

## Whistle Signals

Sound	Indication
(1) Succession of short sounds	Use when persons or livestock are on the track at other than road crossings at grade.  In addition, use to warn railroad personnel when an emergency exists, such as a derailment. When crews on other trains hear this signal, they must stop until it is safe to proceed.
(2) —	When stopped: air brakes are applied, pressure equalized.
(3) ----	Release brakes. Proceed.
(4) o o	Acknowledgment of any signal not otherwise provided for.
(5) o o o	When stopped: back up. Acknowledgment of hand signal to back up.
(6) o o o o	Request for signal to be given or repeated if not understood.
(7) ----- o -----	When approaching public crossings at grade with the engine in front, sound signal as follows:  A. Start signal at least 15 seconds, but not more than 20 seconds, before entering the crossing.  B. Prolong or repeat signal until the engine completely occupies the crossing(s).
(8) — o	Warning-Approaching men or equipment on or near the track, regardless of any whistle prohibitions.

### AIR BRAKE PISTON TRAVEL LIMITS

**Freight and Passenger Cars:**  
Brake cylinder piston travel should be adjusted on cylinders with 8" or more stroke to no less than 5" and no more than 7"

**Diesel Locomotives:**  
Minimum: 3" Maximum: 4"

**Steam Locomotives:**  
Minimum: 4" Maximum: 6"

**Motor No. 7:**  
Minimum: 5" Maximum 7 1/2"

**Motors 2 and 6:**  
Verify shoes are tight against wheels when brakes are set and loose from wheels when released.

# The Golden City & San Juan Railroad

---

## TIME - TABLE No. 3

**TAKES EFFECT**

**Sunday, May 6, 2018**

at 12:01 A.M.  
Standard Time, 105th Meridian

**Superseding Time-Table No. 2  
and all Supplement thereto**

---

For the exclusive guidance of Employees and  
Volunteers of the Colorado Railroad Museum; not  
for the information of the Public

DONALD TALLMAN  
Executive Director

STEPHANIE GILMORE  
Curator of Collections

JEFF TAYLOR  
Curator of Rolling  
Stock & Equipment

DANIELLE GHEAR  
Event & Vol. Mgr.

# Colorado Railroad Museum

17155 W. 44<sup>th</sup> Avenue, Golden, Colorado 80402  
coloradorailroadmuseum.org

## Emergency Numbers

ALL, FIRE, POLICE, MEDICAL EMERGENCIES

DIAL 911

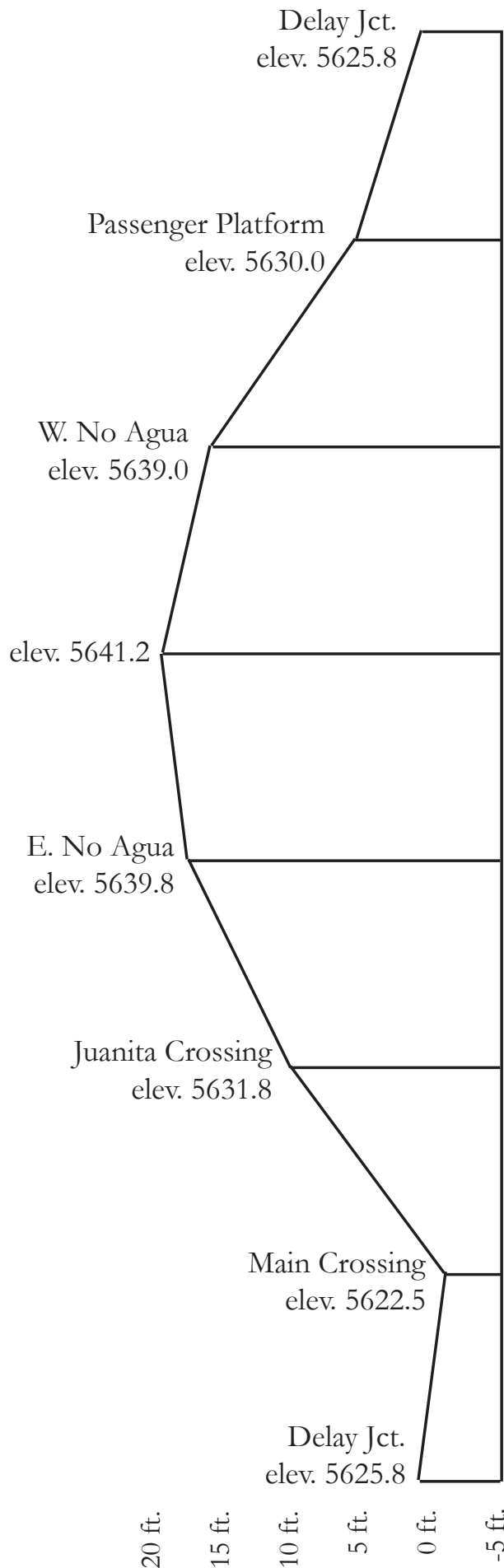
Museum	303-279-4501 800-365-6263
Roundhouse	303-216-9899
Library	303-274-5148
Volunteer Manager	720-274-5145
Executive Director	720 274-5146

