

# NMRA ACHIEVEMENT PROGRAM

BILL BROWN, MMR  
AP CHAIRMAN – NORTHEASTERN REGION

YOUR “TRAVEL GUIDE” FOR YOUR  
JOURNEY IN MODEL RAILROADING

# The Achievement Program Provides:

- A System of Requirements For Demonstrating a Superior Level of Modeling Skill
- Incentive To Learn and Master Skills
- Issuance of a Certificate Acknowledging Your Achievement



# Golden Spike Award

The Golden Spike Award will be awarded to any NMRA member who has completed the qualifications Checklist, obtained the necessary signatures, and who does not hold Master Model Railroader status.

**\*\*There is no judging in this category\*\***

It will be administered by the regional and divisional AP chairs.  
AP regulations and definitions apply for scratchbuilding and detailing.

The Divisional Chair will submit the signed form to the regional AP Chair who will issue the Golden Spike Award certificate.



# QUALIFICATION CHECKLIST

## - Rolling Stock

Display six units of rolling stock either scratchbuilt, craftsman kits or detailed commercial kits.

### SCRATCHBUILT (definition)

To be considered scratchbuilt, a model must have been constructed by the applicant without the use of any commercial parts except:

- Motors, gears
- drivers, wheels, trucks and couplers
- valve gear, light bulbs, bells, marker and class lights
- basic shapes (stripwood, styrene, embossed sheets, scribed siding and other raw materials)



# QUALIFICATION CHECKLIST CONT.

## Rolling Stock cont.

### SUPER DETAILED (definition)

- Considerable more detail than is usually expected
- Quality more important than quantity
- Craftsman kits
- Cross-kit or kitbashed
- Extensively altered to be closer to prototype

# QUALIFICATION CHECKLIST cont.

## **-Model Railroad Setting**

- The member must construct eight square feet of layout including scenery. ( 2' x 4', 1' x 8', 16" hollow core door, etc)
- Construct five structures either scratchbuilt, craftsman kits or detailed commercial kits. If a module contains less than five structures, additional separate structures may be presented.
-

# QUALIFICATION CHECKLIST CONT.

## **-Engineering (Civil & Electrical )**

-Three types of trackage required( turnout, crossing, crossover, etc).  
All must be properly ballasted and installed on proper roadbed.  
Commercial trackage may be used.

-All installed trackage must be properly wired so that two trains can be operated simultaneously(e.g. double track mainline, single track with sidings, and block or command control).

-Provide one additional electrical feature such as power operated turnouts, signaling, turnout indication, lighted building, etc





# THE GOLDEN SPIKE AWARD

Is it time for you to take the challenge?

Many of you have probably completed some of the requirements already!

Minimal paperwork needed compared to Master Model Railroader requirements.

GOOD LUCK, ASK FOR HELP, AND ENJOY THE JOURNEY!

QUESTIONS?



# Master Model Railroader

## Model Railroad Equipment



[Master Builder - Motive Power](#)



[Master Builder - Cars](#)

## Settings



[Master Builder - Structures](#)



[Master Builder - Scenery](#)



[Master Builder - Prototype Models](#)

## Engineering and Operation



[Model Railroad Engineer - Civil](#)



[Model Railroad Engineer - Electrical](#)



[Chief Dispatcher](#)

## Service to the Hobby



[Association Official](#)



[Association Volunteer](#)



[Model Railroad Author](#)

7 Certificates Spanning Each of the 4 Areas

Len Amrhein - 2 Certificates Plus Golden Spike  
Roger Beiswenger – Golden Spike  
Paul Bertran – 1 Certificate  
Steve Brown - 4 Certificates Plus Golden Spike  
Bill Brown – Master Model Railroader – 10 Certificates Plus Golden Spike  
Martin Collard – 1 Certificate Plus Golden Spike  
Brian Curry – Master Model Railroader - 7 Certificates Plus Golden Spike  
Bill Fredlund – 1 Certificate  
Gary Frost – Golden Spike  
Jim Heidt – 4 Certificates Plus Golden Spike  
Drew James – 3 Certificates Plus Golden Spike  
Dick Lautenslager – 5 Certificates Plus Golden Spike  
Dave Martini – 4 Certificates  
Dick Martini – 1 Certificate  
Bryan McGraw – Golden Spike  
Bernie Messenger – 3 Certificates Plus Golden Spike  
Rick Mniece – Golden Spike  
Ed Olszewski – 2 Certificates  
Ed O'Rourke – 4 Certificates Plus Golden Spike  
Jeff Paston – 3 Certificates Plus Golden Spike  
Andy Rezsnyak – Golden Spike  
Mike Shanahan – 1 Certificate Plus Golden Spike  
Harry Smith – 2 Certificates Plus Golden Spike  
Tom Staton – 1 Certificate Plus Golden Spike  
Ed Street – Golden Spike  
Scooter Youst – 1 Certificate



# HOW DO I EARN A CERTIFICATE?

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- Must Be an NMRA Member
- Complete All Requirements of That Category
- Submit a Statement of Qualification Form (SOQ) With All Supporting Data to Your Division AP Chairman  
(Paper Copies or Email)

# CENTRAL NEW YORK DIVISION ACHIEVEMENT PROGRAM CHAIRMAN:

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David Martini

6943 Shannon Way

Liverpool, NY 13088

315-457-7437

[kmartin1@twcny.rr.com](mailto:kmartin1@twcny.rr.com)



# CHAIN OF SUBMISSION

(2 TO 3 MONTHS OR LONGER)

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- Division AP Chair – Dave Martini
- Bill Brown – Region AP Chair (2 Week Turnaround)
- Frank Koch – NMRA National Asst. Manager -“Batches” Submittals – End of Month
- Paul Richardson – NMRA National AP General Manager – End of Month
- Back To Bill Brown – 2 week turnaround
- Back to Dave Martini– Presented at Division Meet
- Acknowledged at Annual NER Convention Banquet

Category:

**Master Builder –  
Motive Power**

# Master Builder: Motive Power

1. Build 3 scale models of railroad motive power (locomotive or self-propelled vehicle), one must be scratchbuilt.
  - All must be capable of self propulsion on track.
  - All must be “super detailed”.
2. Earn a Merit Award of at least 87.5 points on all 3 models either in an NMRA sponsored contest or AP Merit Award judging.  
(lots more on this later)





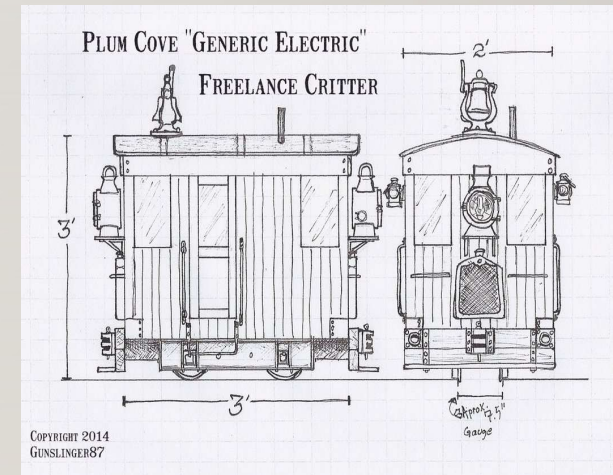
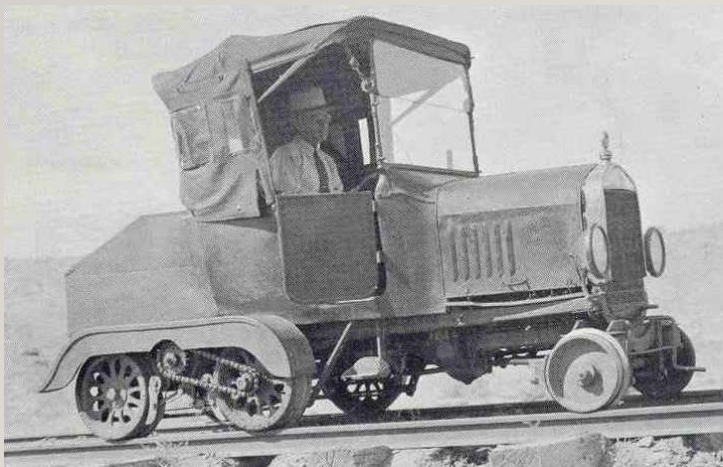
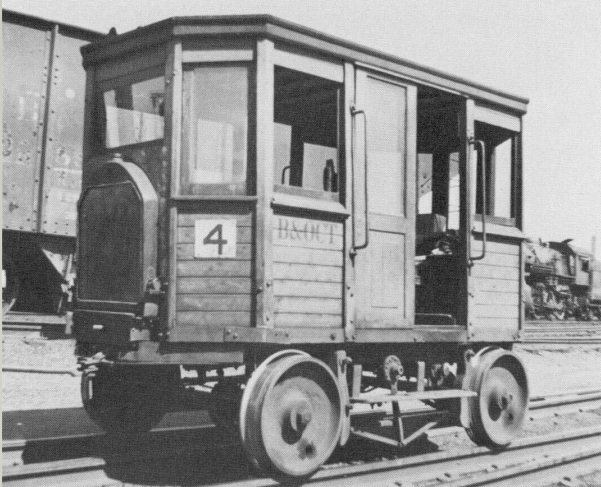
# What qualifies as motive power?



How the heck do I scratchbuild that???



# Think Outside of The Box!



If it moves on rails it is considered "Motive Power"







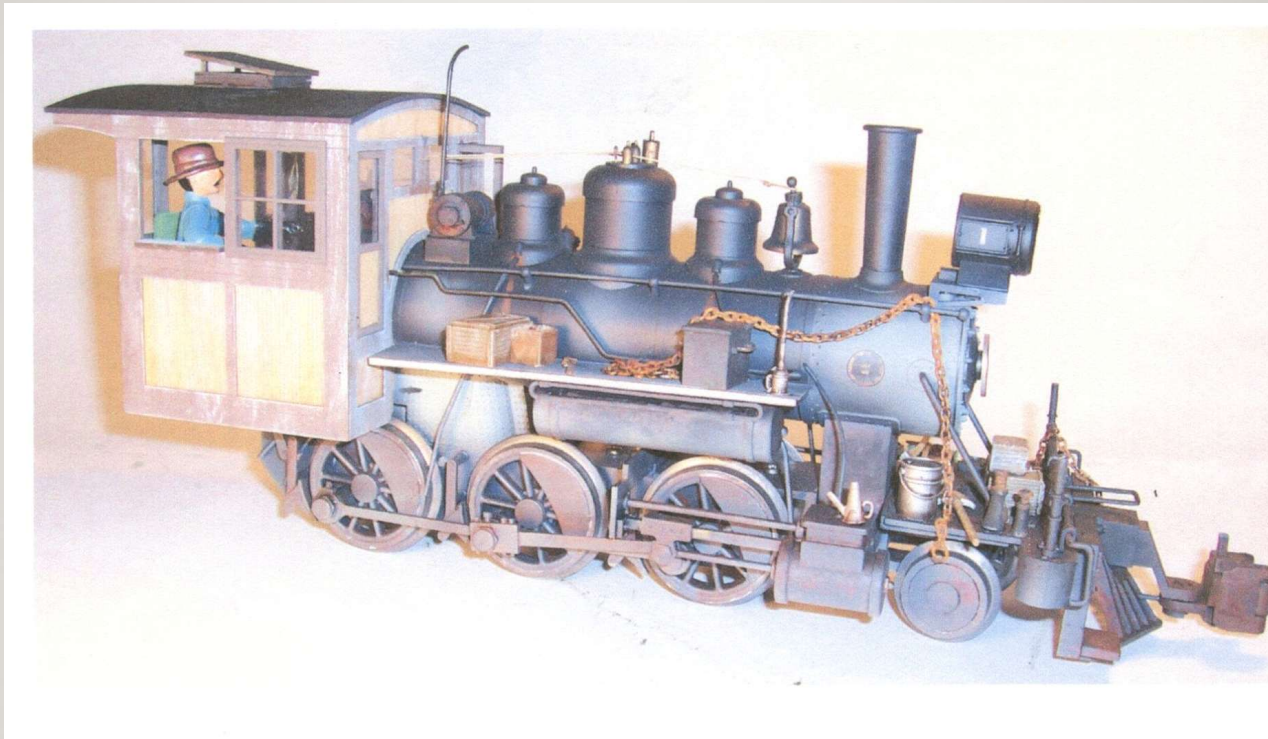






## **HO Scale 0-8-0**

- From Proto 2000 Commercial Loco
- Painted, Weathered, Added Coal, Added Scratchbuilt "Dog House", Water Overflow Added With Crystal Cote", Stretch EZ Line Bell and Whistle Cord, Added Cab Floor Extension From Grated Metal, Engineer, Installed Sound Decoder.



