



**NEVADA STATE
RAILROAD MUSEUM**

CONDUCTOR'S HANDBOOK

D-1004

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Prepared by: _____
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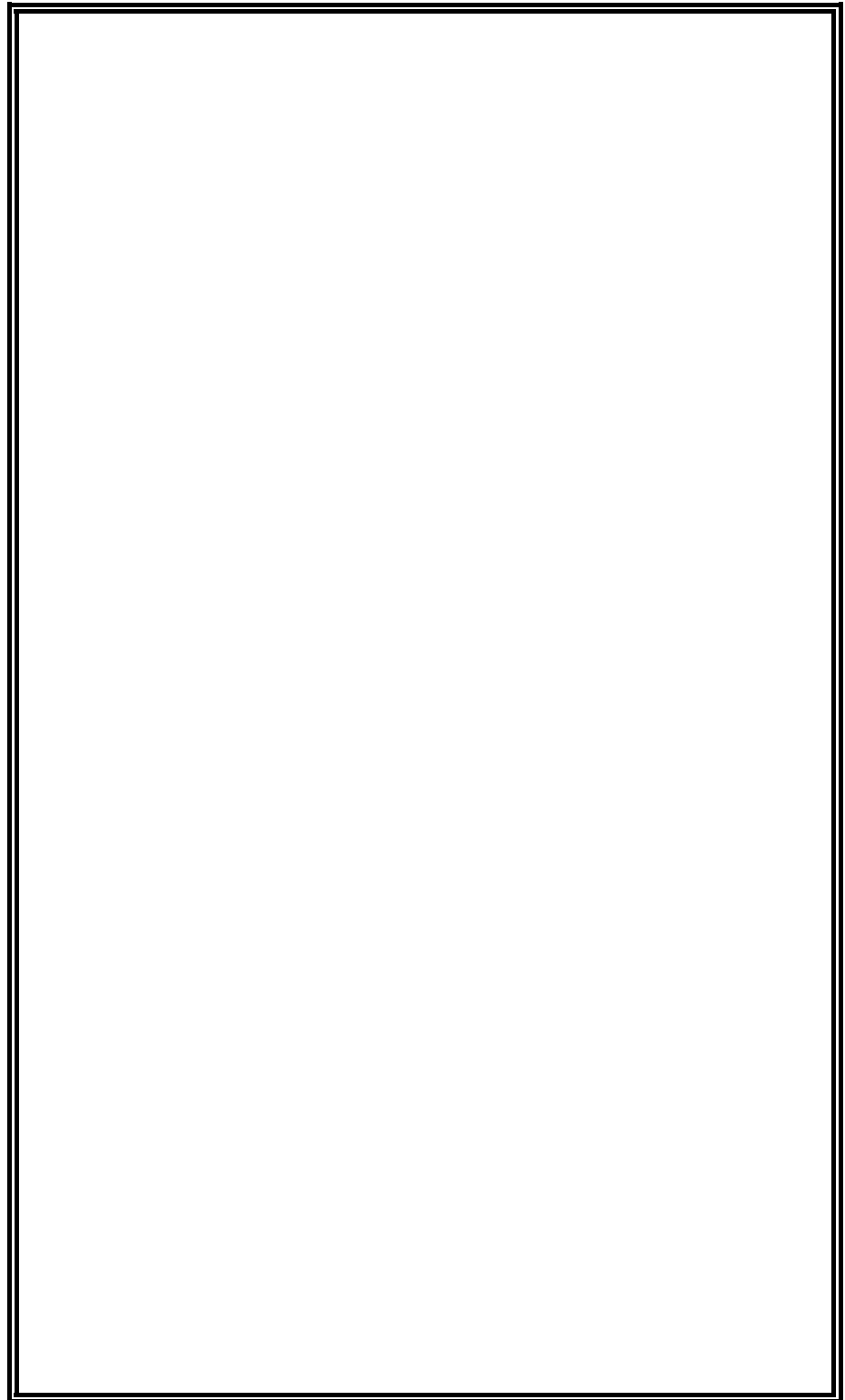
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**NEVADA SOUTHERN RAILWAY
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1.0 INTRODUCTION

This Conductor's Handbook is intended to provide the basic information needed to perform the duties of a Conductor. Any update of the safety information will be noted in the text as a revision from the previous issue of the handbook. The Example Script for Announcements is provided as an example of information that might be of general interest to passengers and announced to them during the run. Anyone making the announcements is free to improvise.

