



**RAILTOWN 1897**

State Historic Park  
Jamestown, California

# RAILTOWN STATE HISTORIC PARK

## Railtown Train Crew Training and Qualification Program

- **GENERAL:** This policy document describes the process for training and advancing Park volunteers into and through the *Railtown Train Crew Training and Qualification Program*. This Program is administered by the *Qualifications Review Board (QRB)*, comprised of the Park Superintendent, the Designated Supervisor of Locomotive Engineers (DSLE) and the Chief Mechanical Officer (CMO). Entry into and advancement through this Program is subject to the Park's needs and objectives. A Candidate's application to advance to Level TWO is subject to QRB review and approval based on the individual's demonstrated capabilities, commitment, and contribution to Railtown's mission and objectives. Due to the complexities involved with training individuals to work on the Train Crew, Candidates must be available for a minimum of 4 student shifts per month. The QRB also reviews and approves a Candidate's advancement based on the criteria identified for each level of the Program. Except as delegated elsewhere, the QRB also evaluates a Candidates' performance at each program level and approves advancement to each subsequent level. Volunteers may seek to attain any level of the program desired; advancement is not compulsory. The Program consists of these levels:

- **ENTRY LEVEL:** Fire Patrol, Car Host
- **LEVEL TWO:** Student Brakeman/Brakeman
- **LEVEL THREE:** Student Conductor/Conductor
- **LEVEL FOUR:** Hostler/Student Fireman/Fireman
- **LEVEL FIVE:** Student Engineer/Locomotive Engineer

The positions of BRAKEMAN, CONDUCTOR, HOSTLER, FIREMAN and LOCOMOTIVE ENGINEER are sub-divided into two classifications: STUDENT and QUALIFIED. Satisfaction of each level's minimum requirements is required prior to consideration for advancement to the next level.

- **BASIC QUALIFICATIONS TO ENTER THE SERIES:** Candidates must be at least 18 yrs. of age, and possess a valid California Driver's License. Candidates **must submit a written application** to the QRB to be considered for promotion to LEVEL TWO: Brakeman. In addition, Candidates must meet the minimum qualifications specific to each position sought, be able to pass medical exams and drug screening, where required, and be capable of performing the minimum physical requirements for each position sought. (The Park Superintendent may grant exemptions on a case-by-case basis for qualified minors, aged 16 and older, to participate in the entry level of the series, or to waive requirement for possession of CDL.)
- **ENTRY LEVEL:** Candidates must demonstrate a commitment to the mission, goals & objectives of Railtown State Park. Candidates must perform a minimum of 10 full shifts serving in one or more of the following positions (see separate duty statements for each position):
  - a) Fire Patrol – Motor car right-of-way patrol performing fire monitoring and prevention duties.
  - b) Car Host – On-board hosts providing for visitors' safety and enhancing their experience through interpretive narration.

## RAILTOWN STATE HISTORIC PARK

Entry-level service positions will be offered based on the Park's current needs and a Candidate's specific skills and/or previous experience. Vacancies or opportunities for advancement may not always be available in a specific area. Alternate entry-level service options may be offered to a Candidate subject to the review of the QRB and approval by the Park Superintendent.

- **GENERAL CODE of OPERATING RULES QUALIFICATION:** Current qualification on the *General Code of Operating Rules (GCOR)* is required prior to an individual operating in the capacity of Fire Patrol, or in Levels Two through Five:

### **FIRE PATROL**

- c) **Initial Qualification:** 8 hours of Fire Patrol classroom/skills training, and passing proctored *GCOR for Fire Patrol* exam.
- d) **Maintaining Qualification:** 8 hours of Fire Patrol training, and passing *GCOR for Fire Patrol* exam, not less than once every 12 months, or; 8 hours of GCOR classroom training not less than every 24 months and passing a proctored written examination not less than once every 12 months.

### **Levels Two through Five:**

- e) **Initial Qualification:** 16 hours classroom training **and** pass a proctored written examination. Attend Brakeman's Academy (strongly recommended).
  - f) **Maintaining Qualification:** Eight hours of GCOR classroom training not less than every 24 months, and passing a proctored written examination not less than once every 12 months.
- **LEVEL TWO - BRAKEMAN:** Prerequisite: *General Code of Operating Rules* qualification, successful completion of all ENTRY LEVEL requirements and QRB approval. Student Brakeman training consists of a minimum of 16 hours self-study including, but not limited to, the following topics:
    - Ability to meet minimum physical requirements to perform duties of position (Appendix 1)
    - Personal, train crew and passenger safety
    - FRA Regulations: Drug & Alcohol (219); Hours of Service (228); Brake Systems Safety Standards Subpart C (232)
    - Timetable/Special Instructions
    - Basic Air Brake
    - Handling switches
    - Equipment inspections
    - Getting on and off equipment
    - Making up trains and cutting cars
    - Guiding train movements
    - Emergency procedures
    - Guest relations

A Student Brakeman must successfully complete the above training requirements and work a minimum of 10 full student shifts in train service, under the supervision of a Qualified Conductor before, 1) applying to the QRB for promotion to Qualified Brakeman, 2) passing a written examination, and 3) demonstrating proficiency in that position. Upon verification of the above requirements, the QRB may approve a Candidate's application for promotion based upon demonstrated proficiency and crew staffing needs.