### **I20.3 F Scale 2-6-0 Mogul**

- From a Bachmann Commercial Loco
  - Painted, Weathered, Added Scratchbuilt Replacement Cab, Windows Fabricated From Acetate, Fabricated Engineer's Chair, Coal Crushed and Added To Cab Floor, Thread Used For Bell and Whistle Rope, Super Detailed With Chain, Tool Boxes, Crates, Tools, Etc., Added Engineer.

Category:

**Master Builder - Cars**



# Master Builder - Cars

1. Build 8 operable railroad cars.

- At least 4 different types. One must be a passenger car.
- 4 must be scratchbuilt. The others must be super-detailed.

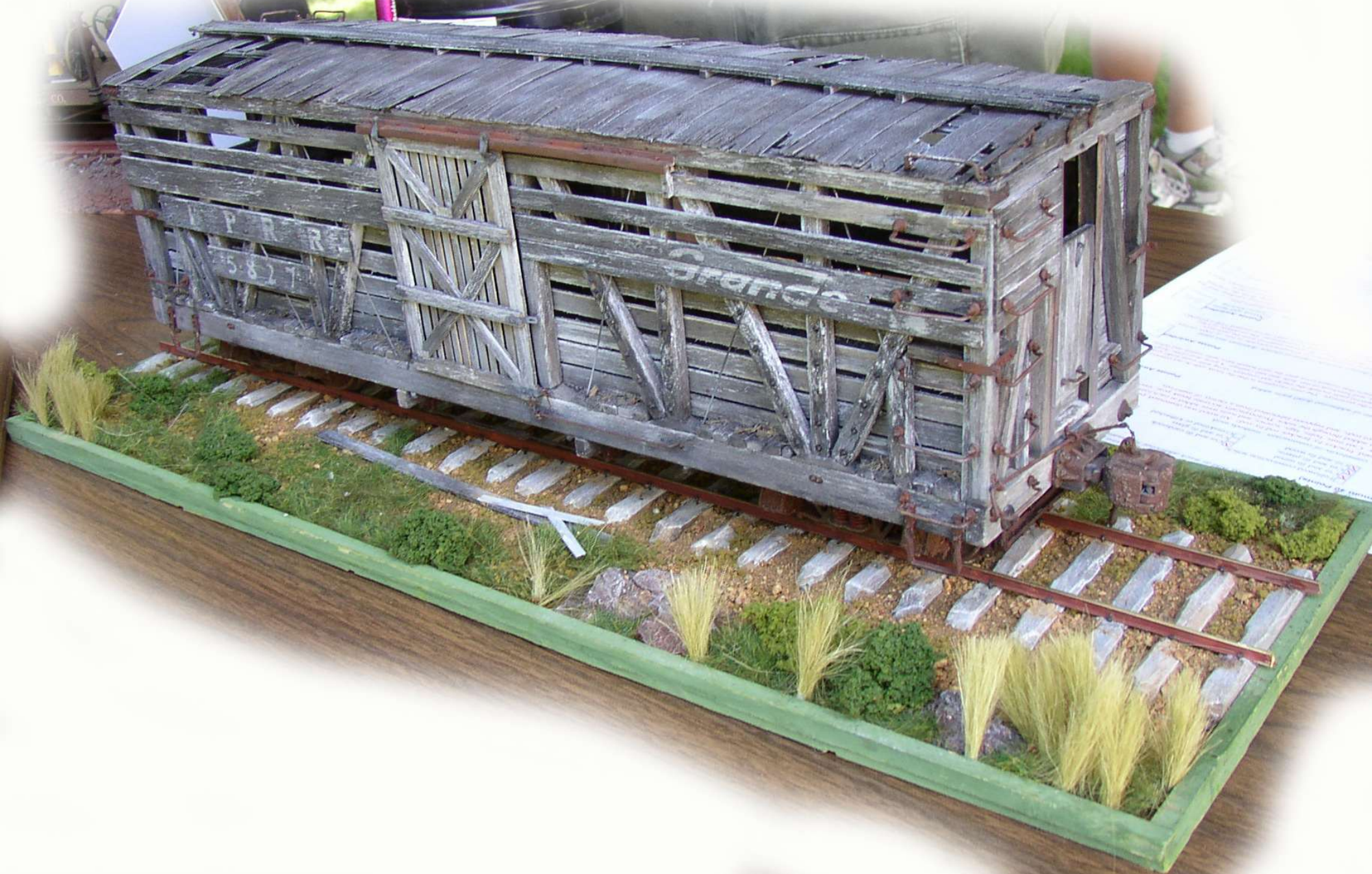
2. Earn a Merit Award (87.5 points) with 4 of the models via an NMRA sponsored contest or AP Merit Award judging.







# Rio Grande Stock Car Model







- First Presented to Division Judges for Input
- Division Meet - 98 Points
- NER Convention - 114 Points
  - Baldwin Trophy – Best of Show
- Detroit 2007 National - 123 Points
  - Gold Award – Best of Show

- Go into this with an open mind
- Use constructive criticism to help improve your skills
- **DON'T BE DEFENSIVE!**









Category:

**Master Builder - Structures**



# Master Builder - Structures

1. Build 12 scale structures (buildings, bridges, factories, signal towers, oil derrick dock, power line tower, crane, ship, etc.
  - 6 different types
  - 1 must be a bridge or trestle
  - 6 must be scratchbuilt
  - Others must be super-detailed
2. Earn a Merit Award (87.5 points) with 6 of the models via an NMRA sponsored contest or AP Merit Award judging.



Category:

**Master Builder - Scenery**

# Master Builder - Scenery

1. Construct a completed section of a model railroad  
(entire layout need not be finished...only the judged scene)
2. Earn a Merit Award (87.5 points) with the above scene.
3. Prepare a written description of materials and methods with photographs of the area.





# Scenery – What The Judges Will Look At:

**Terrain:** The ground and all natural features such as rocks, water, trees, hills and depressions, as well as manmade features such as railroad roadbed, cuts, fills, drainage ditches, embankments, streets and roads, etc.

**Structures:** prototypical suitability, placement, and appearance as scenic effects - NOT as to construction (which is covered under Master Builder - Structures).

**Background:** Treatment of the wall, backdrop, and/or ceiling to realistically depict depth, distance, horizon, and sky.

**Lighting:** three aspects:

- railroad cars, signals, etc.
- buildings, streets, and roads, etc.
- overall lighting effects - day and/or night.

**Realism**



Category:

# Master Builder – Prototype Models



# Master Builder – Prototype Models

1. Construct a model of a prototype scene containing at least 6 models of prototype equipment and structures. Four different types must be represented (rolling stock, railroad structure, caboose or passenger car, and motive power).
2. Earn a Merit Award with the above scene.
3. Prepare a written description with photographs and documented evidence of the intended prototype scene.
4. Provide color photographs and a written description of the materials and methods used.



# Prototype Models - Judging Criteria

**Terrain:** The ground and all natural features such as rocks, water, trees, hills and depressions, as well as manmade features such as railroad roadbed, cuts, fills, drainage ditches, embankments, streets and roads, etc. Look at the photograph(s) that you are working from, and notice the details there, then work to recreate them.

**Structures:** prototypical suitability, placement, and appearance as scenic effects - NOT as to construction (which is covered under Master Builder - Structures). Also remember that structures should be *in* the ground, not sitting on top of it. Again, notice the little things about the structure that you are trying to model, such as the number of chimneys and other roof details.

**Background:** Treatment of the wall, backdrop, and/or ceiling to realistically depict depth, distance, horizon, and sky.

**Lighting:** three aspects:

- railroad cars, signals, etc.
- buildings, streets, and roads, etc.
- overall lighting effects - day and/or night.

