National Register of Historic Places Continuation Sheet

SUPPLEMENTARY LISTI	NG RECORD
NRIS Reference Number: 02000678	Date Listed: 11/4/0
Denver & Rio Grande Western RR Caboose	
Property Name Multiple Name	County
	l Register of Histor nomination document
Multiple Name This property is listed in the National Places in accordance with the attached subject to the following exceptions, enotwithstanding the National Park Serventional Park Serventicular Park Serventional Park Servent	l Register of Histor nomination document

DISTRIBUTION:

National Register property file Nominating Authority (without nomination attachment)

...JES

United States Department of the Interior National Park Service

National Register of Historic Places Registration Form

OCT | 6 2003

This form is for use in nominating or requesting determination for individual properties and districts. See the truetien in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking `x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter `N/A" for `not applicable." For functions, architectural classification, materials and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

sheets (NPS Form 10-900a). Use a typewi	nter, word processor, or computer, to complete a	iii iterris.
1. Name of Property		
historic name Denver & Rio Gran	nde Western Railroad Caboose No. 05	78
other names/site number 5JF249		
2. Location		
2. Location		
street & number 17155 West 44th	Avenue	[N/A] not for publication
city or town Golden		[X] vicinity
state Colorado code CO	county <u>Jefferson</u> code <u>059</u> z	ip code <u>80403</u>
3. State/Federal Agency Certific	ation	
National Register of Historic Places and my opinion, the property [X] meets [] considered significant [] nationally [] statement of certifying official/Title	ion of eligibility meets the documentation stands meets the procedural and professional requirem does not meet the National Register criteria. atewide [X] locally. ([] See continuation sheet State Historic Preservation Officer ric Preservation, Colorado Historical See Continuation State Preservation State Preservation See Continuation State Preservation See Continuation See	nents set forth in 36 CFR Part 60. In I recommend that this property be for additional comments.) O(b/D3 Date
In my opinion, the property [] meets [] c ([] See continuation sheet for additional	does not meet the National Register criteria.	
Signature of certifying official/Title		Date
State or Federal agency and bureau		
4. National Park Service Certific	ation	
I hereby certify that the property is: [V] entered in the National Register [] See continuation sheet. [] determined eligible for the National Register [] See continuation sheet. [] determined not eligible for the National Register. [] removed from the National Register [] other, explain [] See continuation sheet	Signature of the Keeper	Date of Action

Jefferson	County,	Colorado	
County/State			

5. Classification				
Ownership of Property (Check as many boxes as apply)	Category of Property (Check only one box)	Number of i	sly listed resources.)	ithin Property
[X] private [] public-local	[] building(s) [] district	Contributing	Noncontributin	gbuildings
[] public-State [] public-Federal	[] site [X] structure [] object	0	0	sites
		1	0	structures
		0	0	objects
		1	0	Total
Name of related multiple post (Enter "N/A" if property is not part of a multiple post. N/A	property listing.		contributing listed in the	
IVA		0		
6. Function or Use				
Historic Function (Enter categories from instructions)		Current Functi (Enter categories from instr		
Transportation: rail-related		Recreation and		
7. Description				
Architectural Classificatio (Enter categories from instructions)	n	Materials (Enter categories from instr	ructions)	
No style		foundation walls_Wood		
		roof Wood		
		other		
		roof Wood other		

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

Bibliography (Cite the books, articles and other sources used in preparing this form on one or more continuation sheets.)

Previous	documentation	on file	(NPS):
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- [] preliminary determination of individual listing (36 CFR 67) has been requested
- [] previously listed in the National Register
- [] previously determined eligible by the National Register
- [] designated a National Historic Landmark
- [] recorded by Historic American Buildings Survey

[] recorded by Historic American Engineering Record

Primary location of additional data:

- [X] State Historic Preservation Office
- [] Other State Agency
- [] Federal Agency
- [] Local Government
- [] University
- [] Other

Name of repository:

Colorado Historical Society

<u>Denver & Rio Grande Western Railroad Caboo</u> Name of Property	<u>Jefferson County, Colorado</u> County/State		
10. Geographical Data			
Acreage of Property less than one			
UTM References (Place additional UTM references on a continuation sheet.)			
1. 13 483496 4402177 Zone Easting Northing 2.	3. Zone 4.	Easting Northing	
Zone Easting Northing	Zone	Easting Northing	
	[] See co	ntinuation sheet	
Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)			
Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)			
11. Form Prepared By			
name/title Frend John Miner			
organization Rocky Mountain Railroad Club		date December 17, 2001	
street & number 2445 Dartmouth Ave.		telephone 303-494-9670	
city or town Boulder	state CO	_	
Additional Documentation		· · · · · · · · · · · · · · · · · · ·	
Submit the following items with the completed for	orm:		
Continuation Sheets			
Maps A USGS map (7.5 or 15 minute series) indicating the properties having the properties have been supplied to the properties of the properties have been supplied to the properties of the properties have been supplied to the properties of the properties have been supplied to the properties of the properties have been supplied to the properties of the properties of the properties have been supplied to the properties of the properties have been supplied to the properties of the properties		merous resources.	
Photographs Representative black and white photographs of the p	property.		
Additional Items (Check with the SHPO or FPO for any additional items))		
Property Owner			
Complete this item at the request of SHPO or FPO.)			
name see continuation sheet			
street & number		telephone	

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127, and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

United States Department of the InteriorNational Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 1

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

DESCRIPTION

MOVES OF CABOOSE NO. 0578

Denver & Rio Grande Western Railroad Caboose No. 0578 entered service on the D&RG (later D&RGW) narrow gauge system in 1886. It was probably used on all portions of the narrow gauge system during its lifetime, but during its final years of service (1946 to 1951) it generally operated in the Salida/Gunnison/Montrose area.

The Rocky Mountain Railroad Club purchased the caboose in Salida from the D&RGW on 26 November 1951. It remained on railroad property until January 1954 when it was moved as follows:

January 2, 1954 – Caboose moved from Salida, via D&RGW, to the railroad's Burnham Shops in Denver.

