

Why Operating Rules?

June 15, 2011



Operating Rules

- Their Purpose and Ingredients
- Sometimes referred to as ‘Rules for Conducting Transportation’ but they affect all operating departments, i.e. Transportation, Mechanical, MOW
- They are the basis for Safe and Efficient Operations

“Rules for Conducting Transportation”

- There are also other rules such as....
 - General Rules
 - Safety
 - Special, including Rules which are Customer Service Oriented

Rules, SOPs, Duty & a Sense of Professionalism

- Standards (e.g. the new APTA Operating Standards) are not rules
- Beware of SOPs!! These are not Rules!
- Even well written rules are not substitutes for a ...
 - **Sense of Professionalism and Duty**
 - **A healthy ‘fear’ of the railway environment**
- Caution against over writing a rule

Why Operating Rules?

- Safety (employees, passengers, the public)
- Common basis for action
- A 'users guide' to the engineering ingredients of a railway
- A 'users guide' to the railway's operational concept
- Operational discipline



Attributes of Good Operating Rules

- Concise
- Clear in its intent
- Traceable to a reason or cause or function (the source 'DNA')
- Hold to a logical pattern
- It is of utmost importance that rules are not perceived and are not used as a weapon

Source DNA

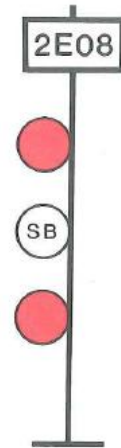
Where do Rules Come From??

The source DNA may consist of any of the following:

- “Signal Engineers”!
or Engineering Functionality, e.g. Signal Rules
- Operating Practices, e.g. Hand Signals, Radio Rules
- Direct Hazard Mitigation, e.g. prohibition on use of cell phones, protecting the rear of the train when backing.
- Accident and Failures

Source DNA (continued)

- Failure Modes Analysis, e.g. Clear blocking or “call-on” signals
- Attribution of Engineering Systems, e.g. Rules of movement of track cars (non-shunting equipment)
- Operating Requirements associated with Special Engineering Systems, e.g. electric train
- Special Conditions, e.g. A work train entering a work zone, shared use waivers



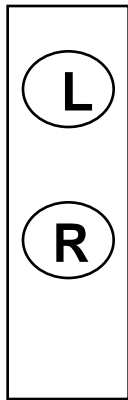
NAME: Stop Signal.

INDICATION: Stop.

NOTE: Block signals, numbered, which are also section break signals, are identified by the letters SB. When the third rail power is off, these signals will display the aspect of Rule 292 (Stop). Trains consisting of DC Electric (Multiple Unit) Equipment will not pass these signals displaying Stop aspect without verbal instructions from the Train Director at A Tower through the block operator. Other trains will stop and then be governed by Rule 291 (Stop and Proceed).

Source DNA (continued)

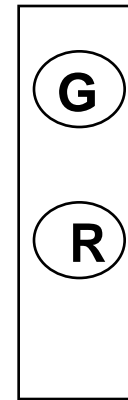
- Failure Modes Analysis, e.g. Clear blocking or “call-on” signals



**Proceed at
Cab Speed
(per ADU)**

Name: Proceed Cab

Note: Not to be displayed



**Proceed Not
Exceeding 25 mph**

Name: Clear Block

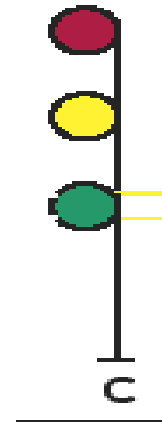
Note: Designed for use for
failed trains

Source DNA (continued)

- Attribution of Engineering Systems, e.g. Rules of movement of track cars (non-shunting equipment)

River LINE Rule No. 802 - Rules and Signals

ABS Rules, TPCS Rules, and numbered automatic block signals do not apply to the movement of track cars. Track cars must approach interlocking signals, controlled point signals, and unnumbered automatic block signals prepared to stop.



Source DNA (continued)