**Realism**



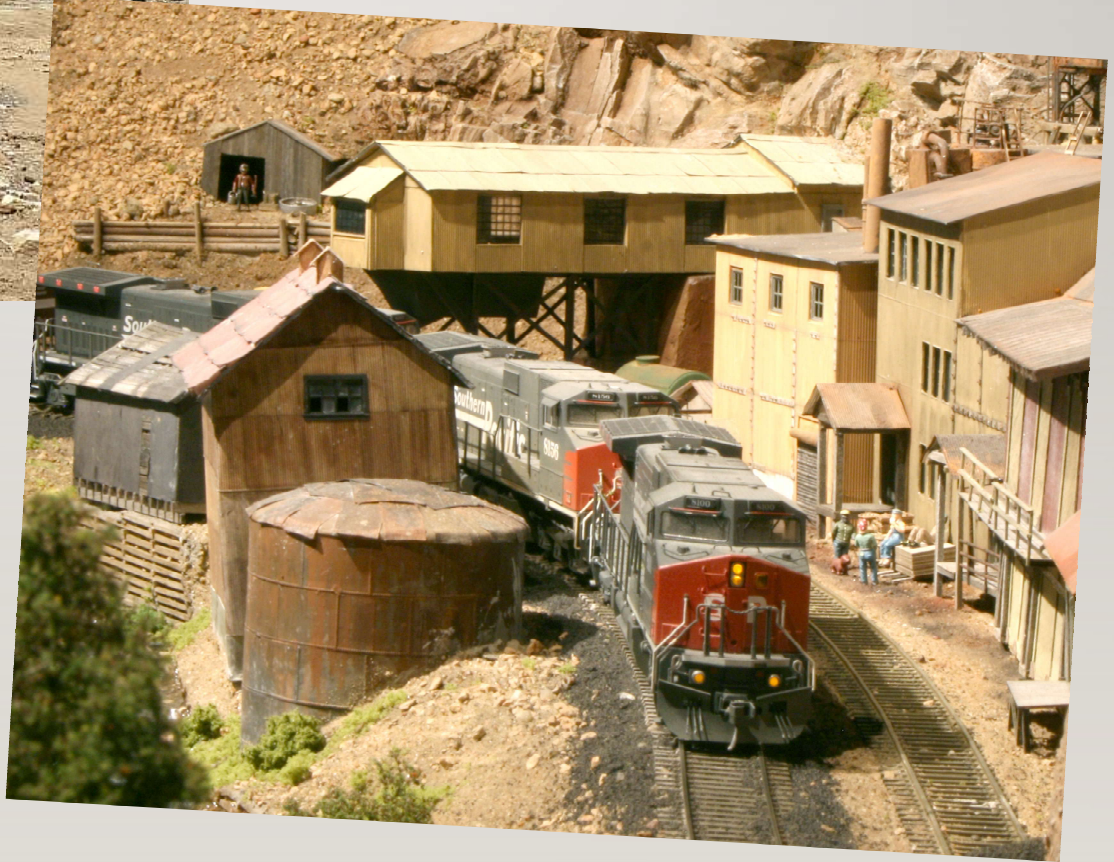
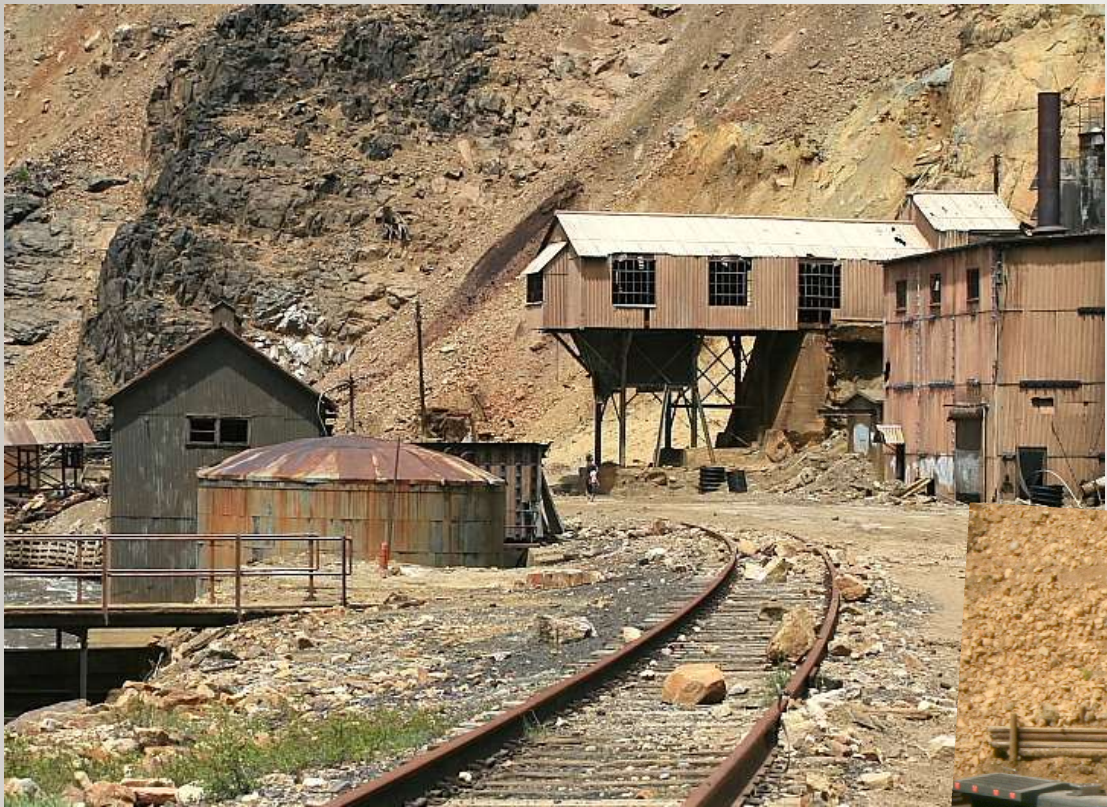














Category:

# Model Railroad Engineer – Civil



# Model Railroad Engineer - Civil

1. Prepare an original scale drawing of a model railroad track plan (several requirements).

\*\*\*Remember, you don't have to actually build this, just show it on the plan.

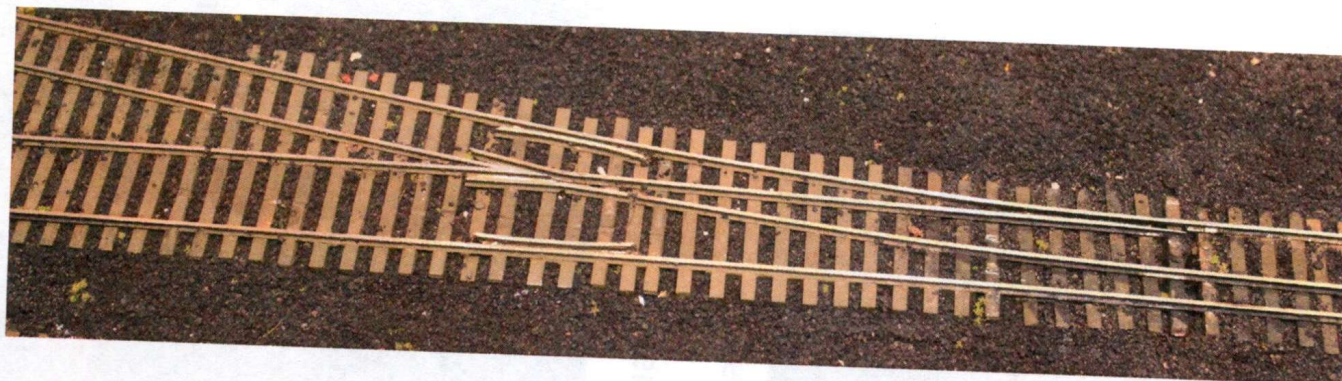
2. Construct and demonstrate, the satisfactory operation of a completed section of the model railroad (several requirements).

3. Construct for Merit Judging, scratch built scale models of any three types of track.

4. Earn a Merit Award (at least 87.5 points) with the items in section 3 above.

Notice that you only have to win a Merit Award with the items in section 3 - the trackwork items in section 2 don't have to be judged at all, except to demonstrate that they work.



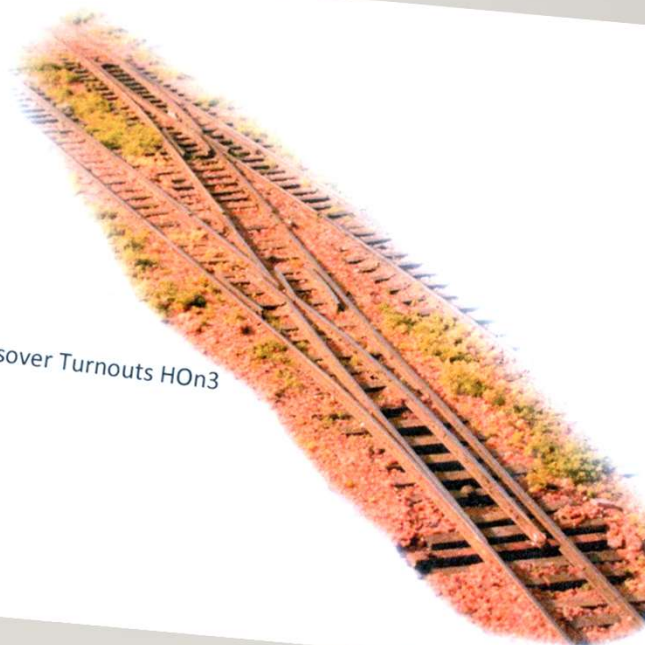


Gauge Separation Turnout  
HO to HOOn3



Right Turnout HOOn3

Crossover Turnouts HOOn3







Category:

# Model Railroad Engineer – Electrical



# Model Railroad Engineer - Electrical

1. Construct and demonstrate on own or club layout, the satisfactory operation of an electrical control system on a model railroad (several requirements).

2. Prepare a schematic drawing of the above ( with gaps, blocks, feeders etc. etc.)

3. Wire and demonstrate the electrical operation of 3 electrical items in each of two categories (total of 6).

Category 1 examples: Turnout, Crossover, Crossing, etc. etc.

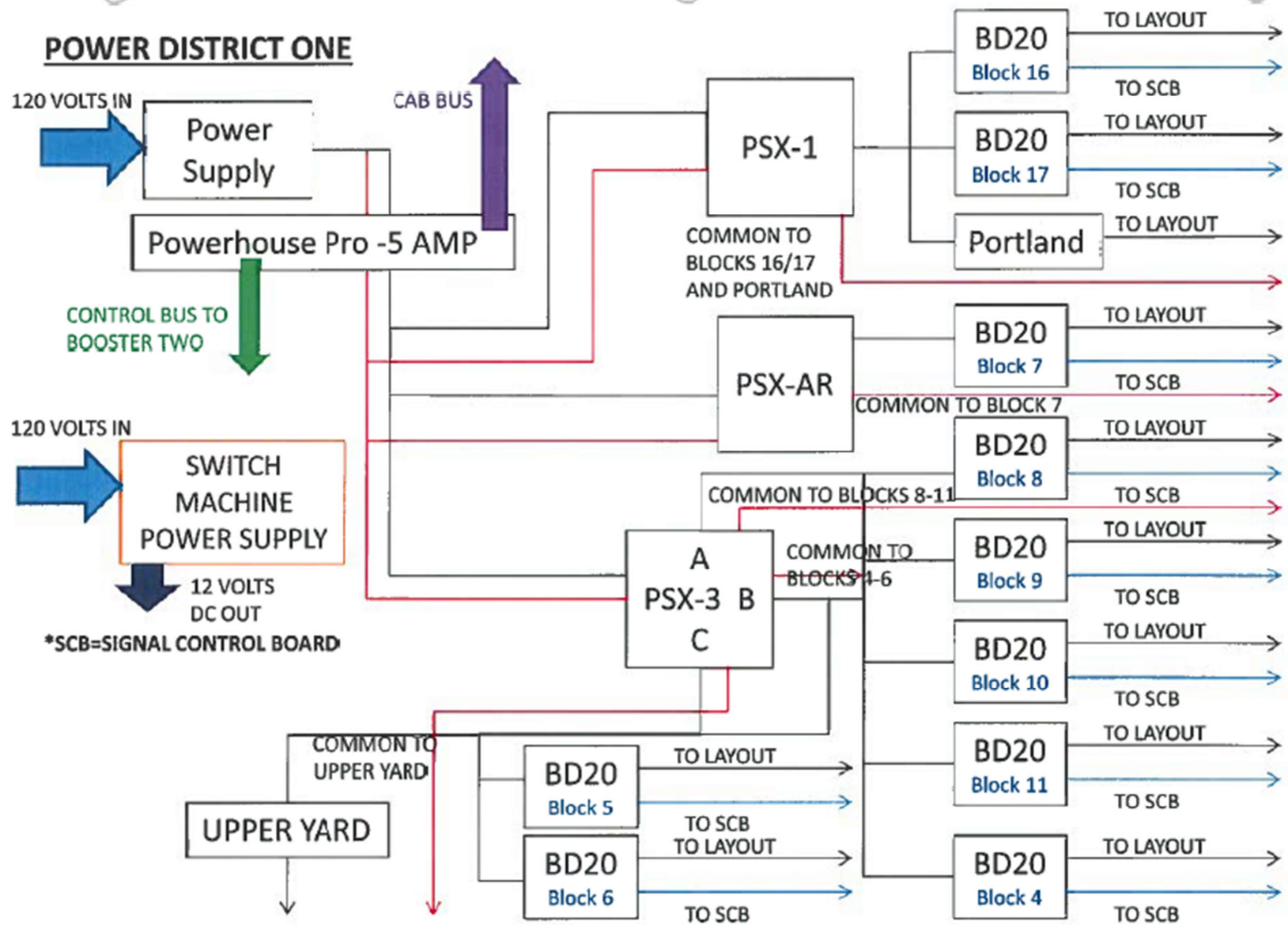
Category 2 examples: Cab Control, Engine Terminal, Grade Crossing, etc. etc.

