

## **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. 3**

IN EFFECT AT 0001  
Central, Mountain and  
Pacific Continental Time

**Wednesday, April 1, 1998**

**SIGNAL ASPECTS AND INDICATIONS**

All signals are subject to modification indicated under individual subdivision special instructions.

**DISTANT SIGNALS**

Aspects shown in Rules 9.1.3 through 9.1.8 may be displayed with a "D" sign on the signal mast to identify the signal as a distant signal. When a "D" sign is displayed, if train is delayed per Rule 9.9 or Rule 9.9.1 between a distant signal and the next signal, proceed prepared to stop short of the next signal. Absolute signals at automatic switches, outside of block system limits, convey main track distant signal information for the other end of the siding.

**BLOCK AND INTERLOCKING SIGNALS**

Aspects shown in Rules 9.1.3 through 9.1.8 and 9.1.13 may be displayed on signals with or without a number plate on signal mast.

Rule	Aspects of Color Light and Semaphore Signals	Cab Signal Aspects	Name	Indication
9.1.3			CLEAR	Proceed.
9.1.4			APPROACH LIMITED	Proceed prepared to pass next signal not exceeding 60 MPH and to advance on diverging route.
9.1.5			ADVANCE APPROACH	Proceed prepared to pass next signal not exceeding 50 MPH and to advance on diverging route.
9.1.6			APPROACH MEDIUM	Proceed prepared to pass next signal not exceeding 40 MPH and be prepared to enter diverging route at prescribed speed.
9.1.7			APPROACH RESTRICTING	Proceed prepared to pass next signal at restricted speed.
9.1.8			APPROACH	Proceed prepared to stop at next signal, trains exceeding 40 MPH immediately reduce to that speed.
9.1.9			DIVERGING CLEAR	Proceed on diverging route not exceeding prescribed speed through turnout.
9.1.10			DIVERGING APPROACH DIVERGING	Proceed on diverging route not exceeding prescribed speed through turnout prepared to advance on diverging route at the next signal not exceeding prescribed speed through turnout.
9.1.11			DIVERGING APPROACH MEDIUM	Proceed on diverging route not exceeding prescribed speed through turnout prepared to pass next signal not exceeding 35 MPH.
9.1.12			DIVERGING APPROACH	Proceed on diverging route not exceeding prescribed speed through turnout; approach next signal preparing to stop, if exceeding 40 MPH immediately reduce to that speed.
9.1.13			RESTRICTING	Proceed at restricted speed.
9.1.14			STOP AND PROCEED	Stop, then proceed at restricted speed.
9.1.15			STOP	Stop.

**SPECIAL ASPECTS WHICH ARE NOT PART OF AUTOMATIC BLOCK, CTC AND INTERLOCKING SYSTEMS**

Rule	Aspects	Name	Indication
9.1.16		TAKE SIDING INDICATOR	When illuminated, hand operate switch to enter next siding or to leave siding and enter main track.
9.1.17		BLOCK INDICATOR	Block clear.
9.1.18		BLOCK INDICATOR	Block occupied.
9.1.19		SPRING SWITCH INDICATOR	When lunar is not illuminated, stop and inspect spring switches per Rule 8.9.
9.1.20		FAILED EQUIPMENT INDICATOR	When illuminated continuously, or when not illuminated, stop train and inspect for failed equipment. Advise dispatcher reason for delay by first available means of communication.
9.1.21		FAILED EQUIPMENT INDICATOR	When flashing, no failed equipment has been detected.
9.1.22		SLIDE FENCE INDICATOR	When illuminated continuously or when not illuminated, slide fence has been activated; proceed at restricted speed.
9.1.23		SLIDE FENCE INDICATOR	When flashing, slide fence has not been activated.
9.1.24		RESUME SPEED	End of slide fence restriction; resume speed.

**General Signal Instructions**

In addition to Rule 9.1 of the General Code of Operating Rules, the following General Signal Instructions apply on Burlington Northern Santa Fe Railway:

- When a track intervenes to the right between a signal and the track governed, a stub post with a blue light will be attached to the right of the signal mast.
- When a track intervenes to the left between a signal and the track governed, a stub post with a blue light will be attached to the left of the signal mast.
- Dwarf signals will display the same aspects and indications as high signals.
- The following symbols are used in diagrams of signal aspects:

- To indicate a number plate.
- To indicate a flashing light.
- To indicate color light signal head.
- To indicate position of semaphore arm
- To indicate grade marker.

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 I(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.

	Main Line	Branch Line
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.  
 Ore cars,  
   Loaded ..... 45 MPH. .... 20 MPH.  
   Empty ..... 50 MPH. .... 20 MPH.  
 Exceptions: BN 98000-98150, BN 99000-99949,  
 BN 551000-551500 and BNSF 601090-601189  
 (No speed restrictions)

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 are 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 through 76745 78287 through 78293  
 76539 76747 78326  
 76556 76748 78328 through 78333  
 76558 76750 78336 through 78340  
 76568 76751 78343  
 76595 78256 through 78269 78344  
 76649 78272 78347  
 76656 78274 78348  
 76696 78278 78350  
 76733 78281 78353  
 76736 through 76738 78285 ..... 40 MPH. .... 40 MPH.

EMPTY Schnabel type cars:  
 APWX 1004 GEX 40010, 80002, 80003  
 BBCX 1000 GPUX 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 WFAX 84654 through 84700 ..... 45 MPH. .... 45 MPH.  
 Trains RSPGAT handling loaded sulphur cars ..... 40 MPH. .... 40 MPH.  
 Trains GATRSP handling empty sulphur cars ..... 40 MPH. .... 40 MPH.  
 Flatcars 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 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 QD	Twin Flats	Two	186 ft.	8	2	T
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. Caboose 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 authorize 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 maximum authorized speed above 55 MPH. (More than 90' of total trailer length shown on train documentation indicates each unit is loaded).

**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 ratings, 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

# 6 SYSTEM SPECIAL INSTRUCTIONS

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	Former 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

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
	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
1500-1575		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

### 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	Axes & 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). Event Recorders**

All trains are restricted to 30 MPH unless at least one locomotive in the lead locomotive consist is equipped with an event recorder.

Train information now being generated should reflect whether or not a locomotive is equipped with an event recorder. Should this information reflect that no locomotive in the lead locomotive consist is equipped with an event recorder, this fact must be reported to the train dispatcher. If no information is available as to whether or not a locomotive is equipped with an event recorder, contact the train dispatcher and be governed by his or her instructions.

**3. Equipment Restrictions**

The following equipment must be placed next ahead of caboose or at rear of cabooseless 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 cabooseless 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.
- 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 operated 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 RPM's 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). Roadrailer Equipment (Roadrailer Triple Crown, Autorailer, and Allrailer)

Description:

Trailer/container units that can be assembled and interconnected with shared railroad trucks (also referred to as bogies) and operate over the railroad are known as "Roadrailer" equipment. This equipment is identified by the railroad truck/bogie and has car kind codes QZW or M2E. This equipment is assembled similarly to articulated freight equipment and blocks of this equipment should reflect an additional railroad truck/bogie that will be indicated as an empty on train documentation. Roadrailer truck/bogies equipped with conventional couplers and tool storage are referred to as "Coupler Mates". This equipment comes in three different types:

1. Roadrailer Triple Crown (car kind code QZW) - are highway/railroad capable trailers that can move all types of conventional dry freight.
2. Roadrailer/Autorailer (car kind code QZW) - are highway/railroad capable trailers that can move both conventional dry freight and automobiles.
3. Roadrailer/Allrailer (car kind code M2E) - are lightweight container segments that are capable of operating only on the railroad and are capable of carrying automobiles only.

#### Special Handling Requirements and Operating Practice Guidelines for Roadrailer Equipment

1. Roadrailer equipment must be operated as a unit train consisting of all Roadrailer equipment or at the rear of other freight equipment as instructed by dispatcher.
2. Roadrailer equipment shown as empty is limited to a maximum speed of 55 MPH. (Trains with a block of this equipment or unit trains made up entirely of this equipment may be operated at maximum authorized speed if only one railroad truck/bogie is shown as an empty).
3. Total number of Roadrailer units that can be operated as a block on the rear of other freight equipment or as a unit train is 125 with total trailing tonnage beginning at the lead Roadrailer unit not to exceed 4,800 tons.
4. Roadrailer equipment must be entrained "nose first" for main track operation.
5. Roadrailer equipment must not be humped.
6. When coupling a locomotive to Roadrailer equipment, a safety stop must be made.