2.0 SUMMARY OF CONDUCTOR'S DUTIES

The Conductor has overall responsibility for the train and its operation. All persons on a train are subject to the Conductor's instructions. The protection of passengers and trains is of the first importance and Conductors must not allow other duties to interfere therewith. The Conductor must be familiar with the contents of the reference documents.

It is the Conductor's responsibility to provide a safe and pleasant experience for the passengers. This is accomplished by making sure that the environment is safe, that all operations are performed safely, that the passengers behave in a safe manner, and that the passengers are reasonably comfortable and informed.

Appearance is important. Conductors must be neatly dressed and groomed. It is preferred, but not mandatory, that Conductors be dressed - dark pants, white shirt, vest, conductor's cap, and jackets and coats when required by the weather.

2.1 CREW CALL

It is the Conductor's responsibility to prepare the inspection sheet clipboards to be used by each crew member. The Conductor's clipboard must also contain a current copy of the Emergency Response Procedures.

Train orders are distributed to the Engineer, the Conductor, and a copy is to be posted in the crew quarters. The Conductor must see that all members of the crew report for duty at the prescribed time. All crew positions must be filled by qualified individuals. Each train must have a complete crew to begin operations. This is the opportunity to discuss anything that will affect how the train will be positioned at the platform, and to set the time and place for the crew safety meeting.

2.2 PRIOR TO FIRST RUN

It is the Conductor's responsibility to unlock the train at the start of the day and check the following items before the first run of the day. It is the Car Attendant's duty to double check items appropriate to their car.

2.2.1 PRIOR TO MOVING THE TRAIN

Prior to moving the train, the Switchman, the Brakeman and the Engineer have inspections to perform. It is the Conductor's responsibility to ensure that these inspections have occurred, and to perform an additional independent inspection.

- A) Look for any dragging equipment or any debris lodged in the undercarriage
- B) Make sure that all brake lines are properly connected and that angle cocks are in the proper position.
- C) Make sure that all power connections are secure
- D) Check couplers and verify that all pins are in the locked position
- E) Verify that all wheels chocks and skates have been removed.
- F) Once the air brakes have been tested, make sure that all hand brakes have been released.

2.2.2 BEFORE THE SAFETY MEETING

These inspections may be done at any time prior to the Safety Meeting, but are generally done while the train is at the platform.

- A) The steps and handrails leading up to the car platform are not loose or broken.
- B) The step stool used for loading and unloading passengers at the station is safe.
- C) The car platform is clean with no obstructions on the deck.
- D) There are no gaps between the bumpers in-between the cars.
- E) Look at the passage ways and doors leading into the cars to see if they work right.
- F) Make sure that the windows work properly, are not broken or jammed, are clean, and are closed if the air conditioner is in use. If windows are opened, make sure the latches are properly in place so they don't fall or close inadvertently.
- G) Look at the seat backs and cushions to see if they are out of place, torn or dirty.
- H) The floor should be clean and free of obstructions.
- I) Turn on overhead lights and fans to make sure they work.
- J) Start the AC/Heat unit to ensure that it is working properly.
- K) The fire extinguisher is in it's proper place, and note it's location in the car you are attending
- L) In the 601 car in the Conductor's closet, there is a first aid kit, a tool kit, and water for emergencies (e.g. dehydration). Make sure everything is available and secure.

- L) The Conductor will pick up the P.A. microphone, push the button and talk. The Car Attendants will listen throughout their cars to make sure the system is working properly.
- M) Make sure the trash cans are not full and overflowing.
- N) For the ADA/Handicap car, make sure that the wheel chair side loading doors are working, that the bathroom is clean and has all supplies, and that the switch is on for the water pump.
- O) Make sure that the wheel chair loading hoist is available and can be unlocked.
- P) For the open air cars, make sure that the car crossovers are in their proper place, grab the hand rails and make sure that none of them are loose, and make sure that the side gates are closed and locked.

