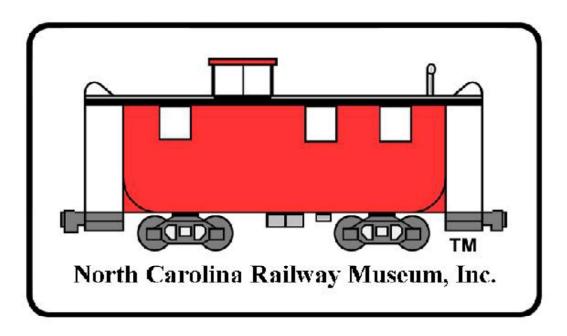
NORTH CAROLINA RAILWAY MUSEUM MUSEUM CATALOG AND GUIDEBOOK 7 OCTOBER 2017



This manual contains an inventory of the major pieces of railroad equipment available for viewing by visitors to the *North Carolina Railway Museum* (NCRM) facility at Bonsal, NC. It is designed as a reference for visitors and for docents providing tours of the grounds.

This document is a publication of the North Carolina Railway Museum, Inc (NCRM), a nonprofit corporation under the laws of the State of North Carolina and tax exempt under \$501(c)(3) of the tax code of the United States of America. All material contained herein and this document itself is copyright by the NCRM, and any use without the expressed written consent of the NCRM is prohibited.

North Carolina Railway Museum, Inc.
Post Office Box 40
New Hill, NC 27562

INDEX

UNIT OR OBJECT	PAGE	UNIT OR OBJECT P	AGE
Introduction	. 3	Scissor Lift	. 10
Credits and Acknowledgements	. 3	Fire Car	. 10
NCRM History	. 4	Non-Rail Equipment	. 10
Diesel Locomotives		Baggage Carts	. 10
5 - Alco S-1	. 5	Block Signals	
10 - GE 25ton	. 5	Crossing Signals	
67 - GE 45ton	. 5	Mail Crane	
70 - Whitcomb 45ton	. 5	Radio Antenna	
71 - GE 80ton		Wheelchair Lift	
75 - BLH 80ton	. 5	Cement Mixer	
399 - GE 80ton	5	Tank Trailer	
1640 - GE 60ton		Garden Railroad	
1681 - GE 60ton		Buildings	
1686 - GE 80ton		Footbridge over Old US-1	
Steam Locomotives		Beaver Creek Trestle	
17 - 0-4-0T		Parking Lot	
110 - 4-6-0		Goldston Depot	
Cabooses		Loading Platforms	
A&R 308		Motor Car House	
VGN 328		Sawmill	
NS 335		Storage Sheds	
SAL 5228		Ticket Office	
NKP 468 (N&W 557568)		Water Tank	
Cars		Staff Kitchen/Tool Room	
NHV 100		Yard Office	
NHV 101		Future Construction	
NHV 200		Public Toilets	
NHV 201		Engine House	
SOU 188		Museum Building	
NS 711		Shops Building	
SLRX 15917		Community Involvement	
USOX 8707	-	Glossary of Terms and Abbreviations	
NHV 9385		APPENDIX A	
NHV 9397	-	Whyte Notation - Steam Locomotive Classification	
B&M 6929		APPENDIX B - 1965 Route Map	
SOU 2653		APPENDIX C - 1934 Bonsal Track Layout	
SOU 500183			
		APPENDIX D - 2017 Current Route Map	
Other Rail Equipment		APPENDIX E - Goldston Depot Photos	
Burro Crane		APPENDIX F - 1934 Grade Crossing Wreck	
Whiting Model 5TM		APPENDIX G - HOBO LORE	
Maintenance of Way Equipment		The Hobo Code of Ethics	
Hi-Rail Truck		APPENDIX H - The Priorities of Volunteerism	
Tie Crane		APPENDIX I - Museum Goals and Techniques	. 27
P&H Road Crane			
Bantam Teleskoop	9		



INTRODUCTION

Welcome to the North Carolina Railway Museum! This Museum Catalog and Guidebook has been prepared by the NCRM Museum Committee for use by docents as a reference guide to the collections to be used for general familiarization and as a reference when giving tours of the facility. Docents are encouraged to carry this publication with them while at the facility as a reference.

ABOUT THE NORTH CAROLINA RAILWAY MUSEUM

The North Carolina Railway Museum, Inc. (NCRM) is a nonprofit corporation under the laws of the State of North Carolina and tax exempt under §501(c)(3) of the tax code of the United States. The mission of the NCRM is:

- A. To preserve the history and heritage of North Carolina railroads for our posterity
- B. To educate succeeding generations in the railroad heritage of their forebears
- C. To provide a repository for artifacts relating to railroad transport in North Carolina
- D. To demonstrate the tools and techniques used to develop North Carolina railroads
- E. To protect the traditions of North Carolina railroads for succeeding generations
- F. To foster a sense of pride in the community of North Carolina
- G. To allow this work to take place in a spirit of mutual cooperation and enjoyment for the public at large, our members, and our friends.

The vision of the NCRM is to act as a custodian of the history and heritage of North Carolina railroads, maintaining this knowledge for the education and enlightenment of the future.

CREDITS AND ACKNOWLEDGEMENTS

The North Carolina Railway Museum, Inc. (NCRM) would like to thank and acknowledge the following sources and individuals for their contributions and other materials contained in this publication:

INDIVIDUALS

David Campbell - Original Research and Personal Knowledge
Timothy Carroll (NCRM) - Original Research and Personal Knowledge
Edward Clark (NCRM) - Original Research and Personal Knowledge
R.T.Crowley (NCRM) - Original Research and Personal Knowledge
Dave Dick (NCRM) - Original Research and Personal Knowledge
M. Gray Lackey (NCRM) - Original Research and Personal Knowledge
Beverly J. Lamelin (NCRM) - Original Research and Personal Knowledge
Richard Lasater (NCRM) - Original Research and Personal Knowledge
Dr. Robert Majors - Original Research and Personal Knowledge
Jule Shanklin (NCRM) - Original Research and Personal Knowledge

R. Victor Varney (NCRM) - Original Research

Other NCRM volunteers too numerous to mention individually also contributed information and photographs to this publication.

ORGANIZATIONS

Association of American Railroads North Carolina Department of Transportation - Rail Division US Department of Transportation - US Federal Railroad Administration

BOOKS AND PUBLICATIONS

A Treasury of Railroad Fokelore

The Railroad Pocket-Book: A Quick Reference Cyclopedia of Railroad Information (1906) Fred H. Colvin - New York - Derry-Collard Norfolk Southern Railroad, Old Dominion Line, and Connections (1972) Richard Prince The Durham Branch (1988) David Younts

Norfolk Southern Color Pictorial 1950s-1970s (2015) Dalton P. McDonald

ONLINE SOURCES

Wikipedia: The Free Encyclopedia
Photos from various public domain sources

HISTORY - SHORT VERSION

The right-of-way and track purchased by the ECC-NRHS began life in 1904 as a railroad called the *New Hope Valley Railroad*. The line founded by William Roscoe Bonsal, Samuel Bauersfeld, and Henry Armand London, and designed by civil engineer William Moncure. The original 1904 charter indicated the railroad would be constructed from "a point on the Scaboard Air Line Railroad System near Apex" through the valley of New Hope Creek (now Jordan Lake) to Carrboro (then called West End) to haul lumber and connect with the *University Railroad* to form a bridge route for freight to bypass Durham and Raleigh. Within a year, the owners determined running to Durham would be more profitable, so a new railroad called the *Durham & South Carolina Railroad* (D&SC) was chartered in 1905 and the land and assets of the NHV sold to the new company. The primary traffic on the line was lumber cut from the forests of the New Hope Valley, but as land was cleared in this manner, hauling farm crops became a major source of revenue.

