

TRAINMASTERS

P. W. DORNFELD.....Yuma
B. B. KIMBALL.....Tucson
L. WISE.....Tucson
J. E. SCHWARTZ.....Tucson
A. G. McMANUS.....Phoenix

ASSISTANT TRAINMASTERS

J. H. VERMILLION.....Gila
D. A. DOYLE.....Gila
B. M. BRAGDON.....Tucson

ROAD FOREMEN OF ENGINES

C. L. STEINER.....Tucson
F. BELLMER.....Tucson

ENGINEMEN INSTRUCTORS

M. E. SCHAD.....Yuma
P. G. VAUGHN.....Yuma
J. E. TOMPKINS.....Yuma
R. V. WILLS.....Tucson
H. D. SMITH.....Tucson

CHIEF TRAIN DISPATCHER

H. W. CASSADY.....Tucson

J. C. SLADE

Assistant Superintendent, Tucson

SOUTHERN PACIFIC COMPANY



TUCSON DIVISION TIMETABLE

119

**EFFECTIVE SUNDAY, JANUARY 4, 1948
AT 12:01 A. M.
MOUNTAIN STANDARD TIME**

**FOR THE GOVERNMENT AND INFORMATION
OF EMPLOYEES ONLY**

J. W. CORBETT,
General Manager.

R. E. HALLAWELL,
H. R. HUGHES,
Assistant General Managers.

C. H. GRANT,
General Superintendent of Transportation.

F. E. KALBAUGH,
Superintendent of Transportation.

G. A. BAYS,
Superintendent.

HOSPITAL DEPARTMENT SURGEONS

LOCATION	NAME	TITLE
San Francisco	Dr. W. W. Washburn	Chief Surgeon
Yuma	Dr. C. S. Powell	District Physician and Surgeon
Yuma	Dr. W. C. Cain	Asst. Dist. Physician and Surgeon
Yuma	Dr. J. F. Stanley	Asst. Dist. Physician and Surgeon
Phoenix	Dr. H. D. Ketcherside	District Physician and Surgeon
Phoenix	Dr. J. E. Draine	Asst. Dist. Physician and Surgeon
Phoenix	Dr. Joseph Bank	Asst. Dist. Physician and Surgeon
Phoenix	Dr. Carlos C. Craig	Asst. Dist. Physician and Surgeon
Phoenix	Dr. Donald Polson	Asst. Dist. Physician and Surgeon
Phoenix	Dr. D. F. Harbridge	Oculist and Aurist
Phoenix	Dr. B. L. Melton	Aurist
Phoenix	Dr. O. W. Thoeng	Aurist
Tempe	Dr. M. W. Westervelt	District Physician and Surgeon
Chandler	Dr. B. J. Axel	Asst. Dist. Physician and Surgeon
Chandler	Dr. J. M. Meason	District Physician and Surgeon
Chandler	Dr. D. I. Arnow	Asst. Dist. Physician and Surgeon
Coolidge	Dr. G. H. Walker	Emergency Physician and Surgeon
Gilbert	Dr. L. M. Tompkins	Emergency Physician and Surgeon
Ray	Dr. O. E. Utzinger	District Physician and Surgeon
Hayden	Dr. C. D. Huestis	District Physician and Surgeon
Gila	Dr. V. J. Jeffery	District Physician and Surgeon
Casa Grande	Dr. J. E. Reddin	District Physician and Surgeon
Tucson	Dr. C. E. Flood	Assistant to Chief Surgeon
Tucson	Dr. N. K. Thomas	Thoracic Surgeon
Tucson	Dr. J. D. Francis	Orthopedic Surgeon
Tucson	Dr. R. W. Rudolph	Consulting Surgeon
Tucson	Dr. W. R. Manning	Consulting Surgeon
Tucson	Dr. J. B. Littlefield	Consulting Surgeon
Tucson	Dr. H. W. Kohl	Visiting Physician
Tucson	Dr. L. J. Kent	Attending Physician
Tucson	Dr. B. H. Morris	Attending Physician
Tucson	Dr. J. S. Mikell	Aurist
Tucson	Dr. Michael O'Connor	Oculist
Nogales	Dr. J. S. Gonzalez	District Physician and Surgeon
Nogales	Dr. Z. B. Noon	District Physician and Surgeon
Nogales	Dr. C. S. Smith	Oculist and Aurist
Benson	Dr. J. M. Hesser	District Physician and Surgeon
Willcox	Dr. J. E. Wilson	District Physician and Surgeon
Willcox	Dr. B. E. Briscoe	District Physician and Surgeon
Willcox	Dr. R. A. Hicks	Asst. Dist. Physician and Surgeon
Bowie	Dr. F. W. Parrish	District Physician and Surgeon
Lordsburg	Dr. C. B. Austin	District Physician and Surgeon
Safford	Dr. J. N. Stratton	District Physician and Surgeon
Safford	Dr. F. W. Butler	Asst. Dist. Physician and Surgeon
Globe	Dr. C. Gunter	District Physician and Surgeon
Globe	Dr. W. M. O'Brien	Asst. Dist. Physician and Surgeon
Miami	Dr. C. M. Cron	District Physician and Surgeon
Miami	Dr. I. E. Harris	Asst. Dist. Physician and Surgeon

Note.—Emergency Surgeons should only be summoned for temporary treatment when prompt attention is required and when patients cannot be sent to or await arrival of Division or District Surgeon.

HOSPITALS

GENERAL HOSPITAL	SAN FRANCISCO, CALIF.
DIVISION—ST. JOSEPH'S HOSPITAL	PHOENIX, ARIZ.
DIVISION—ST. MARY'S HOSPITAL	TUCSON, ARIZ.
EMERGENCY HOSPITAL	TUCSON, ARIZ.
EMERGENCY HOSPITAL	GILA, ARIZ.

WATCH INSPECTORS

San Francisco	S. A. Pope, Manager of Time Service, 65 Market St.
Yuma	Gilbert Devendorf Daniels Jewelry Co.
Phoenix	H. H. Howard
Tucson	Grunewald & Adams
Nogales	G. C. Jackson
Lordsburg	H. H. Conder
Safford	Adolph J. Cubitto
Globe	J. C. Cubitto
Miami	J. C. Cubitto, Jr.

WELLTON SUBDIVISION

EASTWARD

FIRST CLASS

Capacity of sidings	FIRST CLASS									Mile Post Location	Timetable No. 119 January 4, 1948	Distance from Yuma
		40	2	4	6	370	44	48				
		Imperial	Sunset Limited	Golden State	Argonaut	A. O. N.	Passenger	Mall and Express				
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily				
Yuma yard	BKWOTYP	PM 11.15	PM 8.00	PM 6.44	AM 4.30	AM 4.10	AM 4.05	AM 3.10	732.7	Automatic Block System	TO-R YUMA	0.0
	P	11.25	8.10	6.52	4.40	4.20	4.15	3.20	737.4		TO-R EAST YARD	4.7
	58 P								737.5		2.6 ARABY	7.3
	115 P	11.32	8.17	6.58	4.47	4.27	4.22	3.27	740.1		3.6 FORTUNA	10.9
	58 P								743.7		2.9 BLAISDELL	13.8
	104 P	11.39	8.24	7.05	4.54	4.35	4.29	3.40	746.6		4.0 KINTER	17.8
	M 73 P	PM 11.44	8.29	7.09	4.59	4.40	4.34	f 3.46	750.6		2.9 DOME	20.7
	Yard Limits WIP	AM 12.05	8.50	7.28	f 5.20 AM	5.00	4.53	f 4.05	753.5		16.5 WELLTON	37.2
	64								770.0		5.7 MING	42.9
	66 P	12.13	8.58	7.34		5.08	4.59	4.12	775.7		5.2 ROLL	48.1
67 P	12.19	9.04	7.39		5.15	5.04	f 4.19	780.9	12.3 GROWLER	60.4		
69 P	12.32	9.17	7.49		5.30	5.17	4.35	793.2	9.3 KOFA	69.7		
71 P	12.43	9.28	7.58		5.54	5.28	4.46	802.5	10.2 HORN	79.9		
69 P	12.54	9.39	8.08		6.07	5.42	4.59	812.7	9.6 HYDER	89.5		
70 WOP	1.05	9.50	8.17		6.19	5.55	s 5.29	822.3	8.8 MONTEZUMA	98.3		
71 P	1.15	10.01	8.26		6.30	6.06	5.40	831.1	10.0 SADDLE	108.3		
71 WP	1.26	10.12	8.36		6.42	6.18	5.52	841.1	9.9 GILLESPIE	118.2		
71 P	1.39	10.27	8.50		6.56	6.32	6.06	851.0	10.3 ARLINGTON	128.5		
69 P	1.52	10.38	9.00		7.09	6.45	6.19	861.3	4.4 DIXIE	132.9		
69 P	1.58	10.45	9.04		7.15	6.51	6.25	865.7	5.8 CONGER	138.7		
68 P	2.05	10.52	9.10		7.22	6.58	6.32	871.5	4.2 BUCKEYE	142.9		
74 WP	2.11	10.58	9.15		7.27	7.06	s 6.39	875.7	6.0 LIBERTY	148.9		
68 P	2.18	11.06	9.20		7.34	7.14	6.46	881.7	8.0 LITCHFIELD	156.9		
68 YP	2.27	11.16	9.28		7.44	7.25	s 7.00	889.7	3.3 CASHION	160.2		
96 P	2.32	11.20	9.32		7.48	7.30	f 7.06	893.0	5.1 FOWLER	165.3		
70 P	2.39	11.26	9.37		7.54	7.37	7.14	898.1	5.9 23rd AVE. PHOENIX	171.2		
Phoenix yard	71 P	2.45	11.32	9.43		8.00	7.43	7.20	904.0	1.5 Crossing-AT&SFry Wye	172.7	
	BKWP	s 2.55 AM	s 11.40 PM	s 9.53 PM		s 8.10 AM	s 7.55 AM	s 7.30 AM	905.5	0.5 PHOENIX	173.2	
	BKWOTYP					Arrive Daily Ex.Sun.,Mon	Arrive Daily	Arrive Daily	906.0	1.0 TO-R PHOENIX YARD	174.2	
		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	907.0	(174.2)			
		(3.40) 47.23	(3.40) 47.23	(3.09) 54.98	(0.50) 44.64	(4.00) 45.21	(3.50) 45.18	(4.20) 39.97			Time over District.....	
											Average Speed per Hour.....	

RULE 5. Schedule time and train-order time for eastward trains at East Yard and Phoenix Yard apply at end of double track.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE REVENUE PASSENGERS				
Train	At	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
44	{ Roll..... Hyder..... Buckeye..... Litchfield.....	Tucson.....	Yuma.....	Daily
40	{ Buckeye.....	El Paso.....	Alhambra.....	Daily

No. 44 stop at Hyder Sunday to entrain employees.
 No. 44 reduce speed to 35 MPH passing Buckeye and Litchfield to permit safe dispatch of U. S. Mail.
 No. 48 stop daily at Tolleson to exchange U. S. Mail.

