



**Run 8 Simulator
Union Pacific Railroad
Fresno, Mojave and Lone Pine Subdivisions
Trona Railway**

**Timetable
No. 1**

Effective June 1, 2026

**Produced by
David M. Bernstein**

**Run 8 Train Simulator Use Only
Do Not Use For Real World Operation**

Contents

UP System Map.....	3
UP Fresno Subdivision Subdivision	4-10
UP Mojave Subdivision Subdivision	11-20
UP Lone Pine Subdivision Subdivision	21-22
Trona Railway	23
Maximum speeds	24
Timetable Characters	24
Method of Operation Characters	24
Sidings	24
Multiple Main Tracks	24
Duplicate Mile Posts	24
Whistle Quiet Zones	24
Sounding Whistle	25
Restricted Limits	26
Movement at Restricted Speed	26
Movement on Other Than Main Track	26
Crossing Warning Signs	26
Permanent Speed Signs	26
Continental Time	27
Run 8 Locomotive Data	28-29
UP Block and Interlocking Signals	30-33
Run 8 Forms	34-40
Run 8 Keyboard Bindings	41-42

Introduction

This timetable is authored as a companion to Run 8 Train Simulator. It is a simplified version of an employee timetable tailored for Run 8 operation. The territory covered in this publication is identical to territory covered in Run 8 Train Simulator. **The information contained is based on Run 8 Depot track maps and does not necessarily reflect real life operation. This timetable applies only to rail simulation and is not to be used for real life operation.**

The author worked as a train dispatcher, chief dispatcher and rules consultant for the Southern Pacific Transportation Company, the Atchison, Topeka & Santa Fe Railway Company and the BNSF Railway Company from 1979 to 2015.

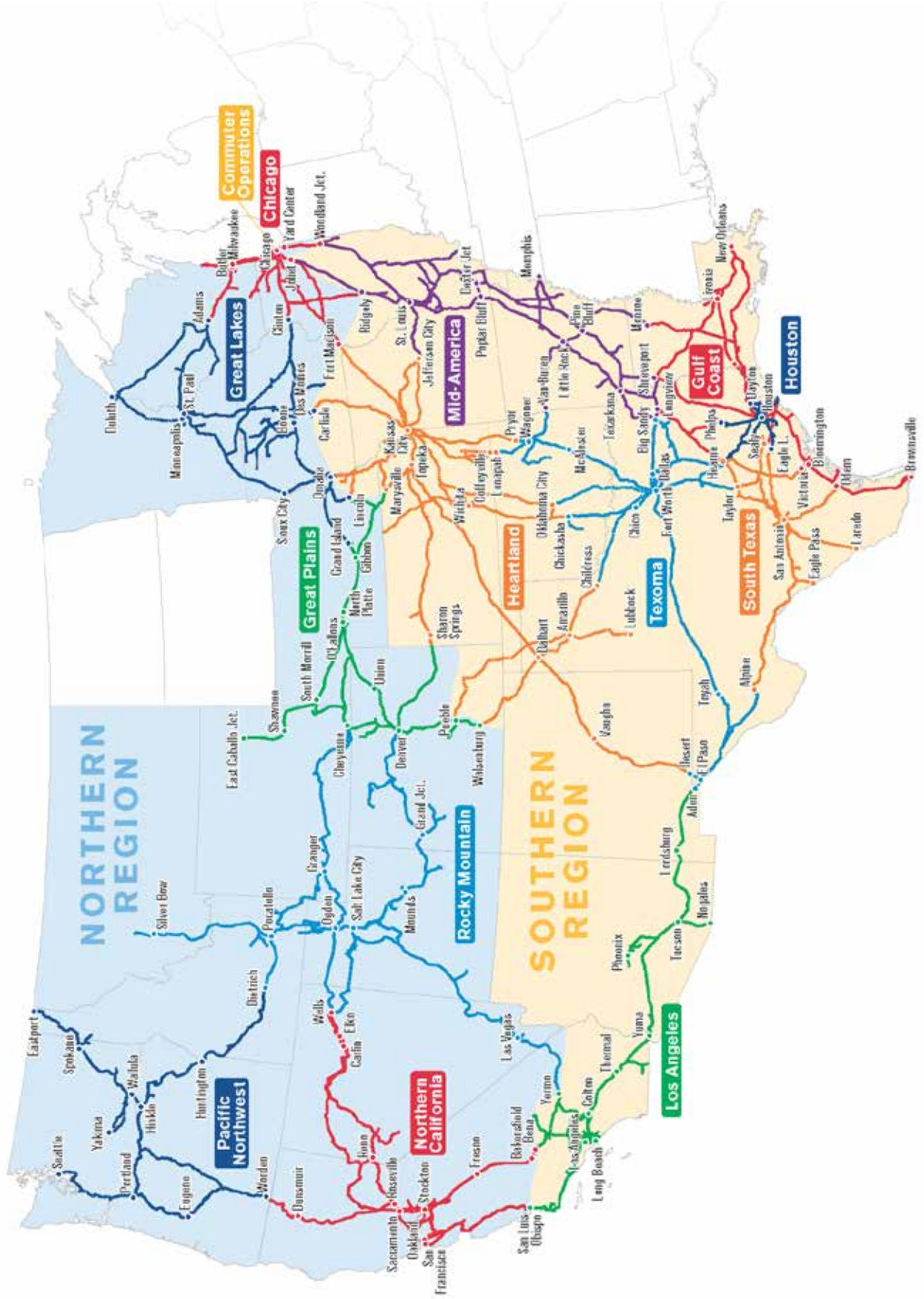
Published by David M. Bernstein
E-mail: davebernstein9@protonmail.com

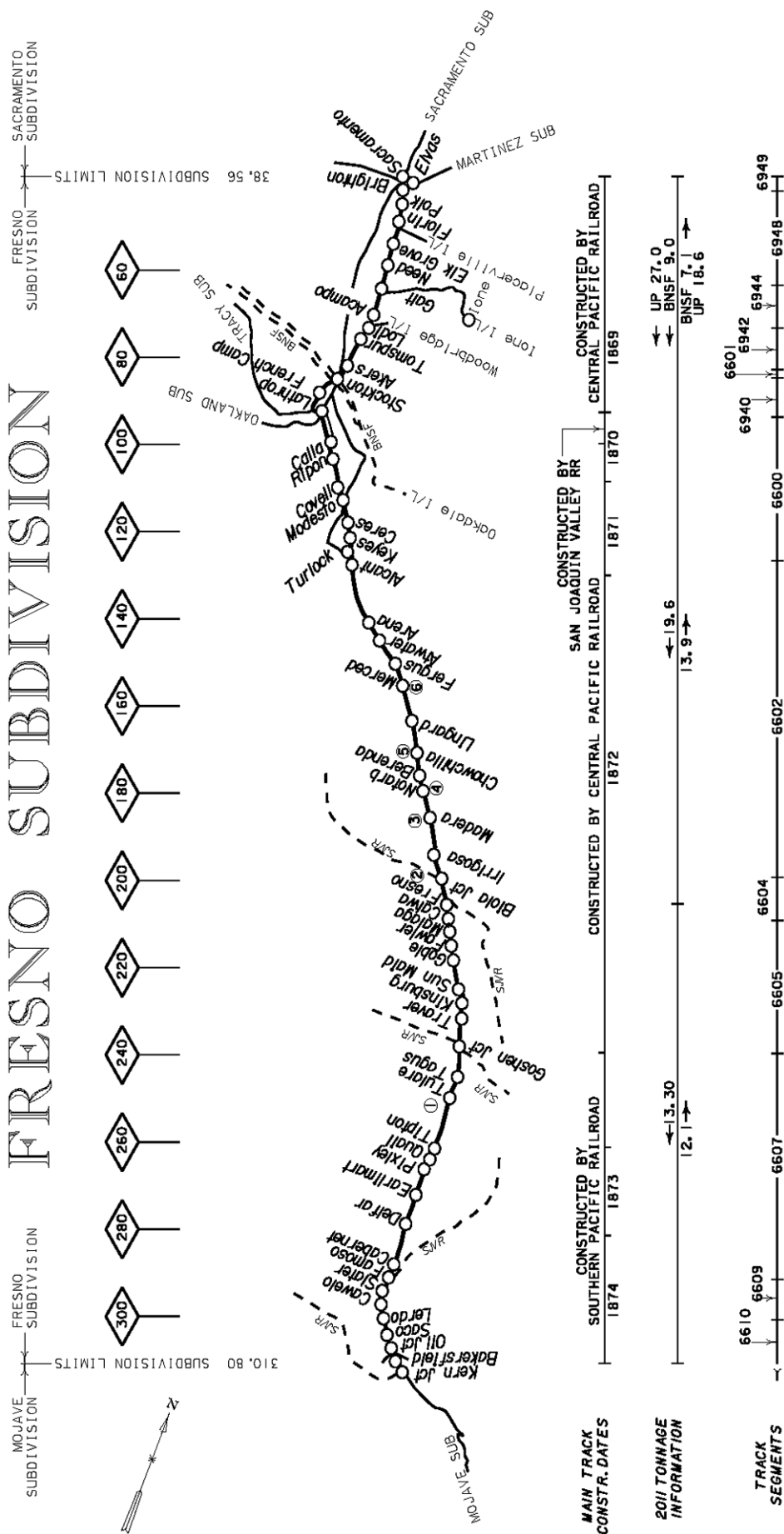
Front cover: UP loaded grain train passing Modesto June 16, 2024, en route to Pixley. (Craig Walker photo).

Abbreviations and Acronyms

ABS	Automatic Block Signal System
A&C	Arizona & California Railroad
AMTK	Amtrak
BO	Bad Order
C	Center
C & E	Conductor and Engineer
COFC	Container on Flat Car
CP	Control Point
CTC	Centralized Traffic Control
DISPR	Dispatcher (also DS)
DIV	Division
DT	Double Track
E	East
EBCS	East Bound Controlled Signal
EE	East End
ENG	Engine
ESS	East Siding Switch
EWD	Eastward
FRT	Freight
HER	Head End Restriction
JCT	Junction
MAX	Maximum
MMT	Multiple Main Track
MP	Mile Post
MPH	Miles Per Hour
MT	Main Track
MW	Maintenance of Way
N	North
NBCS	North Bound Controlled Signal
NE	North End
NO	Number
NSS	North Siding Switch
NWD	Northward
OK	Correct
OOS	Out of Service
OPR	Operator
ORIG	Originating
PSGR	Passenger
RL	Restricted Limits
S	South
SBCS	South Bound Controlled Signal
SCRRA	Southern California Regional Rail Auth. (Metrolink)
SDG	Siding
SE	South End
SJVR	San Joaquin Valley Railroad
SSS	South Siding Switch
SUBDIV	Subdivision
SW	Switch
SWD	Southward
TOB	Tons Per Operative Brake (Also TPOB)
TOFC	Trailer on Flat Car
TRK	Track
TRN	Train
TWD	Trackside Warning Detector
UP	Union Pacific Railroad
W	West
WBCS	West Bound Controlled Signal
WE	West End
WSS	West Siding Switch
WWD	Westward
XO	Crossover
YD	Yard
YM	Yardmaster

UP Railroad Service Units & Regions





Southward ▼		UP FRESNO SUBDIVISION			▲ Northward		
Mile Post	Oper-aton	Control Point	Stations	Speed (MPH)		Sidings (feet)	
				XO	Sid-ing		
38.8			ELVAS (Martinez Subdivision) JT	---			
Elvas to Covell is not included in Run 8 Simulator							
107.1	CTC	SP107	COVELL	---	15	8250	
108.9		SP109					
110.4		SP110	NORTH MODESTO	---	10	6280	
111.7		SP111	WOODLAND	---			
112.6		SP112	SOUTH MODESTO	---	10	4535	
113.0		SP113	I STREET (Modesto Empire Traction Co.) J	---	---	---	
114.7		SP115	MODESTO JCT.	---	---	---	
117.2		SP117	CERES	---	40	8130	
118.9		SP119					
119.5		SP120	KEYES	---	---	---	
128.7		SP129	ALCANT	---	40	8280	
130.4		SP130					
138.9		SP138	ARENA	---	25	8300	
140.6		SP141					
143.2		---	ATWATER	---	---	---	
146.3		SP146	FERGUS	---	40	8290	
148.0		SP148					
156.3		SP156	LINGARD	---	40	8530	
158.0		SP158					
168.0		SP168	CHOWCHILLA	---	25	8000	
169.7		SP170					
178.0		SP178	NOTARB	---	40	8300	
179.7		SP180					
183.1		---	NORTH MADERA	---	---	---	
183.9		SP189	IRRIGOSA	---	40	8130	
191.0		SP191					
197.2		CTC 2MT	SP197	BIOLA JUNCTION	---	---	---
200.9			---	FRESNO YARD	---	---	---
202.8	SP203		FLORADORA X	40	---	---	
205.7	CTC 2MT	SP206	MONO STREET (San Joaquin Valley Railroad) JX	20	---	---	
209.0		SP209	CALWA (BNSF Crossing) M	---	---	---	
215.4	CTC	SP215	GOBLE	---	40	8200	
217.1		SP217					
222.3		SP222	SUN-MAID	---	30	8350	
224.0		SP224					
231.2		SP231	TRAVER	---	30	8300	
232.9		SP233					

Southward ▼		UP FRESNO SUBDIVISION			▲ Northward		
Mile Post	Oper- aton	Control Point	Stations	Speed (MPH)		Sidings (feet)	
				XO	Sid- ing		
237.4	CTC	SP238	NORTH GOSHEN	---	30	11030	
238.7		SP239	GOSHEN JUNCTION JTX (San Joaquin Valley Railroad)	30			
239.8		SP240	SOUTH GOSHEN J (San Joaquin Valley Railroad)	---			
247.9		SP248	TULARE	---	30	8130	
249.6		SP250		---			
261.1		SP261	TIPTON	---	30	8290	
262.8		SP263		---			
263.9		SP264	QUAIL	---	30	7940	
265.6				---			
272.9		SP273	EARLIMART	---	25	8330	
274.6		SP275		---			
282.3		SP282	DELFAR	---	25	7200	
284.0		SP284		---			
290.6		SP290	FAMOSO	---	25	8370	
292.3		SP292		---			
297.6		SP298	CAWELO	---	30	8220	
299.3		SP299		---			
304.5		SP305	SACO	---	25	8435	
306.3		SP306		---			
308.6			---	OIL JUNCTION J (San Joaquin Valley Railroad)	---	---	---
310.8			SP311	NORTH BAKERSFIELD (UP Mojave Subdivision)	---	---	---
272.2 miles (203.7 miles from Covell)							

Space Left Blank Intentionally

UP FRESNO SUBDIVISION

Radio Communication

Covell MP 107.1 to North Bakersfield MP 310.8 Channel 096

Method of Operation:

Covell MP 107.1 to Biola Jct. MP 197.2 CTC

Biola Jct. MP 107.2 to Calwa MP 208.9 CTC 2MT

Calwa MP 208.9 to North Bakersfield MP 310.8 CTC

CTC in effect on sidings Covell to North Bakersfield.