This lumber was used to manufacture railroad ties, for even though he was a vice-president of the *Scaboard Air Line Railroad* (SAL), Bonsal had an exclusive contract to supply ties to the SAL as they extended their lines south through Georgia and Florida. This was 1904. The *US Internal Revenue Service'* was still nine years in the future and most business regulations we know today had not been enacted yet. Three sawmills existed along the D&SC, including one at Bonsal where the NHVRy yard is today. The lumber was sawn into rough tie blanks at those mills, and then shipped in gondolas to plants to be soaked in creosote before being sold to the SAL to build their lines. Bonsal and his partners established a company called *W. R. Bonsal and Company* in Charlotte to handle lumber and other construction related materials business.

The D&SC was never a major railroad and never reached South Carolina, terminating at its south end at Duncan in southern Wake County where it connected to the original *Norfolk Southern Railroad* (NS). Eventually, the D&SC was acquired by the NS at the behest of the *American Tobacco Company*, the major shareholder in NS. As the only railroad with direct trackage into the *American Tobacco Company* complex in Durham, this provided a ready, in-house means of transporting tobacco products into and out of the plant. The NS (including the D&SC) was subsequently acquired by the *Southern Railway* (SOU) becoming part of one of the largest railroad systems in the American south. The line operated as branch until about 1974 when the *US Army Corps of Engineers* determined to create Jordan Lake in the New Hope Valley. Since this would flood the original right-of-way, the *Corps* built a bypass line around the east side of what would become the lake. After serving as a route for construction materials used to build the *Shearon Harris Nuclear Plant*, the SOU determined to abandon the line. Members of the *East Carolina Chapter NRHS* approached *Southern Railway* with the intent to purchase part of the line, and that transaction was completed in 1983.

¹ The US Internal Revenue Service (IRS) was established in 1913. Prior to that, the US had flirted with an income tax during the Civil War and the Spanish-American War, but that did not become permanent until the IRS was established.

² The company still exists today as *Bonsal American*, *Inc.*, a Charlotte-based division of the *Oldcastle Group*, a multinational conglomerate based in Dublin, Ireland.

DIESEL LOCOMOTIVES

A diesel locomotive is a type of railway locomotive in which the prime mover is a diesel engine. Several types of diesel locomotive have been developed, differing mainly in the means the output of the engine is conveyed to the wheels.

'5 - ALCO S-1:



Builder: Alco - Built: Aug 1945 - Builders Number 73583

Switcher locomotives of this type did service on virtually every major railroad in North America. It was donated from storage on the *Bayshore Railroad* in Virginia Beach, VA. Previously used on the *Point Comfort & Northern* in Lolita TX., *Alcoa Terminal in*, Alcoa TN., and *Alcoa Aluminum* in Sewalls Point, VA.

'10 - GE 25ton:



Builder: GE - Built: Apr 1950 - Builder's Number: 30590 - Status: Non-operational. This end-cab is an example of locomotives used by industrial railroads. It has only one powered

axle (traction motor), and uses a chain-drive to transmit power to the other axle. Purchased by a member from the *Piedmont Carolinas Railroad Museum* in Belmont, NC. Originally used by Duke Power at the Riverbend Plant in Mount Holly, NC, and the Lee Plant in Pelzer, SC.

'67 - GE 45ton:



Builder: GE - Built: Apr 1941 - Builders Number 15260

A no-frills locomotive for mostly industrial use for needs greater than 25 Tons. Basically two 25 ton locomotives on a common platform. It was purchased from the US Navy at *St.Julian's Creek Navy Base* in Norfolk, VA.

70 - Whitcomb 45ton:



Builder: Whitcomb - Built: Dec 1940 - Builder's Number: 60298

This locomotive is the Whitcomb Locomotive Works competition to the GE 45 ton. Purchased from the US Navy (Marine Corps assignment). At Camp Lejeune, NC. Originally US Navy at Indian Head, MD. Note connecting rods between the wheels on each truck to send traction from the powered wheel to the unpowered wheel. This originally used at the original NCRM location in Greenville, NC.

*71 - GE 80ton:



Builder: GE - Built: Mar 1945 - Builder's Number: 27994

Typical of locomotives sold to small railroads and industries across North America; an example of a very successful locomotive family. Never a candidate for most beautiful locomotive, nor the fastest, these GE center-cabs were popular due to their rugged construction and pure utilitarian design. Donated by *Becker Sand and Gravel Company*. Originally US Navy Port Chicago, CA,

75 - BLH 80ton:



Builder: Baldwin Lima Hamilton - Built: Apr 1947 - Builder's Number: 60739

A Whitcomb design, this engine was built by the resulting merger of the Baldwin Locomotive Works and the Lima-Hamilton companies. Purchased from the Beaufort & Morehead Railroad. Originally New York Shipbuilding in Camden, NJ and Steelton & Highspire Railroad in Steelton, PA.

*399 - GE 65ton:



Builder: GE - Built: Mar 1943 - Builders Number 31818

This engine is currently one of the *New Hope Valley Railway's* primary motive power units. Purchased from the *US Navy* (Marine Corps assignment) at Camp Lejeune, NC. Originally *US Army* at Theodore, AL.

'1640 - GE 80ton:



Builder: GE (Serial *31346) - Rebuilt: 1990 by the US Army at Tooele, UT

This unit was first deployed in July of 1952 at the *US Army Marion Engineering Depot* in Marion, OH. The NCRM purchased it from the US Army at Sunny Point NC.

*1681 - GE 80ton:



Builder: GE (Serial *31388) - Rebuilt: 1990 by the US Army at Tooele, UT This unit was first deployed in December of 1952 at *Military Ocean Terminal* in Bayonne, NJ. The NCRM purchased from the US Army at Sunny Point NC.

'1686 - GE 80ton:



Builder: GE - Built: Mar 1953 - Builder's Number: 31818

This engine is currently one of the *New Hope Valley Railway's* primary motive power units. Except for having been built eight years apart, *1686 is virtually identical to locomotive *71. This unit worked for the USAF 4th Fighter Wing at Sumpter, SC and Goldsboro, NC, *North Carolina Ports Authority* (ex-*Beaulort & Morehead*) in Morehead City NC, and the B&M. Purchased from NC State Surplus Property Office.

STEAM LOCOMOTIVES

A steam locomotive is a railway locomotive producing its pulling power through a steam engine. These locomotives are fueled by burning combustible material (usually coal, wood, or oil) to produce steam in a boiler. The steam moves reciprocating pistons mechanically connected to the locomotive's driving wheels. Both fuel and water supplies are carried with the locomotive, either on the locomotive itself or in a tender pulled behind.

