.

Sec. 7. The directors shall have power to do all other business and transact all other business that may lawfully be done and transacted under the laws of North Carolina.

ARTICLE VIII

Officers

SECTION 1. The officers of the association shall consist of a president, a vice-president, a secretary-treasurer, and a board of five directors, who shall be elected at the annual meeting of the association, and who, in all cases, shall be members of the association.

Sec. 2. The president shall preside at all meetings and shall have general supervision of the affairs of the association.

Sec. 3. The vice-president shall exercise all the functions of the president in the absence of the president.

Sec. 4. The secretary-treasurer shall issue notices of all meetings of the association, either regular or special meetings of the board of directors; he shall sign with the president such instruments as require his signature and shall keep and issue lists of the members of the association; he shall collect assessments levied by the board of directors, make out vouchers covering legitimate expenses of the association and attest them, shall make out reports, and shall perform such other duties as are incident to his office or are properly required of him by the board of directors. He shall receive all moneys belonging to the association, keep an accurate account of same and pay them out only upon a duly authorized voucher drawn by the secretary with the approval of the board of directors. At the end of his term of office he shall turn over to his duly elected successor all moneys in his hands belonging to the association.

ARTICLE IX

Term of Office

The term of office of all officers of the association shall be one year from the second Tuesday in August of each year, or until their successors are duly elected and have qualified.

ARTICLE X

Amendments

These articles may be amended at any annual meeting, or special meeting, of the members of the association by a majority vote of the members present, in person or by proxy, at such meeting; said amendment must, however, be submitted to the secretary in writing at least one month before said meeting, or in ample time for him to incorporate same in his notice or call for said meeting, which notice shall in all cases contain the full text of the proposed amendment.”¹²⁸

“The work of this association was referred to in the Collaborator's report to the United States Forester for 1916 as follows:

‘In spite of the very limited assistance the State was able to contribute, owing to the lack of an appropriation, private coöperation was extended in 1916. The Linville Forest Protective Association was definitely organized in February, with headquarters at Linville in Avery County. Landowners, extending from Blowing Rock on the Blue Ridge westerly almost to the Tennessee line and controlling an area of some 33,000 acres in Avery, Caldwell, and Watauga counties, agreed to some general articles of association, a copy of which is attached. The chief feature of these articles is the assessment, which is based not only upon the amount of land represented, but also upon the miles of railroad operated or under construction in the area. A preliminary assessment of half a cent an acre and \$5 per mile for railroads was paid in by all members. A total of \$330.68 was thus contributed to the fire protection fund of this organization. Owing possibly to a failure

on the part of the management to grasp the necessity for vigorous action, few patrolmen were appointed and comparatively little of this sum was spent. Unfortunately, a considerable number of serious fires occurred both on and surrounding this area, which might at least in part have been prevented had more complete control been organized. Though a second assessment of the same size was expected before the fall fire season, it was not thought necessary to call for this, so that only the first assessment has been made. One Federal patrolman coöperated with this association, with his district at the extreme eastern end of the area. A second patrolman was offered to the association during the fall fire season, but the season was so short and light that this was not taken advantage of.'

The report of the Collaborator for 1917 contains this reference:

'The Linville Forest Protective Association, controlling some 33,000 acres in Avery, Caldwell, and Watauga counties, employed two patrolmen throughout the spring and fall fire seasons. In addition to these two men, some of the members employed their own patrolmen, who cooperated with those employed by the association. The members are thoroughly interested, and practically all of them have paid their dues to date; \$316.91 semiannual dues having been received during the fall. No account, however, has been received of expenditures. One Federal patrolman coöperated with this association, both in the spring and fall, on the Blowing Rock end of the district.

No complete official statement has been submitted by the manager, so that only an incomplete one can be supplied. As all the subscriptions of this association have been made through the office of the State Geological and Economic Survey, the receipts, therefore, are known. A statement of expenditures has recently been submitted by the manager.'"¹²⁹

Forest Fires in Avery County, North Carolina, 1917 – 1920

Table E – 1. “Forest Fires in North Carolina during 1917.
Summary of Reports from Correspondents by Counties. Mountain Region.”¹³⁰

County.	Total Number of Townships in County.	Number of Replies Received	Number of Fires	Total Number Acres Burned Over	Merchantable Timber Destroyed, M.	Value of Timber Destroyed	Acres Young Growth Destroyed	Value Young Growth Destroyed	Value of Products destroyed	Value Improvements destroyed	Cost of Fighting Fires	Total Damage Reported
Avery	5	6	8	350	220	\$200	200	\$600	\$200	\$1,110	\$115	\$2,110

Table E – 2. “Forest Fires in North Carolina during 1918.
Summary of Reports from Correspondents by Counties. Mountain Region.”¹³¹

County	Total Number of Townships in County	Number of Townships Reporting	Number of Replies Received	Number of Fires	Total Number Acres Burned Over	Merchantable Timber Destroyed, M.	Value of Timber Destroyed	Value of Young Growth Destroyed	Value of Products Destroyed	Value of Improvements Destroyed	Cost of Fire Fighting	Total damage Reported
Avery	8	3	3	2	20	-	-	\$20	-	-	\$20	\$20

Table E – 3. “Forest Fires in North Carolina during 1919.
Summary of Reports from Correspondents by Counties. Mountain Region.”¹³²

County	Total Number of Townships in County	Number of Townships Reporting	Number of Replies Received	Number of Fires	Total Number Acres Burned Over	Merchantable Timber Destroyed, M.	Value of Timber Destroyed	Value of Young Growth Destroyed	Value of Products Destroyed	Value of Improvements Destroyed	Cost of Fire Fighting	Total damage Reported
Avery	8	3	4	2	10	-	-	-	-	\$100	-	\$100

Table E – 4. “Forest Fires in North Carolina during 1920.
Summary of Reports from Correspondents by Counties. Mountain Region.”¹³³

County	Total Number of Townships in County	Number of Townships Reporting	Number of Replies Received	Number of Fires	Total Number Acres Burned Over	Merchantable Timber Destroyed, M.	Value of Timber Destroyed	Value of Young Growth Destroyed	Value of Products Destroyed	Value of Improvements Destroyed	Cost of Fire Fighting	Total damage Reported
Avery	8	6	8	41	2,500	160	\$800	\$6,400	\$2,100	\$300	\$300	\$9,600

Endnotes

¹ “Newland, North Carolina,” by John R. Waite, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Fall/Winter 2004 (Volume 15, Number 2), pages 3 – 10.