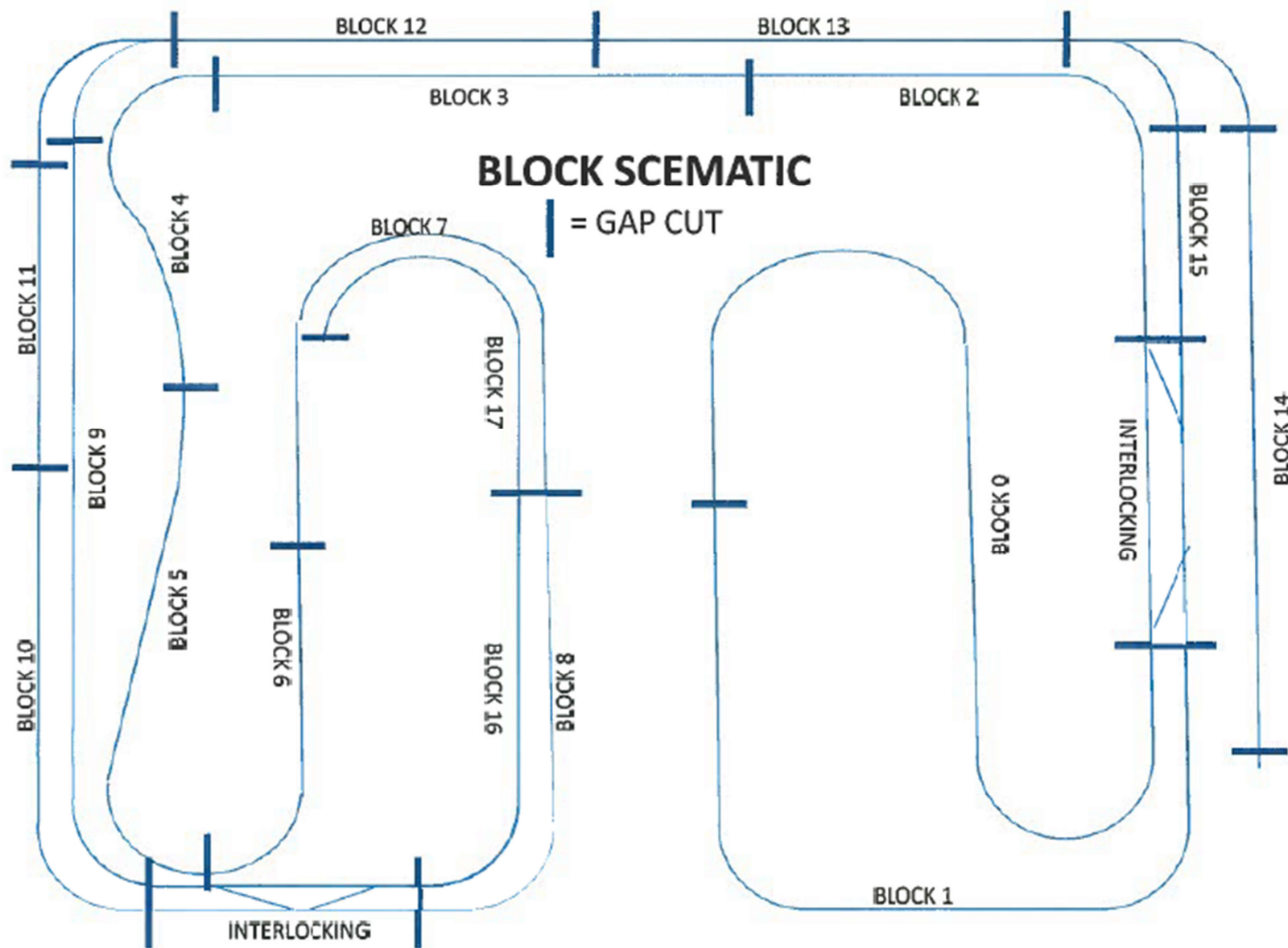
4. Prepare schematic drawings of the wiring of each of the 6 items in #3 above.