7. Roadrailer equipment coupling speed must not exceed 2 MPH.
8. Shoving Roadrailer equipment must be avoided whenever possible. If necessary to shove Roadrailer equipment, movement must not exceed 10 MPH.

#### Other Special Handling Requirements

1. Roadrailer equipment must not be left standing as a single unit within block system or interlocking limits without notifying train dispatcher who must provide protection.
2. Roadrailer equipment is not equipped with the following safety appliances: ladders, handholds, platforms, sill steps, uncoupling levers or handbrakes. **DO NOT ATTEMPT TO MOUNT THIS EQUIPMENT.**
3. Roadrailer must be set out if highway wheels are on the rail and the condition cannot be corrected.
4. Any unit bypassed with a run-around hose must be set out as instructed by dispatcher.
5. Do not bypass a railroad truck/bogie unless absolutely necessary; if railroad truck/bogie must be bypassed, the following will apply:
  - If equipment personnel are not available to cage or otherwise disable bogie spring brake, trailer must be set out.
  - Caging bolt and instructions for its use are supplied in Coupler Mate.

### 3(H). 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(I). 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.

**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**

Cars that are either shorter than minimum length or are heavier than limits specified in Item 2 of the Individual Subdivision Special Instructions or in any of the following paragraphs are not permitted without authority of Division Superintendent or BNSF Clearance Bureau.

Six-axle cars listed in Table 5A can weigh up to the indicated weights and still be in compliance with Item 2 of the Individual Subdivision Special Instructions.

Table 5A 6 Axle Car Number Series	Maximum Gross Weight of 6 Axle Car If Item 2 Max. Weight of Car Equals:			
	143 Tons	138 Tons	136 Tons	134 Tons
CSXT 600908-600910. DODX 39980-40573. HCMX 4402. KCS 700002-700053. NS 185541-185542. SOU 50016-50019. ZRXN 150.	185 Tons	180 Tons	177 Tons	175 Tons
CN 672001-672009, 673000-673001. CR 766062-766072, 766074, 766145-766150. CSXT 600430. DODX 39095-39199, 39810-39832. PC 766149. RSUX 200.	170 Tons	165 Tons	162 Tons	160 Tons

ATSF 90010. BLE 4601-4602. CR 766026-766061. CSXT 600349, 600390-600394. DH 16159. IAPX 1001, 1003-1005, 1008. LV 9661. MP 863002-863015, 866000. NS 185209-185210, 185400, 185403-185423. PC 766043-766051. SEX 1. SP 500502-500521. SSW 80005-80006. UP 50000. OTHERS	150 Tons	145 Tons	142 Tons	140 Tons
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Eight-axle cars listed in Table 5B can weigh up to the indicated weights and still be in compliance with Item 2 of the Individual Subdivision Special Instructions.

Table 5B 8 Axle Car Number Series	Maximum Gross Weight of 6 Axle Car If Item 2 Max. Weight of Car Equals:			
	143 Tons	138 Tons	136 Tons	134 Tons
ATSF 90001-90004, 90006-90007, 90011-90014, 90016. BAWX 106-107, BN 631021. FWLX 81, HCMX 4400. NS 185300-185301, 185550, 185522-185531, 185550-185555. NW 70103, 70108-70111. PLMX 100-101, PSOX 1. QTTX 130500-130503, 130550-130562, 130600-130604, 130700-130707, RAIX 4301-4319. UP 50002-50003, VAPX 20000. WP 1601-1602, WPEX 100. ZRXN 151.	250 Tons	235 Tons	226 Tons	220 Tons
ATSF 90015. BPAX 855-883, 900-901. CN 674100-674102, 675000-675001, CNW 48017-48019. DODX 38860-38861, 39780-39782, 39800-39809, 39833-39847, EL 7600-7601. NS 185009, 185100-185108, 185501-185503, 185505-185506. PC 766090-766091, 766152. QTTX 131025-131051. UTLX 83699.	225 Tons	212 Tons	205 Tons	200 Tons
BLE 4607-4610. CN 670002, 67400-67403. CNW 48003, CP 309965-309970. DODX 38865-38867, 38870-38885. NS 185005-185007, 185521. QTTX 131000-131005. SOU 50088-50089. SP 500605-500606.	200 Tons	190 Tons	184 Tons	180 Tons
ATSF 90020-90023. BLE 4604-4605, DH 16153-16156. DODX 39900-39907, NS 185000. RDG 9100, RTTX 1-4. USAX 39902, WECX 100. OTHERS	150 Tons	145 Tons	142 Tons	140 Tons

Actual car weight may exceed the maximums by up to 1 ton due to weighing tolerances.

Cars weighing between 134.01 and 143 tons must be at least 52 feet long.

Cars weighing between 110.1 and 134 tons must be at least 44 feet long.

Cars weighing between 89.01 and 110 tons must be at least 38 feet long.

Cars weighing 89 tons or less must be at least 35 feet long.

Ore cars weighing between 110.1 and 134 tons must be at least 35 feet long.

Ore cars weighing 110 tons or less must be at least 24 feet long.

Weight and length restrictions indicated in this section and in Item 2 of the Individual Subdivision Special Instructions apply to four axle cars but do not apply to articulated cars such as trough cars or multiple unit double stack well cars.

**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 lost.
CN	Car is not ready to be pulled account hoses attached, ramps in doorways, plug door opened, hazardous placards missing or wrong.
FR	Car is not pulled/spotted account customer request directed to crew, rejected by customer or held to be reloaded.
FS	Full spot, no room to spot car.
NA	Could not perform switch as requested account yard track blocked, obstructed, out of service, car located in wrong switching zone or location.
PR	Locomotive power restricted from operation on yard/industry track, engine failure, excess tonnage, train make-up compliance (hazardous or operating).
SA	Substituted another car in place of ordered equipment.
SI	Did not perform switch as requested per supervisory or dispatcher instructions.
TB	Could not perform switch as requested account industry track blocked, obstructed, out of service or poor track conditions.
TM	Could not perform switch account hours of service, work done in opposite direction or work should be scheduled to another job assignment.
UC	Unsafe conditions caused by debris, weeds, footing, high water, snow/ice/storm.
XX	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	
SP	<b>SPOT</b> - Customer request to spot car for loading/unloading.
PU	<b>PULL</b> - Customer request to move a car from an industry track to another track or scheduled destination.
IP	<b>INTRA-PLANT SWITCH</b> - Customer request to move a car originally spotted correctly to another spot or track within the industry.
RS	<b>RESPOT</b> - Request to reposition cars to a spot or track for loading or unloading when not spotted correctly.
MO	<b>MOVE</b> - Request to move cars to a designated location for disposition.
TU	<b>CARS TURNED ON WYE OR TURNTABLE</b> - Request to turn a car previously spotted and re-spot.
PK	<b>PICKUP</b> - Cars available to be picked up by train, local, road switcher at station.
SO	<b>SETOUT</b> - Cars scheduled to be set out by train, local, road switcher at station.
Status Codes	
Displays Current Status of Cars (Does not require any work to be performed)	
Code	
PL	<b>PLACED</b> - Car on spot. (Displays car status and not a request).
CP	<b>CP</b> - Constructive Placement (Condition between Carrier and Customer).
OF	<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.
DD	<b>CARS DELIVERED IN INTERCHANGE</b> - Displays cars scheduled for interchange delivery to a connecting road.
Hold Codes	
Carrier/Customer instructions have not been provided	
Code	
HOLD MT	Car not scheduled for outbound train. (Hold code appears in the Scheduled Train field).
HOLD NI	Car has no instructions for spotting. (Hold code appears in the Scheduled Train field).
HOLD HL	Car is HIWIDE and has not been scheduled to a train. (Hold code appears in the Scheduled Train field).
HOLD LS	Car is on floating lease. (Hold code appears in the Scheduled Train field).
HOLD ED	Car to be held for equipment distribution. (Hold code appears in the Scheduled Train field).
HOLD WH	Car is to be held for weighing. (Hold code appears in the Scheduled Train field).
HOLD OT	Car is to be held for local order. (Hold code appears in the Scheduled Train field).
HOLD ME	Car is to be held for mechanical inspection. (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*</b> <b>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 a movement authorization message issued by BNSF Clearance Bureau or by track bulletin.
- 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 alarm message is received. If detector indicates more than one detector message or circumstance, comply with each train crew action shown.