WELLTON SUBDIVISION

Timetable No. 119 January 4, 1948		Distance from Phoenix Yard		WESTWARD									
				FIRST CLASS									
				1 Sunset Limited	39 Imperial	3 Golden State	5 Argonaut	43 Passenger	47 Mail and Express				
STATIONS		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily						
732.7	TO-R YUMA 4.7	174.2	AM s 4.10	AM s 7.15	PM s 12.49	PM s 11.40	AM s 12.55	AM s 2.30					
737.4 737.5	R EAST YARD 2.6	169.5	3.56	7.05	12.36	11.25	12.35	2.10					
740.1	ARABY 3.6	166.9											
743.7	FORTUNA 2.9	163.3	3.49	6.59	12.30	11.17	12.25	2.02					
746.6	BLAISDELL 4.0	160.4											
750.6	KINTER 2.9	156.4	3.40	6.52	12.23	11.09	12.15	1.53					
753.5	TO DOME 16.5	153.5	3.36	6.47	12.18 PM	11.04	12.10 AM	f 1.47					
770.0	TO WELLTON 5.7	137.0	3.17	6.28	11.59 AM	10.45 PM	f 11.50 PM	s 1.25					
775.7	MING 5.2	131.3	3.11	6.23	11.53		11.40	1.17					
780.9	ROLL 12.3	126.1	3.05	6.18	11.48		f 11.34	f 1.10					
793.2	GROWLER 9.3	113.8	2.52	6.05	11.38		11.19	12.55					
802.5	KOFA 10.2	104.5	2.41	5.54	11.28		11.04	12.43					
812.7	HORN 9.6	94.3	2.28	5.42	11.18		10.52	12.27					
822.3	TO HYDER 8.8	84.7	2.16	5.29	11.09		s 10.40	s 12.15 AM					
831.1	MONTEZUMA 10.0	75.9	2.05	5.18	11.00		10.24	11.55 PM					
841.1	SADDLE 9.9	65.9	1.53	5.06	10.50		10.12	11.45					
851.0	GILLESPIE 10.3	56.0	1.39	4.54	10.40		9.48	11.31					
861.3	ARLINGTON 4.4	45.7	1.20	4.41	10.30		9.34	11.18					
865.7	DIXIE 5.8	41.3	1.15	4.35	10.26		9.28	11.12					
871.5	CONGER 4.2	35.5	1.08	4.28	10.20		9.21	11.06					
875.7	TO BUCKEYE 6.0	31.3	1.03	4.23	10.16		f 9.15	s 10.58					
881.7	LIBERTY 8.0	25.3	12.56	4.16	10.10		9.03	10.35					
889.7	TO LITCHFIELD 3.3	17.3	12.46	4.06	10.02		f 8.53	s 10.25					
893.0	CASHION 5.1	14.0	12.42	4.02	9.58		8.43	f 10.15					
898.1	FOWLER 5.9	8.9	12.36	3.56	9.53		8.37	10.07					
904.0	23rd AVE. PHOENIX 1.5	3.0	12.30	3.50	9.47		8.30	10.01					
905.5	Crossing—AT&SFRy Wye 0.5	1.5											
906.0	R PHOENIX 1.0	1.0	12.25 AM	3.45 AM	9.42 AM		8.25 PM	9.55 PM					
907.0	TO-R PHOENIX YARD	0.0											
(174.2)			Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily					
.....Time over District.....			(3.45)	(3.30)	(3.07)	(0.55)	(4.30)	(4.35)					
.....Average Speed per Hour.....			46.19	48.10	55.57	40.58	38.12	37.78					

RULE 5. Schedule time and train-order time for eastward trains at East Yard and Phoenix Yard apply at end of double track.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE REVENUE PASSENGERS				
Train	AT	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
39	Buckeye.....		El Paso.....	Daily

WELLTON SUBDIVISION

EASTWARD

SECOND CLASS

Capacity of sidings					846 Freight	902 Freight	844 Freight	842 Freight	Mile Post Location	Timetable No. 119		Distance from Yuma		
										January 4, 1948			STATIONS	
										Leave Daily	Leave Daily		Leave Daily	Leave Daily
Yuma yd.	BKWOTYP				PM 4.30	PM 2.00	AM 8.20	AM 1.00	732.7	TO-R YUMA	D. R.	0.0		
	P				4.45	2.15	8.35	1.15	737.4 737.5	TO-R EAST YARD			4.7	
	58	P			4.49	2.19	8.39	1.19	740.1	2.6 ARABY		7.3		
	115	P			4.54	2.24	8.44	1.24	743.7	3.6 FORTUNA		10.9		
	58	P			4.58	2.28	8.48	1.28	746.6	2.9 BLAISDELL		13.8		
	104	P			5.05	2.35	8.55	1.35	750.6	4.0 KINTER		17.8		
	M 73	P			5.10	2.40	9.00	1.40	753.5	TO 2.9 DOME	D. R.	20.7		
	64	Yard Limits WIP			5.37 PM	3.17	9.27 AM	2.07 AM	770.0	TO 16.5 WELLTON			37.2	
	66	P					3.25		775.7	5.7 MING		42.9		
	67	P					3.33		780.9	5.2 ROLL		48.1		
	69	P					3.59		793.2	12.3 GROWLER		60.4		
	71	P					4.14		802.5	9.3 KOFA		69.7		
	69	P					4.32		812.7	10.2 HORN		79.9		
	70	WOP					4.55		822.3	TO 9.6 HYDER		89.5		
	71	P					5.10		831.1	8.8 MONTEZUMA		98.3		
71	WP					5.27		841.1	10.0 SADDLE		108.3			
71	P					5.52		851.0	9.9 GILLESPIE		118.2			
69	P					6.10		861.3	10.3 ARLINGTON		128.5			
69	P					6.18		865.7	4.4 DIXIE		132.9			
68	P					6.28		871.5	5.8 CONGER		138.7			
74	WP					6.35		875.7	TO 4.2 BUCKEYE		142.9			
68	P					6.46		881.7	6.0 LIBERTY		148.9			
68	YP					7.00		889.7	TO 8.0 LITCHFIELD		156.9			
96	P					7.06		893.0	3.3 CASHION		160.2			
70	P					7.15		898.1	5.1 FOWLER		165.3			
Phoenix yard	71	P				7.25		904.0	5.9 23rd AVE. PHOENIX		171.2			
								905.5	1.5 Crossing-AT&SFRy Wye		172.7			
	BKWP							906.0	R 0.5 PHOENIX	D. R.	173.2			
BKWOTYP							907.0	TO-R 1.0 PHOENIX YARD			174.2			
					Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily		(174.2)				
					(1.07) 33.28	(5.35) 31.20	(1.07) 33.28	(1.07) 33.28		.....Time over District.....			
										.....Average Speed per Hour.....			

RULE 5. Schedule time and train-order time for eastward trains at East Yard and Phoenix Yard apply at end of double track.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Granite Spur.....	755.2	..
Ligurta.....(Spur)	760.2	12
Tyson.....(Spur)	788.3	31
Harqua.....(Spur)	849.4	4
Crag.....(Spur)	856.0	39
Hassayampa.....(Spur)	867.6	12
Palo Verde.....(Spur)	870.2	6
Norton.....	884.9	..
Tolleson.....	895.7	..
Campo.....	902.0	..

Capacity of sidings		EAST- WARD	Timetable No. 119		WEST- WARD
		Mile Post Location	January 4, 1948		Distance from Litchfield Park
			Litchfield Branch		
			STATIONS		
68	YP	889.7	TO	LITCHFIELD	5.0
		894.7		5.0 LITCHFIELD PARK	0.0
			(5.0)		

WELLTON SUBDIVISION

EASTWARD					Mile Post Location	Automatic Block System	Timetable No. 119		Distance from Gila	WESTWARD		
Capacity of sidings	SECOND CLASS			FIRST CLASS			January 4, 1948			FIRST CLASS		
	846	844	842	6			STATIONS	5				
	Freight	Freight	Freight	Argonaut						Argonaut		
	Leave Daily	Leave Daily	Leave Daily	Leave Daily			Arrive Daily					
64	Yard Limits WIP	PM 5.37	AM 9.27	AM 2.07		AM 5.20	770.0	TO WELLTON	85.7	f PM 10.45		
104	P	5.48	9.38	2.18		5.30	776.4	6.4 TACNA	79.3	10.35		
104	P	6.00	9.50	2.30		5.40	783.8	7.4 COLFRED	71.9	10.23		
104	P	6.15	10.05	2.45		f 5.55	792.6	8.8 MOHAWK	63.1	f 10.11		
65	P	6.23	10.13	2.53		6.02	795.9	3.3 KIM	59.8	10.02		
60	P	6.30	10.20	3.00		6.10	800.5	4.6 STOVAL	55.2	9.56		
90	P	6.39	10.29	3.09		f 6.20	806.2	5.7 DATELAND	49.5	f 9.49		
W 124 E 59	WP	6.58	10.48	3.28		f 6.28	811.9	5.7 AZTEC	43.8	f 9.40		
90	P	7.04	10.54	3.34		6.33	815.8	3.9 MUGGINS	39.9	9.34		
59	P	7.11	11.01	3.41		6.38	819.7	3.9 STANWIX	36.0	9.29		
W 102 E 68	WOP	7.20	11.10	3.50		s 6.50	826.1	6.4 SENTINEL	29.6	s 9.22		
57	P	7.35	11.25	4.05		6.59	833.1	7.0 TARTRON	22.6	9.10		
104	P	7.45	11.35	4.15		7.06	839.9	6.8 PIEDRA	15.8	9.01		
59	P	7.54	11.44	4.24		7.12	845.5	5.6 THEBA	10.2	8.54		
104	P	8.02	AM 11.52	4.32		7.17	850.3	4.8 SMURR	5.4	8.48		
Yard Limits BKWOYP		8.10 PM	12.01 PM	4.40 AM		s 7.25 AM	855.7	5.4 GILA	0.0	8.40 PM		
		Arrive Daily	Arrive Daily	Arrive Daily		Arrive Daily		(85.7)		Leave Daily		
		(2.33) 33.61	(2.34) 33.39	(2.33) 33.61		(2.05) 40.50		.....Time over District.....		(2.05) 40.50	
								.....Average Speed per Hour.....			

YUMA VALLEY RAILROAD

Capacity of sidings	EASTWARD	Timetable No. 119 January 4, 1948	WESTWARD
	Mile Post Location		Distance from Gadsden
Yuma yard	P		
	0.0	TO-R YUMA	21.0
16	1.0	1.0 U.S.R.S.	20.0
19	8.5	7.5 WILLETTS	12.5
21	15.0	6.5 SOMERTON	6.0
	21.0	6.0 GADSDEN	0.0
		(21.0)	

SPECIAL INSTRUCTIONS

Southern Pacific Company Rules and Regulations of the Transportation Department, Air Brake Rules, and Special Instructions in Tucson Division Timetable govern on YVRR.

Trains will not exceed speed 10 MPH except must not exceed 8 MPH over trestle at U.S.R.S.

Engines weighing over 150,000 pounds on drivers must not operate on Y. V. R. R.

Impaired side clearance at Spillway, MP 10.25.

At Yuma, normal position of junction switch will be for YVRR main track.

RULE 93: Yard limits are established at Yuma.

U.S.R.S. yard, Yuma, and Ludy Spur must not be used.

Track out service and must not be used east of MP 16 (Somerton).

