

## BNSF Safety Vision

We believe every accident or injury is preventable. Our vision is that Burlington Northern Santa Fe will operate free of accidents and injuries. Burlington Northern Santa Fe will achieve this vision through:

**A culture** that makes safety our highest priority and provides continuous self-examination as to the effectiveness of our safety process and performance ...

**A work environment**, including the resources and tools, that is safe and accident-free where all known hazards will be eliminated or safe-guarded ...

**Work practices and training** for all employees that make safety essential to the tasks we perform ...

**An empowered work force**, including all employees, that takes responsibility for personal safety, the safety of fellow employees, and the communities in which we serve.

**BNSF**



## System Special Instructions

### All Subdivisions No. 5

IN EFFECT AT 0001

Central, Mountain and  
Pacific Continental Time

**Sunday, October 10, 1999**

## Table of Contents

1.	Speed Restrictions .....	3	16.	General Code of Operating Rules, Supplemental Instructions .....	24
1(A).	Control of Harmonic Rocking on Jointed Rail ....	3	17.	Maintenance of Way Operating Rules, Changes and Additions .....	25
1(B).	Speed—Main Tracks .....	4	18.	Air Brake and Train Handling Rules, Changes and Additions .....	25
1(C).	Speed Restrictions—Tonnage .....	4	19.	Safety Rules, Changes and Additions .....	25
1(D).	Maximum Speed of Engines .....	4	20.	Train Dispatcher's, Operator's and Control Operator's Manual, Changes and Additions .....	26
1(E).	Intermodal Equipment TOB/Car Count and Speed Restriction .....	4	21.	Hazardous Material Instructions, Changes and Additions .....	28
2.	Locomotive Restrictions .....	5	22.	Engineering Instructions, Changes and Additions .....	28
2(A).	Helper Operations .....	5	23.	Automatic Cab Signals .....	30
2(B).	Locomotive Data Tables .....	5	24.	Verification of Rules Examination .....	30
2(C).	TFM Locomotives .....	7	25.	Document Notation .....	30
3.	Equipment Restrictions .....	7	26.	FRA Random Drug Testing .....	30
3(A).	Multi-Platform and Stack Intermodal Cars .....	7	27.	Roadway Signs .....	30
3(B).	Rotary/Rapid Discharge Coal Cars .....	7	28.	Cars Setout Bad Order .....	31
3(C).	Trough Cars—BN 552000 through BN 552022 (13-section articulated coal cars, 278 ft. long) ...	7	29.	Grade Crossing Accidents .....	31
3(D).	V-Slope Flat Cars .....	8	30.	System Work Train Policy .....	32
3(E).	Two-Axle Cars .....	8	31.	Track Condition Messages .....	32
3(F).	Radio Controlled Ballast Cars .....	8	32.	Securing Track Warrants .....	32
3(G).	Air Dump Cars .....	8	33.	Excessive Wind, Tornado and Earthquake Instructions .....	32
3(H).	Caboose Placement .....	9	34.	Engineer Training Assistance Hotline .....	33
3(I).	GREX Ballast Car Restrictions .....	9	35.	Duplicate Mile Posts .....	33
4.	Air Repeater Operation .....	9	36.	Handling Business Cars in Train .....	33
5.	Car Restrictions .....	9	37.	Instructions for Handling Continuous Rail .....	34
6.	Work Order: Instructions for Reporting Work .....	10	38.	Handling of FRA T-10 Car .....	35
7.	Dimensional and Special Shipment Restrictions .....	12	39.	Rail Detector Cars .....	35
8.	Trackside Warning Devices (TWD) .....	12	40.	KNORR CCB Electro-Pneumatic Automatic Brake Valves and ABDX Control Valves .....	36
8(A).	Description .....	12	41.	Rear End Restricted Cars .....	36
8(B).	Detector Radio Message .....	12	42.	Car Identification B-End .....	36
8(C).	Detector Message and Train Crew Action .....	12	43.	Gravity Switch Moves .....	36
8(D).	Radio Tone Only Detectors .....	13	44.	Signal Awareness Form .....	36
8(E).	Train Inspection .....	14	45.	Report of Unsafe Motorist/Trespasser .....	37
8(F).	Testing Bearing Temperature .....	14	46.	Network Operations Center Notification Requirements .....	37
8(G).	Consecutive Alarm Messages .....	14	47.	Special Car Handling Instructions .....	37
8(H).	Alarms Indicated on Locomotive or Caboose ....	14	48.	Geometry Test Car Instructions .....	39
8(I).	Special Conditions .....	15	49.	Operations Testing .....	39
8(J).	High Water Detectors .....	15	Division Index .....	40	
8(K).	Slide Detectors .....	15	Subdivision Index .....	42	
8(L).	Exception Reporting Detectors .....	15	Changes from System Special Instructions No. 4 .....	44	
9.	Amtrak Instructions .....	15			
10.	Storage of Cars Within Yard Limits In Non-Signaled Territory .....	16			
11.	Shunting the Track .....	16			
12.	Turnouts Equipped with Two Switch Machines (Moveable Point Frogs/Swing Nose Frogs) .....	16			
13.	In Effect on Burlington Northern Santa Fe Railway ....	16			
14.	General Code of Operating Rules, Changes and Additions .....	16			
15.	General Code of Operating Rules, BNSF Version No. 1, Changes and Additions .....	24			

In the individual division timetables, the number at the bottom of the schedule column entitled "Miles to Next Station" indicates total miles on the subdivision.

**1. Speed Restrictions**

All speeds are subject to modification by speed restrictions indicated under individual subdivision special instructions.

Passenger trains will be governed by freight train speed if passenger train speed is not specified under individual subdivision special instructions.

Unless defined differently in the individual subdivision special instructions, tons per operative brake (TOB) is defined as the gross trailing tonnage of the train divided by the total number of control valves.

**Maximum Speeds Permitted**

Freight trains up to 100 TOB .....	60 MPH.
Trains 100 TOB and over .....	45 MPH.
Exception: This does not apply where " % " is shown with speed in Individual Subdivision Special Instruction 1(A).	
Trains handling empty cars, except when comprised entirely of passenger/commuter equipment (See 1(E) regarding empty intermodal equipment) .....	55 MPH.
Key trains .....	50 MPH.
Key trains on sidings .....	10 MPH.
Trains moving in non signaled territory .....	49 MPH.
Trains moving against current of traffic .....	49 MPH.
Solid consist of military equipment .....	55 MPH.
Locomotives equipped with friction bearings .....	35 MPH.
On sidings .....	20 MPH.
Trains and engines through turnouts .....	10 MPH.
On tracks other than main tracks and sidings .....	10 MPH.
Trains operating with lead controlling	
CN (Canadian National) locomotives .....	65 MPH.
Within Mechanical Department limits .....	5 MPH.
Movements on or off turntables .....	1 MPH.
Trains with welded rail in open end gondolas .....	35 MPH.

<b>Equipment</b>	<b>Main Line</b>	<b>Branch Line</b>
Roadrailer equipment .....	60 MPH.	60 MPH.
Flat cars, empty, NP 580400-580739 .....	50 MPH.	50 MPH.
Flatcars OTTX 90000-97955 (loaded or empty) .....	45 MPH.	45 MPH.
Gondolas: empty cars picked up enroute and not on conductor's wheel report or work order .....	50 MPH.	50 MPH.
Gondolas: loaded and empty		
PC 598500 through 598999,		
CR 598500 through 598990 or		
SP 345000 through 345699 .....	45 MPH.	45 MPH.
Gondolas: empty KCS 801011 through 802930, EJE 4000 through 4999 and CR 576026 through 579245 .....		
	45 MPH.	45 MPH.
Empty bulkhead flatcars picked up enroute and not on conductor's wheel report or work order .....		
	45 MPH.	45 MPH.
Empty bulkhead wallboard flatcars:		
BN 616475 through 616674,		
CS 616375 through 616474 and		
SOU 115250 through 115274 .....	45 MPH.	45 MPH.
Air dump cars, loaded .....	45 MPH.	45 MPH.
Clay Cars, RARW 3801-4199 .....	45 MPH.	45 MPH.

Scale test cars ..... 35 MPH. .... 25 MPH.  
 Exception: Scale test cars listed below have a minimum gross weight of 100,000 pounds and may move in any position in the train and at maximum authorized speed for which train is qualified:

WWBX 199917	MP 15510	UP 900700
WWBX 199918	MP 15511	UP 903600
WWBX 199919	MP 15512	BN 979019-979024
MP 15507	UP 167579	BN 979026-979036

Ribbon rail cars, (loaded) ..... 35 MPH. .... 25 MPH.  
 Ribbon rail cars, (empty) ..... 45 MPH. .... 45 MPH.  
 Wedge plow or dozer, hauled in tow ..... 35 MPH. .... 25 MPH.  
 Rotary plow, wrecking derrick, locomotive crane, pile driver or Jordan spreader, handled in trains .....

30 MPH. .... 25 MPH.  
 Exception: Locomotive cranes/pile drivers AT 199454 through AT 199468 may be handled in trains at a maximum of 45 MPH. Trains or engines handling this and similar equipment which is moving on its own running gear must operate through the curved side of turnouts at a speed not exceeding one-half the maximum authorized speed for that turnout.

Locomotive cranes, wrecking derricks and other types of heavy work equipment must not be operated on any subdivision designated as a branch line unless authorized by dispatcher and roadmaster or covered by specific instructions.

The following equipment when handled in trains will be handled on rear end of train only, and is subject to the following maximum speeds:

Kershaw .....	45 MPH.	45 MPH.
Plasser Machines .....	45 MPH.	45 MPH.
P 811 .....	45 MPH.	45 MPH.
Loram .....	45 MPH.	45 MPH.

When moving coupled with maintenance of way tool cars, they must remain coupled to such cars.

Tank cars ACFX 17451 through 17495 .....	45 MPH.	45 MPH.
Tank cars NATX 10841 through 10865 .....	45 MPH.	45 MPH.

Tank cars:

DVLX 4001 through 4190 and the following UTLX cars:		
76517	76742 thru 76745	78287 thru 78293
76539	76747	78326
76556	76748	78328 thru 78333
76558	76750	78336 thru 78340
76568	76751	78343
76595	78256 thru 78269	78344
76649	78272	78347
76656	78274	78348
76696	78278	78350
76733	78281	78353
76736 thru 76738	78285	40 MPH. .... 40 MPH.

EMPTY Schnabel type cars:

APWX 1004	GEX 40010, 80002, 80003
BBCX 1000	GPWX 100
CAPX 1001	HEPX 200
CEBX 100, 101	KWUX 10
CPOX 820	WECX 101, 102, 200-203, 301
CWEX 1016 .....	40 MPH. .... 40 MPH.

All Schnabel cars listed above must be handled on or near the rear of trains not exceeding 100 cars in length, must not be handled in trains requiring pusher service and must not be humped or switched with motive power detached.

Hopper cars WFAH 84654 through 84700 .....	45 MPH.	45 MPH.
Flatcars ATSF 190298, 209144, 209149, loaded with track panels .....	35 MPH.	35 MPH.

**1(A). Control of Harmonic Rocking on Jointed Rail**  
 Under certain conditions, operation of trains between 13 MPH and 21 MPH can cause derailments due to harmonic rocking of cars. Where specified by individual subdivision special instructions or general order, the following restrictions apply when operating on jointed rail:

Freight trains, other than coal trains, ore trains, or trains consisting entirely of empty equipment, which cannot maintain a minimum speed of 21 MPH, must reduce speed to 13 MPH or less until movement can again exceed 21 MPH.

**1(B). Speed—Main Tracks**

Unless otherwise restricted, when authorized by Individual Subdivision Special Instruction 1(A) by an asterisk (\*) in the freight column, the maximum speed for freight trains is 70 MPH provided:

1. Train does not contain empty car(s). Refer to Rule 1(E) for determining speed for multiplatform, intermodal equipment.
2. Train does not exceed 8,500 feet.
3. Train does not average more than 80 TOB.
4. Engineer can control speed to 70 MPH without use of air brakes.

(If unable to control speed to 70 MPH on long descending grades, two additional attempts are allowed to control speed with dynamic brake at slower speeds before speed must be reduced to 55 MPH while negotiating descending grade.)

**Exceptions**

Trains consisting entirely of intermodal equipment:

- Same as above except train must not average more than 90 tons per operative brake under item (3).

Trains consisting entirely of loaded double-stack equipment:

- Same as above except train must not average more than 105 tons per operative brake under item (3).

**Note:** Double stack exception does not apply on the following subdivisions: Newton, La Junta, Raton, Glorieta, Needles, Mojave, Bakersfield and Stockton.

Trains operating with solid double stack equipment only, may use a maximum of 32 axles of dynamic braking per engine consist.

**1(C). Speed Restrictions—Tonnage**

Where indicated by individual subdivision special instruction Item 1(A) by a pound sign (#) in the freight column, the maximum speed for freight trains is 45 MPH when:

1. Train exceeds 10,000 feet; or
2. Train averages 90 TOB or more.

**1(D). Maximum Speed of Engines**

Engines	MPH	When not controlled from leading unit (MPH)
Amtrak	90*	45
Metrolink	90*	45
Metra	79*	45
All other classes	70	45

**Exception:** When the controlling locomotive of the train is a car body type or has comfort design cab and is in the backing position, maximum speed is 45 MPH.

\*Engine without cars must not exceed 70 MPH.

**1(E). Intermodal Equipment TOB/Car Count and Speed Restriction**

TSS Car Kind Codes	Car Description	Units or Segments	Maximum Car Length	Axle Count	Control Valves and/or Car Count	Trailers=T Containers=C Either=T/C
Articulated cars						
QY	Doublestack	Five	308 ft.	12	3	C
QV	Doublestack	Three	190 ft.	8	2	T/C
QM	Spine Car	Three	189 ft.	8	2	T/C
QC	Spine Car	Three	189 ft.	8	2	T
QO	Spine Car	Five	291 ft.	12	3	T/C
Q5	Spine Car	Five	291 ft.	12	3	C
QE	Spine Car	Five	291 ft.	12	3	T
Non-Articulated Cars *						
QW	Doublestack	Three	215 ft.	12	3	T/C
QX	Doublestack	Four	286 ft.	16	4	T/C
QT	Doublestack	Five	359 ft.	20	5	C
QB	Twin Flats	Two	186 ft.	8	2	T
QD						
QL	Twin Flats	Two	186 ft.	8	2	T/C
QDE	Front-Runner	Four	188 ft.	8	4	T
Single Unit Intermodal Cars						
QU	Doublestack	One	80 ft.	4	1	T/C
QA	Front-Runner	One	51 ft.	2	1	T

**Car Kind Codes**

Car kind codes are usually 3 characters. On intermodal cars shown above, only the first two characters are required to identify car type, with one exception (QDE).

**Definitions of Multiple-Unit Equipment**

*Articulated*—Refers to cars with multiple units (segments) that are connected with an articulated couplings that share a common truck.

*Non-Articulated*—Refers to cars with multiple units (segments) that are connected with solid drawbars. Each unit is a stand-alone unit and does not share a common truck with another unit.

**Tons Per Operative Brake (TOB)**

Tons per operative brake on cars above are determined by dividing the number of control valves/car count into the weight of the car. This can be determined without inspection as follows:

Articulated cars = total number of units divided by two, rounded up to next number divided into total weight of the car.

(Example: five unit doublestack, Car kind code QY=3 by car count)

Non-articulated cars = total number of units divided into weight of car.

(Example: Four Unit doublestack Car Kind Code QX=4 by car count)

**Speed**

In order to limit truck hunting, trains must not exceed 55 MPH unless all cars in train are loads. Caboosees and any car loaded with container chassis are considered loads for the purpose of the rule.

*Articulated Cars*—Articulated spine cars (Car kind Codes QM, QC, QO, Q5, QE) are considered loads if it can be determined that car is loaded with at least one empty or loaded, container or trailer. Due to the load bearing characteristics of shared trucks on articulated cars, truck hunting is limited even when such cars have empty units. Empty articulated doublestack cars

(Car Kind Codes QY or QV) may operate at maximum authorized speed when completely empty due to constant contact side bearings which prevent truck hunting.

\* *Non-Articulated Cars*—Non-articulated cars (Car Kind Codes QW, QX, QD, QB, QL, QT and QDE) are restricted to 55 MPH unless each unit is loaded with an empty or loaded trailer or container. These cars do not share a common truck and empty units are subject to truck hunting as with any empty, conventional car. (This may require a review of train documentation to determine). Non-articulated, Twin Flats (TTEX, FEC and CN) can be loaded with three 48'-57' or four 45' or shorter trailers. When loaded with three trailers, trailer can straddle the drawbar. Each unit must be loaded with all or one-half of a trailer to be considered loaded for movement at speeds greater than 55 MPH. (More than 90' of total trailer length shown on train documentation indicates each unit is loaded or the car must be visually inspected.)

**2. Locomotive Restrictions**

The powered axle rating of a locomotive consist must not exceed 36.

**Hauled-In-Tow**

The number of locomotives hauled-in-tow, regardless of placement in train, must not exceed two times the number of locomotives coupled for MU operation.

Locomotives not coupled to the head end, or helper consist, must have the Dead Engine Feature cut in and if possible be placed not more than 15 cars from the head end consist.

**2(A). Helper Operations**

Placing helpers behind caboose is prohibited unless using coupler lock blocks. When helpers shove against caboose, employees are prohibited from occupying that caboose.

**Helper Restrictions**

Unless individual subdivision special instructions specify otherwise, the following powered axle limitations apply to each helper consist at the rear of the train: (Use Locomotive Data Table to determine powered axle ratings)

- All trains—12 powered axle rating, or less
- Solid, loaded bulk commodity trains—24 powered axle rating, or less
- (Coal, grain, potash, taconite, molten sulphur, etc.)

**Note:** Helper locomotive consist exceeding powered axle rating above must be cut in at least 300 tons per additional powered axle from the rear of the helped train, but no closer to the head end than mid-train.

**Helper tractive effort restrictions when shoving against empty or light cars**

Any helper consist at the rear of a train exceeding a powered axle rating of 6 must not shove against any car weighing less than 45 tons or empty units of a multi-platform car within 10 cars and/or units of the helper consist. If more than 6 powered axles of tractive effort needed to help train with cars less than 45 tons or empty units within rear 10 cars/units of rear of train, helper consist must be entrained 300 tons for each additional powered axle rating above 6.

**Exception:** If helpers are not entrained as outlined above, limit tractive effort as follows:

- 6 rated powered axles or less—No restriction
- 8 rated powered axles—1050 amps
- 10 rated powered axles—950 amps
- 12 rated powered axles—900 amps

**Note:** When helping with AC locomotives as outlined above, limit tractive effort to 100,000 lbs. by utilizing tractive effort gauge of controlling locomotive and multiplying by number of AC locomotives in consist. Example: Lead controlling AC locomotive of a two-unit AC locomotive consist should not indicate more than 50,000 lbs. shoving against light cars as outlined above.

**Distributed Power**

Distributed Power remote consist(s) placement will be determined by dispatcher or local supervision.

**2(B). Locomotive Data Tables**

The table below shows the current Santa Fe and BN engine numbers and the new BNSF numbers when engines are renumbered.

The following tables will be used for determining power and dynamic brake axles limitations for conventional, helper and distributed power operation:

Former Santa Fe	BN	BNSF	Type	Make	Weight	Horse-Power	Axles & DB Type	Power-Axle Rtg.	DB Axle-Rtg.
	3300	3300	SW1	EMD	198,000	600	4-NONE	4	0
	375-585	3600-	SW10	EMD	250,000	1,000	4-NONE	4	0
	5	3310	NW12	EMD	252,000	1,200	4-NONE	4	0
	171-255	3500-3546	SW12	EMD	250,000	1,200	4-NONE	4	0
	20-65, 300-324	3400-3470	SW15	EMD	262,000	1,500	4-NONE	4	0
	1000-1004	3700-3704	GP15	EMD	261,000	1,500	4-NONE	4	0
1200-1201		1200-1201	MK 1200G	MK	250,000	1,200	4-NONE	4	0
1460		1460	SWBL-W	EMD	262,500	1,500	4-NONE	4	0
2000-2241		1299-1375	GP7	EMD	249,000	1,500	4-NONE	4	0
2244-2299	1702-1977	1600-1684	GP9	EMD	259,000	1,750	4-NONE	4	0
	600-604	1700-1703	GP9B	EMD	248,000	1,750	4-NONE	4	0
	1400-1438	1400-1438	GP10	EMD	260,000	1,800	4-NONE	4	0
	1375-1399	1475-1499	GP15, GP15-1	EMD	258,000	1,500	4	4	
	1955	1955	GP18	EMD	248,000	1,800	4	4	
3000-3066	2048-2063	2000-2059	GP20	EMD	261,000	2,000	4BT	4	4
	1500-1599	1500-1599	GP28 M/P	EMD	260,000	1,800	4BF	4	4
2700-2779		2400-2477	GP30	EMD	262,900	2,500	4BT	4	4
2801-2954		2500-2649	GP35	EMD	266,000	2,500	4BT	4	4
2300-2380	2060-2369	2075-2382	GP38, GP38-2	EMD	285,000	2,000	4ET	4	4
3400-3704	2700-2984	2700-2985	GP39, GP39-2	EMD	270,000	2,300	4EF#	4	4
	3500-3554	3000-3029	GP40M GP40E	EMD	278,000	3,000	4BF	4	4
3800-3809	3040-3064	3030-3064	GP40-2 GP40X	EMD	278,000	3,000	4BF	4	4
3810-3854		3163-3207	GP50	EMD	275,000	3,600	4EF	4	4
	3100-3162	3100-3162	GP53, GP53L	EMD	272,000	3,000	4EF	4	4

Former Santa Fe	Former BN	BNSF	Type	Make	Weight	Horse-Power	Axles & DB Type	Power-Axle Rtg	DB Axle-Rtg.
6350-6419	MNCW 801-807	4200-4276	B23-7	GE	268,000	2,250	4EF	4	4
	4000-4119	4000-4119	B30-7A	GE	275,000	3,000	4BF	4	4
	6100-6246	6100-6199	SD9	EMD	368,000	1,750	6	6	6
	6260-6270	6260-6270	SC38P	EMD	391,000	2,000	6BF	6	6
	6289-6299	6289-6299	TEBC6	EMD	387,000	2,000	6B	6	6
1556-1575		6200-6219	SD39	EMD	389,000	2,500	6EF	6	6
5000-5267	6300-6399 6700-8181	6300-8181	SD40 SD40-2	EMD	391,500	3,000	6EF#	6	6
5325-5437 5800-5975		6400-6516	SD45 SD45-2	EMD	395,000	3,600	6ET	6	6
90-98		90-98	SDFP4-5	EMD	395,000	3,600	6ET	6	6
8099-8166	5000-5141 5500-5599	5000-5209 5500-5599	C30-7	GE	417,000	3,000	6EF#	6	6
9508-9568		5220-5222	SF30C	GE	319,500	3,000	6EF	6	6

# BN or BNSF locomotives with green paint scheme in this class have basic dynamic brakes instead of extended range as shown.

**Leased Locomotives**

Leased Locomotives	Type	Make	Weight	Horse Power	Axles & DB Type	Power Axles	DB Axles
LMX 8500-8599	B39-8	GE	280,000	3,900	4EF	4	6
OWY 9000-9599	SD60	EMD	401,000	3,800	6EF	6	8
EMD 741-838	GP38E	EMD	285,000	2,000	4ET	4	4
EMD 6402-6430	SD40E	EMD	391,500	3,000	6EF	6	6
GATX 1237-1245	SD38-2	EMD	391,000	2,000	6EF	6	6
GATX 7349-7378	SD42G	EMD	415,000	3,000	6BF	6	6
EMD 2000-6382	SD42E	EMD	415,000	3,000	6BF	6	6
HLCX 3621-3695	GP38	EMD	262,000	2,000	4EF	4	4
HLCX 3700	GP38-2	EMD	265,000	2,000	4ET	4	4
HLCX 4291	GP40-2	EMD	265,000	2,000	4BT	4	4
HLCX 6056-6625	SD40-3	EMD	410,000	3,000	6EF	6	6
HLCX 6600	SD45-2	EMD	395,000	3,600	6EF	6	6
LRCX 5490-5491	B30-7	GE	275,000	3,000	4BF	4	4
LRCX 5501-5506	C30-7	GE	388,000	3,000	6BF	6	6
LRCX 7771-7773	B36-7	GE	274,000	3,600	4BF	4	4

LRCX 8099-8119	C307A	GE	395,000	3,000	6BF	6	6
LRCX 8149	C307	GE	395,000	3,000	6BF	6	6
LRCX 9508-9568	SF30C	GE	395,000	3,000	6BF	6	6
NREX 966-970	GP20	EMD	257,000	2,000	4NN	4	0
NREX 2041	SD20	EMD	391,000	2,000	6NN	6	0
NREX 2601-2602	GP26	EMD	255,000	2,250	4NN	4	0
NREX 2776	GP38	EMD	265,000	2,000	4EF	4	4
NREX 3065	SD40	EMD	391,000	3,000	6EF	6	6
NREX 3076	GP40	EMD	270,000	3,000	4BF	4	4
NREX 3107	SD40	EMD	391,000	3,000	6EF	6	6
NREX 3140	GP40	EMD	270,000	3,000	4BF	4	4
NREX 3186	SD40	EMD	391,000	3,000	6EF	6	6
NREX 5487-5488	B30-7	GE	275,000	3,000	4EF	4	4
NREX 5509	C307	GE	413,000	3,000	6EF	6	6
NREX 6564	SD40	EMD	391,000	3,000	6EF	6	6
NREX 6634	SD18	EMD	300,000	2,000	6NN	6	0
NREX 7200	GP40X	EMD	270,000	3,000	4EF	4	4
NREX 8147	C307	GE	413,000	3,000	6EF	6	6
NREX 9323	SD45-2	EMD	395,000	3,600	6ET	6	6
NREX 9450	SD28	EMD	391,000	2,000	6NN	6	0
NREX 9503-9561	SF30C	GE	395,000	3,000	6EF	6	6

**High Horsepower Locomotives with High-Capacity Dynamic Brakes (3800HP+)**

Former Santa Fe	Former BN	BNSF	Type	Make	Weight	Horse Power	Axles & DB Type	Power Axle Rtg	DB Axle Rtg.
500-582		500-582	B40-8W	GE	288,000	4,000	4EF	4	6
100-162		100-162	GP60M	EMD	274,500	3,800	4EF	4	6
325-347		325-347	GP60B	EMD	270,000	3,800	4EF	4	6
	9200-9299	9200-9299	SD60M	EMD	401,000	3,800	6EF	6	8
200-250 8251-8275		8200-8301	SD75M	EMD	394,000	4,300	6EF	6	8
800-951		800-951	C40-8W	GE	394-200	4,135	6EF	8	8
600-699		600-699 960-1123	C44-9W	GE	392,000	4,400	6EF	8	8
4000-4039			GP60	EMD	274,500	3,800	4EF	4	6
7410-7499		8600-8639	B40-8	GE	283,000	4,000	4EF	4	6
		700-799 47004-799	C44-9W	GE	415,000	4,400	6EF	8	8

**Note:** For locomotives above, cutting out traction motors reduces power axle rating a like amount. Cutting out traction motor(s) on above DC locomotives nullifies dynamic brake.