*17 - 0-4-0T:



Builder: Vulcan Iron Works - Built: Jun 1941 - Builder's Number: 4309

Classified as a 40ton switcher, this unit was built for the *US Navy* and furnished to *New York Shipbuilding* for service building ships during WWII. This steam locomotive carries its fuel and water supplies on board, not in a separate tender. Most locomotives of this type were used in industrial or railroad switching service due to their small size. Purchased in 1999 from individuals planning to use it on the *West Virginia Northern Railway* in Kingwood, WV.

'110 - 2-6-2:



Builder: Vulcan Iron Works - Built: 1927

This Prairie-type locomotive is typical of those used by many railroads across the South. It served on the *Cliffside Railroad* at Cliffside, NC, and was later acquired by the *Stone Mountain Railroad* at Stone Mountain, GA. It was acquired by the NCRM from the *Stone Mountain Railroad*.

CABOOSES

A caboose is a railroad car occupied by the conductor and one or more brakemen coupled at the end of a freight train. Cabooses provide shelter for crew at the end of a train, and allow them to keep a lookout for load shifting, damage to equipment and cargo, and overheating axles. Cabooses were used on every freight train until the 1980s when technology safety laws requiring the presence of cabooses and full crews were relaxed. Developments in monitoring and safety technology such as lineside defect detectors and the End-of-Train Device resulted in crew reductions and the phasing out of caboose cars. Today they are generally only used under very specific circumstances or on heritage and tourist railroads.

A&R *308:



Type: Caboose - Builder: Magor Car Company - Built: Aug 1926

This car was originally built for the *Seaboard Air Line Railroad* as their *5320, and later purchased by the *Aberdeen & Rockfish Railroad*. The A&R cut the baggage doors to allow the car to be used on mixed trains for less-than-carload service. It was donated to the NCRM by the A&R when it was no longer needed.

VGN '328:



Type: Caboose - Builder: Virginian Railway from kits produced by St. Louis Car Company This car was originally built for the *Virginian Railway* and transferred to the *Norfolk & Western Railroad* through a merger. The N&W donated it to the Town of Archdale, NC where it was displayed in a park. It was purchased by an NCRM member from the Town of Archdale, NC.

NS *335:



Type: Caboose - Builder: NS Shops at New Bern, NC - Built: 1913

The oldest piece of equipment in the museum, this *Norfolk Southern Railroad* wood sided caboose is over one-hundred years old. It is used at the NCRM for birthday parties and meetings. It was donated to the community of Nelson, NC and used as a daycare center playhouse. It was acquired by the NCRM when it became unsafe to play in and was going to be burned.

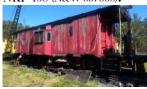
SAL *5228:



Type: Caboose - Builder: Magor Car Company - Built: Aug 1926

This car is virtually identical to '308, but without the baggage doors. It was donated to the NCRM by the *Seaboard Coast Line Railroad*.

NKP 468 (N&W 557568):



Type: Bay Window Caboose

This car was originally built for the *Nickle Plate Railroad* and transferred to the N&W in a merger. It was acquired by *Carolina Power and Light* and used as a storage building at the *Cape Fear Power Plant*. It was donated to the NCRM by CP&L.

CARS

A railroad car or railcar is a vehicle used for the carrying of cargo or passengers on a rail transport system. Such cars, when coupled together and hauled by one or more locomotives, form a train. Alternatively, some passenger cars are self-propelled in which case they may be either single railcars or make up multiple units.

NHV 100:



Type: Excursion Car - Builder: Greenville Steel Car - Built: Feb 1953

This superstructure of this car was constructed on site at Bonsal by NCRM volunteers. The frame and trucks are a flatcar purchased from the *US Navy* (Marine Corps assignment) Camp Lejeune, NC.

NHV '101:



Type: Excursion Car - Builder: Greenville Steel Car - Built: Feb 1953

This superstructure of this car was constructed on site at Bonsal by NCRM volunteers. The frame and trucks are a flatcar purchased from the *US Navy* (Marine Corps assignment) Camp Lejeune, NC.

NHV '200:



Type: Excursion Car - Built: Apr 1953

This superstructure of this car was constructed on site at Bonsal by NCRM volunteers. The frame and trucks are a flatcar purchased from the *US Navy* (Marine Corps assignment) Camp Lejeune, NC.

NHV '201:



Type: Excursion Car - Built: Apr 1953

This superstructure of this car was constructed on site at Bonsal by NCRM volunteers. The frame and trucks are a flatcar purchased from the *US Navy* (Marine Corps assignment) Camp Lejeune, NC.

SOU '188:



Type: Baggage/RPO - Builder: Bethlehem Steel - Built: 1922

This heavyweight dutifully served the *Southern Railway System* for many years. The car has been painstakingly restored and the is open as an exhibit during operating days to the public. Donated by *Southern Railway System* in 1970.

NS '711 Tool Car:



Type: Tool Car

This car was originally part of the old *Norfolk Southern Railroad* wreck train. Donated by the *Old North State Chapter NRHS*.

SLRX '15917:



Type: Refrigerator Car - Built: Nov 1956

This car was originally owned by *Swift Refrigerator Line* and used for the transport of fresh meats around the nation. A paint scheme like this, with the big corporate logo, is known as "billboarding," and is no longer allowed by the FRA. It was donated by a hot dog factory in Selma, NC

USOX '8707:



Type: Troop Train Kitchen Car - Built: Nov 1942 - Builder: St. Louis Car Company The original interior configuration was as a Kitchen Car for WWII troop trains, providing meals

to military personnel being transported to the ships to take them to the various theaters of war. It was donated by the *Old North State Chapter NRHS*.

NHV '9385:



Type: Tank Car - Built: Jun 1969

This car in Bonsal Yard filled with water for the steam locomotives and as a water point for the *Apex Fire Department*. It was purchased by the NCRM from the US Army at Sunny Point, NC.

NHV '9397:



Type: Tank Car - Built: Jun 1969

This car is kept at the north end of the NHV in New Hill filled with water for the steam locomotives and as a water point for the *Apex Fire Department*. It was purchased by the NCRM from the US Army at Sunny Point, NC.

B&M *6929:



Type: RDC-9 - Builder: Budd Corporation - Built: Dec 1958

This car saw service in commuter operations on the *Boston & Maine Railroad* north of Boston, MA for many years. When it was retired, it was purchased by an NCRM member from the *Boston & Maine Railroad*.

SOU *2653:



Type: Boxcar - Built: Oct 1938

Donated by the Southern Railway System in 1983.

SOU *500183:



Type: Boxcar - Rebuilt: Feb 1968

Donated by the Southern Railway System in 1983.

OTHER RAIL EQUIPMENT

Burro Crane:



Type: Burro Crane Model 15 - Builder: Cullen Friestedt Co.

This is a typical small crane on railroad wheels used by MoW departments across the nation. It was donated to the NCRM by the *Aberdeen & Rockfish Railroad*.

Whiting Model 5TM:



Type: Car Mover - Builder: Whiting Corp. - Built: 1959

This unit is capable of operating on both rail and road. Units like this were used at industrial sites for moving individual cars. It was purchased by the NCRM from the USMC at Cherry Point, NC.