The "Conductor's Pre-Run Inspection" sheet is to be completed and taken to the Safety Meeting. At the Safety Meeting, the Conductor will collect the pre-run inspection sheets from the other crew members, to be filed after the last run. The Safety Meeting will cover any restrictions on operations including, but not limited to, Track Warrants, equipment operating condition, special passenger requirements. Although there is a set of crew assignments made prior to the day, the Conductor has final say for all crew assignments.

2.3 LOADING PASSENGERS

When loading and unloading, there should be two people at the vestibule. One Attendant should be at the top of the stairs and another Attendant (or the Conductor) at the bottom of the stairs. The following duties are defined as Car Attendant responsibilities, but the Conductor must ensure that they are performed safely and politely.

- A) Put the step stool in place at the bottom of the car stairs. Make sure that it is firm - step on it to make sure it's OK.

- B) When instructed by the Conductor to begin the boarding, punch tickets, assist passengers onto the step stool and instruct them to hold the hand rail as they climb the steps.
- C) If a passenger might have difficulty negotiating the stairs, offer to assist them, and offer use of the wheelchair lift for loading.
- D) If needed, assist the Conductor in loading passengers requiring the wheelchair lift.
- E) Observe what people are carrying, and if consumables other than water are noted, inform the passengers that only water is allowed to be consumed aboard the train.

When loading is complete, and the Conductor has instructed the Car Attendants to do so:

- F) Take the step stool aboard the train.
- G) Carefully lower the platforms, close and latch all exterior doors.
- H) Just before the train leaves, make sure that all passengers are seated.

Once all passengers have boarded, make a welcome aboard safety announcement. It might go something like this:

“Hi everyone. Welcome to the Nevada Southern Railway. I’m Conductor ____ . Our train is ready to depart the station, so I would appreciate it if everyone would please take a seat and stay seated for a couple of minutes until we’re past the street.”

Once all passengers are seated, all vestibules are closed, and you have verified that all crew members are aboard and the parking lot is clear, you may radio the engineer with a High Ball. While everyone is seated could be an opportune time to begin some of the background announcements. This can be done by either the Conductor or a

designated Car Attendant over the PA system, or by individual Car Attendants to small groups of passengers.

2.4 DURING THE RUN

Once the run is under way, the Conductor should make a walking inspection of all of the cars. During the run, each Car Attendant should roam among the passengers, elicit questions, and encourage conversation. The following are the duties of the Car Attendants that must be verified by the Conductor:

- A) Make sure that the passengers keep their arms and heads inside the car.
- B) Make sure that passengers are seated whenever the train is starting or stopping.
- C) In the enclosed cars, if the AC is running, make sure that all windows are closed and that the doors at the ends of the car are closed.
- D) **Talk to the passengers!** Provide the information outlined in the Example Script. If they have any questions you can’t answer, see if you can find someone who can. Note the unanswered questions for future inclusion in the Car Attendant’s Handbook.
- E) Passengers are not allowed to stand between the cars during the run, but may walk through on their way to other cars.
- F) Make sure that all passengers follow the safety instructions as given by the conductor.

And at all times, stay aware of the operation of the train and all communications (especially if there are trainees in any of the crew positions), and ensure that you have communications with the Engineer.

2.5 END OF THE RUN

When approaching the street, announce that all passengers must be seated and remain seated until the train has come to a complete stop:

“We’re now approaching the street crossing and the station. I would appreciate it if everyone would take a seat and remain seated until the train comes to a complete stop and the engineer tells us that it is safe to depart the train

We hope that you have enjoyed your trip on our Nevada Southern Railway, and we’ve enjoyed having you aboard. Your crew for today has been Car Attendants _____, Switchman _____, Brakeman _____, Engineer _____, and myself _____ as Conductor. Please tell your friends about your ride, and come back again. On your way out, if you’ve not already done so, please take the opportunity to visit our gift shop”

Once the train has passed the street, have the Car Attendant(s) prepare the vestibule(s) that will be used for disembarking. After the “brakes set” horn and receiving the corresponding radio message from the engineer:

“The brakes are now set, and it’s safe to depart the train. Please make sure that you have collected all of your items before leaving. Thanks again for riding our Nevada Southern Railway.”

Once all passengers have disembarked, take a walk through the train, looking especially for forgotten items.