Load limit (car and contents):

Yuma-Gadsden 169,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Ludy.....(Spur)	3.0	25
Spillway.....(Spur)	10.2	8

PICACHO SUBDIVISION

EASTWARD

FIRST CLASS

Capacity of sidings	FIRST CLASS									Mile Post Location	Timetable No. 119 January 4, 1948	Distance from Phoenix
		4	370	44	6	48	40	2	STATIONS			
		Golden State Leave Daily	A. O. N. Leave Daily Ex. Sun., Mon	Passenger Leave Daily	Argonaut Leave Daily	Mail and Express Leave Daily	Imperial Leave Daily	Sunset Limited Leave Daily				
Phoenix yard BKWP		PM 10.03		AM 8.15		AM 7.50	AM 3.10	AM 12.01	906.0	R PHOENIX	0.0	
BKWOTYP		10.06	AM 8.35	8.18		7.53	3.13	12.06	907.0	TO-R PHOENIX YARD	1.0	
P		10.13	8.45	8.25		8.00	3.20	12.13	911.1	4.1 KENDALL	5.1	
Yd. Limits. 75 YP		10.19	9.10	s 8.35		s 8.10	3.25	12.19	914.4	TO 3.3 TEMPE	8.4	
P									915.3	0.9 TEMPE JCT.	9.3	
P									917.1	1.8 NORMAL JCT.	11.1	
Yard Limits 74 WYP		10.30	9.25	s 8.57		s 8.30	3.40	f 12.34	921.8	TO 4.7 MESA	15.8	
77 P		10.33	9.28	9.03		8.33	3.43	12.37	923.6	1.8 McQUEEN	17.6	
75 P		10.40	9.35	s 9.13		s 8.47	3.50	12.44	929.3	TO 5.7 CHANDLER	23.3	
72 P		10.45	9.40	9.20		9.02	3.55	12.50	934.3	5.0 SERAPE	28.3	
63 P		10.50	9.45	9.25		9.07	4.00	12.55	939.0	4.7 SANTAN	33.0	
63 P		10.54	9.50	9.30		9.12	4.04	1.00	943.2	4.2 DOCK	37.2	
68 P		11.04	10.00	9.40		9.22	4.14	1.10	953.2	10.0 BLACKWATER	47.2	
115 P		11.09	10.05	9.45		9.27	4.19	1.15	958.2	5.0 POSTON	52.2	
69 WP		11.13	10.09	s 9.55		s 9.37	4.23	1.19	962.0	TO 3.8 COOLIDGE	56.0	
28 P		11.18	10.14	10.02		f 9.43	4.28	1.24	966.4	4.4 RANDOLPH	60.4	
63 P		11.22	10.19	10.09		9.49	4.33	1.29	971.4	5.0 TOPAZ	65.4	
Yd. Limits. N 87 S 80 WOIYP		11.30	10.27	10.17	AM 10.07	9.57	4.41	1.45	979.7 936.7	TO 8.3 PICACHO JCT.	73.7	
68 P		11.34	10.31	10.21	10.11	10.01	4.45	1.50	937.7	f 937.7	TO 1.0 PICACHO	74.7
87 P		11.37	10.35	10.24	10.14	10.04	4.48	1.54	940.7	3.0 OCATILLA	77.7	
67 P		11.40	10.39	10.28	10.18	10.08	4.51	1.57	942.2	3.5 WYMOLA	81.2	
W 81 E 84 WP		11.43	10.43	10.31	10.21	10.11	4.54	2.00	947.9	3.7 MONTROSE	84.9	
62 P									951.4	TO 3.5 RED ROCK	88.4	
172 P		11.50	10.50	10.38	10.28	10.18	5.01	2.07	954.3	2.9 AVRA	91.3	
64 P		11.53	10.54	10.42	10.32	10.22	5.04	2.10	958.4	4.1 NAVISKA	95.4	
89 P									962.2	3.8 MARANA	99.2	
171 WP		PM 11.57	10.59	10.46	10.36	10.26	5.08	2.14	964.6	2.4 PAPAGO	101.6	
88 P		AM 12.01	11.02	10.49	10.39	10.29	5.11	2.18	966.9	TO 2.3 RILLITO	103.9	
78 P									969.9	3.0 SABINO	106.9	
87 P		12.05	11.07	10.53	10.43	10.33	5.15	2.22	972.1	2.2 CORTARO	109.1	
W 80 E 82 P		12.07	11.10	10.56	10.46	10.36	5.18	2.24	974.7	2.6 KINO	111.7	
P		12.10	11.14	11.00	10.50	10.40	5.22	2.27	977.4	2.7 JAYNES	114.4	
Tucson yard BKWCOITYP		s 12.18 AM	s 11.30 AM	s 11.10 AM	s 11.00 AM	s 10.50 AM	s 5.30 AM	s 2.40 AM	981.2	3.8 STOCKHAM	118.2	
		Arrive Daily	Arrive Daily Ex. Sun., Mon	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	983.9	TO-R 2.7 TUCSON	120.9	
		(2.15) 53.73	(2.55) 41.45	(2.55) 41.46	(0.53) 53.43	(3.00) 40.30	(2.20) 50.38	(2.39) 45.62		(120.9)		

RULE 5. Schedule time and train-order time for eastward trains at Phoenix Yard, and for westward trains at Stockham apply at end of double track.
Second main track between east end Phoenix Yard and Kendall, may be used by freight trains when authorized by train order. Single track rules apply.

RULE S-72. Exceptions: Nos. 2, 40 and 4 are superior to Nos. 43, 5, 47 and 1.

Train	At	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
4	Chandler	Tucumcari	Los Angeles	Daily
2	Chandler	El Paso	Alhambra	Daily
40	Mesa, Coolidge	El Paso	Alhambra	Daily

PICACHO SUBDIVISION

Timetable No. 119
January 4, 1948

WESTWARD
FIRST CLASS

Mile Post Location	STATIONS	Distance from Tucson	WESTWARD									
			39	3	43	5	47	1				
			Imperial	Golden State	Passenger	Argonaut	Mall and Express	Sunset Limited				
			Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily				
906.0	R PHOENIX 1.0	120.9	AM	AM	PM		PM	AM				
907.0	TO-R PHOENIX YARD 4.1	119.9	s 3.25	s 9.29	s 8.00		s 9.30	s 12.10				
911.1	KENDALL 3.3	115.8	3.06	9.15	7.49		9.15	11.59				
914.4	TO TEMPE 0.9	112.5	3.01	9.10	s 7.42		s 9.10	11.54				
915.3	TEMPE JCT. 1.8	111.6										
917.1	NORMAL JCT. 4.7	109.8										
921.8	TO MESA 1.8	105.1	2.46	8.57	s 7.25		s 8.50	f 11.39				
923.6	McQUEEN 5.7	103.3	2.43	8.54	7.15		8.37	11.36				
929.3	TO CHANDLER 5.0	97.6	2.36	8.47	s 7.05		s 8.30	11.29				
934.3	SERAPE 4.7	92.6	2.31	8.40	6.53		8.20	11.24				
939.0	SANTAN 4.2	87.9	2.26	8.35	6.48		8.15	11.19				
943.2	DOCK 10.0	83.7	2.21	8.31	6.43		8.10	11.14				
953.2	BLACKWATER 5.0	73.7	2.11	8.21	6.31		8.00	11.04				
958.2	POSTON 3.8	68.7	2.06	8.16	6.25		7.55	10.46				
962.0	TO COOLIDGE 4.4	64.9	2.02	8.12	s 6.20		s 7.50	10.42				
966.4	RANDOLPH 5.0	60.5	1.58	8.08	6.09		7.38	10.38				
971.4	TOPAZ 8.3	55.5	1.53	8.03	6.04		7.33	10.33				
979.7	TO PICACHO JCT. 1.0	47.2	1.45	7.55	5.56	PM 6.15	7.25	10.25				
936.7	PICACHO 3.0	46.2										
937.7	OCATILLA 3.5	43.2	1.39	7.49	5.51	6.08	7.19	10.19				
940.7	WYMOLA 3.7	39.7	1.36	7.46	5.48	6.05	7.16	10.16				
944.2	MONTROSE 3.5	36.0	1.33	7.43	5.44	6.01	7.13	10.13				
947.9	TO RED ROCK 2.9	32.5	1.30	7.40	5.41	5.58	7.10	10.10				
951.4	AVRA 4.1	29.6										
954.3	NAVISKA 3.8	25.5	1.24	7.34	5.34	5.51	7.04	10.04				
958.4	MARANA 2.4	21.7	1.21	7.31	5.30	5.47	7.01	10.01				
962.2	PAPAGO 2.3	19.3										
964.6	TO RILLITO 3.0	17.0	1.18	7.28	5.26	5.42	6.58	9.58				
966.9	SABINO 2.2	14.0	1.15	7.25	5.22	5.37	6.55	9.55				
969.9	CORTARO 2.6	11.8										
972.1	KINO 2.7	9.2	1.11	7.21	5.18	5.33	6.51	9.51				
974.7	JAYNES 3.8	6.5										
977.4	TO STOCKHAM 2.7	2.7	1.06	7.16	5.13	5.28	6.46	9.46				
981.2	TUCSON	0.0	1.00 AM	7.10 AM	5.05 PM	5.20 PM	6.40 PM	9.40 PM				
983.9			Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily				
Time over District.....			(2.25)	(2.19)	(2.55)	(0.55)	(2.50)	(2.30)				
Average Speed per Hour.....			50.02	52.19	41.45	51.49	42.67	48.36				

RULE 5. Schedule time and train-order time for eastward trains at Phoenix Yard, and for westward trains at Stockham apply at end of double track. Second main track between east end Phoenix Yard and Kendall, may be used by freight trains when authorized by train order. Single track rules apply.

RULE 8-72. Exceptions: Nos. 2, 40 and 4 are superior to Nos. 43, 5, 47 and 1.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE REVENUE PASSENGERS				
Train	At	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
3	Chandler.....	Los Angeles.....	Kansas City.....	Daily
1	Chandler.....	El Paso.....	El Paso.....	Daily
39	Coolidge, Chandler, Mesa.....	El Paso.....	El Paso.....	Daily

No. 5 stop on flag at Picacho for Gila line and Los Angeles passengers.

PICACHO SUBDIVISION

EASTWARD

SECOND CLASS

Capacity of sidings	Phoenix yard	Yd. Limits	Yard Limits	856 Freight	854 Freight	852 Freight	904 Freight	Mile Post Location	Automatic Block System	Timetable No. 119 January 4, 1948		Distance from Phoenix
										STATIONS		
				Leave Daily	Leave Daily	Leave Daily	Leave Daily					
	BKWP						AM 12.10	906.0		R	PHOENIX	0.0
	BKWOTYP							907.0		TO-R	PHOENIX YARD	1.0
	P						12.20	911.1			KENDALL	5.1
	75 YP						12.35	914.4		TO	3.3 TEMPE	8.4
	P							915.3			0.9 TEMPE JCT.	9.3
	P							917.1			1.8 NORMAL JCT.	11.1
	74 WYP						12.56	921.8		TO	4.7 MESA	15.8
	77 P						1.01	923.6			1.8 McQUEEN	17.6
	75 P						1.11	929.3		TO	5.7 CHANDLER	23.3
	72 P						1.18	934.3			5.0 SERAPE	28.3
	63 P						1.24	939.0			4.7 SANTAN	33.0
	63 P						1.29	943.2			4.2 DOCK	37.2
	68 P						1.42	953.2			10.0 BLACKWATER	47.2
	115 P						1.48	958.2			5.0 POSTON	52.2
	69 WP						2.02	962.0		TO	3.8 COOLIDGE	56.0
	28 P						2.10	966.4			4.4 RANDOLPH	60.4
	63 P						2.16	971.4			5.0 TOPAZ	65.4
	N 87 S 80 WOYYP			PM 11.35	PM 3.10	AM 7.55	2.30	979.7 936.7		TO	8.3 PICACHO JCT.	73.7
	68 P			11.41	3.16	8.01	2.36	940.7		TO	1.0 PICACHO	74.7
	87 P			11.45	3.20	8.05	2.40	944.2			3.0 OCATILLA	77.7
	67 P			11.50	3.25	8.10	2.45	947.9			3.5 WYMOLA	81.2
	W 81 E 84 WP			11.54	3.29	8.14	2.49	951.4		TO	3.7 MONTROSE	84.9
	62 P			PM 11.58	3.33	8.18	2.53	954.3			3.5 RED ROCK	88.4
	172 P			AM 12.03	3.38	8.23	2.58	958.4			2.9 AVRA	91.3
	64 P			12.08	3.43	8.28	3.03	962.2			4.1 NAVISKA	95.4
	89 P			12.12	3.47	8.32	3.07	964.6			3.8 MARANA	99.2
	171 WP			12.16	3.51	8.36	3.11	966.9		TO	2.4 PAPAGO	101.6
	88 P			12.20	3.55	8.40	3.15	969.9			2.3 RILLITO	103.9
	78 P			12.24	3.59	8.44	3.19	972.1			3.0 SABINO	106.9
	87 P			12.28	4.03	8.48	3.23	974.7			2.2 CORTARO	109.1
	W 80 E 82 P			12.32	4.07	8.52	3.27	977.4			2.6 KINO	111.7
	P			12.36	4.11	8.56	3.31	981.2			2.7 JAYNES	114.4
	Tucson yard BKWCOITYP			AM 12.45	PM 4.20	AM 9.05	AM 3.40	983.9		TO-R	3.8 STOCKHAM	118.2
				Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily				2.7 TUCSON	120.9
				(1.10) 37.60	(1.10) 37.60	(1.10) 37.60	(3.30) 34.24				(120.9)	
											.....Time over District.....	
											.....Average Speed per Hour.....	