## RAILTOWN STATE HISTORIC PARK

- **LEVEL THREE - Conductor:** Prerequisite: *General Code of Operating Rules* qualification, successful completion of all LEVEL TWO requirements and QRB approval. Student Conductor training consists of a minimum of 16 hours self-study on:
  - All Student Brakeman required topics listed in LEVEL TWO, and
  - Guest relations & management
  - Crew resource management & supervision
  - Emergency response procedures

A Student Conductor must successfully complete the above training requirements and work a minimum of 10 full student shifts in train service under the supervision of a Qualified Conductor before, 1) applying to the QRB for promotion to Qualified Conductor, 2) passing a written examination, and 3) demonstrating proficiency in that position. Upon verification of the above requirements, the QRB may approve a Candidate's application for promotion based upon demonstrated proficiency and crew staffing needs.

- **LEVEL FOUR:**

a) **Hostler:** Prerequisite to start training: Must have been a Qualified Conductor for a minimum of 10 full shifts and/or approval from the CMO. Under the general oversight of the CMO, Student Hostlers must complete the following in order to become a Qualified Hostler:

- Minimum of 10 student shifts of hands-on training, assisting a Qualified Hostler preparing locomotives for service
- Demonstrate proficiency to the CMO

The CMO will verify successful completion of the above requirements and may, at his/her sole discretion, qualify the Candidate as a Hostler.

b) **Locomotive Fireman:** At the written request of a Qualified Hostler, the CMO may recommend a Candidate to the QRB for advancement to **Student Fireman**. Upon review, the QRB may approve a Candidate's application for Student Fireman based upon proficiency and crew staffing needs. Prerequisite: **Hostler and Conductor qualifications**. Student must successfully complete the following before being eligible to qualify as a Fireman:

- Workshop and self-study on *Basic Management of Oil-Fired Steam Locomotives*
- Self-study of suggested topics (Appendix 2)
- Pass a written exam on the subjects
- A minimum of 10 student shifts hands-on training on steam locomotives under the direct supervision of a Qualified Fireman
- Demonstrate proficiency to the CMO

Upon successful completion of the above, the CMO may endorse a Candidate for promotion to Locomotive Fireman. Upon verification of the requirements, the QRB may approve a Candidate's application for promotion based upon proficiency and crew staffing needs.

- **LEVEL FIVE:**

a) **Student Engineer:** The CMO/QRB may recommend a Qualified Fireman to the QRB for advancement to Student Engineer provided the Candidate:

- Meets FRA Part 240 eligibility requirements for Train Service Engineer Certification;

## RAILTOWN STATE HISTORIC PARK

---

- Has completed a minimum of 10 full shifts as a Qualified Fireman;
- Has completed a minimum of 40 self-study hours (Appendix 3) and passed written examinations on:
  - FRA Part 240 locomotive engineer certification regulations;
  - Advanced Locomotive Management
  - Air Brake & Train Handling
- Demonstrates understanding and proficiency of the Engineers Proficiency Standards (Appendix 4)

b) **Locomotive Engineer:** Upon successful completion of a minimum of 80 training hours operating and managing a steam locomotive under the direct supervision of a Qualified Locomotive Engineer, and demonstrated proficiency in safe and efficient locomotive and train handling, the CMO and DSLE may jointly recommend a Student Engineer to the QRB for promotion to Locomotive Engineer. Upon verifying successful completion of the above requirements, the QRB may approve a Candidate's application for promotion based upon demonstrated proficiency and crew staffing needs.

- **RE-ENTRY PROVISIONS for INDIVIDUALS with PREVIOUS EXPERIENCE & QUALIFICATIONS:** A volunteer previously qualified to operate at Railtown or an individual with credible steam locomotive and/or railroad experience may apply to the QRB for accelerated advancement through the Train Crew Program provided the following conditions are met:

- Applicant is currently accepted into the *Railtown State Historic Park Volunteer Program*.
- Applicant successfully qualifies on the Railtown GENERAL CODE of OPERATING RULES and applicable Timetable/Special Instructions.

If it determines the applicant's previous experience, qualifications, skills, proficiency and certifications so warrant, and the applicant passes the written examinations and demonstrates proficiency for the LEVEL TWO requirements and for each subsequent level sought, the QRB may waive or modify any other Program requirements as it deems appropriate.