Detector Message or Circumstance	Type Detector	Train Crew Action	Additional Instructions
"...No Defects"	5(A) or 5(B)	Proceed	None
"Train Too Slow"	5(A)	Stop, inspect both sides of entire train before reaching bridge, tunnel, or structure being protected.	None
	5(B)	Proceed	None
"Integrity Failure"	5(A)	Stop, inspect both sides of entire train before reaching bridge, tunnel, or structure being protected.	Report integrity failure to train dispatcher.
	5(B)	Proceed	Report integrity failure to train dispatcher.
When track bulletin or track warrant states that FED equipment is out of service.	5(A)	Stop, inspect both sides of entire train before reaching bridge, tunnel, or structure being protected.	None
	5(B)	Proceed	None
"...First hot box right/left side axle XXX" or "First dragging equipment near axle XXX" or "...First hot wheel right/left from axle XXX to axle XXX" or "first wide load right/left side near axle XXX" or "First high load right/left side near axle XXX" or "...Shifted load right/left side near axle XXX"	5(A) or 5(B)	1. As soon as message "...You have a defect" is received, immediately reduce train speed to 30 MPH. 2. Stop the train. 3. Inspect the indicated axle(s). 4. If no defect is found, inspect 12 axes both sides of the indicated axle(s). 5. Report findings to train dispatcher.	Detector alarm message may identify more than one defect. Inspect train for all reported defects before proceeding.
	5(A) or 5(B)	1. As soon as message "...you have a defect" is received, immediately reduce speed to 30 MPH. 2. Stop the train. 3. Inspect the indicated axle(s). 4. If no defect is found, inspect 12 axes both sides of the indicated axle(s). 5. Inspect both sides of the remainder of the train from the last reported defect. 6. Report findings to train dispatcher.	None

Axle count varies by more than 16 axles from previous detector readout or speed transmitted varies by more than 10 MPH from actual speed or detector alarm message does not include axle designation.	5(A) or 5(B)	1. Stop the train. 2. Inspect both sides of entire train. 3. Report findings to train dispatcher.	Verify that the marker or EOT device is on the rear car.
No message or incomplete message is transmitted.	5(A) or 5(B) (with recall code)	1. Enter recall code and be governed by message. 2. If still no message or incomplete message, stop the train. 3. Inspect both sides of entire train.	Report no message or incomplete message to train dispatcher.
Note: Crew member must receive "OUT" for message to be complete.	5(A) without recall code)	1. Stop the train. 2. Inspect both sides of entire train.	Report no message or incomplete message to train dispatcher.
	5(B) (without recall codes)	Proceed	Report no message or incomplete message to train dispatcher.

**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
Continuous 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.

**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.

**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 # 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 crayon marker to write date and 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 with an asterisk (\*), 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)**

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 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).

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

- General Code of Operating Rules, THIRD EDITION, effective 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, effective April 1, 1998.
- Air Brake and Train Handling Rules, effective April 1, 1998.
- Train Dispatcher's, Operator's and Control Operator's Manual, effective March 1, 1997.
- Maintenance of Way Operating Rules, effective August 1, 1996.
- BNSF TY&E Safety Supplement, effective April 1, 1998.
- Safety Rules and General Responsibilities for all Employees, effective March 1, 1997.
- 1996 North American Emergency Response Guidebook
- Canadian Rail Operating Rules 1990, revised December 1, 1996 (For use in Canada only).
- Rules for the Protection of Track Units and Track Work 1990, revised December 1, 1996 (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, Safety Rules and General Responsibilities, 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 2.3 Transmitting Track Warrants and Track Bulletins**—the second bullet point is amended by adding: 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 following paragraph is added: All road trains must have an operable radio in the controlling locomotive. If the radio should fail enroute, the locomotive may continue as the controlling locomotive only if no other locomotive is available to be picked up or switched to the controlling position, and then only to the next radio repair facility.

**Rule 5.4.2 Display of Yellow Flag**—Paragraph B, Restriction Not Specified in Writing, Item 2a is changed to read:

- Passed a green flag. If the rear of the train passes a green flag prior to traveling 2 miles from the yellow flag, speed may be resumed at that time.

**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**—Change the heading “B. Yellow-Red and Green Flags” to read “Yellow-Red Flags.”

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

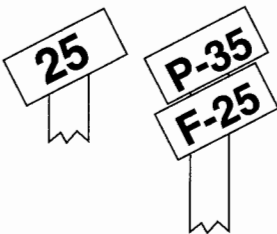
Reduced speed limits may be designated by Advance Warning Sign (diagonally upward), Reduce Speed Sign (rectangle) and Resume Speed Sign (vertical).

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.

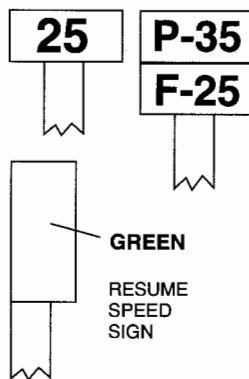
Locations where reduced speeds are required, but which are not indicated by signs, are listed in the special instructions for each subdivision.

#### ADVANCE WARNING SIGN



Note:  
Advance Warning Sign and Speed Sign have yellow background and black letters and/or numbers

#### SPEED SIGN



These signs, as illustrated, apply to train and engine movements as follows:

Figures preceded by letter P apply to passenger trains.

Figures preceded by letter F apply to freight trains.

Figures not preceded by a letter apply to all trains.

**Rule 5.8.2 Sounding whistle**—add the following as the new 4th paragraph and the current 4th paragraph will now be the 5th paragraph:

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

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

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

EXCEPTION: Engines painted in the blue and yellow or red and silver color schemes with the words Santa Fe or initials MKM or BLC on the side of the locomotive, 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 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**—Add new rule reading:

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; or,
- Receiving information about the train from the train dispatcher or control operator.

**Rule 6.3 Main Track Authorization**—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 engine 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 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**—is amended as follows: 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 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**—Change last bullet 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 new rule is added:

In TWC, DTC, and CTC territories, employees may use a train's authority to establish working limits to remove snow, ice, debris; unloading ballast and 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, 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**—add a 4th 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**—is amended by adding:

Train must not proceed until it has been determined that it is safe to do so by visual inspection of train or knowledge that the brake pipe pressure has been restored by observing caboose gauge, End of Train Device (ETD) control head, or ascertaining that air pressure is present in the brake pipe by 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 automatic brake valve cutout valve to "OUT" position. If brake pipe pressure rapidly reduces to zero, entire train must be inspected. If air pressure is present in brake pipe, train may proceed.

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

ALL TRAINS: Train must be visually inspected before proceeding if unusual slack action was experienced when stopping or if excessive power is required to start train. If excessive power is not required to start 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 train moving.

The last paragraph under heading "Train on Adjacent Track" is amended to read: A train on an adjacent track that receives radio notification must approach location at restricted speed and stop short of any obstruction or flagman. When advised track is clear and 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)
- fl 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.

Employees must observe all automatic crossing warning devices and report any that are malfunctioning to the train dispatcher or proper authority by the first available means of communication. Notify all affected trains as soon as possible.

**A. Automatic Warning Devices Malfunctioning**

Use the following table to properly complete movement over the crossing:

Movement When Automatic Warning Devices Are Malfunctioning	
If...	Then...
The crossing is not protected by someone at the crossing.	Stop before occupying the crossing. After a crew member is on the ground at the crossing to warn highway traffic, proceed over the crossing on hand signals from that crew member, or If devices are seen to be working or when relieved by the train dispatcher, proceed over the crossing at 15 MPH without stopping until the head end of the train completely occupies the crossing. Then proceed at normal speed.
The crew is notified that the crossing is protected by one equipped flagger who is unable to protect the crossing in all directions of approaching traffic.	Proceed over the crossing at 15 MPH without stopping until the head end of the train completely occupies the crossing. Then proceed at normal speed.
The crew is notified that the crossing is protected by one or more equipped flaggers who are able to protect the crossing in all directions of approaching traffic.	Proceed over the crossing at normal speed without stopping.

NOTE: An **equipped flagger** is a person other than a crew member who is equipped with an orange vest, orange shirt or orange jacket. At night, the vest, shirt or jacket must be florescent. The flagger must have a red flag or stop paddle by day and a light at night.

**B. Whistle for Crossing**

When notified that automatic warning devices are malfunctioning, sound whistle signal 5.8.2(11) regardless of any prohibition.