MAINTENANCE OF WAY EQUIPMENT

Hi-Rail Truck:



Able to be driven on the road or rail, this type of equipment replaced the track mounted "motor car" of old. Used for many purposes from inspections to work crew transportation. Purchased

Tie Crane:



Railroad ties are heavy and maneuvering them when doing track maintenance can be awkward. The tie crane assists with this task, and lightens the work of our all-volunteer crew. Purchased

P&H Road Crane:



Most objects around the railroad are heavy, so a good crane like this is a necessity. This crane is on a special chassis allowing it to be driven over the road to wherever it is needed. Purchased

Bantam Teleskoop:



This hefty piece of equipment can be used for a variety of tasks in maintaining track and other facilities around the railroad. It can lift like a crane or scoop earth like a backhoe. It even has retractable railroad wheels so it can operate on tracks, roads, or open areas. Purchased

Scissor Lift:



Sometimes we have to reach very high above the railroad to maintain overhead wires, signals, antenna masts, and lights. This piece of equipment allows us to do that easily, and above all, safely. Purchased

Fire Car



Steam locomotives, and occasionally diesel locomotives, will sometimes eject sparks from their smokestacks and exhausts. This piece of equipment allows us to deal with small fires along the right-of-way before they become a problem. Purchased

NON-RAIL EQUIPMENT

Baggage Carts:



Donated by various sources.

Block Signals:



Used in governing train movements on line of road or yards - basically a railroad traffic light. Different railroads used different type of signals. Donated by various sources.

Crossing Signals:



Used as a protection device to warn motorist or pedestrians of immediate train movements over a rail/road intersection. Donated by various sources.

Mail Crane:



Donated

Radio Antenna:



All NHVRy locomotives and operating personnel carry two-way radios to stay in contact with each other, and most importantly, with the Dispatcher to control train movements and ensure safety. This base-station radio antenna is mounted near the Yard Office. Purchased

Wheelchair Lift:



A wheelchair lift is available to assist disabled passengers board and leave the train. Contact the Yard Office when needed to have an operator available. This unit was donated by *Amtrak*.

Cement Mixer:



Donated

Tank Trailer:



Donated

GARDEN RAILROAD



The Garden Railroad is one of the most popular attractions at the NCRM. The layout is over six-hundred (600) square feet, and was constructed on site by NCRM volunteers. The equipment operated is all "G Gauge" and owned by individual volunteers.

BUILDINGS

Footbridge Over Old US-1:



This footbridge connects the parking lot with Bonsal Yard, providing a safe crossing over Old US-1. It was originally a railroad bridge constructed in the 1930s to carry part of the connection between the *Durham & South Carolina Railroad* (now the NHVRy) and the *Seaboard Air Line Railroad* (now the CSX). It is usually festooned with flags as appropriate to the season and the event on operating days.

Beaver Creek Trestle:



This trestle is located approximately three miles north of Bonsal and carries the NHVRy track over Little Beaver Creek, a stream feeding into Jordan Lake. It was originally constructed in the 1980s by the *US Army Corps of Engineers* when the new line was constructed to replace the old line to be inundated under Jordan Lake.

Parking Lot:



The parking lot is located on the land once occupied by the original Seaboard Air Line Railroad Bonsal Depot and its attending service tracks.

Goldston Depot:



This freight depot was built in 1884 for the *Cape Fear & Yadkin Valley Railroad* (CF&YV), and also served the *Atlantic & Yadkin Railway* when the CF&YV sold under bankruptcy and later the *Southern Railway*. It was donated by Todd Gaines in memory of his father who saved it from destruction in 1973.

Loading Platforms:



Constructed on site by NCRM volunteers.

Motor Car House:



Constructed on site in 1984 by NCRM volunteers from a commercial building and some materials salvaged from a derelict tobacco barn.

Sawmill:



Donated by XXX. Enclosure and shed constructed on site by NCRM volunteers.

Storage Sheds:



Purchased by the NCRM.

Ticket Office:



Constructed on site by NCRM volunteers.

Water Tank:



Donated

Staff Kitchen/Tool Room:



Rebuilt on site by NCRM Volunteers from parts of the *Piedmont Woodyards* saw filers shop and commercial lumber.

Yard Office:



Original office for the industry occupying the site before it was acquired by the NCRM. Donated by *Picdmont Woodyards* in 1983.

FUTURE CONSTRUCTION

Public Toilets:



Future Construction

Engine House:



Future Construction

Museum Building:



Future Construction

Shops Building:



Future Construction

COMMUNITY INVOLVEMENT

The North Carolina Railway Museum, Inc. (NCRM) strongly believes in being involved in our local community and not simply operating and displaying historic and heritage railroad equipment for the sake of its educational value. To this end, we also get involved in many community functions, projects, and events.

Boy Scout Eagle Projects

The NCRM has been the recipient over many years of the benefits of Boy Scouts Eagle Projects, assisting our youth in earning their status as Eagle Scouts. Two of those projects are pictured here.



Christmas at the Halle Cultural Arts Center of Apex

Every Christmas for many years volunteers from the *NCRM Garden Railroad Division* have installed a model train display at the *Halle Cultural Arts Center of Apex*. After all, model trains are a holiday tradition, right?



North Carolina State Fair Garden Railroad

Volunteers from the NCRM have set up and operated a garden railroad display at the annual North Carolina State Fair each October for a number of years.



Antique Vehicle Displays at Bonsal

The NCRM has often been host to displays of antique vehicles of all types on operating days. Pictured below are a display of antique and heritage automobiles and an antique fire truck from Fayetteville posed with our locomotive '17.



Civil War Reenactment

The NCRM has hosted reenactments based upon the 1865 Battle of Morrisville, one of the last battles of the Civil War, and one of the few involving a train in the center of the action.



Local Wildlife Visitors to Bonsal

Even the local wildlife loves Bonsal and we often get visitors of all species coming to call. We always are hospitable.



We Do It All

We even operate in the snow! At Bonsal we have everything including the kitchen sink!



GLOSSARY OF TERMS AND ABBREVIATIONS

TERM DEFINITION

A&R Aberdeen & Rockfish Railroad - A regional railroad in North Carolina

AAR Association of American Railroads - The industry trade group representing the major railroads of North America,

including Amtrak and some regional and commuter railroads.

ABS Abbreviation for "Automatic Brake System"

Accommodation Car Hobo slang for the caboose of a train.

AIC This name has now been expanded to the American Institute for Conservation of Historic and Artistic Works

Air Hose The hose connecting the air brakes on each car together.

American Locomotive Company - A former locomotive builder formed in 1901 by the merger of Schenectady Alco

Locomotive Engine Manufactory of Schenectady, NY with seven smaller locomotive manufacturers.

Amtrak The American passenger rail system owned by the US Government.

Angelina Hobo slang for a young and inexperienced hobo.

 \mathbf{B}

Beaufort & Moorhead Railroad - A short line railroad serving the seaport of Moorhead City, NC B&M B&M Boston & Maine Railroad - A former regional railroad operating from Boston, MA to points north

Bad Order The status of a railroad car taken out of service for repairs.

Bad Road Hobo slang for a railroad line rendered useless by a hobo's bad action or crime. Baldwin Baldwin Locomotive Works - A former locomotive builder based in Philadelphia, PA Ballast The crushed rock placed between the ties of a railroad line to hold it in place.

Barnacle Hobo slang for a person who sticks to one job a year or more.

Big Hole The brake setting for an emergency stop

Big House Hobo slang for prison.