² The Shay Locomotive: Titan of the Timber, by Michael Koch, 1971, pages 401 and 404, lists: A Shay locomotive with shop number 583 (originally owned by W.G. Tuten of Pembroke, Georgia, as #1) was mistakenly listed as Sanford & Treadway #1, at Newland, North Carolina. A Shay locomotive with shop number 670 (originally owned by W.G. Tuten of Pembroke, Georgia, as #17) was mistakenly listed as Sanford & Treadway #17, at Newland, North Carolina. Neither shop number 583 nor 670 was ever owned by Sanford & Treadway. Corrections are from Shay – The Supplement, by Thomas Lawson, Jr., 1998, pages 23 and 25.

³ This locomotive, the 20-ton Class A Climax reportedly operated by Sanford & Treadway, has been assigned tracking number X512. The origin and use of “tracking numbers” is explained in The Climax Locomotive (above). The Climax Locomotive, by Dennis Blake Thompson, Richard Dunn, and Steve Hauff, 2002, page 382. Page 396 states that this locomotive operated out of Linville (not Newland) North Carolina.

⁴ Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, pages 108 – 109. A part of this section reads that Sanford & Treadway “operated a three-foot gauge railroad running north along a creek at a rural location on the early logging railroad built by Camp from Cranberry to Saginaw. [Camp did not complete his railroad. It was sold to Isaac T. Mann in 1898.] Later [1899], W.M. Ritter chartered this Camp logging line as his Linville River Railway. The Sanford & Treadway mill and camp became the village of Newland (3590 foot elevation) which was in Mitchell County. In 1913 [1911], the area around Newland was formed into Avery County, North Carolina...” Based on extant information, it appears that Sanford & Treadway did not begin operations out of Newland until 1916. This source also includes: “The disposition of all equipment in 1920 probably signalled the end of the Sanford & Treadway operations at Newland”, however, other sources indicate that Sanford & Treadway moved this operation to Linville and continued to operate from there until about 1924, when this operation was acquired by the D. & H. MacRae Lumber Company.

⁵ Along the ET&WNC, Volume IV: Freight Cars Part A, by Johnny Graybeal, 2003, pages 77 – 82, 114 and 117.

⁶ Adapted from Along the ET&WNC, Volume IV: Freight Cars Part A, by Johnny Graybeal, 2003, page 147. Of note, there were seven lumber companies with significant logging railroads served by the E.T. & W.N.C. R.R. and L.R.R. during their existences. Prior to 1911, there was the Uptegrove operation on White Rocks Mountain near Roan Mountain, Tennessee, as well as the William M. Ritter operation at Pineola, North Carolina. Both of these had shut down by 1911. From 1915 to 1928, the Boone Fork Lumber Company (and its successors) operated out of Shulls Mills, North Carolina, followed in 1917 by the Sanford & Treadway operations out of Newland, and Linville, North Carolina (which was taken over in 1924), and, finally, the D. & H. MacRae operation out of Linville, North Carolina, beginning in 1924, which was in service until 1940. Nevertheless, there were a number of smaller operations that also shipped out lumber and other forest products over the Linville River Railway during the period 1915 – 1940. Perhaps of interest, the Laurel Fork Railway, which also operated near Hampton, Tennessee, is not included because it used its own railroad to ship its lumber.

⁷ “Shay Locomotives,” available online at: <https://www.shaylocomotives.com/data/dataframe.htm>.

⁸ Adapted from “Shay Locomotives,” available online at: <https://www.shaylocomotives.com/data/dataframe.htm>.

⁹ “Stokesville, Virginia, From Past to Present,” available online at: <https://masonma.wixsite.com/stokesville>.

¹⁰ Available online at: <https://www.shaylocomotives.com/data/dataframe.htm>. The photograph is credited to the George Kadelak collection.

¹¹ Adapted from “Shay Locomotives,” available online at: <https://www.shaylocomotives.com/data/dataframe.htm>.

¹² American Lumberman, 15 January 1910 (Whole Number 1809), page 99, available online at: <https://books.google.com/books?id=OtbUwCRND-UC>.

¹³ Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 67.

¹⁴ The Lumber Trade Journal, 15 April 1909 (Volume 55, No. 8), page 18, available online at: <https://books.google.com/books?id=kLo4AQAAMAAJ>, which included: “operations, which are now well under way, include the company’s band mill and other buildings at Abingdon, Va., and two similar plants at Judson, N.C., 33 miles of railway, ramifying the forests, seven locomotives, 118 logging cars, steam log-loaders, planing mills, flooring mills, waterworks, electric light plants, dry kilns, lumber sheds, etc.” The Climax Locomotive, by Dennis Blake Thompson, Richard Dunn, and Steve Hauff, 2002, page 419, indicates that at least six of these seven locomotives were Climax types, of which carried two #2 and both of these were 18-ton Class A types (with shop numbers 245 and 706). The two 20-ton Class A Climaxes carried #3 (shop number 882) and #4 (shop number 892). One of these two 20-ton Climaxes was transferred to Whiting’s Boone Fork Lumber Company in 1915, becoming their 1st #1 (probably shop number 882, as shop number 892 was listed for sale in April 1914 and Whiting probably retained the best of these two for his own use). At some point before 1921, this Boone Fork Lumber Company #1 Class A Climax was acquired by Sanford & Treadway. A fifth Class A Climax, of 18-tons with shop number 447, carried #1.

¹⁵ American Lumberman, 15 January 1910 (Whole Number 1809), page 105, available online at: <https://books.google.com/books?id=OtbUwCRND-UC>.

¹⁶ Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 66. This photograph and the one below shows two of the five Class A Climaxes operated by the Whiting Manufacturing Company, based out of Abingdon, Virginia.

¹⁷ “Sanborn Fire Insurance Map from Elizabethton, Carter County, Tennessee,” November 1902, image 1, available online at: http://hdl.loc.gov/loc.gmd/g3964em.g3964em_g083081902.