## Table of Contents

Air Brake Test	12
Auxiliary Tracks, ID/Length	4
Blue Signal	7
Car & Locomotive Data/Restrictions	5
Cardinal Safety Rules	16
Changes to Rule Books(s)	7
Coupling Speed Chart	17
Delay Jct. Special Instructions	8
Job Briefings	14
Juanita Crossing Special Instructions	8
Main Crossing Special Instruction	8
Maps	10-11
No Aqua Special Instructions	8
Phone Listings	2
Public Relations	17
Roundhouse Special Instructions	8
Speed Restrictions	3
Passenger Platform Special Instructions	8
Timecard	3
Whistle Signals	20



## Colorado Railroad Museum



## NOTES

## THE COLORADO RAILROAD MUSEUM

**Westward**

**MAIN LINE**

**Eastward**

Ruling Grade Ascending ↓	Siding Length in Feet	Feet from Delay Junction	<b>STATIONS TIME TABLE No. 3 MAY 6, 2018</b>	Feet from Delay Junction	Ruling Grade Ascending ↑
0%		2151	<b>DELAY JUNCTION (WAB)</b> elev. 5625.8	0	0%
0%		1960	<b>MAIN CROSSING</b> elev. 5622.5	191	4%
0%		1399	<b>JUANITA CROSSING</b> elev. 5631.8	752	2%
1.5%	130	1156	<b>EAST NO AGUA (AW)</b> elev. 5639.8	995	1%
3.5%		700	<b>WEST NO AGUA (AW)</b> elev. 5639.0	1451	0%
1%		198	<b>PASSENGER PLATFORM (L)</b> elev. 5630.0	1953	0%
		0	<b>DELAY JCT. (WAB)</b> elev. 5625.8	2151	

### NOTICE TO ENGINEERS

All trains, locomotives, motors (Geese) and motorized track vehicles that operate on Colorado Railroad Museum (CRRM) trackage will operate at Restricted Speed as outlined in CRRM Operating Rule 5.5. Movement must be made at a speed that allows stopping within half the range of vision short of: Train, Engine, Railroad Car, Men or Equipment Fouling Track, Stop Signal or Derail or Switch lined improperly. Movement must not exceed 10 MPH.

### SPEED REGULATIONS & RESTRICTIONS

Maximum Authorized Speed (Main Loop) - 10 MPH

Roundhouse and Auxiliary, Side & Spur Tracks- 5 MPH

All Turnouts – 5MPH (diverging)

### APPROXIMATE TRAVEL TIME AROUND LOOP

8 MPH - 3 minutes, 45 seconds

10 MPH - 3 minutes

### EXPLANATION OF CHARACTERS

A – Auxiliary Track

B – General Orders, Circular, Notices (Roundhouse)

L – Passenger Loading Area

W – Water

**Auxiliary Tracks from Delay Jct.****Car Length  
(30 ft.NG)**

Delay Junction Spur (Dual Gauge)	14
Roundhouse Lead (Dual Gauge)	5
Fence Track (Dual Gauge)	3
Three Way	2
West Yard Track No. 1	3
West Yard Track No. 2	2
West Yard Track No. 3	7
West Yard Track No. 4	7

**Auxiliary Tracks from No Aqua****Car Length  
(30 ft.NG)**

No Aqua Siding	4
Juanita Spur	8
Crooked Spur	3
Twenty Track	5
South Table Mountain Spur	4
North Table Mountain Spur	4