January 1954 – Caboose moved by Weiker Transfer & Storage from Burnham Shops to Golden (School of Mines).

August 1958 – Caboose moved by Duffy Moving and Storage from Golden to its current location at the Colorado Railroad Museum.

DESCRIPTION AND ALTERATIONS

The Denver & Rio Grande (D&RG) built Caboose No. 0578 in its own car shop. It was one of 124 narrow gauge cabooses owned by the railroad. Based on a number of parameters, including length and number of wheels, these 124 cabooses have been divided into five separate classes. In this organizational system, Caboose 0578 is classified as a Class 2 caboose. The 16 cabooses in this particular class were built between 1885 and 1890. Caboose 0578 was built in 1886.

Caboose 0578 has a 17-foot long body and two 4-wheel trucks (photos 1 & 2). Its original cost was \$685. In 1888, Class 2 cabooses were insured for \$400 to \$530, depending on age. In 1919, their book value varied from \$685 to \$800.

Caboose 0578 is of conventional rectangular plan, with a cupola in the center of the car (figs. 2 & 3). An open platform occupies the space at each end of the car between the doors into the caboose proper and the railing. These platforms are approximately two feet by eight feet and are protected from the weather by an extension of the caboose roof. A roof walkway extends about a foot beyond the ends of the roof, providing relatively safe footing when walking on the roofs between cars. Ladders from each platform provide access to the roof. There is also a manual brake wheel on each platform. Each end door contains a four-pane window below which is lettered "Passengers are not allowed to stand on this platform." (photos 3 & 4)

National Register of Historic Places Continuation Sheet

Section number 7 Page 2

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

There are two windows on one side of the car and one window on the other (photos 1 & 2). The cupola has two windows in front and back and two windows on each side. Each side of the caboose has a letter board just under the edge of the roof containing the words "Denver & Rio Grande Western." (The letter boards are currently off the car for painting and re-lettering.)

Important operational information is stenciled on the caboose sides. This includes the car's weight ("WT 20700 Salida 9-11-41") and the date the wheels were last re-packed ("RPKD. MO. 7-20-44 D&RGW"). There are two 4-wheel trucks under the caboose. Each truck has a 3' 7" wheelbase and a leaf spring suspension system (photo 6).

Figure 1 D&RGW Caboose No. 0578 Specifications					
Length		Cupola		Doors	
Overall	22' 6"	Width	8' 0"	Width	1' 10"
Body	17' 1"	Length	5' 9"	Height	5' 6"
Width		Height (from cab roof)	2' 9"	Wheels	
Overall	8' 0"	Roof Walk		Diameter	26"
Body	6' 10"	Width	1' 8"	Wheelbase	15' 0"
Height		Extension past roof	1' 4"	Weight	
Overall (from rails)	9' 8"	End Platform		Empty (9/1941)	20,700 lbs
Body	6' 11"	Width	8' 0"		
•		Length	2' 3"		

Inside Caboose 0578, the walls have been painted dark green. The locker interiors have not be repainted and remain a light green. The inside trim is black.

At the stove end of the caboose and immediately to the left is a rectangular water reservoir mounted on the wall (photo 10). Underneath is a cabinet with a counter top. An opening in this counter contains a basin which rests directly beneath the water reservoir faucet.

Immediately to the right of the water reservoir and cabinet, separated by a window in the side of the caboose, is a small, slanted-top writing desk mounted to a partition wall (photo 11). The hinged desk top can be raised to reveal a storage area. In front of the desk, mounted on the wall, is a three-slotted container for holding forms and other documents. In the corner, above and to the left of the desk, is a kerosene lantern in a lamp bracket. Presumably, the conductor used the lamp at night while doing his paper work.

The wall behind the desk is also the wall for three floor-to-ceiling lockers located below the cupola. Beyond these lockers one of the three crew bunks extends to the end of the caboose. Below the bunk are several small lockers.

National Register of Historic Places Continuation Sheet

Section number 7 Page 3

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

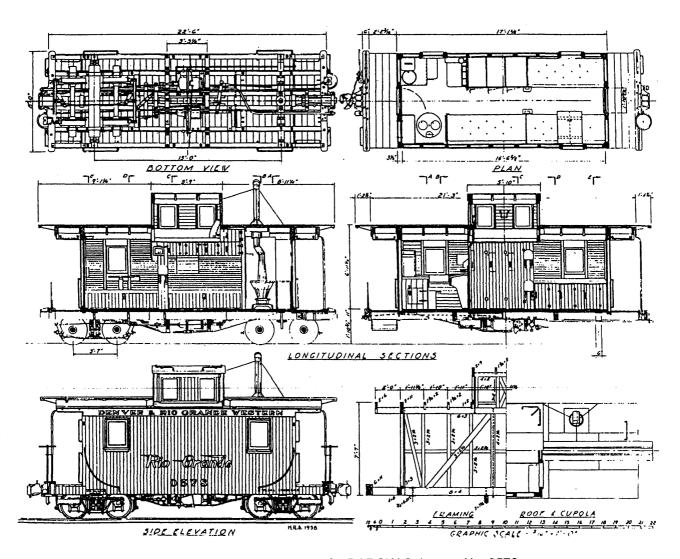


Figure 2 Elevations and Plans for D&RGW Caboose No. 0578

Returning to the stove end of the caboose, immediately to the left of the door is a corner coal hopper and a stove (photo 12). The wall behind the stove is covered with sheet metal to protect it from the heat. A partition wall just beyond the stove serves as an end wall for a bunk that extends directly under the cupola. There are several small lockers above and below the bunk. Another partition wall separates this bunk from another bunk that extends to the end of the caboose. There is a window above this bunk as well as a kerosene lamp in a corner holder (photo 13).