2.6 END OF THE DAY

After the train has been parked in the yard, the hand brakes set, and any needed skates or wheel chocks have been set, lock up the train. At the shop make a note for the Museum Director of any maintenance actions that are needed, and file the inspection reports.

3.0 EMERGENCIES

For all emergencies, it is the responsibility of the Conductor to determine the nature and severity of the emergency, to determine whether Boulder City Emergency Services response is needed, to select the rendezvous location, to direct train crew actions, and to contact and coordinate with the Boulder City Emergency Services dispatcher. Contact phone numbers are in the Emergency Response Procedures, and are posted in the cab and in every electrical cabinet.

3.1 PROCEDURES

A current copy of the Emergency Response Procedures should be available at all times. These procedures are intended to be strong guidelines, but **be sure that common sense is used** to interpret the intent of these procedures. To aid in the interpretations, keep in mind that the order of priorities is: 1) Safety of Passengers and Crew first; 2) Equipment and railroad property second. When **Contacting Emergency Services**, please follow the procedure outlined as closely as possible since these procedures have been coordinated with Boulder City Fire Department and with the Boulder City Police Department. **Emergency Responses** will be divided into six general categories: 1) Medical emergencies; 2) Fire (smoke); 3) Uncooperative passengers; 4) Obstruction problems; 5) Mechanical problems; 6) Observed (from the train) problems. For all emergencies, it is the responsibility of the Conductor to direct train crew actions, and to contact and coordinate with Boulder City Emergency Services.

3.2 CONTACTING EMERGENCY SERVICES

Prior to the first run, the Conductor must determine the location of a cell phone to be used for emergency calls. If the Conductor does not have a cell phone, it will be necessary to borrow one from a crew member, or via the radio have one of the other crew members contact Emergency Services. The train crew **must** call Emergency Services, even if some of the passengers have already called 9-1-1, since only the train crew can give accurate information as to the rendezvous location.

4.0 EXAMPLE SCRIPT FOR ANNOUNCEMENTS

The Conductor is responsible for all safety announcements. It is the Conductor's option as to how to provide the background announcements. They can be made by the Conductor using the PA system, they may be made by a Car Attendant using the PA system, they may be made personally by the Car Attendants to small groups of passengers, or (eventually) may be pre-recorded and played synchronous with the location of the train.

This script is provided as an example of the types of background and history information that can be provided to the passengers during a run. Because the train makeup may change depending upon the availability of equipment and expected passenger load, the Car Attendants should become aware of the details of the train makeup before boarding the train. For example, three different locomotives are available, so the correct description should be selected from the example text.

It is not necessary, nor is it desirable, to give all of the announcements at one time. These background announcements should not begin until the train has passed the public crossing. In general, these background announcements should be timed to occur when no safety announcements are expected.

4.1 CURRENT TRAIN

Hi everyone. Welcome to the Nevada Southern Railway. Your crew is all volunteer. Our run today will be about 3.5 miles to near the Railroad Pass Casino, and will last about 45 minutes.

The train you are riding is composed of diesel locomotive number 844 (or 1855 or 1000 as appropriate), an Head End Power Car, two enclosed passenger cars, an (or two) open passenger car, and an ADA/handicap car. There is a rest room in the ADA car at the front of the train.

The locomotives used on this railway are of the diesel-electric design. We don't have any operational steam locomotives at this time.

(844) Today we are using locomotive 844, a type GP-30. It was built in 1963 by the Electro-Motive Division of General Motors, and was first used by the Union Pacific railroad. It has completed a restoration here at the museum in 2003. It weighs over 250,000 pounds and has a V-16 diesel engine which generates about 2250 horsepower.

(1000) Today we are using locomotive 1000, a type NW-2. It was built in 1939 by the Electro-Motive Company as the first demonstrator of this class of yard switching locomotive. It was first used by the Union Pacific, then went through a series of owners before coming to this museum. It weighs just under 250,000 pounds and has a V-12 engine that generates about 1000 horsepower.

(1855) Today, we are using locomotive number 1855. It was built in 1953 and was used in service for the government, and uses a diesel engine that was originally developed by the Fairbanks-Morse Company for use in diesel submarines.

The Head End Power Car was created because these locomotives were designed to operate as yard switchers or with freight trains. They do not have the power generation needed by passenger trains for things such as lighting, air conditioning, and announcement systems. The Head End power car was originally a boxcar car that has now been fitted with two diesel engines and generators capable of providing approximately 500 kilowatts of three-phase power at 480 volts.

