

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

FOR NPS USE ONLY  
RECEIVED FEB 6 1979  
MAR 28 1979  
DATE ENTERED

NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC Mikado Locomotive No. 4501  
4501  
AND/OR COMMON

LOCATION

STREET & NUMBER 2202 N. Chamberlain Avenue  
CITY, TOWN Chattanooga  
STATE Tennessee  
VICINITY OF  
CODE 047  
COUNTY Hamilton  
CONGRESSIONAL DISTRICT 3  
CODE 065

CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE
<input type="checkbox"/> BUILDING(S)	<input checked="" type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL
<input type="checkbox"/> SITE	<b>PUBLIC ACQUISITION</b>	<b>ACCESSIBLE</b>	<input type="checkbox"/> ENTERTAINMENT
<input checked="" type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY
			<input type="checkbox"/> MUSEUM
			<input type="checkbox"/> PARK
			<input type="checkbox"/> PRIVATE RESIDENCE
			<input type="checkbox"/> RELIGIOUS
			<input type="checkbox"/> SCIENTIFIC
			<input checked="" type="checkbox"/> TRANSPORTATION
			<input type="checkbox"/> OTHER:

OWNER OF PROPERTY

NAME Tennessee Valley Railroad Museum (TVRM) ✓  
STREET & NUMBER P.O. Box 5263  
CITY, TOWN Chattanooga  
VICINITY OF  
STATE Tennessee  
37406

LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. Not applicable  
STREET & NUMBER  
CITY, TOWN  
STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Historical and Architectural Survey  
DATE September 1978  
DEPOSITORY FOR SURVEY RECORDS Tennessee Historical Commission, 170 Second Avenue, North  
CITY, TOWN Nashville  
STATE Tennessee  
37201

# 7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE Not applicable
<input checked="" type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input type="checkbox"/> UNALTERED	<input type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input checked="" type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

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## DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Locomotive 4501 was built in 1911 by the Baldwin Locomotive Works of Philadelphia. It is a Mikado 4500 series with a wheel arrangement of 2-8-2 (two pilot wheels, 8 drivers, two trailing wheels) and has suspension crosshead guides. This type of locomotive seems to serve as a transition between locomotive styles. Its high mounted acetylene headlight and arched-windowed cab reflect the traditional styles but certain characteristics such as being superheated and its valve system show more modern developments in railroad technology.

The specifications for the 4501 appear in David P. Morgan's Locomotive 4501. This information is attached.

The 4501 has never had any major alterations to its engine, however, repair work and some modifications were made during its 1965 renovation such as the replacement of worn-out engine parts or rotted wood in the cab seats. In this renovation several minor alterations were made such as rebuilding the electrical system and having the locomotive reflued in an Interstate Commerce Commission approved class-three overhaul. At this time, the boiler pressure was increased from 180 to 200 pounds per square inch. Overflow jets have been added to the engine for pollution control.

The 4501 is owned by the Tennessee Valley Railroad Museum (TVRM) and based at its yards. It is occasionally leased to Southern Railways which uses it for special excursions such as whistle stop political campaigns and annual autumn leaf color trips.

# 8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input checked="" type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES      October 1911      BUILDER/ARCHITECT      Baldwin Locomotive Works  
Philadelphia, Pennsylvania

## STATEMENT OF SIGNIFICANCE

Locomotive 4501, a Mikado 2-8-2, was one of 25 ordered in 1911 by Southern Railway from the Baldwin Locomotive Company in Philadelphia, the original building of steam locomotives in America. The 4501 was the first of this class of engine to be built for Southern Railway. It was named the Mikado because the first order for this engine in 1897 was by the emperor of Japan. When the United States entered World War II, it was renamed the MacArthur.

The 4500 series dominated orders for freight locomotives as long as steam power was used. During this period, the 4501, painted the traditional black for freight locomotives, was stationed in Princeton, Indiana, and worked for Southern around the area of the Cincinnati, New Orleans, and Texas Pacific lines under "Daddy" Lee who painted a spread eagle design on it and installed a steamboat-sounding whistle.