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 4

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

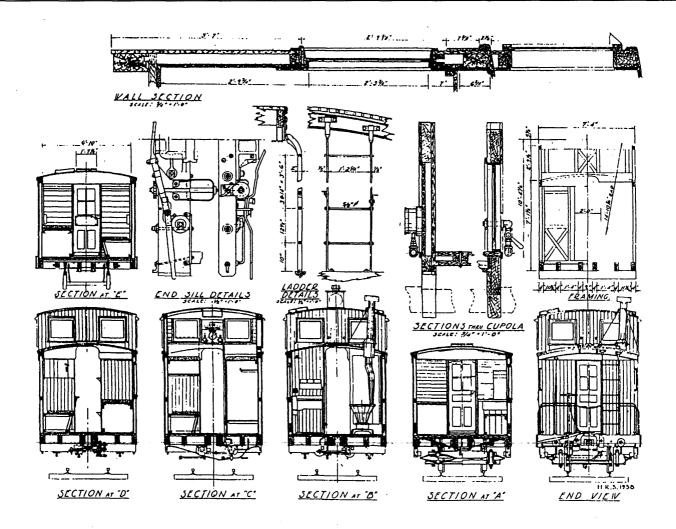


Figure 3 Elevations and Plans for D&RGW Caboose No. 0578

The cupola is entered by climbing combination grab iron/steps mounted on a bunk wall on one side of the aisle and a locker wall on the other (photo 14). There is a single, padded bench seat on each side of the cupola, running parallel to the aisle. A back cushion is located at the end of each of these seats closest to the stove-end of the caboose. The rider in the cupola stretches out his legs on the seat and watches the train and engine ahead or looks out the side windows. An air pressure gauge and associated piping for monitoring the train's air brake system is located on the back wall of the cupola, between the windows (photo 15).

All of the windows in the caboose have shades which can be rolled up by hand. Loops at the top of the frames wrap around the rolled shades and attach to hooks above the windows.

National Register of Historic Places Continuation Sheet

Section number _ 7 Page _5

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

ALTERATIONS WHILE ON THE D&RG / D&RGW

Cabooses of the same class were built of identical design. From that point on they were frequently modified to increase their strength, convenience, or utility; to comply with new rules and regulations of the Interstate Commerce Commission (ICC); or simply to meet the whim of their crews for whom they were a part-time home. Aside from changes made by the individual operating crews, modifications were the same for all members of a particular class.

By comparing photographs of individual Class 2 cabooses taken over a period of time, car alterations can often be detected. It can be demonstrated that eventually these alterations worked their way through all the cabooses in a given class. From the photographic record, as well as other information, it is apparent that a number of significant (as well as cosmetic) alterations were made to Caboose 0578 in its sixty-six years (1886 to 1951) on the Rio Grande.

Brakes

Originally, and through at least 1907, all Classes 1, 2, 3, and 4 cabooses had a cupola mounted brake wheel so that the brakemen could operate the brakes while seated in the cupola observing the train. There is no indication of such a wheel in the 0578. However, there is a brake wheel in the cupola of Caboose 49, a Class 1 caboose built in 1881 that was restored to its "as built" condition. This caboose is at the Colorado Railroad Museum.

Ladders and Safety Appliances

In 1903 the ICC mandated safety appliances in cars used in interstate commerce (the D&RG narrow gauge line crossed the Colorado/New Mexico border many times between Alamosa, Colorado, and Chama, New Mexico). In July 1911, the commission additionally mandated a standard and uniform set of features on all freight cars. For cabooses this included steps on both ends of the side sills (platforms), side grab irons, and ladders at both ends of the car. The first known photograph of Caboose 0578 in August 1937 shows that it had ladders at each end of the roof, roof walkways, and side grab irons (fig. 9). However, photographs taken around 1907 show two other Class 2 cabooses without ladders or roof walkways. We may assume that the ladders and other safety appliances were added to 0578 as a result of the ICC mandates.

NPS Form 10-900a (Rev. 8/86)

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 6

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

OMB No. 1024-0018

Body and Cupola Windows

The 1886 erection plan for Class 2 cabooses showed three windows on each side of the body as well as windows on each side of the end doors (fig. 4). Circa 1900 photographs of two Class 2 cabooses show the three-window configuration on at least one side. The railroad slowly replaced the center windows with wood panels as brakemen frequently kicked the windows out getting up and down from the cupola. When rebuilt, the center sash was removed and the window opening was paneled over inside and out (photo 16).

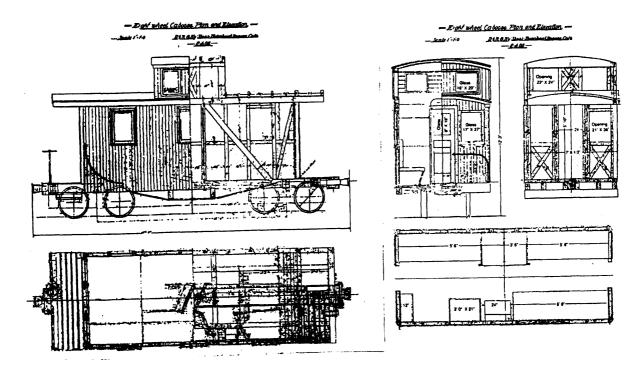


Figure 4 Plans for Class 2 Caboose, 1886.
Source: Robert E. Sloan, *A Century* + *Ten of D&RGW Narrow Gauge Freight Cars, 1871 to 1981.*

A photograph of Caboose 0580 in circa 1898 shows windows on either side of the end door. A photograph of the same caboose taken in August 1940 shows these windows paneled over. These particular windows fell prey to damage from wooden, axe-type handles used by the brakemen to assist in turning the brake wheel on the platform in front of one of the windows. There was also a possibility of someone falling into the window when the train lurched. Protective wooden guard rails were placed over these windows on at least one caboose. Ultimately these windows were removed.

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 7

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

When stoves were added to cabooses beginning in the 1880s, the windows behind the stoves were removed. This resulted in the 'final' configuration for Class 2 cabooses consisting of two windows on one side and one on the other. Photographs of Caboose 0578 show the single-window side (figs. 9 & 10). A later photograph shows the two-window side (fig. 11). A photograph taken during the 1961 restoration of the car shows where the window above the stove had been boarded up. A difference in lumber color indicates where the center window had been boarded up during an earlier rebuild.