**Auxiliary Tracks-Turntable****Length  
(ft.)**

Turntable	73' 8"
Roundhouse No. 1 (Dual Gauge)	136
Roundhouse No. 2	117
Roundhouse No. 3 (Dual Gauge)	102
Roundhouse No. 4 (Dual Gauge)	117
Roundhouse No. 5	117
Track No. 6 (Dual Gauge)	148
Track No. 7 (Dual Gauge)	102
Track No. 8 (Dual Gauge)	57
Track No. 9	44
Track No. 10	30
Track No. 11	22
Track No. 12	13
Track No. 13	14
Track No. 14	13
Track No. 15	12
Track No. 16	15
Track No. 17	15
Track No. 18	14
Track No. 19	10
Track No. 20	10
Track No. 21	30
Track No. 22	32
Track No. 23	47
Track No. 24 (Dual Gauge)	67

**Public Relations and Conduct**

Employees, trainmen, attendants and other volunteers, through direct personal contact with museum passengers and guests have the opportunity to demonstrate that you are the best museum employees and volunteers anywhere.

Some common-sense practices are:

- Assuring the safety and comfort of museum guests.
- Giving correct information in answer to questions and tactfully correcting errors or mis-statements which may have been made by someone else.
- Giving necessary special attention to the aged, infirm, and children by assisting them on and off trains and exhibits and inquiring concerning their comfort during their visit.
- Maintaining orderly behavior on trains and museum grounds.
- Avoiding arguments with guests even when they are discourteous to you. "A soft answer turneth away wrath."
- "Watch your appearance, everybody else does." Close attention to neat appearance, indicates pride in what you do.
- Inspect coaches, cars and other exhibits for cleanliness. Correct, or report any infractions in cleanliness to the appropriate museum employee.

**Unusual Delays**

- Reasons for delays will be transmitted diplomatically to passengers and guests. Normally, people will cheerfully accept an inconvenience which they understand. Conversely, irritation among passengers and guests is bound to result from lack of information.
- Courtesy is.....

**DON'T EXCITE! BE POLITE!****Over Speed Couplings are Damaging  
Here is what happens:**

4 MPH		Safe Coupling
5 MPH	■	Damage Begins
6 MPH	■■	2 Times the Damage as 5 MPH
7 MPH	■■■	3 Times the Damage as 5 MPH
8 MPH	■■■■	4 Times the Damage as 5 MPH
9 MPH	■■■■■	5 Times the Damage as 5 MPH
10 MPH	■■■■■■	6 Times the Damage as 5 MPH

AVOID DAMAGE TO OUR UNIQUE EQUIPMENT  
PLEASE SWITCH CARS CAREFULLY

## Cardinal Safety Rules

- Safety First! Safety is of the first importance in the discharge of duty.
- Safety must be the first consideration in all operations and duties. In all cases, the safest available methods must be followed. In case of doubt or uncertainty, the safe course must be taken.
- Always be on the alert for hazardous or unsafe conditions. If they are found, eliminate them; if this can't be done, report them to proper museum authority, warn others and take such steps as necessary to protect the condition until it can be corrected.
- Expect the movement of trains, locomotives, cars or other equipment at any time, on any track, in either direction.
- Never stand in the middle of a track. Always stand at least 20 feet away from tracks used during operations. Personnel must avoid standing or walking on or near the tracks except in the performance of duty.
- Do not step on top of a rail, step over it and be alert for wet and slippery conditions. Walking, sitting, stepping on frog, rail, switch or guard rail is prohibited.
- Never put any objects (such as coins) on track and discourage visitors from doing so as well.
- Do not go in-between or underneath equipment or allow museum guests to go in-between or underneath equipment. Sitting, lying, or crossing under cars is prohibited, except when required in the performance of duty and then only when proper protection is afforded.
- Do not climb on or allow museum guests to climb onto equipment that is not equipped with stairs or other devices that will safely allow entry.
- Watch out for museum guests with extra care, assuming they will be preoccupied and unaware of train movements.
- Do not cross, or allow guests past the inside perimeter fence during railroad operations. During railroad operations, volunteers and guests are not allowed to pass this area unless accompanied by museum personnel or qualified operating volunteer. Always inquire with museum personnel to determine if there are active railroad operations.
- Volunteers must watch out for museum guests with extra care. Assuming they will be preoccupied and unaware of train movements.
- Always be courteous with museum guests, DON'T EXCITE! BE POLITE!

