SYSTEM SECTION

Timetable Number

1

In Effect

At 12:01 AM

Monday, August 4, 2008

Eastern Standard Time

For The Government of Employees Only

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GENERAL SPEED RESTRICTIONS

CONDITIONS	MAXIMUM SPEED MPH

SP-1. SPEED RESTRICTIONS — CARS

Empty multi-level equipment:

Unrestricted — 40 to 70 in a solid block on the rear of a train or 150 or less in a solid train

Restricted — 40 or more (Other than a solid block on the rear).....25

Short ore hopper cars (35' or less): loaded.....30
empty 35

Empty top gon(s) in series NS 20000–35499 unless handled in solid empty unit train.....45

Empty open-top hopper(s) unless handled in solid empty unit train 45

Empty bulkhead flat car and/or empty woodrack car, foreign or system 45

EXCEPTION:

Restriction does not apply:

1. If car is shown on train consist, but is not identified as restricted equipment. (Bulkhead flat cars and woodrack cars equipped with constant contact side bearings are not restricted and will not be identified by the computer as restricted equipment.)
2. To center beam flat cars.

Log cars in series NS 111500–NS 111538 and SOU 118039 when empty.....45

SP-2. SPEED RESTRICTIONS — LOCOMOTIVES

Controlling locomotive not equipped with an operative speed indicator.....20

Single light locomotive 30

Locomotive not equipped with event recorder when operated as a single unit or as a lead unit 30

All steam locomotives 40

All other light locomotive consists of two (2) or more units 50

NOTE: Road Locomotives must not be operated through class yard retarders.

SP-3. SPEED RESTRICTIONS — TRAINS

Key Trains 50

All other trains 50

Loaded Welded Rail Trains 50

Trains consisting entirely of Triple Crown, TOFC/COFC, Multi-level, or stack equipment 60

Unless further restricted, Intermodal (Trail Van) trains handling loaded or empty automotive frame flat cars 60

Passenger Trains 79

Jointed Rail

When freight trains handling one or more loaded cars are operated on jointed rail, the Engineer will avoid prolonged operation in speed range of 16 to 21 MPH. If speed cannot be maintained above 21 MPH, speed must be reduced to 15 MPH.

SP-4. SPEED RESTRICTIONS — OTHER EQUIPMENT

Shoving movements with caboose on leading end 30

Shoving movements with NS Geometry Car (NS 31, NS 33, NS 34, or NS 35) on leading end 25

Snowplow — NW 590000, when plowing (see EQ-4) 25

Locomotive Cranes/Pile Drivers (see EQ-26) 25

2-axle Scale Test cars (see EQ-6) 30

Single unit of self-propelled work equipment that is designed to shunt track circuits (i.e. Sperry Rail Test car, Loram rail grinder, and ballast cleaner) 30

Lucky Loader, NW 591006 loaded on gon NW 590901 35

Jordan Spreaders (see EQ-3) 40

Mulching Brushcutters Nos. NS 992700 — NS 992702 45

Derricks 45

SP-5. SPEED RESTRICTIONS — SIDINGS AND AUXILIARY TRACKS

Except where a different speed is authorized by Timetable or Special Instructions:

Sidings..... Restricted Speed not exceeding: 15

All tracks other than the
main track and sidings..... Restricted Speed not exceeding: 10

SP-6. SPEED RESTRICTIONS — FLANGERS

1. When handled behind locomotive, flanger must not exceed 30 MPH

2. When working, flanger must not exceed 5 MPH while:

(a) Passing station platforms.

(b) Passing over grade crossings.

(c) Passing equipment on adjacent tracks.

(d) Backing up.

EQUIPMENT RESTRICTIONS

EQ-1. MAXIMUM WEIGHT

Cars having a combined weight of car and lading in excess of 286,000 lbs. must not be handled unless authorized by the Division Timetable.

EQ-2. SCHNABEL AND HIGH-CAPACITY FLAT CARS

1. Restrictions for "schnabel" and other high-capacity flat cars having 8-axles or more:

(a) Except where further restricted, speed must not exceed that indicated below:

	Maximum Speeds	
Number of Axles	**Loaded**	**Empty**
8 to 15	45 MPH	No Restrictions
16 or more and 12-axle APWX 1004	25 MPH	45 MPH
36 (CEBX 800)	15 MPH	25 MPH

(b) When loaded, APWX 1004 (12-axles) and all cars having 16-axles or more must be handled in a special train of no more than 10 cars.

(c) Loaded cars having 12-axles or more, when not moving in special train, must be handled at the head end of a train, and train length must not exceed 100 cars. Loaded cars must be accompanied by sufficient cars that may be used as brake cars in the event it becomes necessary to set out a loaded car between terminals and when securing cars in yards, terminals or sidings.

(d) In addition to the above restrictions, the cars listed below must not be placed in trains requiring pusher service, humped, or flat switched with motive power detached. When moving empty, these cars must be handled on rear end of train, properly locked and secured. Switching moves must be kept to a minimum.

2. Cars with 10-axles or more, either loaded or empty, must not be forwarded in a train without permission of the Chief Dispatcher.

CAR IDENTITY	NO. AXLES	CAR IDENTITY	NO. AXLES
ABWX 20002	12	GEX 40010	20
APWX 1004	12	GEX 80000	16
BBCX 1000	20	GEX 80002	16
CEBX 100	12	GEX 80003	20
CEBX 101	12	GPUX 100	12
CEBX 800	36	HEPX 200	20
CPOX 820	20	KWUX 10	20
DODX 39898	8	KWUX 102	22
DODX 39899	8	LNAL 200	12
ETMX 1001	18	PTDX 204	12
EXEX 1016	12	PTDX 201	14
GEGX 21154	16	PTDX 202	20
GEGX 21155	16	PTDX 203	14
GEX 40013	12	WECX 101	20
GEX 40017	12	WECX 301	22
GEX 40018	12		

3. Transformers, rotors, circuit breakers, or similar electrical equipment with net weight exceeding 200,000 lbs., loaded on a well, depressed, or flat car must be handled on or near the head end of trains except on locals. When these loads are designated to move on locals or high-wide specials, they will be positioned as instructed by the Clearance Department.

4. Loads with waybill having “high value” sticker, transformers, rotors, circuit breakers, or similar electrical equipment loaded on a well, depressed, or flat car will not be humped or permitted to roll free. They will be shoved to a coupling with motive power attached. Cars being coupled to such equipment will be handled in the same manner.

Trains handling any of the aforementioned equipment must not be pushed with more than the equivalent of 12 conventional (non-high-adhesion) powered axles.

EQ-3. JORDAN SPREADERS

1. Movement in trains:

(a) Must not exceed 40 MPH.

(b) Must be handled next to and ahead of caboose or on rear of train with “B” end trailing so that side spreaders, hinged near the “A” end of the car, are in the trailing position.

(c) Must have swinging or rotating mechanism properly secured.

2. Movement in yards:

(a) Must not be moved through retarders due to insufficient clearance.

(b) Must not be:

- cut off in motion
- struck by a free-rolling car
- coupled into with more force than needed to make the coupling

(c) While working, care must be taken to avoid contact with overhead or side obstructions.

EQ-4. SNOWPLOW — NW 590000

1. When plowing:
Except where further restricted, must not exceed 25 MPH.

2. When being moved to a location to begin plowing:
No restrictions apply.

3. Other movements:
Handle within rear five (5) cars of a train.

EQ-5. JET SNOW BLOWERS

Jet Snow Blowers loaded on flat cars must not be humped or flat switched with motive power detached.

EQ-6. SCALE TEST CARS

1. 2-axle Scale Test Cars:

(a) Must move only on authority of the Chief Dispatcher.

(b) Must be handled as second car ahead of rear car of train or caboose.

(c) Must not be coupled to a car exceeding 55' 00" in length.

(d) Must not exceed 30 MPH.

(e) Must not be humped.

2. 4-axle Scale Test Cars must not be humped. If 4-axle Scale Test Cars are destined to a hump yard, they should be moved as the head or rear car in the train or in an established “Do Not Hump” block.

3. Scale Monitor Cars have no special restrictions.

EQ-7. TWO-UNIT CARS

The following restrictions are applicable to:

- all two-unit TTEX cars
- two-unit RTTX cars in the series 165200 to 165552

1. Must not be humped or flat switched with motive power detached except to a clear track.

2. Empty cars or cars carrying one (1) loaded or one (1) empty trailer at one (1) outer loading position must be handled per the following restrictions:

(a) Trailing tonnage is restricted to 4,000 tons except in Distributed Power (DP) trains. Yard shove movements are restricted to 4,000 tons and must not exceed 12 powered conventional or 10 powered high-adhesion axles.

(b) Car must not be handled in the first 10 cars ahead of Distributed Power (DP) units or rear-end helpers. Helper units must not exceed 12 powered conventional or 10 powered high-adhesion axles.