Inspection of the inside walls of Caboose 0578 shows the location of the boarded-up windows on either side of the caboose as well as on each side of the doors in the ends of the caboose. Even though these walls had been painted several times over the years, it is still possible to see the difference in width and surface texture of the boards used to replace the windows when compared to the boards on the rest of the walls.

The 1886 erection plan for Class 2 cabooses mentioned above indicates two windows on each side of the cupola. However, a photograph of Caboose 0579 (a Class 2 caboose) taken in November 1938 shows only one window on each side of the cupola. A photograph of this same caboose taken later records two windows on each side of the cupola. The first photograph is the only known image of a Class 2 caboose with only one window in the side of the cupola, perhaps the result of an operating crews' particular preference.

Box for Signal Lantern of Cupola Roof

From about 1885 until the early 1940s, D&RG cabooses had small boxes on the cupola roofs to house signal lanterns. These boxes contained a window in the front and back and a vent on top. A lantern could be placed in the box at night to send train operation signals to the locomotive crew. The earliest known photograph of Caboose 0578 taken in August 1937 shows a signal box on the cupola roof (fig. 9). In a subsequent 1946 photograph the box is gone (fig. 10). The cupola ceiling reveals the boards that were replaced when the signal box was removed.

Color

The original color scheme for cabooses was Caboose Red for the outside and Prince's Mineral Brown for the floors, platforms, and running boards. The interior walls were light green and the main and cupola ceilings were a light blue. Sashes inside and out were Tuscan Red and the exposed iron work was black. After about 1918 the outside of cabooses were painted Boxcar Red with a pea green interior. By that time, grab irons and ladders were painted aluminum or white, if aluminum was not available. Until around 1949 the top coat of paint applied to the exterior of cabooses was 50% varnish.

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section number _ 7 Page 8

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

Caboose Numbers

Initially, D&RG assigned blocks of numbers to various car types. For example, cabooses were numbered 1 and up, refrigerator cars 100 and up, and gondolas 300 and up. With the addition of many more narrow gauge and ultimately standard gauge cars, the D&RG soon outgrew this numbering scheme. In August 1887 the railroad introduced a revised numbering system with cabooses renumbered beginning with 0500. Caboose 1 became 0500, 2 became 0501, 25 became 0524, and 49 became 0548 (0524 and 0548, under its old number 49, are both at the Colorado Railroad Museum). However, it was Caboose 94 that became 0578, not 0593. Too many "old number" cabooses were sold, wrecked, or retired to allow consistency in the renumbering process. Caboose 0581, the third to the last Class 2 caboose built (1890), was the first new caboose built after the 1887 renumbering and so was the first Class 2 caboose without an old number.

Lettering and Herald

When the D&RG was founded, the original lettering on the letter board was a block serf "DENVER & RIO GRANDE". From 1870 until at least 1887, the word "CABOOSE" in 6-inch by 6-inch bold Roman was present in an arc above the caboose number, centered under the cupola. One of the earliest known photographs of a caboose, a Class 1 taken circa 1880, shows this lettering.

Although there is no known early photograph of Caboose 0578 with this type of lettering, there is a photograph of the car taken in 1975 showing this configuration. This is after the caboose had been retired from the D&RGW and was at the Colorado Railroad Museum. There is no record of exactly when or why this configuration was painted on the caboose. It is presumed it occurred after a full repainting of the caboose. Incidentally, when the railroad was still the D&RG, its name on the letter board was "DENVER & RIO GRANDE" not "DENVER AND RIO GRANDE" as shown on the 1975 photograph.

In 1923 the letter board on the railroad equipment was changed to "DENVER & RIO GRANDE WESTERN," reflecting a change in the corporate name of the railroad. Beginning in 1927, a circular herald "D. & R.G.W.R.R. SCENIC LINE – ROYAL GORGE ROUTE" was added above the number and centered under the cupola. The August 1937 photograph of Caboose 0578 shows this herald (fig 9).

In 1936, with the opening of the Moffat Tunnel, the Dotsero Cutoff, and the establishment of a new main line west of Denver, the herald was changed to "RIO GRANDE SCENIC LINE OF THE WORLD – ROYAL GORGE/MOFFAT TUNNEL". Caboose 0578 apparently never carried this herald. In 1939 the speed lettering-style "RIO GRANDE" herald was adopted as a result of a contest. Photographs of Caboose 0578 after that date all show this marking (fig. 10).

National Register of Historic Places Continuation Sheet

Section number __7_ Page _9__

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

RESTORATION WORK AT THE COLORADO RAILROAD MUSEUM

In November 1951 the Rocky Mountain Railroad Club purchased Caboose 0578 for \$204 from the D&RGW in Salida. It was subsequently moved to the Colorado Railroad Museum in Golden, Colorado, in 1958. The museum is also the home of eight other cabooses, four of which are narrow gauge. The museum acquired four of its cabooses from the D&RGW.

Since Caboose 0578 arrived at the Colorado Railroad Museum, work on it has had a two-fold objective: first, to provide maintenance due to its outdoor storage venue (periodic painting, replacement of roofing material, and other general maintenance); and second, to restore those parts that were worn out, broken, or missing when the car was received from the D&RGW (replacing rotted wood elements and restoring missing interior items). A summary of this museum maintenance and restoration work is detailed in Figure 5.

Figure 5 Maintenance and Restoration of D&RGW Caboose No. 0578			
Date	Type of Work		
August 1958	Arrived at Colorado Railroad Museum from storage in Golden. Repainted.		
April 1961	Old siding removed and replaced.		
1988-1990	Replaced splice on south side sill on the east end. Replaced east end buffer beam and outside platform planking. Repainted exterior.		
1992	Replaced west end roofing.		
1994	Replaced east end roofing		
1997	Tested air brakes.		
1998	Replaced cushions and window shades. Installed interior lanterns of D&RGW 'can' style. Cleaned and 'fired up' exterior marker lights.		
1999	Fabricated and installed oak replacement windows and sills for the cupola and the body of the caboose (except doors). Replaced roof walkways. Repainted roof and guy-wired smokestack. Installed grab irons/steps left off since 1961 residing.		
2000	Repaired rotted framing members and buffer beam. Reinstalled coupler.		