¹⁸ This article was kindly provided by Ryan Rice in an email to the author on 17 July 2023. “The Valley and Mountain Iron Ores of East Tennessee,” by Royal P. Jarvis, in The Resources of Tennessee: Published by the State Geological Survey, September 1912 (Volume 2, No. 9), pages 341 – 342, available online at: <https://books.google.com/books?id=sOJIAQAAMAAJ>, which includes: “Magnetites on tributaries of Doe River. – In the extreme southeastern part of Carter County, on Shell, Heaton, Roaring and Tiger creeks, tributaries of Doe River, are to be found a number of occurrences of magnetite. The part lying within the boundaries of Carter County is within the belt of magnetites which extends, more or less continuously, a distance of about 15 miles westerly from Cranberry to Magnetic City, North Carolina, of which the middle 10 miles lies within the boundaries of Tennessee. The lands supposed to cover the outcrop of this ore are owned by a number of interests. Among the largest may be noted the Tennessee Coal, Iron & Railroad Company, the Crab Orchard Iron Company, J.C. Campbell, of Johnson City, and others. The most extensive openings made on the deposit within Carter County are located at the old Hampton Forge, two miles south of Roane Mountain station on the East Tennessee and Western North Carolina Railway. The land which is said to belong to the Crab Orchard Iron Company was under lease, in 1899, to Mr. George L. Carter, who is shipping considerable ore at this time. The vein has been developed by open cuts, the most extensive of which is on the east side, and about 100 feet higher than the bed of the river. At this point it has a strike nearly east-west, and dips at a high angle to the south. The ore deposit appears to be made up of two portions, a lower seam or lens, 12 to 15 feet thick, above this a lean parting of 8 to 12 feet thick, and on top a rich seam six to eight feet thick; but these dimensions seem to vary within short distances. Much of the ore appears to be rather lean. The deepest point examined was about 25 feet below the surface. The character of ore appears to be identical with that of the Cranberry mines. On the west side of Doe River, about 600 feet west of this opening, another cut has been made on this vein. Here the total width of the vein is 20 feet, but with the exception of a streak about two feet thick, the deposit is low grade. Some ore is said to have been shipped from this opening in 1899. At the time this deposit was worked, a branch line connected the station and Roane Mountain, but the heavy floods of 1902 washed it out completely, and it has never been rebuilt. Ores from this deposit were drawn on to supply the forges located at a point about where Doe River cuts across the vein. The iron made from these ores was noted for its strength and superior qualities.” And Deposits of Brown Iron Ores: (Brown Hematite) in Western North Carolina, by William Shirley Bayley, 1925, Bulletin No. 31, North Carolina Geological and Economic Survey, page 126, available online at:

<https://books.google.com/books?id=xKkRAAAAIAAJ>, includes: “On the divide between Hampton Creek and Doe River are the openings of the Peg Leg mine which has been worked intermittently since colonial days. As late as 1885 ore was taken from the surface to supply the Doe River forge on the banks of Doe River. In 1898 the place was reopened by the Crab Orchard Iron Co. and about 1,000 tons of ore was shipped. It was then again closed and remained idle until 1917 when it was prospected by the Magnetic Iron & Coal Co., without satisfactory results. A cut was driven 600 feet in an easterly direction through a vein 50 feet wide, of which about a third was lean ore...”

¹⁹ American Lumberman, 27 October 1906 (whole number 1640), page 82, available online at: <https://hdl.handle.net/2027/mdp.39015084518862>.

²⁰ American Lumberman, 29 December 1906 (whole number 1649), pages 46B and 46C, available online at: <https://hdl.handle.net/2027/mdp.39015084518862>.

²¹ “Sanborn Fire Insurance Map from Elizabethton, Carter County, Tennessee,” January 1908, image 1, available online at: http://hdl.loc.gov/loc.gmd/g3964em.g3964em_g083081908.

²² Hardwood Record, 10 February 1908 (Volume XXV, No. 8), page 56, available online at: <https://books.google.com/books?id=9wI3AQAAMAAJ>.

²³ The Lumber Trade Journal, 15 February 1908 (Volume 53, No. 4), page 35, available online at: <https://hdl.handle.net/2027/mdp.39015084631731>.

²⁴ The Lumber Trade Journal, 15 April 1908 (Volume 53, No. 8), page 33, available online at: <https://hdl.handle.net/2027/mdp.39015084631731>.

²⁵ This article was kindly provided by Ryan Rice in an email to the author on 17 July 2023. Note that this article appears to continue.

²⁶ “Heritage in Brogans,” by Carmon Stewart Bowers, 1973, available online at: <http://www.thebowershome.com/Bowers/HERITAGE%20IN%20BROGANS.htm>.

²⁷ The Wood-Worker, July 1908 (Volume XXVII, No. 5), page 51, available online at: <https://books.google.com/books?id=GSNaAAAAYAAJ>.

²⁸ American Miller, 1 July 1908 (Volume XXXVI, No. 7), page 569, available online at: <https://books.google.com/books?id=IpNFAQAAMAAJ>.

²⁹ American Lumberman, 3 April 1909 (Whole Number 1767), page 65, available online at: <https://hdl.handle.net/2027/mdp.39015084519043>. Hardwood Record, 10 April 1909 (Volume XXVII, No. 12), page 42, available online at: <https://books.google.com/books?id=CgM3AQAAMAAJ>, included: “W.H. Stiles, formerly of Sanford & Treadway of New Haven, Conn., is now in the lumber business for himself in Smyth county, Virginia, with headquarters in Marion, and has several country mills in operation in the Rye Valley Railroad. Mr. Stiles reports the lumber manufacturing business brisk in that section.”

³⁰ “Complaints in which Reparation was Authorized on Informal Pleadings,” in Twentieth-Fourth Annual Report of the Interstate Commerce Commission, December 21, 1910, page 193, available online at: https://books.google.com/books?id=DLAf7GFA1_cC.

³¹ “Newland, North Carolina,” by John R. Waite, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Fall/Winter 2004 (Volume 15, Number 2), pages 3 – 10.

³² American Lumberman, 23 March 1912, page 65, available online at: <https://books.google.com/books?id=xjgxAQAAMAAJ>.

³³ Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 86.

³⁴ “Sanborn Fire Insurance Map from Elizabethton, Carter County, Tennessee,” June 1913, image 1, available online at: http://hdl.loc.gov/loc.gmd/g3964em.g3964em_g083081913. By June 1924 (the next available relevant map in the Sanborn Fire Insurance Map collection), the land occupied by the Sanford & Treadway lumber yard was occupied by other enterprises (Acme Coal & Land Company and the coal yard J.F. Grindstaff), see “Sanborn Fire Insurance Map from Elizabethton, Carter County, Tennessee,” June 1924, image 7, available online at: http://hdl.loc.gov/loc.gmd/g3964em.g3964em_g083081924.

³⁵ “Elizabethton,” by John R. Waite, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Fall/Winter 2006 (Volume 17, Number 2), pages 12 – 13.

³⁶ Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 86.

³⁷ The North Carolina Year Book and Business Directory, 1915, page 97, available online at: <https://hdl.handle.net/2027/nc01.ark:/13960/t9q23vt0q>. There was no mention of Sanford & Treadway in earlier editions.