(c) Locomotive amperage must be limited to 400 AMPS in dynamic braking while these cars are traversing turnouts or crossovers restricted to 25 MPH or less and while within terminal limits.

EXCEPTION: Cars having three (3) loaded trailers or cars having empty or loaded trailers at both outer loading positions may be handled without restrictions.

EQ-8. GTTX OR JTTX CARS

Blocks of 10 or more empty GTTX or JTTX cars, when being moved in Distributed Power (DP) trains will be handled on the rear only behind the DP units.

Blocks of 20 or more empty GTTX or JTTX cars must be handled on the rear of non-Distributed Power trains.

EQ-9. TRAIN PLACEMENT OF 5-WELL EQUIPMENT

When loaded articulated 5-well double-stack equipment is located behind blocks of 89' flat cars and/or multi-level equipment with end-of-car cushioning device, to prevent increased buff forces requires good judgment in train handling procedures.

When building trains at terminals or receiving trains in interchange, special consideration must be given to train make-up containing this equipment.

When practicable, such equipment must be handled in the head 25% of the consist.

These instructions do not apply to trains made up entirely of double-stack equipment.

EQ-10. DOUBLE-STACK EQUIPMENT

The Conductor and Engineer must determine if their train contains double-stack equipment prior to departure from originating terminal or crew change point. If the trains consist includes double-stack equipment, the Conductor or Engineer must notify the Train Dispatcher/Control Operator prior to departure. At run through crew change points, the crew being relieved will advise the relieving crew of the presence of double-stack cars in the train. On line-of-road, when a relief crew takes over a train with double-stack equipment, the Conductor must ensure the Train Dispatcher/Control Operator is notified of the equipment prior to departure.

When setting off or picking up double-stack cars on line-of-road, the Conductor must ensure the Train Dispatcher/Control Operator is notified of the double-stack pick up/set off before departing the station.

Before entering yards (even if an approved double-stack route) Conductor must ensure Yardmaster or Terminal Trainmaster is advised of the existence of double-stack cars in their train consist.

When necessary to set off or pick up a stack car account bad order status or otherwise, crew members are responsible to ensure clearance from overhead wires, cables, load docks, roof overhangs or any other obstructions above or adjacent to auxiliary track being used.

Single unit or multiple unit double-stack cars, loaded or empty, must not be humped or flat switched with motive power detached except to a clear track.

Double-stack cars must not be moved over retarders unless it is known there is proper clearance.

EQ-11. BLOCKS OF EMPTY AND LOADED CARS

Blocks of Empty Cars — Blocks of 30 or more empty cars must be handled on the rear of trains whenever practicable.

Blocks of Loaded Cars — Blocks of 30 or more loaded cars of coal, grain, phosphate, rock, sand, sulfur or similar bulk commodities must be handled on the head of trains next to and behind locomotives whenever practicable.

EQ-12. BUFFER CARS BETWEEN MULTI-LEVEL AND OPEN-TOP CARS

Loaded multi-level cars must not be placed for movement in trains behind open-top hopper cars or gondolas loaded with stone, gravel, sand, lime, coal, or soda ash except when separated by 10 buffer cars.

EQ-13. EXCESSIVE HEIGHT MULTI-LEVELS

Multi-level auto racks 20' 2" high are excessive dimension cars (loaded or empty) and must be handled in accordance with high-wide clearance message. Before handling these cars on other than main tracks or sidings, it must be determined adequate clearance exists.

EQ-14. EXCESSIVE DIMENSION EQUIPMENT

1. **All high and wide shipments** must have copy of clearance file attached to regular waybill, and movements must be made in strict compliance with clearance file information.

   Conductors on trains handling high and/or wide shipments will verify car initials and numbers with waybills and clearance files. Conductors will also verify route of each car by comparing route on waybill with **Restricted Route** as shown on Clearance File. **Restricted Route** will be more detailed. If any discrepancy exists, Conductor will notify the Chief Dispatcher by the quickest available means of communication and will not move the shipment until properly authorized.

   The safe and proper handling of high and wide shipments requires strict compliance with instructions contained in the clearance file by train and engine crews and Train Dispatcher/Control Operators.

   The Engineer and Conductor on through, local, or high-wide trains must each have a copy of the clearance restriction file.

   When handling more than one such shipment, Chief Dispatchers will determine the most restrictive of all shipments, and extra copies of this file will be furnished with the Train Clearance to both Engineer and Conductor.

   Train Dispatcher/Control Operators, with the assistance of train and engine crews, will establish meeting and passing points in accordance with clearance files of all trains to be met or passed.

   Train and engine crews will be responsible for passing standing cars on adjacent side, industrial, and yard tracks in accordance with clearance file restrictions.

   Trains meeting or passing another train with high and wide shipments must comply with instructions received from the Train Dispatcher/ Control Operator.

   When trains handling high and wide shipments and/or triple loads go into emergency for any reason, in addition to inspecting their entire train, all high and wide loads and/or triple loads must be inspected to determine if loads or cars have been damaged or if loads have shifted. Train crews will advise Train Dispatcher/Control Operator of findings.

   At stations where no Mechanical personnel are on duty and NS crews pull interchange from foreign railroads, inspection of cars for defects in accordance with **NS-1 Rule C-100** is required. Crew members will also make an inspection of open-top loads to determine the possibility of loads being excessive dimensional loads.

If there is any doubt regarding load being an excessive dimensional shipment, the Chief Dispatcher should be notified immediately to determine if shipment is, in fact, an excessive dimensional shipment requiring a clearance file. The shipment must not be moved until appropriate clearance file or proper authority is received.

If there is no clearance file available, the car should not be placed in train before a mechanical inspection is made to determine if the car is an excessive dimensional shipment.

Before departing, Conductors on all outbound trains must check their consist. If high and wide shipments are shown on the consist, the Conductor must contact the proper authority before departing in order that clearances can be checked prior to moving the train. On transfer movements departing yards, if cut of cars contains high and wide shipments this information will be shown on the "list." The Conductor on outbound transfer cuts must also contact the Yardmaster or other designated employee to ensure that high and wide shipments have been cleared before departing.

2. Before handling excessive dimension equipment on other than main tracks or sidings, it must be determined that adequate clearance exists.

Oversize shipments must not be left on any track adjacent to the main track or sidings unless authorized by the Chief Dispatcher.

EQ-15. OTHER EQUIPMENT RESTRICTIONS

1. **Backhoes** specially designed to unload crossties from gondolas constitute an excessive dimension car (13'1" wide) when mounted on top of a gondola.

To ensure the safety of work trains as well as movements subject to passing on adjacent track(s), the following precautions must be taken when the backhoe is mounted on top of the car:

(a) Equipment must be kept under observation with particular care being taken to avoid contact with side structures or obstructions.

(b) Protection must be provided for movements on adjacent track(s).

2. **Roller bearing equipped cars with converted friction bearing side frames** are prohibited in interchange. Cars with converted friction bearing side frames must not be placed for loading. Cars found with converted friction bearing side frames must be turned over to the Mechanical Department for disposition.

EQ-16. WELDED RAIL TRAINS AND ASSOCIATED EQUIPMENT

1. Two (2) loaded rail trains, or one (1) loaded and one (1) empty rail train, may be handled as one (1) movement. When loaded and empty rail trains are handled together, the empty train must be on the rear.

Empty rail trains may be handled on the rear of revenue freight trains excluding those designated as corporate trains. If pusher service is required, the pusher must be placed ahead of the empty rail equipment.

Rail laying, T&S, and associated equipment may be handled on a loaded rail train but must be handled on the rear end only.

Rail trains are permanently coupled together by having an approved locking device inserted in the uncoupling lever mechanism and secured with a bolt. These cars are not to be separated. In the event of a bad order car, the entire train must be set off until repairs are made.

Crew members taking charge of a loaded welded rail train will inspect it to determine that the uncoupling lever mechanism locks are in place on each car before moving the train except when relieving a crew that has previously handled the train, or when notified by the proper authority, the securement between the cars has been checked. This paragraph does not apply to a rail train originating in Atlanta, GA.

Cars coupled together and equipped to pick up and to unload strands of welded or bolted rail are not to be separated due to the possibility of damage to the hydraulic hose connection between the cars.

Loaded rail trains must not be originated from any crew change point without first being inspected and approved for movement by Maintenance of Way forces.

In the event of bad ordering any rail train and associated equipment, the Chief Dispatcher must notify Rail Welding Plant in Atlanta, GA.

Rail trains and associated equipment must not be handled without air on the trains and all other NS Rules applying to train air brakes and service reductions apply when handling these trains.

Welded rail trains handled on grades must not be separated from engine unless accompanied by a sufficient number of cars with effective hand brakes to secure the train.

2. Unloading Welded Rail at Railroad Crossing at Grade or Interlocked Junction

Before a rail train unloads rail within the limits of a railroad crossing at grade or interlocked junction, protection as prescribed below must be established and maintained to ensure that a crossline or conflicting movement will not enter the limits until the rail is clear of affected routes:

(a) At controlled interlocking or at a junction equipped with power operated switch:

Secure time and working limits.