**AC Traction Locomotives**

Type	Make	Weight	Horse-Power	Axles & DB Type	Power Axle Rating	Dynamic Brake Axle Rating
CW4400AC	GE	408,000	4,390	6EF	11	9
1 TM c/o					11	8
2 TM c/o					11	6
3 TM c/o					5	5
4 TM c/o					4	3
5 TM c/o					2	2
CW6000AC	GE		6,000	6EF	12	11
1 TM c/o					12	9
2 TM c/o					8	7
3 TM c/o					6	5
4 TM c/o					5	3
5 TM c/o					3	2
SD70MAC	EMD	415,000	4,000	6ET	11	8
1 truck c/o					5	5
SD80MAC	EMD		5,000	6EF	12	9
1 truck c/o					6	6
SD90MAC	EMD		6,000	6EF	13	10
1 truck c/o					7	7
SD90MAC	EMD		4,300	6EF	11	8
1 truck c/o					5	5

**Dynamic Brake Types**

- E = Extended Range
- B = Basic Range
- F = Flat or grid control
- T = Taper or speed control

**AC Locomotives**

EMD AC traction locomotives have a single inverter per truck, therefore, individual trucks are cut out when troubleshooting or when limiting power or dynamic brake axles.

GE AC locomotives have one inverter per axle and can have individual traction motors cut out as with a DC locomotive.

**Note:** Unlike DC locomotives, dynamic brake is still operative with traction motors or a truck cut out on AC locomotives.

The table is to be used to determine appropriate rating of power axles/dynamic brake axles with traction motors/trucks cut out.

**2(C). TFM Locomotives**

TFM 1505 through 1515 must not be used as the lead locomotive in an engine consist.

**3. Equipment Restrictions**

The following equipment must be placed next ahead of caboose or at rear of cabooseseless trains, except in work trains, unless otherwise indicated in the individual subdivision special instructions.

- Outfit cars (Exception: Univans may be placed anywhere in the train.)
- Pile drivers
- Locomotive cranes
- Empty ribbon rail cars
- Rear end only cars
- Jordan spreaders
- Rotary snowplows
- Wedge plows
- Dozers

Except as provided in Item 1, scale test cars must be placed ahead of caboose or, on cabooseseless trains, ahead of the last car.

Scale test cars must not be humped.

When locomotive cranes/pile drivers, wrecking derricks or similar equipment are being moved on their own wheels or on cars in a train, they will be handled on the rear of the train only.

**Exception:** Locomotive cranes/pile drivers AT 199454 through AT 199468 must be handled in trains next to the engine.

This equipment must be properly loaded and secured. Booms must be properly secured and, when possible, boom must be trailing. Equipment must be inspected before being moved. Such equipment must not be operated on any subdivision designated as a branch line unless authorized by roadmaster or covered by specific instructions. Equipment of this type must not be humped.

Spreaders and dozers being moved in trains must, when possible, be headed in the direction train is moving, and wings must be properly secured.

DODX 40000-40100 are cars belonging to the Department of Defense. Handbrakes on these cars must not be used to control movement and must be applied from a ground position while car is standing.

Loaded ribbon rail cars must not be:

- Coupled to other cars except buffer cars. (Buffer cars will be placed ahead of and behind ribbon rail cars at welding plant.)
- Handled in freight service with other cars unless authorized and train is equipped with Rail Movement Detectors (RMD).
- Separated for maintenance or repairs unless under direct supervision of a roadmaster.

**3(A). Multi-Platform and Stack Intermodal Cars**

Unless otherwise indicated in the individual subdivision special instructions, multi-platform stack intermodal cars are authorized for movement on tracks with weight limit of 177,000 pounds or more.

These cars must not be cut off in motion or struck by any car moving under its own momentum.

**3(B). Rotary/Rapid Discharge Coal Cars**

On the following sets of Rotary/Rapid Discharge coal cars, the dump door line air hoses must be coupled or placed in proper receptacle, when provided, prior to releasing the train for service:

- MCHX 30815-31044
- D NSPX 90001-90240 & 90501-90744
- D WCSX 12001-12123

**Note:** These are cars that have the trainline on one side of the coupler and the dump door line on the other side, with both hoses being at end sill level.

**3(C). Trough Cars—BN 552000 through BN 552022 (13 section articulated coal cars, 278 ft. long)**

**Speed restrictions—**None (unless there are restrictions on individual subdivisions based on gross weight of car and its axle equivalency).

Gross Weight of Trough Car	Axle Equivalency
855 tons .....	263,000 lb.
871 tons .....	268,000 lb.
884 tons .....	272,000 lb.
904 tons .....	278,000 lb.
917 tons .....	282,000 lb.
930 tons .....	286,000 lb.

Tons per operative brake:

- when empty, less than 100 TOB
- when loaded, 100 TOB or more

**Switching restrictions**—Trough cars must not be cut off in motion or struck by any car moving under its own momentum.

**Coupling speed restrictions**—Due to unique design and experimental nature of this equipment, when coupling to or coupling with loaded Trough Cars, maximum speed must not exceed 2 MPH. To comply with this speed, when coupling to or coupling with loaded Trough Cars, stop movement 10 to 20 feet short of a coupling, then proceed to couple cars.

**Hand brakes** (there are four hand brakes per trough car)

- All four hand brakes are accessible only from the left side of the trough car.
- Operate hand brake only when car is stopped. Do not attempt to apply hand brake while car is moving.
- When hand brake is required, apply all four hand brakes on a car.
- When applying hand brakes because of grades, use the same required percentage of cars, rounded upward to the next whole car. For example: if there are 22 trough cars in a train, and the requirement is 10% of cars need hand brakes applied, then the requirement for hand brakes is 2.2 cars, rounded upward to 3 whole cars, so apply all four hand brakes on 3 trough cars.

**Air cut-out cocks** (there are three air cut-out cocks per trough car)

- All three air cut-out cocks are accessible only from left side of the trough car.
- Each air cut-out cock controls four trucks—two on each side of the control.
- To cut out air, pull up on rod end and pull out away from car—directions are on a decal above the air cut-out cock.

**Dump door line air hoses**

- The dump door line air hoses must be coupled between all trough cars, and must be coupled above train line air hoses.
- At front of train and rear of train, dump line air hoses must be secured so as not to drag on ground.
- Connect dump door air line hoses to locomotives only when at unloading facility or when near unloading facility shortly before unloading.

### 3(D). V-Slope Flat Cars

V-Slope Flat Car loads of pulpwood logs, without side retainers, are restricted to 35 MPH, and must be observed closely enroute. Trains handling these cars will stop before passing through truss or girder bridges and crew will inspect cars to be safe to pass through bridge before proceeding.

### 3(E). Two-Axle Cars

Hand brakes must not be depended upon to hold two-axle cars. When a two-axle car is set out, it must be chained to the rail or coupled to a non-two-axle car with operative hand brake.

### 3(F). Radio Controlled Ballast Cars

There are three (3) sets of radio controlled ballast cars. Each 32-car set is split into two 16-car units with couplers padlocked together using mechanical Switch/Derail Locks. Additionally, each 16 car unit has its own CONTROL CAR and can operate independently or in combination with another 16 car unit. The following is the current pool assignment of these cars:

Newberry 32 cars (2 each 16 car units w/locked couplers).  
Series ATSF 180400 - 180431 with CONTROL  
CARS: 180400 & 180425.

Newberry 32 cars (2 each 16 car units w/locked couplers).  
Series ATSF 180432 - 180463 with CONTROL  
CARS: 180440 & 180450.

Davis 32 cars (2 each 16 car units w/locked couplers).  
Series ATSF 180464 - 180495 with CONTROL  
CARS: 180475 & 180490.

These cars are numbered ATSF 180400 through 180495. The ballast car(s) door(s) are operated via pakset signals to each individual car(s) and door(s). The doors can be opened to the inside or outside of the track, or both, to any degree between fully opened and fully closed. These door mechanisms are operated by air motors on each individual car and hydraulics which have sufficient power to crush granite and close the door during the dumping process. Extreme caution should be exercised during door operation.

The six control cars are identified by a white vertical stripe painted on the side center rib of the cars. Equipment needed to operate the remote control doors is in a cabinet locked with a M/W lock, on the "B" hopper underneath these control cars. A dummy hose for connecting the locomotive main reservoir hose to the ballast hopper actuating hose is stored underneath the control cars, attached to a standard air hose glad hand, which is attached to the "A" hopper door. (Each ballast car door is stenciled A,B C or D.)

The dumping mechanisms of these cars operate off the locomotive main reservoir air supply and not off the trainline air supply and have dual air hose connections similar to those on our existing air dump cars.

At no time should air be unhooked from the trainline for the purpose of dumping these remote control ballast cars.

Since the doors are air/hydraulic, the locomotive engineer will need to pay close attention to main reservoir pressure. When charging the system the engineer should not start movement until the main reservoir pressure is restored as indicated by the compressor cycling on and off on the lead locomotive.

During dumping operation, to maintain main reservoir pressure, it may be necessary to keep locomotives in throttle position 3 or 4. It may also be necessary to apply a minimum reduction of the air brakes and shove or pull the train so that throttle position 3 or 4 RPMs can be used to maintain adequate air pressure.

When dumping is complete, all doors on cars must be closed before uncoupling or closing the ballast car actuating line.

After completion of dumping and closing of doors, the dummy air hose must be returned to the holder underneath the control car.

When a bad order condition requires cutting a car out of a train, the entire string of interconnected cars in that block must be set out.

As batteries are replaced in the pakset radios, make sure that the old batteries are properly disposed of and not put back into the storage boxes. All quarries have a supply of batteries and will replenish the storage boxes as the cars are cycled back to their respective quarries.

### 3(G). Air Dump Cars

Employees are prohibited from riding in air dump cars. Cars must not be moved with doors open, except as necessary to clear material just dumped. Air dump cars must not be humped or be impacted by other cars.

When air dump cars are being operated, the conductor must personally supervise the handling to see that all locked devices are in proper position and that all people are in the clear before charging actuating air line and before they are operated.

Only employees who are knowledgeable in the operation of air dump cars may operate such cars in unloading operations. When coupling actuating air hoses, not more than three air dump cars may be charged at a time.



Before charging the actuating air line, or before attempting to dump air dump cars, it must be known that protection against movement on adjacent tracks which could be fouled by material to be dumped, has been provided as follows:

- A. If the adjacent track is an auxiliary track, except where CTC is in effect, movement must not be permitted to pass air dump cars which are being charged or being unloaded.
- B. If the adjacent track is a main track with ABS in effect, protection must be provided either by track warrant box 12, track bulletin Form B, or flag protection provided in both directions as prescribed by Rule 6.19.
- C. If the adjacent track has CTC in effect, protection must be provided either by securing track and time as prescribed by Rule 10.3 or flag protection provided in both directions as prescribed by Rule 6.19.

**3(H). Caboose Placement**

All cabooses other than the working caboose moving in trains for any reason, are to be handled on rear of train or just ahead of working caboose, except:

- A. Trains operating with helpers on the rear end must have cabooses other than the working caboose placed behind helpers.
- B. Trains or yard movements limited to maximum speed of 10 MPH may operate with caboose placed anywhere in train.
- C. Cars with defective couplers may be transported to repair facilities behind caboose.

**3(I). GREX Ballast Car Restrictions**

GREX ballast cars in the series: 2200-2299, 3300-3469, 4000-4012, must be placed next ahead of caboose or at the rear end of cabooseless trains, except they may be in any location in work trains. They must not be kicked or humped and other cars must not be kicked or humped into these cars. They must not exceed 5 MPH through other than main track turnouts.

**4. Air Repeater Operation**

Air repeater cars BNH 3-14, 20-29, and 30-35 must be operated at a position approximately 60% from the head-end of train.

Example: In a 100 car train, the air repeater car will be the 60th car.

There are flashing lights on each end of the roof and two lights on either car side, at ground level. Flashing roof light and illuminated side light indicates which end of the car is cut in for repeater operation. The illuminated light must be the light nearest the controlling locomotive.

If charging in the wrong direction, bring the brake pipe of the air car to zero psi with an emergency application of the brakes. Then recharge in the normal manner.

Air repeater cars increase the brake pipe pressure by a fixed percentage. Higher brake pipe pressure at the rear of a train will be noticed with this arrangement. It is possible for the brake pipe pressure on the rear car to be greater than the brake pipe pressure setting of the controlling locomotive. This does not constitute an overcharge with the air repeater car operating.

If an air repeater car fails enroute, an automatic valve will operate to bypass the repeater equipment making it operate like any other car in the train. It is not necessary to do anything at the air repeater car. The air repeater car diesel engine contains antifreeze and draining of the engine is not required with engine shutdown.

If brakes do not release on the train when the air repeater rack is cut out from the bypass valve, it will be necessary to reduce the overcharged condition.

**5. Car Restrictions**

Item 2 of the individual subdivision special instructions indicates a maximum gross weight of car and a letter restriction (A through H).

The maximum gross weight of car restriction is applicable only to four-axle cars with a coupled length of 49 feet 6 inches or greater. The maximum gross weight of car restriction for cars shorter than 49 feet 6 inches, six-axle cars, eight-axle cars or other specialty cars can be obtained from Table 5 by cross referencing the car length and the letter restriction for the subdivision.

Example: Item 2, Individual Subdivision Special Instruction of subdivision XXX indicates a maximum gross weight of car of 143 tons, Restriction E.

- for hoppers 53' long, the maximum gross weight/car = 143 tons from Item 2 (or by looking at line 8, column E)
- for tank car 43' long, the maximum gross weight/car = 136 tons (line 6, column E)

Cars that do not meet the weight limits specified in Table 5 or in Item 2 of the individual subdivision special instructions or in any part of the following paragraphs are not permitted without authority of System Structures Department or BNSF Clearance Bureau.

35-ft. cars (BNSF 601090-601179) loaded to 143 tons may operate only on the Hibtac, Casco, Lakes (between Superior and Gunn) and Allouez Subdivisions. These cars must comply with weight limits indicated in Table 5 when operating on all other subdivisions.

Actual car weight may exceed the maximums by up to one ton due to weighing tolerances.

Weight and length restrictions indicated in this section and in Item 2 of the individual subdivision special instructions do not apply to multiple-unit double stack well cars.

Line No.	No/Axles and/or Car Length	Typical Car Types & Partial Listing of Representative Car Number Series	Maximum Weight of Car (Tons) Based on Car Restrictions Class A through H							
			A	B	C	D	E	F	G	H
1	4 axles & length less than 35'0"	Hopper	89	NP	89	NP	NP	NP	NP	NP
2	4 axles & length 35'0" to 36'11"	Hopper, tank cars BN 99000-99949, BN 98000-98189, BNSF 601090-601179	134	117	134	117	110	110	110	110
3	4 axles & length 37'0" to 38'11"	Hopper, tank cars ATSF 82056-82990, 176900-177861	141	123	141	123	117	117	117	117
4	4 axles & length 39'0" to 40'11"	Hopper, tank cars BN 435500-435999	143	131.5	143	131.5	123	123	123	123
5	4 axles & length 41'0" to 42'11"	Hopper, tank cars BN 476000-476019	143	143	143	143	134	134	134	131.5
6	4 axles & length 43'0" to 44'10"	Hopper, tank cars	143	143	143	143	136	136	134	131.5

Line No.	No/Axles and/or Car Length	Typical Car Types & Partial Listing of Representative Car Number Series	Maximum Weight of Car (Tons) Based on Car Restrictions Class A through H							
			A	B	C	D	E	F	G	H
7	4 axles & length 44'11" to 49'5"	Hopper, gondola, tank cars BN 686000-686054 COILCARe	143	143	143	143	143	136	134	131.5
8	4 axles & length greater than or equal to 49'6"	Hoppers, flats, gondolas, tank cars	143-X	143X	143	143	143	136	134	131.5
9	278'	13-unit trough car BN 552000-552022	930	930	930	930	884	884	871	NP
10a	6 axles	CSXT 600908-600910, DODX 39980-40573, DUPX 29400-29439, 29600-29666, HCMX 4402, KCS 700002-700053, NS 185541-185542, SOU 50016-50019, CELX 6400-6458, CELX 10400-10438	197	197	197	197	197	197	185	NP
10b	6 axles	CN 672001-672009, 673000-673001, CR 766062-766072, 766074, CR 766145-766150, CSXT 600430, DODX 39095-39199, 39810-39832, PC 766149 ZRNX 150	197	197	185	185	185	178	175	NP
11	6 axles	Others	185	185	170	170	170	165	160	NP
12a	8 axles & length greater than or equal to 80'0"	ATSF 90001-90004, 90006-90007, ATSF 90011-90016, BN 631021	263	263	263	263	263	235	235	NP
12b	8 axles & length greater than or equal to 55'0" and less than 80'0"		263	255	263	255	235	235	235	NP
13	8 axles & length less than 55'0"	ATSF 90020-90023	220	195	220	195	180	180	180	NP

**6. Work Order: Instructions for Reporting Work**  
 Conductors and engine foremen are responsible for documenting and reporting all scheduled and non-scheduled work performed during their tour of duty. Timely reporting by fax machine, radio communication, telephone, cellular phones, electronic devices such as the Hammerhead or computers, is

key to maintaining current inventory, accurate records and a successful operation.

Work orders issued to train and switch jobs will list all **scheduled work**.

**Unscheduled work** requested by customer, conductor, supervisor, dispatcher, etc. will be reported on Supplemental Work Order Form.

Train Work Order Package includes the following documents:

- Train list and profile
- FRA 215.9 Mechanical Defective Cars List (if applicable)
- Hazardous manifest (if train contains hazardous materials)
- Work order for each station
- Track list of each track to be worked
- Supplemental Work Order Form

The following reporting codes will be used to report work performed:

Reporting Codes	
Reporting Instructions for Scheduled/Unscheduled Work	
Code	
SP	<b>SPOT</b> - (Code, date, time, zone/track spot) When cars are spotted to an industry track and no spot number is provided, use "01" as a spot number.
PU	<b>PULL</b> - (Code, date, pull time, station name, zone/track where cars are pulled from. Also include date, time station, zone/track where cars were left.)
IP	<b>INTRA-PLANT SWITCH</b> - (Code, date, time, zone/track spot)
RS	<b>RESPOT</b> - (Code, date, time, zone/track spot)
PK	<b>PICKUP</b> - (Code, date, time, station name, track, location in train) Display train location using one of the following codes (HE-Head End, RE-Rear End, FB-Fill Behind). When filling behind cars in the train, enter the initial/number of the car the pickup will follow in standing order.
SO	<b>SETOUT</b> - (Code, date, time, station name, zone, track, timetable direction and standing order) When track length will not hold all cars to be set out, enter first car initial/number and track where remaining cars were moved. If cars are set out on an interchange track, refer to reporting code DD.
TU	<b>CARS TURNED ON WYE OR TURNABLE</b> - (Code, date, time, station name, zone/track/spot)
OF	<b>CARS OFFERED OR NEEDING OFFERED TO A CONNECTING ROAD</b> - (Code, date, time, station name, zone/track, name of road and person's name refusing cars)
DD	<b>CARS DELIVERED IN INTERCHANGE</b> - (Code, date, time, station name, zone/track, and name of road)
CC	<b>CARRIERS CONVENIENCE</b> - (Code, date, time, station name, zone, track where cars were left) Cars left on an industry track for carrier convenience must not include a spot number.
ND	<b>NOT DONE</b> - (When ND code is used, enter ND explanation code or a full written explanation.)
Not Done Codes and Definitions	
Code	
BE	Car is ordered/billed to wrong customer, wrong zone/track/spot.
BO	Car ordered to spot/pull is bad ordered, derailed or behind derailed equipment.
CM	Car is physically missing from track or is lost.
CN	Car is not ready to be pulled on account of hoses attached, ramps in doorways, plug door open, hazardous placards missing or wrong.
FR	Car is not pulled/spotted on account of customer request directed to crew, rejected by customer or to be held for reloading.
FS	Full spot, no room to spot car.
HS	Could not perform switch on account of Hours of Service.
NA	Could not perform switch as requested on account of another industry's track or a yard track blocked, obstructed or out of service. Car is located in wrong switching zone or location.

<b>OW</b>	Work should be part of another job's assignment.
<b>PR</b>	Locomotive power restricted from operation on yard/industry track, engine failure, excess tonnage, train make-up compliance (hazardous or operating).
<b>RT</b>	Work done on return trip or in other direction.
<b>SA</b>	Substituted another car in place of ordered equipment.
<b>SI</b>	Did not perform switch as requested per supervisory or dispatcher instructions.
<b>TB</b>	Could not perform switch as requested on account of industry track being blocked, obstructed, out of service, or poor track conditions.
<b>TS</b>	Could not complete work on account of train turned short.
<b>UC</b>	Unsafe conditions caused by debris, weeds, footing, high water, snow/ice/storm.
<b>XX</b>	Work not performed as scheduled for unknown reasons or no listed reason applicable.

**Reporting Methods**

**Fax Machine**—Scheduled or unscheduled work documented on the appropriate work order or switch lists may be faxed into the Field Support Specialist for your respective territory. Conductors and engine foremen must call the designated Field Support Specialist that provides service for your respective division or terminal, in order to verify that all lists are received, legible, completed properly and are understood by the Field Support Specialist.

**Radio**—Where radio communications are possible, conductors and engine foremen are expected to radio their designated Field Support Specialist after completion of work performed at each station or as soon as possible.

**Telephone or Cellular Phones**—Telephone or cellular phones assigned to conductors and engine foremen may be used when radio communication is unavailable or radio is congested in order to provide timely reporting in the field. Use of cellular phones or any other electronic device does not relieve conductor or engine foremen from faxing written work order documents to their designated Field Support Specialist.

**Electronic Device**—Hammerhead and computer reporting will not require any written documentation to be forwarded.

The following information must be included when reporting:

1. Date
2. Time of arrival and departure
3. Conductor's or engine foremen's name
4. Job or Train's Identification
5. Location name and track number for all work done

Conductors and engine foremen are required to call their designated Field Support Specialist anytime there are questions or problems with work order information or work to be performed during their tour of duty.

**Work Order Codes**

There are three types of work order codes that appear on your work orders:

Request Codes	
Displays Work to Be Performed	
Code	
<b>SP</b>	<b>SPOT</b> - Customer request to spot car for loading/unloading.
<b>PU</b>	<b>PULL</b> - Customer request to move a car from an industry track to another track or scheduled destination.
<b>IP</b>	<b>INTRA-PLANT SWITCH</b> - Customer request to move a car originally spotted correctly to another spot or track within the industry.
<b>RS</b>	<b>RESPOT</b> - Request to reposition cars to a spot or track for loading or unloading when not spotted correctly.
<b>MO</b>	<b>MOVE</b> - Request to move cars to a designated location for disposition.