³⁸ “Forest Fires in North Carolina during 1915, 1916, and 1917, and Present Status of Forest Fire Prevention in North Carolina,” by J.S. Holmes, State Forester, North Carolina Geological and Economic Survey, Economic Paper No. 48, 22 May 1918, pages 55 – 59, available online at: <https://books.google.com/books?id=aE05AQAAMAAJ>.

³⁹ The Charlotte Observer, 11 April 1916, available online at: https://www.averyjournal.com/news/our-avery-county-the-first-avery-county-herald/article_6bf38fa2-d369-11e4-badf-83331aa70ddd.html.

⁴⁰ Carolina, Clinchfield and Ohio Railway, For the Fiscal Year Ended June 30, 1916, Sixth Annual Report, page 32, available online at: <https://books.google.com/books?id=vMk7AQAAMAAJ>.

⁴¹ “Forest Fires in North Carolina during 1915, 1916, and 1917, and Present Status of Forest Fire Prevention in North Carolina,” by J.S. Holmes, State Forester, North Carolina Geological and Economic Survey, Economic Paper No. 48, 22 May 1918, pages 55 – 59, available online at: <https://books.google.com/books?id=aE05AQAAMAAJ>, which includes: “The second annual meeting was unavoidably delayed and was not held until October 9, 1917. Delegates to this meeting came from Wilmington, Asheville, and other points. Great interest was shown in the work. An important change was made by electing a secretary separate from and in addition to the manager. The following board of directors was elected for the ensuing year, two of the officers having had to resign on account of the exigencies of war: E.C. Robbins, Pineola, N.C., president; T.W. Hampton, Shulls Mills, N.C., vice-president; J.P. Gibbs, Linville, N.C., manager; L.D. Ellis, Cranberry, N.C., and E.G. Underdown, Blowing Rock, N.C. George C. Love of Pineola, N.C., was elected secretary.”

⁴² The North Carolina Year Book and Business Directory, 1916 (Sixteenth Year), page 100, available online at: <https://hdl.handle.net/2027/nc01.ark:/13960/t2r49km5g>. Regrettably, this publication was not issued during the period 1917 – 1921. Sanford & Treadway is not mentioned in the 1922 or 1923 editions.

⁴³ The Lumberman’s Review, September 1917 (Volume XXVI, No. 301), page 4, available online at: <https://books.google.com/books?id=VH4qAQAAMAAJ>. The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway,” by John R. Waite and Chris H. Ford, 2003, page 121, includes: “improvements to the Linville River line were expensive, but the promise of improved traffic justified the expense. Two sawmills were cutting lumber at Newland during the summer of 1913, and Sanford & Treadway Lumber Company was building two new mills for its large timber tract...” The author has not found any contemporary information to support the statement that the “Sanford & Treadway Lumber Company was building two new mills for its large timber tract” near Newland in 1913. Ghost Railroads of Tennessee, by Elmer Griffith Sulzer, 1976, page 97, includes: “Huge quantities of logs from the Newland (originally named ‘Fields of Toe’), Sanford, and Treadway areas were brought to the Ritter mill at Pineola...” Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 107, includes: “In April of 1907, Ritter sold the Pineola properties, but not including the railroad, to John T. Nagle who organized the Linville River Lumber Company to continue operations in the area, but Ritter took down the Pineola mill and

shipped it to another location.” On 9 July 1914, the Johnson City Comet included: “All of the saw mills around Newland except two have closed down. The two still running belong to J.H. Prichard and Ben Eller. We understand that wages at one mill has been reduced from \$1.50 to \$1.25.” Of note, the Sanford and Treadway lumber operation is not mentioned in this reference.

⁴⁴ “Newland, North Carolina,” by John R. Waite, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Fall/Winter 2004 (Volume 15, Number 2), pages 3 – 10.

⁴⁵ The Lumberman’s Review, December 1917 (Volume XXVI, No. 304), page 4, available online at: <https://books.google.com/books?id=VH4qAQAAMAAJ>, note: this advertisement ran until at least April 1920.

⁴⁶ Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 107.

⁴⁷ Tweetsie Country, the East Tennessee & Western North Carolina Railroad, by Mallory Hope Ferrell, 1976, pages 44 – 45.

⁴⁸ “Newland, North Carolina,” by John R. Waite, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Fall/Winter 2004 (Volume 15, Number 2), page 11.

⁴⁹ “C.C. & O. R.R., Map of Buildings, Tracks & Property South of Buffalo Street, Johnson City, Tennessee,” Office of Engineer M. of W., original scale 1” = 50’, 29 August 1919, available online at: http://www.stateoffranklin.net/johnsons/maps/clinch_map.pdf.

⁵⁰ American Lumberman, 8 November 1919 (Whole Number 2321), page 63, available online at: <https://books.google.com/books?id=8EsxAQAAMAAJ>. Michigan Manufacturer & Financial Record, 12 October 1912 (Volume 9, No. 24), page 3, available online at: <https://books.google.com/books?id=W7LmAAAAMAAJ>, includes: “A new Escanaba company will manufacture the Raymond log loader, which has been constructed at the plant of the Chatfield Brass & Iron Works. It is planned by the company to construct a factory at once. Special machinery to allow the turning out of the log loaders in large numbers will be installed and skilled workmen will be brought in to carry out the work. The Raymond log loader is now recognized among timber operatives as easily the most successful machine of its kind now on the market. A large number of machines are now in use and only recently the loaders have been introduced by Mr. [Oscar L.] Raymond in the southern timber districts, where several machines have already been shipped and a number of new orders have been secured.” See also “Log-Handling Machinery,” in Veneers, December 1908, page 4, available online at: <https://books.google.com/books?id=0bM4AQAAMAAJ>.

⁵¹ “Some Aspects of Logging in the Adirondacks,” by A.B. Recknagel, Pulp and Paper Magazine of Canada, 20 June 1918 (Volume XVI, No. 25), page 558, available online at: <https://books.google.com/books?id=P57nAAAAMAAJ>.

⁵² Along the ET&WNC, Volume IV: Freight Cars Part A, by Johnny Graybeal, 2003, pages 77 – 82, 114 and 117.

⁵³ Adapted from Along the ET&WNC, Volume IV: Freight Cars Part A, by Johnny Graybeal, 2003, page 148.

⁵⁴ “Forest Fires in North Carolina during 1918, 1919, and 1920, and Forest Protection in North Carolina,” by J.S. Holmes, State Forester, North Carolina Geological and Economic Survey, Economic Paper No. 51, 20 May 1921, pages 46 – 47, available online at: <https://books.google.com/books?id=aE05AQAAMAAJ>. Although the specific date of this meeting is not given in the source document, this meeting was held each November, according to the by-laws, and for this reason, is placed here.