(b) At locations where the home signal for crossline or conflicting route is controlled by a Foreign Line railroad:

Communication must be established with the Foreign Line Train Dispatcher/Control Operator and ensure positive protection has been established and will be maintained against Foreign Line movements until affected track section is reported clear by the employee who requested protection.

(c) At an automatic interlocking or non-interlocked railroad crossing at grade:

Cross line protection must be provided.

EQ-17. ROTARY DUMP CARS

1. Cars equipped with rotary coupler(s) can be identified by stenciling on the car body at the rotary coupler end.

2. Rotary dump cars must not be operated with the rotary coupler ends coupled together unless specifically designed to be the head or rear car.

EQ-18. TURNOUT CARS

The following turnout car sets loaded or empty are **not to be separated when in transit**. If one of the cars is bad ordered both cars must be set off. If the cars are bad ordered because of mechanical problems, the Division Manager of Mechanical Operations' Office for the division must notify the Roanoke Material Yard, Roanoke, VA.

Set Numbers: (2 cars per set)

SOU 991001 – 991021
SOU 991002 – 991022
SOU 991003 – 991023
SOU 991004 – 991024
SOU 991005 – 991025
SOU 991006 – 991026
SOU 991007 – 991027
SOU 991008 – 991028
SOU 991009 – 991029
SOU 991010 – 991030
SOU 991011 – 991031

EQ-19. LOADED PANEL SWITCH CARS

Loaded panel switch cars must not be humped or cut off to roll free. They must be shoved to a coupling when loaded.

EQ-20. TRACTION MOTOR CARS

Loaded traction motor cars and loaded truck cars must not be humped except when they are humped to a clear track.

EQ-21. CABOOSES

1. Cabooses will be handled on rear of trains unless otherwise authorized by the General Manager.
2. Must not be subjected to pusher or helper service.
3. Cabooses left unoccupied/unattended on line-of-road for any reason (i.e., switching, inspecting train, etc.) must be locked to protect personal and company property.

EQ-22. DO NOT HUMP & HELPER RESTRICTIONS

1. The following cars, loaded or empty, must not be humped or flat switched with motive power detached except to a clear track:
   - **(a)** Single or multiple-unit double-stack cars.
   - **(b)** Articulated single platform (SPINE) cars.
   - **(c)** Drawbar connected rapid discharge cars.
   - **(d)** Articulated or permanently coupled cars.
2. Double-stack cars must not be moved over hump retarders unless it is known there is proper clearance.
3. Whenever practicable, articulated cars and cars with slackless drawbars should be placed ahead of cars with conventional draft gears, which in turn should be placed ahead of cars with end-of-car cushion units.
4. Trains handling any of the aforementioned equipment must not be pushed with more than the equivalent of 12 conventional (non-high-adhesion) powered axles.

EQ-23. EQUIPMENT WITH BOOMS

A crane or other machine equipped with a boom, even if boom is detached, loaded on open-top car or moving on its own wheels must not be handled in through trains unless the boom end is trailing. It may be handled in local freight and work trains with boom forward when properly anchored.

EXCEPTION: Cranes and military equipment loaded on open-top cars may be handled in any train with boom or rotating part forward provided it is properly anchored with visible securement and does not overhang the end of the car.

EQ-24. WRECKED/DISABLED CARS

Movement of wreck-damaged or disabled rail cars or parts of such cars loaded on flat cars or in open-top cars, and lading extends above or beyond the car sides, must be confined to locals, shifters, work, or wreck trains.

Authorization for movement in other trains must be secured from Transportation Clearance Department for each individual car.

Before such equipment is handled in any train, a Mechanical Department employee must inspect it and will authorize its movement and designate any speed restriction required for its safe handling.

EQ-25. LUMBER CARS

Center partition lumber cars, foreign or system, must not be moved when cars are partially unloaded. These cars must not be pulled from an industry or moved without tie down cables being secured. Loading and unloading instructions and warnings not to move car without cables secured are stenciled on these cars at several locations.

EQ-26. LOCOMOTIVE CRANES/PILE DRIVERS

1. Locomotive cranes and pile drivers may be operated on all main and passing tracks.
2. Locomotive cranes, with or without attached boom idler car, must not be moved over humps or through retarders when being operated under their own power. Retarders must not be set up while such equipment is in the retarders.
3. Pile drivers must not be moved through retarders under any circumstances due to insufficient clearance. When pile drivers are placed in one of the classification tracks, they must be handled in the same manner as explosive cars.
4. Locomotive cranes and pile drivers while working must avoid contact with overhead or side obstructions.

EQ-27. FRA TRACK GEOMETRY CARS

Except where further restricted, speed of FRA Track Geometry Cars must not exceed:

Self propelled or handled with a single locomotive .....30 MPH

When handled in:

Freight trains .....50 MPH
Intermodal trains .....60 MPH
Passenger trains .....79 MPH

FRA Track Geometry Cars must:

1. Move only on the authority of the Chief Dispatcher.
2. Not be subjected to pusher or helper service.
3. Not be humped or switched with locomotives detached.
4. Be handled with air hoses coupled and air cut in.
5. Not have more than 1500 trailing tons.

SYSTEM WIDE INSTRUCTIONS

A-1. TRAIN CLEARANCE

Engineers and Conductors must receive a current Train Clearance addressed to their train before leaving their initial station. Engineers and Conductors will be responsible for obtaining their respective Train Clearance from the mainframe. The Train Clearance must include all items and messages for the route over which they will operate including other Divisions and Foreign Lines. Engineers and Conductors must show the Train Clearance to other members of their crew. They must read and be familiar with the contents of the Train Clearance and assist the Engineer and Conductor in complying with the requirements contained therein.

Crew members must read the Train Clearance when received. They must be certain that the total number of items and messages indicated above the Train Dispatcher/Control Operator's initials correspond with actual numbers of items and messages listed in the Train Clearance. If any discrepancy is noted, the Train Dispatcher/Control Operator must immediately be contacted for further instructions.

When Engineer and/or Conductor are relieved before the completion of a trip, the Train Clearance held must be delivered to the relieving Engineer and Conductor. Engineer and Conductor must compare the Train Clearance before proceeding.

When tying up on line-of-road, the Train Clearance must be retained. When this is done, Engineer or Conductor must contact the Train Dispatcher/ Control Operator at the commencement of the next tour of duty to verify the Train Clearance and to receive further instructions, if any.

Each Train Dispatcher/Control Operator is responsible for the correctness of the contents of the Train Clearance issued to the train. Additions to and deletions of items in the Train Clearance must be made without delay and such changes must be promptly provided to concerned trains while en route.

Instructions contained in the Train Clearance must be complied with on all trips during the tour of duty.

A-31-1. TWO-WAY EOTD — HELPER LOCOMOTIVES

Helper locomotives coupled ahead of the original hauling consist are not required to be armed to the train's EOTD provided employees on the helper locomotives establish and maintain two-way voice radio contact. Employees must confirm radio contact before train resumes operation or reaches crest of grade. If radio contact is lost, the train must be stopped. If radio contact cannot be maintained, the helper locomotive must be armed to the train's EOTD and tested to ensure an emergency function can be initiated before proceeding.

C-1. QUALIFICATIONS

FRA has established minimum qualifications for Locomotive Engineers and Remote Control Operators. The rule requires railroads to have a formal process for evaluating prospective Operators of locomotives and Remote Control Operators to determine that they are competent before permitting them to operate a locomotive, train, or Remote Control Transmitter.

The procedures require that railroads:

1. Make a series of four (4) determinations about a person's competency, which are:
   - **(a)** Eligibility.
   - **(b)** Vision and hearing acuity.
   - **(c)** Demonstration of knowledge.
   - **(d)** Demonstration of performance skills.
2. Devise and adhere to an FRA approved training program for Locomotive Engineers and Remote Control Operators.
3. Employ standard methods for identifying qualified Locomotive Engineers and Remote Control Operators and monitoring their performance.

Engineers and Remote Control Operators must remain qualified on those districts, terminals, or divisions their seniority allows them to work. Prior to accepting an assignment on a territory which they have not operated over in six (6) months but less than one (1) year, it is the responsibility of the Engineer or Remote Control Operator to contact the Division Road Foreman of Engines or the District Road Foreman of Engines who will arrange for either a physical characteristics review or a qualifying trip prior to the Engineer or Remote Control Operator taking an assignment on the district or terminal.

Engineers and Remote Control Operators who have not worked a particular district or terminal in one (1) year or more must contact the Division Road Foreman of Engines or District Road Foreman of Engines to make arrangements for a qualifying trip prior to accepting an assignment on the territory.

Employees called to perform service as Conductor or Engineer over any portion of the railroad for which they are not qualified must immediately inform their supervisor.

C-100-1. PLACEMENT OF SHIFTABLE LOADS

1. Poles or similar loads on a flat car or in open-top equipment loaded above ends of cars must not be handled in trains next to open shipments subject to damage by shifting loads on adjacent cars.