**C. Train Dispatcher and Yardmaster Responsibilities**

When notified that automatic warning devices are malfunctioning, the train dispatcher or yardmaster must:

- fl Notify all trains.
- fl Contact the Signal Maintenance Desk to ensure that local law enforcement agents are contacted.

**D. Power Off Indicators**

When the Power Off Indicators on the side of signal housings at highway crossings are not illuminated, immediately notify the train dispatcher.

**Rule 7.1 Switching Safely and Efficiently**—amended by adding second paragraph reading:

Do not leave cars or engines where they will foul equipment on adjacent tracks or cause injury to employees riding on the side of a car or engine.

**Rule 7.6 Securing Cars or Engines**—the first paragraph is amended to read:

Do not depend on air brakes to hold a train, engine or cars in place when left unattended. Engineer and conductor are jointly responsible, through job briefing, to ensure equipment left unattended is properly secured and a sufficient number of hand brakes are applied to prevent movement. If handbrakes are not adequate, block the wheels.

**Rule 7.7 Kicking or Dropping Cars**—is amended to read:

Kicking cars is permitted only when it will not endanger employees, equipment or content of cars. Dropping cars is permitted only on territory where specifically authorized by the division superintendent.

Before dropping cars, crew members must fully understand the intended movement. They must verify that the track is sufficiently clear and that switches and hand brakes are in working order. If possible, the engine must run on a straight track.

**Rule 7.8 Coupling or Moving Cars on Tracks Where Cars are Being Loaded or Unloaded**—Delete sentence reading:

“Properly close or secure plug-type and swinging doors on cars.”  
Add a 5th bullet under “In addition:”

- fl Ensure plug-type and swinging doors on cars are properly closed or secured.

**Rule 8.2 Position of Switches**—New second paragraph is added:

Do not operate a switch that is tagged. If a switch is spiked, do not remove the spike unless authorized by the craft or group that placed it.

**Rule 8.3 Main Track Switches**—The following is added:  
When a switch is returned to normal position as required by the last bullet of Rule 8.3 (Main Track Switches), the employee is considered at that location if their train or engine is occupying the switch.

**Rule 8.19 Automatic Switches**—“Operating an Automatic Switch by Hand”—the following is added as the last paragraph:  
After switch is placed in hand position, signal governing movement over the switch will display Stop indication and movements will be governed by hand signals.

**Rule 8.20 Derail Location and Position**—is amended as follows: Third paragraph is amended to read:  
Sidings having hand-thrown derails will have derail locked off rail, except when engines or cars are left unattended on siding. On auxiliary tracks other than siding, except when derails are placed in non-derailing position to permit movement, make sure they are always in derailing position regardless of whether cars are on the track they are protecting. Lock all derails equipped with a lock.

**Rule 9.12.4 ABS Territory**—Change the current No. 2 to No. 3 and add new No. 2 as follows:

2. Proceed at restricted speed to permit an engine, with or without cars, to couple to its train or to a standing cut of cars, if the track between the engine and cars is clear.

**Rule 9.15 Track Permits**—Is amended by adding the following between the existing paragraphs:

Limits designated by a switch extend only to the signal governing movement over the switch unless otherwise designated.

The third paragraph is changed to read:

Except at interlockings, trains granted a track permit, after stopping, may pass a signal displaying Stop indication without further authority to enter the limits or within the limits.

**Rule 9.15.1 Issuing Track Permits**—Is amended as follows:  
“Track permit wording” amended to read: Track permits will be granted in the words “Track permit, authority (number), granted on (track), between (point) and (point), (time) until (time).”

New last paragraph is added, reading: Track Permit authority must be recorded on and repeated from form provided for that purpose.

**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 limits, 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:

- fl 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 10.3A Passing Signal Displaying Stop or Stop and Proceed Indication**—the first line is changed to read:  
Except at automatic interlockings, trains granted track and time.

**Rule 10.3C Track and Time Release Within the Limits**—the following is added:

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 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 must not move 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 following paragraph is added:

When requesting track and time, if communication is lost or incomplete message is received while control operator is issuing track and time, or if after repeating the authority to the control operator, you do not hear the response from the control operator “That is Correct”, employee must not occupy the track. Employee requesting track and time must contact the control operator as soon as possible and confirm with the control operator the track and time was not received.

**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-signalled 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.

The following item is added:

3. In non-signalled 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-signalled territory.

**Rule 14.4 Occupying Same Track Warrant Limits**—the second paragraph of Item No. 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:

An employee 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."

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, 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).

The train must proceed at restricted speed and not exceed the speed specified, unless otherwise restricted.

4. To permit a train to move at a higher speed after receiving permission to pass a red flag (or light) at a 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.

**Rule 15.2.1 Protection for On-Track Equipment**—the first paragraph is changed to read:

Track Bulletin Form B may be used to protect on-track equipment, such as rail detectors, without using yellow red flags. Identify protected equipment in the track bulletin.

**Rule 15.12 Relief of Engineer or Conductor During Trip**—the first two paragraphs are changed to read:

When a conductor, engineer, or both are relieved before trip is finished, they must contact the train dispatcher and comply with instructions concerning the handling of their track warrants, track bulletins, and other instructions.

When a crew member is called to relieve a train at other than the initial station, crew members must contact the train dispatcher before leaving the initial station and determine if any track warrants, track bulletins, or other instructions must be obtained.

**Rule 16.3.3 Authority Effective After the Arrival of a Train**—

The following new rule is added:

When DTC block authority is specified to be in effect "after the arrival of trains(s)," DTC block may be occupied after train(s) specified have passed the location where the DTC block will be entered. Crew members must determine specified train(s) have passed by visually identifying the train by engine number and that the rear end marker has passed the point of restriction. In non signaled territory, the train being met must establish positive radio communication 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 and location passed, or current time and location must be written on the DTC block authority by both the conductor and engineer. Conductors and engineers must retain copies of all movement authorities transmitted by radio, until the end of the tour of duty.

**Rule 18.0 Occupancy Control System (OCS)**

**Rule 18.1 OCS for Trains and Engines**

In addition to GCOR Rule 6.13 (Yard limits), the following also applies at locations designated under the Individual Subdivision Special Instructions:

**Occupy the Main Track**

Before occupying the main track, trains or engines must receive one of the following permissions from the train dispatcher or control operator.

- Written OCS
- Signal indication of a controlled signal or
- Verbal permission

Locations where permission is granted by signal indication or verbal permission will be designated in the Individual Subdivision Special Instructions or by General Order.

Written OCS must be used when permission is joint with Maintenance of Way.

Unless authorized by controlled signal indication, written OCS permission is required when operating against the current of traffic.

OCS does not relieve a train or engine from complying with restricted speed in nonsignaled territory.

The employee requesting OCS will state name, occupation, location and train or other identification. The employee will then copy and repeat the permission granted. If the permission is repeated correctly, the train dispatcher or control operator will acknowledge. The train can make no movement until the engineer understands the OCS granted. The employee who requests OCS must retain the written OCS record until OCS is released.

Employees must advise the train dispatcher or control operator when they are clear of the limits.

Employees releasing OCS must state the following:

- Their name
- The OCS number being released
- The track limits being released

**Designated Limits**

OCS limits must be designated by specifying track, where required, and exact points such as switches, mile posts, or other identifiable points.

**Direction of Movement**

When trains or engines receive permission to proceed from one point to another, they must only move in the direction specified.

When trains or engines receive permission to work between two specific points, they may move in either direction between those points.

**Same Limits with a Train or Engine**

Before a train or engine receives permission to occupy the same limits with a train or engine working between two locations, a crew member of each train or engine must be notified. When notified, all movements must be made at restricted speed.

**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 or control operator and OCS permission expires, permission is extended until the train dispatcher or control operator 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

The following new term is added:

**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 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 and 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-WVV-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 6.23 Train Inspection Checklist**

	Walking Inspection Needed	Proceed-No Inspection Needed
Brake pipe pressure is not restored.	X	
Under 5,000 tons & brake pipe is not restored.	X	
Under 5,000 tons & brake pipe is restored.		X
Over 5,000 tons but under 30 MPH.	X	
Over 5,000 tons; over 30 MPH & brake pipe pressure is not restored.	X	
Over 5,000 tons; over 30 MPH & brake pipe pressure is restored.		X
Excessive slack action when stopping.	X	
Excessive power required to start train.	X	

**Four Ways to Determine if Brake Pipe Pressure is Being Restored**

1. Observe caboose air gauge
2. End of Train device
3. Air flow meter indicator gauge
4. Make a 20 psi brake pipe reduction and after brake pipe exhaust ceases, place automatic brake valve to "OUT" position. If brake pipe drops rapidly, train must be inspected.