Bindle Stiff Hobo slang for a collection of belongings wrapped in cloth and tied around a stick.

Blind Baggage Hobo slang for riding on small vestibule platform at the end of a baggage or covered hopper car.

Block Signal A signal controlling the movement of trains over a specific block or section of track.

Blowed-in-the-Glass Hobo slang for a genuine, trustworthy individual. Abbreviation for "Built" (Also a great sandwich.) BLT

Blue Flag A blue marker placed on a piece or pieces of railroad cars or locomotives indicating they are not to be moved under

any circumstances since workers are working under the equipment.

BLH Baldwin-Lima-Hamilton Corporation - A former locomotive builder formed from the merger of the Baldwin

Locomotive Works and the Lima-Hamilton Crane Corporation.

Boil Up Hobo slang for boiling one's clothes to kill lice and their eggs; generally, to get oneself as clean as possible.

Bone Polisher Hobo slang for a mean dog. Brass Hat A railroad executive **B**ullets Hobo slang for beans.

Cannonball Hobo slang for a fast train.

Captain Conductor

CF&YV Cape Fear & Yadkin Valley Railroad - A former short line railroad in Chatham County, NC, it was acquired by the old

NS and incorporated into the SOU in a merger.

CFR Code of Federal Regulations

CFR49 That part of the Code of Federal Regulations covering the rules for conducting transportation.

Chuck a Dummy Hobo slang for pretending to faint.

Cinders Bull Railroad policeman

Class One Railroad A railroad with a minimum annual operating revenue of \$433.2 million.

Classification Yard A railroad yard where cars are sorted (classified) into trains.

A type of steam locomotive with the pistons connected to the wheels by gears and a driveshaft with the pistons mounted Climax

on the sides of the locomotive pointing outward at a forty-five-degree (45°) angle to the track.

Consist The list of cars making up a train

COTS Abbreviation for "Cleaned, Oiled, Tested, and Stenciled"

Coupling To link one or more railroad cars together.

Covered Hopper Railroad car designed for handling bulk materials such as grain or plastic pellets needing to be covered during transport

to prevent damage.

Cow Crate Hobo slang for a railroad stock car for carrying animals.

Cowcatcher Slang term for a "pilot," a v-shaped device at the front of a locomotive designed to push objects off the track. CP&L

Carolina Power and Light - An electric power generating utility now merged with Duke Power to form Duke Progress.

A small diesel locomotive Critter

CRR Cliffside Railroad - A former short line railroad in North Carolina in Cliffside, NC near Charlotte, NC. CRRCO Cliffside Railroad - A former short line railroad in North Carolina in Cliffside, NC near Charlotte, NC.

Crummy Slang term for a caboose

CSX CSX Transportation - A Class-One railroad currently operating; one of its mainlines skirts the edge of the NCRM

Cut A group of cars coupled together but without a locomotive and markers

D

D&S Durham & Southern Railroad - A former short line railroad in North Carolina, its right-of-way is now part of the NS. TERM DEFINITION

D&SC Durham & South Carolina Railroad - A former short line railroad in North Carolina, its right-of-way is now the NHVRy,

the service tracks of the Shearon Harris Nuclear Plant, the American Tobacco Trail, or partially abandoned.

Daisy Picker A non-railfan accompanying a railfan on a train spotting trip

Diamond Cracker A locomotive fireman

Do Not Hump Placard applied to cars containing fragile materials.

Drawbar The shank of the coupler attached to the car to allow it to be pulled (drawn) along.

Dwarf Signal A signal on a mount close to the ground to advise trains of the status of an individual spur or siding.

 \mathbf{E}

Easy Mark Hobo slang for a person or place where one can easily get food and a place to stay overnight.

ECC-NRHS East Carolina Chapter NRHS - A railroad historical organization associated with the NRHS and a Division of the

EMD Electro-Motive Diesel - A locomotive builder formed from the spin-off of the Electro-Motive Division of the General

Motors Corporation.

Ferroequinologist The Latin term for a railfan

Fish Plate Slang term for a rail joining plate otherwise known as an angle bar.

Flange The small rim of steel on the inside edge of a railroad wheel causing the wheel to follow the rails.

Foamer A casual or unprofessional railfan

FRA US Federal Railroad Administration - An agency in the US Department of Transportation (DOT) established to

promulgate and enforce rail safety regulations, administer railroad assistance programs, conduct research and development in support of improved railroad safety and national rail transportation policy, provide for the rehabilitation of Northeast Corridor rail passenger service, and consolidate government support of rail transportation activities.

Friction Bearing A Babbit metal bearing that the end of an axle turns in, requiring periodic lubrication. Frog

The large forging used in a turnout allowing a flangeway for the wheels to cross a track.

G

Gandy Dancer A railroad maintenance-of-way worker.

GE General Electric Company - The locomotive builder division of the General Electric Company Glad Hands Slang for the fittings connecting air brake hoses; used because the link looks like a handshake.

Gondola A type of railroad car with low sides and (usually) no roof.

Η

Heisler A type of steam locomotive with the pistons connected to the wheels by gears and a driveshaft with the pistons mounted

on the sides of the locomotive at a forty-five-degree (45°) angle to the track.

Heritage Railroad A railroad preserved for its cultural value as a piece of history

High Ball A clear signal

High-Wheeler A fast passenger train

Acronym derived from the term "HOmeward BO und." The term originated after the Civil War as many veterans hopped Hobo

rides on freight trains to return to their homes.

Railroad engineer Hogger

Hot Box An overheated wheel bearing

Hump Yard A type of railroad yard built on the side of a hill where cars are sorted by allowing them to roll down the hill by gravity

and adjusting the turnouts to shunt them onto the proper tracks.

I

ISO

International Organization for Standardization - An international standards body composed of representatives from

various national standards organizations. Founded on 23 February 1947, the organization promotes worldwide proprietary, industrial and commercial standards. It is headquartered in Geneva, Switzerland and works in 162 countries. It was one of the first organizations granted general consultative status with the United Nations Economic and

Social Council.

J

Jungle Hobo slang for an area off a railroad where hobos camp and congregate.

Jungle Buzzard Hobo slang for a hobo or tramp who preys on his own.

Knuckle The moveable part of a standard North American coupler used to link freight cars together.

L

Loon An irresponsible railfan Lube Abbreviation for "Lubricated"

Mixed Train A train made up of cars carrying both passengers and freight

Moniker Hobo slang for nickname.

A small, self-propelled railroad car used for transportation of railroad workers and supplies Motor Car

Mulligan Hobo slang for a type of community stew, created by several hobos combining whatever food they have or can collect

NCRM North Carolina Railway Museum - A nonprofit corporation operating a museum and the New Hope Valley Railway at

NHV New Hope Valley Railway - A Tourist Line railroad operating at Bonsal, NC NHVRy New Hope Valley Railway - A Tourist Line railroad operating at Bonsal, NC TERM DEFINITION

NKP Nickle Plate Railroad - Nickname for a former Class-One railroad called the New York, Chicago, and St. Louis Railroad, the reporting mark was NKP, hence the nickname. The remaining lines of the NKP were merged into the

NRHS National Railway Historical Society - A non-profit organization established in 1935 to promote interest in, and

appreciation for, the historical development of railroads. It is headquartered in Philadelphia, Pennsylvania and

organized into 16 regions and 170 local chapters.