*As adopted by the Railtown Railroad Operations Management Group on June 22, 2009*

*Minor revisions 2/18/12*

*Minor revisions 3/3/12*

*Revised 3/18/16*

## RAILTOWN STATE HISTORIC PARK

### *Promotional Checklist-Entry requirements for each level*

#### **Entry Level: Fire Patrol/Car Host**

- Initial Qualification Training & applicable exam (Fire Patrol & Car Host)
- 18 years of age (or waiver by Park Superintendent)
- Possession of valid CDL (or waiver by Park Superintendent)
- Must submit written application to QRB to be considered for promotion to Brakeman

#### **To promote to Level Two: Student Brakeman**

- Complete 10 full shifts at Entry Level (Fire Patrol/Car Host)
- Ability to meet minimum physical requirements to perform duties of position (Appendix 1)
- Approval of QRB (upon consideration of written application)
- 16 hours of GCOR classroom study & pass proctored exam (85%)
- Attend Brakeman's Academy (strongly recommended)
- Pre-employment drug testing
- Previous covered service questionnaire (DOT)

#### **To promote to Level Two: Brakeman**

- 16 hours of self-study (topics listed under Brakeman, page 2)
- Work a minimum of 10 student shifts in service under supervision of a Qualified Conductor
- Pass a written exam (85%)
- Demonstrate proficiency to the DSLE
- Approval by the QRB

#### **To promote to Level Two: Student Conductor**

- Approval of QRB (upon consideration of written application)
- 16 hours of GCOR classroom study & pass proctored exam (85%)

#### **To promote to Level Three: Conductor**

- 16 hours of self-study\*\* (topics listed under Conductor, page 3) \*\*can include hours studied in Level Two, plus
- Guest relations & management, and crew resource management & supervision
- Emergency Response Procedures
- Work a minimum of 10 student shifts in service under supervision of a Qualified Conductor
- Pass a written exam (85%)
- Demonstrate proficiency to the DSLE
- Approval by the QRB

#### **To promote to Level Four: Student Hostler**

- Qualified Conductor for 10 full shifts
- Approval of Chief Mechanical Officer (CMO)

#### **To promote to Level Four: Hostler**

- A minimum of 10 student shifts of hands-on training assisting a Qualified Hostler, preparing locomotive for service
- Demonstrate proficiency to the CMO
- Approval of CMO for promotion

#### **To promote to Level Four: Student Fireman**

## RAILTOWN STATE HISTORIC PARK

- Hostler & Conductor qualifications
- Approval of QRB (upon consideration of written application)

### To promote to Level Four: Fireman

- Workshop and self-study\* on the *Basic Management of Oil-Fired Steam Locomotives*
- Self-study of suggested topics (Appendix 2)
- Pass a written exam (85%) on the subject
- A minimum of 10 student shifts of hands-on training on steam locomotives under the direct supervision of a qualified fireman.
- Demonstrate proficiency to the CMO
- Recommendation of CMO
- Approval of QRB

### To promote to Level Five: Student Engineer

- Complete a minimum of 10 full shifts as a Qualified Fireman
- Recommendation of CMO/QRB for promotion
- Complete a minimum of 40 self-study hours (see appendix 3)
- Demonstrate understanding and proficiency of the Engineers Proficiency Standards (Appendix 4)
- Pass a written exam on FRA Part 240 locomotive engineer certification regulations
- Pass a written exam on Advanced Locomotive Management
- Pass a written exam on Air Brake and Train Handling (exams may be combined, but overall score must be 85% or higher)
- Hearing and vision acuity testing (ref 49 CFR 240.121)
- Review discipline record and other pertinent data from employee's personnel file as well as his/her driving record to determine safe working habits.
- Review of previous DOT covered service employment records

### To promote to Level Five: Engineer

- On-the-job training with a certified locomotive engineer (designated as a trainer) handling steam trains for not less than 80 training hours. It is anticipated that most student engineers will require substantially more training time.
- Demonstrate understanding and proficiency in the following areas
  - Machinery
  - Air Brakes
  - Train Handling
  - Operating rules (including signals)
  - Hazardous materials/emergency response
  - Federal Regulations
  - All aspects of railroad operations and equipment, including a familiarization trip in the cab of a locomotive.
  - Company's safety rules for employees and operations
  - Overview of applicable Federal and state regulations
  - Rules and responsibilities of individual train crew and ground employees
- Skills Examination (at the controls), on a pass/fail basis, of not less than 4 hours, while operating a locomotive in actual train service, under the supervision of the DSLE (ref 49 CFR 240 plan)
- Participate in final written exam, with a passing score of 85%, covering (but not limited to)
  - Personal Safety Practices
  - Operating Rules and Practices
  - Signal Compliance
  - Radio Rules Compliance

## RAILTOWN STATE HISTORIC PARK

---

- Hazardous material handling and emergency response
  - Mechanical condition of equipment
  - Train handling practices
  - Use of automatic train brake
  - Relevant Federal Safety Rules
- Final approval by the QRB & CMO

For specific details of testing requirements, please refer to Railtown's 49 CFR Part 217 plan, and Railtown's 49 CFR Part 240 plan.