**Rule 6.19 Protection Against Following Trains**—The following supplemental instruction is added: Unless otherwise specified in Individual Subdivision Special Instructions, when necessary to provide protection against following trains, a crew member must go back at least the distance prescribed below:

Where Maximum Authorized Timetable Speed is:	Distance
35 MPH or less .....	1 mile
36 MPH to 49 MPH .....	1 1/2 miles
50 MPH or over .....	2 miles

**Rule 6.26 Use of Multiple Main Tracks**—The following supplemental instruction is added: Unless otherwise indicated in the Individual Subdivision Special Instructions, when using main tracks, except double track, in westward or southward timetable direction, they will be numbered consecutively from right to left beginning from Main 1. When using in eastward or northward timetable direction, they will be numbered from left to right beginning with Main 1.

**Rule 6.32.6 Blocking Public Crossings**—The following supplemental instruction is added: In the state of Texas, if possible, a standing train or switching movement must avoid blocking a public crossing longer than 5 minutes.

**Rule 9.12.3 Automatic Interlockings**—The following supplemental instruction is added: At a signal displaying a Stop indication, in addition to complying with the instructions in the release box, the following must be complied with:

If signal does not change its indication at expiration of time release interval, train may then proceed on hand signal from a member of the crew at the crossing if there is no movement approaching on conflicting routes.

If a train is approaching on a conflicting route, hand proceed signal must not be given until such movement has been completed over the crossing, or has come to a stop at the governing signal.

If a train is standing between the absolute signals on a conflicting route, the proceed signal must not be given until after thorough understanding has been reached with the crew of the train on the conflicting route.

**Track Warrants**—The following supplemental instruction is added:

Track Warrants issued electronically print only items checked. The item numbers checked will be listed on the bottom of the track warrant. Notify the dispatcher if:

- The track warrant does not contain all items listed on the bottom.
- Computer generated line on the bottom listing the items checked is missing.
- or
- Track warrant is missing text or is otherwise not legible.

When contacted, train dispatchers will arrange to provide crews with complete, legible copies and report incident to their supervisor.

**Track Bulletin**—The following supplemental instruction is added:

Form D Track Bulletins sent electronically include the number of lines of text on the bottom of the track bulletin. The computer will count and list all lines that contain at least one character.

Notify the train dispatcher if:

- The track bulletin does not have the same number of lines shown on the bottom.
- The computer generated line on the bottom listing the number of lines is missing.
- or
- The track bulletin is missing text or is otherwise not legible.

When contacted, train dispatchers will arrange to provide crews with complete, legible copies and report incident to their supervisor.

**TSS Track Bulletin**—Mechanically transmitted track bulletins from TSS, must indicate in space provided, the total number of lines used. Employees receiving copies must assure that the lines used correspond with the number indicated.

**16. Maintenance of Way Operating Rules Changes and Additions**

**Note:** Rules listed in Item 4, General Code of Operating Rules Items, of the Individual Subdivision Timetables are in effect for employees governed by the Maintenance of Way Operating Rules, when applicable.

**Rule 1.3.1 Rules, Regulations, and Instructions**—is amended by adding the following section: Engineering Instructions

Employees governed by the Maintenance of Way Operating Rules must have a current copy of the Engineering Instructions they can refer to while on duty and comply with the provisions of these instructions.

**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 5.4.2 Display of Yellow Flag**—Paragraph B, Restriction Not Specified in Writing, Item 2a is changed to read:

- a. Passed a green flag. If the rear of the train passes a green flag prior to traveling 2 miles from the yellow flag, speed may be resumed at that time.

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

**EXCEPTION:** Engines painted in the blue and yellow or red and silver color schemes with the words Santa Fe or initials MKM or BLC on the side of the locomotive, 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 identifying unit is not the lead unit.

**Rule 5.12 Protection of Occupied Outfit Cars**—The first paragraph is changed to read:

This rule outlines the requirements for protecting occupied outfit cars. When outfit cars are occupied, hand brakes must be set on each outfit car and any car(s) coupled to outfit cars. If necessary, wheels must be blocked. As used in this rule, the following definitions apply:

**Rule 6.3.1 Main Track and Controlled Sidings**—The following paragraph is added after the nine types of authorizations listed: People or equipment may perform maintenance within these authorized limits by placing a red flag or light to protect the work limits. Place the red flags or lights as outlined in Rule 5.4.7 (Display of Red flag or Light), except torpedoes are not required. On-track equipment may move within these authorized limits without displaying a red flag or light.

The following is added after the section entitled "Requesting Authority":

**Multiple Work Groups Using the Same Authority/Position of Main Track Switches**—When more than one work group (including on-track equipment or off-track equipment fouling the track) is using the same authority, or the position of a main track switch is changed by any employee, the employee in charge must complete, keep up-to-date and retain until the end of the shift, form entitled "Multiple Work Groups Using the Same Authority/Position of Main Track Switches."

The box under the heading **Requesting Authority** on page MWOR 6-5 is amended to read:

When requesting authority, the employee in charge will ensure equipment or employees do not occupy or foul track until authority is received. In addition to employee receiving the authority, when the work group consists of two or more employees, at least one other employee in that work group (rules qualified, if available) must read and initial the authority prior to equipment or employees fouling the track.

**Rule 6.3.2 Other Tracks**—The third bullet under "EXCEPTION" is changed to read:

- Power operated tools or roadway maintenance machines are not in use within hearing distance of lone workers.

Under the EXCEPTION, a 5th bullet is added reading:

- The work is performed by a lone worker outside the limits of a control point or a remotely controlled hump yard facility.

**Rule 6.14 Restricted Limits**—The third paragraph is changed to read:

People or equipment may perform maintenance in Restricted Limits only under the provisions of Rule 5.4.3 (Display of Yellow-Red Flag), Rule 6.19 (Flag Protection) or Rule 15.2 (Track Bulletin Form B). On-track equipment may move within Restricted Limits without displaying a red flag or light.

**Rule 6.19.7 Train Coordination**—The following new rule is added:

In TWC, DTC, and CTC territories, employees may use a train's authority to establish working limits to remove snow, ice, debris; unloading ballast and 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, 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 6.32.2 Automatic Crossing Devices**—The following paragraph is added:

E. Power Off Indicators

When the Power Off Indicators on the side of signal houses at highway crossings are not illuminated, immediately notify the train dispatcher.

**Rule 8.3 Main Track Switches**—The following paragraph is added:

Before reporting clear of a track warrant, track and time, track permit or OCS in a siding or other track, main track switches must be lined and secured in the normal position.

**Rule 8.3.1 Hand Throw Switches**—is amended in its entirety to read:

**Rule 8.3.1 Hand Operated Switches**—Do not open main track hand operated switches except as instructed by the employee in charge. Employee in charge should avoid transferring authority or responsibility to handle main track hand operated switches whenever possible. When necessary to transfer such authority or responsibility, the employee in charge must ensure that the switch is lined and secured in normal position before releasing main track authority.

The position of the switch must be determined by the employee in charge making a visual inspection or by communicating with the employee operating the switch. When communicating the position of the switch, the information must be acknowledged and repeated by the employee in charge.

Lone workers who operate main track switches must observe the position of the switch and ensure that the switch is lined and secured in normal position before leaving the area.

**Rule 8.19 Automatic Switches**—the second sentence of the first paragraph is changed to read:

Unless the switch is in normal position when operating on a main track, employees must stop and hand operate the automatic switches before moving over them.

The first two paragraphs of the section "On Siding" are changed as follows:

When on-track equipment is operating on a siding, the equipment must be stopped before it fouls an adjacent track or passes an overlap sign, if equipped, and automatic switch must be hand operated. The switch must not be returned to power position until all on-track equipment has passed over the switch.

**Rule 9.51.1 Maintenance of Way Release Box**—The first sentence is changed to read:  
Automatic interlockings may be equipped with a maintenance of way release box.

**Rule 10.3 Track and Time**—The box on page MWOR 10-2 is changed to read:

Track and time does not authorize trains, MW employees, or equipment to occupy or foul a main track within automatic interlocking limits.