NS Norfolk Southern Railroad - A Class-One railroad currently operating

NS Norfolk Southern Railway - a regional railroad that ran from Norfolk, VA. To Charlotte, NC. Absorbed into the SOU

in 1974.

O

On the advertised On schedule

ONS Old North State Chapter NRHS - A railroad historical organization based in Raleigh, NC

OS On Sheet - Dispatcher and tower operators used this as a verb to indicate a train had passed and had been recorded

"on the sheet."

Padding the Hoof Hobo slang for traveling by foot.

Pilot A v-shaped device at the front of a locomotive designed to push objects off the track. The slang term is a "cowcatcher."

Points The movable part of a turnout.

Polling The act of pushing a car on a parallel track using a sturdy wooden pole. This practice is now illegal. Polling Pocket A steel fitting formerly applied to the outside corners of freight cars to allow them to be moved by polling. Possum Belly Hobo slang for riding on the roof of a passenger car (one must lie flat the stomach, to avoid being blown off).

Pullman A railroad sleeping car; most were made by the *Pullman Company*.

Punk Hobo slang for a young hobo.

Push-pole A sturdy wooden pole formerly used to allow a locomotive to push a car on a parallel track. This practice is now illegal.

Q

Qa \mathbf{R}

R&LHS Railway & Locomotive Historical Society - A railroad historical organization

Railfan A railroad hobbyist

Railroad Any form of non-highway ground transportation run on rails or electromagnetic guideways, including commuter or other

short-haul rail passenger service in a metropolitan or suburban area.

RBLT Abbreviation for "Rebuilt"

RDC Rail Diesel Car - A self-propelled diesel multiple unit (DMU) railcar. Between 1949 and 1962, 398 RDCs were built

by the Budd Company of Philadelphia, PA. The cars were primarily for passenger service in low traffic density traffic areas or in short-haul commuter service. The cars could be used singly or several could be coupled together in train sets

and controlled from the cab of the front unit.

Refrigerated Car - A refrigerated boxcar designed to carry perishable freight at specific temperatures. Reefer

Regional Railroad A railroad with at least three-hundred fifty (350) miles of track or \$40 million in annual operating revenue.

Right-of-Way The route and roadbed of a railroad.

Road Stake Hobo slang for the small amount of money a hobo may have in case of an emergency.

Roller Bearing The end of the axle of a wheelset allowed to turn in a collar equipped with rollers so the wheels rotate.

RPKD Abbreviation for "Repacked"

RPO Railway Post Office - A railroad car, normally operated in passenger service, as a means to sort mail enroute in order to

speed delivery. The RPO was staffed by highly trained Railway Mail Service postal clerks and was off-limits to the

passengers on the train.

RS&N Red Springs & Northern - A Tourist Line railroad operating between Parkton, NC and Red Springs, NC using railroad

motors cars to carry visitors

S

SAL Seaboard Air Line - A former Class-One railroad merged with ACL to form SCL with parts now merged into CSX and

SCL. Seaboard Coast Line - A former Class-One railroad formed from the merger of the ACL and SAL with parts now merged into CSX and NS

Shack Slang term for a caboose

Shay A type of steam locomotive with the pistons connected to the wheels by gears and a driveshaft with the pistons mounted

vertically on one side of the locomotive.

Shunt To switch cars to sort them among several tracks in a yard

SLRX The UMLER code identifying railroad cars owned by Swift Refrigerator Line - A division of Swift & Company, a meat

packing company founded in 1855 in Eastham, MA by Gustavus Franklin Swift. The company is now part of JBS USA

Holdings, Inc. of Greely, CO.

Smoke Orders The act of watching the horizon for a plume of smoke to determine if another train is coming.

SMRR Stone Mountain Railroad - A tourist Line railroad operating at Stone Mountain, GA SOU

Southern Railway System - A former Class-One railroad with parts now merged into CSX and NS

Speeder Another term for a motor car

A dead-end track branching off another track. Spur

Stock Car A type of railroad car designed for the transportation of livestock, usually farm animals.

Noun: A track structure designed to set a route between one or more tracks; properly called a "turnout." Switch

Switch Verb: The act of shunting cars to various tracks to sort them.

TERM DEFINITION

<u>T</u>

Tamper A unit of maintenance-of-way equipment with vibrating paddles hanging down into the ballast to agitate the ballast down

between the ties making the track more stable.

Tank Tank Car for carrying bulk liquids
Tea Kettle A small steam locomotive
Tender Locomotive's Fuel Car

Tie Plate The small slab of steel placed between the bottom of a rail and the top of a tie to distribute weight across a larger area

than the rail base when a train passes over.

Torpedo A small packet of explosive designed to be attached to a railroad rail to signal an engineer to stop immediately upon

hearing the detonation. The use of torpedoes is now illegal on most railroads around the world.

Tourist Line Railroad A railroad operated for its historic value or for the entertainment of the public.

Track Speeder Another term for a motor car

Train A group of cars coupled together with a locomotive at one end and proper end-of-train markers at the other Train Order Signal A signal operated by a station agent to advise approaching trains of a need to stop or perform other operations.

Truck The set of wheels under a railroad car. Each railroad car will usually have one truck at each end.

Turnout The proper term for a track structure designed to set a route between one or more tracks; this is also called a "switch."

 $\underline{\mathbf{U}}$

Umler The rail industry's official source for rail equipment information, including freight cars of all varieties, locomotives, and

end of train devices. This system replaced the legacy UMLER database. The name originally was an acronym for *Universal Machine Language Equipment Register*, but was changed in 2009 with the launch of the new Umler system

in favor of the lower-case spelling and trademarked name.

Uncoupling To disconnect railroad cars or locomotives from each other.

USAF United States Air Force
USMC United States Marine Corps
USN United States Navy

USO United Service Organizations - A nonprofit organization providing programs, services, and entertainment to United

States service members and their families. Since 1941, it has worked in partnership with the US Department of Defense

(DoD)

USOX The UMLER code identifying railroad cars owned by the *United Service Organizations*

 $\underline{\mathbf{V}}$

Vestibule The part of a passenger car, usually at one or both ends of the car, allowing passengers to board or detrain.

VGN Virginian Railway - A Class-One railroad merged in the N&W

Vulcan Iron Works - A locomotive manufacturing company based in Wilkes-Barre, PA and now out of business

 \mathbf{W}

Weenie English slang term for "hot dog" or "wiener." Wheelset Two railroad wheels connected by an axle

Whitcomb Whitcomb Manufacturing - A locomotive manufacturing company, merged into BLW, and finally out of business
White Lined The status of a railroad car or locomotive marked for disposal, usually indicating the car or unit will be sold or scrapped.

A white line is painted through the number on the side of the car or locomotive.

Whyte Notation A system for classifying steam locomotives by wheel arrangement was devised by Frederick M. Whyte. It came into use in the early twentieth century following a December 1900 editorial in American Engineer and Railroad Journal. The

notation counts the number of leading wheels, then the number of driving wheels, and finally the number of trailing wheels, groups of numbers being separated by dashes. In the notation, a locomotive with two leading axles (four wheels) in front, then three driving axles (six wheels) and then one trailing axle (two wheels) is classified as 4-6-2.

WVN West Virginia Northern Railroad

<u>**X**</u>

Y

Yard Any area where freight or passengers are loaded or classified (sorted).