In the late 1940s and early 1950s, Southern began its dieselization program, and the 4501 was sold to the Kentucky and Tennessee Railway (K&T) in 1948; by 1953 Southern had disposed of all of its steam engines. The K & T renamed the 4501 No. 12 and used it on its 10-1/2 mile line in Stearns, Kentucky to haul coal. In 1964 the 4501 was scheduled to be sold for scrap as the K & T replaced its old steam engines with diesels.

At that time Paul Merriman, a railroad enthusiast, purchased the 4501 for \$5,000 and made plans to bring the engine to Chattanooga. Merriman finally convinced Southern to not only allow him to bring the engine to Chattanooga on Southern's lines, but to bring it to Chattanooga under steam. After a much publicized trip, Merriman and the TVRM, the local Chapter of the National Railway Historical Society, began a complete renovation of the 4501 by then nicknamed the Chattanooga Choo-Choo. An estimated 2,650 volunteer man hours and \$10,000 donated by Southern Railway turned the 4501 into a showplace--but not to be stored in a typical museum setting.

The TVRM is one of two museums in the south which keeps its stock in working order and uses its equipment, and the 4501 is no exception. After its renovation, it was painted green and gold, traditional colors for Southern's passenger locomotives. Currently owned by TVRM and based at its yard, the 4501 is leased to Southern which has spent approximately \$100,000 on the renovation of the locomotive and does any major repair work needed on the engine. Throughout the Southern system, the 4501 carries passenger excursions with an average of 50,000 people riding the 4501 each season.

# 9 MAJOR BIBLIOGRAPHICAL REFERENCES

Chattanooga News-Free Press, 1 October 1965, 6 October 1969, 18 July 1971, 20 April 1976, and 2 October 1977.  
Chattanooga Times, 7 June 1964, 12 November 1970, and 16 October 1971.  
 Morgan, David P. Locomotive 4501. Milwaukee: Kalmbach Publishing Company, 1969.  
 "A Summer Full or Steam." Ties [Southern Railway System Magazine]. October, 1967.

# 10 GEOGRAPHICAL DATA

*an object*

ACREAGE OF NOMINATED PROPERTY Not applicable

QUADRANGLE NAME Chattanooga, Tennessee

QUADRANGLE SCALE 1:24000

UTM REFERENCES

A 16 659550 3881110  
 ZONE EASTING NORTHING

B           
 ZONE EASTING NORTHING

C         

D         

E         

F         

G         

H         

## VERBAL BOUNDARY DESCRIPTION

The 4501 is based at TVRM's storage yards at its twelve-acre museum site on Chamberlain Avenue.

## LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

# 11 FORM PREPARED BY

NAME / TITLE

M. A. Carver, Preservation Planner

ORGANIZATION

Chattanooga-Hamilton County Regional Planning Commission

DATE

September 1978

STREET & NUMBER

200 City Hall Annex

TELEPHONE

615-757-5216

CITY OR TOWN

Chattanooga

STATE

Tennessee 37402

# 12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL   

STATE   

LOCAL   x  

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

*Herbert L. Singer*

TITLE

Executive Director, Tennessee Historical Commission

DATE

1/30/79

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

3-28-79

ATTEST:

*[Signature]*  
 KEEPER OF THE NATIONAL REGISTER

DATE

3/26/79

*[Signature]*  
 CHIEF OF REGISTRATION

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

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CONTINUATION SHEET

ITEM NUMBER 8

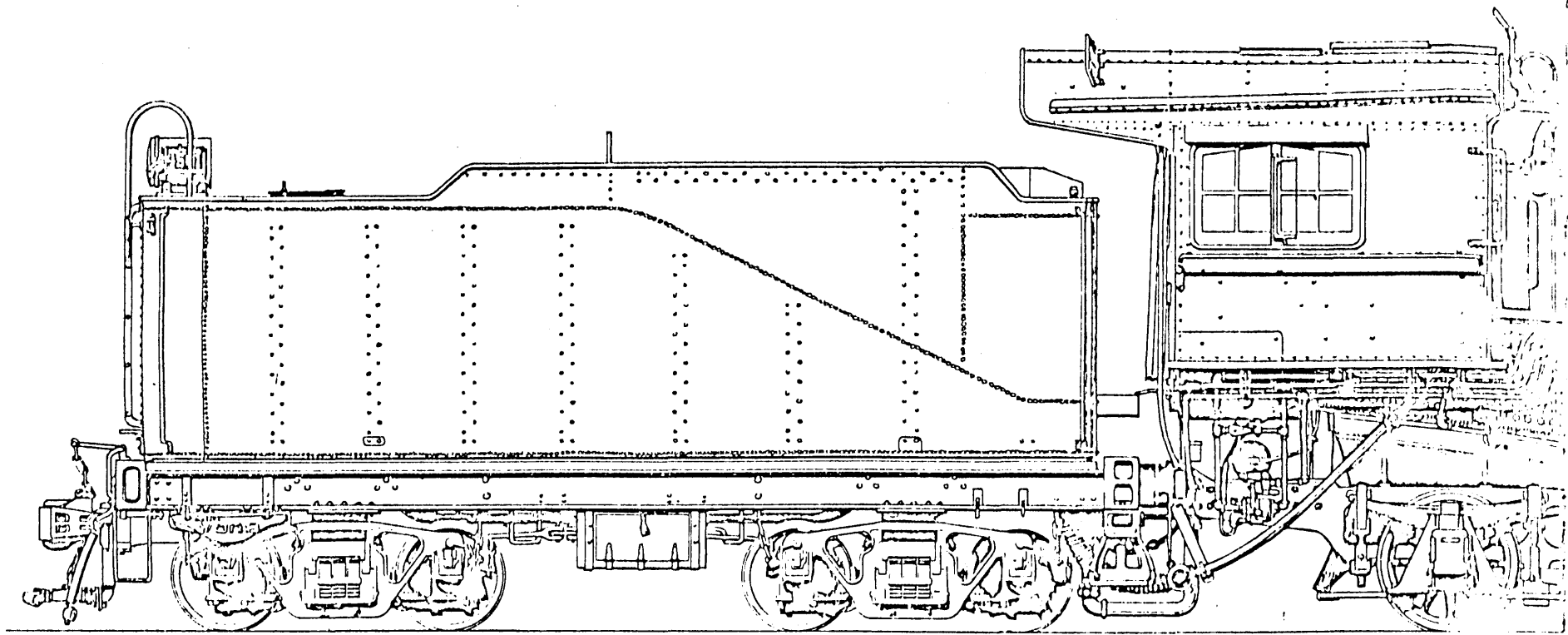
PAGE 2

The 4501 is significant, not as a result of its uniqueness, but from its very commonness. David Morgan, editor of TRAIN magazine, speaking to the Heart of Dixie Chapter of the National Railway Historical Society in 1967 said

An insignificant locomotive? Yes, and that is precisely why the 4501 is so important to our generation and the next. For the 4501 is the genuine article--typical and representative of thousands of look-alike Mikes that labored so long, so hard, so unsung in the cause of railroad-ing and hence, America itself.

As a representative of the thousands of steam locomotives which no longer exist, the 4501 has come to be a symbol to many Americans of a by-gone railroad era; the Chattanooga Times called it "one of the most famous steam engines in the country." As a traveler on Southern's lines before and after its retirement, it has become a familiar sight to thousands of Americans. It has been used in two films: the James Stewart movie, Fool's Parade, and the television movie, Eleanor and Franklin.

Today the 4501, once purchased for \$5,000 is valued at \$250,000 and is one of two of its class still in existence. For railroad enthusiasts the 4501 has become representative of America's industrial age when steam railroad operations were the rule rather than a museum concern. Currently, as one of the few remaining steam engines in use, the 4501 is a carefully maintained example of America's golden age of industrial development.