**Rule 10.3.3 Joint Track and Time**—Diagram A is deleted and the 3rd 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 following paragraph is added:

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

**Rule 14.8 Track Warrant Requests**—is changed in its entirety to read:

An employee requesting a track warrant must inform the train dispatcher of the following:

- The subdivision.
- The exact location where the track will be entered.
- The limits to be occupied.
- and
- Time required.

**Rule 15.2 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."

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, 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).

The train must proceed at restricted speed and not exceed the speed specified, unless otherwise restricted.

4. To permit a train to move at a higher speed after receiving permission to pass a red flag (or light) at a 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.

**Rule 15.2.1 Protection for On-Track Equipment**—The first paragraph is changed to read:

Track bulletin Form B may be used to protect on-track equipment, such as rail detectors, without using yellow red flags. Identify protected equipment in the track bulletin.

**Rule 15.2.4 Control Points**—The following new rule added:  
When track bulletin Form B limits contain a dual control switch, the employee in charge of the track bulletin Form B must ascertain from the control operator that blocks are applied to dual control switches on the segment of track to be occupied or fouled. This must be done before occupying or fouling the limits of the track bulletin Form B.

**Rule 15.2.5 Crossovers**—The following new rule 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 must ensure that all crossover switches providing access to the track segment to be occupied are:

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

**Rule 28.0 Hy-Rail Vehicles**—The following paragraph is added:  
Exception: When it is not practical for an escort to occupy the front seat of a contractor's vehicle, that person should ride in the next seat behind the front seat in that vehicle. If the vehicle is not equipped with other seats within the passenger compartment, the escort should ride in the front seat of another hy-rail vehicle which immediately precedes the contractor's vehicle during the performance of the assigned duties.

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

EBCS	Eastbound Controlled Signal
WBCS	Westbound Controlled Signal
NBCS	Northbound Controlled Signal
SBCS	Southbound Controlled Signal
SS	Station Sign
NA	Not Applicable

The following new term is added:

**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.

**Glossary**—The term "Foul of Track" is amended to read:  
Within 4 feet of the nearest rail of a track.

**Appendix A Track Flagging Examples**—Pages A-1 through A-24 are replaced in their entirety with pages A-1 through A-28 dated May 11, 1997.

**17. Air Brake and Train Handling Rules Changes and Additions**—None

**18. Safety Rules and General Responsibilities for All Employees Changes and Additions**

The following pages are added or revised effective April 15, 1997:

MEMO 1 and MEMO 2, TOC 1 through TOC 12, 10, 19, 31, 32, 52, 100, 164, 165, 203, 204, 221, 222, 222a, 222b, 222c, 222d, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, and GLO 1 through GLO 6.

**Rule S-1.2.5 Safety Rules, Training Practices, Policies, Regulations, Codes**—is changed to read:

Comply with all company safety rules, engineering instructions, training practices, and policies, and all applicable federal, state, and local regulations and codes.

**Rule S-1.2.6 Warning Signs**—is changed to read:

Comply with verbal warnings, warning signs, posted instructions, and placards identifying restricted areas, safety and health precautions, or potential hazards.

**Rule S-1.4.7 Safe Lifting Practices**—the title and entire rule is changed to read:

**S-1.4.7 Physical Exertion**

Employees must only use BNSF approved stretches when stretching at the beginning of the shift, before physical exertion, after rest breaks, and after a long period of sitting or maintaining the same posture. Employees are to stretch without exceeding personal capabilities, but must participate to the extent of their ability or as directed by a physician. Stretches following rest breaks may consist of a subset of the approved stretches.

Always use safe lifting practices when lifting, carrying or performing other tasks that might cause back pain, injury or property damage. Do not use excessive force to accomplish tasks. If one person cannot manually handle a load safely, then use mechanical assistance. Where mechanical assistance is not readily available, request assistance or stop and obtain the mechanical means necessary to complete the task.

**Rule S-1.4.8 Passengers**—is changed to read:

Transport passengers in vehicles equipped to transport passengers.

**Rule S-2.6 Containment and Spill Prevention**—is changed to read:

When dispensing petroleum products or other materials such as soaps and solvents from drums or containers:

- Whenever possible, place drums in a vertical position and use an appropriate pump for dispensing the product. Place an absorbent mat or dike on top of the dispensing drum or container.
- If drums must be placed in a horizontal position, use self-closing dispensing valves.
- Place the drum or container in a dike or other containment.
- Place containment devices such as drip pans under drums and valves.
- Properly label receiving container.
- When dispensing flammable liquids, ground and bond all containers.
- Properly dispose of contaminated absorbent material and mats.

**Rule S-2.8 Protection from Asbestos Exposure**—is changed to read:

Conduct all work involving asbestos in accordance with BNSF's Asbestos Control Program.

**Rule S-3.2.2 Protective Gloves**—the following is added:

Perform air test on high-potential rubber gloves before each use. Send high-potential rubber gloves to a qualified facility for testing every six months.

**Rule S-6.7.1 General Information**—the 3rd bullet is deleted.

The following is added as the 2nd bullet:

- A minimum of six inches of hose should be removed from the torch end annually or more frequently whenever damage or wear indicates replacement is necessary.

The following is added as the 4th and 5th bullets:

- Do not use hose with more than one splice per 50 foot section.
- Select fittings with adequate inside diameter to avoid flow restrictions.

**Rule S-6.7.3 Welding Hose Fittings**—the second bullet is deleted.

The following is added at the end of the rule:

- Do not use dropped or damaged fittings.
- Each time a fitting is installed, an approved leak detection liquid must be used to test for leaks at fittings.

The following requirements must be met when quick disconnects are used in oxygen-fuel gas processes:

- Purchase only approved, UL-listed quick disconnects.
- Employees must receive training on quick disconnects prior to their use and demonstrate safe use of the equipment.
- Quick disconnect flow rating must meet or exceed the SCFH requirements for the attached equipment.
- Do not install quick disconnect fittings in systems where splices, couplers or additional fittings are used to lengthen or repair damaged hose assemblies.
- Do not use quick disconnects with check valves when a check valve is an integral part of the flash back arrestor (additional check valve will reduce flow rates).
- Flash back arrestor must still be used. Quick disconnects do not replace the need for a flash back arrestor. Do not install the quick disconnect directly to the flash back arrestor.
- Prior to initial use, and before attaching the torch to the assembly (fittings), use a direct reading instrument to verify an adequate flow rate will be reaching the torch.

**EXCEPTION:** Quick disconnects shall not be used in System Engineering welding applications.

**Rule S-10.2.1 Moving**—the following is added to the seventh bullet:

Sounding the whistle within designated mechanical servicing and repair facilities is prohibited, unless in emergency or when approaching roadway workers on or near the track.

**Rule S-10.2.2 Spotting**—the first bullet is amended in its entirety to read:

When the locomotive is in new position, apply independent brake, apply hand brake on each locomotive, and place wheel blocks where applicable.

**EXCEPTION:** At mechanical facilities, when locomotives are protected by outbound derails on designated servicing tracks, apply a sufficient number of hand brakes to prevent undesired movement.

**Rule S-10.3.3 Avoid Hazards While Working**—the 5th bullet is changed to read:

- Do not open the ground relay protective knife when the ground relay is tripping.

**Rule S-12.1.1 General Requirements**—the 5th bullet is changed to read:

- Use headlights any time the vehicle is moving.

**Rule S-12.9 Parking**—the first bullet is changed to read:

- Place standard transmission in low gear with engine shut off.

**Rule S-13.1.2 Signals**—amend “Hand, Flag, and Lantern Signals”, the top left illustration, change caption from “Reduce Speed” to read “Set Air Brakes.”

**Rule S-13.1.3(A) Crossing Tracks**—The following is added: While within the limits of a designated mechanical facility, when crossing between standing equipment that is not under blue signal protection:

Employees may cross within 25 feet of standing equipment, provided:

1. Speed limit for all equipment on the track is 5 MPH or less, and;
2. Check for movement is made prior to crossing track, and;
3. Distance is sufficient to allow safe passage should there be unexpected movement, and;
4. Designated walkways are used, when available.

**Rule S-13.5.3 Getting On and Off Full Car Body**

**Locomotives**—The last paragraph is changed to read:

Where other units are available, do not use a full car body locomotive as the lead locomotive.

**Rule S-13.5.6 Carrying Lanterns**—is changed to read:

When practical or when there is a risk that the lantern could catch on objects, hold the lantern handle between the base of your thumb and index finger.