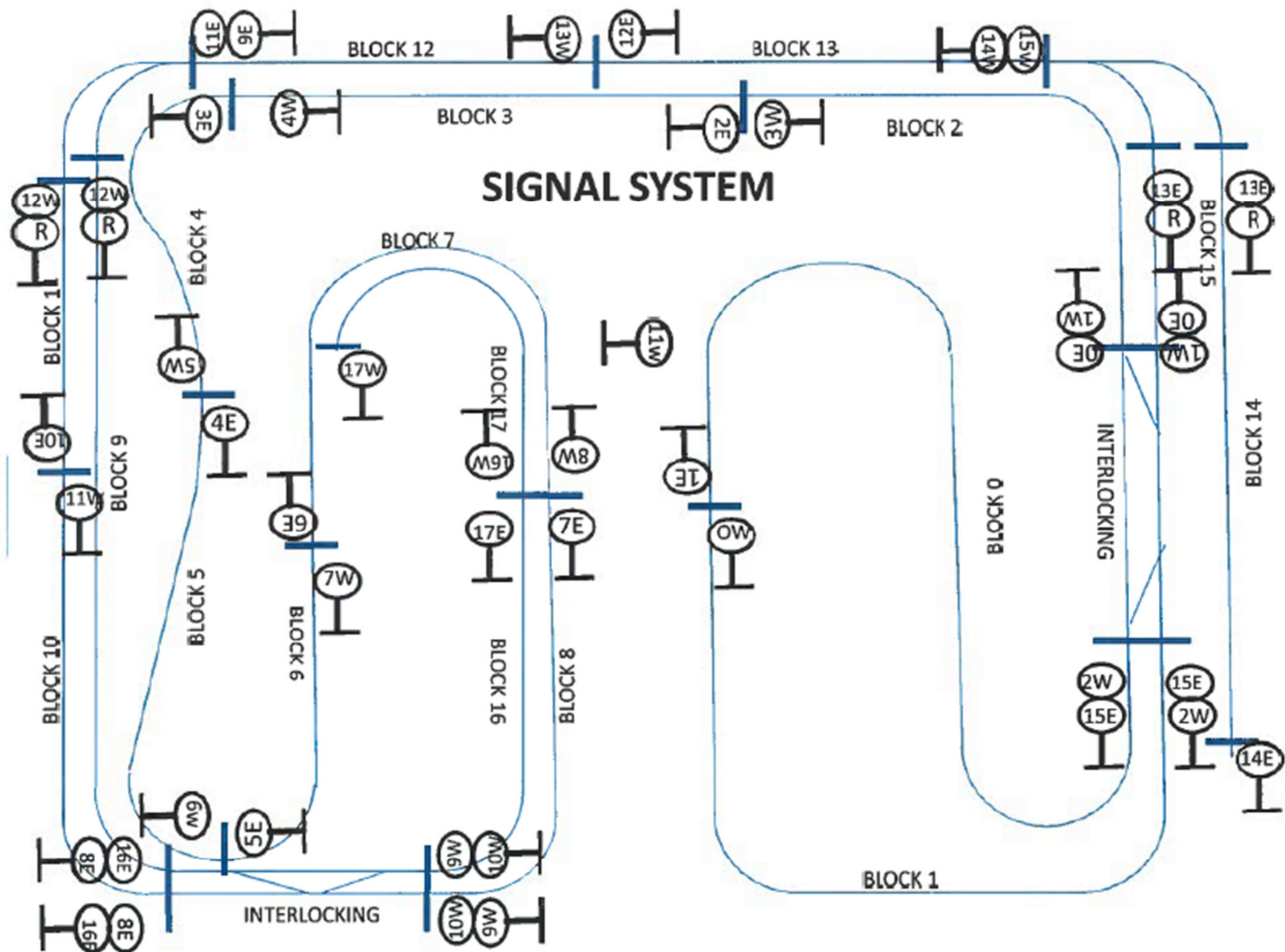




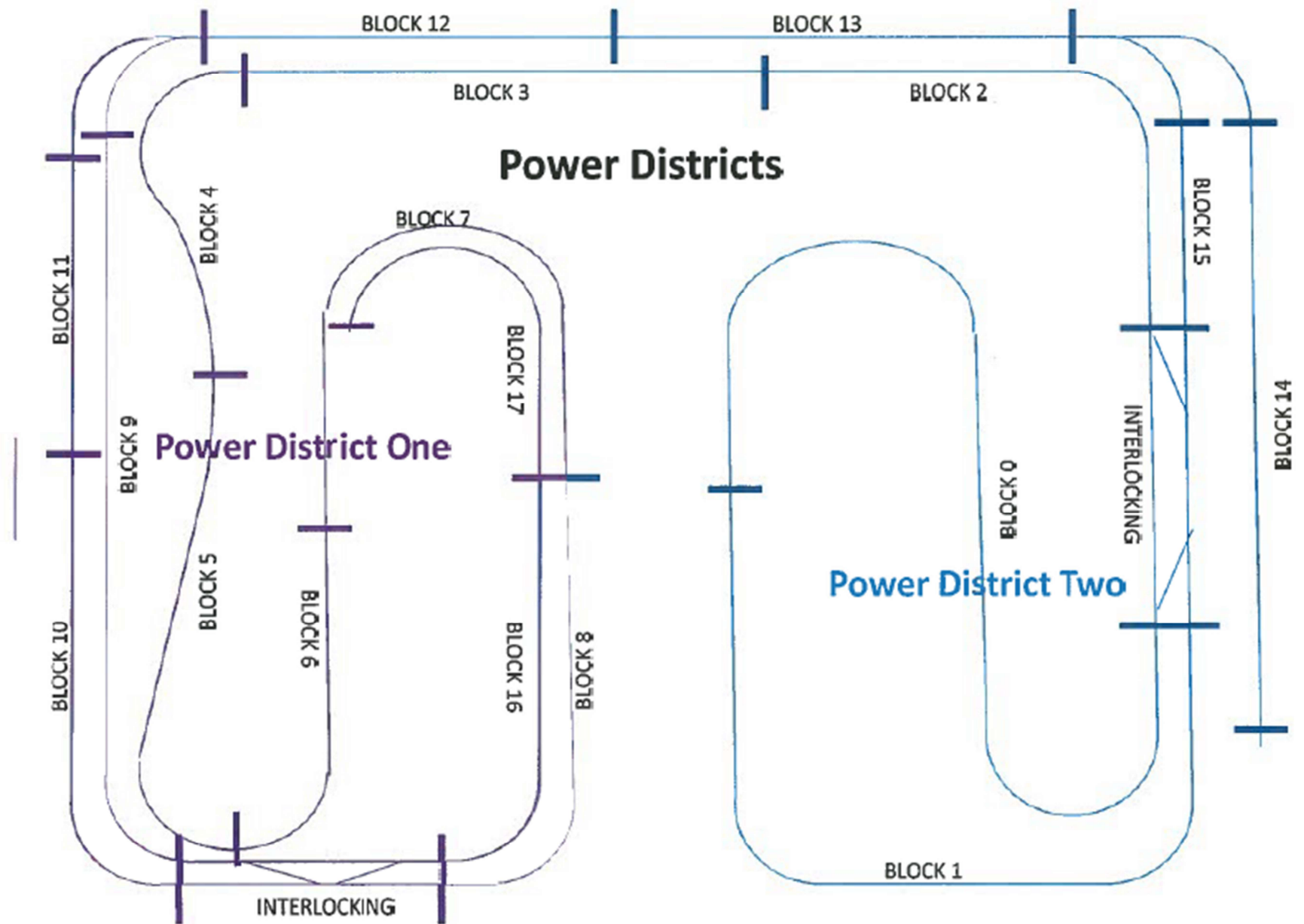
## POWER DISTRICT ONE



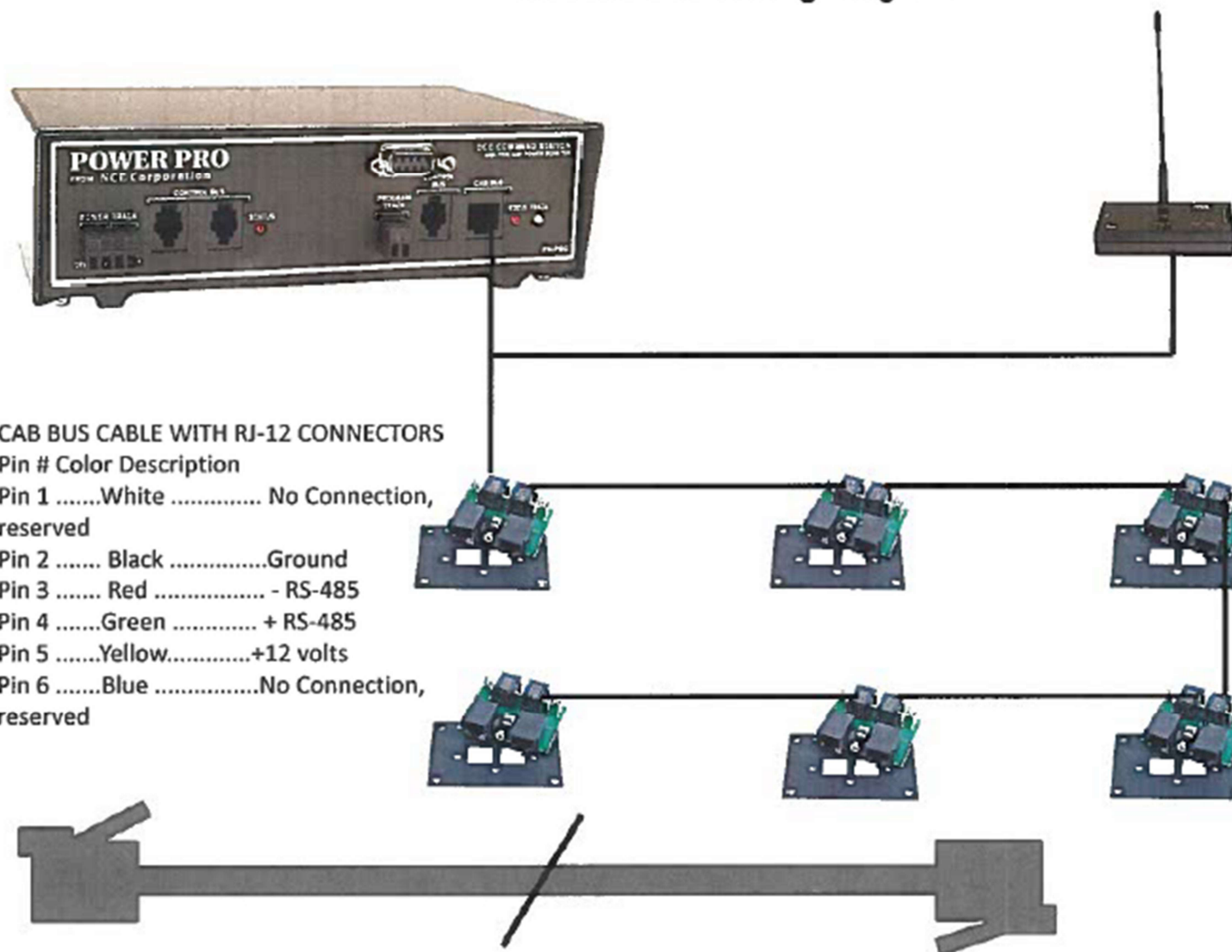




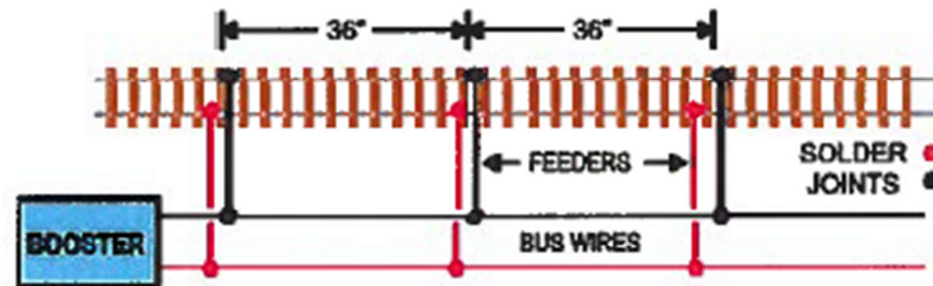




## Throttle Bus Wiring Diagram

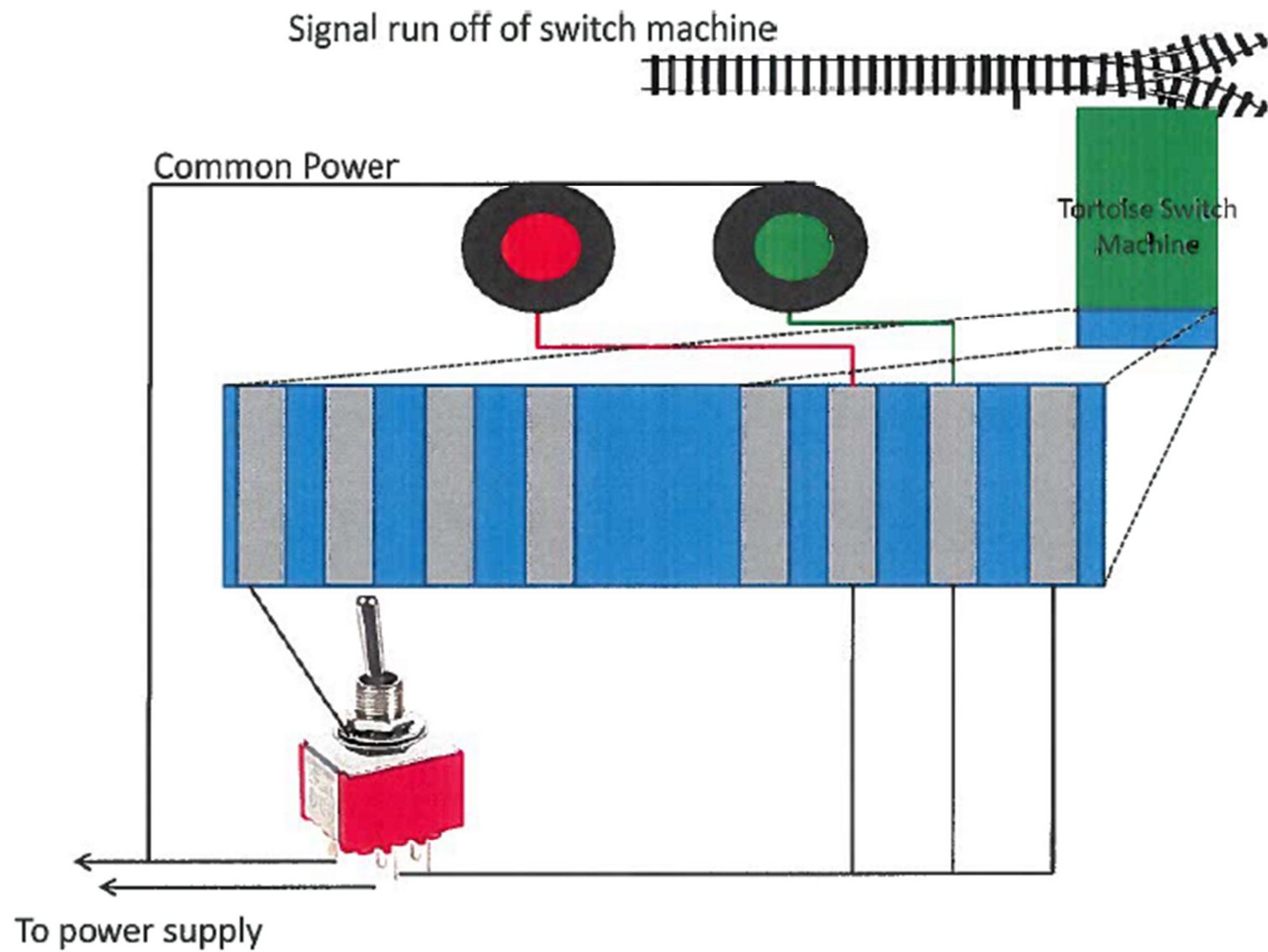


## Track Feeders

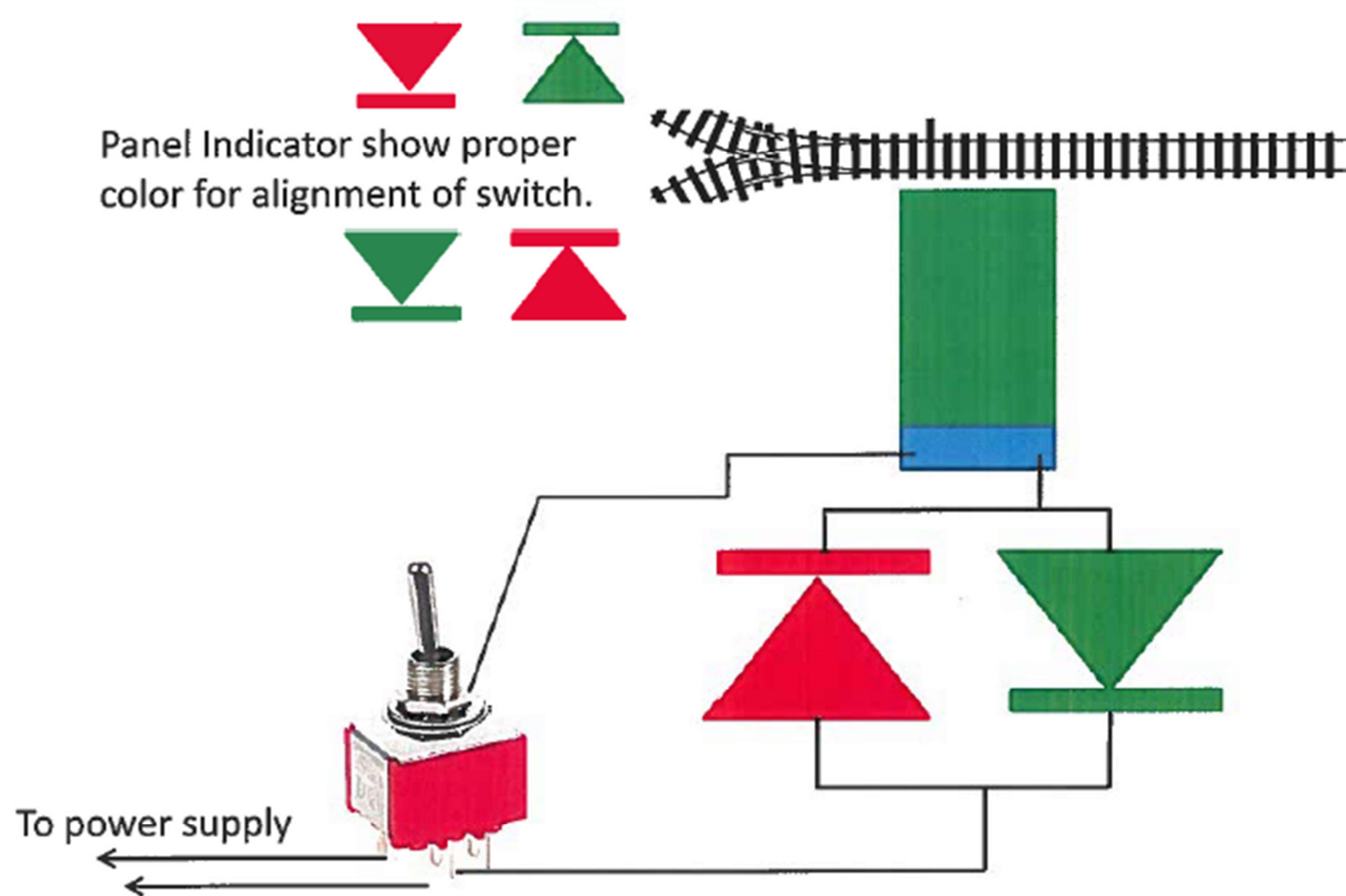


Track feeders are placed on each rail on very section of rail so that the signal does not have to be carried thru the rail joiners. The red common rail is common for the entire circuit breaker section. The black rail is common to each block for signaling purposes that go back thru a NCE BD-20 to detect current draw of a train being present.



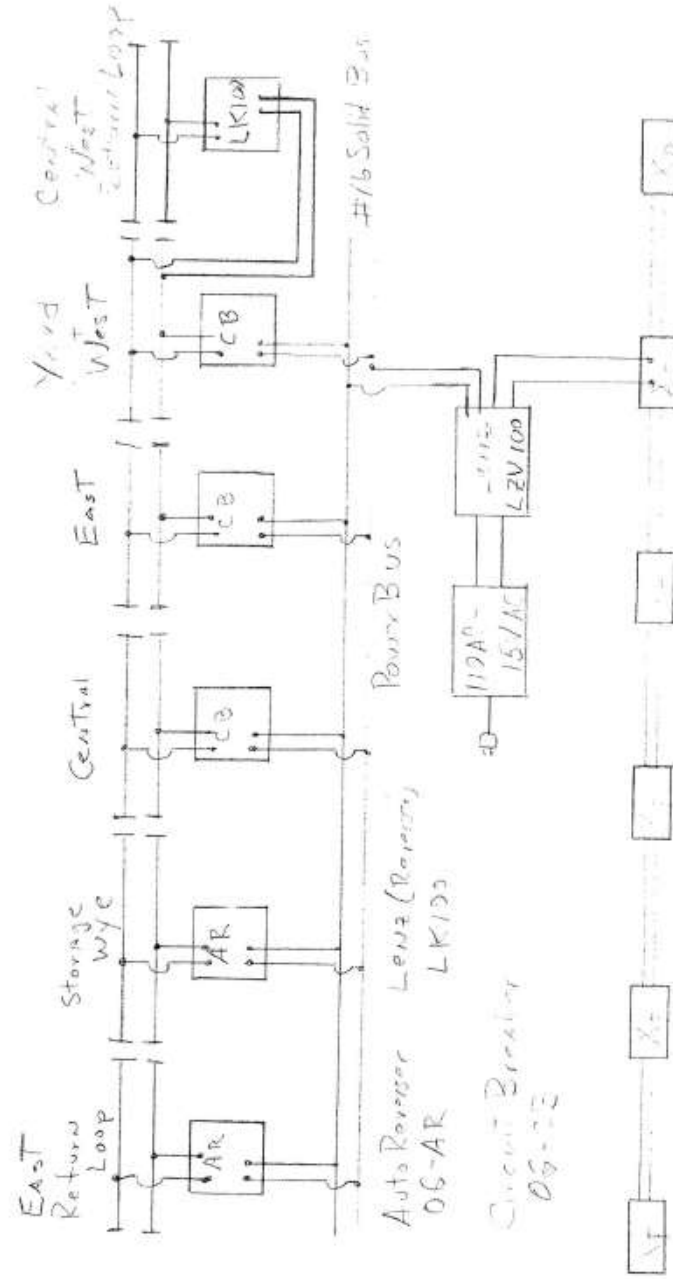


## Electrical Turnout Position indicator on a Control Panel

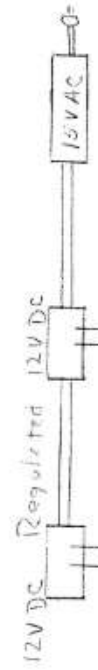


# 4

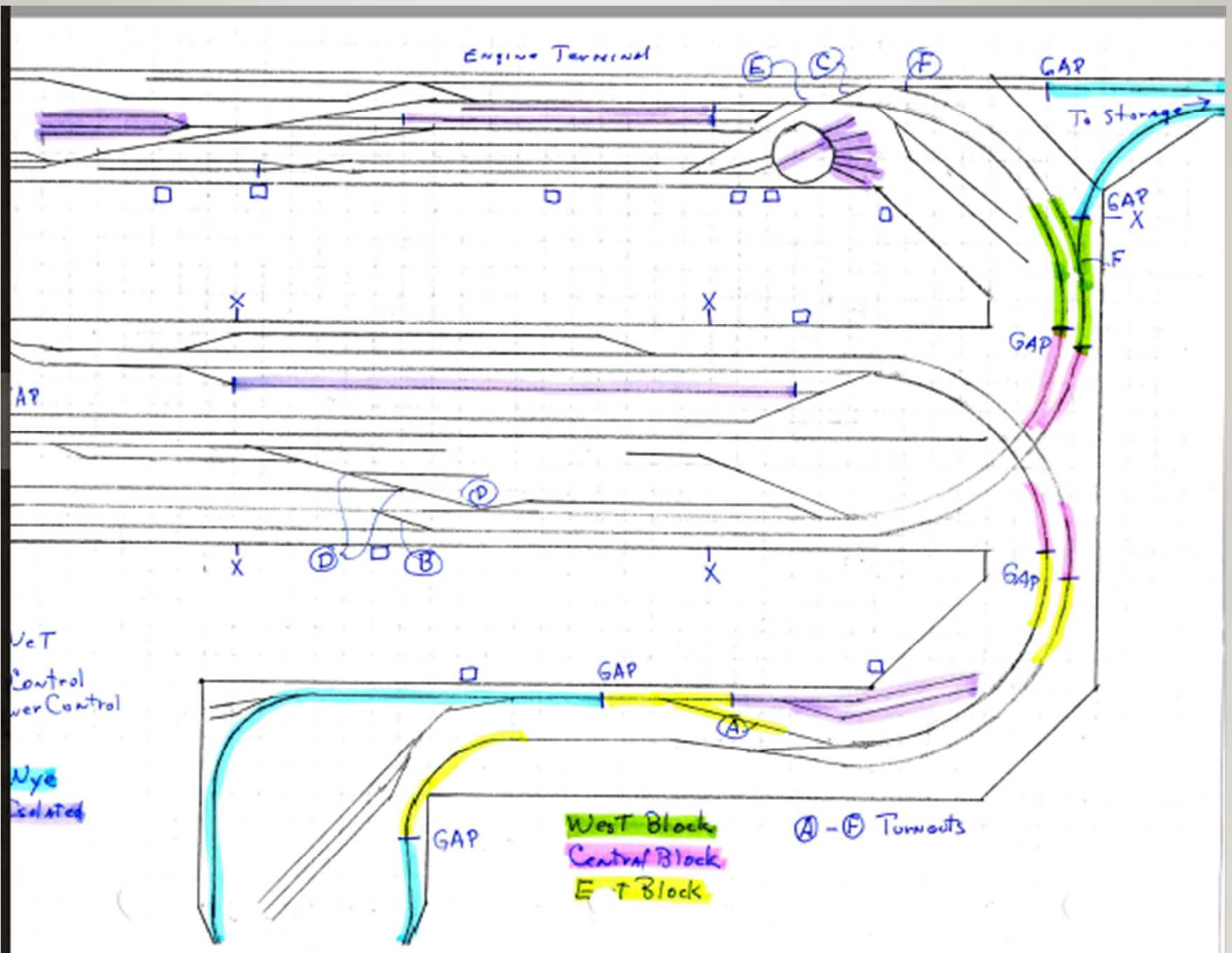
Power Distribution  
Throttle Bus  
Express Net  
DCC Bus



DCC Bus Express Net







Category:

**Chief Dispatcher**



# Chief Dispatcher

A. Have participated in the operation of a model railroad, either home or club, for not less than **fifty hours**. A minimum of ten hours each must have been served in three of the five categories listed below, one of which must be Dispatcher:

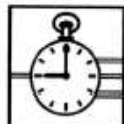
- Engineer (mainline freight, passenger, or wayfreight)
- Yardmaster (or station master)
- Hostler (or power desk)
- Towerman (or traffic manager, or road master)
- Dispatcher

B. Documentation - The applicant shall also do the following:

- Prepare a schematic drawing of a model railroad layout meeting the operating conditions described in (A)
- Develop a timetable appropriate to this model railroad
- Develop an operating train chart (graph) which interprets the above schedule
- Develop or adapt a system of operation for the layout in (A), including all the necessary forms



# Chief Dispatcher



## ACHIEVEMENT PROGRAM CHIEF DISPATCHER CERTIFICATE OF OPERATION FORM May 2006

PLEASE ATTACH THIS FORM TO A COMPLETED STATEMENT OF QUALIFICATIONS (SOQ) FORM.