<b>TU</b>	<b>CARS TURNED ON WYE OR TURNABLE</b> - Request to turn a car previously spotted and re-spot.
<b>PK</b>	<b>PICKUP</b> - Cars available to be picked up by train, local, road switcher at station.
<b>SO</b>	<b>SETOUT</b> - Cars scheduled to be set out by train, local, road switcher at station.
<b>Status Codes</b>	
<b>Displays Current Status of Cars</b> (Does not require any work to be performed)	
<b>Code</b>	
<b>PL</b>	<b>PLACED</b> - Car on spot. (Displays car status and not a request.)
<b>CP</b>	<b>CP</b> - Constructive placement. (Condition between carrier and customer.)
<b>OF</b>	<b>CARS OFFERED OR NEEDING OFFER TO A CONNECTING ROAD</b> - Displays to the carrier, cars normally delivered in interchange cannot be delivered due to connecting road's inability or unwillingness to accept cars.
<b>DD</b>	<b>CARS DELIVERED IN INTERCHANGE</b> - Displays cars scheduled for interchange delivery to a connecting road.
<b>Hold Codes</b>	
<b>Carrier/Customer Instructions Have Not Been Provided</b>	
<b>Code</b>	
<b>HOLD MT</b>	Car not scheduled for outbound train. (Hold code appears in the Scheduled Train field.)
<b>HOLD NI</b>	Car has no instructions for spotting. (Hold code appears in the Scheduled Train field.)
<b>HOLD HL</b>	Car is HIWIDE and has not been scheduled to a train. (Hold code appears in the Scheduled Train field.)
<b>HOLD LS</b>	Car is on floating lease. (Hold code appears in the Scheduled Train field.)
<b>HOLD ED</b>	Car to be held for equipment distribution. (Hold code appears in the Scheduled Train field.)
<b>HOLD WH</b>	Car is to be held for weighing. (Hold code appears in the Scheduled Train field.)
<b>HOLD OT</b>	Car is to be held for local order. (Hold code appears in the Scheduled Train field.)
<b>HOLD ME</b>	Car is to be held for mechanical inspection. (Hold code appears in the Scheduled Train field.)
<b>HOLD EH</b>	Car is to be held for embargo. (Hold code appears in the Scheduled Train field.)
<b>NC *</b>	Non-credit customer. DO NOT SPOT. (Code appears in the SCHI field.)
<b>DO *</b>	Written delivery order. DO NOT SPOT. (Code appears in the SCHI field.)
<b>SO *</b>	Car billed shipper's order. DO NOT SPOT. (Code appears in the SCHI field.)
<b>Zn Tk Sp * 00 00 00</b>	* Do not spot cars with '00 00 00' in the ZNTKSP field or cars with NC, DO or SO in the SCHI field. (Cars may be pulled or picked up and moved to a location for further disposition when these codes are displayed.)

Work order documents will display work order codes as outlined by customer or carrier for specific instructions to conductors or engine foremen. They will be located in the Special Car Handling Instructions (SCHI) column or in the Scheduled Train column.

**Hours of Service**

Conductors or engine foremen should plan ahead and report scheduled and unscheduled work before being overtaken by Hours of Service.

Conductors and engine foremen who relieve crews that were overtaken by Hours of Service will be responsible for reporting work performed during their tour of duty.

If a crew is overtaken by Hours of Service and is unable to report scheduled or unscheduled work, the information must be passed on to the relieving conductor, engine foreman or supervisor who will be responsible to report work for the previous job.

**Pick Up in Block**—When picking up cars enroute, unless otherwise advised by train dispatcher or if in conflict with current train make-up instructions, trains must pick up in block.

**7. Dimensional and Special Shipment Restrictions**

All employees involved in handling dimensional or special shipments must be familiar with and are governed by these instructions:

- a. Any dimensional and/or oversize car or special shipment must be accompanied by one of the following: message included with train's work order; track bulletin; or message issued by BNSF Clearance Bureau.
- b. Before a dimensional or special shipment can be moved in a train, yard forces or employee in charge of station where no yard forces on duty, must obtain permission from the train dispatcher. This does not relieve conductor from complying with Rule 1.47 of the General Code of Operating Rules. When yard supervisors are notified of expected arrival of wide cars, precautions must be taken to safeguard employees in yard.
- c. Before a dimensional shipment is picked up on line, conductor must obtain permission from the train dispatcher. When dimensional or special shipment is set out on line, conductor must notify train dispatcher as soon as possible.
- d. Train dispatcher must issue appropriate track warrant, track bulletin or message when dimensional shipment restricts opposing train and confirm message received.
- e. Train with dimensional shipment must not pass or be passed by a train in the same direction unless authorized by the train dispatcher or proper safeguards taken.
- f. Within or when destined for the state of California, and train room permits, they shall be blocked together in one place and trained at least five cars distant from both caboose and engine.
- g. Employees are prohibited from riding excessive dimension cars.
- h. Train crews handling dimensional and/or oversize car or special shipment car(s) approaching locations in CTC, interlocking or double track territory where these car(s) are restricted should communicate with the dispatcher and jointly determine if a meet or pass of any other equipment at the restricting location(s) can be accomplished safely.

**8. Trackside Warning Devices (TWD)**

**8(A). Description**

Trackside warning devices (TWD) inspect passing trains for defects or monitor for unusual trackside conditions that could adversely affect the safe and efficient movement of trains.

Examples of such devices include the following:

- Overheated journal bearings (hot box) (HBD)
- Hot wheels
- Dragging equipment detector (DED)
- High/Wide/Shifted load (SLD)
- High water detector
- Earth/Rock slide fence

Individual subdivision special instructions identify the following:

- Detector location
- Detector type

Unless otherwise stated, protection will be hot journal and dragging equipment with bidirectional operation.

Exceptions will be shown as follows:

- Eastward direction only (EWD)
- Westward direction only (WWD)
- Dragging equipment only (DED)
- Shifted load only (SLD)
- Radio tone only detectors
- Detectors that inspect trains only in specified direction

- Detectors that protect bridges, tunnels or other structures
- Exception reporting detector (\*)

When a shifted load or dragging equipment detector is actuated at a point where an adjacent main track or controlled siding may be obstructed, crew must provide protection as prescribed by Rule 6.23 (See Rule 6.29.2).

**8(B). Detector Radio Message**

A message "You have a defect" will be transmitted during train passage if a defect is detected. When this message is received from a TWD, immediately reduce train speed to less than 30 MPH, utilizing train handling methods that minimize in-train forces. After train passes the detector, a radio message will be transmitted (unless defined as exception reporting detector per 8(L)).

This message will indicate "no defects" or will state any "alarms" or "integrity failures" that were detected during train passage.

The detector message is not complete until "Out" is received.

**Train Approaching Detector**

Except in emergency, when approaching train is within 150 feet of a TWD, DO NOT make a radio transmission until the entire train has passed the TWD.

**8(C). Detector Message and Train Crew Action**

Use the following table to determine crew requirements when a detector message is received. If detector indicates more than one detector message or circumstance, comply with each train crew action shown.

Type Detector	Non-Alarm Message	Train Crew Action	Additional Instructions
5(A) or 5(B)	When detector announces " ... no defects" or when advised by signal maintainer or train dispatcher that there are no defects.	Proceed.	None.
5(A)	"Train too slow" "Integrity failure" or Crew is notified by train dispatcher or signal maintainer that TWD is out of service.	Stop. Make a walking inspection of both sides of entire train before reaching bridge, tunnel, or structure being protected.	Report train too slow or integrity failure to train dispatcher.
5(B)	"Train too slow" "Integrity failure" or Crew is notified by train dispatcher or signal maintainer that TWD is out of service.	Proceed.	Report integrity failure to train dispatcher.

Table No. 2 - 8(C) Alarm Message

Type Detector	Alarm Message	Train Crew Action	Additional Instructions
5(A) or 5(B)	<p>"First hot box right/left side axle XXX."</p> <p>"First dragging equipment near axle XXX."</p> <p>"First hot wheel right/left from axle XXX to axle XXX."</p> <p>"First wide load right/left side near axle XXX."</p> <p>"Shifted load right/left side near axle XXX."</p>	<p>1. As soon as message "... you have a defect" is received, immediately reduce train speed to 30 MPH.</p> <p>2. Stop the train.</p> <p>3. Inspect the indicated axle(s).</p> <p>4. If no defect is found, inspect 12 axles forward and 12 axles to the rear of the indicated axle regardless of whether a defect is found before reaching the 12th axle.</p> <p>5. Report findings to the train dispatcher.</p> <p>6. When defective car(s) are set out or continue in train, notify the train dispatcher and Mechanical Help Desk.</p>	<p>Detector alarm message may identify more than one defect. Inspect train for all reported defects before proceeding.</p> <p>If detector alarm message does not include axle designation, inspect both sides of entire train.</p>
5(A) or 5(B)	"Excessive Alarms"	<p>1. As soon as message "... you have a defect" is received, immediately reduce train speed to 30 MPH.</p> <p>2. Stop the train.</p> <p>3. Inspect the indicated axle(s).</p> <p>4. If no defect is found, inspect 12 axles forward and 12 axles to the rear of the indicated axle regardless of whether a defect is found before reaching the 12th axle.</p> <p>5. Inspect both sides of the remainder of the train from the last reported defect.</p> <p>6. Report findings to the train dispatcher.</p> <p>7. When defective car(s) are set out or continue in train, notify the train dispatcher and Mechanical Help Desk.</p>	<p>Detector alarm message may identify more than one defect. Inspect train for all reported defects before proceeding.</p> <p>If detector alarm message does not include axle designation, inspect both sides of entire train.</p>

Table No. 3 - 8(C) Other Circumstances

Type Detector	Circumstance	Train Crew Action	Additional Instructions
5(A) or 5(B)	Total axle count transmitted varies by more than 16 axles from total axle count transmitted from a previous detector. or Speed varies by more than 10 MPH from actual speed.	<p>1. Stop the train.</p> <p>2. Make a walking inspection of both sides of entire train.</p> <p>3. Report findings to train dispatcher.</p>	Verify that the marker or EOT device is on the rear car.
5(A) or 5(B) - with recall code	No message. or Incomplete message is transmitted.	<p>1. Enter recall code and be governed by message.</p> <p>2. If still no message or incomplete message, stop the train.</p> <p>3. Make a walking inspection of both sides of entire train.</p>	<p>Report no message or incomplete message to train dispatcher.</p> <p>Note: Detector message followed by the word "Out" indicates a complete message. Total axle count is not required for a complete message.</p>
5(A) - without recall code	No message. or Incomplete message is transmitted.	<p>1. Stop the train.</p> <p>2. Make a walking inspection of both sides of entire train.</p>	<p>Report no message or incomplete message to train dispatcher.</p> <p>Note: Detector message followed by the word "Out" indicates a complete message. Total axle count is not required for a complete message.</p>
5(B) - without recall code	No message. or Incomplete message is transmitted.	Proceed.	<p>Report no message or incomplete message to train dispatcher.</p> <p>Note: Detector message followed by the word "Out" indicates a complete message. Total axle count is not required for a complete message.</p>

**8(D). Radio Tone Only Detectors**

When radio tone is received from a TWD, immediately reduce train speed to less than 30 MPH, utilizing train handling methods that minimize in-train forces.

Radio tone only detectors are identified in the individual subdivision special instructions. They are used to detect dragging equipment only and communicate by radio tone. No voice messages are announced.

Use the following table to determine crew member requirements when passing Radio Tone Only Detectors.

Detector Message or Circumstance	Type Detector	Train Crew Action	Additional Instructions
Intermittent tone immediately after train has passed detector.	5(A) or 5(B)	Proceed.	None
Continous tone while passing detector. or No tone after train has passed detector.	5(A) or 5(B)	1. Stop the train. 2. Inspect both sides of entire train for dragging equipment. 3. Report to train dispatcher.	None

**8(E). Train Inspection**

When alarm message requires inspection, inspect the side of the train in the message. The reference to defect locations will be from HEAD END of train, and references to LEFT or RIGHT side are to engineer's left or right side in the direction of travel.

Determine the location of the indicated axle by physically counting axles from the HEAD END of the train, including locomotive axles. DO NOT depend on wheel report information for correct axle count.

When alarm message requires, inspect indicated axle(s). If inspection does not reveal a defect, inspect 12 axles forward and 12 axles to the rear of the indicated axle.

When this is necessary, inspect all 12 axles in each direction regardless of whether a defect is found before reaching the twelfth axle.

**Dragging Equipment/Shifted Load Inspection**

When a dragging equipment *or shifted load* alarm message is received, make a walking (trackside) inspection of the train until the inspection is complete or until an obstruction (bridge without a walkway) prevents further inspection. When obstruction prevents completion of inspection, move train at no more than 5 MPH to complete the inspection per Rule 6.29.2, as amended.

**Overheated Equipment Inspection**

When an overheated equipment alarm is received, follow this procedure to inspect equipment:

- Crew member positioned on the ground must count axles.
- Move train at no more than 10 MPH until the indicated axle is near crew member or until inspection is complete.

**Freight Trains**

If no defect is found, train may continue, but crew members must closely observe indicated equipment for the next 25 miles or until inspection by hot bearing detector.

**Exception:** If indicated axle is on a loaded, placarded, non-intermodal car containing hazardous material and no defect is found during the inspection, set out the loaded, placarded, non-intermodal car. (For Key Train instructions see Hazardous Material Instructions, Section VI, C.)

**Passenger Trains**

If no defect is found after inspecting 12 axles forward and 12 axles to the rear of the indicated axle, inspect both sides of the entire train.

If no defect is found, train may continue, but crew must closely observe indicated equipment for the next 25 miles or until next inspection by hot bearing detector.

**8(F). Testing Bearing Temperature**

Use a heat-indicating crayon or handheld infrared device to test bearing temperature. Test bearing temperature by stroking the heat indicating crayon on the bearing cup. A liquid smear will remain on an overheated bearing. (Determine if the bearing is hot by using a Dual Temp. 163 degree - 200 degree Fahrenheit, Mark All Thermal Melt, Millennium ordering reference no. 362090999N.)

When ambient temperature is 32 degrees Fahrenheit or above, use a 200-degree Fahrenheit heat-indicating crayon to test bearing temperature.

When ambient temperature is below 32 degrees Fahrenheit, use a 163-degree Fahrenheit heat-indicating crayon to test bearing temperature.

Use a crayon marker to write the date and the letter "X" above each journal indicated or found to be overheated, and the date and the letter "W" above each wheel indicated or found to be defective or overheated if the car is set out or remains in the train.

Set out equipment with overheated bearings.

If it is safe to move equipment, set out car with an overheated bearing at a location accessible to repair personnel.

**8(G). Consecutive Alarm Messages**

If the same equipment is indicated by two (2) successive hot bearing alarm messages, set out the indicated equipment.

**Exception: Amtrak Trains**

When the same axle actuates a second or subsequent wayside hot box detector, and no hot journal or other defect which may have caused the actuation(s) (i.e., hot traction motor bearing, sticking brakes, etc.) is found after the prescribed inspections, the following actions will be taken:

1. The train will not exceed 30 MPH for the next five (5) miles.
2. The train will be stopped after five (5) miles, and all bearings which activated the detector(s) will be re-examined. Equipment ahead of and behind the suspected axle(s) need not be re-examined during this 5-mile inspection.
3. If apparent increases in bearing temperature are noted during the 5-mile re-examination, the car will be set out at the first available point.
4. If no hot bearing is found during the 5-mile re-examination, the dispatcher will be notified, and the train may proceed to the next point where railroad mechanical personnel are available to inspect the car and authorize further movement or direct the car to be set out. If any station stops are made before the mechanical inspection point, the crew will inspect the car at such locations.

When a train actuates a wayside hot box detector before a crew change location, the relieving crew will be advised of the equipment that activated the detector so that they can inspect the car and follow the above procedure if the equipment actuates a subsequent detector enroute.

**8(H). Alarms Indicated on Locomotive or Caboose**

When unable to locate a defect indicated on a locomotive or caboose, notify the following:

- Connecting crew members
- Mechanical personnel
- Supervisor

Do not set out a caboose with a generator belt attached to the indicated axle unless a hot bearing, hot wheel or dragging equipment is found.

**8(I). Special Conditions**

When a hot bearing is found within 25 miles of TWD equipment, a crew member must notify the train dispatcher. The train dispatcher must notify the signal maintainer and request the TWD equipment be inspected.

When blowing or swirling snow conditions may prevent detectors from making a proper inspection, crew members must reduce train speed to **no more than 30 MPH** to minimize this condition.

**8(J). High Water Detectors**

High water detectors have been placed under certain bridges and in areas where high water might occur.

When train is notified of high water by rotating red lights or radio message, crew must not proceed over bridge or track until *trackside* examination by crew member has been made to determine that bridge or track has not been weakened by high water.

When train is stopped or is moving at restricted speed because of signal indication governing movement over a high water detector, train must not proceed over bridge or track until *trackside* examination by crew member has been made to determine that bridge or track has not been weakened by high water.

At locations equipped with Radio Readout type detectors, if no response is received, trains must not proceed until *trackside* examination has been made to determine that bridge or track has not been weakened by high water.

Trains moving against the current of traffic must approach all locations protected by high water detectors prepared to stop unless it has been determined that tracks are clear, high water is not present, approaches to bridges are intact, or examination has been made to determine that bridge or track has not been weakened by high water.

**8(K). Slide Detectors**

Slide detectors have been placed in certain areas where earth/rock slides might occur.

When a rock slide is indicated by rotating red light or radio message, trains must proceed at restricted speed AND be prepared to stop short of any obstruction through the entire slide detector area.

When train is stopped or moving at restricted speed because of signal indication governing movement through a slide detector, train must ALSO be prepared to stop short of any obstruction through the slide detector area.

Train dispatcher must be promptly notified if slide conditions are observed.

At locations equipped with Radio Readout type detectors, if no response is received, trains must proceed at restricted speed until track at this location is known to be clear of any obstruction. Train dispatcher must be promptly notified if slide conditions are observed.

**8(L). Exception Reporting Detectors**

Radios at exception reporting detectors will only transmit a message when an alarm is present.

Where indicated in Individual Subdivision Instruction No. 5, trains will be governed by 8(C) detector message and crew action with the following exceptions:

Detector Message or Circumstance	Type Detector	Train Crew Action	Additional Instructions
No Message	5(B)	Proceed	None
Incomplete message is transmitted	5(B)	1. Stop the train and inspect both sides of entire train. 2. Report findings to train dispatcher.	None

DO NOT report a failure to transmit to the train dispatcher as required with other types of detectors.

**9. Amtrak Instructions Equipment**

Unless otherwise provided, equipment that cannot be safely operated at maximum speed must be set out at first available location unless train can arrive at final destination in less time than would be required to make the set out.

- Maximum speed for freight locomotives in Amtrak service is 70 MPH.
- Movement with locomotives between cars is prohibited.
- Double stretch is required after pick up or set out of cars or locomotives.
- Required hand tools and supplies must be available on locomotive.
- Train garbage/refuse to be off loaded into FDA approved containers.

**Head End Power (HEP) Requirements**

- Departure from originating station with HEP cables short looped is prohibited.
- In the event of HEP failure, crew members must determine if train may be handled safely and every effort made to advance train to the next siding or scheduled stop before repairs are made.
- All HEP cables must be secured with approved tie-down grommets.
- Air hoses and HEP cables must be secured no less than 4 inches above top of rail.

**BNSF Crews Operating Amtrak Trains**

When a BNSF crew relieves or helps an Amtrak crew, a freight locomotive must be used to handle Amtrak trains. Amtrak crews being relieved or helped by BNSF crews must handle all 480 volt AC power and set up Amtrak locomotives in the trail position. The speed in which the train will operate is the maximum speed allowed on that territory for freight train service. BNSF crews are prohibited from handling, adjusting or performing work between or under cars when Head End Power (HEP) 480 volt AC is energized.

**Amtrak-Qualified BNSF Engineers Operating Amtrak Trains**

Addition of a freight locomotive will not be necessary when one or both of the following apply:

- When the BNSF engineer who is to relieve or help an Amtrak crew is Amtrak qualified.
- When a BNSF engineer is accompanied by an Amtrak qualified engineer or qualified Amtrak supervisor.

The locomotives need not be set up in the trail position. All other requirements as listed above will be followed.

**Dumping Toilets**

Except when discharged into appropriate container, dumping of toilets from Amtrak trains is prohibited while:

- Passing through limits of track bulletin Form B or joint track and time.
- In Nelson, Bennett, Seattle, Everett, Cascade and Flathead tunnels.

Train and engine crews will coordinate their efforts to ensure compliance. Train crews are responsible for notification of on-board personnel.

Speed Sensor Override Switch must not be placed in DUMP BELOW 25 MPH position except when an employee is in attendance.

#### Delay Reports

Prior to tie-up, engineer or conductor must furnish train dispatcher's office with official delay report. The BNSF Passenger Services Desk must also receive a copy of the delay report (Fax 817-234-7283). Such delay reports will include:

- All time lost based on station dwell times and best possible run times.
- Reasons for delay over dwell times and all other time lost, i.e. passengers, baggage, slow order, hot/cold weather restriction, locomotive malfunctions, etc. Each individual reason for delay must be separate from other types of delay. For example, do not list time lost due to a slow order and locomotive malfunction together.
- Car/locomotive initial and number, axle and journal, if applicable, and reason for inspection and defect, if any found.
- SD relief numbers authorizing "hold" or "delay."

#### 10. Storage of Cars Within Yard Limits In Non-Signaled Territory

Within yard limits in non-signaled territory, the main track must not be used as a storage track except in case of emergency. When it becomes necessary to leave cars on main track in such territory, they must be protected by track warrant or track bulletin. This does not modify requirements of Rule 6.13.

#### 11. Shunting the Track

##### Commodities Insulating Track In CTC And ABS

Employees should be alert for insulating commodities such as clay, chips, oil, etc., on top of rails. This condition could possibly insulate the track and cause loss of train shunt. Such conditions should be promptly reported and trains protected per rules while in CTC and ABS territory.

##### Single Unit Light Engine

When a train sets out all cars enroute and becomes a single unit light engine within CTC, manual interlocking, or ABS territory, the train dispatcher/control operator must be notified.

##### Movements Consisting of Less Than 12 Axles

Train, engine and other such movements consisting of less than 12 axles must approach road crossings at grade equipped with automatic crossing warning devices prepared to stop until it is determined that the warning devices are operating properly.

#### 12. Turnouts Equipped with Two Switch Machines (Moveable Point Frogs/Swing Nose Frogs)

Locations where turnouts are equipped with two switch machines will be identified under individual subdivision special instructions.

When dual control switches equipped with two switch machines are operated by hand, the switch machine which operates the switch points and the switch machine which operates the moveable point (swing nose) frog must both be placed in hand operation.

When turnouts are equipped with crank operated machines, the hand crank must be turned an additional 10 revolutions after the switch points are in the desired position to insure sufficient closure tension at the switch points.

Rule 9.13.1 applies at all locations where turnouts are equipped with two switch machines (moveable point frogs/swing nose frog).

#### 13. In Effect on Burlington Northern Santa Fe Railway

- General Code of Operating Rules, THIRD EDITION, in effect April 10, 1994. Page 15-14 of the General Code of Operating Rules, Third Edition, may be missing due to a printing error. Therefore all employees governed by the GCOR must replace page 15-13 with reprinted pages 15-13 and 15-14 in order to have a complete rule book.
- BNSF General Code of Operating Rules with Revisions, in effect April 1, 1998, with revised pages. (See Item 15.) (BNSF employees are only required to use this version of the GCOR.)
- Maintenance of Way Operating Rules, in effect January 31, 1999, with revised pages. (See Item 17.)
- Air Brake and Train Handling Rules, in effect April 1, 1998, with revised pages. (See Item 18.)
- Train Dispatcher's, Operator's and Control Operator's Manual, in effect March 1, 1997.
- BNSF TY&E Safety Supplement, in effect April 1, 1998, with revised pages. (See Item 19.)
- Maintenance of Way Safety Rules, in effect January 31, 1999, with revised pages. (See Item 19.)
- Employee Safety Rules, in effect January 31, 1999, with revised pages. (See Item 19.)
- Mechanical/P&M Safety Rules, in effect January 31, 1999, with revised pages. (See Item 19.)
- 1996 North American Emergency Response Guidebook
- Canadian Rail Operating Rules, in effect April 1, 1999. (For use in Canada only.)
- Rules for the Protection of Track Units and Track Work, in effect April 1, 1999. (For use in Canada only.)

#### 14. General Code of Operating Rules, Changes and Additions

The following rules apply only on Burlington Northern Santa Fe Railway:

**Rule 1.5.1 Motor Vehicle Driving Records**—new rule added: Employees certified as locomotive engineers, whatever class of service, must report convictions for:

- Operating a motor vehicle while under the influence of or impaired by alcohol or a controlled substance.
- Refusal to undergo such testing when a law enforcement official seeks to find out whether a person is operating under the influence of alcohol or a controlled substance.

An employee must report any conviction to an employee assistance representative no later than the end of the first business day immediately following the day that the employee received notice of the conviction.

**Rule 1.11 Sleeping**—the following is added:

Napping is permitted by BNSF road train crews under the following conditions:

- The train must be stopped to be met or passed by a train, waiting for track work, waiting for helpers or other similar conditions.
- When waiting for the arrival or make-up of their train at their initial terminal.
- Trains must not be delayed for an employee taking a nap. When conditions allow the train to be moved, the non-napping employee must wake the napping employee.
- One crew member must remain awake at all times.
- Before napping, the employee in charge of the locomotive controls must make a sufficient brake pipe reduction to prevent the train from moving, turn off the generator field and center and remove the reverser.
- The employee in charge of the locomotive controls may nap while the non-napping employee is off the locomotive. The non-napping employee must be on the controlling locomotive except in the performance of their duties.
- The person who will take the nap must be negotiated between the crew members.