NPS Form 10-900a (Rev. 8/86) OMB No. 1024-0018

United States Department of the InteriorNational Park Service

National Register of Historic Places Continuation Sheet

Section number 7 Page 10

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

All railroad cars, including cabooses, received minor alterations during their operating life due to routine maintenance, repair/replacement of worn or damaged parts, or to conform to Interstate Commerce Commission mandates. Since its purchase in 1951, the Rocky Mountain Railroad Club has performed general maintenance to keep the caboose, which is stored outdoors, in good condition. Rotted wood, failed 'tar paper' roofing and interior window shades and cushions are the only materials that have been replaced since the caboose was obtained in 1951. When possible, the same type of wood was used in the replacement as was used originally, e.g., white oak for the end sills and oak for the windows and window sills. The paint was matched for color but not for composition since paint in the time the caboose was in operation contained lead. The rest of the car contains the same material as when it was retired from the D&RGW in 1951.

The Club set as its goal the return of the caboose to its 1951 operating condition, when it was retired by the D&RGW. There has not been any alteration to the mechanical systems on the car. The air brake system passed safety tests using approved methods in 1997. The wheel sets and the couplers are the same as when the caboose was obtained in 1951 from the D&RGW.

There are nine extant Class 2 Cabooses. Only 0578 is being restored to the operating condition that existed when it was retired from the railroad. The others are on display in city parks, in museums, serving as a visitor information center or in other miscellaneous locations. It is safe to say that these have deteriorated from the time they were retired from the D&RGW due either to modifications for their current use or to time and the weather. In the process, they lost their integrity as a Class 2 Caboose.

Caboose 0578 retains all the design and character it had at the end of its service on the D&RGW. It is still recognized as a caboose that served on that railroad. Currently the caboose in on static display at the Colorado Railroad Museum in Golden. It is capable, however, of being used in the periodic operating sessions at the Museum.

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 11

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

SIGNIFICANCE

The 1886 Denver & Rio Grande Western Caboose No. 0578, as modified to 1951, is eligible for the National Register under Criterion C, in the area of engineering, as a rare surviving example of a Class 2 Rio Grande caboose. The railroad constructed all of its Class 2 cabooses in its own shops. The cars represent an improvement in design and operation over the older Class 1 models. In addition to its larger size, the use of two sets of four-wheel trucks gave the cars greater stability and comfort for the operating crews. Caboose 0578 ran in freight service over all of the Rio Grande's narrow gauge network until its retirement in 1951.

The caboose underwent various changes over its operating life. These alterations reflect routine maintenance, necessary repairs, and modifications for improved efficiency or responses to changing government regulations. Although modified over time, Caboose 0578 retains its basic 1886 appearance. The period 1886-1951 is selected as the period of significance as this represents the car's full evolution during its operational life. Recent restoration activities have used 1951 as the date to which the caboose has been restored and maintained. In its 1951 appearance, the overall engineering importance of the caboose is demonstrated by both its original design and the subsequent modifications which allowed it to sustain a successful sixty-six year operating career.

THE D&RG SYSTEM AND ITS CABOOSES

When the Denver & Rio Grande Railroad (D&RG)* began operation in 1871 the caboose car was not yet a standardized class of rolling stock, either on the D&RG or any other railroad. That soon changed. During the lifetime of the narrow gauge portion of the D&RG (1871 to 1967), the railroad owned a total of 124 cabooses. Four of these were purchased and the remainder were constructed in the railroad's own shops.

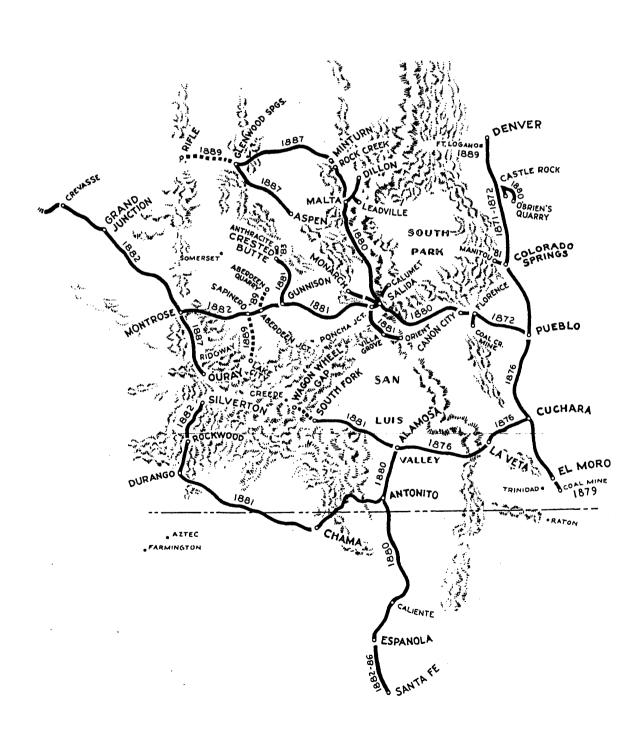
Based on a number of design parameters (including length of caboose and number of wheels) these 124 cabooses have been divided into five separate classes. In this classification scheme, Caboose 0578 is a Class 2 caboose, one of 16 built by the D&RG. Of these 16, only 0578 is being restored to operating condition. It therefore represents an important example of a class of cabooses used in Colorado on the D&RG narrow gauge system.

* The Denver and Rio Grande Railway was incorporated in 1870 and began operation in 1871. It went through financial and legal problems and was finally reorganized as the Denver and Rio Grande Western Railroad in 1921. The abbreviation 'D&RG' is used throughout this document for consistency and ease of reading. When the historical context warrants, 'D&RGW' is used.