2. Any open type car where lading may shift and fall to track surface (such as loaded regular flats, gondolas loaded above sides or ends) must not be used as rear car of any train being operated without a caboose.

3. The equipment listed below must not be placed and handled in a train immediately behind an occupied locomotive or immediately ahead of an occupied caboose:

(a) Open end flat cars loaded with poles, pipe, lumber, or similar lading that might shift and protrude beyond the car ends.

(b) Open-top cars or bulkhead flats loaded with similar lading that extends above the car ends or beyond the car sides.

(c) Flat bed or stake-body trailers loaded with similar lading when the open end is toward the locomotive or caboose or when the lading extends above the end toward the locomotive or caboose.

C-100-2. INTERMODAL TRAINS (RAIL-HIGHWAY)

Rail-highway trains (excluding Triple Crown) must handle only Intermodal and multi-level cars unless authorized by Division Superintendent's Bulletin.

C-100-3. BANDS

Cars equipped with chain tie-down devices must not be moved unless chains are properly secured. Cars with bands improperly secured are not to be moved.

C-110-1. GROX EQUIPMENT — AIR HOSE CONFIGURATION AND TEST

1. Any train containing GROX rapid dump hoppers must have the following test performed prior to departing the initial terminal or any location where train line continuity has been disturbed:

The Engineer must make a 25 lb. brake pipe reduction and a corresponding reduction must be observed by use of the end-of-train device. If the end-of-train device is defective or missing, an air gauge must be connected to the brake pipe at the rear of the train to confirm that brake pipe pressure at the rear corresponds to the Engineer's reduction.

2. On the "A" end of cars with GROX markings, the train line hose is on the left of the coupler, and the door dump line hose is on the right of the coupler.

3. On the "B" end of these cars, the door dump line hose is on the left of the coupler and the train line hose is on the right of the coupler. The glad hands on both the train line and door dump hoses are the same size and configuration.

All employees are to use extreme caution when coupling these hoses to ensure the correct connections are made. Afterwards, a brake test must be performed in accordance with all applicable rules and instructions.

C-113-1. BAD ORDER TAG ATTACHED TO COFC OR TOFC

When a bad order tag, Form ME-597 (orange tag), is attached to a trailer or container loaded on a flat car, the flat car will be considered to be bad ordered and must not be moved in a train. When a bad order tag is applied to a trailer or container, the tag will be attached to the nose end.

F-1. FLASH FLOOD WARNING

1. If a Control Station receives notification of a flash flood warning from the National Weather Service, Weather-Bank, or other reliable source, immediate action must be taken to protect employees, train movements, and property where there is a possibility of high water that may damage track or bridges. If so notified, the Train Dispatcher/ Control Operator must:

(a) Immediately notify all affected train crews.

(b) Instruct freight trains to operate at a speed not to exceed 40 MPH.

(c) Instruct passenger trains to operate at Restricted Speed between designated points.

(d) Immediately notify track and bridge personnel to make an inspection of the affected line segment.

(e) Issue any further speed restrictions resulting from track and bridge inspections.

(f) Leave speed restrictions in effect until the flash flood warning is canceled and the track and bridge personnel have assessed the need for any continuing speed restrictions.

2. Track and Bridge inspectors must:

(a) Verify with the Train Dispatcher/Control Operator that train speed has been restricted as outlined in **Items 1 (b)** and **1 (c)**.

(b) After observing local conditions, advise the Train Dispatcher/ Control Operator of any additional train speed restrictions.

(c) Inspect track and bridge structures with particular attention to bridges and drainage.

(d) Inspect the affected line segment for washouts, scour, surface irregularities, water over the rail, or other weather produced conditions which may make train speed reductions necessary.

3. If unusual water level, turbulence, or other conditions prevent a thorough inspection of a bridge or drainage structures, the inspector will notify the Train Dispatcher/Control Operator to limit all trains to operate at Restricted Speed until it is possible to make a proper inspection. If needed, qualified bridge maintenance or engineering employee may be called to assist in the interpretation of inspection results.

4. Train and Engine Service employees must comply with the provisions of **Rule 99**.

GR-6-1. WARM-UP EXERCISES

In order to assist in avoiding muscle strain, all Train and Engine service employees are required to perform five (5) minutes of stretching exercises from the warm-up exercise examples depicted in the Safety and General Conduct Rule Book at the beginning of each tour of duty. The Conductor, or in the absence of the Conductor, the Engineer is responsible for ensuring that all crew members, including himself/herself, perform the stretching exercises. Stretching exercise is a safety preparation to be used in advance of performing your work that presents potential strenuous activity.

Take care of yourself by doing the stretching preparation in a reasonable and moderate manner within your physical ability.

GR-9-1. DEFECTIVE EQUIPMENT DETECTORS

1. INSTRUCTIONS FOR DETECTORS

When a detector announces one or more defects to a passing train, the crew must stop the train and the specified axle(s) must be examined for excessive bearing heat, dragging equipment, sticking brakes, over dimension, and/or sliding wheel, as applicable.

When approaching, passing, or departing detector locations, crew members must be alert for radio transmissions from detectors (on the road frequency for that territory). When in the vicinity of the detector locations, all employees must keep radio transmissions to an absolute minimum to avoid interference with detector radio messages.

When stopped by hot bearing detector and no hot bearing is found, the Conductor on the inbound train will advise the proper authority at the final terminal so the car(s) may be inspected by mechanical forces prior to the train departing.

When an inspection is made for a suspected hot bearing or dragging equipment, the crew member will take available tools and supplies for use if needed.

1.1 TEMPERATURE INDICATOR

Crews in road service must have a 200 Degree Temperature indicator accessible while on duty.

To determine if a bearing is overheated and car cannot continue in service, a crew member must:

- stroke the outside surface of the top of the journal box or the lower half of the cup of the roller bearing
- stroke the top of the inboard surface of the adapter on Amfleet cars equipped with inboard bearings

If a liquid smear results, obtain instructions from the Train Dispatcher/ Control Operator.

The temperature indicator should be used only on the reported bearing or if there is evidence of an overheated bearing.

1.2 INFORMATION

When a train is stopped for a defect, a crew member must give the following information to the Train Dispatcher/Control Operator as quickly as possible by railroad radio or authorized communication device:

(a) Car Initials and Number

(b) Type of defect

(c) Type of car

(d) Loaded or empty

(e) Type of journal for hot bearing

(f) Standard or unusual journal configuration (if cars are not hot)

(g) Axle or wheel position on car

(h) Disposition of car

(i) Name or location of detector involved

For hot wheel alarms, the Engineer, after stopping the train, will release the train air brakes after making a full service application and the employee making the inspection will determine that the brake has released, the hand brake will be released if applicable. If not released, Engineer will again make full service application and release. If still not released, the air brake may then be cut out.

2. HOT BEARING DETECTORS

When a train is occupying a detector and a defect has been detected, an automatic radio transmission as shown in the example below will occur:

(a) A warning alarm and/or a "TONE" will indicate that a hot bearing (or other defect) has been detected. The speed of the train must be reduced, and after the rear of the train has cleared the detector, train must be stopped for inspection as soon as possible, consistent with safe train handling procedures. When the rear has cleared, a radio message will be transmitted to indicate nature of any defect(s) and its location in the train. The location will be given by axle count, counting from the first axle in the locomotive consist. The detector will identify track to which message is applicable in multiple track territory.

NOTE: At Dragging Equipment Detector locations that do not provide an axle location for the defect, the entire train must be inspected.

(b) When excessively hot journal or dragging equipment has been detected by a detector, a radio message stating "CRITICAL ALARM" will be transmitted at once and train must be stopped for inspection as soon as possible consistent with safe train handling procedures.

(c) When an inspection is required, a thorough inspection will be made of both sides of the car(s) indicated as being defective. If no apparent defects are found, 20-axles ahead and behind on either side of the designated car(s) will be thoroughly inspected on both sides.

Crews in road service must:

- have a hand-held counter accessible and available for immediate use while on-duty
- take every precaution to ensure the proper axle is inspected including the use of a hand-held counter

A copy of train consist must not be used to locate an axle indicated as defective. While en route to and from either end of the train to inspect a car(s), crew members will, when practicable and safe to do so, make a visual inspection of both sides of the train.

(d) After a defect message has been received, if train is stopped while occupying the detector, or if train speed over the detector drops below 8 MPH, all cars following the last car indicated as being defective must be inspected.

(e) If three (3) or more of the same type of defects are reported, those defect locations must be inspected and the balance of the train behind the last reported defect must be inspected in accordance with **Item 5**.

When no defects have been detected, the exit radio message will be:

"NS detector, milepost location, identification of track to which message is applicable (in multiple track territory)," and followed by "NO DEFECTS."