- Each crew member has the right and responsibility to refuse to allow another crew member to take a nap if doing so could jeopardize the personal safety of the employee, other employees, or the train.
- The nap period must not exceed 45 minutes. The period is not limited to the time sleeping but includes the advance time needed to fall asleep.
- If during the time the crew member is napping, another employee feels their personal safety, the safety of other employees, or the safety of the train is jeopardized, they must wake the napping employee.
- The normal requirements of the GCOR, Timetable and Special Instructions, TY&E Safety Supplement, Air Brake and Train Handling Rules and other operating instructions remain the responsibility of the non-napping employee. These rules and instructions are suspended for the employee taking the nap.

#### Exceptions

Crew members on train and train is stopped:

- All crew members on a train may nap as outlined above after first notifying the train dispatcher and determining the length of the delay.

Crew members waiting for arrival of or make-up train:

- One crew member must remain awake while waiting for their train's arrival or make-up at their initial terminal unless arrangements have been made with a third party to wake up all crew members. The train must not be delayed for employees napping.
- All general orders and notices must be reviewed prior to napping. All available paperwork must be secured and reviewed prior to napping.

**Rule 1.14 Employee Jurisdiction**—first bullet point is amended to read:

- Safety rules, air brake and train handling rules, and hazardous material instructions of the railroad they are employed by.

**Rule 1.17 B. Exceeding the Law**—add as last sentence:

Except as provided by this paragraph, employees are then relieved of all duties.

**Rule 1.26 Gratuities**—second sentence is changed to read:

Employees must not accept gifts or rewards from customers, suppliers, or contractors of the railroad unless authorized by the proper manager.

**Rule 1.30 Riding Engine**—the following paragraph is added:

In conductor only train operations during over the road movements, the conductor will occupy the controlling locomotive.

**Rule 1.33 Inspection of Freight Cars**—the last paragraph that reads, "A freight car with three bad order tags indicating that the car is safe to move may be moved to the nearest car repair point. The conductor will remove one bad order tag from the side with two tags. The conductor will use this written information from the tag to inform other crew members of the restriction," is changed to read:

Freight car with bad order tags indicating that car is safe to move may be handled to nearest repair point.

**Rule 2.3 Repetition**—change the first bullet to read:

- Concerns yard switching operations.

**Rule 2.4 Over**—the entire rule (including the title) is changed to read:

#### Rule 2.4 Ending Transmission

Employee using a radio for transmissions must state to the employee receiving the transmission the following as it applies to indicate that the communication has ended or is completed: "OVER"—when a response is expected.

or

"OUT"—preceded by required identification when no response is expected.

However, these requirements do not apply to yard switching operations.

**Rule 2.5 Out**—this rule is cancelled.

**Rule 2.14 Transmitting Track Warrants and Track Bulletins**—the entire rule (including the title) is changed to read:

#### Rule 2.14 Mandatory Directive

Mandatory directives are authorities to occupy a main track or speed restrictions that affect the movement of equipment.

Mandatory directives are:

- Track warrants
- Track bulletins
- DTC authority
- Track and time
- Track permits

When transmitted by radio, a mandatory directive must be transmitted according to applicable operating rules and the following:

- The train dispatcher must state that a mandatory directive will be transmitted.
- The employee must inform the train dispatcher when ready to copy, stating the employee's name, identification and location. An employee operating the controls of a moving engine may not copy a mandatory directive. In addition, a mandatory directive must not be transmitted to the crew of a moving train if the conductor, engineer or train dispatcher feels that the transmission could adversely affect the safe operation of the railroad. Within ABS territory, when train is operating on a block signal indication requiring movement at restricted speed or prepared to stop short of next signal, the train must be stopped before a track warrant extending the existing authority is copied.
- The employee receiving a mandatory directive must copy it in writing using the format outlined in the operating rules.
- Mandatory directives that have been fulfilled or canceled shall be marked in accordance with applicable operating rules and retained for the duration of that crew's tour of duty.

Within ABS territory, when train is operating on a block signal indication requiring movement at restricted speed or prepared to stop short of the next signal, the train must be stopped before a track warrant extending the existing main track authority is copied.

**Rule 2.17 Radio Testing**—the first paragraph is changed to read:

Test radios to be used as soon as possible before beginning of work assignment.

**Rule 2.17.1 Equipment Failure**—this new rule is added:

Any radio or wireless communication device found not to be functioning as intended when tested must be removed from service, and the train dispatcher or yardmaster must be so notified as soon as possible.

If a radio fails on the controlling locomotive enroute, the train may continue until the earlier of:

1. the next calendar day inspection.  
or
2. the nearest forward point at which the radio can be repaired or replaced.

**Rule 2.21 Communication Redundancy**—this rule is added:

The controlling unit of any train that requires an air brake test must be equipped with an operative radio, unless relieved by Rule 2.17.1 (Equipment Failure). In addition, these trains must have a second means of communication, which may include:

- An operative radio on any unit in the consist.

- A portable radio.  
or
- Other wireless communication device.

**Rule 5.4.3 Display of Yellow-Red Flag**—Item 2b, which reads, "The rear of the train has passed a green flag," is cancelled.

The following paragraph is added:

Green flags must not be placed to release a train from the requirements of a yellow-red flag.

**Rule 5.4.5 Display of Green Flag**—is changed to read:

A green flag indicates the end of a speed restriction. If a series of locations requires reduced speeds, the green flags could overlap yellow flags. When this is the case, employees must:

- Place a yellow flag before each speed restriction.
- Place a green flag at the end of the last speed restriction.

Green flags must not be placed to release a train from the requirements of a yellow-red flag.

**Rule 5.4.6 Display of Flags Within Current of Traffic**—this rule is canceled in its entirety.

**Rule 5.4.7 Display of Red Flag or Red Light**—the third paragraph is changed to read:

**Displayed Between Rails.** When a red flag or red light is displayed between the rails of a track, the train must stop and not proceed until the flag or light has been removed by an employee of the class that placed it.

**Rule 5.4.8 Flag Location**—the first paragraph is changed to read:

Flags will be displayed on all main tracks and sidings leading to the track affected.

**Rule 5.8.2 Sounding Whistle**—add the following as the new fourth paragraph, and the current fourth paragraph will now be the fifth paragraph:

Sound whistle signal (11) and ring the bell when approaching roadway workers on or near the track, regardless of any whistle prohibition.

When hy-rail car is observed on adjacent track, sound whistle signal (11) approaching and passing this car.

**Rule 5.9.1 Dimming Headlight**—Item 3 is changed to read: When stopped on the main track waiting for an approaching train. However, turn the headlight off at the radio request of the crew of an approaching train, until the head end of the train passes.

The following is added:

6. When left unattended on a main track in non-signaled territory.

**Rule 5.9.2 Headlight Off**—is changed to read:

Turn the headlight off under either of the following conditions:

1. The train is stopped clear of the main track.
2. The train is left unattended on the main track in block system limits.

**Rule 5.9.5 Displaying Ditch Lights**—is changed to read:

Auxiliary lights to the front of the lead locomotive must be displayed just prior to and during movement over public grade crossings.

Required auxiliary lights: Engines not equipped with operative auxiliary lights must not exceed 20 MPH (head end restriction) over public grade crossings. Engines displaying operating ditch lights, an oscillating white headlight, or strobe lights may proceed at authorized speed over public grade crossings.

Auxiliary light enroute failure: A locomotive must not be operated as the lead unit on a train out of an initial terminal unless all auxiliary lights, if equipped, are operative. If one light fails enroute, the train may proceed at authorized speed, but

repairs must be made by the next daily inspection. If two lights fail enroute, the train may proceed, but not beyond the first point at which repairs may be made, and the train must not exceed 20 MPH (head end restriction) over public grade crossings.

Any auxiliary light failure must immediately be reported to the train dispatcher and Mechanical Help Desk.

**Rule 5.11 Engine Identifying Number**—is changed to read: Trains will be identified by engine initials and a number on the side of the locomotive, adding the direction when required, with the following exception:

All engines painted in the blue and yellow or red and silver color schemes with the words Santa Fe on the side and no identifying initials on the side, or with the initials MKM or BLC, will be identified as ATSF.

When an engine includes more than one unit or when two or more engines are coupled, the number of one unit only will be illuminated as the identifying number. When practical, the number of the leading unit should be used. Notify the train dispatcher when the identifying unit is not the lead unit.

**Rule 5.13.1 Utility Employee**—the following new rule added: This rule outlines the requirements for allowing utility employee to work without blue signal protection.

As used in this rule, a utility employee is a railroad employee assigned as a temporary member of a train or yard crew.

**A. Requirements to Start Work**

A utility employee may work with more than one crew during the same shift or tour of duty, but may work as a member of only one train or yard crew at a time.

No more than three utility employees may work with one train or yard crew at the same time.

A utility employee may become a member of a train or yard crew under the following conditions:

- The utility employee establishes communication with the designated crew member of the train or yard crew before starting work.
- The designated crew member identifies the utility employee to each member of the crew, and each crew member acknowledges the utility employee's presence.
- The designated crew member authorizes the utility employee to work as a temporary member of the crew.

**B. Requirements While Working On, Under, or Between**

Before a utility employee will be on, under, or between rolling equipment, the following applies:

- All members of the crew must communicate with each other to understand the work to be done.
- The engineer must be in the cab of the assigned controlling locomotive. However, another member of the same crew may replace the engineer when the locomotive is stationary.

**C. Requirements When Work Ends**

A utility employee is released from a train or yard crew when:

- The utility employee notifies the designated crew member the work is completed.
- The designated crew member notifies each crew member that the utility employee is being released.
- After the designated crew member releases the utility employee from the train or yard crew, each crew member acknowledges this notice.

**Rule 6.1.1 Direction and Numbers**—new rule added:

When issuing or repeating track and time limits, track warrants, track bulletins, train location lineups, track permits and OCS, observe the following guidelines:

Directions—Directions (North, South, East, West) must be pronounced, then spelled.

Numbers—When the figure has more than one number:

1. State the number in words. (Example: Three-hundred sixty-five)
2. State each figure in the number. (Example: Three, six, five)

When the figure has only one number:

1. State the number. (Example: Three)
2. Spell the word. (Example: T, H, R, E, E)

**Rule 6.2.1 Train Location**—this rule is added:

Train or maintenance of way employees who receive authority to occupy the track after the arrival of a train or to follow a train must ascertain the train's location by one of the following methods:

- Visual identification of the train.
- Direct communication with a crew member of the train.
- Receiving information about the train from the train dispatcher or control operator.

**Rule 6.3 Main Track Authorization**—the following last paragraph is added:

**Requesting Authority**

The employee requesting authority must be qualified on these rules and must tell the train dispatcher or control operator exactly where the main track will be entered. Employees and equipment must not enter the main track at any other point unless otherwise authorized.

**Rule 6.4 Reverse Movements**—is changed to read:

Make reverse movements on any main track or on any track where CTC is in effect at restricted speed and only within the limits a train has authority to occupy the track.

**Rule 6.4.1 Permission for Reverse Movements**—is amended to read:

Obtain permission from the train dispatcher or control operator before making a reverse movement, unless the movement is within the same block in any of the following territories:

- CTC
- ABS
- Rule 9.14 (Movement with the Current of Traffic)

**Rule 6.4.2A Control Points or Manual Interlockings**—is changed in its entirety to read:

A. Control Points or Manual Interlockings

Except within track and time limits, obtain permission from the control operator:

1. Before making a reverse movement if the trailing end of the train is between the outer opposing absolute signals of a control point or manual interlocking.
2. Before making a forward movement after making a reverse movement if the leading end of train is between the outer opposing absolute signals of a control point or manual interlocking.

**Rule 6.5 Handling Cars Ahead of Engine**—is changed in its entirety to read:

When cars or engines are shoved and conditions require, a crew member must take an easily seen position on the leading car or engine, or be ahead of the movement, to provide protection. Cars or engines must not be shoved until the engineer knows who is protecting the point of the movement and how protection will be provided. Cars or engines must not be shoved to block other tracks until it is safe to do so.

When cars are shoved on a main track or controlled siding in the direction authorized, movement must not exceed:

- 20 MPH for freight trains.
- 30 MPH for passenger trains.

- Maximum timetable speed for snow service unless a higher speed is authorized by the employee in charge.

Note: When plowing snow and all employees are on the equipment, one common authority may be used by both maintenance of way employees and the train crew.

**Rule 6.6 Picking Up Crew Member**—the first sentence is changed to read:

A train may back up on any main track or on any track where CTC is in effect to pick up a crew member under the following conditions.

Item 1(a) is changed to read:

Another authority is not in effect within the same or overlapping limits unless conflicting movements are protected.

Item 4 is changed to read:

4. Movement will not be made into or within yard limits, restricted limits, or interlocking limits.

Item 6, which reads as follows, is cancelled:

6. Movement does not exceed 5 MPH.

Add new last sentence reading:

Trains backing up under the provisions of this rule may pass signals indicating Stop and Proceed, without stopping.

**Rule 6.12 FRA Excepted Track**—the last bullet is changed to read:

- No movement will be operated that contains more than five cars placarded according to Hazardous Material Regulations.

**Rule 6.13 Yard Limits**—first paragraph is changed to read:

Within yard limits, trains or engines are authorized to use the main track not protecting against other trains or engines. Engines must give way as soon as possible to trains as they approach. Engines which have not received track warrant authority to occupy main track must keep posted as to the expected arrival of passenger trains and must not delay them.

**Rule 6.19.7 Train Coordination**—the following rule is added:

In TWC, DTC, and CTC territories, employees may use a train's authority to establish working limits to remove snow, ice, and debris; to unload ballast; and to perform other work train activities; provided the train does not have joint authority with other trains, employees or equipment. To establish the working limits, the train must be visible to the roadway worker who is establishing the working limits and must be stopped. In addition, the roadway worker must communicate with a member of the train crew and determine that:

- Further movements of the train will be made only as permitted by the roadway worker in charge of the working limits while the working limits remain in effect, and,
- The crew of the train will not give up its authority to move until the working limits have been released to the train crew by the roadway worker in charge of the working limits.

Display of red flags and yellow-red flags in these limits is not required, and hand operated power tools may be used by a lone worker.

**Rule 6.20 Portion of Train Left on Main Track**—eliminate the second bullet that reads:

- Place a torpedo 1/4 mile in front of the detached portion to warn returning crew members.

**Rule 6.20 Portion of Train Left on Main Track**—add a fourth bullet that reads:

- Make the return movement at restricted speed within the authorized limits of the rear portion of the train. However, an engine without cars may return at a higher speed when governed by block signal indication.

**Rule 6.23 Emergency Stop or Severe Slack Action**—under the heading, Obstruction of Main Track or Controlled Siding, the bullet point is amended to read:

- If an adjacent BNSF main track or controlled siding may be obstructed, immediately warn other trains and the train dispatcher by radio, stating the exact location and status of the train. Provide protection for other affected railroads by advising the train dispatcher which railroads may be affected. When necessary, provide protection for other affected railroads by going at least two miles in each direction if flagging distance is not known, and by displaying lighted red fuseses.

When only one flagman is available, provide protection immediately in the direction the first train is expected. After necessary protection is provided, provide protection in the opposite direction. Recall the flagman:

- When adjacent tracks are not obstructed.  
or
- When the train dispatcher or control operator advises the crew that protection is provided on adjacent tracks.

**Rule 6.23 Emergency Stop or Severe Slack Action**—is amended by adding:

The train must not proceed until it has been determined that it is safe to do so by visual inspection of the train or by knowledge that the brake pipe pressure has been restored by observing the caboose gauge, end-of-train device (ETD) control head, or by ascertaining that air pressure is present in the brake pipe by using the following procedure:

- A. After air brakes have had sufficient time to release following an emergency application, make a 20-psi brake pipe reduction, and;
- B. After brake pipe exhaust ceases, place the automatic brake valve cutout valve in the OUT position. If brake pipe pressure rapidly reduces to zero psi, the entire train must be inspected. If air pressure is present in the brake pipe, the train may proceed.

**Exception:** If the train exceeds 5,000 tons, it must be visually inspected, unless emergency application of the brakes occurs at a speed above 30 MPH, and it can be ascertained that the brake pipe is continuous by observing pressure being restored on the rear car after the emergency application is released, or by performing steps A and B above.

**All trains:** Trains must be visually inspected before proceeding if unusual slack action was experienced when stopping or if excessive power is required to start the train. If excessive power is not required to start the train, and physical characteristics prevent a complete walking train inspection, inspect as much of the train as possible. The train may then be moved, but may not exceed 5 MPH for the distance necessary to complete the inspection, and must be stopped immediately if excessive power is required to keep the train moving.

The last paragraph under the heading "Train on Adjacent Track" is amended to read: A train on an adjacent track that receives radio notification must approach the location at restricted speed and stop short of any obstruction or flagman. When advised that the track is clear and that it is safe to proceed, these restrictions no longer apply.

**Rule 6.29.1 Inspecting Passing Trains**—the last paragraph entitled "Trackside Warning Detectors and Inspections" is amended to read:

Crew members must be aware of trackside warning detectors and signals from persons inspecting their train.

Stop the train immediately for inspection when:

- Crew member receives stop signal.
- A trackside warning device indicates a train defect or failed equipment.  
or
- Notified of a dangerous condition.

Movement must not proceed until it is safe.

**Rule 6.29.2 Train Inspection by Crew Members**—is supplemented by adding a new first paragraph reading:

If trackside warning detector or visual inspection notes a dragging equipment or shifted load defect, a walking inspection is required. The train may be moved only after:

- walking inspection confirms there is no dragging equipment or shifted load(s).
- defective car or cars are repaired.  
or
- permission is received from the train dispatcher or manager to move defective equipment.

Second paragraph (former first paragraph) is amended to read:

At other times when a walking inspection of the train is required, and physical characteristics prevent a complete train inspection, inspect as much of the train as possible. The train may then be moved, but may not exceed 5 MPH for the distance necessary to complete the inspection.

**Rule 6.32.2 Automatic Crossing Devices**—is changed in its entirety to read:

Under any of the following conditions, a movement must not foul a crossing equipped with automatic warning devices until the device has been operating long enough to provide warning and the crossing gates, if equipped, are fully lowered:

- Movement has been delayed or stopped within 3,000 feet of the crossing.
- Movement is closely following another movement.
- Movement is on other than the main track or siding.

Crew members must observe all automatic crossing warning devices and report any that are not operating properly to the train dispatcher or proper authority by the first available means of communication. Notify all affected trains as soon as possible.

- engineer.
  - loader car operator.
  - tiedown car person.
2. If the Rail Train Supervisor is on vacation, relieve the supervisor with a roadmaster or assistant roadmaster who has rail loading experience. Good communication is essential for successful loading operations.

**Item 9.1.4 F, Maintaining Spring Rail Frogs**—the “Note” under 2a is changed to read:

Note: Proper hold-down housing and horn clearances is 3/16 inch maximum and a minimum of 1/16 inch measured from the top of the horn to the housing and 1/8 inch maximum and a minimum of 1/32 inch measured from the bottom of the horn to the top of the riser plate. See the diagrams on Standard Plan 1829.04.

**Item 11.15.5 Thermite Welding, General Restrictions and Limitations**—is changed to read:

Do not place thermite welds:

- On rail ends with the end bolt hole drilled.
- Within 4-1/8 inches of the edge of any hole in the rail.
- Within 2 inches of a cadweld or copper bond wire installation. If this type of bond exists, remove any presence of copper by grinding. The rail ends must be inspected and cleaned after the grinding is complete.
- Closer than 2 feet from an existing plant weld.
- Closer than 14 feet to an existing thermite weld. Closely spaced thermite welds, which are brittle compared to rail and flashbutt welds, have contributed to derailments. Fourteen feet is slightly longer than a three axle locomotive truck. EXCEPTION: Thermite welds can be placed closer than 14 feet but not less than 4 feet to existing thermite welds if the alternative is a rail joint, or if additional lengths of rail would have to be cut in to keep thermite welds at 14 feet apart. No bolt holes shall exist between the 4 foot section of rail for thermite or 2 foot section for plant welds.
- On both ends of a rail “plug” simultaneously unless the rail is 24 feet long or more.

**Item 13.5 Operating Ballast Cars**—No. 4 is changed to read:

4. Only ride inside of ballast cars that are fully loaded, and then only when absolutely necessary to protect a reverse or shoving move. When it is necessary to protect a reverse or shoving move, it must be done in accordance with Safety Rule 13.1.5.

If an employee must get inside a ballast car for any reason other than the protection of a reverse or shoving move, the supervisor in charge must ensure that the cars are stopped and not moved until the employee is safely out of the car and on the ground.

**Item 15.20, Hy-Rail Vehicles (including Rules 15.20.1 through 15.20.8)**—are cancelled in their entirety.

**Item 18.3.1 Track Shunts**—is amended to read:

A. Track Shunts Placed by Track Personnel

Track personnel are responsible for ensuring the safety of the traveling public when their work activities interfere with the normal operation of automatic grade crossing warning systems. Authorized and trained track personnel may use track shunts in some situations to perform track work within the controlling circuit of an active warning device at a highway grade crossing.

1. Training  
Only employees who have been properly trained and qualified may use track shunts. This training, entitled Grade Crossing Track Shunt Program, is available within BNSF under Course Code 005145, and will be conducted by Signal Supervisors.

2. Approved Track Shunts  
Use only track shunts approved for use in the current edition of the BNSF Standard Plan Book to deactivate crossing signals (BNSF Standard Plan Drawing No. 2410).
3. Track Occupancy  
Do not use track shunts to deactivate highway grade crossing signals when authority to occupy the track is granted in the same limits with a train.

**23. Automatic Cab Signals**

Cab signal equipment must be cut out except on suburban equipment on the Chicago Subdivision.

**24. Verification of Rules Examination**

Employees required to pass rules examination must have a current rules examination card when issued, or engineer's certificate in their possession while on duty.

**25. Document Notation**

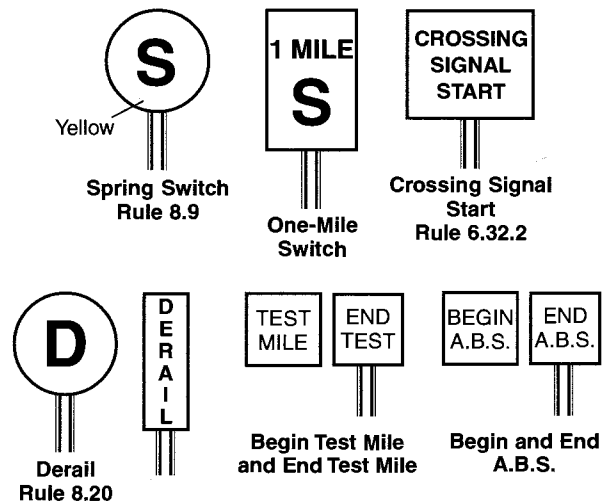
When the timetable or general order contains an amendment to the General Code of Operating Rules; Maintenance of Way Operating Rules; Air Brake and Train Handling Rules; Train Dispatcher's, Operator's and Control Operator's Manual; Canadian Rail Operating Rules; Rules for the Protection of Track Units and Track Work (Canada); notation of the change must be made or revised pages must be inserted into these rule books. The same will apply if a general order contains an amendment to the timetable.

**26. FRA Random Drug Testing**

TY&E employees selected for FRA Random Drug Testing must show the start time of the Random Drug Test (RDT) in the remarks column of their timeslip. Start time of RDT begins when a supervisor notifies the employee or hands the employee a letter advising him/her that they are selected for RDT. A stop time on RDT is necessary only if different from their off-duty time.

**27. Roadway Signs**

Except as shown, the following roadway signs have white backgrounds and black letters and/or numbers.



**Rule 9.16 Stop and Proceed Indications**—Item e is changed in its entirety to read:

- e. Proceed from a Stop indication in CTC territory, when authorized by the control operator as prescribed in Rule 9.12.1 (CTC Territory). This will apply to each succeeding signal displaying a Stop and Proceed indication or a signal displaying a Restricting indication designated by a grade marker ("G" sign).

**Rule 9.18 Electrically Locked Switches and Derails**—the second paragraph is changed to read:

To enter a track within manual interlocking or CTC territory, employees must not open the case door or unlock an electrically locked switch or derail without authority from the control operator.

**Rule 10.1 Authority to Enter CTC Limits**—the first bullet is changed to read:

- A controlled signal displays a proceed indication.

**Rule 10.3 Track and Time**—the instructions inside the box are changed to read:

Track and time does not authorize trains to occupy the main track within automatic interlocking limits.

**Rule 10.3.3 Joint Track and Time**—Diagram B is deleted and the second paragraph is changed to read:

When track and time is granted to protect maintenance or repair work, trains must not be allowed into the work limits unless the trains and foreman in charge of the work understand the conditions and movements that will be made.