The Enclosed Passenger Cars and the ADA/Handicap car were built by the Pullman Company. They're what are called Harriman Style. Passenger car number 601 was built in about 1910. Passenger car number 603 was built in 1913. The ADA/Handicap car was built in 1916. It was modified here at the Museum to have side loading doors for use with a lift so that it can accommodate wheelchairs and passengers who cannot climb the stairs into the cars. It is also used as crew quarters for alternate crews during the runs. For safety, all cars were brought up to Amtrak mechanical standards, and for comfort in our climate, the enclosed cars have had air conditioning added.

The Open Passenger Cars are of Heavyweight design. They have three axles (six wheels) on each truck instead of the two axles per truck used for the enclosed passenger cars. To give the car a smooth ride, the floor is several inches of poured concrete. This coach, built in 1914, was originally a Maintenance of Way coach that served on the Union Pacific.

4.2 HISTORY

In 1928, the Federal Government appropriated \$165 Million for the construction of the Boulder Canyon project, soon renamed to Boulder Dam and later given it's current name of Hoover Dam. To begin bringing people, supplies, and equipment to the site, a two lane vehicular road was built from Las Vegas to Boulder City. Then for heavy equipment and supplies, the Union Pacific in 1931 constructed a rail line linking their main Las Vegas line to Boulder City. Today, we are riding on those rails and ties installed in 1931.

A railroad was needed to take supplies directly to the dam construction site. The U.S. Government Construction Railroad branch was built from Boulder City to the dam site proceeding down Hemenway Wash. That branch required the construction of five tunnels through the rock hills. That right-of way is now a walking trail that is accessible from a trailhead just east of the Alan Bible Visitor's Center on US 93 east of Boulder City.

The Six Companies, Inc. Railroad branched off the U.S. Government Railroad in lower Hemenway Wash and crossed the river on a trestle bridge to the Arizona gravel pit. Another branch went from the gravel plant near the present Boulder Islands to the lower dam site. Dam construction began in 1930 and was completed just less than five years later in 1935. Shortly after completion of the dam, the Six Companies, Inc. Railroad branch was decommissioned and the rails removed. The railroad beds and trestle bridge were covered as the lake filled.

The U.S. Government Construction Railroad was used until 1961 when the last generator was installed in Hoover dam. The tracks from Boulder City down to the dam were removed soon afterward. The Union Pacific abandoned the portion of the Boulder City Branch line from Boulder City to Henderson in 1985 and donated the land and track to the State of Nevada for this Nevada State Railroad Museum.

In 1988, the Heber Creeper (Wasatch Mountain Railway) began selling off equipment. Many of the cars (including the two enclosed coaches and the open-air car) and locomotives were purchased by the State of Nevada and moved onto these tracks in 1993. To accommodate restoration work here at the Museum, the maintenance facility was built in 1996 and the platform was built in 2000. Equipment has been acquired by the State both through purchase and donation. The

refurbishment of the locomotives and cars has been funded primarily by the State, with some private donations, and lots of volunteer labor. The first public run was the "Santa Train" in December 2002.

4.3 SIGHTS FROM THE TRAIN

Several places of interest, both natural and man-made, can be seen from the train. The portion of track used for this run are roughly east-west, and we are currently running west toward Railroad Pass. The mountains to the north are the River Mountains, and the mountains to the south-west along US-95 are the McCullough Range. To the south along US-95 is the Eldorado Valley and the Eldorado dry lake bed. During the first two months of 2005, we had enough rain that there was sufficient water in the "dry" lake for a few adventurous souls to go jet skiing.

Way up on the hill north of the tracks is a set of antennas. They are aircraft navigation systems, a VOR (VHF Omnidirectional Range) and DME (Distance Measuring Equipment). The VOR gives the pilot the angle of his aircraft from the site and the DME gives the range. Most flight paths are designated as a series of segments from VOR to VOR. This station provides the final point for approach from the east into McCarran Airport.

The large "hole" just north of the train is a storm water detention basin. It holds run-off water coming in via the large concrete channels on the uphill side, and meters out the water at a controlled rate into the storm water control system. It was constructed with a flat bottom to accommodate a variety of fields that could be used by the Parks and Recreation Department and the public. And with minimal improvement of the basin's walls could provide arena type seating.