National Register of Historic Places Continuation Sheet

Section number 8 Page 12

Figure 6 Denver & Rio Grande Railway in 1889 (showing stages of construction)



United States Department of the InteriorNational Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 13

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

Cabooses 0578 also provides a snapshot in the evolution of the design and construction of cabooses in the early days of railroading. Since cabooses were not yet a standardized class of rolling stock when the D&RG began operations in 1871, the design and engineering the railroad used for its cabooses were based on the needs at the time. As the amount and composition of traffic changed on the railroad, as well as the topography of the areas served, the design, engineering and construction of the cabooses also changed. Class 2 cabooses were built between 1885 and 1890. They represent, then, the requirements of the railroad at that time, just as Class 1 cabooses represent a prior period and Classes 3, 4 and 5 cabooses reflect later periods of operation.

The 124 narrow gauge cabooses that the D&RG owned during its 96 years of operation monitored a significant fleet of freight cars. At one time or another, the narrow gauge system consisted of 294 locomotives and 10,849 freight and work cars. The number of freight cars peaked at 5,988 in December 1883. Even during its last year of narrow gauge operation (1967) the railroad's roster still listed 967 work and revenue freight cars.

In 1890 the D&RG narrow gauge system had 1,635 miles of track (fig. 6). By 1920 the mileage had shrunk to 720 miles. Over 180 miles of track remained when narrow gauge operations ceased in 1967. During the height of operation (ca. 1890), the narrow gauge trackage stretched from Salt Lake City on the west, to Santa Fe, New Mexico, on the south, and into many areas of the mountains in the southwest part of Colorado. In 1889, responding to competition from other railroads, the railroad's managers decided to convert its main line to Salt Lake City from narrow gauge to standard gauge. Many miles of narrow gauge track remained, particularly in Colorado, so the railroad kept its narrow gauge rolling stock. Subsequently, some of the narrow gauge track system was converted to three rail to accommodate both standard and narrow gauge trains. Three-rail track remained until the narrow gauge system ceased operation.

The D&RG gradually abandoned its unprofitable lines, primarily the narrow gauge routes. Near the end, the narrow gauge tracks were generally in the southwestern part of Colorado in an area stretching from Alamosa to Durango. Today there are only two short segments remaining of the D&RG narrow gauge system: the Cumbres and Toltec Scenic Railroad (Antonito, Colorado, to Chama, New Mexico, and a National Register listing) and the Durango and Silverton Narrow Gauge Railroad (Durango to Silverton, Colorado, and a National Historic Landmark). Both of these segments operate as tourist attractions.

The D&RG brought its first four narrow gauge cabooses in 1871 from Jackson & Sharp of Wilmington, Delaware. All subsequent cabooses were built by the D&RG in its own shops in Denver or Alamosa. The first caboose was produced in 1876 and the last one in 1901. The peak for caboose building occurred in 1880 (26) and 1881 (27), during a period of great expansion for the railroad. Even with this building spree, the railroad found itself short of cabooses. D&RG managers supplemented the caboose fleet in the late 1890s by converting four, 24-foot long boxcars into cabooses.

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United States Department of the InteriorNational Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 14

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

As new cabooses were built, their design evolved based on the operating experience at the D&RG and other railroads. This evolution resulted in larger, more comfortable and safer cabooses. D&RG narrow gauge cabooses have been grouped into five distinctive classes, based, as noted above, on parameters such as length and number of wheels. Information on each of these classes is summarized in Figure 7.

The passage of time took its toll on the D&RG's narrow gauge cabooses. Some were wrecked, burned, scrapped or sold. From a peak of 87 cabooses in 1886, the number dropped to 53 in 1891, 35 in 1889, 25 in 1903, and finally to 14 in 1940. Thirteen Class 2 cabooses remained in service in 1931. They were all sold or donated to various towns along the line between 1950 and 1953 (fig 8).

Figure 7 Classes of D&RG Narrow Gauge Cabooses

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Parameter	Class 1	Class 2	Class 3	Class 4*	Class 5
Body Length	16 ft.	17 ft.	26 ft.	16 ft.	25 ft.
Total Length	20 ft.	23 ft.	30 ft.	20 ft.	30 ft.
Wheel base	9 ft.	15 ft.	22 ft.	13 ft.	22 ft.
No. of wheels	4	8	8	8	8
Date first built	1871	1885	1900	1892	1920
Number built**	81	16	6	9	5

^{*}Plans were prepared but no new cabooses were constructed. The Class 4 caboose was to be an intermediate size between Classes 2 and 3. Modified plans were used for the remodeling of 9 cabooses.

CLASS 2 CABOOSES AND CABOOSE 0578

A Class 2 caboose, Caboose 0578 represents two significant design changes in the evolution of the D&RG narrow gauge caboose. The first of the changes is the number of wheels: Class 2 cabooses had 8 wheels – two trucks with 4 wheels each. Earlier Class 1 cabooses had just 4 wheels. These 4-wheelers were not particularly comfortable to ride. They were equalized, which improved their ride, but they still pitched fore and aft. As a result, they had a poor reputation among operating crews.

^{**} In addition to the 117 cabooses noted here, an additional 7 "odd cabooses" existed having been fabricated from box cars during the period of 1882 to 1901.

NPS Form 10-900a (Rev. 8/86)

OMB No. 1024-0018

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section number 8 Page 15

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

The second significant design change was the brake system. Class 2 cabooses were the first D&RG narrow gauge cabooses built with air brakes as standard equipment. Previous cabooses had only hand brakes. The railroad instituted this brake system change for safety reasons. In 1903 the ICC mandated air brakes for all rail cars.

There are two other design characteristics - less significant operationally than the dimensions and wheel arrangements noted above - that occurred in the Class 2 cabooses. These changes separate the Class 2 Cabooses from the Class 1 and/or all subsequent classes of narrow gauge cabooses. Both changes relate to the copula. The first is the seating arrangement. In Class 2 Cabooses it consists of a single, padded bench seat on each side of the copula running parallel to the aisle. A back cushion was located at the end of each of the seats closest to the stove-end of the caboose. In all other classes of cabooses the seating in the copula consists of four seats, perpendicular to the aisle. This latter configuration would appear to be more comfortable than that used in the Class 2 Cabooses.