\*Self-study hours must be documented by use of the *Self Study Validation Form* in the employee's personnel file.

### Appendix 1

(Adapted from UP/BNSF materials)

## RAILTOWN STATE HISTORIC PARK

---

### Physical Requirements

- Medium to heavy work, lifting up to 50 pounds occasionally and up to 83 pounds on a rare basis
- Reach/handle/finger/feel (dexterity)
- Stoop/bend/kneel/crouch/crawl/balance/climb
- Work in cramped, confined, enclosed, or awkward places
- Ride on the outside of rail equipment for long periods of time
- Walk long distances (up to 2 miles a day) over uneven terrain
- Demonstrate auditory and visual acuity/tracking/inspection
- Work outdoors in high temperatures
- Must meet color vision requirements as described in the Federal Railroad Administration (FRA) Regulations
- Operate any style handbrake

A/V Resources - Getting Off on the Right Foot 25 min.

Appendix 2

Fireman/Student Self-Study Training Topics

## RAILTOWN STATE HISTORIC PARK

---

- Basic Management of Oil-Fired Steam Locomotives
- Oil Firing the Steam Locomotive by Marshall Kirkman
- Fundamentals of the Steam Locomotive – Simmons-Boardman Books
- Firing A Passion For Steam – A Handbook For The Steam Locomotive Devotee by Darrell Tilcock
- An Engineer’s Guide to The Firing and Handling of Steam Locomotives by Jerry Brooks and Karl Ryden
- Southern Pacific Line Information for Oil Burning Locomotives by Southern Pacific Railroad
- Santa Fe Instructions for Enginememen governing The Care, Maintenance and Economical Operation of the Steam Locomotive
- The Science of Railways – Engineers’ and Firemen’s Handbook
- Firing Locomotives by I.C.S. Staff
- Heat and Steam by I.C.S. Staff

### Online Video Resources

- [The Steam Locomotive - New York Central Railroad 1938 Steam Trains in the 1930s](#)

### Audio-Visual Resources (DVDs)

- Steam Locomotive Daily Inspection Presented by Silver Enterprises and the FRA
- Running a Steam Locomotive Vol 1 1970 Railroad Management
- Running a Steam Locomotive Vol 2 1992 Railroad Management
- Running a Steam Locomotive Vol 3 1992 Railroad Management
- Running a Steam Locomotive Vol 4 1992 Railroad Management

## Appendix 3

### Engineer/Student Self-Study Training Topics

- ABC’s of Air Brakes Vol. 1 “Chalk Talks”      C.M. Drennan 1954      Simmons-Boardman

## RAILTOWN STATE HISTORIC PARK

---

- Car Air Brakes Vol. 2 "Chalk Talks" C.M. Drennan 1955 Simmons-Boardman
- Locomotive Air Brakes Vol. 3 "Chalk Talks" C.M. Drennan 1955 Simmons-Boardman
- Enginemen's Manual by W.P. James
- The Science of Railways – Engineers' and Firemen's Handbook
- Locomotive Engine Breakdowns and How to Repair Them by W.G. Wallace
- How Steam Locomotives Really Work by P.W.B. Semmons 7 A.J. Goldfinch
- The 1925 Modern American Locomotive Construction and Operation by Frederick J Prior
- Practical Locomotive Operating by Clarence Roberts and Russell Smith
- Locomotive Appliances by Marshall Kirkman
- Basic Steam Locomotive Maintenance by Simmons-Boardman Books

### Audio-Visual Resources (DVDs)

- At This Moment 1954 Historical Files
- Safe Roads and Rails 1935 Historical Files
- The Great Railroad at Work 1942 Historical Files
- The Big Train 1950s Historical Files
- This is My Railroad 1940s Historical Files

### Online Resources

- [Steam Train Maintenance in the 1950's](#)
- Train Order Accidents - A review of 68 accidents under the American system of time table and train orders from ICC reports, 1911-1966
  - <http://mysite.du.edu/~jcalvert/railway/trainord.htm>

## Appendix 4

### Engineers Proficiency Standards

- Maneuvering locomotives on and off of turntable
- Maneuvering locomotives in and out of roundhouse

## RAILTOWN STATE HISTORIC PARK

---

- Yard switching
- Sanding out
- Locomotive Inspection
- Train Handling
- Shoving
- Injectors
- Lubricators
- Compressors
- Airbrakes
- Securing Equipment
- Safety
- Emergency Procedures - Locomotive