RULE 5. Schedule time and train-order time for eastward trains at Phoenix Yard, and for westward trains at Stockham apply at end of double track.

Second main track between east end Phoenix Yard and Kendall, may be used by freight trains when authorized by train order. Single track rules apply.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Aristuc..... (Spur)	909.43	11
Tovrea.....	911.8	..
Yeso..... (Spur)	912.9	20
Tremaine.....	925.4	18
Falfa.....	926.1	36
Pozo..... (Spur)	931.0	31
Olberg..... (Spur)	948.1	15
Peak.....	975.2	..

PICACHO SUBDIVISION

EASTWARD					Mile Post Location	Automatic Block System	Timetable No. 119 January 4, 1948	Distance from Picacho	WESTWARD				
Capacity of sidings	SECOND CLASS			FIRST CLASS					STATIONS	FIRST CLASS			
	856	854	852	6						5			
	Freight	Freight	Freight	Argonaut						Argonaut			
	Leave Daily	Leave Daily	Leave Daily		Leave Daily	Arrive Daily							
Yard Limits BKWOYP	PM 8.40	PM 12.30	AM 5.00		AM 7.40	855.7	TO-R GILA	81.0	s	PM 8.25			
59 P	8.50	12.40	5.10		7.47	859.1	3.4 COLEDON	77.6		8.19			
105 P	9.05	12.55	5.25		7.55	865.1	6.0 BOSQUE	71.6		8.11			
59 P	9.12	1.02	5.32		8.00	869.1	4.0 OCAPOS	67.6		8.05			
69 P	9.22	1.12	5.42		8.05	871.8	2.7 SHAWMUT	64.9		8.01			
105 YP	9.35	1.25	5.55		f 8.15	874.6	2.8 ESTRELLA	62.1	f	7.56			
104 P	9.50	1.40	6.10		f 8.25	883.7	9.1 MOBILE	53.0	f	7.44			
58 P	9.58	1.48	6.18		8.31	888.4	4.7 ENID	48.3		7.36			
59 P	10.05	1.55	6.25		8.37	892.8	4.4 HEATON	43.9		7.30			
140 WP	10.15	2.05	6.35		s 8.50	897.8	5.0 MARICOPA	38.9	s	7.22			
104 P	10.28	2.18	6.48		9.02	907.7	9.9 BON	29.0		7.05			
Yard Limits WP	10.52	2.42	7.12		s 9.30	918.8	11.1 CASA GRANDE	17.9	s	6.50			
104 P	11.04	2.54	7.24		9.40	928.4	9.6 TOLTEC	8.3		6.32			
69 P	11.12	3.02	7.32		s 10.00	933.1	4.7 ELOY	3.6	s	6.25			
N 87 Yard Limits S 92 WOIYP	11.20 PM	3.10 PM	7.40 AM		10.07 AM	936.7	3.6 PICACHO JCT.	0.0		6.15 PM			
	Arrive Daily	Arrive Daily	Arrive Daily		Arrive Daily		(81.0)			Leave Daily			
	(2.40) 30.37	(2.40) 30.37	(2.40) 30.37		(2.27) 33.06		Time over District.....			(2.10)			
							Average Speed per Hour.....			37.38			

North track, east of crossover at Maricopa, holding 82 cars, must be left clear of cars for use in meeting or passing trains as directed by train dispatcher.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Seco. (Spur)	921.0	18

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE REVENUE PASSENGERS				
Train	At	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
6	Toltec.....	Tucson.....	Yuma.....	Daily
5	Toltec.....	Yuma.....	Tucson.....	Daily

PICACHO SUBDIVISION

Capacity of sidings	EAST-WARD		Timetable No. 119 January 4, 1948 Christmas Branch	WEST-WARD
	Mile Post Location	Distance from Christmas		
			STATIONS	
77 P	923.6		McQUEEN	86.9
			3.4	
68 P	927.0	TO	GILBERT	83.5
			5.0	
	932.0		HIGLEY	78.5
			3.6	
	935.6		GERMANN	74.9
			2.5	
P	938.1		RITTENHOUSE	72.4
			3.5	
P	941.6		QUEEN CREEK	68.9
			8.2	
P	949.8		MAGMA	60.7
			9.2	
21 WP	959.0	TO	FLORENCE	51.5
			10.0	
P	969.0		PRICE	41.5
			6.2	
P	975.2		COCHRAN	35.3
			7.9	
P	983.1		ZELLWEGER	27.4
			4.7	
Yard Limits P	987.8	TO-R	RAY JCT.	22.7
			7.1	
	994.9		BRANAMAN	15.6
			4.8	
Yard Limits Y	999.7		BURNS	10.8
			0.5	
BKWOYP	1000.2	TO-R	HAYDEN JCT.	10.3
			1.9	
P	1002.1	TO	HAYDEN	8.4
			8.4	
	1010.5		CHRISTMAS	0.0
			(86.9)	

Capacity of sidings	EAST-WARD		Timetable No. 119 January 4, 1948 Creamery Branch	WEST-WARD
	Mile Post Location	Distance from Normal Jct.		
			STATIONS	
Yd. Limits. {	75 WYP	914.4	TO TEMPE	2.1
		915.4	1.0 CREAMERY	1.1
		916.5	1.1 NORMAL JCT.	0.0
			(2.1)	
Capacity of sidings	EAST-WARD		Timetable No. 119 January 4, 1948 Tempe Branch	WEST-WARD
	Mile Post Location	Distance from West Chandler		
			STATIONS	
Yard Limits P	915.3		TEMPE JCT.	7.7
			2.4	
	917.7		PETERSON	5.3
			2.4	
	920.1		HELENA	2.9
			2.9	
	923.0		WEST CHANDLER	0.0
			(7.7)	

Kennicott Copper Corporation R.R. between Hayden Jct. and Hayden Mills is operated by Tucson Division, and is within Hayden Jct. yard limits.

Special upper quadrant signals on high mast at Hayden Jct. indicate stop when arms are in horizontal position. Eastward signal must be left in stop position while a westward movement is being made from Hayden Mills, and westward signal must be left in stop position while any train or engine is occupying the Christmas line east of Hayden Jct. until such train or engine comes to stop, or is not moving west of Hayden.

Proceed indication in eastward signal will authorize movement Hayden Jct. to Hayden Mills and proceed indication in westward signal will authorize movement from KCRR line at Christmas line junction switch to Hayden Jct.

Normal position of Christmas line junction switch is for KCRR line. Westward movements from KCRR line must stop before fouling this junction switch and may then proceed if special signal at train-order office indicates proceed.

Movements in either direction between Hayden Jct. and Hayden Mills must be spaced 10 minutes apart. Back-up hose must be used when making back-up movements with cars Hayden Jct. to Hayden Mills, and one trainman must ride in cab of engine when shoving cars. Flag protection to the rear must be provided as prescribed by Rule 99 when movement is stopped at any point Hayden Jct. to Hayden Mills on ascending grade, and must also be provided to rear on descending grade when there is another following movement possible.

Speed must not exceed 15 MPH in either direction. Grade is 2.2% descending Hayden Mills to Hayden Jct.

Ray Consolidated derail near west end Hayden Mills is spring derail, and may be trailed through on movement to Hayden Mills and must be thrown for all westward movements and lined back to derail following movement over the derail.

Impaired overhead and side clearance at Hayden Mills smelter. Entrance to Kennecott Copper Corp'n plant is protected by gate, which must be closed and locked at night.

Switchback, and all tracks leading off the switchback in KCRR yard, Hayden Mills are out of service.

Between Price and Christmas: Look out for rocks and landslides.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Wooley (Spur)	984.6	5
Winkelman (Spur)	1003.5	8

PICACHO SUBDIVISION

EASTWARD				Mile Post Location	Timetable No. 119		Distance from Nogales	WESTWARD		
Capacity of sidings	FIRST CLASS				January 4, 1948			FIRST CLASS		
			378 Mexican Express		Nogales Branch			379 Mexican Express		
			Leave Daily Ex. Sunday		STATIONS			Arrive Daily Ex. Sunday		
Tucson yard	BKWCOITYP	AM 11.15	983.9	TO-R TUCSON	TO-R TUCSON	65.9	PM 4.50			
				Via SHOP YARD	T&NRR JCT.	65.1				
20			991.6	6.9 CONSAIR		58.2				
53	P	AM 11.38	993.8	2.2 XAVIER		56.0	4.28			
	P	AM 11.53	1002.4	TO	8.6 SAHUARITA	47.4	f 4.13			
54	P	PM 12.17	1016.3	13.9 CANOA		33.5	3.49			
	WP	s 12.26	1021.1	TO	4.8 AMADO	28.7	s 3.40			
51	P	12.35	1025.6	4.5 CHAVEZ		24.2	3.31			
53	P	f 12.50	1034.2	8.6 OTERO		15.6	f 3.16			
	Nogales yard BKWOTP	s 1 20 PM	1049.8	TO-R	15.6 NOGALES	0.0	2.45 PM			
		Arrive Daily Ex. Sunday		(65.9)			Leave Daily Ex. Sunday			
		(2.05) 31.44		.....Time over District.....			(2.05)			
				.....Average Speed per Hour.....			31.44			

No. 378 stop on flag at Continental and Calabasas.
 No. 379 stop on flag at Calabasas and Continental.
 Rule S-72 Exception, No. 378 is superior to No. 379.
 Passenger trains use shop yard route, Tucson yard.
 Other trains use T&NRR Jct. route, Tucson yard.
 On Eagle-Picher spur at Sahuarita:

Speed must not exceed 10 MPH; nor exceed 5 MPH with engine backing.

A flagman must precede all movements over Nogales Highway.

Back-up hose must be used on leading car when shoving.

Air brakes must be used, and rear end test made on all movements.

Hand brakes must be securely set on all cars left at the plant, and cars must not be left west of the derail.