Two main tracks between Biola Jct. and Calwa. Viewed southward,
Main 1 is the right track and Main 2 is the left track.

Manual Interlockings:

MP 209.1 Calwa controlled by BNSF Train Dispatcher.

Maximum Speeds - Main Tracks:

Southward Trains			
Limit	Limit	Psg.	Frt.
MP 107.1	MP 109.3	70	70
MP 109.3	MP 114.8	40	40
MP 114.8	MP 133.9	70	70
MP 133.9	MP 134.1	50	50
MP 134.1	MP 181.9	70	70
MP 181.9	MP 197.1	60	60
MP 197.1	MP 197.2	40	40
MP 197.2 Main 1	MP 205.6 Main 1	40	40
MP 205.6 Main 1	MP 208.9 Main 1	20	20
MP 197.2 Main 2	MP 198.1 Main 2	30	30
MP 198.1 Main 2	MP 205.6 Main 2	40	40
MP 205.6 Main 2	MP 208.9 Main 2	20	20
MP 208.9	MP 209.2	30	30
MP 209.2	MP 226.4	70	70
MP 226.4	MP 229.1	60	60
MP 229.1	MP 242.3	70	70
MP 242.3	MP 299.6	60	60
MP 299.6	MP 310.9	70	70
MP 310.9	MP 310.8	50	50

Northward Trains			
Limit	Limit	Psg.	Frt.
MP 310.8	MP 310.8	50	50
MP 310.8	MP 299.6	70	70
MP 299.6	MP 242.3	60	60
MP 242.3	MP 229.1	70	70
MP 229.1	MP 226.4	60	60
MP 226.4	MP 209.2	70	70
MP 209.2	MP 208.9	30	30

Maximum Speeds - Main Tracks: (continued)

Northward Trains			
Limit	Limit	Psg.	Frt.
MP 208.9 Main 2	MP 205.6 Main 2	20	20
MP 205.6 Main 2	MP 198.1 Main 2	40	40
MP 198.1 Main 2	MP 107.2 Main 2	30	30
MP 208.9 Main 1	MP 205.6 Main 1	20	20
MP 205.6 Main 1	MP 197.2 Main 1	40	40
MP 197.2	MP 197.1	40	40
MP 197.1	MP 181.9	60	60
MP 181.9	MP 134.1	70	70
MP 134.1	MP 133.9	50	50
MP 133.9	MP 114.8	70	70
MP 114.8	MP 109.3	40	40
MP 109.3	MP 107.1	70	70

Track	Psg.	Frt.
Crossovers		
• Floradora MP 202.8	40	40
• Mono Street MP 205.7	20	20
• Goshen Junction MP 238.7	30	30
Sidings		
• Covell		
• North Modesto, South Modesto	10	10
• Ceres, Alcant	40	40
• Arena	25	25
• Fergus, Lingard	40	40
• Chowchilla	25	25
• Notarb, Irrigosa, Goble	40	40
• Sun-Maid, Traver, Goshen, Tulare, Tipton, Quail	30	30
• Delfair, Famoso	25	25
• Cawelo	30	30
• Seco	25	25
I Street Lead Track, Modesto	10	10
Biola Jct. Turnout Main Track to Main 2	30	30
Calwa Turnout Main 2 to Main Track	20	20
North Bakersfield Turnout Main Track to Main 1	50	50
All other tracks and turnouts	15	15

UP FRESNO SUBDIVISION

Trackside Warning Detectors:

MP	Track(s)	Between	Notes
109.3	Main	Covell and North Modesto	
121.1	Main	Keyes and Alcant	
132.5	Main	Alcant and Arena	
142.6	Main	Arena and Fergus	
161.2	Main	Lingard and Chowchilla	
181.6	Main	Notarb and Irrigosa	
225.4	Main	Sun-Maid and Traver	
234.6	Main	Traver and North Goshen	
243.5	Main	South Goshen and Tulare	
252.2	Main	Tulare and Tipton	
278.2	Main	Earlimart and Delfar	
290.0	Main	Delfar and Famoso	
294.2	Main	Famoso and Cawelo	

Joint Operation:

San Joaquin Valley Railroad trains operate between Fresno Yard and North Bakersfield.

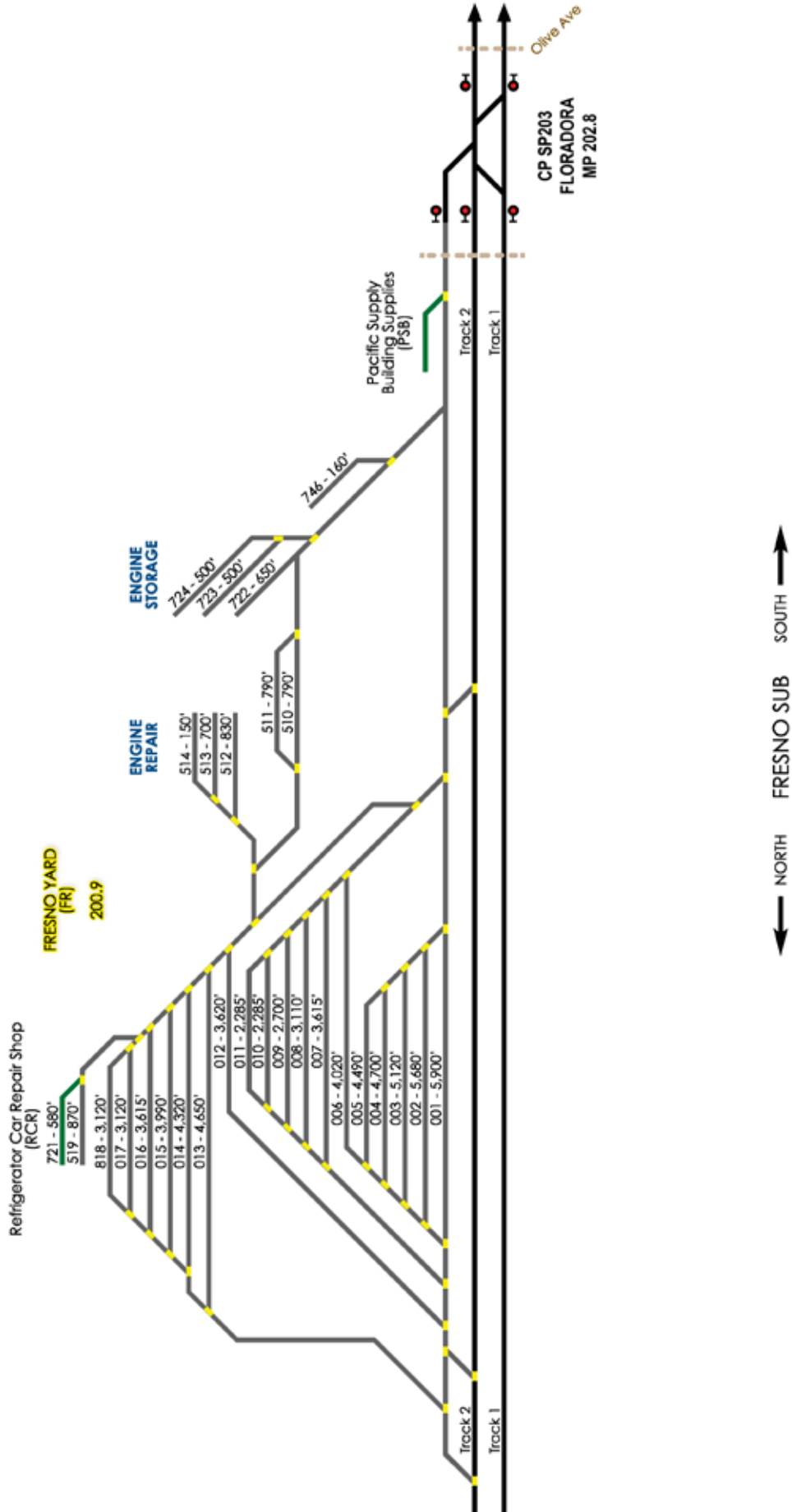
Notes:

1. There are no permanent speed signs in Run 8 Simulator between Covell and Seco. They exist in the real world but not Run 8 world.
2. The northward speed sign at North Bakerfield reading 60/55 MPH is incorrect and should be 70 MPH for all trains.
3. The crossing warning signs with letter "W" in Run 8 Simulator are incorrect. In the real world Union Pacific uses the letter "X" is used on these signs. There are also overlapping crossing warning signs which never exist in the real world.
4. There are missing station signs and control point signs in Run 8 Simulator which exist in the real world.
5. There are Yard Limit signs on Main 2 between Biola Jct. and Fresno Yard in Run 8 Simulator which should not exist.
6. There are mile post signs with the suffix "X" in Run 8 Simulator for an unknown reason. In the real world there is no mention of this in the Union Pacific timetable or special instructions.
7. There is no control point in the real world at the south end of Quail nor is there a controlled siding between north Quail and south Quail.

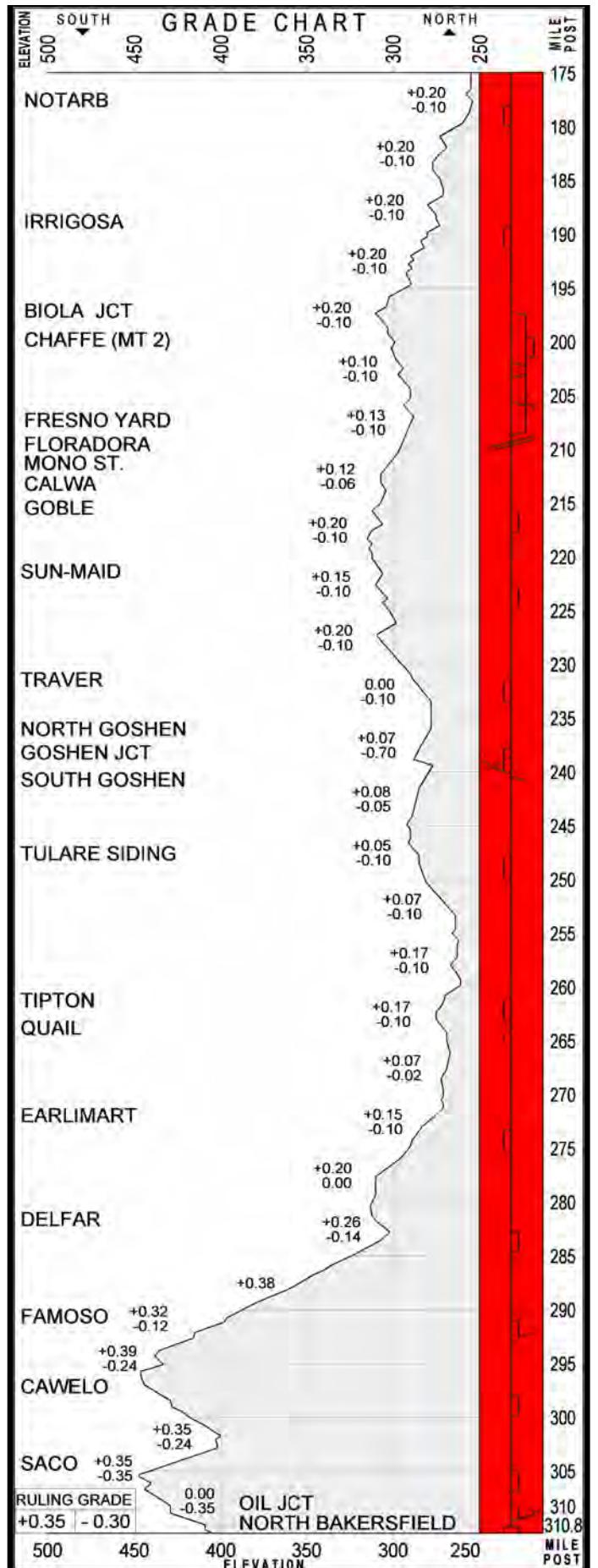
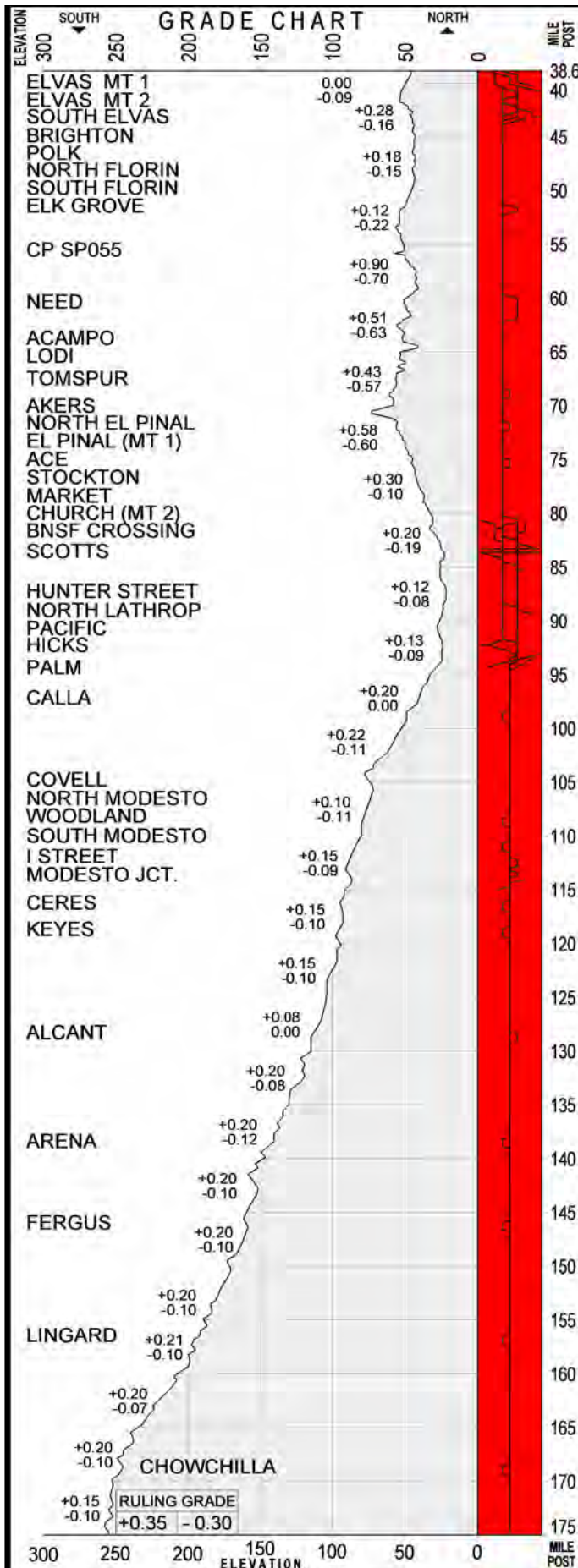
Other Location Information:

Name	Mile Post	Capacity (feet)	Switch Opens
East Modesto MP 113.0 to MP 113.6	113.1	3450	Both
Modesto Jct. Lead	114.7	12010	North
Keyes MP 119.5 to MP 120.9	119.5	7510	Both
Calneva	126.7	1580	South
Foster Farms	134.1	9005	Both
Atwater	143.2	3820	Both
Western Industrial Park Lead	149.5	---	North
CertainTeed	171.4	3960	South
Madera Industrial Park Lead	183.3	---	North
WGM Feed & Supply (Main 2)	204.0	---	Both
SJVR Int. West Side Sub. wye (Main 1)	204.1	---	Both
Fresno Bee (Main 1)	204.6	2380	North
SJVR Int. Clovis & Exeter Subs. (Main 2)	205.8	---	South
United States Cold Storage	209.5	1750	North
SA Recycling	210.2	3435	North
Kingsburg	226.0		Both
Foster Farms (Traver)	231.2		Both
SJVR Hanford Sub. Interchange wye	238.8	---	Both
SJVR Goshen Subdiv. Interchange		---	North
Norco Rail Park Tulare	250.7		South
Pixley JD Heiskell	265.0		North
Kovacevich 5 Farms	279.1		South
Titan Cold Storage Delfar	283.5	12132	North
Western Milling Famoso	292.8	14380	North

UP FRESNO SUBDIVISION



UP FRESNO SUBDIVISION



MOJAVE SUBDIVISION

MOJAVE SUBDIVISION

MOJAVE SUBDIVISION

FRESNO SUBDIVISION

SUBDIVISION LIMITS

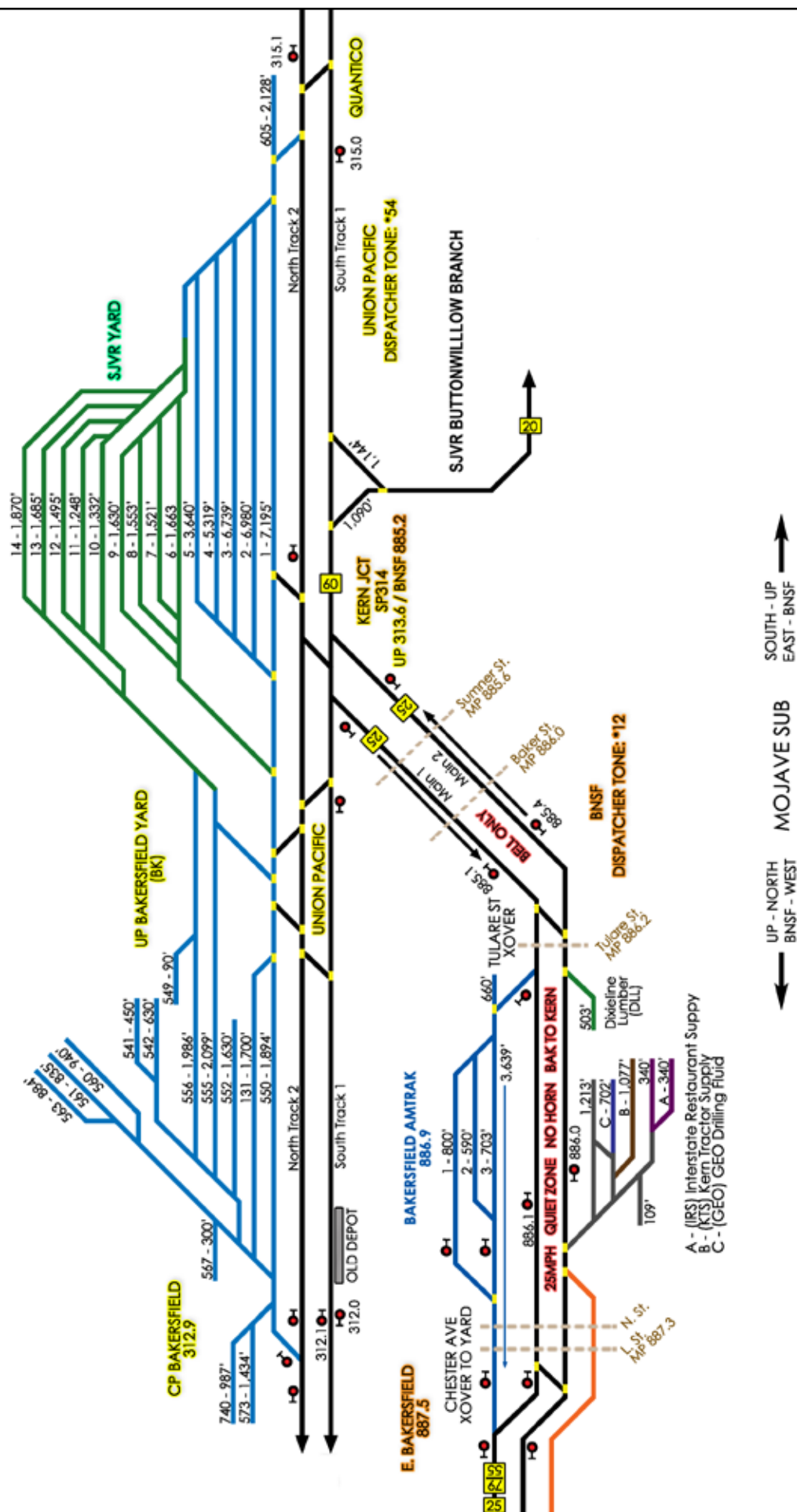
310.80 SUBDIVISION LIMITS

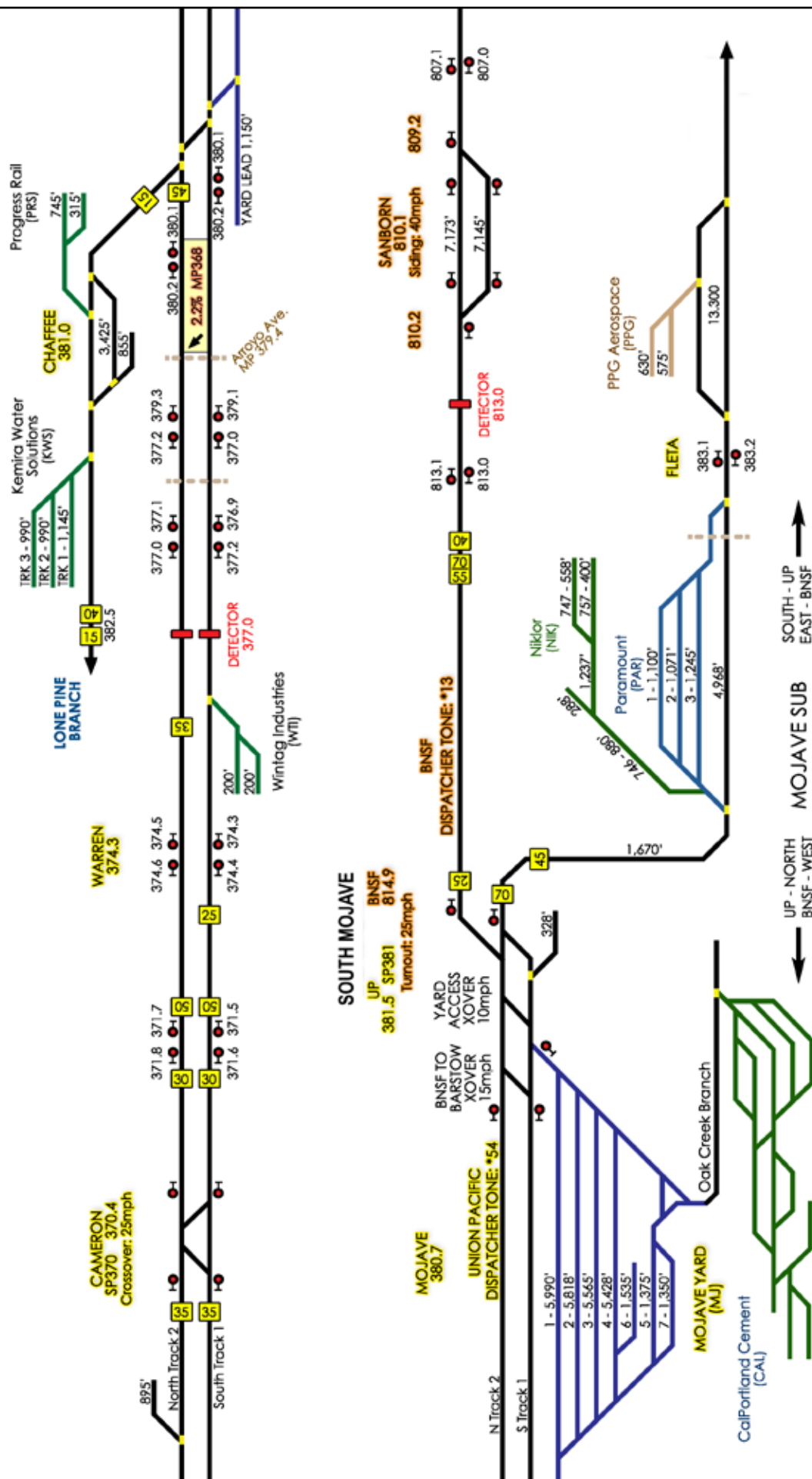
492.71 SUBDIVISION LIMITS

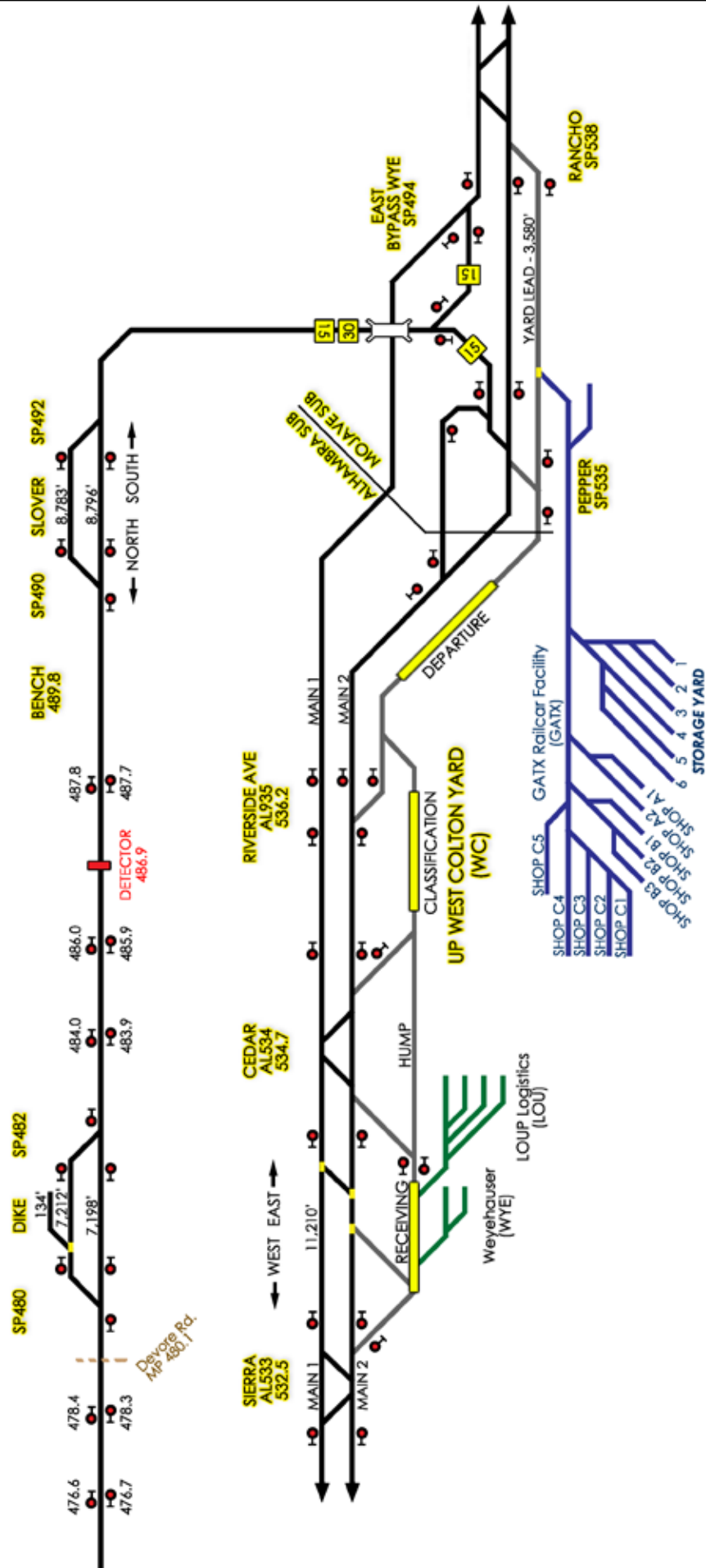


MAIN TRACK
CONSTR. DATES
2ND M/L TRACK
CONSTR. DATES
2011 TONNAGE
INFORMATION
TRACK
SEGMENTS

1966-1967	1876	1875	1874
← 12.20 (UP)	← 9.70 (UP)	← 27.40 (BNSF)	12.10 (UP)
(UP) 8.70	(UP) 7.70	(BNSF) 23.00	(UP) 13.30
6615	6614	6612	6610







MOJAVE SUB

Southward ▼		UP MOJAVE SUBDIVISION				▲ Northward
Mile Post	Operation	Control Point	Stations	Speed (MPH)		Sidings (feet)
				XO	Siding	
310.8	ABS DT	SP311	NORTH BAKERSFIELD (Fresno Subdivision)	---	---	---
312.7		SP312	BAKERSFIELD (CP MT 2 only)	---	---	Yard
313.6		SP313	KERN JCT. JMTX (BNSF Mojave Subdivision) (SJVR Buttonwillow Br.)	20	---	
315.1		---	QUANTICO	---	---	
316.6		---	MAGUNDEN J (SJVR Arvin Branch)	---	---	4122
320.1		---	EDISON	---	---	---
325.0	CTC 2MT	SP325	SANDCUT X	20	---	---
328.1	CTC	SP328	BENA	---	---	---
330.6	CTC	SP331	ILMON	---	---	---
335.4	CTC 2MT	SP335	CALIENTE	---	---	---
338.0	CTC	SP338	ALLARD	X	23	14375
339.5		SP340	BEALVILLE X-OVER			
340.6		SP341	BEALVILLE			
341.8		SP342	CLIFF	---	10	7535
343.6	CTC	SP344	ROWEN	---	23	8235
345.1		SP345	WOODFORD	---	23	8769
346.8		SP347				
347.9	CTC 2MT	SP348				
349.7		SP350				
351.8		SP351				
354.2	CTC	SP354	MARCEL	---	---	---
356.6	CTC	SP356	CABLE	---	---	---
358.5	CTC 2MT	SP358	CABLE X-OVER X	23	---	---
360.5		SP361	TEHACHAPI X	35	---	---
362.4		---	SUMMIT SWITCH T	---	---	---
365.0		---	MONOLITH	---	---	---
370.4		SP370	CAMERON X	25	---	---
380.7		SP380	MOJAVE JTXY (Lone Pine Branch) (Oak Creek Ind. Lead)	---	---	Yard
381.5	CTC	SP381	SOUTH MOJAVE JXY (BNSF Mojave Subdivision)	15	---	---
384.1		---	FLETA	---	---	---
389.5		SP389	ANSEL	---	30	8340
391.1		SP391				
399.3		SP399	OBAN	---	30	8350
401.0		SP401				
405.5	CTC	---	LANCASTER	---	---	---
409.2		SP409	DENIS	---	30	8350
410.9		SP411				
414.4		SP414	PALMDALE JUNCTION J (SCRRA Valley Subdivision)	---	---	---

Southward ▼		UP MOJAVE SUBDIVISION			▲ Northward	
Mile Post	Oper- aton	Control Point	Stations	Speed (MPH)		Sidings (feet)
				XO	Sid- ing	
416.5 418.1	CTC	SP416 SP418	PALMDALE	---	30	7370
428.2		---	VULCAN	---	---	---
434.3 436.1		SP434 SP436	WASH	---	30	9000
450.1 451.9		SP450 SP452	PHELAN	---	30	9000
461.9 463.8		SP462 SP464	HILAND	---	30	9097
464.6		SP465	SILVERWOOD J (BNSF Cajon Subdivision)	---	---	---
469.3 471.3		SP469 SP471	CANYON	---	30	9154
480.2 481.8		SP480 SP482	DIKE	---	30	7212
489.8		---	BENCH	---	---	---
490.0 491.9		SP490 SP492	SLOVER	---	30	8783
492.3		SP538	RANCHO JTX (Alhambra Subdivision)		---	---
(181.5 miles)						
Mileage Equations: Mojave Subdivision MP 491.97 = Alhambra Subdivision MP 537.87 (connection track - west leg wye to Pepper Main 2). Mojave Subdivision MP 492.34 = Alhambra Subdivision MP 538.03 (east leg wye at Rancho Main 1).						
Southward freight trains must not leave Bench unless they receive a Clear or Advance Approach signal at north switch Slover or unless instructed to do so by the train dispatcher.						
Under no circumstances are trains to be left standing or unattended on main track or siding at Slover.						