⁵⁵ “Sanborn Fire Insurance Map from Johnson City, Washington County, Tennessee,” February 1920, image 35, available online at: http://hdl.loc.gov/loc.gmd/g3964jm.g3964jm_g083261920. The map showing the shops of the E.T. & W.N.C. is part of image 6. Note, previous Sanborn Insurance Company maps did not provide detailed coverage of the location of the Sanford & Treadway Lumber Yard in Johnson City, Tennessee.

⁵⁶ “Lumberyard, southeast Johnson City (maybe Sells Manufacturing),” from the Burr Harrison Collection, Archives of Appalachia, available online at: <https://archivesofappalachia.omeka.net/items/show/249>. The quoted caption is

from The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway,” by John R. Waite and Chris H. Ford, 2003, page 152. The Sells Lumber Company and the Exum Furniture plant operated for many years, making it difficult to date this photograph.

⁵⁷ Grandfather Mountain: The History and Guide to an Appalachian Icon, by Randy Johnson, 2016.

⁵⁸ The Lumberman’s Review, May 1920 (Volume XXVIII, Whole Number 333), page 3, available online at: <https://hdl.handle.net/2027/umn.31951d00408611u>. This advertisement ran until at least December 1921.

⁵⁹ Thirty-Second Report of the Department of Labor and Printing of the State of North Carolina, 1919 – 1920, pages 174, 176 – 177, 288, 388, available online at: <https://books.google.com/books?id=AScTAAAYAAJ>. Regrettably, this sort of information did not appear in other editions of this report.

⁶⁰ “Odom v. Sanford Treadway, 299 S.W. 1045 (Tenn. 1927),” available online at: <https://www.courtlistener.com/opinion/4133377/odom-v-sanford-treadway/>. The South Western Reporter, Volume 289 (2 – 23 February 1927), pages 533 – 535, available online at: <https://hdl.handle.net/2027/uc1.b3503563>, included another court case, Chambers versus Sanford & Treadway, included: “Petition of E.L. Chambers, employee, against Sanford & Treadway, employer, to enforce payment under Workmen’s Compensation Act... The petition was filed against the defendants, who had an office and place of business in Johnson City... The petitioner recites that he is a citizen and resident of Carter county and was injured in course of employment while at work for the defendants in Carter county. These facts appear on the face of the petition...” Perhaps narratives of these cases would provide additional, useful information on the operations of Sanford & Treadway.

⁶¹ Tweetsie Country, the East Tennessee & Western North Carolina Railroad, by Mallory Hope Ferrell, 1976, pages 44 – 45.

⁶² The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co.,” Fall 1990 (Volume 3, Number 2), page 16.

⁶³ I found this map and saved a copy of it a long time ago. Regrettably, I could not locate any bibliographical information on it.

⁶⁴ The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway,” by John R. Waite and Chris H. Ford, 2003, page 147. The footnote for this information included: “Minutes (Directors), July 23, 1924.”

⁶⁵ The Lumber Manufacturer & Dealer, 6 March 1925 (Volume LXXV, No. 4), page 61, available online at: <https://books.google.com/books?id=T1L1AAAAMAAJ>.

⁶⁶ Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 109.

⁶⁷ Along the ET&WNC, Volume IV: Freight Cars Part A, by Johnny Graybeal, 2003, pages 77 – 82, 117 – 118.

⁶⁸ Adapted from Along the ET&WNC, Volume IV: Freight Cars Part A, by Johnny Graybeal, 2003, page 148.

⁶⁹ Adapted from Along the ET&WNC, Volume IV: Freight Cars Part A, by Johnny Graybeal, 2003, page 149.

⁷⁰ Tweetsie Country, the East Tennessee & Western North Carolina Railroad, by Mallory Hope Ferrell, 1976, page 213. Also in The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway,” by John R. Waite and Chris H. Ford, 2003, page 193, which included the caption: “A narrow gauge shay (Lima #2131/1908) sits at the MacRae Lumber Company mill at Linville on August 15, 1938. Photo by L.L. Norton, Mallory Hope Ferrell Collection.”

⁷¹ Adapted from “Shay Locomotives,” available online at: <https://www.shaylocomotives.com/data/dataframe.htm>.

⁷² Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 97. The Lopsided Three: A History of Railroading, Logging and Mining in the Holston, Doe & Watauga Valleys of Northeast Tennessee, by Doug McGuinn, 2010, page 29, included the following caption for the same photograph: “Peter McCain Lumber Company’s No. 1, a narrow-gauge, 2-truck, 24-ton Shay locomotive, built in 1909 (c/n 2131). The engineer, Landon Boling, standing at the cab’s entrance; Bert Lunsford standing on stump; the other men unidentified.” 1930 Census Carter County Tennessee, Partial Compilation of County Including Districts Sharing a Common Boundary with Johnson County, Districts 1, 4, 10, 12 & 16, by Herman Teste, 2009, captioned this photograph: “This photograph taken in the early 1920’s pictures a Whiting’s Lumber Company log train.” However, this statement does not appear to be supported by the available information.

⁷³ “Locomotive, ‘D & H MacRae,’” Hugh Morton Collection of Photographs & Films, available online at: https://dc.lib.unc.edu/cdm/ref/collection/morton_highlights/id/7317, which includes: “Probably logging railroad in Linville, NC used by D & H MacRae Lumber Company. Labeled ‘For 2003 Reprint Book.’”

⁷⁴ The earliest publication of this photograph, which the author is aware of, occurred in Ghost Railroads of Tennessee, by Elmer G. Sulzer, 1975, page 130, which captioned this photograph: “D. & H. MacRae Lumber Company No. 5 at Linville, N.C., August 17, 1938. This ex-Wright Lbr. Co. 3’ gauge Climax was scrapped in 1944. (Thomas Lawson, Jr.)”. Interestingly, the statement “ex-Wright Lbr. Co. 3” is not supported by The Climax Locomotive, by Dennis Blake Thompson, Richard Dunn, and Steve Hauff, 2002, pages 283, 393, and 438, which captioned this photo “Tired Climax #5 (S/N unknown) at Linville, on August 15, 1937. She belonged [to] D. & H. McRae Lumber Company. (Courtesy of Thomas Lawson, Walter C. Cassler)”. Logging Railroads of the Blue Ridge and Smoky Mountains, Volume 1, Cold Mountain, Black Mountain and White Top, by Thomas Fetters, 2007, page 109, which captioned this photograph: “D. & H. McRae Lumber Company’s Climax No. 5 sits forlornly at Linville, North Carolina on August 15, 1937. Built in 1906, for an unknown buyer, in 1911 this 36-inch gauge engine then went to H.S. White Lumber Co. at Newland, North Carolina. After working for D. & H. McRae, it was finally scrapped in 1944. (Courtesy of Walter C. Casler and John T. Labbe)”. The mention of the “H.S. [should read “H.L.”?] White Lumber Co. at Newland” not Elk Park or Johnson City, is odd and thus makes this claim less than certain. This locomotive has been assigned tracking number X365. The origin and use of “tracking numbers” is explained on page 382 of The Climax Locomotive (above). Nevertheless, it seems most likely that this locomotive was acquired around the same time that the D. & H. MacRae Company took over from Sanford & Treadway in about 1925.