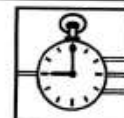
Member's Name: HOWARD DWYER NMRA #: 080665  
Date Submitted: 10-17-15 Region: NER

Record of Activities		Identify Job description by inserting A, B, C, D or E (see previous form) in the Job column.		
Railroad Name	Job	Date	Hours	Verified By
BOSTON & MAINE'S WHITE MOUNTAIN RR	A2/A3	10-19-13	3	D. S. J.
ISLAND CENTRAL RR	E. Dispt	11-6-13	2	Michael J. Ryan
JEROME CENTRAL	B.1 YD MS	11-14-13	2	Michael J. Ryan
GREAT NORTHERN	A.1 Loc. Freq	12-5-13	2	John J. J.
STONE CANYON RR	A.1 Loc. Freq	12-9-13	2	John J. J.
ISLAND CENTRAL RR	E. Dispt	1-13-14	2	Michael J. Ryan
JEROME CENTRAL RR	B.1 YD MS	2-27-14	2	Michael J. Ryan
SEWARD CANYON RR	B.1 YD MS	3-13-14	2	Michael J. Ryan
ISLAND CENTRAL RR	E. Dispt	3-20-14	2	Michael J. Ryan
GREAT NORTHERN	A.1 Loc. Freq	2-20-14	2	Michael J. Ryan
STONE CANYON RR	A.3 Loc. Freq	3-27-14	2	Michael J. Ryan
ISLAND CENTRAL RR	E. Dispt	4-24-14	3	Michael J. Ryan
	E.	5-15-14	3	Michael J. Ryan
	E.	6-12-14	3	Michael J. Ryan
	A.1	7-10-14	3	Michael J. Ryan
	A.1	8-7-14	3	Michael J. Ryan
	A.2	9-4-14	3	Michael J. Ryan
	A.3	10-2-14	3	Michael J. Ryan
	B.1	10-3-14	3	Michael J. Ryan
	B.1	11-24-14	3	Michael J. Ryan
	B.1	12-22-14	3	Michael J. Ryan
	D.1	1-15-15	3	Michael J. Ryan
	D.1	2-12-15	3	Michael J. Ryan
	D.3	3-12-15	2	Michael J. Ryan
	D.3	4-16-15	2	Michael J. Ryan
	D.1	5-14-15	3	Michael J. Ryan
	D.1	6-25-15	3	Michael J. Ryan
	A.2	7-16-15	3	Michael J. Ryan
	D.1	8-13-15	3	Michael J. Ryan
	D.1	9-17-15	3	Michael J. Ryan
TOTAL			97	

REGIONAL AP CHAIR: [Signature]

REGION: NER

DATE: 11-25-15



## ACHIEVEMENT PROGRAM CHIEF DISPATCHER CERTIFICATE OF OPERATION FORM May 2006

PLEASE ATTACH THIS FORM TO A COMPLETED STATEMENT OF QUALIFICATIONS (SOQ) FORM.

Member's Name: HOWARD DWYER NMRA #: 080665  
Date Submitted: 10-17-15 Region: NER

The undersigned judges certify that the Dispatcher options shown below have been earned on one or more model railroads for a minimum of 50 actual operating hours by the above named NMRA member and have been personally observed by two or more judges appointed by the Region AP Chair.

### JOBS WITNESSED

TITLE	JOB	HOURS SERVED	DATES (FROM-TO)
A. ENGINEER	A.1 Mainline Freight	11	10-13-13 To 9-16-15
	A.2 Mainline Passenger	9	10-13-13 To 9-16-15
	A.3 Wayfreight	9	10-13-13 To 9-16-15
B. MASTER	B.1 Yard Master	18	11-14-13 To 9-17-15
	B.2 Station Master	0	
C. HOSTLER	C.1 Hostler	—	
	C.2 Power Desk	—	
D. TOWERMAN	D.1 Towerman	12	1-15-15 To 8-13-15
	D.2 Traffic Manager		
	D.3 Road Master	6	1-15-15 To 8-13-15
E. DISPATCHER (Mandatory)	E. Dispatcher	18	11-6-13 To 6-25-15

JUDGE'S NAME	SIGNATURE	NMRA #
JOHN FERACA	[Signature]	130228
Michael J. RYAN	[Signature]	150475
JOHN JAKLITSCH	[Signature]	096077

REGIONAL AP CHAIR: [Signature]

REGION: NER

DATE: 11-25-15



Category:

**Association Official**

# Association Official

Have served in an office of President (Superintendent), Vice-President, Secretary, Treasurer, or Director at the National or Regional level.

Sometimes there is a question about whether a particular office qualifies for "Association Official " or "Association Volunteer". In general, the test is: if holding an office makes you a voting member of the Region (or National) Board of Directors, then it counts toward "Official"; otherwise, it counts toward "Volunteer".





Category:

**Association Volunteer**

# Association Volunteer

## **To qualify for the Association Volunteer certificate, you must:**

Have served actively on one or more NMRA committees (National, Regional, or Division) long enough to accumulate sixty (60) certified time units(TU) for months of active satisfactory service.

- Boy Scout Railroading Merit Badge Counselors
- Present Live Clinics
- Newsletter editor
- Contest Judges
- AP Judges
- Individuals (and their crew) who open their home or club layout for NMRA events
- Individuals who participate with their modular club at NMRA events





Category:

**Model Railroad Author**

# Model Railroad Author

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

Accumulate a total of forty-two (42) points earned by preparing and submitting

- **Published Articles**
- **Live Clinics**
- **Instructional Video Tapes and Multi-Media**
- **Electronic Publications (Internet) – No more than 21 points**

Material may be on any of the following subjects:

- Model Railroading.
- Prototype Railroading, Applicable to Modeling.
- NMRA Administration (e.g. Officers or Committee Reports)

The material being claimed must be the work of the author, photographer, artist, draftsperson, etc. applying for the certificate.



# Judging Models at the Division Level

## **Central NY Division**

Dave Martini, AP Chair

### “Certified” Judges:

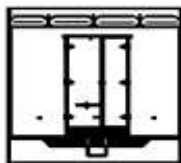
- Bill Brown
- Jim Heidt
- Martin Collard
- Dave Martini

### “Apprentice” Judges

- NMRA Member
- “Certificate Holder”







# ACHIEVEMENT PROGRAM MASTER BUILDER CARS JUDGING FORM May 2006

PLEASE ATTACH THIS FORM TO A COMPLETED STATEMENT OF QUALIFICATIONS (SOQ) FORM.

Member's Name: \_\_\_\_\_

NMRA #: \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Region: \_\_\_\_\_

Model: \_\_\_\_\_

The undersigned judges certify that the model or railroad rolling stock described above, built by the above named NMRA member, has been personally examined by two or more judges appointed by the Region AP Chair; that the model is either scratchbuilt or is superdetailed (as defined in the NMRA AP Regulations "DEFINITIONS" Section); is operational and meets all applicable NMRA Standards; has earned a minimum score of 87.5 points; and has been awarded a Merit Award.

## MERIT AWARD SCORING SCHEDULE

CATEGORY	DESCRIPTION	POINTS	SCORE
CONSTRUCTION	Workmanship	0-40	
DETAIL	Quality & Amount	0-20	
CONFORMITY	Prototype Practice	0-25	
FINISH & LETTERING	General Appearance	0-25	
SCRATCHBUILT	Amount of Parts Built by the Modeler	0-15	
		Total	

## NOTE

Exempted Parts: motor, gears, wheels, couplers, light bulbs, trucks, marker & classification lights, brake fittings, basic wood, metal and plastic shapes.

The above commercial parts may be used on a model and the model is still considered to be scratchbuilt.

JUDGE'S NAME	SIGNATURE	NMRA #

REGIONAL AP CHAIR: \_\_\_\_\_ REGION: \_\_\_\_\_ DATE: \_\_\_\_\_





# CONSTRUCTION

## Quality & Workmanship

Poor      Mediocre      Ordinary      Good      Very Good      Outstanding      Exceptional

Column

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Scope & Complexity	Simple ↑ ↓ Complex	Row	A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
			B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
			C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
			D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
			E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
			F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
			G	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
			H	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
			I	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
			J	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
			K	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
			L	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
			M	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
			N	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
			O	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
			P	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40



Less than merit

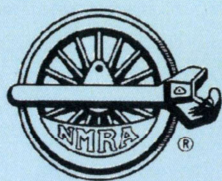


Merit level



Exceeds Merit





## DETAIL

### Quantity of Added Detail

Little Added    A Few Added    Moderate Detail    A lot of Detail    Exceptional Detail

### Column

0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15

### Scope & Complexity

Simple  
Easy to Add  
↑  
↓  
Complex  
Hard to Add

Row

A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20



Less than merit

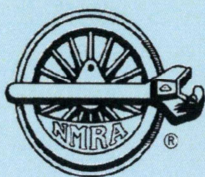


Merit level



Exceeds Merit





# **CONFORMITY**

## Prototypicality of Intended Model

Partly

Largely

Completely

**Column**

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

**Degree of Conformance**

Minimal



Extensive

**Row**

A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25



Less than merit



Merit level



Exceeds Merit





# **APPEARANCE**

## **Quality & Skill of Finish & Lettering**

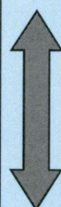
Poor                      Average                      Good                      Better                      Exceptional

### **Column**

0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20

## **Scope & Complexity**

Simple



Complex

### **Row**

A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25



Less than merit



Merit level



Exceeds Merit





# Scratch Building

## Quantity of Scratch Built Parts

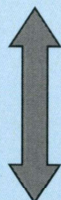
Poor Average Good Better Exceptional

Column

0 1 2 3 4 5 6 7 8 9 10

Scope & Complexity

Simple



Complex

Row

A

B

C

D

E

F

0	1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10	11
2	3	4	5	6	7	8	9	10	11	12
3	4	5	6	7	8	9	10	11	12	13
4	5	6	7	8	9	10	11	12	13	14
5	6	7	8	9	10	11	12	13	14	15



Max score for Kit Class



Less than merit



Merit level



Exceeds Merit









# CONSTRUCTION

## Quality & Workmanship

Poor Mediocre Ordinary Good Very Good Outstanding Exceptional

Column

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Scope & Complexity

Simple



Complex

Row

A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
G	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
H	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
I	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
J	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
K	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
L	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
M	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
N	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
O	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
P	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40



Less than merit




Merit level



Exceeds Merit

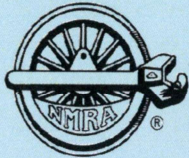




<div></div> <div>Scope &amp; Complexity</div> <div><div>Simple Easy to Add</div><div>↕</div><div>Complex Hard to Add</div></div>		<b>DETAIL</b>																
		Quantity of Added Detail																
		Little Added	A Few Added			Moderate Detail			A lot of Detail			Exceptional Detail						
		Column																
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Row	A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
	C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
	D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
	E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
	F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
		<div><div></div> Less than merit<div></div> Merit level<div></div> Exceeds Merit</div>																

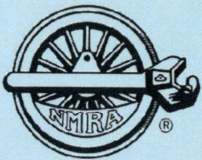




<div></div>			<b>CONFORMITY</b>																					
			Prototypicality of Intended Model																					
			Partly						Largely						Completely									
			<i>Column</i>																					
<div>Degree of Conformance</div> <div><div>Minimal</div><div>↕</div><div>Extensive</div></div> <div>Row</div>			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
			A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
			B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
			C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
			D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
			E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
			F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
			<div><div></div> Less than merit<div></div> Merit level<div></div> Exceeds Merit</div>																					