Figure 8 Status of Extant Class 2 Cabooses (as of 9/1999)

Number	Built	City	Comments
0500	6/1886	Durango	Sold 5/1950. Narrow Gauge Motel, Alamosa. Now Durango & Silverton Narrow Gauge 0500.
5001	6/1889	Denver	Sold 10/1953. Now Jackson Place, off 8 th Ave., in Denver. No markings.
0573	12/1885	Ogden	Donated 11/1953 to Pioneer Villager, Salt Lake City. Now at Utah State Railroad Museum, Ogden Union Station.
0575	6/1886	Ouray	Donated 6/1953 to Ouray. Now in Ouray City Park and Pool off US 50. No number.
0576	6/1886	Salida	Sold 1/1952. Now at Salida Museum, 406 W. Rainbow. No number.
0577	6/1886	Cimarron	Donated 12/1952 to Montrose. Now at Curecanti National Recreation Area, US 50 west of Gunnison.
0578	6/1886	Golden	Sold 11/1951 to Rocky Mountain Railroad Club. Now at Colorado Railroad Museum, Golden.
0579	6/1886	Antonito	Sold 12/1951. Now near Cumbres & Toltec Scenic Railroad Depot. Former C&TS 0579. No markings.
0580	1/1887	Del Norte	Sold 1/1952. Now at Rio Grande County Visitor Information Center alongside US Hwy. 160 in Del Norte. No markings.

National Register of Historic Places Continuation Sheet

Section number 8 Page 16

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

The second design change relates to the copula itself. Class 2 caboose cupolas had vertical sides in contrast to slanting sides on Class 1 cabooses. All subsequent classes of cabooses also had vertical sides.

A total of 16 Class 2 cabooses were built by the D&RG between 1885 and 1890. Of these, four were wrecked, burned or dismantled. Three were converted in the early 1920s to Class 5 cabooses leaving nine extant (fig. 8). Eight of these are in various states of repair and are on static display—seven in Colorado and one in Utah. Only one, Caboose 0578, is being restored and returned to its condition when retired from the D&RGW.

CABOOSE 0578 AFTER RETIREMENT FROM THE D&RGW

The Rocky Mountain Railroad Club is in the final stages of restoring Caboose 0578 at the Colorado Railroad Museum in Golden. The Club purchased the caboose from the D&RGW in 1951 and moved it to the Museum in 1958. In its restored state, Caboose 0578 is a museum-quality example of the evolution of caboose design and construction on the D&RG narrow gauge system. The car is available for viewing by the public and the Museum uses it for periodic operating sessions. Caboose 0578 shares its Museum home with narrow gauge Class 1 Caboose 49 and Class 4 Caboose 0524. Thus, the Museum displays three of the five classes of D&RG narrow gauge cabooses.

National Register of Historic Places Continuation Sheet

Section number 9 Page 17

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

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- Record of Property Changes "Equipment." Acct. No. 53, Engr. Page 790, Group 12, Series Nos. 0500-0589. Sheet No. 1. [D&RGW Form R. P. C. 4].
- Series or Class Number (ICC) 0500-0589. Account No. 53 Caboose, Sheet No. 1. [D&RGW Form 5075].
- Field Sheet No. 437, Page 1677, Car 0578. 53-Freight Train Cars. Division of Valuation, Interstate Commerce Commission, 9-24-1920 [D.V. Form 320].

Interviews

Luning, Paul and Steve Mason. Interview by Frend John Miner, 8 November 2000. Colorado Railroad Museum, Golden, Colorado.

United States Department of the InteriorNational Park Service

National Register of Historic Places Continuation Sheet

Section number 9/10 Page 18

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

Mason, Steve. Interviewed multiple times in various locations by Frend John Miner, from May 2000 through January 2001.

Internet

Rio Grande Modeling & Historical Society Web site (www.drgw.org/data/caboose.htm).

GEOGRAPHICAL DATA

VERBAL BOUNDARY DESCRIPTION

The property being nominated includes the physical structure of the Denver & Rio Grande Western Caboose 0578 and the rails, ties and land on which it sits within the 15 acre outdoor railyard of the Colorado Railroad Museum in Golden. The caboose is operational and may be located on any of the narrow gauge tracks in the Museum's outdoor railyard.

BOUNDARY JUSTIFICATION

Denver & Rio Grande Western Caboose 0578 is owned by the Rocky Mountain Railroad Club. The structure is currently a static display at the Colorado Railroad Museum. The caboose is displayed within the confines of the outdoor railyard. The caboose is operational and its display location may shift within the railyard exhibit area.

United States Department of the Interior National Park Service

National Register of Historic Places Continuation Sheet

Section number ___ Page 19__

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

PROPERTY OWNERS

Caboose: Land:

Rocky Mountain Railroad Club

PO Box 2391

Denver, CO 80201-2391

Colorado Railroad Historical Foundation, Inc.

PO Box 10

Golden, CO 80402-0010

PHOTOGRAPH LOG

The following information pertains to photograph numbers 1-20, except as noted:

Name of Property: Denver & Rio Grande Western Railroad Caboose No. 0578

Location: Golden vicinity, Jefferson County, Colorado

Photographer: Frend John Miner Date of Photograph: 27 January 2001

Negative: Possession of photographer

Photo No. Photographic Information

- South elevation; (relative to its current location at the Colorado Railroad Museum, February 2001). 16 November 2000.
- North elevation of Caboose 0578 (relative to its current location at the Colorado Railroad Museum, February 2001). 16 November 2000.
- 3 East end. 16 November 2000.
- 4 West end. 16 November 2000.
- 5 Hand brake mechanism on platform at east end. 16 November 2000.
- Wheel truck at east end of caboose. Note the leaf spring suspension system (middle right). The cover plate, partially painted white (middle left), can be lifted and the box underneath packed with oil and waste cotton (serving as a wick) to keep the wheel journal lubricated. 16 November 2000.
- 7 Denny Haefele and Bob Tully, both of the Equipment Committee of the Rocky Mountain Railroad Club, working on restoration of a window frame on the north side of the caboose.
- 8 Restoration work done in 2000 on rotted/damaged frame at the east end of the caboose. Sketch prepared by Steve Mason, then Chairman of the Equipment Committee of the Club.
- 9 Looking toward the door at the west end. Next to the door (on the left) is a stove. A wall separates this stove from a bunk. Above the bunk are small lockers.