Space Left Blank Intentionally

UP MOJAVE SUBDIVISION

Radio Communication:

Kern Junction and Rancho Channel 014 Tone 54

Method of Operation:

North Bakersfield MP 310.8 to Sandcut MP 325.0 DT ABS
 Sandcut MP 325.0 to Bena MP 328.1 CTC 2MT
 Bena MP 328.1 to Ilmon MP 330.6 CTC
 Ilmon MP 330.6 to Caliente MP 335.3 CTC 2MT
 Caliente MP 335.3 to Walong MP 351.8 CTC
 Walong MP 351.8 to Marcel MP 354.1 CTC 2MT
 Marcel MP 354.1 to Cable MP 356.6 CTC
 Cable MP 356.6 to South Mojave MP 381.5 CTC 2MT
 South Mojave MP 381.5 to Rancho MP 492.3 CTC

CTC in effect on other than main track:

- On all sidings except Magunden
- On BNSF Connection track at Silverwood

Yard Limits in effect (refer to page 15):

- Between MP 380.1 and South Mojave

Designation of Multiple Main Tracks:

- North Bakersfield - Sandcut: Viewed northward the track to the right is Main 2 (current of traffic northward). The track to the left is Main 1 (current of traffic southward).
- Between Sandcut and South Mojave multiple main tracks are designated viewed northward as Main 2 (right) and Main 1 (left).

Manual Interlockings:

MP 885.2 Kern Junction controlled by UP Train Dispatcher.

MP 814.7 Mojave controlled by UP Train Dispatcher.

Distance between Sandcut and Bena is 15530 feet.

Distance between Allard and Bealville XO on Main Track is 8000 feet.

Distance between Bealville X-over and Bealville on Main Track is 5660 feet.

Distance between Cable and Cable X-over is 10750 feet.

Distance between Cable X-Over and West crossover Tehachapi is 9996 feet.

Maximum Speeds - Main Tracks:

Southward Trains			
MP 310.8 Main 1 & 2	MP 312.7 Main 1 & 2	50	50
MP 312.7 Main 1	MP 313.6 Main 1	25	25
MP 313.6 Main 1	MP 324.9 Main 1	60	60
MP 312.7 Main 2	MP 315.5 Main 2	20	20
MP 315.5 Main 2	MP 324.9 Main 2	59	49
MP 324.9 Main 1 & 2	MP 328.1 Main 1 & 2	50	50
MP 328.1	MP 330.6	50	50
MP 330.6 End of 2MT	Main Track to Main 2	25	25
MP 330.6 Main 1	MP 331.9 Main 1	50	50
MP 331.9 Main 1	MP 335.4 Main 1	30	30
MP 330.6 Main 2	MP 335.4 Main 2	25	25
MP 335.4	MP 356.6	23	23
MP 356.6 Main 1 & 2	MP 359.6 Main 1 & 2	23	23
MP 359.6 Main 1 & 2	MP 368.7 Main 1 & 2	70	70
MP 368.7 Main 1 & 2	MP 370.3 Main 1 & 2	40	40
MP 370.3 Main 1 & 2	MP 371.8 Main 1 & 2	35	35
MP 371.8 Main 1 & 2	MP 373.8 Main 1 & 2	30	30
MP 373.8 Main 1	MP 381.5 Main 1	25	25
MP 373.8 Main 2	MP 380.2 Main 2	25	25
MP 380.2 Main 2	MP 381.7 Main 2	45	45
MP 318.7	MP 414.3	70	70
MP 414.3	MP 414.7	35	35
MP 414.7	MP 459.8	60	60
MP 459.8	MP 464.1	40	40
MP 464.1	MP 491.9	30	30
MP 491.9	MP 492.3	15	15

Northward Trains			
Limit	Limit	Psg.	Frt.
MP 492.3	MP 491.9	15	15
MP 491.9	MP 464.1	30	30
MP 464.1	MP 459.8	40	40
MP 459.8	MP 414.7	60	60
MP 414.7	MP 414.3	35	35
MP 414.3	MP 381.6	70	70
MP 381.6 Main 2	MP 376.5 Main 2	45	45
MP 376.5 Main 2	MP 378.1 Main 2	35	35
MP 381.5 Main 1	MP 378.1 Main 1	45	45
MP 378.1 Main 1 & 2	MP 368.7 Main 1 & 2	50	50
MP 368.7 Main 1 & 2	MP 359.6 Main 1 & 2	70	70
MP 359.6 Main 1 & 2	MP 356.6 Main 1 & 2	23	23
MP 356.6	MP 354.1	23	23
MP 354.1 Main 1 & 2	MP 351.8 Main 1 & 2	23	23

UP MOJAVE SUBDIVISION

Maximum Speeds - Main Tracks: (continued)

Northward Trains			
MP 351.8	MP 335.8	23	23
MP 335.8	MP 335.4	15	15
MP 335.4 Main 1	MP 331.9 Main 1	30	30
MP 331.9 Main 1	MP 330.6 Main 1	50	50
MP 335.4 Main 2	MP 330.6 Main 2	25	25
MP 330.6	MP 328.1	50	50
MP 328.1 Main 1 & 2	MP 324.9 Main 1 & 2	50	50
MP 324.9 Main 2	MP 315.5 Main 2	60	60
MP 315.5 Main 2	MP 312.7 Main 2	20	20
MP 312.7 Main 2	MP 310.8 Main 2	50	50
MP 324.9 Main 1	MP 313.6 Main 1	59	49
MP 313.6 Main 1	MP 312.7 Main 1	25	25
MP 312.7 Main 1	MP 310.8 Main 1	49	49

Trackside Warning Detectors:

MP	Track(s)	Between
318.8	MT 1 & MT 2	Kern Jct. and Sandcut
328.6	Main	Bena and Ilmon
347.0	Main	Rowen and Woodford
363.8	MT 1 & MT 2	Tehachapi and Cameron
377.0	MT 1 & MT 2	Cameron and Mojave
387.3	Main	South Mojave and Ansel
391.1	Main	Ansel and Oban
402.1	Main	Oban and Lancaster
411.9	Main	Denis and Palmdale Jct.
431.1	Main	Vulcan and Wash
446.6	Main	Wash and Phelan
457.9	Main	Phelan and Hiland
486.9	Main	Dike and Slover

Maximum Speeds - Other Tracks and Turnouts:

Track	Psg.	Frt.
Crossovers		
• Kern Junction MP 313.6	20	20
• Sandcut North Crossover MP 325.0	20	20
• Sandcut South Crossover MP 324.9	25	25
• Bealville MP 339.5	23	23
• Cable MP 328.5	23	23
• Tehachapi MP 360.5	25	25
• Cameron MP 370.4	25	25
• South Mojave MP 381.5 ("BNSF Crossover")	15	15
• South Mojave ("Yard Access Crossover")	10	10
Controlled sidings		
• Bealville	23	23
• Cliff	10	10
• Rowen, Woodford	23	23
• Ansel to and including Slover	30	30
Bena Turnout Main 2 to Main Track	50	50
Ilmon Turnout Main Track to Main 1	25	25
Caleinte Turnout Main 2 to Main Track	25	25
Walong and Marcel Turnouts	23	23
Cable Turnout	23	23
Mojave Turnout UP Main 2 to BNSF Main Track	25	25
Palmdale Jct. Turnout UP Main to UP Main	35	35
Silverwood BNSF Connection	30	30
Wye connections with Alhambra Subdivision	15	15
All other tracks and turnouts	15	15

Joint Operation:

SJVR trains operate on Union Pacific between North Bakersfield and Magunden.

BNSF trains operate on Union Pacific between Kern Jct. and Mojave.

Mountain Grade Operation:

1.	Coupler Capacity (Trains with head end power only) Ilmon - Summit 7,800 tons Mojave - Cameron 7,875 tons Trains exceeding these limits must be equipped with distributed power and/or manned helpers.
2.	All trains with helpers and/or distributed power must not exceed 13,500 tons, except southward freight trains departing Bakersfield may be operated up to 13,000 tons, provided each train exceeding 11,000 tons is operated with a 3x3x2 or 4x3x2 locomotive configuration.
2.	The maximum number of rated powered axles in the head end consist on ascending mountain grade is 36.
3.	Between MP 331.3 and MP 381.3 the speed of trains must be controlled, at least in part, with automatic air brake when train tonnage exceeds 3,000 tons operating on descending grades,
4.	Freight trains operating between MP 331.3 and MP 381.3 that exceed the maximum authorized speed by 5 MPH must stop by using an emergency application of the air brakes.
5.	2-Way ETD Requirement: Freight trains operating between MP 331.3 and MP 381.3 must be equipped with an operative 2-way end-of-train telemetry device (ETD and HTD) or equivalent device. This requirement does not apply to passenger trains.

UP MOJAVE SUBDIVISION

UP Yard Limits (Rule 6.13):

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 must keep posted as to the arrival of passenger trains and must not delay them.

All movements entering or moving within yard limits must be made at restricted speed unless operating under a block signal indication that is more favorable than Approach.

Upon observing or having advance knowledge that a block signal may require restricted speed due to yard limits, if entering or within yard limits, the movement must be at restricted speed at that block signal, or as soon as possible thereafter, consistent with good train handling.

Movements against the current of traffic must not be made unless authorized or protected by track warrant, track bulletin, yardmaster, or other authorized employee.

Where yard limits are in effect in CTC territory, the control operator must authorize any movement on the main track.

Tunnels:

Tunnel No.	Tracks	Portals (MP)		Length (feet)	Note
		North	South		
1	Main	336.9	336.9	365	
2	Main	337.8	337.9	255	
3	Main	340.8	340.9	494	
5	Main	341.5	341.8	1175	
7	Main	343.7	343.8	520	
8	Main	344.2	344.3	689	
9	Main	351.0	351.1	428	
14	Main	355.4	355.5	513	
15	Main	355.7	355.8	330	
16	Main	355.9	355.9	259	
17	Main	356.0	356.1	259	
14	Main	355.4	355.5	518	

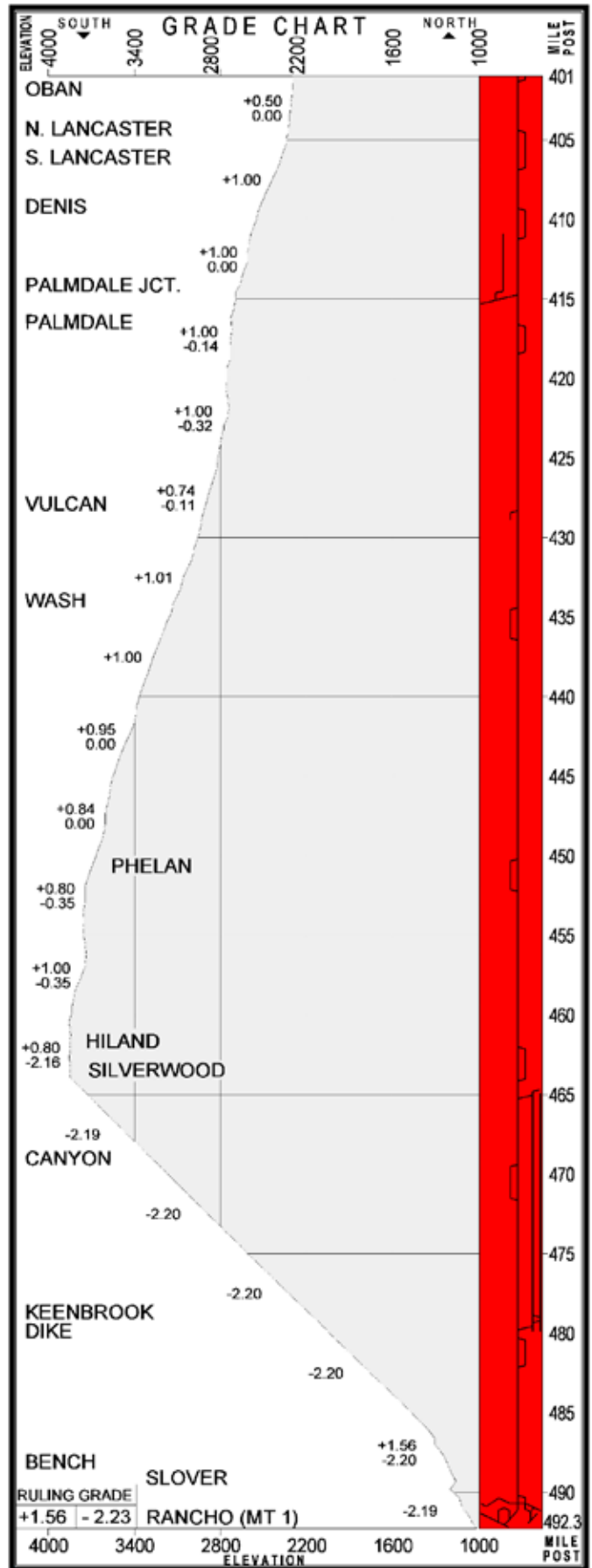
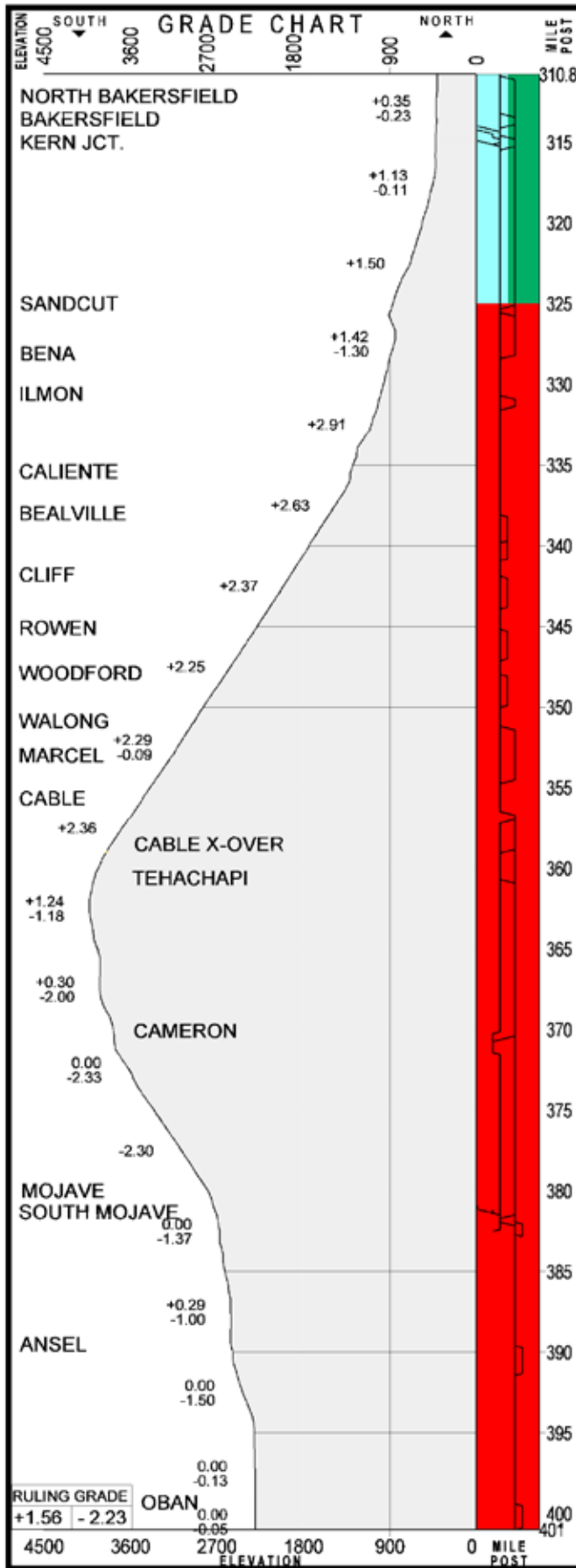
Other Location Information:

Name	Mile Post	Capacity (feet)	Switch Opens
Magunden siding (Main 1)	316.6	4122	Both
Edison former siding (Main 2)	320.1	3800	Bothj
Edison former siding (Main 1)	320.1	6166	Both
Caliente Set Out Track (Main 2)	335.0	5558	Both
Caliente Set Out Tracks (Main 1)	335.1	1300	Both
Rowen Set Out Track (Main 1)	346.2	340	South
Woodford Set Out Track (Main Track)	349.1	2500	South
Woodford Set Out Track (Siding)	348.6	400	South
Marcel Set Out Track (Main 2)	353.8	630	North
Summit Set Out Track (Main 1)	362.1	5150	Both
Monolith Set Out Track (Main 2)	364.2	5320	North
Oak Creek Industrial Lead	380.1	9.5 miles	Both
Nikor	382.0	3363	North
Paramount	382.0	3416	Both
Fleta Storage Track	383.1	13300	Both
Fleta PPG Aerospace	384.1	1205	South
Lancaster former siding	404.5	6305	Both
Lancaster USA Services	405.5	1250	South
Lancaster Stock Building Supply	407.0	405	South
Vulcan Materials	428.2	12155	North
Southern California Edison	459.9	1880	North

Notes:

1. In real life CTC in in effect on both main tracks between North Bakersfield and Sandcut. There are no yard limits on the Mojave Subdivision in real life..
2. Run 8 Simulator uses BNSF permanent speed signs and crossing warning signs instead of Union Pacific signs.
3. MP 312.7 speed signs are missing in Run 8 Simulator.
4. Tehachapi crossover speeds are 25 MPH, not as shown on Run 8 Depot Map.
5. MP 359.6 and MP 368.7 Run 8 Depot Map change freight train speeds from 55 MPH to 70 MPH.
6. MP 373.8 Main 2 southward 25 MPH permanent speed restriction sign is missing in the simulator and on the Run 8 Depot Map.
7. MP 380.2 Main 2 the 45 MPH permanent speed speed restriction in the simulator is for southward trains, not northward trains.

UP MOJAVE SUBDIVISION



UP LONE PINE SUBDIVISION

Eastward ▼		UP LONE PINE SUBDIVISION				▲ Westward	
Mile Post	Oper-aton	Control Point	Stations	Speed (MPH)		Sidings (feet)	
				XO	Sid-ing		
380.1	YL	---	MOJAVE (Mojave Subdivision) JY	---	---	---	
380.8	TWC	---	CHAFFEE Y	---	---	---	
402.5		---	CANTIL	---	---	---	
408.5		---	SALTDAL	---	---	---	
428.4	YL	---	SEARLES (Trona Railway) JTY	---	---	---	
431.7		---	END OF TRACK	---	---	---	
(51.6 miles)							

Radio Communication:

Mojave and End of Track Channel 014 Tone 54

Method of Operation:

Mojave MP 380.1 and MP 385.0 Yard Limits
 MP 385.0 and MP 426.0 Track Warrant Control
 MP 426.0 and MP 431.7 Yard Limits

Maximum Speeds - Main Tracks:

Eastward Trains			
Limit	Limit	Psgr.	Fr.
MP 380.1	MP 382.5	15	15
MP 382.5	MP 422.1	40	40
MP 422.1	MP 428.5	20	20
MP 428.5	MP 431.7	10	10

Westward Trains			
Limit	Limit	Psgr.	Fr.
MP 431.7	MP 428.5	10	10
MP 428.5	MP 422.1	20	20
MP 422.1	MP 382.5	40	40
MP 382.5	MP 380.1	15	15

Tonnage Restrictions On Descending Grades:

Applies on descending grades between Searles and MP 412.0:	
TPOB	Maximum Speed
80 or less	30 MPH
80+ to 100	25 MPH
100+	20 MPH
This is a simplified version of UP requirements.	

Maximum Speeds - Other Tracks and Turnouts:

15 MPH

Trackside Warning Detectors:

MP	Track(s)	Between
401.3	Main	Chaffee and Cantil
422.1	Main	Cantil and Searles

Tunnel:

Tunnel No.	Tracks	Portals (MP)		Length (feet)	Note
		North	South		
29	Main	426.2	426.9	3690	

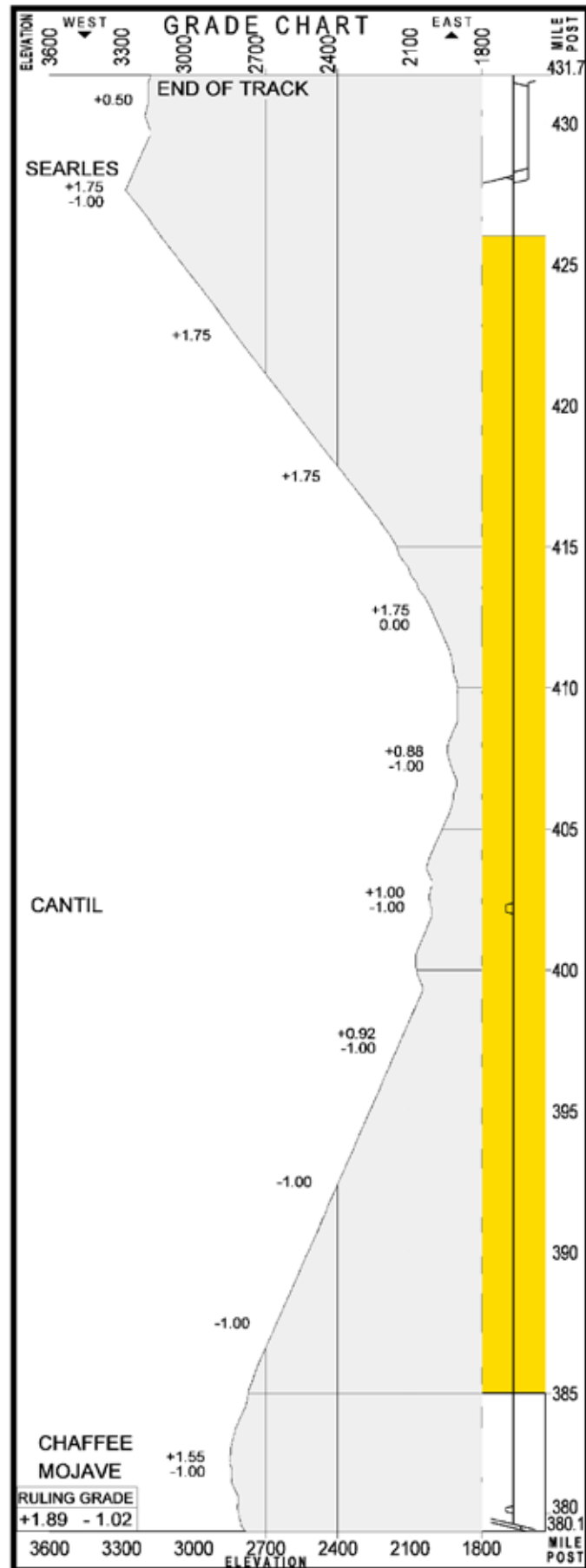
Other Location Information:

Name	Mile Post	Capacity (feet)	Switch Opens
Chaffee • Progress Rail		1060	East
Chaffee • former siding		3425	Both
Chaffee • Set Out Track		855	East
Chaffee • Kemira Water Solutions		3125	West
Cantil • former siding	402.5	2000	Both
Saltdale • Alpha Explosives Lincoln	408.5	2830	Both

Note:

1. There are no permanent speed signs in Run 8 Simulator between Mojave and Searles. They exist in the real world but not Run 8 world.

UP LONE PINE SUBDIVISION



TRONA RAILWAY COMPANY

Eastward ▼		TRONA RAILWAY COMPANY			▲ Westward		
Mile Post	Oper-aton	Control Point	Stations	Speed (MPH)		Sidings (feet)	
				XO	Sid-ing		
0.0	YL	---	SEARLES JY (UP Lone Pine Subdivision)	---	---	---	
14.4	TWC	---	NAVY SIDING	---	---	---	
24.1		---	OXY YARD	---	---	---	
26.4		---	WEST END	---	---	---	
28.0		---	BOROSOLVAY	---	---	---	
30.6			---	TRONA T	---	---	---
(30.6 miles)							

Radio Communication:

Searles to Trona Channel 085

Method of Operation:

MP 0.0 to MP 1.3 Yard Limits

MP 1.3 to MP 29.6 Track Warrant Control

Maximum Speeds - Main Tracks:

Eastward Trains			
Limit	Limit	Psg.	Frt.
MP 0.0	MP 29.6	25	25
MP 29.6	End of Track	15	15

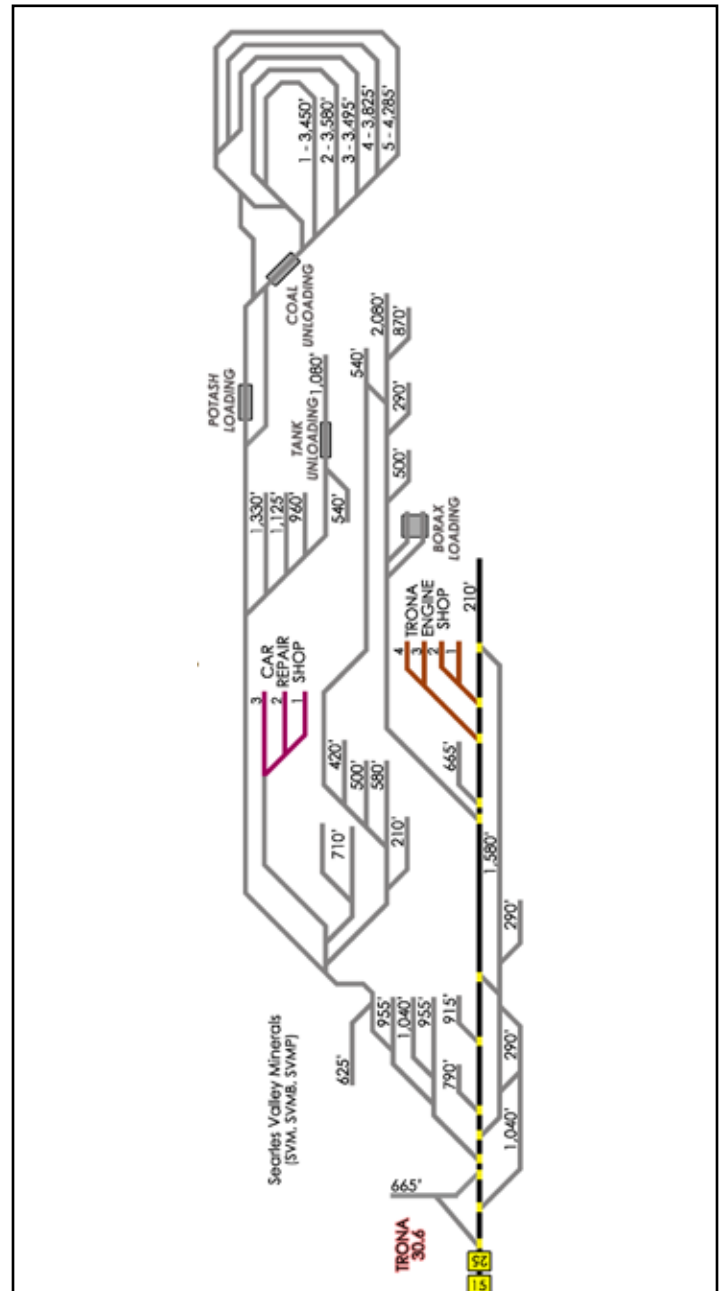
Westward Trains			
Limit	Limit	Psg.	Frt.
End of Track	MP 29.6	15	15
MP 29.6	MP 0.0	25	25

Maximum Speeds - Other Tracks and Turnouts:

15 MPH

Other Location Information:

Name	Mile Post	Capacity (feet)	Switch Opens
Navy Siding • former siding	14.4	300	Both
Navy Siding • United States Navy	14.4	420	East
Oxy Yard • yard tracks	24.1	6285	East
Borosolvay • storage tracks	28.0	7030	Both



SPECIAL INSTRUCTIONS

1. Maximum Speeds

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

Passenger trains will be governed by freight train speed, including temporary speed restrictions governing freight trains, if passenger train speed is not specified under timetable individual subdivision special instructions.

All trains consisting entirely of passenger equipment as well as locomotives without cars (light engines) will be considered passenger trains and may operate at passenger speeds where provided. This includes Amtrak, commuter trains, business cars and passenger equipment modified to serve as track inspection, track geometry or similar test cars.