**Rule 10.3.4 Record Track and Time**—the first paragraph is changed to read:

The employee requesting track and time will state name, occupation, exact location and train or other identification. The employee will copy the authority granted on the form provided for that purpose, and repeat from the form the authority granted. If the authority is repeated correctly, the control operator will acknowledge with "That is correct." The train can make no movement until the engineer understands the track and time granted. The employee who requests track and time must retain the written track and time record until track and time is released. The control operator must maintain a record of authority granted, including the time the track and time was released.

The following paragraph is added:

When requesting track and time, if communication is lost or an incomplete message is received while the control operator is issuing track and time, or if after repeating the authority to the control operator, the employee does not hear the response from the control operator "That is correct," the employee must not occupy the track. The employee requesting track and time must contact the control operator as soon as possible and confirm with the control operator that the track and time was not received.

#### Releasing Track and Time Limits

Employees releasing track and time limits must state the following:

- Their name.
- The track and time limit number being released.
- The authorized track limits being released.

**Rule 14.3 Operating with Track Warrants**—add the following second paragraph before the diagram:

When track warrant requires "Not in Effect Until After the Arrival of \_\_\_\_\_," the limits must not be occupied until the train to be met has been identified by engine number and the rear end marker has passed the point of restriction. In non-signalized territory, the train being restricted must establish positive radio

contact with the train to be met in order to confirm the identity of the passing train. If radio contact cannot be established, the train dispatcher must be contacted to provide the required confirmation. The train identification, time passed, location passed, or current time and location must be written on the track warrant form by both the conductor and engineer of the train being so restricted.

Item No. 1 is amended to read:

1. Proceed from one point to another in the direction the track warrant specifies. When a crew member informs the train dispatcher that the entire train has passed a specific point, track warrant authority is considered void up to that point. When the train dispatcher instructs a train crew to report passing a designated station or mile post, if the station has a siding, the report must be made after the rear car of the train passes over the last siding switch or rear car of train passes the mile post. If the designated station does not have a siding, the report must be made when the rear car of the train passes the station sign.

Engineer and conductor are jointly responsible, through job briefing, to ascertain and agree on their train's exact location before reporting past a specific point or clearing their track warrant.

The following item is added:

3. In non-signalized TWC territory, when a train is approaching a siding or potential meeting point, a crew member must transmit the following by radio:

"Train identification (initials, engine number and direction) is approaching siding at (location name) at (speed) MPH."

This transmission must be made approximately 2 miles in advance of any station or location where a train could meet another train in non-signalized territory.

**Rule 14.4 Occupying Same Track Warrant Limits**—the second paragraph of Item 1 is changed to read:

A train must inform the train dispatcher when it leaves the main track before reaching the last named point, unless a flagman is left to prevent a following movement from passing.

**Rule 14.10 Track Warrant in Effect**—the following is added: Employees releasing a track warrant must state the following:

- Their name.
- The track warrant number being released.
- The track limits being released.
- Time track warrant was reported clear.

**Rule 14.12 Voiding Track Warrants**—add the following paragraph:

Conductors and engineers must retain copies of all track warrant authorities transmitted by radio until the end of the tour of duty.

**Rule 15.1.1 Changing Address of Track Warrants or Track Bulletins**—is changed to read:

If the address must be changed on a track warrant or a track bulletin that does not grant authority, the train dispatcher may change the train symbol, engine number, direction, or date verbally.

**Rule 15.2 Protection by Track Bulletin Form B**—the third paragraph is changed to read:

However, trains do not need to comply with the above requirements if instructed as stated below, or if the entire train has cleared the limits.

**A. Verbal Permission**—is changed to read:

When granting verbal permission, use the following words:

"Foreman (name) (of Gang No.) using track bulletin no. \_\_\_\_\_ line no. \_\_\_\_\_ between MP \_\_\_\_\_ and MP \_\_\_\_\_ on \_\_\_\_\_ Subdivision."

5. All train and engine crew members and any other employees involved should be interviewed as soon as possible to develop their knowledge of the accident with respect to the function of the involved signal system.
6. The General Supervisor of Signals will be responsible for having the signal maintenance personnel called that will be required to protect the signal equipment.

SIGNAL MAINTENANCE PERSONNEL ARE NOT TO BE CALLED UNLESS AUTHORIZED BY THE GENERAL SUPERVISOR OF SIGNALS.

If the General Supervisor of Signals is not available, the Supervisor of Signals for the territory where the accident occurs will be responsible.

## 21. Hazardous Material Instructions, Changes and Additions

**Section II, No. 2, Acceptable Shipping Papers**—the last paragraph is changed to read:

If hazmat packets are used, conductors will be responsible for the envelope or packet during their tour of duty. (The packets should be opened and coupons looked at to be sure that hazardous materials information is available for all shipments.) Upon arrival at off-duty point, the inbound conductor will advise the outbound conductor of the location of the hazmat packet. The outbound conductor will check the new train list and determine the need to maintain the hazmat packet. If all shipments requiring hazmat descriptions have the information printed on the train list, the hazmat packet will no longer be needed. When crews are changed enroute, or when it is not possible for the inbound conductor to furnish such information to the outbound conductor, the train dispatcher or terminal supervisor must be contacted regarding disposition of the hazmat packet. Conductors are responsible to see that the hazmat packet for cars set out enroute is handled per an accompanying message or the train dispatcher's instructions. When cars set out enroute are picked up, the conductor will receive a message or train dispatcher's instruction regarding location of a hazmat packet. As a last alternative to replacing a missing hazmat packet, the conductor may secure a packet from the trailer/container door.

**Section II, No. 4, Reviewing Shipping Paper Entries**—the following is added:

### 10. Exceptions

- A. A shipment that originates as an Elevated Temperature Materials which does not meet any other hazard class definition and is not a hazardous substance (no RQ shown on the loaded shipping paper), can be returned for loading in either of the following methods:
  1. As a hazardous material with the proper shipping name of "Residue Last Contained: Elevated Temperature Material, N.O.S.", or
  2. As a non-hazardous material. (i.e. One Empty Tank Car).

NOTE: Markings do not have to be removed from the tank car if this option is chosen.

**Section III, No. 1, Policy**—the following is added:

- B. Each bulk packaging (for example: bulk bags, intermodal (IM) portable tanks, portable tanks, portable bins, gondola cars, hopper cars, or tank cars), containing any quantity of a hazardous material must be placarded on each side and each end with the type of placards specified in Tables 1 and 2.

**Section IV, No. 6**—the last three bullets are changed to read:

- If completed car certificates are not in place at a shipper's facility, at interchange points, or at points where an inspection is required:
  - Contact the train dispatcher, your supervisor or the customer.
  - Do not move the car until the car certificates are in place.

**Section V, No. 4**—the first bullet is changed to read:

- Class 2.3 or 6.1 Zone B poison-inhalation hazard (PIH) material (SCHI codes PB and PO).

**Section V, No. 4**—the third bullet is cancelled in its entirety.

**Section VI, No. 3, A**—the first bullet is changed to read: Five (5) tank car loads of Zone A or Zone B poison-inhalation hazard (PIH) material (SCHI codes PA, PL, PO and PB).

The third bullet is changed to read:

Class 2.3 or 6.1 Zone A or Zone B PIH material (SCHI codes PA, PL, PO and PB).

**Section VI, No. 3, C**—the fourth bullet is changed to read:

When a key train is stopped by a trackside warning detector, the indicated car (hazmat or not) must be set out.

(Also see System Special Instructions Item 8(E).)

**Section VI, No. 4**—Figure 6 is changed to read:

Allyl Chloride	Ethylene Dibromide
Carbon Tetrachloride	Ethylene Dichloride
Chlorobenzene	Methyl Bromide and Ethylene Chloroform
Chloroform	Dibromide Mixtures, Liquid
o-Dichlorobenzene	Methylene Chloride/Chloroform Mixture
Dichloromethane	Dichloropropane/Dichloropropene Mixture
Dichloropropane	Dichloropropane/Dichloropropene Mixture
Dichloropropene	Mixture
Epichlorohydrin	Tetrachloroethylene
1,1,1 Trichloroethane	Trichloroethylene
Ethyl Chloride	

## 22. Engineering Instructions, Changes and Additions

**Item 4.10 Temporary Speed Restriction Tables, Table 4.1**—is amended as follows:

Spot and out-of-face work activities involving tie renewal, undercutting, and/or surfacing without dynamic track stabilizer, the third column after "105 degrees and over"—is changed to read:

One train at 10 MPH. If track is OK, then 10 trains at 25 MPH. If track is OK, then 10 trains at 40 MPH. If track is OK, then maximum authorized speed.

Spot and out-of-face undercutting without surfacing—the third column is changed to read:

One train a 10 MPH. If track is OK, then 25 MPH until surfaced.

Panel track, washout, slipout, or other roadbed construction—the third column is changed to read:

One train at 10 MPH. If track is OK, then 10 trains at 25 MPH. If track is OK, then 10 trains at 40 MPH. If track is OK, then maximum authorized speed.

**Item 6.7.1(A) Handling Loaded Rail Trains**—Item 3 is changed to read:

3. Make sure buffer cars are at both ends of loaded cars, except during switching, train make-up, loading, or unloading moves.

**Same Limits with Men or Equipment**

Before a train or engine receives permission to occupy the same limits with men or equipment, the maintenance of way employee in charge and a crew member of the train or engine must be notified. When notified, all movements must be made at restricted speed.

**Permission Expired**

When unable to contact the train dispatcher and OCS permission expires, permission is extended until the train dispatcher can be contacted.

**OCS Form**

The following is an example of the OCS form:

**"OCS" Occupancy Control System**

No. \_\_\_\_\_ 19 \_\_\_\_\_  
 To: \_\_\_\_\_ At: \_\_\_\_\_

A.  OCS No. \_\_\_\_\_ is cancelled.  
 B1.  Proceed from \_\_\_\_\_ to \_\_\_\_\_ on \_\_\_\_\_ track.  
 B2.  Proceed from \_\_\_\_\_ to \_\_\_\_\_ on \_\_\_\_\_ track.  
 C.  Work between \_\_\_\_\_ and \_\_\_\_\_ on \_\_\_\_\_ track.  
 D.  Do not proceed until \_\_\_\_\_ arrives at \_\_\_\_\_.  
 E.  Following \_\_\_\_\_.  
 F.  Limits occupied by train or engine between \_\_\_\_\_ and \_\_\_\_\_.  
 G.  Limits occupied by men or equipment between \_\_\_\_\_ and \_\_\_\_\_.  
 J.  This permission expires at \_\_\_\_\_.  
 K.  Do not exceed \_\_\_\_\_ MPH between \_\_\_\_\_ and \_\_\_\_\_.  
 L.  Other specific instructions: \_\_\_\_\_

OK \_\_\_\_\_ Issued by \_\_\_\_\_ Limits reported clear at \_\_\_\_\_.  
 (Mark X in box of each item instructed.)

**Glossary**—The following abbreviations are added:

- AS Absolute Signal
- RL Restricted Limits
- EBCS Eastbound Controlled Signal
- WBCS Westbound Controlled Signal
- NBCS Northbound Controlled Signal
- SBCS Southbound Controlled Signal
- SS Station Sign
- NA Not Applicable

**Controlled Siding**—the following is added:

Rules applicable in Centralized Traffic Control apply on these sidings.

The following new terms are added:

**Automatic Switch**—A switch that, when movement over the switch is complete, will automatically return to its normal position.

**Overlap Sign**—A sign that indicates the limits of a block.

**Radio**—As used in these rules, the term 'radio' also applies to wireless communication devices when used in radio operation.

**Train Coordination**—Working limits established by a roadway worker through the use of a train's authority on a main track or other track where specific authority is required from a control operator or train dispatcher.

**15. General Code of Operating Rules, BNSF Version No. 1, Changes and Additions**

The following pages are added or revised effective October 30, 1998: 1-3, 1-4, 1-4a, 1-4b, 5-7, 5-8, 6-13, 6-14, 6-15, 6-16, 10-3, 10-4.

The following pages are added or revised effective January 31, 1999: i-5, i-6, 5-5, 5-6, 15-3, 15-4, A-1, A-2, A-3, A-4, A-5, A-6, A-7, A-8.

The following pages are revised effective October 10, 1999: Title page, i-2, i-3, i-4, 2-1, 2-2, 2-3, 2-4, 5-3, 5-4, 5-9, 5-10, 5-11, 5-12, 6-3, 6-4, 6-9, 6-10, 6-11, 6-12, 8-1, 8-2, 9-5, 9-6, 10-5, 10-6, 14-3, 14-4, 15-1, 15-2, 15-3, 15-4, 18-1, 18-2, GL-1, GL-2, GL-3, GL-4.

**16. General Code of Operating Rules, Supplemental Instructions**

Several rules in the General Code of Operating Rules allow and/or require that supplemental instructions be carried in the timetable or special instructions. The following are supplemental instructions that apply to Burlington Northern Santa Fe Railway.

**Application of Hours of Service & Change to GCOR Rule 1.17**

Apply the following when reporting Hours of Service: Time spent waiting for deadhead transportation must not be counted when determining time on duty for hours of service purposes when relieved of all duties as outlined in GCOR Rule 1.17.

**Rule 3.3 Time Signals**—Dial 8-998-8463 (8-WWV-TIME) or 8-435-6000 to obtain coordinated universal time signal.

**Rule 4.3 Timetable Characters**

- A ..... Automatic Interlocking
- B ..... General orders, notices, and circulars
- C ..... Radio communication
- g ..... Gate, normal position against conflicting route
- G ..... Gate, normal position against this subdivision
- J ..... Junction
- M ..... Manual interlocking
- P ..... Telephone
- R ..... Restricted Limits
- S ..... Railroad crossing protected by permanent stop sign
- T ..... Turning facility
- U ..... Railroad crossing not protected by signals or gates
- X ..... Crossover
- X(2) ... Multiple crossovers
- Y ..... Yard Limits

**Rule 5.5 Permanent Speed Signs**—the following paragraphs are added:

Reduced speed limits may be designated by Advance Warning sign (diagonally upward), Reduce Speed sign (rectangle) and Resume Speed sign (vertical).

The Advance Warning sign will be placed two miles in advance of the location where the lower speed takes effect. At the point where the reduced speed applies, a speed sign will repeat the permissible speed. The lower speed will be in effect until a Resume Speed sign or another Speed sign is displayed.

At the end of a reduced speed zone, a train or engine will be governed by a Speed sign displaying a higher speed or a Resume Speed sign which will authorize the maximum permissible speed on that subdivision. In either case, the speed must not be increased until the entire train has passed the sign displayed.

Locations where reduced speeds are required, but which are not indicated by signs, are listed in the special instructions for each subdivision.



**Mechanical/P&M Safety Rules**

The following pages are revised effective October 10, 1999:  
Title page, 2, 3, 4, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 29, 30, 33, 34, 65, 66, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 111, 112.

**Maintenance of Way Safety Rules**

The following pages are revised effective October 10, 1999:  
Title page, 2, 3, 4, 17, 18, 29, 30, 53, 54, 75, 76, 77, 78.

**TY&E Safety Supplement**

The following pages are added effective October 30, 1998:  
4a, 4b.

The following pages are revised effective January 31, 1999:  
3, 4, 5, 6, 9, 10, 21, 22, 25, 26, 29, 30, 33, 34.

The following pages are revised effective October 10, 1999:  
Title page, 2, 7, 8.

**20. Train Dispatcher's, Operator's and Control Operator's Manual, Changes and Additions**

**Rule 40.4.10 Serious Accidents Involving the Integrity of the Signal System**—is cancelled in its entirety. Rule 40.4.10 becomes new Rule 60.3.

**Rule 41.5.1 VMS System Delivery**—is cancelled in its entirety.

**Rule 41.5.5 Track Warrant Containing Authority**—the following paragraph is added:

When using the Legacy CTWC system to issue track warrants granting authority (Box 2, 3 or 4) for delivery directly to a printer or fax, do so only when the employee who is to receive the track warrant is at the location of the printer or fax.

**Rule 42.3 More Than One Train in the Same Limits**—is canceled in its entirety.

**Rule 42.7 No Manned Caboose**—is changed in its entirety to read:

**Rule 42.7 Relieve Flag Protection**

When trains are authorized by box 2 or box 3 in non-signalized TWC territory, relieve trains of providing flag protection against following trains on the same track.

**Rule 42.19 Protect Open Switch**—is amended in its entirety to read:

Main track switches in track warrant control territory may be left in the reverse position only when the condition is protected by a computerized track warrant system.

**IN ABS TERRITORY:**

Track warrant box 2 or 3 authority for trains may be issued with no restrictions.

Track warrant box 4 authority for trains must end at any open main track switch. Authority may be issued beyond the open switch only after employee has restored the switch to normal position.

Track warrant box 2,3 or 4 authority for maintenance of way employees may be issued with no restrictions.

**NON-SIGNALIZED TERRITORY:**

Track warrant box 2 or 3 authority for trains must end at any open main track switch. Box 2 or 3 authority may be issued beyond the open switch only after the train has passed the last siding switch of the previous station to the open switch.

Track warrant box 4 authority for trains must end at any open main track switch. Authority may be issued beyond the open switch only after employee has restored the switch to normal position.

Track warrant box 2, 3 or 4 authority for maintenance of way employees may be issued with no restrictions.

**IN ANY TERRITORY:**

When a crew member reports that a switch has been restored to normal position as required by the last bullet of GCOR Rule 8.3 (Main Track Switches), the switch must not be considered returned to normal until the dispatcher verifies that:

- the crew member is physically at the switch.
- or
- the train or engine is occupying the switch.

When using legacy CTWC, before issuing a track warrant with box 7 and box 21 X'ed, you must have issued the opposing train's authority beyond the switch to be left open.

**Note:** If this procedure is not followed, the train that is later authorized beyond the switch to be left open will receive a box 20 to stop and restore a switch that has not yet been left in the reverse position.

**Rule 42.22.4 Form B and Crossovers**—the following new rule is added:

Outside CTC or interlocking limits, when track bulletin Form B limits contain a crossover from the other main track, the employee in charge of the track bulletin Form B will ensure that the crossover switches are:

- lined in normal position.
- spiked, clamped or locked with an effective locking device.
- properly tagged.

Prior to authorizing movement through one of these crossovers, the employee in charge of the track bulletin Form B must be notified of the intent to use the crossover and arrangements made for this employee to facilitate removal of the tags and spikes, clamps or effective locking devices.

**Rule 42.24 Permission for Reverse Movements in ABS**—the following new rule is added:

Permission for a reverse movement within ABS may be granted to a train if the following conditions are satisfied:

- There are no other trains authorized in the limits where the reverse movement will be made.
- If there are other trains authorized within the limits where the reverse movement will be made, the train dispatcher must protect the movement.

**Rule 43.10.1 Switches Included in CTC**—the following new rule is added:

When track bulletin Form B limits contain a dual control switch, blocking or marking devices must be applied to the control machine at these dual control switches during the effective time of the track bulletin Form B on the track to be occupied or fouled. Do not operate the dual control switch without first notifying the employee in charge of the track bulletin Form B and determining it is safe to do so. Maintain record of time blocking is placed and removed. Include in your transfer any blocking or marking devices in use for this purpose.

**Rule 44.14 CTC Outage**—is cancelled.

**Rule 45.2.7 CTC Outage, Issuing Track and Time**—the following new rule is added:

If a CTC outage occurs and trains are in or authorized through the affected territory, do not issue any track and time until the limits can be protected.

Before granting track and time, consider that the control machine display of the affected control point and the signal indications in the field may not correspond.

If necessary to issue track and time, do the following:

- Ensure no train movements are within or authorized through the affected territory unless granted joint track and time.
- Use the Quickblock or Trackblock feature at adjacent CPs to protect access.

**Mechanical/P&M Safety Rules**

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- spiked, clamped or locked with an effective locking device.
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Prior to authorizing movement through one of these crossovers, the employee in charge of the track bulletin Form B must be notified of the intent to use the crossover and arrangements made for this employee to facilitate removal of the tags and spikes, clamps or effective locking devices.

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If a CTC outage occurs and trains are in or authorized through the affected territory, do not issue any track and time until the limits can be protected.

Before granting track and time, consider that the control machine display of the affected control point and the signal indications in the field may not correspond.

If necessary to issue track and time, do the following:

- Ensure no train movements are within or authorized through the affected territory unless granted joint track and time.
- Use the Quickblock or Trackblock feature at adjacent CPs to protect access.

**Same Limits with Men or Equipment**

Before a train or engine receives permission to occupy the same limits with men or equipment, the maintenance of way employee in charge and a crew member of the train or engine must be notified. When notified, all movements must be made at restricted speed.

**Permission Expired**

When unable to contact the train dispatcher and OCS permission expires, permission is extended until the train dispatcher can be contacted.

**OCS Form**

The following is an example of the OCS form:

**"OCS" Occupancy Control System**

No. \_\_\_\_\_ 19 \_\_\_\_\_  
 To: \_\_\_\_\_ At: \_\_\_\_\_

A.  OCS No. \_\_\_\_\_ is cancelled.  
 B1.  Proceed from \_\_\_\_\_ to \_\_\_\_\_ on \_\_\_\_\_ track.  
 B2.  Proceed from \_\_\_\_\_ to \_\_\_\_\_ on \_\_\_\_\_ track.  
 C.  Work between \_\_\_\_\_ and \_\_\_\_\_ on \_\_\_\_\_ track.  
 D.  Do not proceed until \_\_\_\_\_ arrives at \_\_\_\_\_.  
 E.  Following \_\_\_\_\_.  
 F.  Limits occupied by train or engine between \_\_\_\_\_ and \_\_\_\_\_.  
 G.  Limits occupied by men or equipment between \_\_\_\_\_ and \_\_\_\_\_.  
 J.  This permission expires at \_\_\_\_\_.  
 K.  Do not exceed \_\_\_\_\_ MPH between \_\_\_\_\_ and \_\_\_\_\_.  
 L.  Other specific instructions: \_\_\_\_\_

OK \_\_\_\_\_ Issued by \_\_\_\_\_ Limits reported clear at \_\_\_\_\_.  
 (Mark X in box of each item instructed.)

**Glossary**—The following abbreviations are added:

- AS Absolute Signal
- RL Restricted Limits
- EBCS Eastbound Controlled Signal
- WBCS Westbound Controlled Signal
- NBCS Northbound Controlled Signal
- SBCS Southbound Controlled Signal
- SS Station Sign
- NA Not Applicable

**Controlled Siding**—the following is added:

Rules applicable in Centralized Traffic Control apply on these sidings.

The following new terms are added:

**Automatic Switch**—A switch that, when movement over the switch is complete, will automatically return to its normal position.

**Overlap Sign**—A sign that indicates the limits of a block.

**Radio**—As used in these rules, the term 'radio' also applies to wireless communication devices when used in radio operation.

**Train Coordination**—Working limits established by a roadway worker through the use of a train's authority on a main track or other track where specific authority is required from a control operator or train dispatcher.

**15. General Code of Operating Rules, BNSF Version No. 1, Changes and Additions**

The following pages are added or revised effective October 30, 1998: 1-3, 1-4, 1-4a, 1-4b, 5-7, 5-8, 6-13, 6-14, 6-15, 6-16, 10-3, 10-4.

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The following pages are revised effective October 10, 1999: Title page, i-2, i-3, i-4, 2-1, 2-2, 2-3, 2-4, 5-3, 5-4, 5-9, 5-10, 5-11, 5-12, 6-3, 6-4, 6-9, 6-10, 6-11, 6-12, 8-1, 8-2, 9-5, 9-6, 10-5, 10-6, 14-3, 14-4, 15-1, 15-2, 15-3, 15-4, 18-1, 18-2, GL-1, GL-2, GL-3, GL-4.

**16. General Code of Operating Rules, Supplemental Instructions**

Several rules in the General Code of Operating Rules allow and/or require that supplemental instructions be carried in the timetable or special instructions. The following are supplemental instructions that apply to Burlington Northern Santa Fe Railway.

**Application of Hours of Service & Change to GCOR Rule 1.17**

Apply the following when reporting Hours of Service: Time spent waiting for deadhead transportation must not be counted when determining time on duty for hours of service purposes when relieved of all duties as outlined in GCOR Rule 1.17.

**Rule 3.3 Time Signals**—Dial 8-998-8463 (8-WWV-TIME) or 8-435-6000 to obtain coordinated universal time signal.

**Rule 4.3 Timetable Characters**

- A ..... Automatic Interlocking
- B ..... General orders, notices, and circulars
- C ..... Radio communication
- g ..... Gate, normal position against conflicting route
- G ..... Gate, normal position against this subdivision
- J ..... Junction
- M ..... Manual interlocking
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- R ..... Restricted Limits
- S ..... Railroad crossing protected by permanent stop sign
- T ..... Turning facility
- U ..... Railroad crossing not protected by signals or gates
- X ..... Crossover
- X(2) ... Multiple crossovers
- Y ..... Yard Limits

**Rule 5.5 Permanent Speed Signs**—the following paragraphs are added:

Reduced speed limits may be designated by Advance Warning sign (diagonally upward), Reduce Speed sign (rectangle) and Resume Speed sign (vertical).

The Advance Warning sign will be placed two miles in advance of the location where the lower speed takes effect. At the point where the reduced speed applies, a speed sign will repeat the permissible speed. The lower speed will be in effect until a Resume Speed sign or another Speed sign is displayed.