⁷⁵ Linville, A Mountain Home for 100 Years, by Howard E. Covington, Jr., 1992, page 61, which includes: “Nelson MacRae Photos”.

⁷⁶ Linville, A Mountain Home for 100 Years, by Howard E. Covington, Jr., 1992, page 62, which includes: “Nelson MacRae Photo”.

⁷⁷ Linville, A Mountain Home for 100 Years, by Howard E. Covington, Jr., 1992, pages 60 – 61.

⁷⁸ Grandfather Mountain: The History and Guide to an Appalachian Icon, by Randy Johnson, 2016. Interestingly, Map x does not show the D. & H. MacRae Lumber Company railroad operating in the vicinity of Linville Gap.

⁷⁹ “Motor-Coaching Through North Carolina,” by Melville Chater, in The National Geographic Magazine, May 1926 (Volume XLIX, No. 5), page 514, available online at: <https://hdl.handle.net/2027/mdp.39015076209512>. See also “Tanbark, Acidwood & Pulpwood,” by John R. Waite, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Spring/Summer 2004 (Volume 15, Number 1), pages 12 – 14.

⁸⁰ Linville, A Mountain Home for 100 Years, by Howard E. Covington, Jr., 1992, pages 60 – 62.

⁸¹ The Lumber Manufacturer and Dealer, 1931 (Volume 82). Also in National Lumberman, 1931.

⁸² “Riding the ET&WNC, Part III” by Dick Andrews, in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Winter 1992 (Volume 4, Number 3), pages 11 – 12. “Tracking ‘Tweetsie’ Tracks, Part 2, The Linville River Ry.,” by William S. Cannon, Chip Norwood, and John Waite,” in The Blue Ridge Stemwinder, East Tennessee and Western North Carolina R.R. Co., Spring 1989 (Volume 1, Number 4), pages 6 – 7, includes: “It [the roadbed of the Linville River Railway] comes into the Linville area at the rock quarry just south of the highway.

The road to the quarry is the old grade. The Linville depot stood to the right of where the road starts up a little climb toward the bridge over the Linville River. It was about 250 yards west of the bridge on the south side of the road across the road from the brick house. The water tank was almost straight across the highway from the light green cottage. The roadbed then curves to the north through Linville. Pictures of this curve, before and after the 1940 flood are in Sulzer's Ghost Railroads of Tennessee. The grade passes behind the Hampton Store. The operator of the store has built a grist mill on the old roadbed... At the north end of Linville the right-of-way curves to the east and a large metal building and a concrete foundation are still in place. The building was a lumber drying shed or warehouse for the McRae Lumber Company mill and the foundation is reported to be the remains [of] the boiler house that served the mill. The grade turns back to the north where SR#1351 intersects with Highway 105..."

⁸³ The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway," by John R. Waite and Chris H. Ford, 2003, page 202.

⁸⁴ Floods of August 1940 in Tennessee River Basin. Report No. 0-243-67S, Supplement to Precipitation in Tennessee River Basin, by Tennessee Valley Authority, Water Control Planning Department, Hydraulic Data Division, October 1940, pages 102 – 105, available online at: <https://books.google.com/books?id=aC9QAQAAMAAJ>.

⁸⁵ Floods of August 1940 in Tennessee River Basin. Report No. 0-243-67S, Supplement to Precipitation in Tennessee River Basin, by Tennessee Valley Authority, Water Control Planning Department, Hydraulic Data Division, October 1940, page 111, available online at: <https://books.google.com/books?id=aC9QAQAAMAAJ>.

⁸⁶ The Blue Ridge Stemwinder, An Illustrated History of the East Tennessee & Western North Carolina Railroad and the Linville River Railway," by John R. Waite and Chris H. Ford, 2003, page 201.

⁸⁷ New Haven City Directory (Including West Haven), 1899 (No. 60), page 997, available online at: <https://books.google.com/books?id=ddgCAAAAYAAJ>.

⁸⁸ American Lumberman, 20 May 1899 (Whole Number), page 26, available online at: <https://books.google.com/books?id=8tYHM3htGcwC>.

⁸⁹ American Lumberman, 29 July 1899 (Whole Number 1262), page 31, available online at: <https://books.google.com/books?id=2NQj2rDLFDkC>. Year Book of the Chamber of Commerce of New Haven, 1898, pages 33 – 34, available online at: <https://books.google.com/books?id=ABVQAAAAAYAAJ>, included: "Edwin Holt English passed away at his home, 390 Prospect street, October 6th, 1899. Mr. English was the son of the late Charles L. and Harriet (Holt) English, and was born in New Haven, September 28th, 1854. In his youthful days he attended French's private school. Subsequently he prepared for college at Hopkins Grammar School from which he graduated in the Class of 1871. He entered Yale with the Class of 1875, but ill health prevented the completion of his course. After leaving college he went to Kokomo, Ind., and entered the employ of Calvin Gallup & Co. (in which firm his father was a partner), wholesale dealers in hardwood lumber. He remained West two or three years, when he returned to New Haven. In 1876 Charles L. English retired from the firm of English & Holt, and Edwin H. succeeded to his father's interest in the business – the firm name of English & Holt being retained until the retirement of Mr. Holt, July 1, 1897, when it was changed to E.H. English & Co. October 5th, 1882, he married Miss Lucy W. Kellogg, second daughter of Hon. Stephen W. Kellogg, of Waterbury. Immediately after his marriage, he and his wife spent several months traveling in Europe and the East. During the last four years of his life, his health was extremely poor, lung trouble having developed. While facing and fighting with great pluck and courage a fatal disease, he was constantly the head of his large business interests, retaining even in hours of weakness and suffering the active control of its management. In consequence of his retiring disposition and modest habits he was not a well-known man in this community. While interested in all that pertained to the public weal, he instinctively shrank from conspicuousness in any sphere outside his business, social and family circle. Mr. English was a man of exceeding worth, a man of strong and certain ability, a man sure and reliable. He entertained no doubt as to his position upon matters under discussion and had no timidity in stating his views. Those who knew him and even those who met him casually liked and respected him. Mr. English affiliated with no political party. He was in favor of gold monometalism, of moderate protection and municipal reform. He was interested in and endorsed intercollegiate football and athletics in general. He was a member of Center Church, a member of the Quinnipiack Club, and a director in the Merchants National Bank, C, Cowles & Co. and the New Haven Colony Historical Society. He left a wife and seven children, the eldest being nearly fourteen

and the youngest not quite two years old. His first child, Susie Hosmer, died May 22d, 1892, at the age of eight years. Mr. English was elected a member of the Chamber April 1st, 1878.”