One retainer for each 120 Ms must be turned up from the plant to Santa Cruz River bridge.

Engines not permitted across ore bins.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Continental..... (Spur)	1010.4	12
Morales..... (Spur)	1012.1	18
Tubac..... (Spur)	1029.7	2
Silva.....	1037.3	19
Calabasas..... (Spur)	1039.8	28Y

BOWIE SUBDIVISION

EASTWARD

FIRST CLASS

Capacity of sidings	FIRST CLASS							Mile Post Location	Timetable No. 119		Distance from Tucson
									January 4, 1948		
	44	6	48	40	2	4	STATIONS				
	Passenger	Argonaut	Mail and Express	Imperial	Sunset Limited	Golden State					
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily					
Tucson yard BKWCOITYP	AM 11.30	AM 11.20	AM 11.10	AM 5.40	AM 2.55	AM 12.28	983.9	TO-R TUCSON	0.0		
57 P	11.45	11.35	11.25	5.55	3.10	12.44	993.8	9.9 RANKIN	9.9		
58 P	AM 11.56	f AM 11.46	11.36	6.06	3.21	12.54	1003.3	9.5 VAIL	19.4		
75 WP	PM 12.14	f PM 12.04	AM 11.54	6.23	3.38	1.12	1012.6	9.3 PANTANO	28.7		
N 82 Yard Limits S 76 CIYP	12.35 PM	12.25	f 12.15 PM	6.42 AM	3.57	1.30 AM	1023.6	11.0 TO-R MESCAL	39.7		
73 P		12.31			4.03		1028.2	4.6 CHAMISO	44.3		
E113 Yard Limits W66 BKWOP		s 12.45			s 4.15		1032.5	4.3 TO BENSON	48.6		
58 P		12.52			4.22		1035.8	3.2 FENNER	51.8		
79 P		12.59			4.28		1038.5	2.7 CURVO	54.5		
71 WP		1.06			4.35		1041.0	2.5 SIBYL	57.0		
105 P		1.11			4.40		1043.9	2.7 TULLY	59.9		
59 P		1.16			4.45		1044.5	2.8 OCHOA	62.7		
61 P		1.22			4.51		1050.8	3.5 LANCHA	66.2		
E59 W60 YP		s 1.30			4.58		1053.9	3.1 TO DRAGOON	69.3		
78 P		1.36			5.04		1058.3	4.4 MANZORO	73.7		
86 P		f 1.44			5.09		1063.9	5.6 TO COCHISE	79.3		
60 P		1.50			5.14		1069.6	5.7 HADO	85.0		
64 WP		s 2.00			5.20		1074.7	5.1 TO WILLCOX	90.1		
57 P		2.10			5.25		1079.4	4.7 DRURY	94.8		
94 P		2.15			5.30		1082.6	3.2 RASO	98.0		
60 P		2.20			5.35		1087.7	5.1 ALRICH	103.1		
60 P		2.23			5.39		1091.0	3.3 LUZENA	106.4		
59 P		2.27			5.43		1094.5	3.5 CHOLLA	109.9		
E105 Yard Limits W109 BKWCOYP		s 2.47			s 5.55		1098.4	3.9 TO-R BOWIE	113.8		
59 P		2.54			6.02		1102.6	4.2 HOLT	118.0		
59 P		2.58			6.06		1106.6	4.0 OLGA	122.0		
59 P		3.02			6.10		1110.2	3.6 KARRO	125.6		
57 BKWCOYP		s 3.08			6.14		1114.2	4.0 TO SAN SIMON	129.6		
59 P		3.14			6.19		1117.6	3.4 BAWTRY	133.0		
70 P		3.19			6.25		1121.8	4.2 VANAR	137.2		
64 P		3.24			6.31		1125.0	3.2 CAVOT	140.4		
E61 W61 YP		f 3.35			6.40		1128.9	3.9 TO STEINS	144.3		
58 P		3.41			6.46		1132.7	3.8 MONDEL	148.1		
58 P		3.45			6.50		1136.5	3.8 CONRAD	151.9		
58 P		3.51			6.55		1140.8	4.3 GARY	156.2		
59 P		3.57			7.00		1143.9	3.1 PYRA	159.3		
Yard Limits BKWCOYP		s 4.10 PM			s 7.10 AM		1148.3	4.4 TO-R LORDSBURG	163.7		
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily		(163.7)			
	(1.05) 36.64	(4.50) 33.86	(1.05) 36.64	(1.02) 38.42	(4.15) 38.52	(1.02) 38.42		.....Time over District.....		
								.....Average Speed per Hour.....		

Automatic Block System

No. 2 Track

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE REVENUE PASSENGERS

Train	At	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
2	Willcox.....	El Paso.....		Daily

BOWIE SUBDIVISION

Timetable No. 119

January 4, 1948

WESTWARD

FIRST CLASS

43	1
Passenger	Sunset Limited
Arrive Daily	Arrive Daily

STATIONS

Distance from Lordsburg

No. 2 Track

Be Governed by Current Timetable and
Timetable Bulletins of Rio Grande Division.

Mile Post Location	STATIONS	Distance from Lordsburg	43	1						
983.9	TO-R TUCSON 9.9									
993.8	RANKIN 9.5									
1003.3	VAIL 9.3									
1012.6	PANTANO 11.0									
1023.6	TO-R MESCAL 4.6	124.0	PM 3.45	PM 8.35						
1028.2	CHAMISO 4.3	119.4	3.35	8.25						
1032.5 1032.6	TO BENSON 3.2	115.1	s 3.25	s 8.15						
1035.8	FENNER 2.7	111.9	3.15	8.04						
1038.5	CURVO 2.5	109.2	3.10	8.00						
1041.0	SIBYL 2.9	106.7	3.05	7.56						
1043.9 1044.5	TULLY 2.8	103.8	3.00	7.52						
1047.3	OCHOA 3.5	101.0	2.56	7.48						
1050.8	LANCHA 3.1	97.5	2.51	7.43						
1053.9	TO DRAGON 4.4	94.4	f 2.46	7.39						
1058.3	MANZORO 5.6	90.0	2.38	7.33						
1063.9	TO COCHISE 5.7	84.4	f 2.32	7.27						
1069.6	HADO 5.1	78.7	2.25	7.21						
1074.7	TO WILLCOX 4.7	73.6	s 2.19	7.15						
1079.4	DRURY 3.2	68.9	2.10	7.10						
1082.6	RASO 5.1	65.7	2.01	7.05						
1087.7	ALRICH 3.3	60.6	1.55	6.58						
1091.0	LUZENA 3.5	57.3	1.51	6.54						
1094.5	CHOLLA 3.9	53.8	1.47	6.50						
1098.4	TO-R BOWIE 4.2	49.9	s 1.42	s 6.44						
1102.6	HOLT 4.0	45.7	1.28	6.34						
1106.6	OLGA 3.6	41.7	1.24	6.30						
1110.2	KARRO 4.0	38.1	1.20	6.26						
1114.2	TO SAN SIMON 3.4	34.1	f 1.16	6.22						
1117.6	BAWTRY 4.2	30.7	1.11	6.18						
1121.8	VANAR 3.2	26.5	1.07	6.13						
1125.0	CAVOT 3.9	23.3	1.03	6.09						
1128.9	TO STEINS 3.8	19.4	f 12.55	6.02						
1132.7	MONDEL 3.8	15.6	12.49	5.57						
1136.5	CONRAD 4.3	11.8	12.44	5.52						
1140.8	GARY 3.1	7.5	12.39	5.47						
1143.9	PYRA 4.4	4.4	12.35	5.43						
1148.3	TO-R LORDSBURG	0.0	12 30 PM	5 37 PM						
	(124.0)		Leave Daily	Leave Daily						
	.....Time over District.....		(3.15)	(2.58)						
	.....Average Speed per Hour.....		38.15	41.79						

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Polvo..... (Spur)	987.7	4
Wilmot..... (Spur)	990.7	13
Esmond.....	998.6	..

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE REVENUE PASSENGERS				
Train	At	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
1	Willcox.....	Colton.....	El Paso.....	Daily

Automatic Block System

BOWIE SUBDIVISION

EASTWARD

SECOND CLASS

Capacity of sidings	SECOND CLASS						Mile Post Location	Timetable No. 119 January 4, 1948	Distance from Tucson	
		866	964	864	962	862				960
		Freight	Freight	Freight	Freight	Freight				Freight
		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily			
Tucson yard BKWCOITYP		PM 8.00	PM 4.05	AM 11.45	AM 7.00	AM 3.15	AM 1.10	983.9		
57 P		8.20	4.40	PM 12.05	7.35	3.35	1.45	993.8		
58 P		8.40	5.05	12.25	8.00	3.55	2.10	1003.3		
75 WP		9.01	5.35	12.46	8.30	4.16	2.40	1012.6		
N 82 Yard Limits S 76 CIYP		9.25	6.10 PM	1.10	9.05 AM	4.40	3.15 AM	1023.6		
73 P		9.35		1.20		4.50		1028.2		
E 113 Yard Limits W 66 BKWOP		9.55		1.40		5.10		1032.5 1032.6		
58 P		10.05		1.50		5.20		1035.8		
79 P		10.15		2.00		5.30		1038.5		
71 WP		10.25		2.10		5.40		1041.0		
105 P		10.35		2.20		5.50		1043.9 1044.5		
59 P		10.43		2.28		5.58		1047.3		
61 P		10.51		2.36		6.06		1050.8		
E 69 W 60 YP		11.00		2.46		6.15		1053.9		
78 P		11.08		2.53		6.23		1058.3		
86 P		11.15		3.00		6.30		1063.9		
60 P		11.22		3.07		6.37		1069.6		
64 WP		11.30		3.15		6.45		1074.7		
57 P		11.37		3.22		6.52		1079.4		
94 P		11.45		3.30		7.00		1082.6		
60 P		11.53		3.38		7.08		1087.7		
60 P		PM 11.58		3.43		7.13		1091.0		
59 P		AM 12.04		3.49		7.19		1094.5		
E 105 Yard Limits W 109 BKWCOYP		12.20		4.05		7.35		1098.4		
59 P		12.27		4.12		7.42		1102.6		
59 P		12.34		4.19		7.49		1106.6		
59 P		12.40		4.25		7.55		1110.2		
57 BKWCOYP		12.50		4.35		8.05		1114.2		
59 P		12.59		4.44		8.14		1117.6		
70 P		1.07		4.52		8.22		1121.8		
64 P		1.14		4.59		8.29		1125.0		
E 61 W 61 YP		1.28		5.13		8.43		1128.9		
58 P		1.35		5.20		8.50		1132.7		
58 P		1.41		5.26		8.56		1136.5		
58 P		1.48		5.33		9.03		1140.8		
59 P		1.53		5.43		9.08		1143.9		
Yard Limits BKWCOYP		2.00 AM		5.50 PM		9.15 AM		1148.3		
		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily			
		(6.00) 27.28	(2.05) 19.05	(6.05) 26.91	(2.05) 19.05	(6.00) 27.28	(2.05) 19.05			

STATIONS		Distance from Tucson
TO-R	TUCSON		0.0
	9.9 RANKIN	9.9
	9.5 VAIL	19.4
	9.3 PANTANO	28.7
TO-R	11.0 MESCAL	39.7
	4.6 CHAMISO	44.3
TO	4.3 BENSON	48.6
	3.2 FENNER	51.8
	2.7 CURVO	54.5
	2.5 SIBYL	57.0
	2.9 TULLY	59.9
	2.8 OCHOA	62.7
	3.5 LANCHA	66.2
TO	3.1 DRAGON	69.3
	4.4 MANZORO	73.7
TO	5.6 COCHISE	79.3
	5.7 HADO	85.0
TO	5.1 WILLCOX	90.1
	4.7 DRURY	94.8
	3.2 RASO	98.0
	5.1 ALRICH	103.1
	3.3 LUZENA	106.4
	3.5 CHOLLA	109.9
TO-R	3.9 BOWIE	113.8
	4.2 HOLT	118.0
	4.0 OLGA	122.0
	3.6 KARRO	125.6
TO	4.0 SAN SIMON	129.6
	3.4 BAWTRY	133.0
	4.2 VANAR	137.2
	3.2 CAVOT	140.4
TO	3.9 STEINS	144.3
	3.8 MONDEL	148.1
	3.8 CONRAD	151.9
	4.3 GARY	156.2
	3.1 PYRA	159.3
TO-R	4.4 LORDSBURG	163.7
	(163.7)	
.....Time over District.....		
.....Average Speed per Hour.....		