**Rule S-13.8.1 Storing Fusees and Torpedoes**—the 5th bullet is changed to read:

- Store them, when possible, in a locked compartment not intended for passenger occupancy, where unauthorized persons cannot obtain them.

The following 6th bullet is added:

- At fixed facilities, keep fusees and torpedoes in original shipping containers and store in a flammable storage cabinet meeting NFPA standards. Do not store other flammable or non-flammable material in the same cabinet. Store the minimum amount needed, but no more than a 60-day supply.

**Rule S-14.1 Riding on Machines**—the second bullet is changed to read:

- Sit where operator indicates, or, if directed to stand, hold on firmly at all times and maintain three points of contact.

**Rule S-15.4 Handling and Transporting Gas Cylinders**—the following is added:

When transporting compressed gas cylinders on a company vehicle over public roads or property:

1. Secure cylinders tightly with a chain, strap or equivalent device, remove gauges, and replace original cylinder cap over the cylinder valve. Clam-shell or other similar regulator covers must not be substituted for the cylinder cap.
2. Always secure cylinders in a closed compartment when available. Cylinders must not be placed or transported in a passenger-carrying compartment.

**Rule S-16.21 Other Metal or Woodworking Machines**—part of the seventh bullet has been omitted. The seventh bullet is changed to read:

- Do not join short pieces of stock. The length of the pieces joined should be at least four times the width of the bed opening. Do not adjust either half of the joiner table horizontally to make the clearance between the edge of the table and the revolving knife more than 1/8 inch.

**Rule S-17.1.4 Chain Slings**—the following new 1st sentence is added:

Chain slings used for overhead lifting must be constructed of Grade 8 alloy steel.

**Rule S-17.2.3 Outriggers**—is changed to read:

Comply with manufacturer's requirements for deployment of crane outriggers unless a written exception has been issued by the manufacturer to BNSF. Manufacturer's requirements can be found in the operator's manual and/or on the load chart(s) which are required to be on the crane at all times.

**Rule S-17.2.5 Power Line Clearance**—the first sentence of the fourth paragraph is changed to read:

Whenever working a crane within one boom length of the mandatory minimum clearance from a power line on any direction—front, back, side, or overhead—position a lookout on the ground to warn you of the approach to the limits.

**Rule S-17.3 Passengers**—the second sentence is changed to read:

If you are a passenger, ride only in safe areas designated by the operator.

**Rule S-18.10 Stackers**—add the following after the title:

Also see Lockout Tagout (LOTO) program (S-27.13); *Safety Risk Evaluation* “Lockout/Tagout (LOTO)”; and *Safety and Health Manual* “Lockout/Tagout (LOTO)”.

**Rule S-21.1 Personal Protective Equipment Requirements**—

The first bullet is changed to read:

- Hard hats with minimum 6 point suspension.

Exception: If the hard hat currently being worn has fewer than 6 points of suspension, it may continue to be used until it is worn out or damaged. The replacement hard hat must have a minimum 6 point suspension.

The second bullet is changed to read:

- Safety glasses with permanently mounted sideshields and authorized by BNSF. Authorized tints for safety glasses are: Rose #1 and #2 and Grey #1 indoors, Rose #1 and #2 and Grey #1, #2 and #3 outdoors. No other tinting is permitted. Mirror-like lenses and amber (“shooters”) lenses are prohibited.

**PPE Chart (Page 167)**—“Abrasive grinding or cutting (portable)”, replace the “X” which requires the use of “Spats, Leggings” with a “check mark” which may require the use dependent on task and materials.

**Eye and Face Protection Chart (Page 172)**—Blowing or cleaning with compressed air, add to Remarks/Special Requirements, “See Track Welding Manual for requirements when welding frogs.

Change “Boutet or thermite welding (handling molten metal)” to read “Thermite Welding”. Change basic Requirement to read “Welding goggles or faceshield”. Change More Severe Exposure to read “Faceshield over welding goggles”. Add under Remarks/Special Requirements, “See Welding Operations Shade Chart (page 180)”.

Carbon-arc cutting and gouging, change basic requirement to, “welding helmet.”

**Eye and Face Protection Chart (Pages 173 and 175)**—Delete note at bottom of table since polypropionate faceshields are no longer offered by BNSF.

**Work Glove Selection Guide (Page 178)**—Add activity, "Electrical hazard" and insert note across columns stating, "See S-3.2.2, page 12."

Add activity, "Stripping cable". Mark Cut Resistant glove as preferred glove and Leather Driver's glove as acceptable alternative.

**Welding Operations Shade Chart (Page 180)**—Add operation, "Thermite welding" with an "X" in shade number columns "3 or 4" and "4 and 5".

**Rule S-23.10 Emergency Calls**—the following is added: When monitoring marine radios to allow water traffic to pass under or through railroad bridges, the words "Mayday" will be used by marine traffic for distress calls and "Pan Pan" for urgency signals. Absolute priority is to be given over other communications when heard.

**Rule S-25.2 Tips for People Leading Stretches**—the third sentence is changed to read: When leading group stretches, be sure no one is bouncing or using extreme twisting motions as they stretch.

Delete the fourth and fifth sentences.

**Rule S-26.8 Complete and Accurate Reporting of All Accidents, Incidents, Injuries, and Occupational Illnesses Arising from the Operation of the Railroad**—the following sentence is added to the fifth paragraph: Employees who report violations of this policy will not be subject to harassment or reprisal for making the report.

**Rule S-28.2.5A Injuries to Employees**—the following is added:

If after the initial report of an injury an employee seeks medical attention for a work-related injury, they must contact the appropriate supervisor and update his/her status.

**Rule S-28.3 Rules**—the section "Issued, Cancelled, or Modified" is changed to read: Rules contained in Safety Rules and General Responsibilities for All Employees may be issued, canceled, or modified by track bulletin, general order, special instructions, chief engineer's instructions, mechanical bulletin, or directive issued to clerical and administrative employees.

**Rule S-28.3.2 General Orders**—is cancelled.

**Rule S-28.3.3 Circulars, Instructions, and Notices**—is cancelled.

**Rule S-28.28 Avoiding Delays**—is cancelled.

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

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

**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-SIGNALED 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 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 CP's to protect access.
- Issue track and time using form provided.
- Number consecutively, beginning with authority No. 1 on each district.
- When all authorities are released, form must be filed at end of calendar day.

**NOTE:** If train movements are authorized through the affected territory and it is necessary to issue track and time to a MW employee, contact each affected train, inform crew of the situation and advise each train to immediately reduce to restricted speed confirming when they have complied. Place blocking devices and issue joint track and time to each of the affected trains. After issuing joint track and time to each train, place blocking devices and issue joint track and time to the MW employee.

**Rule 50.1 Responsibilities of Dispatcher Being Relieved**—Is amended by adding new bullet point after "On the transfer page, include the following information" reading:

- reference to blocking or marking devices in use at dual control switches in track bulletin Form B limits.

**20. 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."



This banner is 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.

**21. Automatic Cab Signals**

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

**22. 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.

**23. Document Notation**

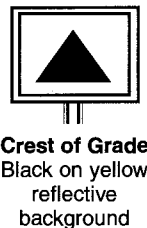
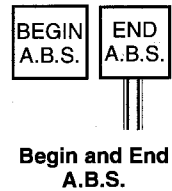
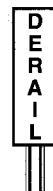
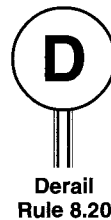
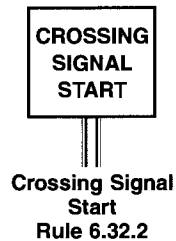
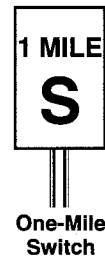
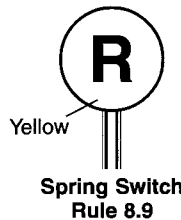
When the timetable or general order contains an amendment to the General Code of Operating Rules, Maintenance of Way Operating Rules, Air Brake and Train Handling Rules, Train Dispatcher's, Operator's and Control Operator's Manual, notation of the change must be made in these rule books. The same will apply if a general order contains an amendment to the timetable.