Track No. 25	102
Track No. 26	138
Track No. 27 Lead to Main Loop (Dual Gauge)	165
Track No. 28 (Dual Gauge)	134
Track No. 29 (Dual Gauge)	121
Track No. 30 Loading Track (Dual Gauge)	47
Track No. 31 Parking Lead/Ash Pit (Dual Gauge)	458
Track No. 32 (Dual Gauge)	66
Track No. 33 (Dual Gauge)	84
Track No. 34 Rip Track	129

### AUXILIARY TRACKS AND TURNTABLE NOTICE

All turntable and roundhouse tracks will not clear man on side of locomotives, motors or cars. Use extreme caution when moving on/off turntable and in or out of roundhouse.

### LOCOMOTIVE INFORMATION AND RESTRICTIONS

Locomotive	Maximum Tonnage	Restrictions
K-37 (DRGW 491)	252	Do not operate on North Table Mountain, Twenty Track or Crooked Spur
C-19 (DRGW 346)	92	None
T-19 (RGS 20)	92	None
GCSJ No. 4	90	None
DRGW No. 50	65	None
RGS No. 2, 6 & 7	N/A	Require a Qualified Brakeman when in passenger service or when conditions require.

### CAR INFORMATION AND RESTRICTIONS

Car No.	Weight in Tons	Length	Capacity	Restrictions
Coach 280	20	44'	40	2 <sup>nd</sup> from rear
Coach 284	20	30'	40	3 <sup>rd</sup> from rear
DRGW 60	29		6	None
DRGW B-8		41' 10"	10	End of Train Only
RGS Rico	20	43'	12	End of Train Only
GCSJ 51-52 (Ex WP&Y)	20	40'	36	None
GCSJ 501-503	11	40'	50	None
DRGW 6532 (Flat)	15	41' 6"	50	None
DRGW 6732 (Flat)	10	30'	50	None

DRGW 0578 (Caboose)	10	22' 7"	Crew Only	End of Train Only
RGS 0404 (Caboose)	12	28' 6"	Crew Only	End of Train Only
URY 50	20	38'	N/A	None
UTLX 11058,12770	33	30"	N/A	None
Box/Stock	11	30'	N/A	None
Gondolas HS/DB	10	32'	N/A	None
Flat	10	30"	N/A	None
Reefer	15	30'	N/A	None
Refer	17	40'	N/A	None

### Turntable Restrictions

Maximum Gross Weight on Rail	476,050
Maximum Length	73' 8"
Maximum Width	15"

### WEIGHT RESTRICTIONS

Any equipment larger than CB&Q 5629 (excluding tender), shall not be on turntable without prior approval of railroad bridge engineer.

#### **CRRM Safety Rule S7.1U: Portions regarding turntable operations for emphasis:**

- Personnel must not get on or off turntable in motion.
- Personnel must not occupy track portion of turntable when movement is being made.
- Do not insert locking device in turntable until table is stopped.
- Engines must not be moved on or off turntable until rails are in proper alignment and table securely locked.
- Movement of locomotives toward turntable without proper alignment and locking of turntable is prohibited.

### Passenger Attendants

- Identify train and engine crew for the day
- Identify person in charge of train attendants for the day
- Specific Safety Hazards for the day
- Unusual operating conditions for the day
- Departure Time and number of trips
- Attendant assignments, relief crew, lunch, etc.
- Review following with all attendants and flagman before first trip of the day and when assignments change:
  - Determine chain of command
  - Ramp operations: Raise ramp before conductor gives final "all aboard"
  - Assure understanding of stop signal and when to use it.
  - Don't move step boxes.
  - What to do if train stops other than loading area.
  - Assist passengers on and off train at all times.
  - Check opposite side of train immediately before departure, if not clear, give immediate stop signal to operating conductor.
  - When train is moving: Make sure all passengers stay seated.
  - When train is moving: Make sure passengers keep all parts of body inside passenger cars and windows.
  - When train is moving: Always maintain three-point protection.
  - Keep passengers seated until engineer whistles stop and will not move signal (single whistle after stop).