Automatic Block System

No. 2 Track

BOWIE SUBDIVISION

EASTWARD				Mile Post Location	Timetable No. 119 January 4, 1948 Globe Branch STATIONS	Distance from Miami	WESTWARD		
Capacity of sidings	SECOND CLASS	FIRST CLASS					FIRST CLASS	SECOND CLASS	
	884	382					381	883	
	Freight	Passenger					Passenger	Freight	
	Leave Daily Ex. Monday	Leave Daily		Arrive Daily	Arrive Daily Ex. Sunday				
E 105 Yard Limits W 109 BKWCOYP	AM 8.00		PM 3.00	1098.4 1098.1	TO-R	BOWIE	133.8	PM 1.00	PM 5.30
51 P	8.25		3.17	1107.4		9.3 ESCALA	124.5	12.36	5.00
P	8.50		f 3.33	1117.8		10.4 TANQUE	114.1	f 12.17	4.40
P	9.05		3.44	1125.1		7.3 HAECKEL	106.8	12.04 PM	4.20
34 P	9.25		s 3.57	1132.6		7.5 SOLOMON	99.3	s 11.52 AM	3.57
47 Yard Limits WP	10.20		s 4.10	1137.5	TO	4.9 SAFFORD	94.4	s 11.40	3.30
P	10.35		s 4.20	1140.6		3.1 THATCHER	91.3	s 11.28	2.25
P	10.55		s 4.31	1145.6	TO	5.0 PIMA	86.3	s 11.18	2.05
58 P	11.14		4.35	1146.7		1.1 DUBLIN	85.2	11.14	1.50
P	AM 11.45		f 4.46	1153.0		6.3 CORK	78.9	f 11.04	1.25
P	PM 12.03		s 4.59	1159.3	TO	6.3 FT. THOMAS	72.6	s 10.53	1.03
WP	12.18		f 5.08	1164.2		4.9 GERONIMO	67.7	f 10.43	12.50
50 P	12.35		f 5.19	1170.1		5.9 BYLAS	61.8	f 10.31	12.35
P	12.57		f 5.31	1176.8		6.7 CALVA	55.1	f 10.19	12.20 PM
49 P	1.40		5.59	1191.0		14.2 DILI	40.9	9.51	11.40 AM
48 WP	2.10		s 6.20	1201.0	TO	10.0 SAN CARLOS	30.9	s 9.30	11.10
P	2.50		f 6.47	1213.5		12.5 CUTTER	18.4	f 9.06	10.40
Yard Limits BKWOTP	3.20 PM		s 7.10 PM	1221.5	TO-R	8.0 GLOBE	10.4	8.45 AM	10.10 AM
P				1226.2		4.7 RADIUM	5.7		
Yard Limits WYP				1231.9	TO-R	5.7 MIAMI	0.0		
	Arrive Daily Ex. Monday		Arrive Daily			(133.8)		Leave Daily	Leave Daily Ex. Sunday
	(7.20) 16.87		(4.10) 29.69			.....Time over District.....		(4.15) 29.11	(7.20) 16.34
						.....Average Speed per Hour.....			

No. 381 and No. 382 stop on flag at Peridot.
Between MP 1184 and MP 1196: Look out for rocks and land-slides.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Lone Star..... (Spur)	1135.3	10
Glenbar.....	1148.9	..
Ashurst.....	1154.8	..
Peridot.....	1197.3	..
Pinal.....	1219.3	9
Burch..... (Spur)	1227.3	5
Claypool..... (Spur)	1230.2	9

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

RULE A. All, or portions of, the following rules have been changed. Pastors have been printed covering these changes, and employes must have the pasters in their copy of Book of Rules:

Rules	10(H)	295
	15	297
	26	705
	99	707
	104(D)	708
	210	763
	221	837
	271	

DEFINITION of FIXED SIGNAL is changed to read as follows:

A signal of fixed location indicating a condition affecting the movement of a train, such as train-order, automatic, interlocking or absolute signal; switch, stop boards, yard limit boards or speed boards.

RULE 2 (A). Watches subject to inspection must be presented to a designated inspector for comparison, and certification on standard watch certificate between the first and fifteenth of each month.

RULE 10 (J) is revised to read as follows:

Speed boards will be located to the right of track in direction of approach where practicable, except on double track where trains keep to the left, they will be located to the left if proximity of adjoining main track prevents location to the right.

Speed boards that prescribe reduction in speed will be located three-fourths mile from initial point of restriction. Speed boards that authorize an increase in speed will be located at the point where higher speed is permissible, and speed may be increased accordingly as soon as rear of train has passed the speed board.

(no change in Figures 1, 2 and 3)

The higher number on speed board indicates the maximum speed of trains consisting entirely of passenger equipment, and the lower number indicates the maximum speed of all other trains. Where but one number is shown it indicates the maximum speed of all trains.

Round yellow speed boards indicate by black figures the maximum speed of certain passenger trains designated by special instructions in the timetable or by timetable bulletin; speed indicated by oval white speed boards applies to those trains unless a round yellow speed board is displayed on same post below the oval speed board.

Certain speed boards have the word "SIGNAL" above the figures. Such speed boards in approach to a distant signal indicate the speed that must not be exceeded while engine is passing the distant signal three-fourths mile beyond the speed board, unless distant signal can plainly be seen to be displaying proceed indication; and such speed boards in approach to a home signal indicate the speed that must not be exceeded while approaching the home signal three-fourths mile beyond the speed board, until indication of home signal can plainly be seen. The word "SIGNAL" on an oval speed board also applies to a round yellow speed board if displayed on the same post.

Round yellow speed boards indicate by black figures the speed restrictions applying to Streamlined GOLDEN STATE.

Speed boards for westward trains at MP 922.8 east of Mesa and MP 1041.5 east of Sibyl also have lamp attached which displays yellow light at night. This light is to call attention to speed board, and is not a yellow signal referred to in Rule 10 (H).

RULE 14. Other engine whistle signals:

For diverging route, o — o.

For siding, — o —.

RULE 17. Oscillating white light on engines so equipped is to be operated in addition to headlight, when engine is moving at night, and in foggy or stormy weather by day. It must be extinguished approaching passenger stations.

Oscillating red light on engines so equipped shall be operated by day or night, only when a train has stopped, or is stopping, under circumstances that may cause an adjacent track to be fouled, and will not in any way relieve trainmen or enginemen from compliance with Rules 99 and 102. A train or engine on adjacent track must stop at once, and may proceed only after ascertaining that track is safe for passage of trains.

RULE 28. In double track territory signals will be placed to right of track according to direction of movement of train to be flagged. Trains in opposite direction will not be required to observe signals so placed.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction, except as shown on Pages 6, 7 and 11.

RULE 105. Sidings designated "E" in Capacity of sidings column are assigned for use by eastward trains; those designated "W" are assigned for use by westward trains. Those designated "M" for middle may be used by trains in either direction. Those designated "N" or "S" are assigned for use by trains as shown in special instructions for the subdivision on which located.

RULE 281B. Movements governed by semaphore type diverging route signals displaying "Proceed on Diverging Route", Figs. 1 and 2, must be made with caution.

RULES 281 and 281D. Movements against the current of traffic governed by semaphore type dwarf signals displaying "Proceed", Fig. 5, Rule 281; or by light type dwarf signals displaying "Proceed Prepared to Stop at next Home Signal", Fig. 7, Rule 281D, must be made with caution, and position of switches observed.

RULE 505. AUTOMATIC BLOCK SYSTEM

PUSH BUTTONS

Where signal protection is provided for movements from an adjacent track to main track, push buttons and pilot lights are installed in box near each of the two signals, with time-release feature, to clear signals on one track when the control circuit on the other track is occupied.

Train on main track to let train on siding pass may clear signal on siding by pressing button bearing number of signal on siding. Train on siding to let train on main track pass should not pass Approach Circuit sign, but when necessary to do so, may clear signal on main track by pressing button bearing number of signal on main track.

Pilot light will appear after time-release has operated and signal has cleared.

Further instructions posted inside push-button box.

ELECTRIC SWITCH LOCKS

Where electric switch locks are installed, lock box door must not be opened if movement is to be made into a track leading from main track until engine or car is standing within 150 feet of the switch; or if movement is to be made from such track, or through a crossover to a main track, until switch indicator indicates block clear on opposite track.

After lock box door is opened lock lever cannot be moved to opposite position to release switch for hand throwing until indicator in lock box indicates "unlocked".

Lock lever must not be returned to locked position until all movements over the switch are completed, switch returned to normal position and locked.

When switch indicators indicate "block occupied", instructions posted inside lock box for operation of push button to start time-release must be complied with if movement is to be made to main track while approach circuit is occupied by another train, in addition to providing flag protection when necessary.

Emergency lock release to be used only in case of electrical or mechanical failure, as indicated by failure of time-release to function after several minutes. When necessary to break seal on emergency lock release, dispatcher's permission must first be obtained, and movement made only after flag protection provided on both tracks.

Low type electric locks, such as are applied direct to lever of hub type switch stands, function as above except that the removal of the switch padlock has the same effect as opening the lock box door. Instead of being equipped with an "unlocked" indicator, these locks have a pilot light that indicates by illumination when the lock is unlocked.

RULE 535. A spring switch with facing point lock must not be trailed through unless switch target displays the letters "SS" in normal position, or switch has been lined for the movement.

When a signal with triangular number plate protecting a spring switch with facing point lock displays stop indication, member of crew must open and close spring switch by hand, removing any obstruction. If signal does not then display proceed indication, switch must be hand thrown for the movement.

When a spring switch or spring derail is hand thrown, trainman so setting same must again set it for normal position after movement has been completed, unless he has arranged for another trainman to do so.

RULE 536. Wheels of tenders must not be considered as engine wheels.

GENERAL REGULATIONS

RULE 824. Instructions for setting hand brakes:

At points where hand brakes must be set on freight trains such brakes must be securely set, using standard brake club to set staff brakes, after train or cut has stopped, unless yardmen immediately take charge and yard engine is coupled to cars. Any employe releasing any of these brakes must set as many others to replace them.

RULE 827. TRAIN INSPECTION

Engines running light on descending grades must stop for inspection at freight train inspection points.

Trains, including military trains, made up in part of freight cars or cabooses equipped with cast iron wheels are required to comply with rules and timetable instructions applying to freight trains as they relate to stopping for train inspection, and speed restrictions.

Cars bearing placards denoting contents are explosive, inflammable, poisonous or otherwise dangerous, must be given careful inspection at all points where train inspection is made.