NOTE: If "NO DEFECTS" message has been received from a defect detector before passing the designated radio acknowledgement point (milepost locations designated in Timetable or the train length plus approximately 20 car lengths beyond the detector when a milepost is not designated), Train Dispatcher/Control Operator must be contacted for further handling. The train will be handled in accordance with **Item 5**.

(f) All defect messages, including nature of the defect and its location in the train, must be acknowledged to the Train Dispatcher/Control Operator. A crew member must notify the Train Dispatcher/Control Operator of the results of the inspection even if no exception is taken.

3. HOT WHEEL DETECTORS

For hot wheel alarms, the Engineer, after stopping the train, must release the train air brakes after making a full service application and the person making the inspection will determine that the brake is released, the hand brake is released, and the retainer is in the proper position if applicable. If not released, Engineer will again make a full service application and release. If still not released, air brake may then be cut out.

4. HIGH CAR AND CLEARANCE DETECTORS

If there is no transmission received after passing over a detector location or after a "DETECTOR NOT WORKING" or "SYSTEM FAILURE" message is received, the train must not pass through obstructions such as height restricted bridges, tunnels, etc., until inspection is made.

If a defect is detected at a radio alarm High Car Detector or Clearance Detector, in addition to checking the location specified, two (2) cars (or two (2) platforms on articulated equipment) ahead and behind the reported location must also be inspected, even if a defect is found at the reported location.

5. CONDITIONS WHEN VISUAL INSPECTION REQUIRED

The Train Dispatcher/Control Operator may relieve a crew from inspecting their train when office information is available confirming no defects, or if a detector is known to be defective, the Train Dispatcher/Control Operator may authorize a roll-by inspection, not exceeding 30 MPH, of both sides of the train by qualified persons within the designated acknowledgement point (milepost locations designated in Timetable) or a train length plus 20 car lengths beyond the detector when a milepost is not designated.

The following instructions do not apply to Key Trains. All Key Trains must stop immediately and must be given full inspection with any detector failure.

When no defects have been indicated and one of the following conditions exists, a visual inspection of the train is required if:

(a) Train stops on detector.

(b) Train speed over detector drops below 8 MPH.

(c) Train is operated over a track, which caused it to bypass a detector it normally would pass over.

Except as noted above, a train receiving no message from a detector must stop immediately and must perform a full inspection of the train.

6. FAILURE MESSAGE

A train receiving a failure message ("Analyzer Failure" or "System Failure" or "Detector Malfunction" or "System Not Working") may proceed, in accordance with existing authority, at a speed not to exceed 30 MPH to the next detector provided:

(a) Train is not a Key Train or Passenger Train (these trains must stop and be inspected).

(b) Train Dispatcher/Control Operator is notified of detector failure.

(c) No erratic operation of the train is detected by the train crew.

(d) The previous detector over which the train passed detected "NO DEFECTS."

NOTE: A train receiving a failure message on two (2) consecutive detectors must be stopped and inspected.

If a train receives a failure message at the first detector location immediately departing a yard, the Train Dispatcher/Control Operator must be notified and the entire train inspected. If a train receives a failure message at the last detector location prior to entering a yard or crew change point, the train may proceed in accordance with this section. However, positive communication must be made with the Yardmaster, relieving crew, or other designated authority to ensure a proper inspection is made.

GR-9-2. CONSECUTIVE DETECTOR STOPS

When a hot journal is indicated for the same journal by two (2) consecutive detectors or by two (2) of three (3) successive detectors, the car is to be set out. Additionally, any time a car has a high reading on three (3) detectors over a division, the car is to be set out. A malfunctioning detector will not be considered as one of the consecutive or successive detectors except for any cars known to be correctly scanned by that detector. A car will not be set out if it can be determined, positively, that sticking brakes caused the high readings and it is known that the car can be moved safely.

These instructions apply to trains traversing territories governed by adjoining Train Dispatcher/Control Operators. Information on detector stops must be promptly conveyed between Train Dispatcher/Control Operators.

GR-9-3. STRESS STATE DETECTORS

Stress State Detectors (SSD) measure various stress levels that occur at the rail to wheel interface point as a train passes over the detector. These measurements include:

- impact a rail wheel has on the track structure
- imbalance loads resulting from improper loading and/or shifted loads

1. RADIO MESSAGES

(a) Stress State Detectors are equipped to transmit via radio on the designated road channel either a "Non-Critical" or "Critical" alarm message when a defect is detected.

- Non-Critical — NS SSD MP (milepost location) Track (designation). (Number of alarms detected) alarms detected. Contact Train Dispatcher/Control Operator.
- Critical — Critical Alarm, Critical Alarm, Critical Alarm. NS SSD MP (milepost location) Track (designation). (Number of alarms detected) alarms detected. Contact Train Dispatcher/Control Operator.

(b) "NO DEFECT" Message

If the SSD does not detect any alarm conditions, the detector will announce twice via radio on the designated road channel the following automatic message:

NS SSD MP (milepost location) Track (designation) — NO DEFECT.

2. DETECTOR ALARMS

(a) When a Stress State Detector transmits via radio an alarm message ("Non-Critical" or "Critical"), the train:

- Non-Critical
  May continue without stopping, not exceeding 30 MPH. Train crew must contact the Train Dispatcher/Control Operator via railroad radio or authorized communication device to advise of location and alarm announcement. Train Dispatcher/Control Operator will provide the train crew with instructions and information regarding defects detected by the SSD.
- Critical
  Must be stopped for inspection as soon as possible consistent with safe train handling procedures. Train Crew must contact the Train Dispatcher/Control Operator via railroad radio or authorized communication device to advise of location of alarm announcement. Train Dispatcher/Control Operator will provide the train crew with instructions and information regarding defects detected by the SSD. If no obvious defects are found upon inspection, the train may proceed not exceeding 30 MPH to the nearest location where the car(s) must be set out.

(b) If the SSD does NOT transmit a message or a message is NOT received, the train must immediately reduce speed, not exceeding 30 MPH. Train crew must promptly contact the Train Dispatcher/Control Operator via railroad radio or authorized communication device to advise of the location and failure of the SSD announcement. Unless notified by the Train Dispatcher/ Control Operator to stop and inspect a car(s), the train may then proceed at authorized speed without stopping.

The Train Dispatcher/Control Operator must promptly notify the C&S Department of the failure.

3. INSPECTION

When notified by the Train Dispatcher/Control Operator to inspect a car(s), the train crew must visually inspect the car(s) indicated. Based on the defect type, the following conditions should be inspected for:

(a) Wheel Impact

- Flat Spots/Shelled Tread
- Broken/Cracked Wheel
- Tread Build-up

(b) Imbalanced Load

- Bulging sides, doors, ends, or top chords
- Leaning or Listing
- Springs that are completely compressed on one side and loose on the other side
- A restriction between the wheels and car body
- Lading improperly distributed and/or shifted in open-top cars

4. GENERAL INSTRUCTIONS

Trains that stop on a SSD or do not maintain a minimum of 15 MPH while passing over the SSD may receive multiple messages. When possible, stopping or reducing speed below 15 MPH should be avoided while passing a SSD. If multiple voice messages are received, the train must handle them as described in **Item 1**.

When a SSD announces any alarm, a crew member will promptly notify the Train Dispatcher/Control Operator of the alarm type.

When a car(s) must be inspected for SSD alarms, a crew member must provide the Train Dispatcher/Control Operator with the results of the inspection and furnish the following information:

- Train Identification
- Car Initial and Number
- Type of defect
- Location of defect

The Train Dispatcher/Control Operator will determine proper disposition of car(s) based on any inspection results.

GR-14-1. DRAWBAR ALIGNMENT STRAP

Drawbar alignment straps may be used only at locations authorized and only by employees who have been qualified on its use by a division or terminal officer.

GR-14-2. SINGLE ENGINEER PROCEDURES

A Single Engineer working alone as a one-person crew (hereinafter referred to as a 'Single Engineer') without blue signal protection must not go between standing equipment to couple or uncouple a pusher consist from a train, couple or uncouple locomotives to be set out or picked up, or engage in any other work that places the Single Engineer on the ground between standing equipment or at the end of equipment where the employee would be subject to injury if unexpected movement of the equipment should occur, unless the requirements listed below are met:

1. The work being performed must be limited to one or more of the following functions:

(a) Couple or uncouple air hoses and other electrical or mechanical connections.

(b) Prepare rail cars for coupling.

(c) Set wheel blocks or wheel chains.

(d) Conduct air brake tests to include cutting air brake components in or out.

(e) Inspect, test, install, remove or replace a rear-end marker device or end-of-train device.

2. Locomotives in the Single Engineer's charge must either be coupled to the train or other railroad rolling equipment to be assisted, or stopped at least 50' from the train or equipment, and secured as prescribed by **NS-1 Rule L-236(a)** except the employee will apply the hand brake only on the controlling unit instead of each unit. An approved orange tag (with the words "ASSIGNED LOCOMOTIVE — DO NOT OPERATE") must be displayed on the control stand of the controlling unit.