**24. FRA Random Drug Testing**

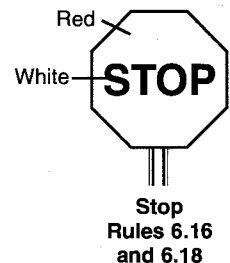
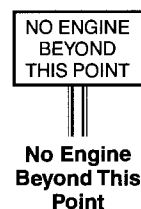
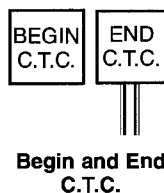
TY&E employees selected for FRA Random Drug Testing must show the start time of the Random Drug Test (RDT) in the remarks column of their timeslip. Start time of RDT begins when a supervisor notifies the employee or hands the employee a letter advising him/her that they are selected for RDT. A stop time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

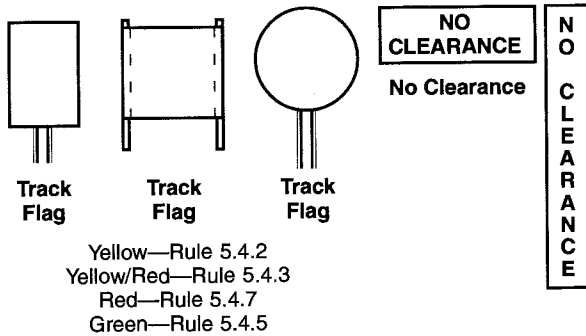
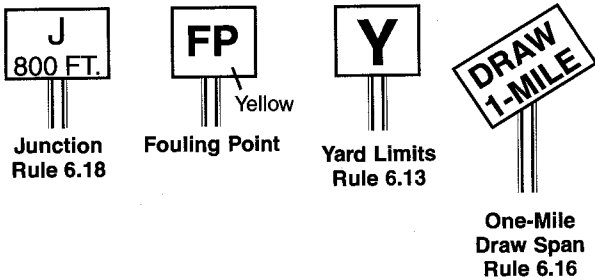
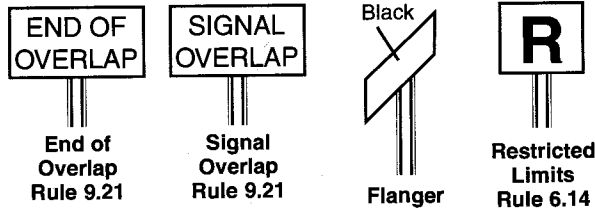
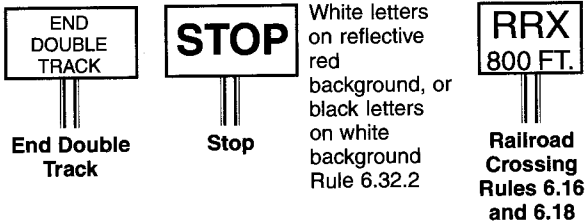
**25. Roadway Signs**

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



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





**26. 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.

**27. 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.

**28. 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.

**29. 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.

**30. 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 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.

Exception: In CTC territory, only rescue/relief crews are required to contact the dispatcher before departing initial terminal.

At locations where track warrants are received by printer or FAX, crew members must verify that the route description at top of track warrant, if so 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.

**31. 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, the train dispatcher must determine the location of each train within the area. The train dispatcher and crew member of each train must jointly determine if the train is affected by the high wind warning. The train dispatcher must instruct all trains within the area, except loaded unit coal trains and grain trains, to stop. When so instructed, affected trains must stop during the time and within the limits stated.

**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:**

When notified that flash flood warning conditions exist, the following restriction will apply during the time and limits stated:

Passenger trains will operate at restricted speed, and all other trains are restricted to a maximum speed of 40 MPH.

**32. Engineer Training Assistance Hotline**

For questions concerning:

- A. SD 70MAC, AC traction and ICE systems
  - B. SD 75M and GE AC 400
  - C. Integrated Distributive Power
  - D. Electronic Air Brake System
- call Overland Park Training Center (913) 469-3996.

**33. Duplicate Mile Posts**

On subdivisions where duplicate mile posts exist, an alpha suffix has been added (ie. 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.

**34. 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.

**35. 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.

When handled in other than special service, loaded rail trains must be on head end and train length restricted to a maximum of 64 cars. 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.

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.

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 rampcars, 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.

Rail trains are equipped with "Rail Movement Detectors" (RMD) to alert operating crews if any rail string(s) should become loose during movement. If the RMD system (i.e. strobe lights) become inoperative enroute, a maintenance representative must accompany each train during transit (a "Rider"). When the RMD system is inoperative each time train stops the rider must inspect the cars carrying the continuous rail for shifted, bowed or broken rail; also, that each base clamp (tie-down block) is tight. If any of the above or other unusual condition is observed, train must be held for instructions from general roadmaster. Defective strobe lights must be reported to train dispatcher who will notify the manager of the rail facility so that problems can be documented and repairs can be arranged as soon as possible.

Strobe lights at each end ramp car must be observed frequently enroute. When observed flashing, train must be immediately stopped and all cars carrying continuous rail be inspected to determine any rail movement.

If movement is found, observe and complete the following:

1. If adjacent track or standard clearances are not fouled, train may be moved to clear main track not exceeding speed of 10 MPH.
2. If adjacent track or standard clearances are fouled, protection must be provided and train not moved until inspected by proper personnel.

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

The RMD consists of an 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. RMD 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 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 observation of the lights flashing, depress the reset button, which is located on the control box, for three second duration to turn off and conserve the batteries. The lights should flash at approximately 60 times per minute; and fully charged batteries will operate them for about sixteen hours.

The RMD System is inspected and tested by Pueblo Rail Facility 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.

At designated intermediate inspection points, make mechanical inspection of cars in compliance with FRA requirements. Manager Rail facility in Pueblo must be advised if any mechanical repairs 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

#### **36. 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.

### 37. 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.

### 38. 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 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).

### 39. Colt ETD Control Heads

Locomotives currently equipped with Colt ETD Control heads can perform only one function at a time. If the "Train Length," Calib Mile," or Odometer Start" features are in use, depressing the emergency button cannot be relied upon to initiate an emergency application from the rear of the train. Therefore, do not use any of these features when the ETD is emergency-enabled for rear-end operation. Colt control heads are the only two-way control heads mounted in the normal ETD control head panel. Pulse control heads are additional modular attachments, and as information, do not have the problems associated with the colt control heads.

### 40. 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.

### 41. 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 14 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.

**42. Signal Awareness Form**

Signal Awareness Forms are available at on duty points or will be included with track warrants. In addition to observing and calling signals as required by GCOR Rule 5.16, the conductor of each train operating on BNSF must fill out one of these forms. BNSF conductors must also fill out this form when operating on foreign railroads. The conductor must record all block signal aspects except CLEAR and all yellow or yellow-red flags. The information must include the location and name of each signal or flag, the train speed, time the signal or flag is passed and indication that the signal was called. At the completion of each trip, the form must be turned in as directed by the Division Superintendent.

Example:

Signal Number Control Point Flag Location	Signal Name	Speed	Time	Called Signal (Y/N)
Signal 3411	Approach	40 MPH	1345	Y
ESS Baker	Stop and Proceed	Restricted	1412	Y
MP 65	Yellow-red Flag	55 MPH	1620	Y

**43. 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
- 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
- NC ..... Non-credit Patron
- NC ..... 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
- 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
- TB ..... Car Control Distributed Bad Order
- 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, and GVSR 89000-89058 are all (Hi Tri-Levels) with car code M3E and must not be operated on any Branch Line or any location listed below:

- Chicago Subdivision—BRC overpass between MP 6.70 and MP 6.73 (Handle on mains 4 and 5 only)
- Rockford Subdivisions
- Sioux City Subdivision
- Omaha Subdivision—Handle on main 1 only at Omaha Depot
- Wayzata Subdivision
- Casco Subdivision
- Aberdeen Subdivision—Sioux City to Mitchell
- Laurel Subdivision
- Fort Benton Subdivision
- Helena Subdivision
- Hi Line Subdivision
- Kootenai River Subdivision—Whitefish to Sandpoint Jct.
- Scenic Subdivision
- Helena Subdivision
- Hi Line Subdivision
- Kootenai River Subdivision—Whitefish to Sandpoint Jct.
- Scenic Subdivision
- Seattle Subdivision
- Fallbridge Subdivision—Wishram to Vancouver, WA.
- A Line Subdivision
- O E Subdivision
- Oregon Trunk Subdivision—Wishram to Bend
- Hannibal Subdivision—West Quincy to Burlington
- Topeka Subdivision—Topeka to Emporia
- Longview Subdivision
- Raton Subdivision.
- Glorieta Subdivision—Las Vegas to Albuquerque
- Stockton Subdivision—Stockton to Richmond

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.

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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