

**ACHIEVEMENT PROGRAM**

**MODEL RAILROAD ENGINEER ELECTRICAL**

**STATEMENT OF QUALIFICATIONS FORM**

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Member's Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NMRA #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Exp: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Street: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ City: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ State/Prov.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ZIP/PC: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Country: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NMRA Region: \_\_\_\_\_\_\_\_\_\_\_Division:\_\_\_\_\_\_\_\_

Date Submitted: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ E-Mail: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**To qualify for this certificate you must:**

1. Construct and demonstrate on your own, someone else’s layout, or a club layout, the satisfactory operation of an electrical control system on a model railroad capable of simultaneous and independent control of two mainline trains in either direction, and containing at least:

If DC Power – 5 blocks that can be controlled independently

If DCC/TMCC/Other Power – gaps/switches/phase for troubleshooting

One Reverse Loop or Wye or Turntable or Transfer Table

One passing siding

Facilities for storing of at least two unused motive power units.

One yard with a minimum of three tracks and a switching lead independent of the mainline.

One power supply with protective devices (short indicator and/or circuit breaker) to ensure safe operation.

Other \_\_\_\_\_\_\_\_\_\_

Single slip switch

Gauge separation turnout

Double junction turnout

Three way turnout

Turnout

Crossing

Crossover

Double crossover

Gauntlet turnout

Spring switch

Operating switch in overhead

Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Wire and demonstrate the electrical operation of at least three of the following track items:

Electrical turnout position

Track occupancy

Cab control

Engine terminal

Two turnout junctions

High-frequency lighting

Electronic throttle

Grade crossing

Two-way block signaling

Operating overhead wire

Computer control

Animated displays

Layout lighting displays

Command Control Receiver

Command Control Throttle Buss

Sound in Locomotive

Sound system

Signaling system

CTC system

Onboard video system

Computerized block detection

Computerized operation

Computer to railroad interface

Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Wire and demonstrate the satisfactory electrical operation of at least three of the following features:

1. Prepare a schematic drawing of the propulsion circuitry of the model railroad in Section 1 showing the gaps, blocks, feeders, speed and direction control, electrical switches and power supplies.



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1. Prepare schematic drawings identifying the wiring and components of the six items in Requirements 2 & 3.
2. Submit a completed Statement of Qualifications (SOQ) which shall include the following:

Attachment showing the track plan required in Requirement 1.

Description of the track work features, method of construction and identification of commercial components used in 2 & 3.

The signed witness certification form showing that each of the above items are operational and meet all applicable NMRA Standards.

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| --- | --- | --- |
| EVALUATOR'S NAME | SIGNATURE | NMRA # |
|  |  |  |
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**Member Statement and Agreement:**

I certify that I have completed all of the requirements for this Certificate of Achievement as listed above and that I will agree to assist other members in this subject whenever possible, whether or not they are participants in the Achievement Program. 🞎 Check here if this is the member’s first award.

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Division Achievement Program Chair Review (optional):** Reviewed for compliance and completeness.

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Certification of Region Achievement Program Chair**

As the NMRA Region Achievement Program Chair of the \_\_\_\_\_\_\_\_\_\_\_, I certify that I have examined this SOQ and, having compared it to the stated requirements for this certificate, I am satisfied that the stated requirements have been met.

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Region Certificate #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Approval by AP National Executive Assistant Manager**

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_