## Specifications

Number: 4501

Owner: The 4501 Corporation

Former owners: Southern Railway, 1911-1948; Kentucky & Tennessee Railway, 1948-1964

Former numbers: Southern 4501; Kentucky & Tennessee 12

Builder: Baldwin Locomotive Works, Philadelphia, Pa.

Date: October 1911

Serial number: 37,085

Price: \$23,182 in 1911; \$8225 in 1948; \$5000 in 1964

Wheel arrangement: 2-8-2 (Mikado)

SR class: Ms

SR classification: Ms63  $\frac{27}{30}$  53.9 (for Mikado superheated, driver diameter, cylinder dimensions, tractive effort)

Cylinders, diameter and stroke: 27 x 30 in.

Drivers, diameter: 63 in.

Boiler pressure: 200 psi

Starting tractive effort: 53,900 lbs.

Estimated horsepower: 2700

Grate area: 54 sq. ft.

Firebox dimensions: 107 $\frac{1}{2}$  x 71 $\frac{1}{2}$  in.

Boiler tubes: (30) 5 $\frac{1}{2}$  in. x 20 ft.; (183) 2 $\frac{1}{2}$  in. x 20 ft.

Arch tubes: (4) 2 $\frac{1}{2}$ -in. inside diameter

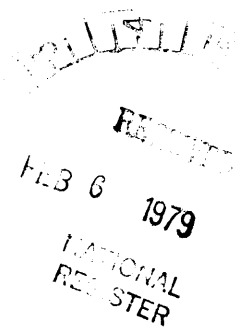
Superheater: Elesco, Type A

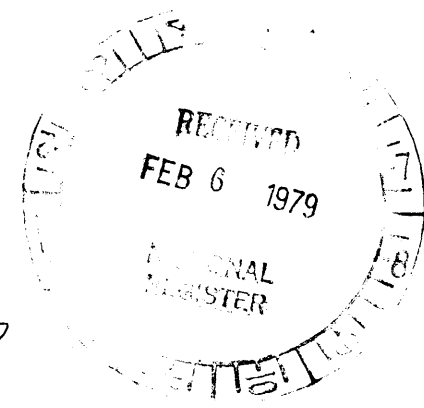
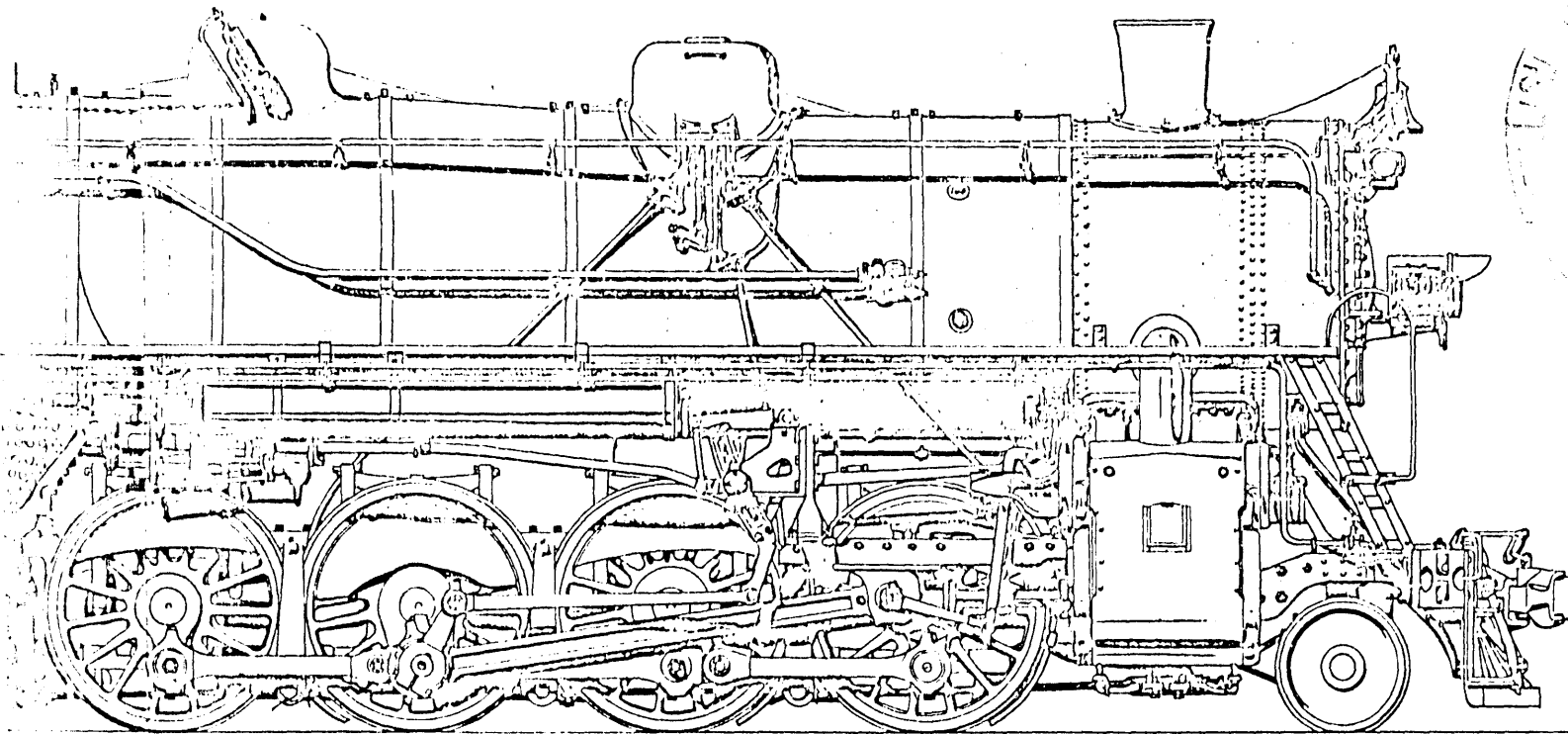
Total heating surface: 3231 sq. ft.