At the end of a reduced speed zone, a train or engine will be governed by a Speed sign displaying a higher speed or a Resume Speed sign which will authorize the maximum permissible speed on that subdivision. In either case, the speed must not be increased until the entire train has passed the sign displayed.

Locations where reduced speeds are required, but which are not indicated by signs, are listed in the special instructions for each subdivision.

5. All train and engine crew members and any other employees involved should be interviewed as soon as possible to develop their knowledge of the accident with respect to the function of the involved signal system.
6. The General Supervisor of Signals will be responsible for having the signal maintenance personnel called that will be required to protect the signal equipment.

SIGNAL MAINTENANCE PERSONNEL ARE NOT TO BE CALLED UNLESS AUTHORIZED BY THE GENERAL SUPERVISOR OF SIGNALS.

If the General Supervisor of Signals is not available, the Supervisor of Signals for the territory where the accident occurs will be responsible.

## 21. Hazardous Material Instructions, Changes and Additions

**Section II, No. 2, Acceptable Shipping Papers**—the last paragraph is changed to read:

If hazmat packets are used, conductors will be responsible for the envelope or packet during their tour of duty. (The packets should be opened and coupons looked at to be sure that hazardous materials information is available for all shipments.) Upon arrival at off-duty point, the inbound conductor will advise the outbound conductor of the location of the hazmat packet. The outbound conductor will check the new train list and determine the need to maintain the hazmat packet. If all shipments requiring hazmat descriptions have the information printed on the train list, the hazmat packet will no longer be needed. When crews are changed enroute, or when it is not possible for the inbound conductor to furnish such information to the outbound conductor, the train dispatcher or terminal supervisor must be contacted regarding disposition of the hazmat packet. Conductors are responsible to see that the hazmat packet for cars set out enroute is handled per an accompanying message or the train dispatcher's instructions. When cars set out enroute are picked up, the conductor will receive a message or train dispatcher's instruction regarding location of a hazmat packet. As a last alternative to replacing a missing hazmat packet, the conductor may secure a packet from the trailer/container door.

**Section II, No. 4, Reviewing Shipping Paper Entries**—the following is added:

### 10. Exceptions

- A. A shipment that originates as an Elevated Temperature Materials which does not meet any other hazard class definition and is not a hazardous substance (no RQ shown on the loaded shipping paper), can be returned for loading in either of the following methods:
  1. As a hazardous material with the proper shipping name of "Residue Last Contained: Elevated Temperature Material, N.O.S.", or
  2. As a non-hazardous material. (i.e. One Empty Tank Car).

NOTE: Markings do not have to be removed from the tank car if this option is chosen.

**Section III, No. 1, Policy**—the following is added:

- B. Each bulk packaging (for example: bulk bags, intermodal (IM) portable tanks, portable tanks, portable bins, gondola cars, hopper cars, or tank cars), containing any quantity of a hazardous material must be placarded on each side and each end with the type of placards specified in Tables 1 and 2.

**Section IV, No. 6**—the last three bullets are changed to read:

- If completed car certificates are not in place at a shipper's facility, at interchange points, or at points where an inspection is required:
  - Contact the train dispatcher, your supervisor or the customer.
  - Do not move the car until the car certificates are in place.

**Section V, No. 4**—the first bullet is changed to read:

- Class 2.3 or 6.1 Zone B poison-inhalation hazard (PIH) material (SCHI codes PB and PO).

**Section V, No. 4**—the third bullet is cancelled in its entirety.

**Section VI, No. 3, A**—the first bullet is changed to read:

Five (5) tank car loads of Zone A or Zone B poison-inhalation hazard (PIH) material (SCHI codes PA, PL, PO and PB).

The third bullet is changed to read:

Class 2.3 or 6.1 Zone A or Zone B PIH material (SCHI codes PA, PL, PO and PB).

**Section VI, No. 3, C**—the fourth bullet is changed to read:

When a key train is stopped by a trackside warning detector, the indicated car (hazmat or not) must be set out.

(Also see System Special Instructions Item 8(E).)

**Section VI, No. 4**—Figure 6 is changed to read:

Allyl Chloride	Ethylene Dibromide
Carbon Tetrachloride	Ethylene Dichloride
Chlorobenzene	Methyl Bromide and Ethylene
Chloroform	Dibromide Mixtures, Liquid
o-Dichlorobenzene	Methylene Chloride/Chloroform
Dichloromethane	Mixture
Dichloropropane	Dichloropropane/Dichloropropene
Dichloropropene	Mixture
Epichlorohydrin	Tetrachloroethylene
1,1,1 Trichloroethane	Trichloroethylene
Ethyl Chloride	

## 22. Engineering Instructions, Changes and Additions

**Item 4.10 Temporary Speed Restriction Tables, Table 4.1**—is amended as follows:

Spot and out-of-face work activities involving tie renewal, undercutting, and/or surfacing without dynamic track stabilizer, the third column after "105 degrees and over"—is changed to read:

One train at 10 MPH. If track is OK, then 10 trains at 25 MPH. If track is OK, then 10 trains at 40 MPH. If track is OK, then maximum authorized speed.

Spot and out-of-face undercutting without surfacing—the third column is changed to read:

One train a 10 MPH. If track is OK, then 25 MPH until surfaced.

Panel track, washout, slipout, or other roadbed construction—the third column is changed to read:

One train at 10 MPH. If track is OK, then 10 trains at 25 MPH. If track is OK, then 10 trains at 40 MPH. If track is OK, then maximum authorized speed.

**Item 6.7.1(A) Handling Loaded Rail Trains**—Item 3 is changed to read:

3. Make sure buffer cars are at both ends of loaded cars, except during switching, train make-up, loading, or unloading moves.

**Rule 9.16 Stop and Proceed Indications**—Item e is changed in its entirety to read:

- e. Proceed from a Stop indication in CTC territory, when authorized by the control operator as prescribed in Rule 9.12.1 (CTC Territory). This will apply to each succeeding signal displaying a Stop and Proceed indication or a signal displaying a Restricting indication designated by a grade marker ("G" sign).

**Rule 9.18 Electrically Locked Switches and Derails**—the second paragraph is changed to read:

To enter a track within manual interlocking or CTC territory, employees must not open the case door or unlock an electrically locked switch or derail without authority from the control operator.

**Rule 10.1 Authority to Enter CTC Limits**—the first bullet is changed to read:

- A controlled signal displays a proceed indication.

**Rule 10.3 Track and Time**—the instructions inside the box are changed to read:

Track and time does not authorize trains to occupy the main track within automatic interlocking limits.

**Rule 10.3.3 Joint Track and Time**—Diagram B is deleted and the second paragraph is changed to read:

When track and time is granted to protect maintenance or repair work, trains must not be allowed into the work limits unless the trains and foreman in charge of the work understand the conditions and movements that will be made.

**Rule 10.3.4 Record Track and Time**—the first paragraph is changed to read:

The employee requesting track and time will state name, occupation, exact location and train or other identification. The employee will copy the authority granted on the form provided for that purpose, and repeat from the form the authority granted. If the authority is repeated correctly, the control operator will acknowledge with "That is correct." The train can make no movement until the engineer understands the track and time granted. The employee who requests track and time must retain the written track and time record until track and time is released. The control operator must maintain a record of authority granted, including the time the track and time was released.

The following paragraph is added:

When requesting track and time, if communication is lost or an incomplete message is received while the control operator is issuing track and time, or if after repeating the authority to the control operator, the employee does not hear the response from the control operator "That is correct," the employee must not occupy the track. The employee requesting track and time must contact the control operator as soon as possible and confirm with the control operator that the track and time was not received.

#### Releasing Track and Time Limits

Employees releasing track and time limits must state the following:

- Their name.
- The track and time limit number being released.
- The authorized track limits being released.

**Rule 14.3 Operating with Track Warrants**—add the following second paragraph before the diagram:

When track warrant requires "Not in Effect Until After the Arrival of \_\_\_\_\_," the limits must not be occupied until the train to be met has been identified by engine number and the rear end marker has passed the point of restriction. In non-signalized territory, the train being restricted must establish positive radio

contact with the train to be met in order to confirm the identity of the passing train. If radio contact cannot be established, the train dispatcher must be contacted to provide the required confirmation. The train identification, time passed, location passed, or current time and location must be written on the track warrant form by both the conductor and engineer of the train being so restricted.

Item No. 1 is amended to read:

1. Proceed from one point to another in the direction the track warrant specifies. When a crew member informs the train dispatcher that the entire train has passed a specific point, track warrant authority is considered void up to that point. When the train dispatcher instructs a train crew to report passing a designated station or mile post, if the station has a siding, the report must be made after the rear car of the train passes over the last siding switch or rear car of train passes the mile post. If the designated station does not have a siding, the report must be made when the rear car of the train passes the station sign.

Engineer and conductor are jointly responsible, through job briefing, to ascertain and agree on their train's exact location before reporting past a specific point or clearing their track warrant.

The following item is added:

3. In non-signalized TWC territory, when a train is approaching a siding or potential meeting point, a crew member must transmit the following by radio:

"Train identification (initials, engine number and direction) is approaching siding at (location name) at (speed) MPH."

This transmission must be made approximately 2 miles in advance of any station or location where a train could meet another train in non-signalized territory.

**Rule 14.4 Occupying Same Track Warrant Limits**—the second paragraph of Item 1 is changed to read:

A train must inform the train dispatcher when it leaves the main track before reaching the last named point, unless a flagman is left to prevent a following movement from passing.

**Rule 14.10 Track Warrant in Effect**—the following is added: Employees releasing a track warrant must state the following:

- Their name.
- The track warrant number being released.
- The track limits being released.
- Time track warrant was reported clear.

**Rule 14.12 Voiding Track Warrants**—add the following paragraph:

Conductors and engineers must retain copies of all track warrant authorities transmitted by radio until the end of the tour of duty.

**Rule 15.1.1 Changing Address of Track Warrants or Track Bulletins**—is changed to read:

If the address must be changed on a track warrant or a track bulletin that does not grant authority, the train dispatcher may change the train symbol, engine number, direction, or date verbally.

**Rule 15.2 Protection by Track Bulletin Form B**—the third paragraph is changed to read:

However, trains do not need to comply with the above requirements if instructed as stated below, or if the entire train has cleared the limits.

**A. Verbal Permission**—is changed to read:

When granting verbal permission, use the following words:

"Foreman (name) (of Gang No.) using track bulletin no. \_\_\_\_\_ line no. \_\_\_\_\_ between MP \_\_\_\_\_ and MP \_\_\_\_\_ on \_\_\_\_\_ Subdivision."

- engineer.
  - loader car operator.
  - tiedown car person.
2. If the Rail Train Supervisor is on vacation, relieve the supervisor with a roadmaster or assistant roadmaster who has rail loading experience. Good communication is essential for successful loading operations.

**Item 9.1.4 F, Maintaining Spring Rail Frogs**—the "Note" under 2a is changed to read:

Note: Proper hold-down housing and horn clearances is 3/16 inch maximum and a minimum of 1/16 inch measured from the top of the horn to the housing and 1/8 inch maximum and a minimum of 1/32 inch measured from the bottom of the horn to the top of the riser plate. See the diagrams on Standard Plan 1829.04.

**Item 11.15.5 Thermite Welding, General Restrictions and Limitations**—is changed to read:

Do not place thermite welds:

- On rail ends with the end bolt hole drilled.
- Within 4-1/8 inches of the edge of any hole in the rail.
- Within 2 inches of a cadweld or copper bond wire installation. If this type of bond exists, remove any presence of copper by grinding. The rail ends must be inspected and cleaned after the grinding is complete.
- Closer than 2 feet from an existing plant weld.
- Closer than 14 feet to an existing thermite weld. Closely spaced thermite welds, which are brittle compared to rail and flashbutt welds, have contributed to derailments. Fourteen feet is slightly longer than a three axle locomotive truck. EXCEPTION: Thermite welds can be placed closer than 14 feet but not less than 4 feet to existing thermite welds if the alternative is a rail joint, or if additional lengths of rail would have to be cut in to keep thermite welds at 14 feet apart. No bolt holes shall exist between the 4 foot section of rail for thermite or 2 foot section for plant welds.
- On both ends of a rail "plug" simultaneously unless the rail is 24 feet long or more.

**Item 13.5 Operating Ballast Cars**—No. 4 is changed to read:

4. Only ride inside of ballast cars that are fully loaded, and then only when absolutely necessary to protect a reverse or shoving move. When it is necessary to protect a reverse or shoving move, it must be done in accordance with Safety Rule 13.1.5.

If an employee must get inside a ballast car for any reason other than the protection of a reverse or shoving move, the supervisor in charge must ensure that the cars are stopped and not moved until the employee is safely out of the car and on the ground.

**Item 15.20, Hy-Rail Vehicles (Including Rules 15.20.1 through 15.20.8)**—are cancelled in their entirety.

**Item 18.3.1 Track Shunts**—is amended to read:

A. Track Shunts Placed by Track Personnel

Track personnel are responsible for ensuring the safety of the traveling public when their work activities interfere with the normal operation of automatic grade crossing warning systems. Authorized and trained track personnel may use track shunts in some situations to perform track work within the controlling circuit of an active warning device at a highway grade crossing.

1. Training

Only employees who have been properly trained and qualified may use track shunts. This training, entitled Grade Crossing Track Shunt Program, is available within BNSF under Course Code 005145, and will be conducted by Signal Supervisors.

2. Approved Track Shunts  
Use only track shunts approved for use in the current edition of the BNSF Standard Plan Book to deactivate crossing signals (BNSF Standard Plan Drawing No. 2410).
3. Track Occupancy  
Do not use track shunts to deactivate highway grade crossing signals when authority to occupy the track is granted in the same limits with a train.

**23. Automatic Cab Signals**

Cab signal equipment must be cut out except on suburban equipment on the Chicago Subdivision.

**24. Verification of Rules Examination**

Employees required to pass rules examination must have a current rules examination card when issued, or engineer's certificate in their possession while on duty.

**25. Document Notation**

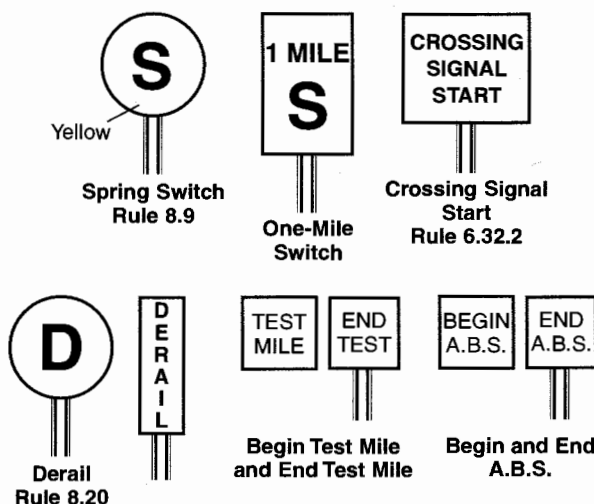
When the timetable or general order contains an amendment to the General Code of Operating Rules; Maintenance of Way Operating Rules; Air Brake and Train Handling Rules; Train Dispatcher's, Operator's and Control Operator's Manual; Canadian Rail Operating Rules; Rules for the Protection of Track Units and Track Work (Canada); notation of the change must be made or revised pages must be inserted into these rule books. The same will apply if a general order contains an amendment to the timetable.

**26. FRA Random Drug Testing**

TY&E employees selected for FRA Random Drug Testing must show the start time of the Random Drug Test (RDT) in the remarks column of their timeslip. Start time of RDT begins when a supervisor notifies the employee or hands the employee a letter advising him/her that they are selected for RDT. A stop time on RDT is necessary only if different from their off-duty time.

**27. Roadway Signs**

Except as shown, the following roadway signs have white backgrounds and black letters and/or numbers.





**Crest of Grade**  
Black on yellow reflective background

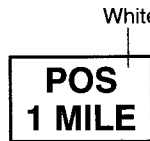


**Crossing Whistle**  
Rule 5.8.2

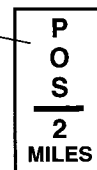


**Westward Siding or Eastward Siding**  
Rule 6.28.1

When numeral attached, denotes the number of crossings less than 1,320 ft. apart



**Protect Open Switch**  
Check track warrant. Switch may be open 1 mile ahead.



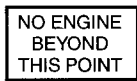
**Protect Open Switch**  
Check track warrant. Switch may be open 2 miles ahead.



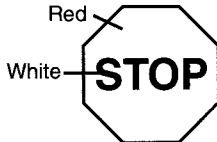
**Protect Open Switch**  
This switch left open when visible.



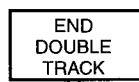
**Begin and End C.T.C.**



**No Engine Beyond This Point**



**Stop**  
Rules 6.16 and 6.18



**End Double Track**

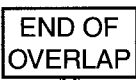


**Stop**

White letters on reflective red background, or black letters on white background  
Rule 6.32.2



**Railroad Crossing**  
Rules 6.16 and 6.18



**End of Overlap**  
Rule 9.21



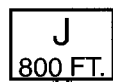
**Signal Overlap**  
Rule 9.21



**Flanger**



**Restricted Limits**  
Rule 6.14



**Junction**  
Rule 6.18



**Fouling Point**



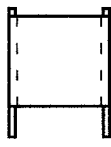
**Yard Limits**  
Rule 6.13



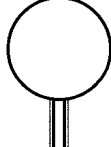
**One-Mile Draw Span**  
Rule 6.16



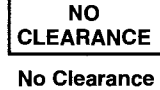
**Track Flag**



**Track Flag**



**Track Flag**



**No Clearance**



**NO CLEARANCE**

Yellow—Rule 5.4.2  
Yellow/Red—Rule 5.4.3  
Red—Rule 5.4.7  
Green—Rule 5.4.5

**28. Cars Setout Bad Order**

When a car is set out between terminals account bad order, it should, if possible, be left where it can be driven to by truck for making repairs.

**29. Grade Crossing Accidents**

The following information is designed to serve as post grade crossing accident guidelines. It is designed to provide the utmost in safety for you and your crew.

After the accident has occurred and the train is stopped:

- A. Ensure the safety of crew members, accident victims, and the public.
- B. Meet the requirements of Rule 6.23.
- C. Contact the dispatcher or any other available radio contact and advise:
  1. exact location; and
  2. what emergency services are needed. Be sure to include alternate routes for the emergency vehicles if your train is blocking road crossings.
- D. Assess the damage to the vehicle and train to determine if there is any danger to your crew or the public.
- E. Assign a crew member to monitor a radio to provide further information for emergency assistance.
- F. If it is safe, render assistance to accident victims. It is important not to move the victim unless a life threatening situation exists.
- G. Turn "off" the vehicle's ignition and inform the investigating officer you did so. Otherwise, do not disturb the accident scene. Do not move the train unless it presents a safety problem, such as emergency vehicles needing to get to the accident through a blocked crossing, etc.
- H. Only give information to :
  1. The investigating officer; or,
  2. Authorized company managers.

Cooperate with the investigating officer. Answer the officer's questions and provide as much information as you can recall.

Record the badge number and name of the investigating police officer at the scene. Witness with the officer that the headlight is on, and that the whistle and bell on lead unit are in proper working order. Also, note that the crossing warning devices are functioning.
- I. Assign a crew member to verify the accuracy of the train list. Save all train lists, track warrants, track condition messages, and other pertinent documents for the proper BNSF managers.
- J. Ascertain that no part of your train is derailed and that it will be safe to proceed once released by the investigating officer.
- K. Personal counseling will be available to any crew member who might experience post-accident trauma.

**30. System Work Train Policy**

The conductor is in charge of and will be responsible for all work train movements. The safety of the overall train operation is the responsibility of the entire train crew. The engineer shall receive train movement instructions only from a member of the train crew except in cases of emergency.

When Maintenance of Way, Signal, Structures, Mechanical or other work groups are involved with the activities of the work train, a coordinator from such group must be designated. The train crew will communicate with the designated coordinator concerning all train movements and work activities.

An initial job briefing will be conducted before commencing work and additional job briefings must be held at intervals not to exceed four (4) hours until the end of the tour of duty. In addition, when there is a change in assignment or a significant delay in activities has occurred, a job briefing must be conducted prior to commencing work. Employees who subsequently work in the vicinity of a work train after such job briefings have been held, must not commence work until they have received a job briefing from the designated coordinator regardless of authority received to occupy the area. The conductor is responsible to ensure that no work activity begins until the required job briefings are complete.

Job briefings must include applicable operating rules, safety rules, special instructions and any other work-specific information. The designated coordinator is responsible for communicating impending train movements to the work groups under his control.

All employees assigned to a work train and/or its activities are responsible to be on the lookout for train or track car movements at all times. Lookouts will be utilized when necessary and all movements must be fully protected.

**31. Track Condition Messages**

Track condition messages may be issued by train dispatchers to cover restrictions on other than main track.

Restrictions shown on a track condition message may be cancelled verbally by the Train Dispatcher.

Authority can be given by a Train Dispatcher or supervisor to enter a track shown to be out of service on a track condition message.

When a track warrant indicates a track condition or train message is to be received, conductor is responsible for securing those messages necessary for movement of their train. Track condition messages must be retained and complied with on all trips made during the tour of duty on which they were received.

**32. Securing Track Warrants**

When reporting for duty at initial terminal, a crew member will secure track warrants, track bulletins, and track condition messages, unless otherwise instructed. A rescue/relief crew member must contact the dispatcher before departing to determine if additional track warrants, track bulletins, and track condition messages are required, and advise if all crew members are present and ready to depart.

At locations where track warrants are received by printer or fax, crew members must verify that the route description, if printed, covers the intended route of their train. If it does not, contact the train dispatcher and determine if the track warrant is valid. Also, crew members must check the date and "OK" time on track warrant and if the track warrant is over three (3) hours old, contact the train dispatcher and determine if the track warrant is still valid.

If the identifying unit is not shown correctly on the track warrant address line, contact the train dispatcher and correct the address line before departing the initial station.

**33. Excessive Wind, Tornado and Earthquake Instructions  
Excessive Wind Instructions**

When weather bulletins forecasting high winds are received in the Network Operations Center, the train dispatcher will notify all trains in the area, giving the time and limits of the expected high winds.

When notified that winds are forecast to be in excess of 60 MPH, all trains and equipment, except light engines and loaded unit type trains handling coal, grain, ore, taconite, ballast, molten sulfur or potash must stop during the time and within the limits stated.

**Exception:** If a crew on a train, other than those listed above, observes that local weather conditions are not as severe as the weather warning and would not impact their safety or that of the train, they may proceed, advising the train dispatcher as soon as possible.

**Tornado Watch and Warning Instructions**

Tornadoes are the most violent of all storms. Paths of destruction range from a few hundred feet in width to more than a mile and extend the length of a city block to 300 miles. The greatest potential for such storms usually exists from April through September.

A "tornado watch" means atmospheric conditions are such that tornadoes may develop. A tornado watch is generally issued 4-6 hours before the conditions may occur.

During a tornado watch, all train movements and yard activities will continue, keeping alert for any signs of weather change. The danger signs to look for are severe thunderstorms, hail, roaring noise, a funnel cloud or combination of the above. The radio on a locomotive or a pakset should be used to monitor instructions and information to and from the train dispatcher. In the event a crew spots a funnel cloud, the train dispatcher should be immediately notified, consistent with the crew's safety.

If a train or yard assignment has an occupied caboose, upon being notified of a tornado watch, the occupants of the caboose should immediately move to the locomotive consist. While in the process of moving to the locomotive, if the tornado watch turns into a "tornado warning," or a funnel cloud is spotted, those affected should seek shelter in a nearby ditch, ravine, culvert, under a bridge or in a depression. If none of these are available, lie face down on the ground with hands over the head away from the caboose or cars in the train.

A "tornado warning" means a tornado has been sighted or verified by the National Weather Service or by persons associated with official weather spotters. The train dispatcher will keep trains and crews apprised of limits of tornado warnings. Train crews are to follow instructions as follows:

During a tornado warning, all train movements and yard activities must stop. Any train enroute will stop and employees should seek appropriate shelter consistent with the safety of all involved, avoiding the stopping of a train on a high bridge, across railroad and highway crossing at grade, or anywhere the presence of a train could be a hindrance.

After the tornado warning has been cleared and such information has reached the train crews, if the path of the tornado crossed the tracks at their location or in the immediate vicinity, crew members must inspect their train before moving to determine if any damage or derailment has occurred to the train or if the track structure has been damaged. After inspecting the train and track, and the train dispatcher has relayed the limits of



the tornado's path, the train may proceed, prepared to stop when approaching bridges, culverts, or other points likely to be affected. The train dispatcher must be advised immediately of such conditions.