To the north, the facility is the "Captain Michael L. Hyde" Nevada Veteran's Nursing Home. It is a State owned and operated facility that receives support from the Department of Veteran's Affairs. Just to the west of that facility is what appears to be a pile of big rocks. This is actually the "P.O.W. Memorial Trails" trailhead for several hiking and mountain biking trails up through the area known as Bootleg Canyon. Some of the trails have interesting (? possibly descriptive) names such as Snakeback, Armageddon, Kevorkian and Poopchute.

Many of our visitors have no idea of the large variety of mammals, reptiles and birds inhabiting southern Clark County. The National Park

Service lists seventy-one different species of mammals that are found within the Lake Mead National Recreation Area. Even though this area appears to be very inhospitable, and a rather hostile environment, it is actually teeming with animals, many of which are seldom seen because they are nocturnal or active only at night. Kangaroo Rats, Pack Rats, Ringtail Cats, and various species of bats and snakes are representative of this nocturnal group. Three rattlesnake species common to the area are the Sidewinder, the Mojave Green, and the Speckled Rattler. A variety of birds and mammals may be observed in the early morning or late evening. Some of those most commonly seen are Quail, Roadrunners, vultures (which migrate seasonally) ravens, Coyotes, Desert Bighorn Sheep (our official Nevada State mammal), Desert Tortoise (our official Nevada State reptile), Black Tailed Jackrabbits and Cottontail Rabbits. Present, but in limited numbers, are Peregrine Falcons, the fastest specie of all animals (in a dive they can exceed 200 mph) which nests near Hoover Dam.

The next facility to the north is the Cascata (waterfall, in Italian) golf course, designed by Rees Jones. It has 800 acres of land leased from Boulder City with one 18 hole course developed and sufficient land for a second course. It was previously owned by Caesars Entertainment, available only to invited guests of the hotel. Now that Caesar's has merged with Harrah's, the course has been opened to the public with greens fees of \$350 during the week and \$500 during the weekend.

Across the road from the Railroad Pass Casino to the west of the tracks (and of US-95) is a large gravel pit owned by Rinker Materials. This is their Eldorado plant and quarry. It supplies seven concrete plants with between 6,000 and 10,000 tons of material every day. To the south of the quarry is PMC (Precision Made Cartridges) Manufacturing and the Desert Lake Country Club. PMC manufactures cartridges for a variety of guns, both for sport and for law enforcement. The Desert Lake Country Club is a shooting club for handguns, shotguns, rifles and archery.

As we pass the Casino's parking lot, we are going from Boulder City into Henderson. The Railroad Pass Casino is in Henderson. Directly behind the casino, our tracks cross a walking and biking trail that is part of the River Mountain trail system. The portion of the trail from the casino to the P.O.W. Memorial Trails trailhead is under construction, and should be complete by the end of the year.

We pass through the cut (or the REAL Railroad Pass, as I like to call it) and approach US 515. The valley between the tracks and the highway was a camping ground for people trying to get employment on the construction of the dam. Those who were employed got to live in the Boulder City facilities provided by the government.

4.4 END OF THE RUN

Call attention to any displays on the display track. Give the details of the current operating schedule. Provide information on any special activities or displays occurring at the shop. And be sure to invite everyone to visit the gift shop.

For 2006, we have begun regular operations on every weekend of the month. The first two weekends in December will be "Santa Train" (December 2nd, 3rd and 9th, 10th). Complete schedule information is available at the ticket booth.

Thank you for riding the Nevada Southern Railway. We hope you have enjoyed your trip. Make sure that you have all of your belongings before leaving the train. Please tell your friends about your ride, and come back again. And if you haven't already done so, be sure to visit our Gift Shop.

REFERENCE DOCUMENTS

NSR-1 Nevada Southern Railway Operating Rules

D-1001 Car Attendant's Handbook

D-1002 Switchman's Handbook

D-1003 Brakeman's Handbook

D-1005 Engineer's Handbook

D-1010 Emergency Response Procedures

REVISIONS RECORD

<u>Date:</u>	<u>Description</u>
7/31/06	Original release.