⁹⁰ The Journal of the Worcester Polytechnic Institute, 1926 – 1927 (Volume XXX), page 107, available online at: <https://books.google.com/books?id=VbIPAQAAlAAJ>, includes: “Treadway, Charles F., ’90, M. Partner, Sanford & Treadway, Manufacturers of hardwood lumber (Res. 427 St. Ronan St.), New Haven, Conn.” Another source indicates that the corporate headquarters was at 139 Chapel, New Haven, Connecticut.

⁹¹ Southern Lumberman, 1 January 1900, reprinted in The Southern Lumberman, January 2000 (Volume 261, No. 1), page 15, available online at: <https://hdl.handle.net/2027/umn.31951p007130788>.

⁹² Official Directory and Atlas Naming Shippers of Staple Commodities and Giving a List of Stations, Track Scales, etc., on the Chicago & North-Western Ry., Chicago, St. Paul, Minneapolis & Omaha Railway, Sioux City & Pacific Railroad, Fremont, Elkhorn & Missouri Valley Railroad, 1901 – 1902, page 198, available online at: <https://books.google.com/books?id=21s2AQAAMAAl>.

⁹³ American Lumberman, 23 January 1904 (Whole Number 1496), page 59, available online at: <https://books.google.com/books?id=s2019aj6qNoC>.

⁹⁴ Twenty-Second Annual Report of the Bureau of Labor and Industrial Statistics Including the Twelfth Annual Report of State Inspection of Factories, State of Michigan, 1905, page 100, available online at: <https://books.google.com/books?id=FE9aAAAAYAAJ>. Sanford & Treadway was not mentioned in the reports for the years between 1900 and 1904, inclusive.

⁹⁵ Twenty-Third Annual report of the Bureau of Labor and Industrial Statistics Including the Thirteenth Annual Report of State Inspection of Factories, State of Michigan, 1 February 1906. page 98, available online at: <https://hdl.handle.net/2027/mdp.39015071182987>.

⁹⁶ American Lumberman, 13 January 1906 (Whole Number 1599), page 66, available online at: <https://hdl.handle.net/2027/mdp.39015084518870>. This advertisement ran through at least December 1907.

⁹⁷ American Lumberman, 5 May 1906 (Whole Number 1615). Page 47, available online at: <https://hdl.handle.net/2027/mdp.39015084518870>.

⁹⁸ American Lumberman, 7 July 1906 (Whole Number 1624), page 62, available online at: <https://books.google.com/books?id=2ysiAQAAMAAl>. American Lumberman, 14 July 1906 (Whole Number 1625), page 54, available online at: <https://books.google.com/books?id=2ysiAQAAMAAl>, includes: “Menominee, Mich., July 11. – Walter C. Mansfield and Miss Mary Elizabeth Carey, of Sparta, Wis., were married at St. John’s Episcopal church at Sparta Tuesday, July 10... On their return they will take up their residence in this city, where Mr. Mansfield has fitted up a pretty home. Walter Mansfield is one of the best known of the younger lumbermen in this region. His position is a responsible and lucrative one, he being manager of the extensive interests of the Sanford & treadway Company in this territory. He is an accomplished musician and a general favorite...”

⁹⁹ Twenty-Fourth Annual Report of the Bureau of Labor and Industrial Statistics Including the Fourteenth Annual Report of State Inspection of Factories, State of Michigan, 1 February 1907, Page 122, available online at: <https://hdl.handle.net/2027/uiug.30112050763868>.

¹⁰⁰ Twenty-Fifth Annual Report of the Bureau of Labor and Industrial Statistics, Including the Fifteenth Annual Report of State Inspection of Factories, State of Michigan, 1 February 1908, page 106, available online at: <https://books.google.com/books?id=z9LNAAAAMAAl>.

¹⁰¹ Twenty-Sixth Annual Report of the Bureau of Labor and Industrial Statistics Including the Sixteenth Annual Report of State Inspection of Factories, State of Michigan, 1 February 1909, page 196, available online at: <https://books.google.com/books?id=0MwzAQAAMAAl>.

¹⁰² Hardwood Record, 25 December 1908 (Volume XXVII, No. 5), page 41, available online at:

<https://books.google.com/books?id=CgM3AQAAMAAJ>.

¹⁰³ American Lumberman, 9 January 1909 (Whole Number 1756), page 70, available online at: <https://hdl.handle.net/2027/mdp.39015084519043>.

¹⁰⁴ American Lumberman, 20 February 1909 (Whole Number 1762), page 71, available online at: <https://hdl.handle.net/2027/mdp.39015084519043>. This advertisement ran through at least June 1909.

¹⁰⁵ First Annual Report of the Department of Labor of the State of Michigan, 1 February 1910, page 108, available online at: <https://books.google.com/books?id=Lk5KAAAAMAAJ>.

¹⁰⁶ Second Annual Report of the Department of Labor of the State of Michigan, 1 February 1911, page 199, available online at: <https://hdl.handle.net/2027/mdp.39015071183019>.

¹⁰⁷ American Lumberman, 8 July 1911 (Whole number 1886), page 62, available online at: <https://hdl.handle.net/2027/mdp.39015024244231>. This advertisement ran through at least December 1911.

¹⁰⁸ Twenty-Ninth Annual Report of the Department of Labor of the State of Michigan, 1 April 1912, page 144, available online at: <https://books.google.com/books?id=MCNFAQAAMAAJ>. On page 299, this report noted that the Sanford & Treadway plant at Menominee needed to “Repair low water alarms.”

¹⁰⁹ Thirtieth Annual Report of the Department of Labor of the State of Michigan, 12 April 1913, page 200, available online at: <https://hdl.handle.net/2027/uiug.30112078006027>. On page 375, this report again noted that the Sanford & Treadway plant at Menominee needed to “Repair low water alarm.”