**Earthquake Instructions**

When an earthquake is reported, the train dispatcher will do the following:

1. Instruct all trains within 150 miles of the reporting location to "proceed at restricted speed due to earthquake conditions." An acknowledgment must be obtained from each train or engine receiving these instructions.
2. Once magnitude and epicenter are known, the following inspection criteria will apply:
  - If magnitude is less than 5.0, no inspection is required.
  - If magnitude is 5.0 or greater, response will depend on the group of states and provinces within which the epicenter is located and the following criteria will apply within the designated radius from the epicenter:  
 Group 1: California and Baja California, Mexico  
 Group 2: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming; Alberta, Canada and Chihuahua, Mexico  
 Group 3: All other states (includes area east of Group 2, Oregon, Washington and British Columbia)

Magnitude Range	Criteria for Response	Group 1 Radius	Group 2 Radius	Group 3 Radius
5.0 to 5.49	Trains proceed at restricted speed until signals have been inspected.	30 Miles	40 Miles	70 Miles
5.5 to 5.99	Trains proceed at restricted speed until signals, track and bridges have been inspected.	30 Miles	40 Miles	70 Miles
6.0 to 6.49	Trains stop until signals, track and bridges have been inspected.	50 Miles	80 Miles	150 Miles
6.5 to 6.99	Trains stop until signals, track and bridges have been inspected.	70 Miles	140 Miles	220 Miles
7.0 to 7.49	Trains stop until signals, track and bridges have been inspected.	100 Miles	300 Miles	400 Miles
7.5 and above	Trains stop until instructed to proceed after inspection of track, signals and bridges completed.	As Directed*	As Directed*	As Directed*

\* Radius at discretion of the command center but not less than for magnitude 7.0 to 7.49.

**Flash Flood Warnings**

Weather information received by BNSF from WeatherData, Incorporated, is categorized as a "Warning" when it describes conditions that require immediate action by the train dispatcher to notify train crews of imminent danger. These warnings are immediately distributed to the relevant train dispatchers by the Service Interruption Desk.

When WeatherData, Incorporated, issues a "Flash Flood Warning," the Network Operations Center will immediately advise all involved trains of the specific conditions. When crews of these trains are so advised and are not operating through areas which have been designated by the Division Engineer as being "critical," passenger-carrying trains will be operated at a maximum of 50 MPH through the limits identified in the warning, and freight trains will be operated at a maximum of 40 MPH through those limits.

Division Engineers will identify "critical" areas by subdivision, segmented by milepost locations based upon their susceptibility to flooding or their history of being prone to washouts or side-scour wash. In identifying these locations, consideration should be given to shallow-foundation bridges, availability of operable culverts, and other conditions as necessary.

If the "Flash Flood Warning" limits include locations identified as being "critical," all trains will be further limited to restricted speed until the track structure has been inspected on a priority

basis at the request of the Network Operations Center. These temporary speed restrictions must remain in place until the warning has expired or is canceled by WeatherData, Incorporated, or the track has been inspected. Once the warning has expired or is canceled, or the track has been inspected, local personnel will assess the need for modifications to the speed restrictions as conditions warrant.

**Local Observations**

When local maintenance personnel become aware of current conditions that might produce flash flooding that could result in damage to BNSF track or structures, they will:

- immediately place the speed restriction described above on the affected route.
- inspect the track for washouts, side-scour wash, surface irregularities, and/or water over the rail.
- carefully inspect bridge foundations and drainage structures, with careful attention to bridges with mud sills, for erosion behind dump planks and head walls, erosion around piers and footings, and obstructions from drift and debris.
- if water level, turbulence, or other conditions make a thorough inspection impossible at the site of such a bridge, operations of all trains will be reduced to no more than restricted speed until it is possible to make a proper inspection.
- if, during the initial track inspection, there is any doubt about the safety of train operations over bridges, a qualified Structures employee must be called at once, and any speed restrictions that have been placed on bridges will not be lifted until authorized by the Structures employee.
- track and bridge foremen must continue to patrol past their respective territories if an adjoining territory is likely to have been damaged, and such damage might not have been discovered.

**34. Engineer Training Assistance Hotline**

For questions concerning:

- A. SD70MAC, AC traction and ICE systems
- B. SD75M and GE AC 400
- C. Integrated Distributive Power
- D. Electronic Air Brake System

call Overland Park Training Center—(913) 319-3996.

**35. Duplicate Mile Posts**

On subdivisions where duplicate mile posts exist, an alpha suffix has been added (i.e. MP 345X, MP 420Z). This alpha character may not be on the physical mile post sign at this time. When the alpha suffix is indicated in track warrant, track bulletins and other documents, reference must be made to the timetable individual subdivisions for station locations of the mile posts indicated.

**36. Handling Business Cars in Train**

Passenger car placement in trains should be governed by the following criteria, with preference given to Item 1, (next to road power):

1. All equipment classified "Heavy Weight" or "Light Weight" style passenger equipment (includes business cars, business support cars and railway service cars) may be handled at the head-end of a freight train, "next behind road power," provided the train does not exceed 3,500 trailing tons or 45 cars, whichever is less. Note: Research and Test Cars BNSF 82 (former Kootenai River) and BNSF 83 are exempted from these rules at the direction of Technical Research and Development as required by testing parameters. These two cars can be placed "next behind road power" in any train operation.

2. If head-end placement criteria can not be met, the following placement "rear of train" should be followed in priority order:
  - a. Articulated train not exceeding 75 cars, excluding business cars.
  - b. Three cars or less on conventional intermodal or vehicle trains in restricted corridors (check with NOC) and not exceeding 5,000 feet, excluding business cars.
  - c. 4 or 5 cars on conventional trains not exceeding 4,000 feet, excluding business cars.
  - d. Three cars or less on conventional intermodal trains in restricted corridors (check with NOC) not exceeding 2,500 feet, excluding business cars. Note: When cars are rear-of-train, adhere to Air Brake and Train Handling rules concerning Stretch Braking.
3. Non BNSF Passenger Equipment—Business cars of Amtrak, other railroads and private car owners are also covered by this policy.
4. Business Car Moves—The following instructions will be complied with in regard to movement of these cars:
  - a. Cars are to be considered occupied at all times whether they are moving in the train or setting on a yard track. Please ensure cars are protected as such and General Code of Operating rules concerning occupied cars is complied with.
  - b. If temperatures are expected to go below zero degrees along the trip route, continuation of the trip must be authorized by Asst. Vice President, Passenger car Services. If canceled and cars are already enroute, please make arrangements to move cars to the nearest heated facility if possible.
  - c. Provide suitable mechanical and Resource Protection Team coverage. Resource Protection Hot Line number is 1-800-832-5452 or company line 8-234-7200. Please report any suspicious or illegal activity as soon as possible.
5. Train Handling—If business cars are moved in other than solid articulated equipment, the train may be handled as outlined in Air Brake and Train Handling rules concerning Stretch Braking.
6. Switching Business Cars—The following instructions will be complied with in regard to movement of these cars in other than assembled trains. Business cars must be handled as outlined in accordance with General Code of Operating Rules 7.3 and 7.9.
  - a. Air Brakes—The business car air brake system must be connected to the locomotive and the automatic air brake used in controlling movement during switching.
  - b. Coupling—When coupling into business cars, business car equipment or when it is coupled to other equipment, the movement must be stopped approximately 50 feet from point at which the coupling will be made. All movements to accomplish coupling must be governed by a crew member on the ground using hand signals. Business cars must not be cut off while in motion and no car moving under its own momentum should be allowed to couple to them.
  - c. After Coupling—Once the coupling is made to the business car, the couplers must be fully compressed and stretched to know the couplers are locked before making air, electrical or communications connections.

### 37. Instructions for Handling Continuous Rail

(excluding articulated loads of 80 ft. length rail or less)

Rail trains loaded with continuous rail must not be kicked, nor allowed to be struck by other kicked cars; and, must be handled through all turnouts with extreme care. Before a switching move is made, an air brake inspection and test as prescribed by rule 101.11 must be performed.

A suitable car should be placed at each end of the "rail" cars to act as a buffer. Trains handling rail trains should not be required to make setouts or pickups enroute. Two loaded rail trains must not be moved together in same train, unless authorized by the manager of the rail facility or his representative. When a two loaded rail movement is authorized, the maintenance representative will designate which rail train will be placed at the head end. The other rail train must then be positioned in the train immediately at the rear of the first or head end of rail train separated by a suitable buffer car.

Full-length rail strings, when loaded, will have their lengths constructed so that the ends will fall between the green stripes painted on end ramp cars. When the rail train is stretched or bunched, and during transit, rail ends must be between the red stripes painted on end ramp cars, or else the train must be held until released by the general roadmaster or his representative. A white stripe will be applied across top of all rails between tie-down stands on center car of the rail train so it can be determined at inspection points whether rail has slipped or shifted.

### Loaded Rail Trains

1. Trains without Rail Movement Detectors (RMD):
  - must be handled in special service.
  - must not be required to make setouts and pick-ups en route.
  - must have suitable cars placed at each end of loaded rail train to act as buffer and idlers.
2. Trains with Rail Movement Detectors (RMD)
 

May be handled in trains other than special service under the following conditions:

  - Rail train must be on head end.
  - Train length limited to 64 cars.
  - Should not be required to make setouts and pick-ups en route.
  - Suitable cars placed at each end of loaded rail train to act as buffer and idlers.
  - If cars other than loaded rail train are included in movement, and RMD (i.e. strobe lights) becomes inoperative en route, a maintenance representative (a rider) must accompany each train during transit, unless rail train is then moved in special service. When the RMD is inoperative, each time the train stops, the rider must inspect the cars carrying the continuous welded rail for shifted, bowed, or broken rail, and to ensure that each base clamp (tie-down block) is tight. Defective strobe lights must be reported to the train dispatcher, who will notify the manager of rail facility so that the problems can be documented and repairs can be arranged as soon as possible.
  - Strobe lights at each end ramp car must be observed frequently en route. When strobe lights are observed to be flashing, the train must be stopped and all cars carrying continuous welded rail must be inspected to determine any rail movement. If movement is found, observe and complete the following:
    - a) If adjacent track or standard clearances are not fouled, train may be moved to clear main track not exceeding speed of 10 MPH.
    - b) If adjacent track or standard clearances are fouled, protection must be provided and train must not be moved until inspected by proper personnel.

If no movement is found, cancel flashing strobe lights by depressing the reset button at the control box for three seconds. The train may proceed at authorized speed.

The RMD consists of electrically activated screens/gates, four amber-colored strobe lights, and associated controls. There are two 12-volt absolute batteries, charged by an array of solar cells mounted between the tunnel stand strobe lights, to power the system. RMDs are installed on all rail train ramp cars, which are placed at each end of a rail train. If a rail string becomes loose and makes contact with the screen, strobe lights will commence flashing. The strobe lights are mounted on the ramp cars, positioned at the uppermost corners toward each end. Two are mounted on each side of the adjustable ramp stand, and the other two are mounted on each side of the tunnel stand.

The "ramp or tunnel" strobe lights operate in a parallel mode with a common activation (redundancy); thus each set will flash independently.

To check that strobe lights are operational, use a metal rod, bare wire or other metal object to make simultaneous contact between the screen and any rail in the load or other metal ground. After observing the lights flash, depress the reset button, which is located on the control box, for three seconds to turn off and conserve batteries. The lights should flash approximately 60 times per minute; and fully charged batteries will operate them for about sixteen hours.

The RMD system is inspected and tested at rail complexes before rail trains are released for movement. When second-hand welded rail is picked up and loaded in the field, the RMD system will be inspected and tested by the rail train supervisor before train is released for movement.

Routing of rail trains from the Rail Welding Facility, Pueblo, CO, to points west should be via Amarillo, TX, instead of the northern route through Raton, NM; unless train has stop(s) to deliver rail between La Junta, CO, and Belen, NM. When a rail train is to be routed via the northern route, loading parameters of welded rail strings will be held more restrictive to allow a greater degree of safety for movement through tight curves and mountains. Unless under special service, the 6x12 rail train (center tie-down car number ATSF 187023, ordinarily consisting of 32 cars rail and 2 buffers) should always be routed through Amarillo, TX, because of its greater amount of slack due to the increased number of cars and limited ramp car length.

At designated intermediate inspection points, make mechanical inspection of cars in compliance with FRA requirements. Manager Rail Complex in Laurel, Pueblo, or Springfield must be advised if any mechanical repairs are needed.

#### **Open End Gondola Consist (Any Ownership)**

Maximum authorized speed for trains handling short lengths of continuous welded rail in open end gondola consist is 35 MPH.

Open end gondola consist loaded with continuous rail must not be kicked; nor allowed to be struck by other kicked cars.

Loaded open end gondola consist should be handled within 25 cars of the head end of trains. Loading of rail into open end gondola consist shall comply with the following instructions:

1. Continuous lengths of welded rail will not be loaded more than one layer high.
2. Width of layer will not exceed 67 percent of the inside width of the narrowest gondola.
3. Rail will be centered width wise in open end gondola consist. If practical, spikes, cleats or blocks will be driven into bearing timbers (raised fashion) to prevent walking of load near sides. Rail lengths will be spotted lengthwise from outboard ends of open end gondola consist to allow sufficient distance to exist for clearance (i.e. to exceed the amount of coupling slack). Amount will be determined by number of cars in consist.

4. Continuous lengths of rail will be supported upon timbers with a minimum size of 4" x 4" hardwood. These timbers will be spaced equally throughout load in sufficient number to prevent rail from contacting floor of cars or bottom flanges used for gondola end retention, and provide friction necessary to limit rail shifting.
5. Couplers of cars will be gagged and locked to prevent accidental opening.
6. Outboard ends of open end gondola consist will have ends installed or stacked timbers arranged into a barricade with a minimum height that exceeds the height of rail.
7. Continuous welded rail lengths will be loosely banded (to allow the required linear movement of the individual lengths of rail when consist is negotiating a curve) to keep all pieces grouped together.

#### **Empty Rail Train Blocks (Any Ownership)**

When handling empty 'rail train' blocks, all cars weighing 50 tons or less, by car count, must be placed behind all cars weighing more than 50 tons per car

#### **38. Handling of FRA T-10 Car**

Engineer pilot must notify the T-10 operator of the limits of movement authority and authorized speeds a sufficient distance in advance of any movement or speed restrictions.

The T-10 must approach all interlockings prepared to stop until the route is known to be clear.

If T-10 is stopped within the limits of any interlocking, the control operator or dispatcher must be notified of the stop and the precise location.

T-10 should not be stopped within the limits of an automatic interlocking or a non-interlocked railroad crossing at grade. If such a stop cannot be avoided, T-10 must be fully protected against conflicting movements at once. Flag protection will be provided unless other positive methods of protection are available or T-10 is relieved of this responsibility by the train dispatcher. In block system limits, T-10 should not be stopped on sand. If such a stop cannot be avoided, T-10 must be moved immediately a sufficient distance to clear the sanded portion of the rails.

T-10 must approach all highway grade crossings equipped with automatic warning devices prepared to stop until it is determined that the warning device is working and continues to work as T-10 passes over the crossing. Flag protection against highway vehicles must be provided when automatic warning device does not operate properly or when required by railroad rules or instructions.

No more than four persons are permitted to occupy the control cab of T-10. These four persons are the vehicle operator, forward observer, engineer pilot and either the FRA operating practices inspector or a carrier supervisor.

#### **39. Rail Detector Cars**

Sperry rail detector cars nos. 124, 132, and 144 will be utilized for rail flaw detection. These units are self-contained rail cars which cannot be depended upon to continuously actuate the block signal circuits and crossing warning devices. When deadheading to a work location, they will require an engineer pilot; when working to detect rail flaws, they will be accompanied by a MW supervisor.

These units should be authorized and protected in the following manner:

#### **CTC Territory**

When the equipment is working to detect rail flaws, it will be authorized and protected by track and time, Rule 10.3. When being deadheaded to a work location, the equipment will operate by signal indication and must report to the control

operator when it has passed each control point. The control operator will apply blocking devices on the control machine behind this equipment as soon as progress report is received.

#### **TWC Territory**

When the equipment is working to detect rail flaws, it may be authorized and protected by Form B track bulletin under the provisions of Rule 15.2.1. This type of protection may also be afforded when deadheading the equipment in TWC territory. (Rule 15.2.1 may only be used on divisions where authorized by timetable or general order). Where Rule 15.2.1 is not allowed, track warrant protection, box 4, may be used for authority.

**Exception:** Track warrant protection, Box 4, must not be used inside of yard limits in ABS territory since the equipment cannot be depended upon to continuously actuate the block signal system.

#### **Track Permit Territory**

The equipment will be authorized and protected by track permit under the provisions of Rule 9.15. At automatic interlockings, the units will be handled accordingly to the instructions in the equipment release box and not by the train release box instructions. At manual interlockings, the control operator will follow instructions for handling track cars rather than trains. These units must approach all grade crossings equipped with automatic crossing warning devices prepared to stop until it is determined that crossing warning device is operating properly.

#### **40. KNORR CCB Electro-Pneumatic Automatic Brake Valves and ABDX Control Valves**

1. When operating a KNORR CCB electro-pneumatic automatic brake valve and initiating an engineer-induced emergency, you must ensure that the handle is positioned forward fully to engage the emergency application. This is the same procedure for making an emergency brake application with any other automatic brake valve. Enough force must be used to ensure that the emergency position is engaged.
2. Cars equipped with ABDX control valves in rare cases experience undesired releases with a minimum brake pipe reduction in effect. The railroad industry and BNSF is working in conjunction with the Federal Railroad Administration to expedite a modification to correct this condition. Emergency brake applications are not affected by this problem. Initial brake pipe reductions of 8 to 10 psi prevent any undesired releases with this equipment.
3. Any crew experiencing any unusual condition with train or locomotive braking systems must immediately stop, inspect their train and notify the train dispatcher. Unusual conditions include the inability to propagate a brake reduction, inability to initiate an emergency application, and inability to maintain a brake application with a fully charged system (Undesired release).

#### **41. Rear End Restricted Cars**

Cars restricted to "rear end only" may be in train up to five cars ahead of rear car. Certain cars may require extreme rear end movement because of mechanical deficiencies.

#### **42. Car Identification B-End**

**Conventional Equipment:** The "B" end of the car is the end where the hand brake is located. Face the "B" end of the car. The left side of the car is to your left and the right side of the car is to your right as you face the "B" end. Count axles from the "B" end beginning with No. 1 being closest to you and No. 4 being farthest away. If the defective journal or wheel is the third axle away from the "B" end of the car on the left side as you face the equipment you will report it as "L3."

**Articulated Equipment:** The important thing is to locate the "B" end of the car. Each segment or unit of such cars is identified by a letter. This letter and the car number are shown on small badge plates located on each segment or unit of the car. The end segments are designated "A" and "B." The interior segments or units are designed (beginning at the "B" end) by the letters "C" through "E" on the five unit or segment cars. Locate the "B" end of the car as indicated by the stencil. Do not rely on the location of the hand brake. Many of these cars are equipped with a hand brake on each end.

Face the "B" end of the equipment. The left side of the car is to your left and the right side of the car is to your right as you face the "B" end of the equipment.

Count axles from the "B" end beginning with No. 1 being closest to you. The axles on this type of equipment are numbered consecutively from No. 1 through No. 9 and then by the alphabet with axle "10" identified by the letter "Z," axle "11" by the letter "Y," axle "12" by the letter "X," etc., going backwards through the alphabet.

There are 12 axles on the five segment or unit equipment. If the defective journal or wheel is the ninth axle away from the "B" end of the car on the right side as you face the equipment, you will report it as "R9." If it is the fourteenth axle away from the "B" end of the car on the right side as you face the equipment, you would report it as "RV." Remember, on this equipment, axles "1" through "9" are identified numerically. Axles "10" through "14" are identified alphabetically beginning with the letter "Z" working backwards. Each axle is stenciled on most multi-segment or unit equipment on the truck side. Use the stencil when available to verify your identification.

#### **43. Gravity Switch Moves**

Unless otherwise restricted, a gravity switch move can be utilized where car(s) must be repositioned on the opposite end of the engine. Not more than five cars may be handled at one time in this manner, and only with sufficient hand brakes manned by crew member(s) to insure that the movement can be controlled. Riding the hand brake on shiftable loads must be avoided.

When making this move, the hand brake(s) to be used to control the movement must be tested to insure proper operation. Hand brakes may then be released to allow car(s) to gravity roll into desired track. Crew member(s) must ride the car(s) and use the hand brake(s) to control speed and to stop. Such cars must not be allowed to couple to other equipment while this method of switching is being used. Other methods of handling such moves, historically referred to as "dropping of cars," are prohibited, except at specific locations where authorized.

#### **44. Signal Awareness Form**

Subdivision-specific signal awareness forms are available at on-duty points. In addition to observing and calling signals as required by GCOR Rule 5.16, the conductor must fill out one of these forms in ink while operating on BNSF and foreign railroads. Foreign railroads operating on BNSF are allowed to use their own signal awareness forms when approved.

All block signal names or aspects and yellow or yellow/red flags must be recorded. With the exception of CLEAR signals, which only require the name or aspect to be recorded, information must include the location of each flag, the train speed, time the signal or flag is passed and name or aspect of the signal that was called. When speed indicator is not visible to the conductor, the engineer must call out the speed, in addition to the signal name or aspect, if other than CLEAR. Should the conductor be unable to record a signal aspect due to other activities, this fact must be noted on the form, including the reason.

In addition, the form must show the location of switches, switch point locks and derails returned to and locked in normal position in non-signaled territory (outside of restricted limits and non-signaled yard limits) and the time that the switch, switch point lock and derail were returned to normal position. The engineer must initial each switch/switch point lock/derail entry as a cross-check measure.

At the completion of each trip, the original form must be turned in as directed by the Division Superintendent.

Standard forms:

Signal Awareness Form (Location to Location)									
Date: _____		Conductor: _____ <i>(print name)</i>				Signature: _____ <i>(signature)</i>			
Train Symbol: _____		Engineer: _____ <i>(print name)</i>							
Block System Limits									
Line No.	Signal and Location	Signal Name					*Speed	*Time	Flag Location and Name
		Clear (Mark X)	Approach Medium (Mark X)	Approach (Mark X)	Stop and Proceed (Mark X)	Stop (Mark X)			
1									
2									
3									
4									
5									
6									

\* It is not required to indicate speed and time for CLEAR signals.  
The following abbreviations may be used: AL - Approach Limited, AA - Advance Approach, AR - Approach Restricting, DC - Diverging Clear, DAD - Diverging Approach Diverging, DAM - Diverging Approach Medium, DA - Diverging Approach, R - Restricting, Y - Yellow Flag, YR - Yellow/Red Flag

Non-Signaled Territory					
Flag Location	Flag Name	Speed	Time	Switches/Derails Normalized in Non-Signaled Territory	Engineer's Initials

The following abbreviations may be used: Y - Yellow Flag, YR - Yellow/Red Flag

**45. Report of Unsafe Motorist/Trespasser**

The Report of Unsafe Motorist/Trespasser Program is designed to capture information on near collisions between trains and vehicles, trespassers or pedestrians. When an incident occurs, employees must make a report by one of the following methods:

- Pre-addressed/Postage-paid postcard (Form SAF51680)
  - Fill in as much information as possible.
  - Fill in name and address if response is desired.
  - Place in mail.
- Call 1-800-697-6736.
  - Accident/Incident Reporting Center
  - Monday-Friday, 6 a.m. to midnight
  - Saturday-Sunday, 6 a.m. to 2:30 p.m.
  - Voice mail, all other times
  - Provide as much information as possible.
  - Provide name and address if response is desired.

Emergencies must not be reported on the Accident/Incident Reporting Center number. Emergencies must be reported as follows:

- Radio/telephone contact with train dispatcher.
- Radio/telephone/verbal contact with local BNSF resource protection personnel or to the Resource Protection Command Center at:
  - Company line: 8-832-5452
  - Bell system: 1-800-832-5452

**46. Network Operations Center Notification Requirements**

BNSF timetable special instructions for individual subdivisions provide a table of radio call-in tones for contacting the Train Dispatcher, Mechanical Help Desk and Field Support. Tone call-in numbers may be a single digit or as many as three digits as outlined by timetable special instructions, depending on radio systems.

**Procedures for Contacting Help Desks**

- Train Dispatcher—Train crews should continue to contact the train dispatcher as required by current instructions for all delays. When reporting mechanical defects on locomotives, cars, or other equipment such as an ETD, the dispatcher must be contacted initially in order to manage delays relative to these defects.
- Mechanical Help Desk—After initially recording and providing general information about defective locomotives, cars, or an ETD to the train dispatcher, the Mechanical Help Desk must be communicated with concerning the defect. Crew will report specific details concerning the defect and be governed by that supervisor's instructions concerning handling of the defect.  
The Mechanical Help Desk may also be contacted by phone at:  
Operations North—(817) 234-6258, Co. Line (8) 234-6258  
Operations South—(817) 234-2300, Co. Line (8) 234-2300
- Signal Desk—Signal Help Desk (SC) radio tone call-in references are no longer valid, and all signal defect/trouble reports should be reported directly to the train dispatcher.
- Field Support—In addition to reporting via radio to Field Support at Fort Worth, the following phone numbers and fax numbers may be used:

Through trains

- BNSF company line—(8) 317-7610
- Toll-free line—(800) 549-4601
- BNSF fax line—(8) 317-7615
- Fax toll-free line—(800) 234-1341

Locals, road switchers and yard jobs

- BNSF company line—(8) 317-7620
- Toll-free line—(800) 549-4602
- BNSF fax line—(8) 317-7625
- Fax toll-free line—(800) 234-9354

Interchange reporting

- BNSF company line—(8) 317-7640
- Toll-free line—(800) 206-3846
- BNSF fax line—(8) 317-7645
- Fax toll-free line—(800) 223-6757

**47. Special Car Handling Instructions**

One or any combination of two of the following codes may be shown on train lists to designate special car handling requirements. These same codes may also appear in the Special Instruction Column of switch lists and yard inventories.