Special Conditions, e.g. A work train entering a work zone, shared use waivers

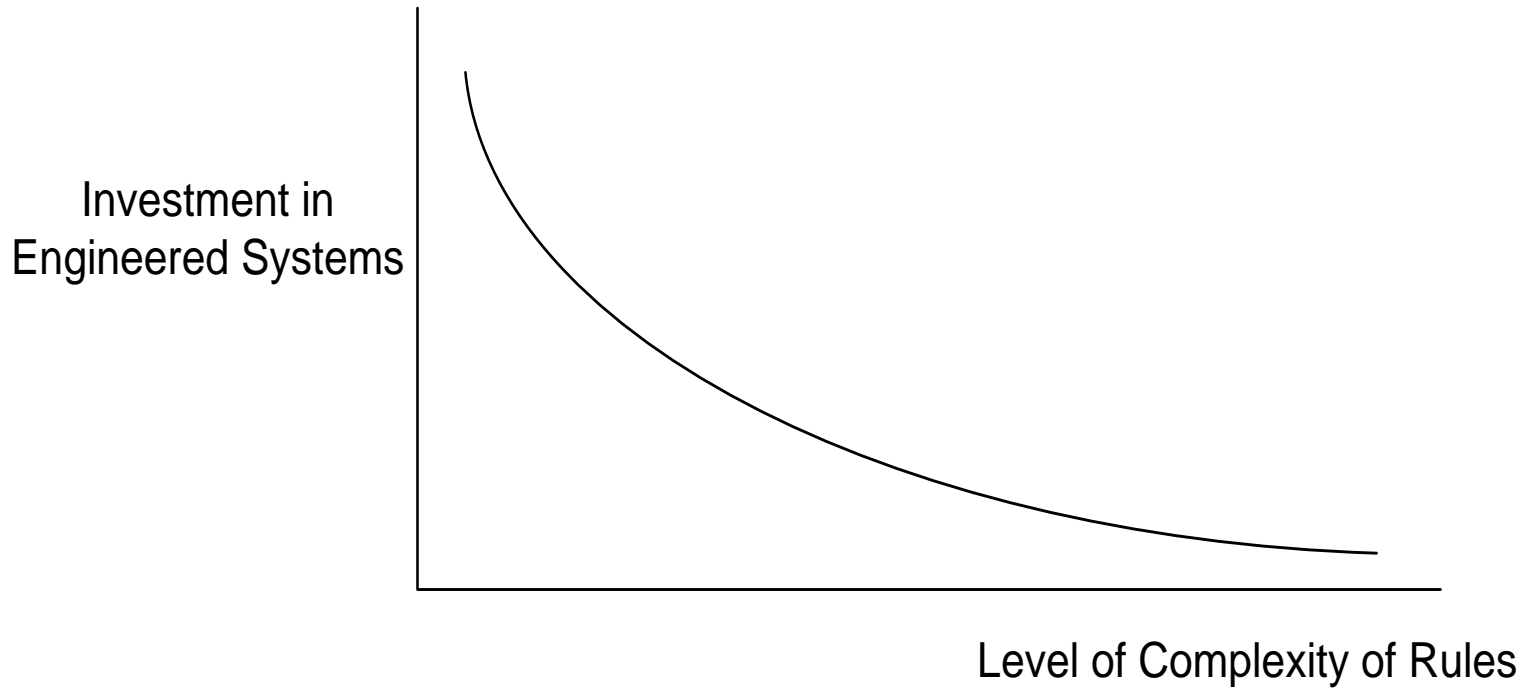
River LINE Rule No. 906 – Temporal Separation

Controllers are responsible to maintain the integrity of temporal separation by protecting the blocking that prevents access into shared trackage.

1. Passenger Mode is enabled from 530 AM until 1000 PM with Freight access allowed at CP 45 and CP 17 (LRT Rule 907).
2. Passenger Mode (Passenger 5:30 a.m. – 10:00 p.m.). Freight operation enabled over single main track from CP45 signal 2N-2 with exit at new signal 6S-1 to Minson Siding only, with entrance into CP 55 from Main Track and Pennsauken Siding disabled, signal 4N blocked. This route protected by NX logic, only allowable exit from CP 45 Signal 2N-2 is Signal 6S-1 to Minson Siding.
 - A. Passenger Operations (5:00am – 6:00am) from CP 45 signal 2N-1 to exit new signal 2S-1 only, with routing to Pennsauken Siding. Signal 2N-1 at CP 70 Blocked # 1 switch Locked Normal. This route protected by NX logic, only allowable route from CP 45 Signal 2N-1 is to Signal 2S-1 to Pennsauken Siding.
 - B. 6:00 a.m. all passenger train regular schedule except for Conrail freight moves in CP 45 interlocking only per LRT Operating Rule 907 Operations at CP 45 crossing the Diamond. Conrail freight moves across CP 45 remain under the authority and control of the River line Train Traffic Controller.
3. Shared Exclusive Mode (10:00 pm – 1:00 am)

Shared Exclusive Mode, is enabled from 1000 PM until 100 AM this mode allows Passenger trains to run between CP 45 and CP 70 on the Pennsauken Siding only with a Freight train working on the Minson Siding.

Rules and Level of Investment in Technology



Changes to Rules

- This is really Configuration Management – a major facet of **System Safety**
- Same concept, but slightly different method, than change management techniques used for engineering equipment

Changes to Rules

**Need for a Change
(local, association
or regulatory)**



Rules Committee Develops

Draft of New Rule



Internal Review

(includes System Safety)



Promulgation

e.g. Bulletin Orders, General Orders,

Train Orders, and eventual accumulation into a revised Rulebook.

Rules – It's Not That Hard!!

**Typical Traffic
Signs**
e.g. "Keep Right"

and

**Typical Other
Signs and Rules**

No Smoking

Pooper Scooper