Yard Limits The designated area of track determined to be a yard.

Yegg Hobo slang for a traveling professional thief. ${f Z}$

Za

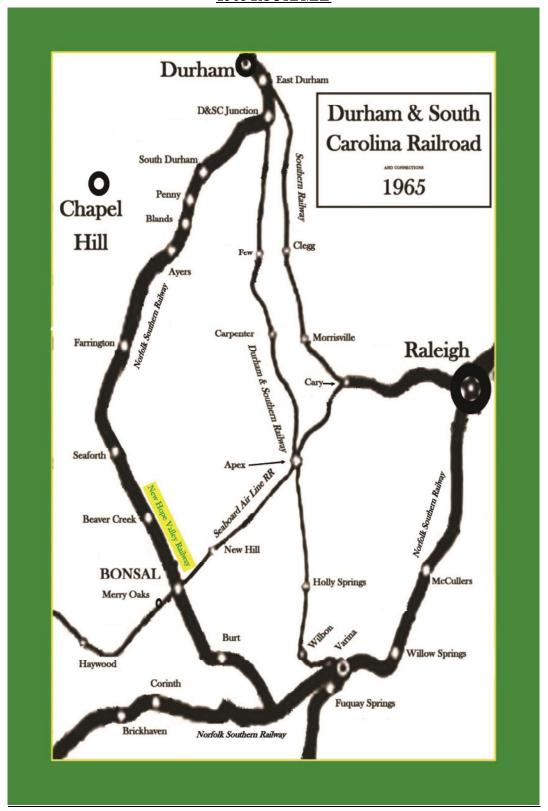
APPENDIX A WHYTE NOTATION - STEAM LOCOMOTIVE CLASSIFICATION

Locomotives.-Types of.-

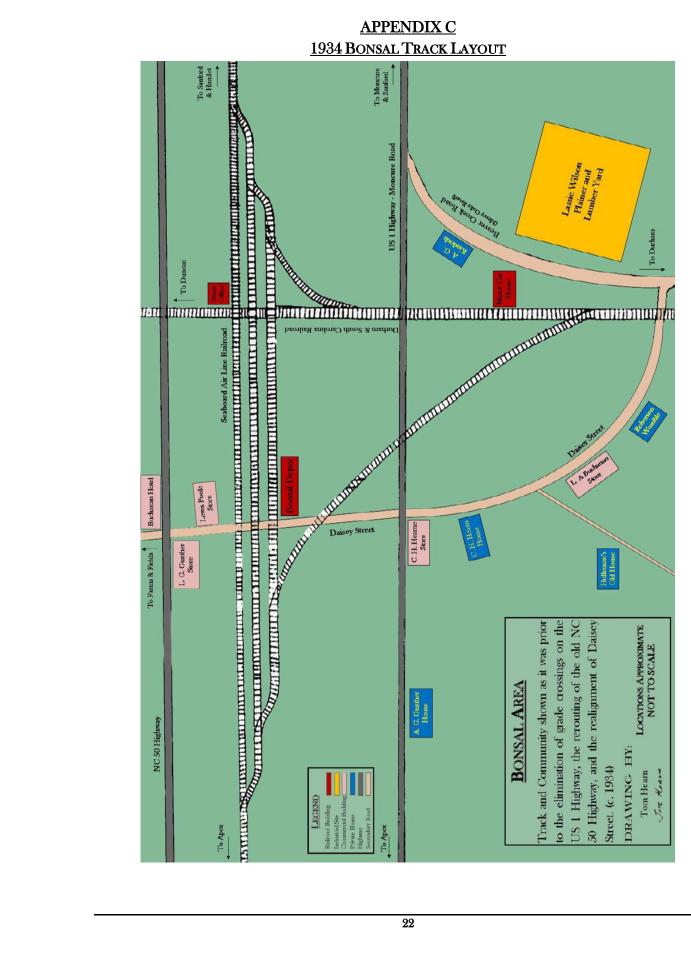
	<u> </u>	Single Driver 4-2-2
Full	<u> </u>	American 4-4-0
Truck	<u> </u>	Atlantic 4-4-2
or	<u> </u>	Ten Wheel 4-6-0
Bogie	<u> </u>	Pacific or St. Paul. 4-6-2
Class.	<u> </u>	Twelve Wheel4-8-0
	<u> </u>	Mastodon 4-10 0
	<u>r2000</u>	Columbia 2-4-2
	<u> </u>	Mogul 2-6 0
Pony or	<u> </u>	Prairie 2-6-2
Two	<u> </u>	Consolidation 2 - 8-0
Wheel Trunk	<u> </u>	Mikado or Calumet 2—8-2
Class.	<u> </u>	Decapod2-10-0
Class.	<u> </u>	Santa Fe 2-10-2
	<u> </u>	Contipode 2-12-0
	r<_00	Four Wheels 0-4-0
	<u> </u>	Four Coupled 2—1—0
	<u> 400 a</u>	" " 0—4—2
Switcher	4000	Six " 0-6-0
Class.	40000	Eight " 0-8-0
	400000	Ten " 0-10 - 0
	4000000	Articulated-Two six coupled.
	40000	Forney Original., 0-4-4
	400000	" 6 coupled 0-6-4
Forney Class.	400 O a	" Single 4 - 2-2
J44001	400000	" Mogul 2-4-4
	4000000	" Suburbs. 2-4-6

Locomotive Classification.

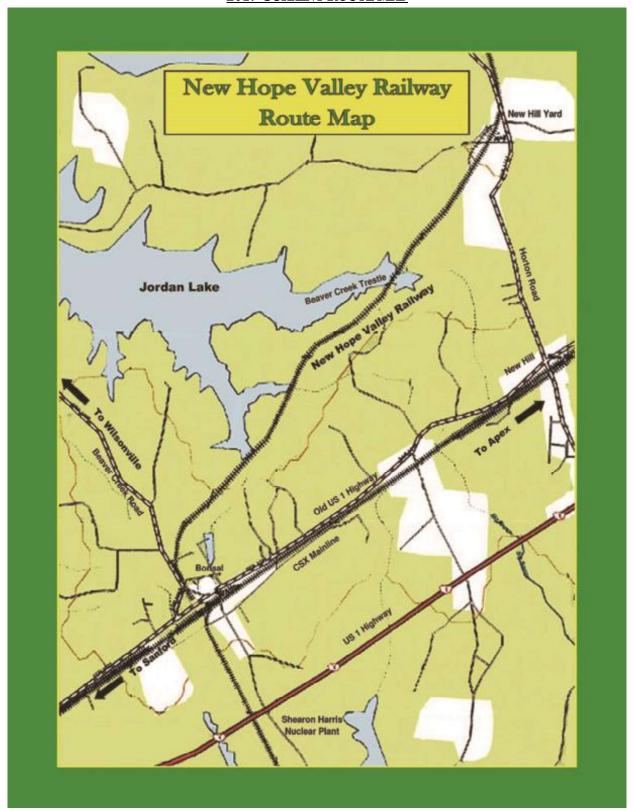
APPENDIX B 1965 ROUTE MAP



APPENDIX C 1934 Bonsal Track Layout



APPENDIX D
2017 CURRENT ROUTE MAP



APPENDIX E GOLDSTON DEPOT



GOLDSTON DEPOT - 1967



GOLDSTON DEPOT - 1945

APPENDIX F GRADE CROSSING WRECK 1934





APPENDIX G - HOBO LORE

THE HOBO CODE OF ETHICS

A Code of Ethics was created by *Tourist Union '63* during its 1889 *National Hobo Convention* in St. Louis Missouri. This code was voted upon as a concrete set of laws to govern the *Nationwide Hobo Body*. It reads:

- 1. Decide your own life; do not let another person run or rule you.
- 2. When in town, always respect the local law and officials, and try to be a gentleman at all times.
- 3. Don't take advantage of someone in a vulnerable situation, locals, or other hobos.
- 4. Always try to find work, even if temporary, and always seek out jobs nobody wants. By doing so you not only help a business along, but ensure employment should you return to that town again.
- 5. When no employment is available, make your own work by using your added talents at crafts.
- 6. Do not allow yourself to become a stupid drunk and set a bad example for locals' treatment of other hobos.
- 7. When jungling in town, respect handouts, do not wear them out, another hobo will be coming along who will need them as badly, if not worse than you.
- 8. Always respect nature, do not leave garbage where you are jungling.
- 9. If in a community jungle, always pitch in and help.
- 10. Try to stay clean, and *boil up* wherever possible.
- 11. When traveling, ride your train respectfully, take no personal chances, cause no problems with the operating crew or host railroad, act like an extra crew member.
- 12. Do not cause problems in a train yard, another hobo will be coming along who will need passage through that yard.
- 13. Do not allow other hobos to molest children, expose all molesters to authorities, they are the worst garbage to infest any society.
- 14. Help all runaway children, and try to induce them to return home.
- 15. Help your fellow hobos whenever and wherever needed, you may need their help someday.
- 16. If present at a hobo court and you have testimony, give it, whether for or against the accused. Your voice counts!

HOBO SIGNS AND SYMBOLS

To cope with the uncertainties of hobo life, hobos developed a system of symbols, or a visual code. Hobos would write this code with chalk or coal to provide directions, information, and warnings to others in "the brotherhood." A symbol might indicate "turn right here," "beware of hostile railroad police," "dangerous dog," "food available here," and so on. Some commonly used signs were:

- A cross signifies "angel food," that is, food served to the hobos after a sermon.
- A triangle with hands signifies that the homeowner has a gun.
- A horizontal zigzag signifies a barking dog.
- A square missing its top line signifies it is safe to camp in that location.
- A top hat and a triangle signify wealth.
- A spearhead signifies a warning to defend oneself.
- A circle with two parallel arrows means get out fast, as hobos are not welcome in the area.
- Two interlocked circles signify handcuffs (i.e. hobos are hauled off to jail).
- A caduceus symbol signifies the house has a doctor living in it.
- A cross with a smiley face in one of the corners means the doctor at this office will treat hobos free of charge.
- A cat signifies a kind lady lives here.
- A wavy line (signifying water) above an X means fresh water and a campsite.
- Three diagonal lines mean it is not a safe place.
- A square with a slanted roof (signifying a house) with an X through it means that the house has already been "burned" or "tricked" by another hobo and is not a trusting house.
- Two shovels signify work was available (shovels, because most hobos performed manual labor).

APPENDIX H - THE PRIORITIES OF VOLUNTEERISM

LIFE Have Fun!

LOVE Take care of your family first and foremost.

MONEY Be true to the job providing you with the money you need to live.

HEALTH Stay healthy and in good shape.

VOLUNTEERISM Only after all of the above is accomplished.

APPENDIX I MUSEUM GOALS AND TECHNIQUES

According to most sources, a museum is an institution caring for a collection of artifacts and/or other objects of artistic, cultural, historical, or scientific importance. Most museums make their collections available for public viewing through permanent or temporary exhibits and exhibitions. While most large museums are located in major cities throughout the world, local museums exist in smaller cities, towns, and even the countryside. The mission, vision, and goal of each museum can be quite different one from another. These may range from serving only researchers and specialists to serving the general public. The continuing increase in the storage of information in digital form is causing many museums to include virtual exhibits able to be studied through the internet. The North Carolina Railway Museum (NCRM) fits into this as a living museum of history and cultural heritage. This type of museum recreates a setting to provide visitors with the impression of seeing something now relegated to the pages of history. In this way, the NCRM attempts to allow visitors the experiential interpretation of visiting a typical railroad yard of the early to midtwentieth century to the fullest extent possible while maintaining a comfortable, friendly, and informative atmosphere for learning and enjoyment. All of this is accomplished through the techniques outlined in this section.

ACCESSION/DEACCESSION:

When an artifact or item is officially added to the collections of a museum, it is said to be accessioned. and by the same token, when an artifact or item is removed from the collections of a museum, it is said to be deaccessioned. Each artifact or item accessioned is assigned a unique accession number to identify it within the collections. An accession number usually includes the year the object was acquired and a sequential number. Departments within the museum sometimes have a unique identifier to show the department responsible for the object. The NCRM has a written policy on accession and deaccession.

PRESERVATION:

The act of preservation means to keep safe from injury, harm, or destruction. This refers to the set of activities designed to prolong the life of an artifact or item without making changes of any sort to the object. Preservation is distinguished from conservation or restoration in cultural heritage since preservation does not include the treatment and repair of objects to slow decay or restore them to a usable state.

CONSERVATION:

The conservation of cultural heritage involves protection and restoration using methods effective in keeping the artifact or item in as close to its original condition as possible for as long as possible. This includes the conservation of architecture and cultural heritage. Conservation of cultural heritage is described as ethical stewardship. The guidelines for the conservation of cultural heritage are:

- Minimal intervention;
- Appropriate materials and reversible methods;
- Full documentation of all work undertaken.

Compromises must sometimes be made when preserving appearance, maintaining original design and materials, and the ability to reverse changes. Conservators must decide an appropriate conservation strategy and apply their expertise accordingly. The American Institute⁸ for Conservation Code of Ethics and Guidelines for Practice has addressed such concerns, stating, "All actions of the conservation professional must be governed by an informed respect for cultural property, its unique character and significance and the people or person who created it." This can be applied in both the care and long-term storage of objects in archives and institutions. "While recognizing the right of society to make appropriate and respectful use of cultural property, the conservation professional shall serve as an advocate for the preservation of cultural property." Preservation specialists must be respectful of cultural property and the societies creating it. It is also important for them to be aware of international and national laws pertaining to stolen items.

RESTORATION:

Restoration is the process of attempting to return artifacts and/or items of our cultural heritage to a previous state as close to "original" as possible. This is not simply a rebuilding, repainting, repair of an object, but rather preserving the object for the future and not necessarily making it look pristine. Restoration is controversial, since it often involves some irreversible change to the original material of the object with the goal of making it "look good." All restorations should be reversible to avoid irrevocable errors based upon future research.

REPRODUCTION:

Reproduction is the act of creating a new version of an artifact and/or item no longer in existence. Objects deteriorate over time and can no longer be used to provide a proper representation when providing interpretive information. In such cases, a reproduction may be substituted for the original. Ethically, all reproductions should be identified as such at all times.

³ AIC – This name has now been expanded to the American Institute for Conservation of Historic and Artistic Works (www.Conservation-US.org)