3. Before assisting another train, a Single Engineer must communicate directly with the crew of the train to be assisted. The crew of both movements must notify each other in advance of all moves to be made by their respective equipment. Prior to attachment or detachment of the assisting locomotive(s), the crew of the train to be assisted must inform the Single Engineer that the train is secured against movement. The crew of the train to be assisted must not move the train or permit the train to move until authorized by the Single Engineer. Communication between the Single Engineer and the crew of the movement being assisted will be through direct verbal contact or by radio.

NOTE: The term "train" as used above will include yard movements when assisted by a Single Engineer.

4. Before picking up or setting off locomotives, a Single Engineer must first secure permission from the Train Dispatcher/Control Operator, Yardmaster, or other employee responsible for directing train and engine movements in the area. The employee will not grant such permission until effective measures have been taken to ensure that other movements will not enter the affected track section while the work is being performed. The consist must be secured as prescribed by **NS-1 Rule L-236(a)**, except the employee will apply the hand brake only on the controlling unit instead of each unit, and an approved orange tag (with the words "ASSIGNED LOCOMOTIVE — DO NOT OPERATE" must be displayed on the control stand of the controlling unit). The Single Engineer will promptly notify the employee who granted the permission as soon as the work is completed.

5. Attention is called to the second paragraph of **General Regulation GR-14** that remains in full force.

L-248-1. TRAINS THAT CANNOT BE PUSHED

The Train Dispatcher/Control Operator must be notified of trains that cannot be pushed.

O-1. ACCIDENT/INCIDENT — EMPLOYEE CAUTION

After any accident or incident where remains or blood are observed on company equipment, employees are not to attempt to remove or clean these particles. The Train Dispatcher/Control Operator or Yardmaster should be notified so that a qualified contractor can perform any necessary cleaning of equipment as soon as possible.

R-306-1. AIR BRAKES — DISTRIBUTED POWER

Air brakes are not to be cut out on Distributed (mid-train) Power when bleeding air on trains in terminals or yards.

S-1. TRASH — DISPOSING

Employees are prohibited from disposing of non-railroad/home generated trash or garbage in company containers.

98-1. PROTECTION OF RAIL EQUIPMENT

When protection to the front of a train is required by rule, crew member providing protection must go out:

- at least one (1) mile where maximum authorized speed is 30 MPH or less
- at least two (2) miles where maximum authorized speed is more than 30 MPH

99-1. SAFE MOVEMENT OF TRAINS AND ENGINES — SLOW ORDER CONDITIONS

When an employee encounters rough track, a track defect, a switch (to include a spring switch with the switch points not fitting up properly against the rail), or a condition that could interfere with the safe passage of a train or engine, the employee must promptly report the defect or condition to the Train Dispatcher/Control Operator.

The Train Dispatcher/Control Operator will issue a 10 MPH slow order to trains operating over the affected track section. The slow order will remain in effect until the track is inspected by a qualified employee.

When a train is stopped by an emergency brake application and:

1. Does not uncouple, the Train Dispatcher/Control Operator will issue a slow order restricting trains over the affected track section to one-half (1/2) the maximum authorized speed for any train at that location but not to exceed 30 MPH. The slow order will remain in effect until the next train passes without incident, or until the track is inspected and a qualified MW&S employee authorizes a higher speed.

2. Does uncouple, the Train Dispatcher/Control Operator will issue a slow order restricting trains operating over the affected track section to one-half (1/2) the maximum authorized speed for any train at that location but not to exceed 30 MPH. The slow order will remain in effect until the track is inspected and a qualified MW&S employee authorizes a higher speed.

Slow orders will be issued in 5 MPH increments with restrictions falling between 5 MPH increments being issued at the next lowest number. Example: If maximum authorized speed for any train at the point where the emergency brake application occurs is 25 MPH, the slow order will be issued as a 10 MPH restriction.

99-2. PROTECTING WORK LOCATIONS

Qualified employees assigned to protect work locations of construction or private contractors whose operations may affect the safe movement of trains or engines must take the following actions:

1. Secure proper signaling equipment and operable radio.

2. Upon reporting for work each day:

(a) Determine who is in charge of the workers.

(b) Ensure all workers have been instructed not to foul any track at any time without permission.

3. If workers fail to comply with the instructions of the qualified employee or an event occurs that would interfere with the safe passage of trains or engines, the qualified employee, using radio communication, must immediately:

(a) Stop any approaching trains or engines.

(b) Notify the Train Dispatcher/Control Operator or Yardmaster.

104-1. SWITCHES — OPERATING

Engineering Department employees, including C&S and MW&S employees, performing work that requires lining switches in controlled track, protection must be provided by Track Authority Form.

104-2. SWITCHES — TRACKS

Crews picking up on line-of-road and from industry tracks must know that switches occupied by the standing cars are properly lined and latched (when switches are equipped with latches) for the movement to be made.

No car or engine is to be moved over a track when dirt or debris covers the rail and the top of the rail is not visible. If there is any doubt, do not use the track and notify proper authority so the condition can be corrected.

104-3. HAND-OPERATED SWITCHES EQUIPPED WITH ELECTRIC LOCKS

Whenever entering the main track or siding from an auxiliary track through a hand-operated switch, permission must be obtained from the Train Dispatcher/Control Operator before switch lock is removed from its keeper. If there is a derail in the route and the main line switch is equipped with an electric lock, the derail is to be left in the derailing position until the electric lock on the main track switch is unlocked.

105-1. HAND BRAKE REQUIREMENTS

Car(s) left standing must be secured with hand brakes as follows:

- One (1) car — One (1) hand brake
- Two (2) cars — Two (2) hand brakes*
- Three (3) or more cars — Two (2) hand brakes, plus a sufficient number of additional hand brakes to secure the cut of cars

*Except when setting a car off on line-of-road with defective hand brake, only one (1) additional car with a good hand brake applied will be required.

These instructions are in addition to any outstanding instructions issued by proper authority, but do not supersede Special Instructions at terminals and yards.

NOTE: Articulated cars left standing require a minimum of 50% of the platforms to be secured with effective hand brakes.

109-1. CLEARANCE POINT — ALL TRACKS

Cars, engines and On-Track equipment must not be left fouling a connecting track unless the connecting track switch the equipment is fouling is lined for the track on which the equipment is standing.

Clearance Point
The clearance point is the location on a track that does not obstruct the movement of equipment, including, where permitted, a person riding the side of a car, on adjacent tracks. The following basic guidelines will ensure the safe and unobstructed passage of rail equipment:

Line-of-Road
The clearance point can be determined by the location of protective devices such as block signals, derails, clearance posts, spring switch signs, or in the case of multi-track territory, the location of the inside switch of a crossover on the adjacent track.

Rail Yards
On yard tracks, except where protective devices such as block signals, derails, or skate retarders are located, the clearance point will be 225' (four and one-half (4-1/2) car lengths) away from the switch-points of the track to be occupied.

120-1. MISMATCHED COUPLERS

When switching or coupling cuts of cars, coupling must be made to prevent mismatched couplers. Cars will not be cut off to roll free against other cars if one or both cars involved in the coupling are on curved track or in a turnout. Any time a coupling is attempted between equipment on curved track or in a turnout, a member of the crew will be at the point of coupling and will stop the movement short of coupling. The couplers will be aligned if necessary to prevent mismatched couplers before the coupling is completed.

121-1. OPEN DOORS ON EQUIPMENT

Crews must not pull or switch covered or open-top hoppers with doors open. Top hatches and bottom outlets on covered hoppers are to be closed by the customer prior to pulling car.

Loaded cars refused by consignee must not be pulled until all doors have been properly closed and sealed.

Cars equipped with plug doors will not be moved from industrial tracks or out of yards with doors open. DOORS MUST BE CLOSED AND LATCHED.

End doors must be closed and secured on enclosed multi-level cars before they are moved in a train.

122-1. NEAR MISS

When a Near Miss is encountered, train or engine crew must contact the Train Dispatcher/Control Operator with relevant information on the Near Miss incident. The Train Dispatcher/Control Operator will notify the NS Police Department. Prompt handling with Train Dispatcher/Control Operator will enable the Police Department to expeditiously handle with involved party. Crew must fill out Near Miss section on the Train Clearance at first opportunity and forward to their supervisor.

122-2. TRAFFIC AT CROSSINGS

Train crew members will report changes in highway traffic on specific crossings.

Grade crossings should be reported when highway traffic has changed, such as increased heavy truck movement, new or more school buses, trucks hauling a dangerous commodity, or anything that may jeopardize safe train movement.

Each report should contain the name of the District, milepost and crossing, if possible, and should be forwarded to the Chief Dispatcher's Office.

122-3. PRIVATE INDUSTRY

Crew members must provide on-ground protection for all movements not headed by an engine at private road crossings within industry.