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

Train, Track or Equipment	MPH
Key Trains	50
Loaded Military trains	50
Loaded Military trains exceeding 60 cars (does not apply to military trains consisting entirely of intermodal cars)	45
Empty Military trains	60
Moving against the current of traffic - passenger trains	59
Moving against the current of traffic - all other trains	49
Through dual control switches not connected to a siding	30
Through other turnouts not connected to a siding	15
Controlled sidings	30
Other sidings and connected turnouts	20
Tracks other than main tracks and sidings	10
Balloon tracks and wye tracks (except used as main track or siding)	5
Locomotive servicing facilities and car repair facilities	5
Engines with cars (except as listed below)	70
• GE AC Locomotives	75
• Engines UP 844, 949, 951, B963, 3985, 4014, 6936	82
• Amtrak and other passenger locomotives	82
• SW-1500 locomotives	50
Multiple-unit engine controlled from other than lead unit	30
Engines running light (without cars)	70
More than eight locomotives	45
Intermodal equipment in Run 8 Simulator is defined as:	
• Autorack	
• Intermodal well car	
• Piggyback trailer flat car	
• Smooth side well car	

2. Timetable Characters

A Automatic Interlocking
g Gate, normal position against conflicting route
G Gate, normal position against this subdivision
J Junction
M Manual interlocking
P Passenger station
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(s)
Y Yard Limits

3. Methods of Operation Column

ABS Automatic Block Signal System
CTC Centralized Traffic Control
DT Double Track
#MT Multiple Main Tracks (# is the number of main tracks)
6.28 Other Than Main Track

4. Sidings

Siding length in the timetable is distance in feet between fouling points. Sidings may be preceded by letters N (north), S (south), E (east), W (west) or C (center).

Sidings may be followed by numbers (1) MT 1, (2) MT 2, (3) MT 3

5. Multiple Main Tracks

Unless otherwise indicated in the individual subdivision special instructions:

On east-west subdivisions, track numbers increase from north to south, and the northern most track is No. 1.

On north-south subdivisions, track numbers increase from west to east, and the western most track is No. 1..

6. Duplicate Mile Posts

Duplicate mile posts on a subdivision are identified by an alpha suffix (e.g. MP 345X, MP 420Z). Timetable individual subdivision special instructions will list where duplicate mile posts are in effect.

7. Whistle Quiet Zone

Within designated whistle quiet zones, whistle signal (7) must not be sounded approaching public crossings at grade except when:

- Necessary to provide warning in an emergency.
- Notified automatic warning devices are malfunctioning.
- Notified automatic warning devices are out of service.

or

- The whistle quiet zone is not in effect during specified hours.

An employee may sound the train horn to provide warning to crews on other trains in an emergency situation, vehicle operators, pedestrians, trespassers or animals if, in the employee's sole judgment, such action is appropriate to prevent imminent injury, death, or property damage.

SPECIAL INSTRUCTIONS

8. Sounding Whistle

The whistle may be used at anytime as a warning regardless of any whistle prohibitions.

When other employees are working in the immediate area, sound the required whistle signal before moving.

The required whistle signals are illustrated by “o” for short sounds and “—” for longer sounds

Sound		Indication
(1)	Succession of short sounds	Use when persons or livestock are on the track at other than road crossings at grade. In addition, use to warn railroad employees when an emergency exists, such as a derailment. When crews on other trains hear this signal, they must stop until it is safe to proceed.
(2)	—	When stopped: air brakes are applied, pressure equalized.
(3)	— —	Release brakes. Proceed.
(4)	o o	Acknowledgment of any signal not otherwise provided for.
(5)	o o o	When stopped: back up. Acknowledgment of hand signal to back up.
(6)	o o o o	Request for signal to be given or repeated if not understood.
(7)	— — o —	When approaching public crossings at grade with the engine in front, sound signal as follows: A. At speeds in excess of 45 MPH, start signal at or about the crossing sign but not more than 1/4 mile before the crossing. B. At speeds of 45 MPH or less, start signal at least 15 seconds, but not more than 20 seconds, before entering the crossing. C. If no crossing sign start signal at least 15 seconds, but not more than 20 seconds before entering crossing but not more than 1/4 mile before the crossing. D. If movement starts less than 1/4 mile from a crossing, signal may be sounded less than 15 seconds before the crossing when it is clearly seen traffic is not approaching the crossing, traffic is not stopped at the crossing or when crossing gates are fully lowered. Prolong or repeat signal until the engine completely occupies the crossing(s).
(8)	— o	Regardless of any whistle prohibitions: Approaching men or equipment or other individuals on or near the track. After sounding initial warning for men or equipment or other individuals, sound whistle signal (4) intermittently until the head end of train has passed the men or equipment or other individuals. Whistle warning is not required: • When there is an adjacent track and men or equipment or other individuals are beyond the farthest rail of the adjacent track. • For members of the same crew associated with movement of their engine unless necessary to warn or alert a crew member Do not sound whistle in designated mechanical servicing and repair facilities, unless for an emergency or when approaching roadway workers.

SPECIAL INSTRUCTIONS

9. Restricted Limits (Rule 6.14)

Within restricted limits, trains or engines are authorized to use the main track not protecting against other trains or engines. All movements must be made at restricted speed.

10. Movement at Restricted Speed (Rule 6.27)

When required to move at restricted speed, movement must be made at a speed that allows stopping within half the range of vision short of:

- Train.
- Engine.
- Railroad car.
- Men or equipment fouling the track.
- Stop signal.
- or
- Derail or switch lined improperly.

When a train or engine is required to move at restricted speed, the crew must keep a lookout for broken rail and not exceed 20 MPH. Comply with these requirements until the leading wheels reach a point where movement at restricted speed is no longer required.

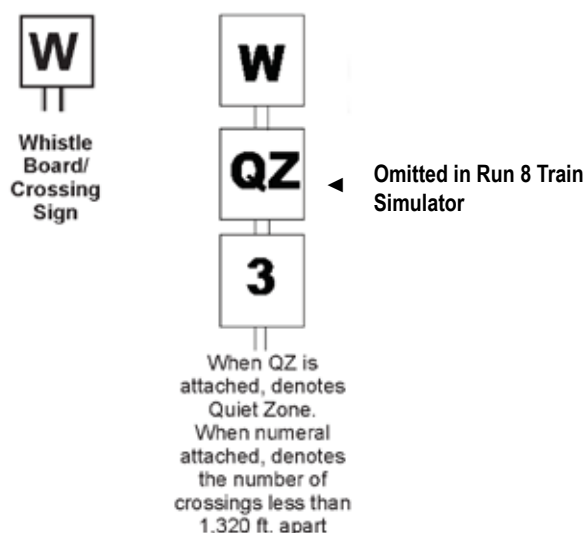
11. Movement on Other Than Main Track (Rule 6.28)

Except when moving on a main track or on a track where a block system is in effect, trains or engines must move at a speed that allows them to stop within half the range of vision short of:

- Train.
- Engine.
- Railroad car.
- Men or equipment fouling the track.
- Stop signal.
- or
- Derail or switch lined improperly

12. Crossing Warning Signs

Note: Run 8 Simulator uses BNSF Railway crossing warning signs instead of the proper Union Pacific signs. BNSF signs are shown.



13. Permanent Speed Signs

Note: Run 8 Simulator uses BNSF Railway speed signs instead of the proper Union Pacific signs. BNSF signs are shown.

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

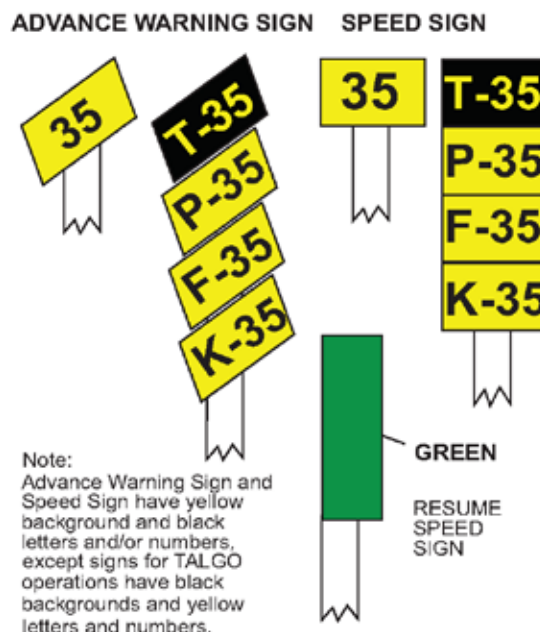
The Advance Warning sign will be placed two miles in advance of the location where the lower speed takes effect. At the point where the reduced speed applies, a speed sign will repeat the permissible speed. The lower speed will be in effect until a Resume Speed sign or another Speed sign is displayed.

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 or has cleared the limits of the restriction. Signs reading "K-END" indicate the end of Key Train municipal area limits. Resume speed signs are not displayed at the end of Key Train municipal area limits.

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

Permanent speed signs will not be placed for trains moving against the current of traffic unless otherwise indicated.

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



Figures preceded by letter P apply to passenger trains, except TALGO, if there is a TALGO sign.

Figures preceded by letter F apply to freight trains.

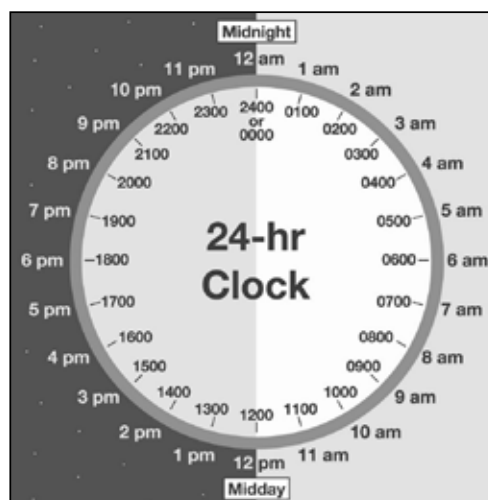
Figures preceded by letter T apply to TALGO passenger trains.

Figures preceded by the letter K apply to Key Trains.

Figures not preceded by a letter apply to all trains.

SPECIAL INSTRUCTIONS

14. Continental Time



Continental Time	12 Hour Clock
0000	Midnight
0001	12.01 a.m.
0100	1.00 a.m.
0200	2.00 a.m.
0300	3.00 a.m.
0400	4.00 a.m.
0500	5.00 a.m.
0600	6.00 a.m.
0700	7.00 a.m.
0800	8.00 a.m.
0900	9.00 a.m.
1000	10.00 a.m.
1100	11.00 a.m.

Continental Time	12 Hour Clock
1200	Noon
1201	12.01 p.m.
1300	1.00 p.m.
1400	2.00 p.m.
1500	3.00 p.m.
1600	4.00 p.m.
1700	5.00 p.m.
1800	6.00 p.m.
1900	7.00 p.m.
2000	8.00 p.m.
2100	9.00 p.m.
2200	10.00 p.m.
2300	11.00 p.m.

All railroad operations within California are conducted in the Pacific Continental Time Zone. Arizona observes Mountain Standard Time year round.

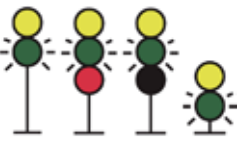
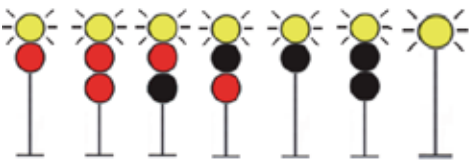
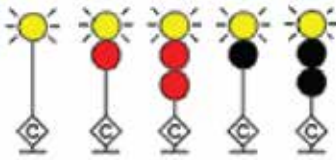
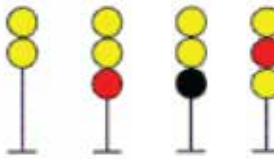
Time Change		
Time	Date	Clock
Daylight Savings	0200 Sun. March 8, 2026	+1 hour
Standard	0200 Sun. November 1, 2026	- 1 hour
Daylight Savings	0200 Sun. March 14, 2027	+1 hour
Standard	0200 Sun. November 7, 2027	-1 hour

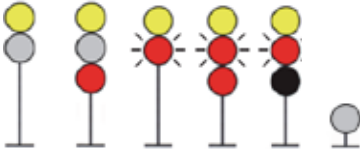
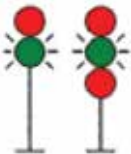
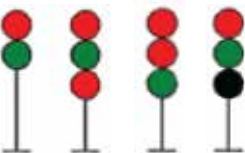
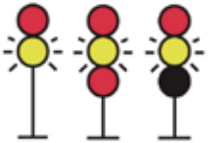
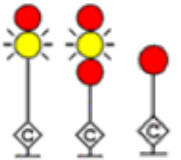
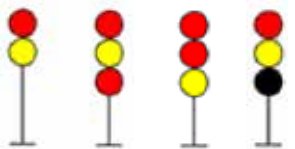
RUN 8 SIMULATOR LOCOMOTIVE DATA

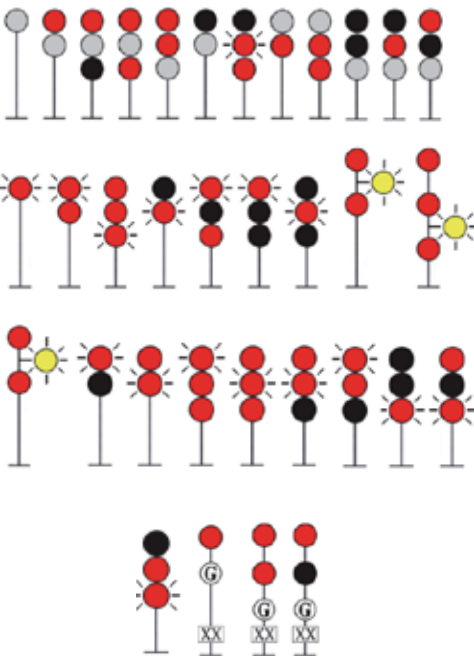
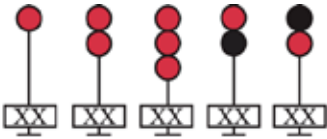
Model	Length (feet)	Full Weight (tons)	Axles	Horse Power	Power Axles	DB Axles	Fuel Capacity (gallons)
Amtrak (AMTK)							
MP15	48	126	4	1500	4	0	1600
P42	69	134	4	4250	4	4	2200
Arizona & California (ACR)							
SD45-2	69	195	6	3600	6	6	4000
Atchison, Topeka & Santa Fe (ATSF)							
C44-9W	74	208	6	4400	8	8	4800
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
BNSF Railway (BNSF)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
Burlington Northern (BN)							
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
Canadian National (CN)							
SD40-2	69	195	6	3000	6	6	4000
Cargill (CARG)							
SD40-2	69	195	6	3000	6	6	4000
Chessie System (BO)							
SD40-2	69	195	6	3000	6	6	4000
Conrail (CR)							
GP40-2	60	138	4	3000	4	6	3800
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
CSX Transportation (CSXT)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
Denver & Rio Grande Western (DRGW)							
GP40-2	60	138	4	3000	4	6	3800
SD40T-2	69	195	6	3000	0	6	4000