RULE 835. Spring switches must be locked while train movements are being made over them.

RULE 836. Cars moved from one station to another ahead of engine on descending grade must be chained to the engine. Switching movement on descending grades must be protected by a derail. When practicable engine must be kept on descending grade end of cars.

RULE 849. Steam valve on Pullman troop sleepers cannot be opened while train is in motion, and when such car is on rear of train steam line must not be cut in any portion of train until valve is closed on the car on each side of coupling to be opened, to avoid burning by steam.

MISCELLANEOUS

1. In all cases where it is necessary to make a short move with heavy freight train to reach water or oil column, including that required to spot second engine of double-headed train, engine must be cut off before spotting at column.

4. Helper service:

No helper engine will be placed behind wooden underframe cars or cabooses.

Engines weighing more than 235,000 pounds on drivers will not be placed behind steel underframe cabooses.

In no case will more than one helper engine be placed behind steel underframe cabooses.

One helper may be placed on head end, except that not more than one AC or AM class engine, nor more than two engines of other classes may be placed on head end of any freight train. When additional helpers are required, they will be placed back in train and cut in ahead of any cars of wooden frame construction, and when practicable should be placed behind a loaded car.

Helper or doubleheader engines must not be placed on head end of trains powered by DEF class engines.

When one Diesel helper is used it will be placed on head end; when two Diesel helpers are used, one will be placed on head end and one on rear end; when one Diesel and one steam engine are used as helpers the Diesel will be placed on head end and steam engine helper on the rear.

Air will be cut in on all helper engines, and engine must not be cut off when train is in motion.

When used as helpers in rear of train, AC, AM or MM class engines must not be coupled together, nor may more than two F, Mt, or heavier class, or more than three smaller classes be coupled together. When coupled, larger engines must be placed ahead of smaller engines. If tonnage requires more power, additional helpers of not to exceed two coupled in each case, must be separated by at least four cars.

Helpers must not be operated backing except in emergency, and in such case engines should not push through a backing engine if it can be avoided.

Helper engines coupled in middle or rear of train must be cut off from forward portion before taking water. On grades road engine and helper must not be cut off from train at the same time without sufficient hand brakes being securely set.

4 (a). For the purpose of pushing trains out of yards:

No engine will be placed behind wooden underframe caboose or other wooden frame equipment.

Engines weighing more than 235,000 pounds on the drivers will not be placed behind steel underframe cabooses.

Air will not be coupled through pusher engine.

Yard engines regularly so used will be equipped with Russell-Jordan device to hold the coupler pin from dropping, thus making it unnecessary for employes to uncouple the pusher engine when cutting off.

In no case shall the knuckle be removed, or closed, or cutting lever temporarily fastened in release position on a pusher engine, as means of preventing coupling being made.

Unless local conditions require, it will not be necessary to stop trains to detach pusher engines.

7. Capacity of sidings column indicates the number of cars of average length of 49 feet that siding will hold between fouling points, in addition to one engine and caboose.

10. When a sign reading "Occupied Outfit Cars" is attached to switch lock, the outfit cars must not be coupled to, nor moved, until occupants have been notified, and permission given by foreman or his representative.

20. Handling of freight cars in trains behind passenger cars is prohibited except passenger equipment may be placed in head end of mixed trains when carrying personnel and equipment in connection with military and naval movements. This does not refer to a baggage, express, or mail car, or a caboose.

Baggage, express, mail, refrigerators or other head end cars must not be handled on rear of passenger trains unless trainmen can pass through them.

All cars handled in passenger trains must be equipped with steel-tired or all-steel wheels.

When necessary to handle passenger equipment, except official cars in freight trains, it must be placed next to caboose, provided rear-end freight cars in train will permit.

21. Employes are warned that it is dangerous to ride on top or sides of cars where impaired clearance exists.

There are numerous structures with impaired clearance on yard and station tracks on the division, and employes must be familiar with their locations and avoid personal injury.

25. Electric lanterns may be used for displaying white light only, except may be used by herders for displaying green lights.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

SPEED RESTRICTIONS

List of CCB (cross-counterbalanced) engines:
 All F-1 class, except eng. 3639.
 All F-3 class.
 All F-4 class, except eng. 3700.
 All F-5 class.
 All B class, except engs. 3501, 3505, 3509.
 All T&NO F-1 to F-5 class.

MAXIMUM SPEED PERMITTED CERTAIN ENGINES

Maximum speed for S and SE class engines, 20 MPH, but must not exceed speed permitted freight and mixed trains and light engines.

Steam or Diesel-electric engines backing must not exceed 20 MPH on all curves and when approaching highway crossings at grade.

Steam engines coupled tender to tender must not exceed speed permitted same engines running light backward.

Engines with tenders having water capacity 7,000 gallons or less, except Classes 70-R-1 and 70-SC-1, must not exceed 50 MPH.

Maximum speed of engines under following conditions, running under own steam or hauled in train must not exceed:

- When all weight has been removed from any one pair of drivers 20 MPH
- When all weight has been removed from only one wheel from any pair of drivers 30 MPH
- When engine truck is removed 20 MPH
- When main rod only is removed 30 MPH
- When side rod only is removed 30 MPH
- When both main and side rods are removed 20 MPH
- When hauled in train with all rods on 30 MPH

When train order is received indicating that main track is out of service and that trains are to be detoured through a siding or other track, or over a shoofly, necessitating a reduction in normal train speed, signal 16(f) must be sounded on passenger trains one mile before reaching point where train must reduce speed, which must be acknowledged by whistle signal 14(g).

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT

MPH

Trains handling wooden pile-drivers; locomotive cranes with boom disconnected and heavy end forward; steam shovels and ditchers transported on their own wheels; and car-top ditchers when blocking and tie-down cables are removed:	
On tangent main tracks except.....	35
SPMW 4044	25
On tangent branch tracks.....	25
On all curves 5 MPH less than speed authorized. Where speed boards in place 5 MPH less than shown on speed boards, except where speed indicated is 15 MPH or less be governed by speed boards.	
Trains handling locomotive cranes with boom disconnected and light end forward (must not be handled in this manner except in emergency):	
On tangent main tracks.....	20
On curves and on branch tracks.....	15
Trains handling locomotive cranes with boom in place, either end forward (to be handled in work train when practicable):	
On tangent main tracks.....	25
On curves and on branch tracks.....	15
Trains handling steel pile-drivers may make maximum restricted freight train speed.	
Trains handling relief outfit with steam derrick:	
On tangent main tracks.....	35
On tangent branch tracks, except.....	25
(Relief outfits 7014 and 7025 must not be operated on any branch except Litchfield, Nogales and Creamery branches.)	
On all curves, 5 MPH less than speed authorized. Where speed boards in place 5 MPH less than shown on speed boards, except where speed indicated is 15 MPH or less be governed by speed boards.	

Passenger trains handling steel wheel baggage-express cars in series 5810 to 5874, and foreign line steel wheel cars not equipped with high speed trucks, must not exceed 60 MPH.

Wooden equipment must not be handled in regular passenger trains.

Extra passenger trains handling wooden coaches or chair cars must not exceed 40 MPH.

If consist of train includes both wooden and steel passenger-carrying cars, the wooden cars must be kept together and handled on rear.

Maximum speed of deadhead equipment or passenger trains with standard caboose is 50 MPH.

Trains consisting of steam or Diesel-electric engine and caboose only must not exceed speed permitted for engines of that class running forward light, and must not in any case exceed 40 MPH.

Maximum speed provided for passenger trains, will apply to No. 370 when that train consists entirely of passenger equipment, or cars with steel wheels, including box cars with steel wheels, or caboose with steel wheels, except that maximum speed of 60 MPH must not be exceeded.

RULE 14 (e). As specified below, — — — — — sounds will be indication that flagman may return from east as prescribed by Rule 99:

Wellton, Trains on Phoenix line.
Litchfield, Trains on Litchfield Branch.

RULE 21(C). At Phoenix and Gila, incoming engines may display indicators until arrival at roundhouse.

RULE 82 (A). Eastward second-class and extra trains originating at Yuma (except trains handling passenger equipment only) will register by ticket and obtain clearance at East Yard, and need not register or obtain clearance at Yuma, but must receive proceed signal from yardman (white flag by day and green light by night) before entering eastward main track, as indication that no first-class train is due, or that proper protection to the rear has, and will be provided until rear of train has entered eastward main track, after which protection to the rear must be provided by train crew if train stops or is delayed. Indicators may be displayed from Yuma to East Yard on instructions from Yardmaster. Conductors will show on margin of train register ticket thrown off at East Yard the time watch was compared with standard clock. Operator will enter this information on train register.

RULE 83. Identification may be made by eastward trains on double track between Yuma and East Yard, and between Phoenix and Phoenix Yard, to be applied at end of double track. Reduce speed sufficiently to permit identification, and comply with Rule 14 (k).

RULE 83 (A). At the following stations, only trains indicated will register:

East Yard..... Westward trains entering yard tracks.
East Yard..... Eastward second-class and extra trains.
Phoenix..... First-class trains, except No. 370.

RULE 83 (B). At open train-order offices trains may register by ticket as follows:

East Yard..... Westward trains entering yard tracks.
East Yard..... Eastward second-class and extra trains.
Phoenix Yard..... First-class trains, except No. 370.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP	East MP
731.51	Yuma 737.83
	" (Yuma Valley R. R.) 0.22
769.13	Wellton 771.00
	" (Gila line) 771.00
900.96	Phoenix 908.79
854.20	Gila 857.70

Shoving of cars on either main track or drill track between Yuma and East Yard is prohibited, except when switching packing sheds located on drill track.

Not more than one movement in either direction is permitted on the drill track between Yuma and East Yard.

RULE D-97 (A). Will apply between Phoenix and Phoenix Yard.

RULE 99. First-class trains standing on passenger tracks at Phoenix must comply with Rule 99 (A).

RULE 103 (A). A flagman must precede all movements over:
Yuma, 1st, 2nd, 3rd and 4th Sts., on yard tracks.
Dateland, U. S. Highway 80, on Government spur.

RULE 103 (B). Back-up hose must be used on leading car when shoving cars on Government tracks at Airport at Yuma.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

Phoenix..... Switch in eastward main track, immediately west of First Avenue, Phoenix, from main track to eastward main track.

Phoenix..... West end double track, for westward track.
Litchfield..... Litchfield Br., for Phoenix line.
Yuma..... Yard track on Madison Ave., for YVRR main track.

Normal position of west crossover switch from yard track 1 to eastward main track at East Yard, is for tail track.

Deraills in main track:
Litchfield Park, 70 feet west of west switch of team track.

RULE 105. Following tracks are designated for use as sidings:
Fowler..... Track north of main track.
Aztec..... Track north of main track is westward siding;
Track south of main track is eastward siding.

Sentinel..... Track north of main track is eastward siding;
Track south of main track is westward siding.

RULE 204. Trains on Wellton and Picacho Subdivisions with the same conductor operating through Phoenix may be issued train orders on one subdivision that affect their movement on either or both subdivisions, and these orders must be delivered by engineer to relieving engineer.

RULE 221. East Yard is train-order office for eastward trains only and is open continuously. Signal arm for westward movement has been removed.

Wellton Subdivision trains originating at Phoenix must obtain clearance at Phoenix Yard instead of Phoenix.

RULE D-251. Applies to the following tracks:
Westward track, East Yard to Yuma. Extra trains and engines must receive proceed signal from yardman (white flag by day, green light by night) before leaving East Yard, before passing Signal 7341, and before passing Signal 7331.