236-1. STOP OBSTRUCTION BANNERS

"STOP OBSTRUCTION" Banners are authorized for monitoring compliance with Restricted Speed on all Norfolk Southern operating divisions. When Division Officers are conducting operational checks for compliance with Restricted Speed, a Banner may be erected across the track displaying:

STOP
OBSTRUCTION

For the purpose of monitoring compliance with Restricted Speed, the Banner will be considered a fixed signal representing a "Stop Signal" and an "Obstruction." Movements required to observe Restricted Speed must stop short of the "STOP OBSTRUCTION" Banner to be in compliance with the operational test.

The Banner may be erected at any time and at any location where Restricted Speed is required.

249-1. SHUNTING — TRACK

In signaled territory, a cut of three (3) cars or less must not be left standing on rail covered with grease, sand, rust, or other material that may interfere with shunting of track circuits.

In signaled territory whenever cars are pulled or switched from storage tracks and the wheels on these cars show an accumulation of rust, they are not to be cut off and left standing on a signaled track without another car, or cars, attached to them that do not have rusty wheels.

249-2. SHUNTING — SINGLE LIGHT LOCOMOTIVE

While operating in signaled territory, a single light locomotive must:

1. Be protected by an absolute block.

2. Not enter a Rail-highway grade crossing equipped with automatic crossing warning device until:

- warning lights have been activated at least 20 seconds and gates, if equipped, have been in horizontal position at least five (5) seconds, or
- crossing is protected by flag

This restriction also applies to a reverse movement over the crossing.

250-1. SUSPENSION OF THE SIGNAL SYSTEM

In accordance with **Rule 250**, by authority of the General Manager, the Signal System, or sections of it, may be suspended if:

- a major failure of the Signal System occurs, or
- construction work necessitates

Upon suspension of the Signal System, the following instructions and procedures for continuing train operations and roadway maintenance and repair will govern.

1. NOTIFICATION

Notification of suspension of the Signal System will be by Operations Bulletin.

2. LIMITS OF SIGNAL SUSPENSION

Effective (time/date) the Signal System on the (Division) (District) between (location) MP _____ and (location) MP _____ is suspended.

Block signals between these locations are out of service and are to be disregarded. NS Operating Rules governing Non-Signaled territory apply.

3. MOVEMENT AUTHORITY

(a) The Train Dispatcher/Control Operator will authorize limits on Track Authority Form within limits of the Signal System suspension.

(b) Approach Controlled Signal(s) at the following location(s) prepared to stop and do not pass these signals unless authorized by the Train Dispatcher/Control Operator.

EASTWARD/NORTHWARD at (location) MP _____
WESTWARD/SOUTHWARD at (location) MP _____

(c) An Absolute Block must be maintained unless an additional movement has been authorized in "Restrictions" as outlined in **Rules 443, 444** or **Track Authority Rules 186** and **188**.

4. OPERATING INSTRUCTIONS

(a) All switches within the limits must be securely spiked or fastened for main track movement.

(b) Except where Timetable or Train Clearance requires a lower speed, you are authorized to operate at ____ MPH.

(c) Approach all public crossings at grade equipped with automatic warning devices prepared to stop and do not enter crossing until warning device has been activated in sufficient time to warn highway traffic or crossing is protected by flag.

(d) Defective equipment detectors may be inoperative. Timetable Instructions will govern.

(e) Approach slide detectors at the following locations at Restricted Speed until way is seen to be clear:

LOCATION _____ MP_____
LOCATION _____ MP_____

(f) A train operating without a caboose may only be reported clear of the authorized limits in accordance with **Rule 182(c)**.

250-2. C&S DEPARTMENT TESTING IN SIGNALED TERRITORY

Before testing, permission must be secured from the Train Dispatcher/Control Operator when either:

- switch(es) is to be lined
- signal(s) will be changed to display better than a Stop indication

C&S personnel and the Train Dispatcher/Control Operator must conduct a Job Briefing which includes:

- understanding the effects testing will have on the Signal System
- identifying the location and direction of present or approaching trains and On-Track equipment
- determining the location of other field personnel in the testing area
- determining if Track Authority is in effect adjacent to the location being tested

Before testing can begin, the Train Dispatcher/Control Operator and authorized C&S personnel must meet the following requirements:

- identify the exact signals and switches to be tested
- protect or clear any movements/authorities within the testing limits
- establish protection by blocking each signal authorizing access to the limits that will be affected by testing

After testing is completed, C&S personnel and Train Dispatcher/Control Operator must:

- restore all tested signals to Stop
- ensure all power switch indications correspond with the control machine
- return any field location placed in local control back to control of the Train Dispatcher/Control Operator
- verify through a recall that each controlled point or interlocking tested is restored and in proper correspondence with the Control Station

250-3. LINING SIGNALS IN THE FIELD DURING CODE FAIL

When a controlled point, Remote Control Station or controlled interlocking is in “code fail” or “CP off line,” the condition of the Signal System is unknown to the Train Dispatcher/Control Operator.

During “code fail” condition, C&S personnel may be requested to clear signals and/or line power operated switches from the field to reduce train delays. Before authorizing C&S personnel to operate the Signal System in a “code fail” condition, the Train Dispatcher/Control Operator and responding C&S personnel must conduct a Job Briefing to determine:

- position of switches and status of signals at the location involved
- location and direction of trains
- location of other field personnel
- Track Authorities in effect for any block within or adjacent to the code fail location

During “code fail” conditions, control of the affected switches and signals from the field is permitted only after the Train Dispatcher/Control Operator and authorized C&S personnel have met the following requirements:

- clear affected area of all Track Authorities and On-Track equipment
- identify the exact switches and/or signals to be lined
- identify (by engine number), direction and location of any affected movement
- determine the desired position of each affected switch

The individual lining switches and clearing signals in the field will be the same individual who communicates with the Train Dispatcher/Control Operator. If the location requires more than one (1) field employee to line switches and/or clear signals, the employee communicating with the Control Station will be designated as the “employee in charge.” This employee will:

- create a checklist of the requested switches and signals
- relate, if necessary, this information to field employees at outlying controlled points or interlockings

The controlled point or interlocking must be placed in “manual” operation by the Train Dispatcher/Control Operator, if auto-routing or computer aided dispatching is enabled.

Instructions given by the Train Dispatcher/Control Operator must be repeated by the C&S employee to ensure understanding before routes are changed or signals cleared at the “code fail” location.

After the above conditions are met, the Train Dispatcher/Control Operator may then authorize C&S personnel to line the specified route and clear signals.

Once signals are lined in the field, C&S personnel must verify by use of the local control panel or relay position that the intended route and correct signal is cleared for each train.

Train movement may be authorized to proceed only by the Train Dispatcher/Control Operator after confirmation is received from the C&S employee in charge that the correct route and/or signal is established.

The above requirements must be followed and repeated for each train movement at each location where the route and/or signals are lined in the field.

Where conditions permit, Train Dispatcher/Control Operator must transmit the “control code” that corresponds with the field position of the switch and/or signal in “code fail” lined by C&S personnel.

When C&S personnel in the field have lined the route and cleared the signals, changes must not be made until the movement is complete and trains have cleared the limits. If necessary to change the route and/or signal that has been lined from the field, the Train Dispatcher/Control Operator must first contact the Engineer on the affected train and inform him/her of the intended change. The signal must not be changed until the Engineer has advised the Train Dispatcher/Control Operator that the train is stopped short of the governing home signal at the location of the “code fail.”

443-1. JOINT TRACK AUTHORITY

When a Control Station is authorizing working limits, which require joint authority with another Control Station, the following procedure applies:

1. Before authorizing working limits, the issuing Control Station must:

(a) Contact the joint Control Station for the track section involved.

(b) Advise the joint Control Station of the requested working limits and track designation in multiple track territory.

(c) Provide the joint Control Station with the issuing Control Station's authority number.

(d) Request protective blocking from the joint Control Station for the specified track segment.

(e) Receive and record authority number from the joint control station.

(f) Repeat all information to the joint Control Station for correctness.

2. To clear joint authority, the issuing Control Station must:

(a) Contact the joint Control Station and advise that the track segment has been reported clear.

(b) Repeat to the joint Control Station their authority number.

(c) Notify the joint Control Station that the protective blocking may be removed.

(d) Repeat all information to the joint Control Station for confirmation.

Joint Track Authority will be required whenever the Control Station cannot block out the involved track section. The Control Station issuing the authority must provide the Operator or person responsible for the On-Track equipment both authority numbers.

These instructions are in addition to current NS Operating Rules applicable to authorizing working limits.

444-1. PROTECTING PASSENGER TRAINS

Passenger Train Movements

The Train Dispatcher/Control Operator must maintain at least one (1) unoccupied block between passenger trains and non-passenger trains.

Anytime following movements involve passenger and non-passenger trains, the Train Dispatcher/Control Operator will notify the Engineer of the following train. When notified, the following train must not occupy the same block or have overlapping limits with the train ahead.

EXCEPTIONS:

1. **Train Meets**
   During train meets, trains may be authorized to occupy the block provided one (1) of the trains is stopped and the Engineer has confirmed that their train will remain stopped until the opposing train has passed.