# APPEARANCE

## Quality & Skill of Finish & Lettering

Poor Average Good Better Exceptional

### Column

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

## Scope & Complexity

Simple



Complex

### Row

A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25



Less than merit



Merit level



Exceeds Merit















# CONSTRUCTION

## Quality & Workmanship

Poor      Mediocre      Ordinary      Good      Very Good      Outstanding      Exceptional

Column  
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

Scope & Complexity

Simple



Complex

Row	A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	G	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	H	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	I	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
	J	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	K	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
	L	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
	M	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
	N	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
	O	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
	P	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40



Less than merit



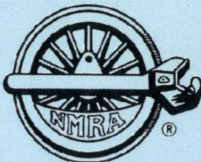
Merit level



Exceeds Merit

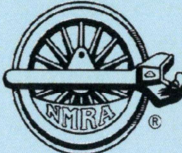




<div></div> <div>Scope &amp; Complexity</div> <div><div>Simple Easy to Add</div><div>↕</div><div>Complex Hard to Add</div></div>		<b>DETAIL</b>															
		Quantity of Added Detail															
		Little Added		A Few Added			Moderate Detail			A lot of Detail			Exceptional Detail				
		Column															
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Row	A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		<div><div></div> Less than merit</div> <div><div></div> Merit level</div> <div><div></div> Exceeds Merit</div>															

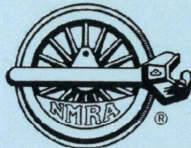




<div></div>		CONFORMITY																								
		Prototypicality of Intended Model																								
		Partly					Largely										Completely									
		Column																								
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
Degree of Conformance	<div>Minimal</div> <div>↕</div> <div>Extensive</div>	Row	A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
		B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
		C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
		D	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
		E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
		F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
		<div><div></div> Less than merit</div> <div><div></div> Merit level</div> <div><div></div> Exceeds Merit</div>																								






<div></div>			<b>APPEARANCE</b>																								
			Quality & Skill of Finish & Lettering																								
			Poor				Average				Good				Better				Exceptional								
			Column																								
			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
Scope & Complexity	<div>Simple</div> <div>Complex</div>	Row	A	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
			B	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
			C	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
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			E	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
			F	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
			<div><div></div> Less than merit</div> <div><div></div> Merit level</div> <div><div></div> Exceeds Merit</div>																								

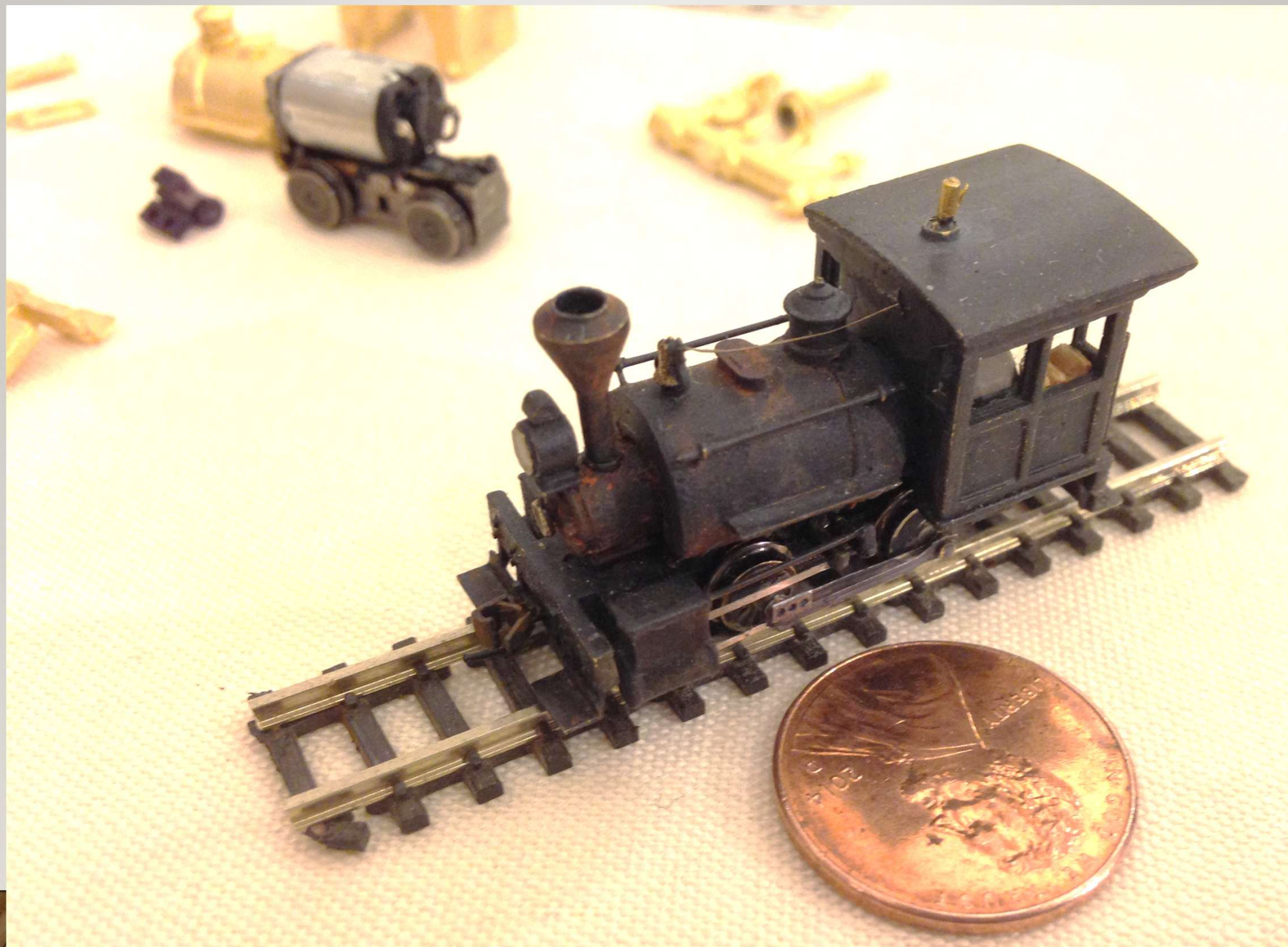




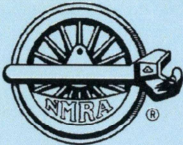




<div></div>		<h1>Scratch Building</h1>											
		Quantity of Scratch Built Parts											
		Poor		Average		Good		Better		Exceptional			
		Column											
		0	1	2	3	4	5	6	7	8	9	10	
Scope & Complexity	Simple	A	0	1	2	3	4	5	6	7	8	9	10
		B	1	2	3	4	5	6	7	8	9	10	11
		C	2	3	4	5	6	7	8	9	10	11	12
	Complex	D	3	4	5	6	7	8	9	10	11	12	13
		E	4	5	6	7	8	9	10	11	12	13	14
		F	5	6	7	8	9	10	11	12	13	14	15
		<div><div></div> Max score for Kit Class<div></div> Less than merit<div></div> Merit level<div></div> Exceeds Merit</div>											

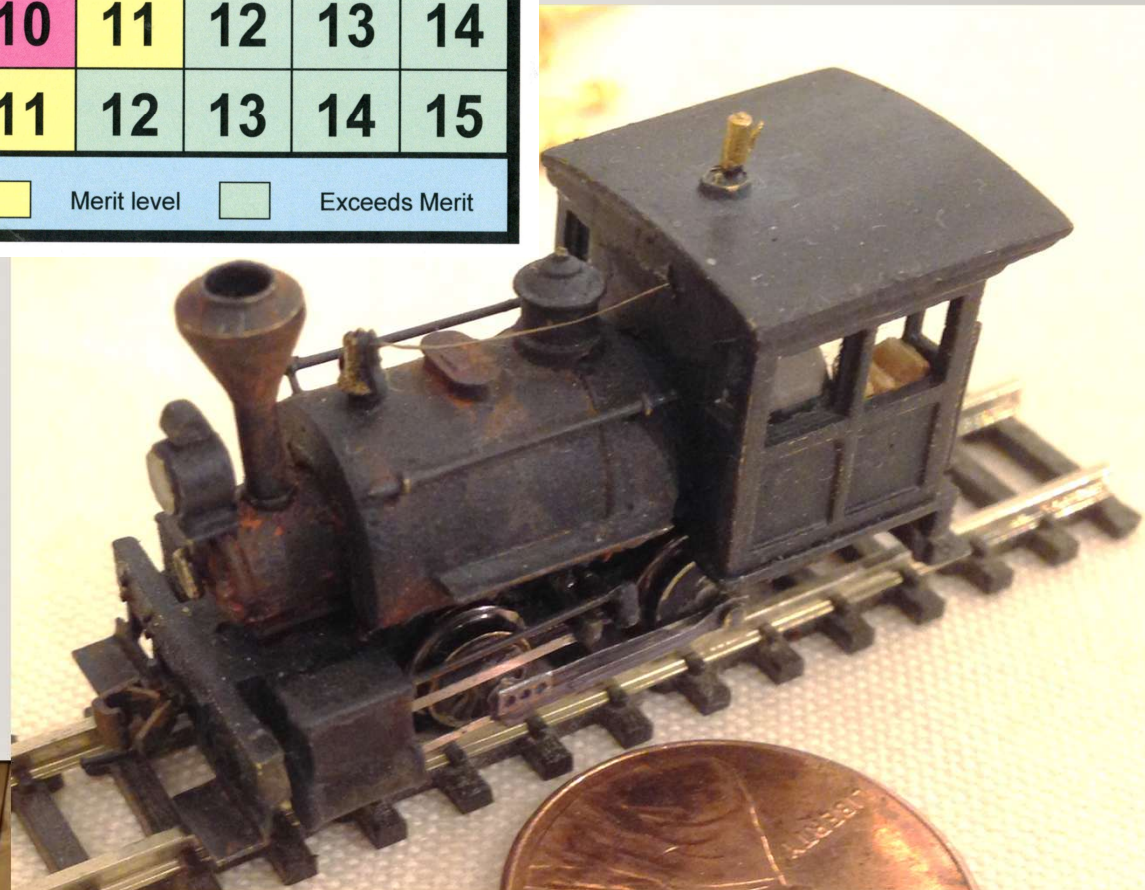








<div></div> <h1>Scratch Building</h1> <h2>Quantity of Scratch Built Parts</h2> <table><tr><th>Poor</th><th colspan="3">Average</th><th colspan="2">Good</th><th colspan="3">Better</th><th colspan="3">Exceptional</th></tr><tr><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr></table>												Poor	Average			Good		Better			Exceptional			0	1	2	3	4	5	6	7	8	9	10
Poor	Average			Good		Better			Exceptional																									
0	1	2	3	4	5	6	7	8	9	10																								
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<div>Scope &amp; Complexity</div> <div>Simple</div> <div>Complex</div> <div>↕</div>		A	0	1	2	3	4	5	6	7	8	9	10																					
		B	1	2	3	4	5	6	7	8	9	10	11																					
		C	2	3	4	5	6	7	8	9	10	11	12																					
		D	3	4	5	6	7	8	9	10	11	12	13																					
		E	4	5	6	7	8	9	10	11	12	13	14																					
		F	5	6	7	8	9	10	11	12	13	14	15																					
		<div><div> Max score for Kit Class</div><div> Less than merit</div><div> Merit level</div><div> Exceeds Merit</div></div>																																





# Questions???

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