Valve gear: Walschaerts

Height above rail: 15 ft. 1 $\frac{1}{2}$  in. (top of stack from rail)

Over-all engine length: 77 ft.  $\frac{1}{2}$  in.





*Gil Reid.*

Rigid wheelbase: 16 ft. 6 in.  
 Minimum radius curve: 20 deg.  
 Axle loadings:  
   Lead truck: 22,860 lbs.  
   Front driver: 54,200 lbs.  
   Intermediate driver: 54,940 lbs.  
   Main driver: 54,540 lbs.  
   Back driver: 54,020 lbs.  
   Trailing truck: 34,380 lbs.  
 Total weight on drivers: 215,700 lbs.  
 Total engine weight: 272,940 lbs.  
 Weight of tender (empty): 62,334 lbs.\*  
 Weight of tender (loaded): 153,000 lbs.\*  
 Tender capacity: 8000 gals. water; 12 tons coal\*  
 Fuel: soft coal

\*As of August 1966; since changed.

Journal sizes:  
   Lead truck: 6 x 12 in.  
   Drivers: 10 x 12 in.  
   Trailing truck: 8 x 14 in.  
   Tender: 5½ x 10 in. (33 in. wheels)  
 Train steam-line connections: on pilot and rear of tank  
 Electrical: 32-volt D.C. system, 250-watt headlights front and rear, markers on smokebox, flagholders on tank  
 Lubrication requirements:  
   Driving axle collars: Esso Journal Compound No. 22  
   Driving rods (hard grease): Essorod cup grease  
   Cylinders: Clyesso T-190 superheat steam oil  
   Air pump: Clyesso T-140 saturated steam oil  
   Soft grease lubrication: Shell Darina AX, Shell MP, or Esso Nebula EP-1  
 General lubrication: car oil