RUN 8 SIMULATOR LOCOMOTIVE DATA

Model	Length (feet)	Full Weight (tons)	Axles	Horse Power	Power Axles	DB Axles	Fuel Capacity (gallons)
Florida East Coast (FEC)							
SD40-2	69	195	6	3000	6	6	4000
GCFX (GCFX)							
SD40-2	69	195	6	3000	6	6	4000
GMTX (GMTX)							
MP15	48	126	4	1500	4	0	1600
Kansas City Southern (KCS)							
SD70ACe	74	210	6	4500	9	9	4900
Modesto & Empire Traction (MET)							
MP15	48	126	4	1500	0	0	1600
Norfolk Southern (NS)							
ES44DC	73	205	6	4400	8	8	5000
MP15	48	126	4	1500	4	0	1600
SD45-2	69	195	6	3600	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
San Joaquin Valley (SJVR)							
GP40-2	60	138	4	3000	4	6	3800
Seaboard Coast Line (SCL)							
SD45-2	69	195	6	3600	6	6	4000
Seaboard System (SBD)							
SD40-2	69	195	6	3000	6	6	4000
SD45-2	69	195	6	3600	6	6	4000
Soo Line (SOO)							
SD40-2	69	195	6	3000	6	6	4000
Southern Pacific (SP)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD40T-2	69	195	6	3000	6	6	4000
Trona (TRON)							
SD45-2	69	195	6	3600	6	6	4000
Union Pacific (UP)							
C44-9W	74	208	6	4400	8	8	4800
ES44DC	73	205	6	4400	8	8	5000
GP40-2	60	138	4	3000	4	6	3800
MP15	48	126	4	1500	4	0	1600
SD40-2	69	195	6	3000	6	6	4000
SD40T-2	69	195	6	3000	6	6	4000
SD70ACe	74	210	6	4500	9	9	4900
Western Pacific (WP)							
GP40-2	60	138	4	3000	4	6	3800

Union Pacific Block and Interlocking Signals			
Rule	Name	Aspects	Indication
9.2.1	Clear		Proceed.
9.2.2	Approach Clear Sixty		Proceed. Trains exceeding 60 MPH proceed prepared to pass the next signal not exceeding 60 MPH. When signal governs approach to a control point with a 60 MPH turnout speed be prepared to advance on diverging route.
9.2.3	Approach Clear Fifty		Proceed. Trains exceeding 50 MPH proceed prepared to pass the next signal not exceeding 60 MPH. When signal governs approach to a control point with a 50 MPH turnout speed be prepared to advance on diverging route.
9.2.4	Advance Approach		Proceed prepared to stop at second signal. Trains exceeding 40 MPH proceed prepared to pass the next signal not exceeding 40 MPH. When signal governs approach to a control point with a 40 MPH turnout speed be prepared to advance on diverging route. When the next signal is seen to display an aspect more favorable than Diverging Approach or Approach, the requirement to proceed prepared to stop short of the second signal is no longer required.
9.2.4P	Advance Approach Passenger	 With diamond shaped "C" plate and with or without number plates.	Proceed prepared to stop at second signal. Freight trains exceeding 40 MPH proceed prepared to pass the next signal not exceeding 40 MPH. Passenger trains may proceed, but must be prepared to pass the next signal not exceeding 60 MPH. When the next signal is seen to display an aspect more favorable than Diverging Approach or Approach, the requirement to proceed prepared to stop short of the second signal is no longer required.
9.2.5	Approach Diverging		Proceed prepared to advance on diverging route at next signal at prescribed speed through turnout.
9.2.6	Approach		Proceed prepared to stop before any part of train or engine passes the next signal. Freight trains exceeding 30 MPH must immediately reduce to 30 MPH. Passenger trains exceeding 40 MPH must immediately reduce to 40 MPH. When the next signal is seen to display a proceed indication, the requirement to proceed prepared to stop no longer applies.

Union Pacific Block and Interlocking Signals			
Rule	Name	Aspects	Indication
9.2.7	Approach Restricting		Proceed to pass the next signal at restricted speed, but not exceeding 15 MPH. When the next signal is seen to display a proceed indication, the requirement to pass next signal at restricted speed no longer applies.
9.2.8	Diverging Clear Limited	 Without number plates.	Proceed on diverging route. Speed through turnout must not exceed 40 MPH.
9.2.9	Diverging Clear		Proceed on diverging route not exceeding prescribed speed through turnout.
9.2.10	Diverging Advance Approach	 Without number plates.	Proceed on diverging route not exceeding prescribed speed through turnout and be prepared to stop at second signal. Trains exceeding 40 MPH proceed prepared to pass the next signal not exceeding 40 MPH. When the next signal is seen to display an aspect more favorable than Diverging Approach or Approach, the requirement to proceed prepared to stop short of the second signal is no longer required. When signal governs approach to a control point with a 40 MPH turnout speed be prepared to advance on normal or diverging route.
9.2.10P	Diverging Advance Approach Passenger	 With diamond shaped "C" plate and without number plates.	Proceed on diverging route at prescribed speed through turnout prepared to stop at second signal. Freight trains proceed prepared to pass the next signal not exceeding 40 MPH. Passenger trains exceeding 60 MPH must immediately reduce to 60 MPH. When the next signal is seen to display an aspect more favorable than Diverging Approach or Approach, the requirement to proceed prepared to stop short of the second signal is no longer required.
9.2.11	Diverging Approach	 Without number plates.	Proceed on diverging route at prescribed speed through turnout prepared to stop before any part of train or engine passes the next signal. Freight trains exceeding 30 MPH must immediately reduce to 30 MPH. Passenger trains exceeding 40 MPH must immediately reduce to 40 MPH. When the next signal is seen to display a proceed indication, the requirement to proceed prepared to stop no longer applies.

Union Pacific Block and Interlocking Signals			
Rule	Name	Aspects	Indication
9.2.12	Diverging Approach Diverging	 Without number plate.	Proceed on diverging route not exceeding prescribed speed through turnout prepared to advance on diverging route at the next signal at prescribed speed through turnout.
9.2.13	Restricting		Proceed at restricted speed, not exceeding prescribed speed through turnout when applicable.
9.2.14	Restricted Proceed		Proceed at restricted speed.
9.2.15	Stop	 Without number plates.	Stop before any part of train or engine passes the signal.
9.12.16	Diverging Approach Clear Fifty	 Without number plate.	Proceed on diverging route at prescribed speed through turnout. Freight trains exceeding 50 MPH must immediately reduce to 50 MPH. Passenger trains may proceed, but must be prepared to pass the next signal not exceeding 50 MPH. When signal governs approach to a control point with a 50 MPH turnout speed be prepared to advance on diverging route

Union Pacific Block and Interlocking Signals

This table does not include position color light signals, Automatic Cab Signals or UP Chicago Lake Street Interlocking signals. Unless otherwise specified or signal mast is shown with a number plate, signal aspects shown apply to signals with or without number plates.



6.27: Movement at Restricted Speed

When required to move at restricted speed, movement must be made at a speed that allows stopping within half the range of vision short of:

- Train
- Engine
- Railroad car
- Men or equipment fouling the track
- Stop signal
- or
- Derail or switch improperly lined

When a train or engine is required to move at restricted speed, the crew must keep a lookout for broken rail and not exceed 20 MPH. Comply with these requirements until the leading wheels reach a point where movement at restricted speed is no longer required. Train and / or engine speed must allow for movement to stop of the obstructions listed consistent with good train handling.

Union Pacific Distant Signals

Rule	Name	Aspects	Indication
9.1.1	Distant Signal Clear		Proceed. If delayed between this signal and block or interlocking signal, proceed prepared to stop before any part of train or engine passes the next signal.
9.1.2	Distant Signal Approach		Proceed prepared to stop before any part of train or engine passes the next signal or switch point indicator. The maximum speed is 20 MPH within interlocking limits or within the limits of the control point for which Distant Signal Approach is displayed at the distant signal.
9.1.3	Distant Signal Approach Diverging		Proceed prepared to advance on diverging route at next signal at prescribed speed through turnout.

RUN 8 TRAIN SIMULATOR FORMS

SoCal Form A/B/Crossing Warning

12.14.20

FORM A									
		To:						Date:	
Number	Subdiv	Limits		Speed MPH		Track(s)	Flags At		
		MP	to MP	Psg	Frt		MP	MP	
							N/A	N/A	
Comments:									
OK					DISPR				

FORM A									
		To:						Date:	
Number	Subdiv	Limits		Speed MPH		Track(s)	Flags At		
		MP	to MP	Psg	Frt		MP	MP	
							N/A	N/A	
Comments:									
OK					DISPR				

FORM B									
		To:						Date:	
Subdivision	Limits	Time/Date	Tracks(s)	Flags At	Foreman/Gang	Stop			
						MP	REQUIRED		
	MP	N/A		N/A					
	MP	N/A		N/A					
Comments:									
OK					DISPR				

CROSSING WARNING NOTIFICATION

Subdiv:		Date:	
1.	☐	Automatic crossing warning device activation failure or disabled at . Stop and protect movement even if devices are seen to be working. Proceed per Rule 6.32.2, Procedure 1.	
2.	☐	Automatic crossing warning device false or partial activation at . Stop and protect movement, unless devices are seen to be working or otherwise instructed. Proceed per Rule 6.32.2, Procedure 2.	
3.	☐	Passive crossing warning device damaged or missing at . Stop and protect movement. Proceed per Rule 6.32.2, Procedure 3.	

MOVEMENT PROCEDURES

GCOR Rule 6.32.2

Procedure 1	Procedure 2	Procedure 3
<i>Crew is notified of an automatic crossing warning system activation failure or devices are disabled:</i>	<i>Crew is notified of an automatic crossing warning system false or partial activation:</i>	<i>Crew is notified of passive warning device (cross-bucks, stop signs, etc.) damaged or missing:</i>
Stop before fouling the crossing After a crew member is on the ground at the crossing to warn traffic, proceed over the crossing as directed by that crew member.	• Stop before fouling the crossing • After a crew member is on the ground at the crossing to warn traffic, proceed over the crossing as directed by that crew member; or if devices are seen to be working or when instructed by the train dispatcher or proper authority, proceed over the crossing not exceeding 15 MPH without stopping until the head end of the train completely occupies the crossing. • The train may then proceed.	• Stop before fouling the crossing • After a crew member is on the ground at the crossing to warn traffic, proceed over the crossing as directed by that crew member.

INSTRUCTIONS / EXAMPLES

FORM A - EXAMPLE

Example: D26 is informed of a NEW Form A restriction from a Track Inspector.

- ☐ Restriction Number: **1001**
- ☐ Subdivision: **Bakersfield**
- ☐ Limits (MP to MP): **891.9 to 892.1**
- ☐ Speed required for Passenger & Freight: **50/30**
- ☐ Track(s): **MAIN 1**

FORM A		To: <i>BNSF 5469 West</i>		Date: <i>12/06/20</i>				
Number	Subdiv	Limits		Speed MPH		Track(s)	Flags At	
		MP	to MP	Psg	Frt		MP	MP
<i>1001</i>	<i>Bakersfield</i>	<i>891.9</i>	<i>892.1</i>	<i>50</i>	<i>30</i>	<i>MAIN 1</i>	N/A	N/A
Comments:								
OK <i>1305</i> DISPR <i>HBD</i>								

Form A - Verbiage Example

DS: "DS 26 calling BNSF 5469 West, over."

Train: "BNSF 5469 West answering, over."

DS: "I have a Form A restriction for you to copy. Can I get your Name, Title, Location when you're ready to copy, over."

Train: "Conductor Briskey, Milepost 885.0, ready to copy, over."

DS: "This is verbally issued Form A Restriction 1001, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.9 & MP 892.1, speed for Passenger 50mph, speed for Freight 30mph, on Main Track 1, over."

Train: "Form A Restriction 1001, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.9 & MP 892.1, speed for Passenger 50MPH, speed for Freight 30MPH, on Main Track 1, over."

DS: "Show verbally issued Form A Restriction 1001 OK at 1305, 1-3-0-5, HBD, over."

Train: "Verbally issued Form A Restriction 1001 OK at 1305, 1-3-0-5, HBD, over."

DS: "That is correct. DS out."

FORM B - EXAMPLE

Example: D26 is informed of a NEW Form B restriction from a MOW Foreman.

- ☐ Restriction Number: **6002**
- ☐ Subdivision: **Bakersfield**
- ☐ Limits (MP to MP): **891.1 to 892.3**
- ☐ Track(s): **MAIN 1 & MAIN 2**
- ☐ Employee in Charge: **BRISKEY**

FORM B		To: BNSF 5469 West		Date: 12/06/20	
No. 6002	Limits	Time/Date	Tracks(s)	Flags At	Foreman/Gang
Subdivision	MP 891.1	N/A	MAIN 1	N/A	BRISKEY
Bakersfield	MP 892.3	N/A	MAIN 2	N/A	
Comments:				OK 1458	DISPR HBD

Form B - Verbiage Example

DS: "DS 26 calling BNSF 5469 West, over."

Train: "BNSF 5469 West answering, over."

DS: "I have a Form B restriction for you to copy. Can I get your Name, Title, Location when you're ready to copy, over."

Train: "Conductor Smith, Milepost 885.0, ready to copy, over."

DS: "This is verbally issued Form B Restriction 6002, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.1 & MP 892.3, Tracks, Main 1, and Main 2, Employee in Charge Briskey, over."

Train: "Form B Restriction 6002, addressed to the BNSF 5469 West on the Bakersfield Subdivision, between the MP 891.1 & MP 892.3, Tracks, Main 1, and Main 2, Employee in Charge Briskey, over."

DS: "Show verbally issued Form B Restriction 6002 OK at 1305, 1-4-5-8, HBD, over."

Train: "Verbally issued Form B Restriction 6002 OK at 1305, 1-4-5-8, HBD, over."

DS: "That is correct. DS out."

CROSSING WARNING NOTIFICATION - EXAMPLE

Example: D26 is informed of a NEW Crossing Malfunction at Reina Rd. Milepost 896.8 on Bakersfield Subdivision.

CROSSING WARNING NOTIFICATION	
Subdiv: Bakersfield	Date: 12/06/20
1. ☒	Automatic crossing warning device activation failure or disabled at <u>Reina Rd, Milepost 896.8</u> . Stop and protect movement even if devices are seen to be working. Proceed per Rule 6.32.2, Procedure 1.
2. ☐	Automatic crossing warning device false or partial activation at _____. Stop and protect movement, unless devices are seen to be working or otherwise instructed. Proceed per Rule 6.32.2, Procedure 2.
3. ☐	Passive crossing warning device damaged or missing at _____. Stop and protect movement. Proceed per Rule 6.32.2, Procedure 3.

Crossing Warning Notification - Verbiage Example

DS: "DS 26 calling BNSF 5469 West, over."

Train: "BNSF 5469 West answering, over."

DS: "I have a crossing restriction for you to copy. Can I get your Name, Title, Location when you're ready to copy, over."

Train: "Conductor Briskey, MP 885.0, ready to copy, over."

DS: "Crossing Warning Notification, addressed to the BNSF 5469 West, X in Box 1, O-N-E, Automatic crossing warning device activation failure or disabled at **Reina Rd, Milepost 896.8**. Stop and protect movement even if devices are seen to be working. Proceed per rule 6.32.2, Procedure 1, over."