### Mechanical and Roundhouse

- Identify crew for the day
- Discuss planned work and potential safety hazards
- Discuss, place and verify Blue Signal Protection
- Discuss unusual conditions and tools needed
- Discuss and identify proper personnel protective equipment (PPE)
- Review a specific Operating or Safety Rule

## **SAFETY RULES**

### **S5.0 Job Safety Briefing**

Operations, mechanical and maintenance of way activities are under the control and supervision of the assigned museum personnel or their designee. Before operations begin, museum personnel or their designee will conduct a safety/job briefing with all personnel, that are present. A new briefing will be conducted if new people arrive, or if changes occur to the operating plan or other conditions change. Each operating plan should consider hazards; assign specific responsibilities and an explanation of those assignments.

### **Job Briefing Guidance**

#### **Operating Crews (Trains and Motors)**

- Identify crew (engineer/fireman, conductor/brakeman/crossing flagman) for the day.
- Specific Safety Hazards for the day
- Unusual operating conditions for the day
- Hand Signals to be used
- Verify briefing with track foreman
- Specific radio use and procedure
- Direction of Travel for Passenger Operations
- Departure Time and number of trips
- Crew assignments, relief crew, lunch, etc.
- Review a specific Operating or Safety Rule

#### **Crossing Flagman**

- Identify train and engine/motor crew for the day
- Specific Safety Hazards for the day
- Unusual operating conditions for the day
- Departure time and number of trips
- Crew assignments, relief flagman, lunch, etc.
- Understand use of crossing signal and are equipped with required flagging supplies, including safety vest and flag.

#### **Track Foreman**

- Identify track crew for the day
- Identify required personal protective equipment
- Identify work area(s)
- Specific Safety Hazards for the day
- Verify on track safety protection regarding train operations, lookout, briefing with operating crew
- Review tractor and/or track machine operations and signal.

## **SPECIAL INSTRUCTIONS AND CHANGES TO RULES**

### **The Colorado Railroad Museum Consolidated Book of Museum Policy & Best Practices as it Relates to:**

Operating Rules

Air Brake Rules

Maintenance of Way Rules

Safety Rules

All Effective May 6<sup>th</sup>, 2018 are in effect at the Colorado Railroad Museum, except as supplemented or amended herein as follows:

### **OPERATING RULES**

#### **Operating Rule 4.8**

Blue Signal Protection - All tracks east of the main road crossing on the roundhouse lead are considered as Engine and Car Repair and/or Service Area. Speed will not exceed 5 MPH.

Note: This also applies to Safety Rule S8.0

#### **Operating Rule 4.5.2 Sounding Whistle**

Out of consideration for our neighbors, whistle signals should be kept at a minimum and at a low frequency when at all possible. Radio communications may be used as an acknowledgement by engine man for appropriate signals when necessary and agreed upon through a job briefing.

### **AIR BRAKE RULES**

#### **Air Brake Rule 100.9 B Initial Air Brake Test**

Angle Cocks on DRGW Coaches 280 and 284 are open when in the crosswise position and closed when in the parallel position. Angle cocks are identified with red handles. Cut-out cocks are identified with white handles.

### **MAINTENANCE OF WAY RULES**

**No Changes**

### **SAFETY RULES**

**No Changes**

## **SPECIAL INSTRUCTIONS FOR DELAY JUNCTION**

### **Passenger Loading Area:**

Do not move step boxes or platforms that have been placed by the operating crews.

Keep wheel chair lift clear of track when not in use.

### **Museum Entrance Road:**

Fence and gate will not clear man, on side of locomotive, motors or cars.

## **SPECIAL INSTRUCTIONS FOR MAIN CROSSING**

When flagman is assigned at crossing as per Operating Rule 5.7.1, flagman must have required safety vest and flagging equipment. All flagmen must be vigilant to assure that crossing is clear and the track signal is turned to yellow by the time a train is approximately 150 ft. from crossing. If unable to clear crossing, leave signal red and give stop signal as per Operating Rule 4.3.1.

## **SPECIAL INSTRUCTIONS FOR JUANITA CROSSING**

None

## **SPECIAL INSTRUCTIONS FOR NO AQUA**

Water Tank and Pump House will not clear man on side of locomotive, motors or cars.