¹¹⁰ Lumber World Review, 10 July 1913 (Volume XXV, No. 2), page 51, available online at: <https://books.google.com/books?id=j-AoAQAAMAAJ>. This advertisement ran through at least December 1913.

¹¹¹ Michigan Manufacturer and Financial Record, 6 September 1913 (Volume 11, No. 10), page 19, available online at: <https://books.google.com/books?id=mIgfAQAAMAAJ>.

¹¹² Thirty-First Annual Report of the Department of Labor of the State of Michigan, 6 March 1914, page 127, available online at: <https://hdl.handle.net/2027/uiug.30112078006019>.

¹¹³ American Lumberman, 3 January 1914 (Whole Number 2016), page 56, available online at: <https://hdl.handle.net/2027/nnc1.cu05635870>. This advertisement ran through at least March 1914.

¹¹⁴ Thirty-Second Annual Report of the Department of Labor of the State of Michigan, 31 March 1915, page 146, available online at: <https://hdl.handle.net/2027/osu.32435063948905>.

¹¹⁵ The Indicator, January to December 1914 (Volume XL), 1916, page 319, available online at: <https://books.google.com/books?id=ZdI7AQAAMAAJ>.

¹¹⁶ Lumber World Review, 25 June 1914 (Volume XXVI, No. 12), page 62, available online at: <https://hdl.handle.net/2027/mdp.39015084539579>.

¹¹⁷ Thirty-Third Annual Report of the Department of Labor of the State of Michigan, 29 March 1916, page 233, available online at: <https://books.google.com/books?id=xFYkAQAAMAAJ>. As the plant at Menominee was no longer owned by Sanford & Treadway, later annual reports from the Michigan Department of Labor will not be included in this document.

¹¹⁸ Hardwood Record, 10 August 1916 (Volume XLI, No. 8), page 36, available online at: <https://books.google.com/books?id=xQU3AQAAMAAJ>.

¹¹⁹ Lumber World Review, 10 August 1916 (Volume XXXI, No. 3), page 47, available online at: <https://books.google.com/books?id=kuIoAQAAMAAJ>.

¹²⁰ Lumber World Review, 10 October 1914 (Volume XXVII, Number 7), page 34, available online at: <https://books.google.com/books?id=ueswAQAAMAAJ>, which includes: “Qualified All Around. With a few exceptions, the life of the average lumberman is almost too prosaic to enable him to dabble in art, literature or the sciences. Still, there is nothing in the lumber business that should stifle an ambition toward higher ideals and, in fact, the work of the lumberman is so closely interwoven with nature that it might not be surprising to find among lumbermen more who are nature lovers and enjoy literary and artistic culture than in almost any other occupation. There thoughts were suggested at a recent banquet of lumbermen at Menominee, Mich., where a large part of the evening was derived through the vocal renditions of one of the members of the Menominee entertainment committee, W.C. Mansfield, the local manager there for Sanford & Treadway, of New Haven, Conn. Mr. Mansfield has a fine tenor voice and at the banquet sang delightfully is solo, duet and trio numbers. One of his songs, ‘When Love is Young,’ demonstrated his ability in an exceptionally satisfactory way. Mr. Mansfield is fully as good a lumberman as he is a vocalist and that is saying something very complimentary as to his knowledge of the lumber business. The Menominee plant handles hardwood lumber and makes a specialty of basswood siding and does a large and profitable business in normal times.”

¹²¹ The Lumber Trade Journal, 1 September 1916 (Volume 70, No. 5), page 36, available online at: <https://hdl.handle.net/2027/pst.000055552493>.

¹²² “Sanford & Treadway Lumber c. 1910 Multi-View RPPC,” available online at: <https://www.sekaimon.com/itemdetail/304882609340/?country=US&keyword=lumber%20mill>.

¹²³ American Lumberman, 19 July 1919 (Whole Number 2305), page 104, available online at: <https://books.google.com/books?id=1AJQAAAAYAAJ>.

¹²⁴ American Lumberman, 23 August 1919 (Whole Number 2310), page 89, available online at: <https://books.google.com/books?id=1AJQAAAAYAAJ>.

¹²⁵ American Lumberman, 23 August 1919 (Whole Number 2310), page 89, available online at: <https://books.google.com/books?id=1AJQAAAAYAAJ>.

¹²⁶ American Lumberman, 23 August 1919 (Whole Number 2310), page 89, available online at: <https://books.google.com/books?id=1AJQAAAAYAAJ>.

¹²⁷ American Lumberman, 23 August 1919 (Whole Number 2310), page 89, available online at: <https://books.google.com/books?id=1AJQAAAAYAAJ>.

¹²⁸ “Forest Fires in North Carolina during 1915, 1916, and 1917, and Present Status of Forest Fire Prevention in North Carolina,” by J.S. Holmes, State Forester, North Carolina Geological and Economic Survey, Economic Paper No. 48, 22 May 1918, pages 55 – 59, available online at: <https://books.google.com/books?id=aE05AQAAMAAJ>.

¹²⁹ “Forest Fires in North Carolina during 1915, 1916, and 1917, and Present Status of Forest Fire Prevention in North Carolina,” by J.S. Holmes, State Forester, North Carolina Geological and Economic Survey, Economic Paper No. 48, 22 May 1918, pages 55 – 59, available online at: <https://books.google.com/books?id=aE05AQAAMAAJ>.

¹³⁰ “Forest Fires in North Carolina during 1915, 1916 and 1917 and Present Status of Forest Fire Prevention in North Carolina,” by J.S. Holmes, Economic Paper No. 48, 22 May 1918, page 13, available online at: <https://hdl.handle.net/2027/hvd.32044102886389>.

¹³¹ “Forest Fires in North Carolina during 1918, 1919 and 1920,” by J.S. Holmes, Economic Paper No. 51, 20 May 1921, page 11, available online at: <https://hdl.handle.net/2027/uc1.aa0001457738>.

¹³² “Forest Fires in North Carolina during 1918, 1919 and 1920,” by J.S. Holmes, Economic Paper No. 51, 20 May 1921, page 15, available online at: <https://hdl.handle.net/2027/uc1.aa0001457738>.

¹³³ “Forest Fires in North Carolina during 1918, 1919 and 1920,” by J.S. Holmes, Economic Paper No. 51, 20 May 1921, page 19, available online at: <https://hdl.handle.net/2027/uc1.aa0001457738>. Of note, the author did not find any later reports from the state of North Carolina in this form.