National Register of Historic Places Continuation Sheet

Section number ___ Page 20

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

Photo No. Photographic Information

- To the right of the west door of the caboose (across from the stove) is a water reservoir attached to the wall. Under it is a cabinet with a basin set into it under the faucet of the reservoir. Slanted top of the Conductor's 'Desk' (right foreground).
- The Conductor's 'Desk'. The railroad required a great deal of paper work to operate (one inventory list indicated 17 stationery supplies and forms in a caboose) and that work could be done here. The lamp provided light when completing paper work went into the night.
- 12 The stove with a coal bin next to it.
- Wall mounted lamp in the corner above a bunk.
- Looking toward the east door showing the grab iron/step used to climb into the cupola. Beyond this is another bunk.
- Inside of the cupola looking toward the west door. Personnel sat with their backs on the cushions under the windows with their feet stretched out in front of them. The gauges measured air pressure in the train's brake system (a Westinghouse Brake System brakes on the train cars are released when pressure is high in the line and set when the pressure is low or at zero).
- 16 Caboose 0578 initially had three windows on each side as did all Class 2 cabooses. The middle windows on each side were frequently kicked out by personnel getting in or out of the cupola, so they were ultimately boarded up. The railroad shop apparently used whatever lumber was on hand to do this. The result is seen in the wall of the bunk next to the stove. (The third window in Class 2 cabooses was boarded up when stoves were installed and they needed a metal shield behind them to protect the wall from the heat.)
- 17 South elevation, relevant to the car's current location at the Colorado Railroad Museum. 16 September 2003.
- North elevation, relevant to the car's current location at the Colorado Railroad Museum. 18 September 2003.
- Looking east in the rail yards at the Colorado Railroad Museum. Photographer: Steve Mason, 18 September 2003.
- On the side track looking west in the rail yards at the Colorado Railroad Museum. 16 September 2003.

National Register of Historic Places Continuation Sheet

Section number ___ Page 21_



Figure 9 Caboose 0578 in Salida; photographer William Henry Jackson; August 1937. Source Robert L. Grandt, *Narrow Gauge Pictorial, Volume V, Cabooses of the D&RGW.* Robert L Grandt, 1987.



Figure 10 Caboose No. 0578 in Montrose; photographer Vollrath; September 1946. Source: Robert L. Grandt, *Narrow Gauge Pictorial, Volume V, Cabooses of the D&RGW.* Robert L Grandt, 1987.

National Register of Historic Places Continuation Sheet

Section number ___ Page 22



Figure 11 Caboose 0578 in Salida; photographer Maxwell; February 1952. Source Robert L. Grandt, *Narrow Gauge Pictorial, Volume V, Cabooses of the D&RGW*. Robert L Grandt, 1987.

National Register of Historic Places Continuation Sheet

Section number ___ Page 23_

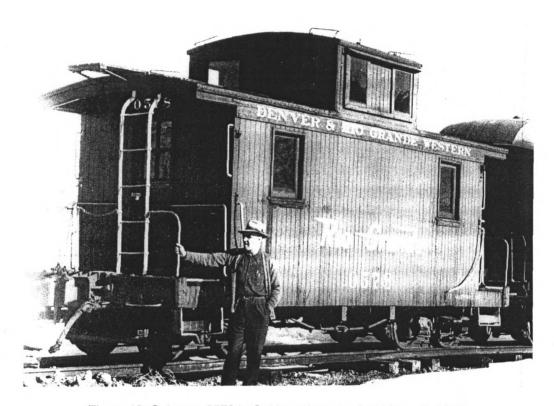


Figure 12 Caboose 0578 in Golden; photographer Maxwell; 1953.

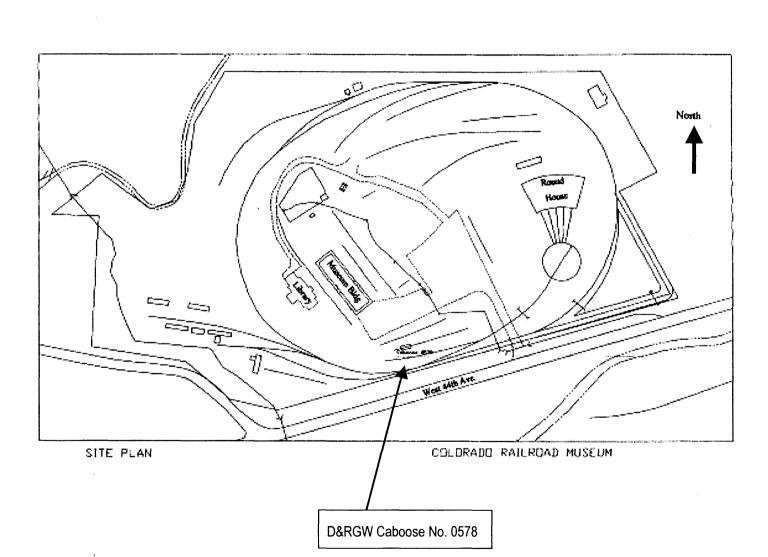
Source: Robert L. Grandt, Narrow Gauge Pictorial, Volume V, Cabooses of the D&RGW. Robert L Grandt, 1987.

National Register of Historic Places Continuation Sheet

Section number Page 24

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

SITE PLAN



National Register of Historic Places Continuation Sheet

Section number ___ Page 25

Denver & Rio Grande Western Railroad Caboose No. 0578 Jefferson County, Colorado

USGS TOPOGRAPHIC MAP

Golden Quadrangle, Colorado 7.5 Minute Series