## **SPECIAL INSTRUCTIONS FOR PASSENGER PLATFORM**

### **Passenger Loading Area:**

Do not move step boxes or platforms that have been placed by the operating crews.

Keep wheel chair lift clear of track when not in use.

## **SPECIAL INSTRUCTIONS FOR ROUNDHOUSE**

All Turntable and Roundhouse Tracks will not clear man on side of locomotive, motors or cars. Please use extreme caution when moving on/off turntable and in or out of Roundhouse. Keep guests well clear of all movements and on the outside of turntable safety chains.

Conduct the test as follows:

1. Charge the air brake system to within 5 pounds of the locomotive regulating valve setting as indicated by a gauge or device at the rear of the train.
2. When proper notification is received to apply the brakes from personnel conducting the test, make a 20-lb. brake pipe reduction.
3. Conduct leakage test as outlined in Rule 100.8.
4. Inspect the entire train or cars added to determine that:
  - Brakes are applied and remain applied on each car and piston travel meets requirements of ABTH 100.13 (Piston Travel) until notification is received to release.
  - Brake rigging does not bind or foul.
  - All parts of the brake equipment are properly secured.
5. When the test and inspection of the air brake application is complete and the proper notification has been received to release the brakes:
  - Place the automatic brake valve handle in the RELEASE position.
  - Notify the inspector that the brakes have been released.
  - Inspect each brake to make sure all brakes have released.

### **C. Engineer Notification**

A qualified person who participated in the test and inspection or who knows the test was completed must notify the engineer verbally that the initial terminal air brake test has been completed satisfactorily including, number of cars inspected, position of retainers, and verification that all hand brakes have been released and wheel chocks have been removed.



## Air Brake Rules

### 100.8 Brake Pipe Leakage Test (Trains)

#### Brake Pipe Leakage Method

Conduct a brake pipe leakage test as follows:

1. Charge the brake system to within 5 psi of the regulating valve setting as indicated by a gauge or device at the rear of the train or after 3 minutes or more as indicated by a reliable watch.
2. Wait for the signal to apply the brakes.
3. When you receive the signal, reduce brake pipe pressure by 20 psi.
4. Place automatic brake valve in "lap" position.
5. Wait 1 minute for the brake pipe pressure to equalize.
6. Time the brake pipe leakage for 1 minute. If the leakage does not exceed 5 psi the test is complete. If the leakage exceeds 5 psi train must be inspected for leakage and re-tested.
7. When you receive the signal to release the brakes, move the automatic brake valve to RELEASE position.

### 100.9 Initial Air Brake Test

Qualified personnel must conduct an initial air brake test to inspect air brake and safety appliances and to test brake pipe integrity.

#### A. Requirement for Test

Test must be conducted:

- Where the train is originally assembled.
- Where the train consist is changed.

#### B. Procedure for Initial Terminal Air Brake Inspection

Inspect before or during Air Brake Test for the following:

- Inspect the angle cocks and verify that they are properly positioned. When angle cocks are open, the handles stand straight (parallel) with the pipe and when closed the handles stand crosswise (at right angle) with the pipe.
- Inspect the air hoses and verify that they are in condition for service and properly coupled.
- Inspect the system for leakage.
- Make necessary repairs to minimize leakage.
- Inspect the retaining valves and verify that they are in EXHAUST position.