2. **Emergencies**
   During emergencies, trains may be authorized to occupy the same or overlapping limits with a passenger train provided all train movements are made at Restricted Speed within the overlapping limits.

NOTE: These restrictions do not apply to:

1. Passenger trains operating on the Chicago Line.
2. Passenger trains switching at terminals.
3. Trains equipped with operative cab signals when operating in Cab Signal (CSS) territory.

448-1. TRACK OCCUPANCY LIGHTS (TOL)

The Train Dispatcher/Control Operator must promptly notify the Signal Maintainer or other authorized employee when one of the following conditions exists:

- Track Occupancy Light(s) which is unexplained
- Track Occupancy Light(s) that remains on behind a train
- Track Occupancy Light(s) that remains on after track or signal work
- signal(s) which is functioning erratically

NOTE: When a signal is functioning erratically, trains or engines will be governed by the most restrictive indication that can be displayed by the signal. (A signal is functioning "erratically" when the signal aspect changes from one indication to another indication more than once as viewed from the direction of the approaching train or engine.)

Trains or engines may be permitted to proceed in accordance with the signal indication when a Track Occupancy Light (TOL) clears prior to the arrival of and inspection by the designated employee. If a train or engine arrives at the affected block prior to the arrival of a Signal Maintainer or other responsible employee, the Train Dispatcher/Control Operator may authorize the train or engine to proceed in accordance with current NS Operating Rules.

After the arrival of the Signal Maintainer or other authorized employee, the Train Dispatcher/Control Operator must afford the employee a reasonable period of time to:

- make an inspection to determine the cause for the Track Occupancy Light(s)
- take corrective action

Before authorizing a train or engine to enter the affected block.

If the TOL(s) clears before the arrival of the responding employee, the employee still must conduct an inspection to determine the cause of the Track Occupancy Light(s).

The Train Dispatcher/Control Operator must maintain a written record on the train sheet pertaining to each event. The required information to be recorded includes the:

- date and time
- location and track designation
- name of responding employee
- nature of the problem
- corrective action taken

448-2. TRACK LIGHTS LEFT BEHIND TRAINS

In territory governed by **Rule 261**, anytime a train or engine leaves on two (2) consecutive track lights or two (2) track lights within 25 miles, the train or engine must be stopped and inspected. The Signal Maintainer must be notified immediately.

501-1. RADIOS — AAR CHANNELS

When using "All Channel" radios, the following AAR channels are authorized:

FREQUENCY	AAR (TX) TRANSMIT CHANNEL	AAR (RX) RECEIVE CHANNEL
SOU 1-Road	56	56
SOU 2-Dispatcher	48	09
NW 1	72	72
NW 2	76	76
NW 3	22	22
CR 1-Road	46	46
CR 2-Road	64	64
CR 3-Road	50	50
CR 4-Road	58	58

When operating on foreign railroads, it will be necessary to consult the governing Foreign Line Timetable or Special Instructions to determine the AAR transmit and receive channels for the road.

Transmitting on unauthorized channels is a violation of Federal Law and is prohibited.

501-2. RADIO — FIELD EMERGENCY SITUATIONS

When an emergency situation arises, an employee will transmit **9-1-1** from the keypad of a locomotive radio (or other dial-pad-equipped radio) which will transmit an "EMERGENCY" call to the Train Dispatcher/Control Operator. This emergency indication will be immediately displayed on all Train Dispatcher/Control Operator screens which display the activated base station(s). When the Train Dispatcher/Control Operator receives the 9-1-1 call on the monitor, console audio is also triggered allowing immediate access to the Train Dispatcher/Control Operator who must immediately respond.

501-3. TAXI AND RELIEF CREWS — COMMUNICATIONS

When crews are called for Relief Crew service or to deadhead (taxi) from one location to another, Conductors must leave their railroad radios on and tuned to the appropriate channel unless the taxi providing service is equipped with an operable radio to receive and transmit on the railroad channel. This will allow the Train Dispatcher/Control Operator or other designated employee to contact the crew, if necessary. This will not be required of a crew that has been relieved due to the Hours of Service Law.

588-1. MOVEMENT OF CARS ON GOVERNMENT BILLS OF LADING

When cars moving on Government bills of lading annotated:

AS — ARMED GUARD SERVICE
DC — DOD CONSTANT SURVEILLANCE
TK — TANK SURVEILLANCE SERVICE
RS — RAIL SURVEILLANCE SERVICE

are set off between terminals other than at final destination, seals must be inspected and seal numbers recorded on the waybill. Also, the Chief Dispatcher must be notified by the quickest available means of communication and furnished the car initials, number, location of set off, and seal numbers.

Any exceptions such as broken or missing seals must be reported in the same manner. Chief Dispatcher must immediately notify NS Police Department.

752-1. LARGE SCALE PRODUCTION WORK

When Rail Gangs, Timbering and Surfacing Gangs, Surfacing Gangs, or Program Ballast trains (continuously unloading) are to work on a main track in multiple track territory, the Foreman or Supervisor must contact Chief Dispatcher at least 12 hours in advance, advising: (1) track to be used by MW&S forces, (2) date and time work is to be performed, and (3) work limits (must begin and end at specified mileposts).

If authorized speed on track(s) immediately adjacent to MW&S forces is greater than 25 MPH, the Chief Dispatcher will arrange for issuance of a 25 MPH slow order to be in effect only when passing work limits during specified time period. Restriction will have been complied with when leading end of train or engine reaches end of work limits, or when notified by MW&S Foreman or a supervisor that leading end has passed entire work gang. Engine Whistle Signal 14(p) and bell must be sounded when approaching and passing work limits.

752-2. WORK THAT MAY SHUNT TRACK CIRCUITS

Within working limits, when necessary to perform work that may shunt track circuits, permission must first be obtained from the Train Dispatcher/Control Operator.

1018-1. GATES ACROSS TRACKS

Gates across tracks must be equipped with proper fasteners (hooks, latches, or chains). Gates that cannot be properly secured in the open position must be reported immediately, and cars or engines will not enter until repairs are made.

1070-1. TBCX FLAT CARS

Employees are prohibited from mounting, dismounting or riding cars in series TBCX 76702 through TBCX 76710 which are modified flat cars containing a covered housing for transporting aircraft parts.

If necessary to set these cars out, another car with an operating hand brake must be set out with it.

1070-2. BRIDGES — STOPPING ON

When locomotive consist of a train stops on a bridge, the Engineer will inform all other crew members of the fact and advise them to take caution when dismounting.

1110-1. SWITCHES — OUT OF SERVICE

When a switch is taken out of service by Engineering Department employees for any reason, in addition to the switch being spiked or clamped, a “switch out of service tag” will be placed on the lock, latch, or handle.

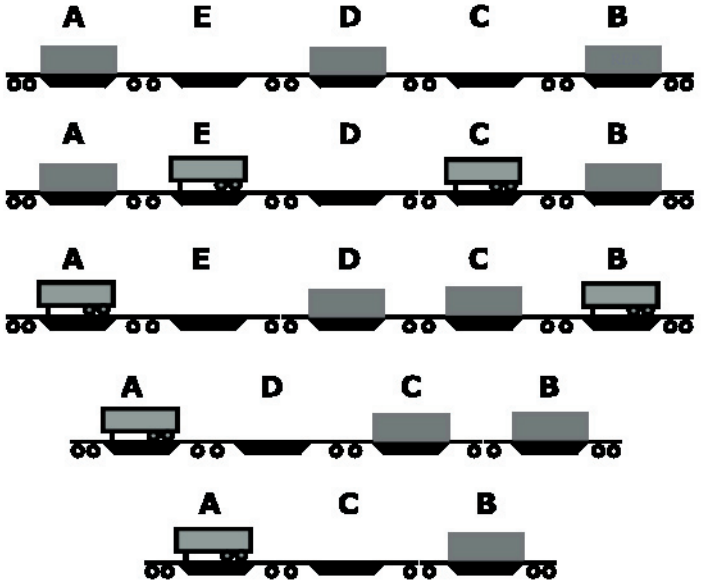
There are two (2) types of tags: one is black on orange, and the other is black on yellow.

Employees observing a tag on a switch that needs to be used, do not operate the switch, and contact the proper authority for further instructions.

APPENDIX 1

LOADED MULTI-PLATFORM STACK/SPINE CAR CONFIGURATIONS

Shown below are examples of container/trailer loading configurations that would be considered a loaded car. This applies to both stack and spine cars. The containers/trailers can be loaded or empty. (The configurations shown below are in addition to all platforms being loaded.)



APPENDIX 2

HAND-HELD AIR GAUGE ACCURACY LOG

DATE (Verify if over 90 Days)	LOCOMOTIVE BRAKE PIPE PRESSURE	HAND GAUGE PRESSURE	DIFFERENCE (Must be within +/- 3 PSI)

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NOTES

NOTES

Our NS Goal-No Damage