**CODE DESCRIPTION**

- AV ..... Annual Volume
- BN ..... If Bad Order Notify Shipper
- BT ..... Bare Table Flat
- B1 ..... Bad Order
- C ..... Customer Chassis Required
- CC ..... To Be Cleaned and Conditioned
- CD ..... Condemned Car (See Note 1)
- CI ..... Customs Inspection
- CY ..... Certification That This Equipment is for Recycling
- DB ..... Distributed Van Bad Ordered
- DH ..... Do Not Hump
- DI ..... Redistribute at Destination

DO ..... Delivery Order Shipment  
 DT ..... Distributed Intermodal Equipment  
 DU ..... Do Not Uncouple  
 EC ..... Speed Restriction 55 MPH  
 EL ..... Empty Container Mechanical Lock  
 ER ..... Return Empty Via Reverse Route  
 FM ..... Fumigate Car Now  
 FP ..... Fumigation Placards Applied  
 HA ..... Cars Held for the Customer in Bond Pending  
           Customs Authority  
 HB ..... Hold for Billing—Mini Waybill Indicating Industry to Bill  
 HC ..... Hold for FMC Redistribution  
 HD ..... Cars Held for Customer Diversion  
 HE ..... Head End Only  
 HF ..... Car Held for BNSF Rail Clearances (High Wides)  
 HG ..... Cars Held for BNSF Pending Customer File  
           Information  
 HH ..... Cars Held for Overload Condition  
 HI ..... Hold for Inspection  
 HJ ..... Cars Held for a Foreign Railroad After Being Offered  
           by BNSF for ICD  
 HK ..... Empty Non-Private Cars Held on BNSF Track and No  
           Car Order Exists  
 HL ..... Excessive Dimension  
 HN ..... Cars Held for Specified Local Conditions,  
           \*\*Restricted Usage  
 HO ..... Cars Held for Consignee to Surrender Original BOL  
           or Indemnity Bond  
 HR ..... Cars Held for Customer Furtherance Instructions  
           After Arr at Dest  
 HS ..... Empty (Non-Private) Cars Held on BNSF Trackage  
           Awaiting Placement  
 HT ..... Heat Car  
 HV ..... High Value Shipment  
 HX ..... Cars Held Waiting for Waybill Information from  
           Connecting Carrier  
 IB ..... In BNSF Bond  
 ID ..... In Bond Beyond BNSF Destination  
 IS ..... In Shipper's Bond  
 L ..... Tank Surveillance Required  
 LC ..... Car Trip Leased to Consignee  
 LD ..... Local Distribution Empty  
 LG ..... Loaded to Gallonage Capacity  
 LO ..... Local Orders  
 LQ ..... Loaded to Full Cubic Capacity  
 LS ..... Handle in Local Service Only  
 LV ..... Loaded to Full Visible Capacity  
 M ..... Person in Charge of Car  
 MB ..... Make Bill of Lading  
 MC ..... Measure Car Now  
 MD ..... Mixed Destination Intermodal Units  
 MN 5 ..... A running reefer unit set at -5 degrees Fahrenheit  
 MR 28 ..... A running reefer unit set at 28 degrees Fahrenheit  
 NC ..... Non-credit Patron  
 ND ..... Do Not Divert  
 NH ..... No Hit—Car Distribution  
 NP ..... No Placards Required  
 NT ..... Do Not Transfer Contents  
 OI ..... Oils Marine Pollutant  
 ON ..... Oil Notation  
 PD ..... Privately Owned Equipment Subject to Demurrage  
 PJ ..... Mechanical Project Job  
 PR ..... Prospective Loading Empty  
 RE ..... Rear End Only  
 RP ..... Rail Controlled Private  
 RS ..... Rule 7 Reject Candidate  
 SE ..... Hold for Seasonal Storage  
 SF ..... Feed Now

SO ..... Shipper's Order  
 SR ..... Rail Surveillance Required  
 SS ..... Surplus Storage  
 SW ..... Switch Only Empty Furnished by Foreign Road  
 TB ..... Car Control Distributed Bad Order  
 TG ..... Transp. Code G—contaminated commodity service.  
           Cars should not be placed at industry other than so  
           designated.  
 TS ..... Transit Shipment  
 TU ..... Turn This Car Now  
 UP ..... Unload as Placarded  
 WA ..... Weigh After Spotted and Released  
 WB ..... Weigh This Car Both Before and After It Goes to  
           Spot  
 WH ..... Weigh  
 WI ..... Waive Inspection  
 WL ..... Weigh Light  
 Y ..... Mechanical Refrigeration  
 Z ..... Expeditor Train  
 25 ..... 25 MPH Speed Restriction (See Note 2)

**Note 1.** The 'CD' Condemned Car code will be inserted by the computer when the car is so registered in UMLER (Universal Machine Language Equipment Register). This does not relieve employees of the responsibility of reporting these codes when appropriate.

**Note 2.** Report numeric MPH speed restriction only, e.g., 25 for a car restricted to 25 MPH. Certain series of cars which have a permanent speed restriction will have the speed restriction code inserted by the computer. When such speed or speeds are shown, trains must not exceed the lowest speed so indicated. This does not relieve employees of the responsibility of reporting the proper code on work order(s) on all cars which for any reason have speed restrictions.

When cars are subject to two special handling instructions, both codes should be reported. If subject to move with more than two, report the two most restrictive and protect other special handling requirements by an administrative message to those offices and/or individuals to whom the train is addressed.

When a car on a train list has the "HL" Car Code, and no clearance wire is received, contact your local CS&S office and obtain a clearance wire for the car. If unable to obtain a clearance wire, the car must be set out.

TTQX cars, BNSF 306000-306153, BNSF 314000-314228, GVSR 89000-89058 and CRLE 1997-1999 are all car kind codes M3E (Hi Tri-Levels) and must not be operated on any Branch Line or any location listed below:

- Barstow Subdivision—Barstow to Bettendorf via Crescent Bridge
- Beatrice Subdivision
- Bellingham Subdivision—USA Canada Border to Burlington
- Carlsbad Subdivision
- Carthage Subdivision
- Chicago Subdivision—BRC overpass between MP 6.70 and MP 6.73 (Handle on mains 4 and 5 only)
- Columbia River Subdivision
- Fallbridge Subdivision—Wishram to Vancouver, WA (Exception: CRLE 1997-1999 and BNSF 314000-314228 OK to operate on this subdivision.)
- Gateway Subdivision
- Hannibal Subdivision
- Helena Subdivision
- Hi Line Subdivision
- Kettle Falls Subdivision—Danville, WA, to San Poil
- Kootenai River Subdivision (Exception: CRLE 1997-1999 and BNSF 314000-314228 OK to operate on this subdivision.)

- Laurel Subdivision
- Lester Subdivision
- New Westminster Subdivision
- Omaha Subdivision—Handle on main 1 only at Omaha Depot
- O E Subdivision
- Oregon Trunk Subdivision—Fallbridge to Bend
- Raton Subdivision
- Rockford Subdivision
- Rustler Springs Subdivision
- Scenic Subdivision
- Seattle Subdivision
- Silsbee Subdivision—Beaumont to Brooks
- Sioux City Subdivision
- Stampede Subdivision
- Stockton Subdivision—Port Chicago to Richmond
- Mitchell Subdivision
- Topeka Subdivision—Topeka to Emporia
- Wayzata Subdivision
- Wymore Subdivision—Table Rock to Wymore
- York Canyon Subdivision

All other subdivisions can handle the car type listed above without issuing a clearance wire to protect movement even if car has "HL" code on the train list.

#### 48. Geometry Test Car Instructions

Engine(s) handling geometry test cars(s) 80/81 and 85/86 may observe passenger train speed on curves not to exceed 70 MPH as shown in individual subdivision special Instructions 1(A) provided:

- a. Purpose of train is to test track structure; and
  - b. There are no six-axle locomotives in the engine consist.
- Such trains are authorized to observe passenger train speed on tangent track not exceeding 70 MPH.

Geometry test cars 80/81 and 85/86 are not required to have an ETD at the rear of the car when the car is occupied.

Geometry test cars must not be cut off in motion. Other cars must not be kicked to couplings with these cars. They must not be coupled with more force than is necessary to complete the coupling, not exceeding coupling speed of 2 MPH. These cars must receive careful handling at all times.

Switching-geometry car(s) must be handled as outlined in accordance with General Code of Operating Rules 7.3 and 7.9.

During testing and deadhead movement, geometry test car(s) must be handled in their own consists. No testing or deadhead moves will be done in a freight train consist.

When not on a train, cars must be protected as prescribed by Rule 5.12 or Rule 5.13. These cars are considered to be occupied at all times.

#### 49. Operations Testing

When operations testing is performed to test for compliance with the following rules, a banner, approximately three feet by eight feet with red reflectorized border and lettering on a white background may be stretched across the track. It will display 'STOP' or 'STOP OBSTRUCTION.' In addition, a banner approximately 36 inches by 36 inches, displayed square on point, colored high visibility orange, and retro-reflective with the words "STOP OBSTRUCTION" may be used. It will be placed between the rails of the track and is considered a STOP signal.

Examples:



These banners are considered a stop signal and a simulation of on-track equipment. Whenever required by an operating rule, stop all train, engine, and on-track equipment movements short of the 'STOP' or 'STOP OBSTRUCTION' banner.

Examples of operating rules where the 'STOP' or 'STOP OBSTRUCTION' banner may be used as a stop signal are:

- GCOR & MWOR Rule 6.27 Restricted Speed.
- GCOR Rule 6.28 Movement On Other Than Main Track.  
or
- MWOR Rule 6.50 Approaching at Safe Speed.

Expect to find the "STOP" or "STOP OBSTRUCTION" banner erected at any location, or at any time the rules above restrict movement.

## Division Index

Division	Subdivisions
Amarillo .....	Boise City Dalhart Hereford La Junta Panhandle Plainview Slaton South Plains
Arizona .....	Coronado Defiance Ennis Gallup Lee Ranch Phoenix Seligman Springerville
Chicago .....	Chicago Corwith
Colorado .....	Akron Brush Casper Cody Front Range Golden Imperial Pikes Peak Pueblo Spanish Peaks Twin Peaks
Dakota .....	Aberdeen Appleton Browns Valley Canton Circle Colstrip Corson Dickinson Forsyth Geneseo Hanley Falls Hettinger Jamestown Linton Madison Marshall Mitchell Mobridge Moorhead Morris Sarpy Line Sidney Line Watertown Wayzata Zap Line

Gulf .....	Bay City Conroe Galveston Houston Lafayette Longview Mykawa Oakdale Silsbee
Illinois .....	Barstow Beardstown Brookfield Chillicothe Des Moines Hannibal La Salle Marceline Mendota Ottumwa Peoria Thomas Hill Yates City
Kansas .....	Arkansas City Chickasha Douglass Emporia La Junta Red Rock Strong City Topeka
Kansas City .....	Emporia Fort Scott/Brookfield/St. Joseph
Memphis .....	Amory Birmingham Mobile River Thayer South
Minnesota .....	Allouez Aurora Brainerd Casco Devils Lake Drayton Glasston Grand Forks Hannah Hib Tac Hillsboro Hinckley Hunter, Clifford Line & Warwick KO Lakes Mayville Midway Monticello Noyes P Line Prosper Rockford Rolla, Westhope & Granville Sarles Staples St. Croix St. Paul Walhalla



Montana .....	Big Sandy	Powder River .....	Angora
	Choteau		Big Horn
	Crosby		Black Hills
	Fairfield		Butte
	Ft. Benton		Campbell
	Glasgow		Canyon
	Grenora		Dutch
	Helena		Orin
	Hi Line		Reno
	Laurel		Sand Hills
	Lewistown		Valley
	Milk River	Southern California .....	Cajon
	Niobe		Harbor
	Scobey		Lucerne Valley
	Sweet Grass		Needles
	Valier		San Bernardino
Northern California .....	Bakersfield		San Diego
	Mojave	Springfield .....	Afton
	Riverbank		Avard
	Stockton		Cherokee
Nebraska .....	Bayard		Creek
	Beatrice		Cuba
	Bellwood		Fort Scott
	Council Bluffs		Lead Line
	Creston		Sooner
	Giltner		Thayer North
	Hastings	Texas .....	DFW
	Lester		Ft. Worth
	Napier		Lampasas
	Neb City		Madill
	Omaha		Red River
	Palmer		Venus
	Ravenna		Wichita Falls
	Sioux City	Washington .....	Burbank
	St. Joseph		Coeur d'Alene
	Wymore		Columbia River
New Mexico .....	Carlsbad		Eureka
	Clovis		Kalispell
	Deming		Kettle Falls
	El Paso		Kootenai River
	Glorieta		Lakeside
	Raton		Nelson
	Rustler		Newport
	York Canyon		Pend Oreille
Oregon .....	Fallbridge		
	Gateway		
	OE		
	Oregon Trunk		
	Wishram		
Pacific .....	Bellingham		
	Cherry Point		
	Granger		
	Lakeview		
	New Westminster		
	Scenic		
	Seattle		
	Stampede		
	Sumas		
	Woodinville		
	Yakima Valley		

## Subdivision Index

Subdivision	Division
Aberdeen	Dakota
Afton	Springfield
Akron	Colorado
Allouez	Minnesota
Amory	Memphis
Angora	Powder River
Appleton	Dakota
Arkansas City	Kansas
Aurora	Minnesota
Avard	Springfield
Bakersfield	Northern California
Barstow	Illinois
Bay City	Gulf
Bayard	Nebraska
Beardstown	Illinois
Beatrice	Nebraska
Bellingham	Pacific
Bellwood	Nebraska
Big Horn	Powder River
Big Sandy	Montana
Birmingham	Memphis
Black Hills	Powder River
Boise City	Amarillo
Brainerd	Minnesota
Brookfield	Kansas City
Brookfield	Illinois
Browns Valley	Dakota
Brush	Colorado
Burbank	Washington
Butte	Powder River
Cajon	Southern California
Campbell	Powder River
Canton	Dakota
Canyon	Powder River
Carlsbad	New Mexico
Casco	Minnesota
Casper	Colorado
Cherokee	Springfield
Cherry Point	Pacific
Chicago	Chicago
Chickasha	Kansas
Chillicothe	Illinois
Choteau	Montana
Circle	Dakota
Clifford Line	Minnesota
Clovis	New Mexico
Cody	Colorado
Coeur d'Alene	Washington
Colstrip	Dakota
Columbia River	Washington
Conroe	Gulf
Coronado	Arizona
Corson	Dakota
Corwith	Chicago
Council Bluffs	Nebraska
Creek	Springfield
Creston	Nebraska
Crosby	Montana
Cuba	Springfield
Dalhart	Amarillo
Defiance	Arizona
Deming	New Mexico
Des Moines	Illinois
Devils Lake	Minnesota
DFW	Texas
Dickinson	Dakota
Douglass	Kansas
Drayton	Minnesota
Dutch	Powder River
El Paso	New Mexico
Emporia	Kansas City
Emporia	Kansas
Ennis	Arizona
Eureka	Washington
Fallbridge	Oregon
Fairfield	Montana
Forsyth	Dakota
Fort Scott	Kansas City
Fort Scott	Springfield
Front Range	Colorado
Ft. Benton	Montana
Ft. Worth	Texas
Gallup	Arizona
Galveston	Gulf
Gateway	Oregon
Geneseo	Dakota
Giltner	Nebraska
Glasgow	Montana
Glasston	Minnesota
Glorieta	New Mexico
Golden	Colorado
Grand Forks	Minnesota
Granger	Pacific
Granville	Minnesota
Grenora	Montana
Hanley Falls	Dakota
Hannah	Minnesota
Hannibal	Illinois
Harbor	Southern California
Hastings	Nebraska
Helena	Montana
Hereford	Amarillo
Hettinger	Dakota
Hi Line	Montana
Hib Tac	Minnesota
Hillsboro	Minnesota
Hinckley	Minnesota
Houston	Gulf
Hunter	Minnesota
Imperial	Colorado
Jamestown	Dakota
Kalispell	Washington
Kettle Falls	Washington
KO	Minnesota
Kootenai	Washington
La Junta	Amarillo
La Junta	Kansas
La Salle	Illinois
Lafayette	Gulf
Lakes	Minnesota
Lakeside	Washington
Lakeview	Pacific
Lampasas	Texas
Laurel	Montana
Lead Line	Springfield
Lee Ranch	Arizona
Lester	Nebraska
Lewistown	Montana
Linton	Dakota
Longview	Gulf
Lucerne Valley	Southern California
Madill	Texas

Madison .....	Dakota	St. Joseph .....	Nebraska
Marceline .....	Illinois	St. Paul .....	Minnesota
Marshall .....	Dakota	Stampede .....	Pacific
Mayville .....	Minnesota	Staples .....	Minnesota
Mendota .....	Illinois	Stockton .....	Northern California
Midway .....	Minnesota	Strong City .....	Kansas
Milk River .....	Montana	Sumas .....	Pacific
Mitchell .....	Dakota	Sweet Grass .....	Montana
Mobile .....	Memphis	Thayer North .....	Springfield
Mobridge .....	Dakota	Thayer South .....	Memphis
Mojave .....	Northern California	Thomas Hill .....	Illinois
Monticello .....	Minnesota	Topeka .....	Kansas
Moorhead .....	Dakota	Twin Peaks .....	Colorado
Morris .....	Dakota	Valier .....	Montana
Mykawa .....	Gulf	Valley .....	Powder River
Napier .....	Nebraska	Venus .....	Texas
Neb City .....	Nebraska	Walhalla .....	Minnesota
Needles .....	Southern California	Warwick .....	Minnesota
Nelson .....	Washington	Watertown .....	Dakota
New Westminster .....	Pacific	Wayzata .....	Dakota
Newport .....	Washington	Westhope .....	Minnesota
Niobe .....	Montana	Wichita Falls .....	Texas
Noyes .....	Minnesota	Wishram .....	Oregon
Oakdale .....	Gulf	Woodinville .....	Pacific
OE .....	Oregon	Wymore .....	Nebraska
Omaha .....	Nebraska	Yakima Valley .....	Pacific
Oregon Trunk .....	Oregon	Yates City .....	Illinois
Orin .....	Powder River	York Canyon .....	New Mexico
Ottumwa .....	Illinois	Zap Line .....	Dakota
P Line .....	Minnesota		
Palmer .....	Nebraska		
Panhandle .....	Amarillo		
Pend Oreille .....	Washington		
Peoria .....	Illinois		
Phoenix .....	Arizona		
Pikes Peak .....	Colorado		
Plainview .....	Amarillo		
Prosper .....	Minnesota		
Pueblo .....	Colorado		
Raton .....	New Mexico		
Ravenna .....	Nebraska		
Red River .....	Texas		
Red Rock .....	Kansas		
Reno .....	Powder River		
River .....	Memphis		
Riverbank .....	Northern California		
Rockford .....	Minnesota		
Rolla .....	Minnesota		
Rustler .....	New Mexico		
San Bernardino .....	Southern California		
San Diego .....	Southern California		
Sand Hills .....	Powder River		
Sarles .....	Minnesota		
Sarpy Line .....	Dakota		
Scenic .....	Pacific		
Scobey .....	Montana		
Seattle .....	Pacific		
Seligman .....	Arizona		
Sidney Line .....	Dakota		
Silsbee .....	Gulf		
Sioux City .....	Nebraska		
Slaton .....	Amarillo		
Sooner .....	Springfield		
South Plains .....	Amarillo		
Spanish Peaks .....	Colorado		
Springerville .....	Arizona		
St. Croix .....	Minnesota		
St. Joseph .....	Kansas City		

**Changes from System Special Instructions No. 4**

- Item 2. Locomotive Restrictions  
Paragraph added from System General Order.
- Item 3. RoadRailer Equipment  
This item has been moved to Air Brake and Train Handling Rules Chapter 103.
- Item 5. Car Restrictions  
Line 5 of Table 5 is amended from System General Order.
- Item 7. Dimensional and Special Shipment Restrictions  
Item (a) is amended from System General Order.
- Item 8(C). Detector Message and Train Crew Action  
Tables have been modified to clarify crew's requirements.
- Item 8(E). Train Inspection  
Third paragraph is amended from System General Order.
- Item 13. In Effect on BNSF Railway  
The eleventh and twelfth bullets are amended from System General Order.
- Item 14. General Code of Operating Rules Changes and Additions  
Rules added from System General Order.
- Item 15. General Code of Operating Rules, BNSF Version No. 1,  
Changes and Additions  
New revised pages are indicated.
- Item 16. General Code of Operating Rules, Supplemental  
Instructions  
Amendment added from System General Order.
- Item 17. Maintenance of Way Operating Rules, Changes and  
Additions  
New revised pages are indicated and amendments are  
added from System General Order.
- Item 18. Air Brake and Train Handling Rules, Changes and  
Additions  
New revised pages are indicated.
- Item 19. Safety Rules, Changes and Additions  
New revised pages are indicated.
- Item 21. Hazardous Material Instructions, Changes and Additions  
Amendment added from System General Order.
- Item 22. Engineering Instructions, Changes and Additions  
Amendments added from System General Order.  
(Operations Testing moved to Item 50.)
- Item 32. Securing Track Warrants  
Amendment added from System General Order.
- Item 44. Signal Awareness Form  
Amendment added from System General Order.
- Item 45. Report of Unsafe Motorist/Trespasser  
Amendment added from System General Order.
- Item 47. Special Car Handling Codes  
Amendment added from System General Order.
- Item 48. Geometry Test Car Instructions  
New item added from System General Order.
- Item 49. Operations Testing  
Amendment added from System General Order.  
(Moved from Item 22.)

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**GCOR and MWOR Rule 15.2A—Verbal Permission:**

When granting verbal permission, use the following words:

“Foreman (name) (of Gang No.) using track bulletin no. \_\_\_\_ line no. \_\_\_\_ between MP \_\_\_\_ and MP \_\_\_\_ on \_\_\_\_ Subdivision.”

1. To permit a train to pass a red flag (or light) without stopping, add the following:  
 “Unless otherwise restricted, (train) may pass red flag or light located at MP \_\_\_\_ without stopping.” (Specify track if necessary.) Unless otherwise restricted, the train may pass the red flag or light at restricted speed without stopping.
2. To permit a train to proceed at other than restricted speed, add the following:  
 “Unless otherwise restricted, (train) may proceed through the limits at \_\_\_\_ MPH (or at maximum authorized speed).” (Specify track if necessary.) The train may move through the limits at the speed specified, unless otherwise restricted.
3. To require a train to move at restricted speed, but less than 20 MPH, add the following:  
 “Unless otherwise restricted, (train) must proceed at restricted speed but not exceeding \_\_\_\_ MPH.” (Specify distance and track if necessary.) Unless otherwise restricted, the train must proceed at restricted speed and not exceed the speed specified.
4. To permit a train to move at a higher speed after receiving permission to pass a red flag or light at specific speed for a specific distance, add the following:  
 “Unless otherwise restricted, (train) may pass red flag (or light) located at MP \_\_\_\_ (without stopping) at \_\_\_\_ MPH until the entire train has passed MP \_\_\_\_ . You may then proceed at (higher speed) MPH (or at maximum authorized speed).” (Specify track if necessary.) Only one additional speed can be given. It must be higher than the speed permitted by the red flag or light, and the speed will extend to the end of the Form B limits, unless otherwise restricted.

**Speed Tables**

SPEED TABLE								
Time Per Mile		Miles Per Hour	Time Per Mile		Miles Per Hour	Time Per Mile		Miles Per Hour
Min.	Sec.		Min.	Sec.		Min.	Sec.	
-	36	100	-	58	62.1	1	40	36.0
-	37	97.3	-	59	61.0	1	42	35.3
-	38	94.7	1	-	60.0	1	44	34.6
-	39	92.3	1	02	58.0	1	46	34.0
-	40	90.0	1	04	56.2	1	48	33.3
-	41	87.8	1	06	54.5	1	50	32.7
-	42	85.7	1	08	52.9	1	52	32.1
-	43	83.7	1	10	51.4	1	54	31.6
-	44	81.8	1	12	50.0	1	56	31.0
-	45	80.0	1	14	48.6	1	58	30.5
-	46	78.3	1	16	47.4	2	-	30.0
-	47	76.6	1	18	46.1	2	05	28.8
-	48	75.0	1	20	45.0	2	10	27.7
-	49	73.5	1	22	43.9	2	15	26.7
-	50	72.0	1	24	42.9	2	30	24.0
-	51	70.6	1	26	41.9	2	45	21.8
-	52	69.2	1	28	40.9	3	-	20.0
-	53	67.9	1	30	40.0	3	30	17.1
-	54	66.6	1	32	39.1	4	-	15.0
-	55	65.5	1	34	38.3	5	-	12.0
-	56	64.2	1	36	37.5	6	-	10.0
-	57	63.2	1	38	36.8	12	-	5.0

FEET	TENTHS OF A MILE
528	.1
1,056	.2
1,584	.3
2,112	.4
2,640	.5
3,168	.6
3,696	.7
4,224	.8
4,752	.9