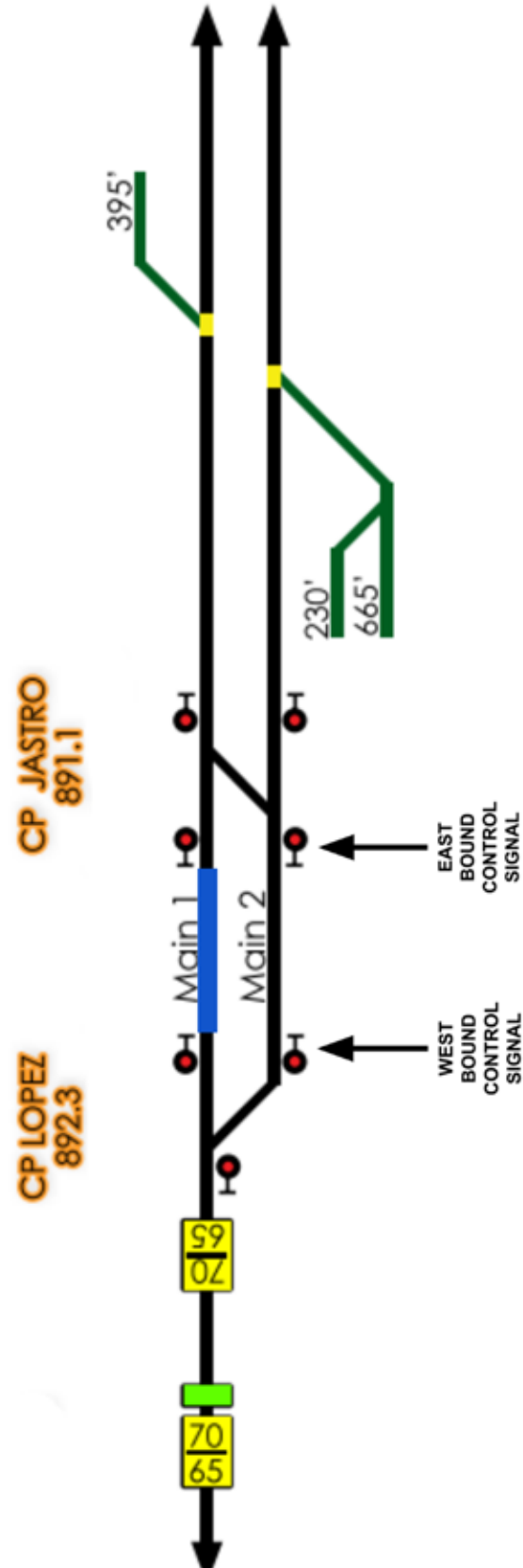
Train: "Crossing Warning Notification, addressed to the BNSF 5469 West, X in Box 1, O-N-E, Automatic crossing warning device activation failure or disabled at **Reina Rd, Milepost 896.8**. Stop and protect movement even if devices are seen to be working. Proceed per rule 6.32.2, Procedure 1, over."

DS: "That is correct, over."

Train: "Correct on the repeat, thank you, out."

INSTRUCTIONS / EXAMPLES

Example: Track Inspector Briskey wants to inspect track between CP Lopez and CP Jastro on Main 1 behind the BNSF 5469 (West) on the Bakersfield Subdivision.



****This is how Track & Time form will look AFTER it's filled out. First Authority. Extension. Released.**

Name (Last): Briskey		SoCal MOW Authority to Occupy Track (Track & Time) In CTC Territory Rule 10.3, in ABS Territory Rule 9.15 or in Rule 17.0 Foul Time		Date: 12/06/20	Vehicle Number: 21269		Form 12.14.20			
Repeat as follows: For (name), authority (number), granted (behind _____), on (track), between (point), switch (yes/no), and point, switch (yes/no), (joint), until (time).										
Authority	Conditions of Authority	Track(s)	Between (Beginning Location)	Switch Included	And (Ending Location)	Switch Included	Joint Status	Time Limits Authorized	OK Time/ DS Initials	Time Authority Released
8321	Behind: BNSF 5469 West	MT SDG Main 1 Main 2	WSS WE ESS EE NCS NE SSS SE EXO EXO	Yes No	WSS WE ESS EE NCS NE SSS SE EXO EXO	Yes No	Joint	Until: 1410 Extended To: 1450	1310 H8D 1403 H8D	1429
Authority behind Trains		Train ID (Engine initials, engine number and direction)							Time Contacted	
• Record train MP location provided by crew member.		BNSF 5469 West							1312	
• After verifying MP location, state the following "Please inform me before making any stop or backup movements."										
• Record time briefing was completed.										

Requesting Authority to Occupy Main - Verbiage Example

Track Inspector: "Track Inspector Briskey calling DS 26, over."
DS: "Go ahead Track Inspector Briskey, over."
Track Inspector: "Yes, I would like to request authority on Main 1 between CP Lopez and CP Jastro to inspect the track, over."
DS: "Understand. Are you ready to copy, over?"
Track Inspector: "Yes, Track Inspector Briskey with Vehicle Number 21269 is ready to copy, over."
DS: "Authority 8321, Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No. and EBSC Jastro, Switch No, Until 1410, over."
Track Inspector: "Understand, Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No. and EBSC Jastro, Switch No, Until 1410, over."
DS: "1310, Dispatcher HBD, over."
Track Inspector: "1310, Dispatcher HBD, over."
DS: "That is correct DS out."

****Since the Dispatcher said "Behind BNSF 5469 West", the Track Inspector must wait for that train to clear where he/she sets-on the track.**

****Track Inspector must also contact BNSF 5469 West and ask for their headend Milepost Location, and confirm they will inform the Track Inspector before stopping or making any reverse movements.**

****Joint is only used for MOW employees sharing authority with other MOW employees.**

Contacting Train with Joint Authority - Verbiage Example (If Joint Authority)

Track Inspector: "Track Inspector Briskey calling BNSF 5469 West, over."
Train: "Go ahead Track Inspector Briskey, over."
Track Inspector: "BNSF 5469, I'll be setting on behind you. What is your headend milepost location, over."
Train: "Our headend is at MP 892.0, over."
Track Inspector: Copy, MP 892.0 Please inform me before making any stop or backup movements, over."
Train: "Understand, we will let you know before making any stop or backup movements, over"
Track Inspector: "Thank you, out"

****At this time, the Track Inspector can record the headend Milepost Location of the train and time contact was established.**

When the Track Inspector (1) **needs an extension of time** or, (2) **is done inspecting the specified limits AND has taken his/her truck off the rails**, he/she will contact the Dispatcher to release authority. ****Either of these must be done before authority time ends****

Time Extension - Verbiage Example

Track Inspector: "Track Inspector Briskey calling DS 26, over."
DS: "Go ahead Track Inspector Briskey, over."
Track Inspector: "Yes, I would like to request an extension of time on Authority 8321, over."
DS: "Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBBCS Jastro, Switch No, Extended To: 1450, over."
Track Inspector: "Understand, Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBBCS Jastro, Switch No, Extended To: 1450, over."
DS: "1403, Dispatcher HBD, over."
Track Inspector: "1403, Dispatcher HBD, over."
DS: "That is correct. DS out."

Releasing Authority - Verbiage Example

Track Inspector: "Track Inspector Briskey calling DS 26, over."
DS: "Go ahead Track Inspector Briskey, over."
Track Inspector: "Yes, I am ready to release Authority 8321, over."
DS: "Authority 8321 displayed, over."
Track Inspector: "Track Inspector Briskey, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBBCS Jastro, Switch No, Extended To: 1450, Released at 1429, over." (For added realism, you may also add "All work groups, employees and myself are clear of the track.")
DS: "Understand, Track Inspector Briskey, on 12/04/20, with Vehicle Number 21269, Authority 8321, granted Behind the BNSF 5469 West, on Main 1, Between WBCS Lopez Switch No, and EBBCS Jastro, Switch No, Extended To: 1450, Released at 1429, over." ("Everyone is clear of the track.")
Track Inspector: "That is correct. Thank you Dispatcher. Track Inspector Briskey out."
DS: "Thank you. DS out."

thedepotserver.com

Created By: Kyler Briskey

RUN 8 KEYBOARD COMMANDS

AIR BRAKES		
Bleed Air Brakes	L CTR F7	Bleeds air brakes all cars
BP Recharge Cheat	F7	Reset all angle cocks and re-charge all brake components
Brake Type	L ALT B	Toggle AB type frt. / psgr.
Emergency	L CTR Backspace	
Emergency Brake EOT	L CTR F11	EOT dump air at rear of train
Independent Apply	Page Up	
Independent Bail	Period	
Independent Full	R CTR Page Up	
Independent Off	R CTR Page Down	
Independent Release	Page Down	
Train Brake Apply	Home	
Train Brake Apply Suppression	R CTR	
Train Brake Release	End	
Train Brake Release Full	R CTR End	
AVATAR		
Avatar Tags	L ALT F8	Show/hide player names
Backward	S	Back normal speed
	L SHIFT S	Back increased speed
	L CTR S	Back high speed
Bow	2	Avatar bows
Down	Q	Down normal speed
	L SHIFT Q	Down increased speed
	L CTR Q	Down high speed
Forward	W	Forward normal speed
	L SHIFT W	Forward increased speed
	L CTR W	Forward high speed
Left	A	Left normal speed
	L SHIFT A	Left increased speed
	L CTR A	Left high speed
Right	D	Right normal speed
	L SHIFT D	Right increased speed
	L CTR D	Right high speed
Up	E	Up normal speed
	L SHIFT E	Up increased speed
	L CTR E	Up high speed
Wave	1	Avatar waves
To activate high speed avatar (free fly) press L SHIFT F12		

DISPATCH		
Dispatch Screen	F3	Toggles DS screens
Exit	Escape	Close DS screen
Next DS Screen	R Arrow	
Previous DS Screen	Left Arrow	
Screen Brighter	Equals	
Screen Dimmer	Minus	
DISTRIBUTED POWER		
Dynamic Brake Setup	L Shift Divide	
Fence Decrease	L Shift L Bracket	DB fence closer to front of the train
Fence Decrease	L Shift R Bracket	DB fence closer to the rear of the train
Throttle Decrease	L Shift Semi Colon	
Throttle Increase	L Shift Apostrophe	
GENERAL		
AI Trains Menu	L Shift F2	
Attach Point	F11	Hold down F11 then left click locomotive
Car Tags	L CTR F8	Toggles off/unit number/destination tag
Consist Editor	L CTR	
Exit	Escape	Close any menu
Flashlight	F	Flashlight on/off
Fullscreen	L Shift F4	
Hailing	Tab	Text chat in multiplayer
Hide Messages	L CTR Tab	
Horn Menu	L CTR F3	Customize horn and bell
Humping Options	L CTR F6	Hump controller menu
Industry Editor	L CTR I	
Industry List	L CTR L	
Industry Tags	R CTR F8	Toggles industry tags
Load / Save Menu	F1	
MOW Window	F6	
MP Tags	L Shift F8	Toggle mile post tags
Network Menu	F2	
Options Menu	F1	
Parking Brake	L Shift F5	Apply hand brakes to all rail units in train
Parking Brake Release	F5	Release hand brakes to all rail units in train
Pause	Pause	
Reset Terrain	F10	Resets all surrounding terrain tiles
Screen Shot	F8	

RUN 8 KEYBOARD COMMANDS

GENERAL		
Show Window Border	F4	Toggles window border
Switch List	R CTR L	
Track Bulletin Window	L CTR F2	
Transport To Switch	Space	
User Notes	L ALT F1	
HUD		
Coupler Brakes	L Shift B	
Engine	L Shift C	
Sim	L Shift X	
Toggle	L Shift Z	
Track	L Shift N	
Train	L Shift Z	
LOCOMOTIVE CONTROLS		
Alerter Reset	R ALT	Reset cab alerter
Bell	Decimal	Locomotive bell on/off
Cabin Light Switch	L	Toggle light in cab
CB Engine Run	L ALT 1	Toggle eng run circuit breaker
CB Gen Field	L ALT 2	Toggle gen field circuit breaker
CB Control	L ALT 3	Toggle control circuit breaker
CB Dynamic Brake	L ALT 4	Toggle DB circuit breaker
Change Control RV	R ALT F11	Change controlling unit
Distance Counter Down	R Shift Multiply	
Distance Counter Up	Multiply	
Dynamic Setup	Divide	
Gauge Light Switch	R ALT L	
Headlight Front Down	L Shift H	
Headlight Front Up	H	
Headlight Rear Down	L Shift J	
Headlight Rear Up	J	
Horn	Space	
Radio Channel Down	L CTR T	Can also be set using mouse
Radio Channel Up	L CTR V	Can also be set using mouse
Reverser Decrease	Delete	
Reverser Increase	Insert	
Sander	Num Pad 0	Toggles sanders on/off
Slow Speed Control	L CTR C	Used in hump operation
Step Light Switch	R Shift L	Toggles step lights
Throttle Decrease	Subtract	
Throttle Increase	Add	
Traction Motor 1	R Shift 1	Toggles TM 1 on/off
Traction Motor 2	R Shift 2	Toggles TM 2 on/off
Traction Motor 3	R Shift 3	Toggles TM 3 on/off
Traction Motor 4	R Shift 4	Toggles TM 4 on/off

LOCOMOTIVE CONTROLS		
Traction Motor 5	R Shift 5	Toggles TM 5 on/off
Traction Motor 6	R Shift 6	Toggles TM 6 on/off
Wiper Control	V	
MFD		
MFD1 Page Decrease	L ALT Z	
MFD1 Page Increase	L ALT A	
MFD2 Page Decrease	L ALT X	
MFD2 Page Increase	L ALT S	
MFD3 Page Decrease	L ALT C	
MFD3 Page Increase	L ALT D	
MFD4 Page Decrease	L ALT V	
MFD4 Page Increase	L ALT F	
MFD Brighter	Equals	
MFD Dimmer	Minus	
MFD Page Decrease	X	Current MFD
MFD Page Increase	C	Current MFD
MFD Select	Z	Toggles current MFD
VIEWS		
Cab View Backward	Down Arrow	
Cab View Decrease	L Shift F11	
Cab View Forward	Up Arrow	
Cab View Increment	R Shift F11	Moves to next attach point
Cab View Left	Left Arrow	
Cab View Right	Right Arrow	
Camera Free Fly	L Shift F12	Enter "free fly" mode
Camera Ground	F12	Exit "free fly" mode
Camera Tracking	4	
Default Cab Position	P	Seat default position
Engineer Head Out Forward	R CTR Up	
Engineer Head Out Reverse	R CTR Down	
EOT	L CTR F12	
Load View 1	L CTR 1	
Load View 2	L CTR 2	
Load View 3	L CTR 3	
Load View 4	L CTR 4	
Load View 5	L CTR 5	
Quick Zoom	R ALT Up	
Reset Zoom	R ALT Down	
Save Cab Cam Position	R CTR P	
Save View 1	L Shift 1	
Save View 2	L Shift 2	
Save View 3	L Shift 3	
Save View 4	L Shift 4	
Save View 5	L Shift 5	