## Common Operating, Air Brake and Safety Rules for Quick Reference

### Operating Rules

#### 1.23 Inspection of Freight and Passenger Cars

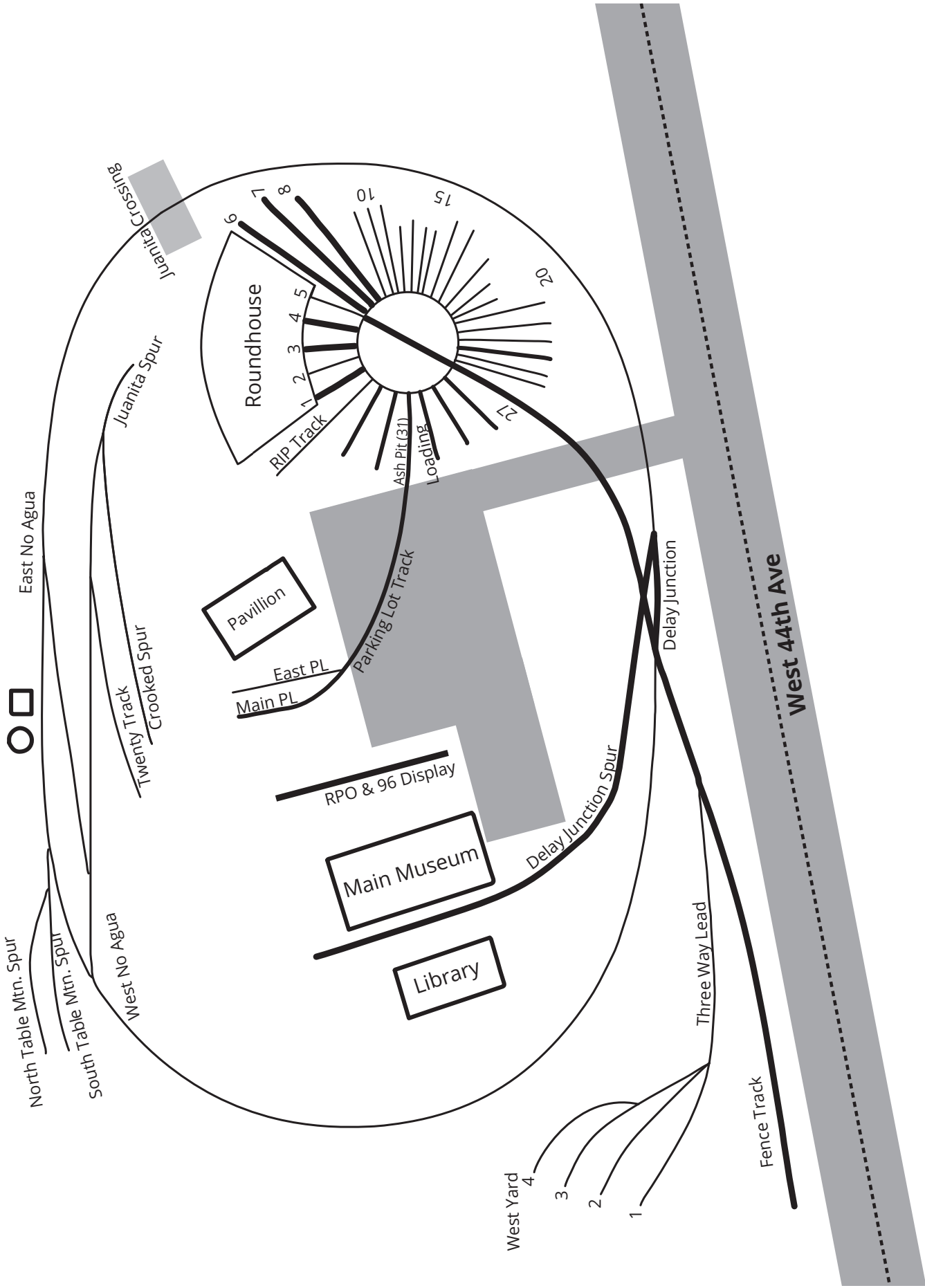
Each railroad car placed in the train may be moved after it receives a safety inspection as follows:

- Cars must be checked for:
  - Leaning.
  - Sagging.
  - Improper position on the truck.
  - Objects hanging or dragging from the car or extending from the side.
  - Insecurely attached doors.
  - Broken or missing safety appliances.
  - Insecure coupling device.
  - Overheated wheel or journal.
  - Broken or cracked wheel.
  - Brake that fails to release.
  - Staff type brake inoperative or not in fully raised position.
  - Any apparent hazard that could cause an accident.
  - Open top loads on flat cars, must be loaded safely.

#### 5.7.1 Providing Warning Over Museum Road Crossing

Whenever railroad equipment crosses the museum entrance crossing, the track must be seen or known to be clear. A crossing flagman will be used during all passenger operations and at other times if possible. If no flagman is available during other operations, movement should stop so a crew member on the ground can provide warning until crossing is occupied.

- A yellow track light on the crossing signal indicates that the signal is operating and the train or railroad equipment may proceed across the crossing with caution.
- A red or dark track light on the crossing signal indicates that the signal is not operating and the train should stop and provide flag protection,



— Narrow Gauge Tracks

— Standard Gauge Tracks