Both tracks between Phoenix and Phoenix Yard.

RULE 505. AUTOMATIC BLOCK SYSTEM

Yuma: Eastward freight trains must not pass Signal 7338, and westward trains, except first-class, must not pass Signal 7341 unless proceed signal received from yardman (white flag by day, green light by night).

East Yard: Westward trains entering yard tracks must not pass Signal P-7375 unless proceed signal received from yardman (white flag by day, green light by night).

Phoenix: Crossing—AT&SFRy Wye: If signal indicates "stop" trains and engines must stop, and if wye is clear of intersecting movement, may then proceed as prescribed by Rules 509(F) or 509(J), but must provide flag protection on intersecting track unless derail is known to be in derailing position.

Phoenix: Main track has no block signal protection between Signal 9061 and end of double track; and double track has no block signal protection from west end to Signal 9064.

RULE 510. The following block signals equipped with triangular number plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
P- 7372 P- 7374	Spring switch, end double track, East Yard....	P- 7375
P- 7428	Spring switch, west end siding, Fortuna.....	
	Spring switch, east end siding, Fortuna.....	P- 7441
P- 7532	Spring switch, end double track, Dome.....	P- 7535
P- 7756	Spring switch, west end siding, Tacna.....	
P- 7836	Spring switch, west end siding, Colfred.....	
	Spring switch, east end siding, Colfred.....	P- 7849
P- 7920	Spring switch, west end siding, Mohawk.....	
P- 7956	Spring switch, west end siding, Kim.....	
P- 8252	Spring switch, west end westward siding, Sentinel.....	
P- 8398	Spring switch, west end siding, Piedra.....	
P- 8494	Spring switch, west end siding, Smurr.....	
P- 9052	Spring switch, west end pass'gr. lead, Phoenix Spring switch, east end double track, Phoenix Yard.....	P- 9075

RULE 516. Overlap posts:

Tolleson..... 450 feet east of Signal 8958 Eastward trains.
Tolleson..... 750 feet east of MP 895 Westward trains.
23rd Ave. Phoenix..... Middle of Siding Eastward trains.
23rd Ave. Phoenix..... Middle of Siding Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while trailing through them:

Location	Normal Position
Yuma..... West end bridge, end double track	Westward track
Yuma..... East end bridge, end double track	Eastward track
East Yard..... End double track	Westward track
Fortuna..... West end siding	Main track
Fortuna..... East end siding	Main track
Dome..... End double track	Eastward track
Tacna..... West end siding	Main track
Colfred..... West end siding	Main track
Colfred..... East end siding	Main track
Mohawk..... West end siding	Main track
Kim..... West end siding	Main track
Sentinel..... West end westward siding	Main track
Piedra..... West end siding	Main track
Smurr..... West end siding	Main track

Spring switches not equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while passing over them in facing movement, or in trailing through them:

Location	Normal Position
Phoenix.....	Main track at passenger lead... Passenger lead
Phoenix Yard.....	East end double track..... Westward track

Spring switch is also located on engine lead at Yuma. Switch position indicator at spring switch on engine lead, Yuma indicates position of switch points, and does not indicate track occupancy. When indicator displays red aspect careful examination of switch must be made before passing over switch.

RULE 605. INTERLOCKING

Wellton: Limits extend from westward interlocking signals 4,300 feet east of station building on Gila line and 4,600 feet east of station building on Phoenix line, to eastward interlocking signals 1,000 feet west of station building on westward track and 1,600 feet west of station building on eastward track.

The derail at east end of siding is electrically locked, and can be operated by trainmen only when released by signal operator.

Switches and derails to spurs leading from westward main track, just west and east of station building are hand-thrown, but must not be used until permission is secured from signal operator.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illuminated Letter	On Post at MP	Approaching	Authorizes and Requires Movement as Follows
M.....	769.2.....	Wellton.....	Proceed to interlocking limit.
S.....	769.2.....	Wellton.....	Enter siding.

RULE 740. ABSOLUTE-PERMISSIVE BLOCK SYSTEM YUMA-COLORADO

Limits extend from absolute signals west of Colorado River bridge to absolute signals east of Colorado River bridge. Speed must not exceed 6 MPH until engine has passed spring switch at opposite end of bridge.

Trains stopped by absolute signal west of bridge must obtain permission from yardmaster, and also make inspection of spring switches at each end of bridge before proceeding.

GENERAL REGULATIONS

RULE 824. Instructions for setting hand brakes:

Yuma: Freight trains.....	Four brakes on east end, Two brakes on west end.
East Yard: Freight trains.....	Two brakes on east end, Five brakes on west end.
Phoenix Yard: Freight trains.....	Two brakes on west end, Two brakes on east end.

RULE 827. TRAIN INSPECTION

Freight trains must be inspected at each water stop. When conditions are favorable, and in the judgment of conductor and engineer it is safe to do so, and when additional stops can thereby be avoided, freight trains may run between water stops without stopping for inspection, provided the distance is not over 60 miles, except freight trains and light engines may run between Aztec and Yuma, for inspection. This does not relieve trainmen from making inspection when stops permit, or whenever it is necessary in the judgment of conductor or engineer.

AIR BRAKE RULES

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hose on outgoing freight trains at Gila until train is made up and engine and caboose on train, unless train is made up by crew making air test and handling the train from Gila.

PASSENGER TRAINS

RULE 39. Running air-brake test not required of eastward passenger trains approaching Crossing—AT&SFRy Wye.

Incoming passenger enginemen will leave automatic air brakes set on trains at Phoenix and Yuma after final stop has been made.

Outgoing enginemen will release brakes on signal from carmen, this signal to be given only after all switching has been done.

MISCELLANEOUS

1. Aztec and Sentinel, water for engine purposes is treated and must not be taken for domestic use except as follows:

Aztec, water rack, or by closing valve between treater and water column.

Sentinel, water rack.

Aztec, westward freight trains take water when possible and take water at Sentinel only when it will avoid delay west of there.

Sentinel, eastward freight trains take water and fill water car, and take water at Aztec only when necessary or when it will avoid delay at Sentinel.

Saddle and Buckeye, emergency water stations, take only enough water to reach next water station.

Open sprinklers on engines so equipped while passing over following bridges:

Ligurta Arroyo	761.82
Ligurta Creek	763.00
First Gila River	777.81
First Quail Springs	845.31
Second Quail Springs	845.89
Third Quail Springs.....	846.09
Fourth Quail Springs.....	846.34
Fifth Quail Springs	846.79
Hassayampa River	866.93
Agua Fria River	890.95

5. Litchfield, gate at entrance Airplane spur is locked with Government lock, and to gain entrance it will be necessary for engineer to sound a long and short blast of steam whistle and the watchman on duty will take care of the opening and closing of the gate.

Litchfield Park, Boswell spur is protected by gate, which must be kept closed and locked when not in use.

10. Engines must not use Seaside Oil Co. spur at Buckeye.

Derail on Government spur at Dateland, 360 feet west of main track switch.

Load limit (car and contents):

Yuma-Phoenix Yard	240,000 pounds
Wellton-Gila	240,000 pounds
Litchfield-Litchfield Park	210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

11. Phoenix, AT&SFRy and SP trains may jointly use tracks at east and west end of Union Station. Yard and light engines must take every precaution possible to avoid delaying first-class trains on all tracks within Union Station zone. Trains will approach switch at entrance to Union Station tracks prepared to stop and will proceed only when track is known to be clear.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description
778.0	Gila River bridge.....	Side
891.0	Agua Fria River bridge.....	Side

LOCATIONS WHERE SPEED BOARD RESTRICTIONS APPLY TO ONE OR MORE CURVES, STRUCTURES, OR EXTENDED SECTION OF TRACK

For Eastward Trains			For Westward Trains		
Location of Speed Board MP	Beginning of Restriction MP	End of Restriction MP	Location of Speed Board MP	Beginning of Restriction MP	End of Restriction MP
Between Yuma and Phoenix			Yard		
736.74	737.49	737.51	733.11	732.36	732.28
747.83	748.58	755.12	733.76	733.01	732.36
768.93	769.68	770.83	734.35	734.10	733.01
769.91	770.66	770.72	738.26	737.51	734.10
775.61	776.36	777.78	754.02	753.27	753.24
778.54	779.29	787.50	755.87	755.12	748.58
794.25	795.00	898.00	763.63	762.88	755.12
902.25	903.00	904.77	770.75	Over switches	
904.02	904.77	907.91	771.47	to Shell & Texaco spurs	
904.74	905.49	905.51	770.72	770.66	
906.68	907.43	907.45	771.76	(Th rough crosso ver)	
			771.01	776.00	
			778.53	777.78	776.36
			788.25	787.50	779.29
			898.75	898.00	795.00
			906.26	905.51	905.49
			908.20	907.45	907.43
			908.66	907.91	904.77
Between Wellton and Gila					
791.75	792.50	794.03	771.53	770.78	770.72
821.66	822.41	823.61	771.58	770.83	766.00
822.86	823.61	825.18	794.78	794.03	792.50
854.22	854.97	856.80	795.75	795.00	794.03
			800.75	800.00	795.00
			825.93	825.18	823.61
			857.55	856.80	854.97

SPEED RESTRICTIONS: Maximum speed of trains with engines of various classes is shown below. Trains with engines not listed must not exceed 35 MPH. Speed must be further restricted as required by speed boards, and may be exceeded only as authorized by special instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	WITH TRAIN — ENGINE RUNNING FORWARD										LIGHT ENGINE RUNNING FORWARD			ENGINE BACKING WITH TRAIN OR LIGHT				
	PASSENGER									*FREIGHT AND MIXED		DEP DEF T A Mt GS	DES 1 to 7 DES 100 to 107 T-26-32-37-40 Mk-5-6-7-8-9 F (if CCB) AC-4-5-6-7-8-9-10-11-12	M T-1-9-9-23-28-31-36-37-40 C-2-4-5-9-32 Mk-5-6-7-8-9 F (if not CCB) AC-4-5-6-7-8-9-10-11-12	DES-200 C-15-17-32 TW Mk-2-4-10-11 AC-1-2-3 AM MM	DES DEF E T P C	A Mk F Mt GS SP B	M AC AM MM
	DEP with Stream-lined GOLDEN STATE	DEP P-7-9-10-12 A Mt GS	DEF E P-1-3-4-5-6-11	T-26-32-37-40 AC-4-5-6-7-8-9-10-11-12	M T-1-9-9-23-28-31-36-37-40 Mk-5-6-7-8-9 F (if CCB) SP B (if CCB)	AM B (if not CCB)	DES 1 to 7 DES 100 to 107 9-10-18-19-26-27-28-29 TW Mk-2-4 F (if not CCB) AC-1-2-3	C-15-17-32 Mk-10-11 MM	With no Restricted Cars (see note)	With Restricted Cars (see note)								
	COLUMN:	A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Between Yuma and Phoenix Yard, except.....	75	70	65	60	50	45	40	35	50	40	45	40	35	30	30	25		
MP 731.75-733.01, except.....	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
Over Colorado River bridge until engine has passed spring switches.....	15	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
MP 733.01-MP 734.10 (Yuma).....	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
MP 734.10-MP 737.51 (end double track).....	60	60	60	60	50	45	40	35	40	40	40	40	35	30	30	25		
East Yard, eastward through spring switch, end double track.....	35	35	35	35	35	35	35	35	35	35	35	35	35	30	30	25		
MP 748.58-MP 755.12, except.....	40	40	40	40	40	40	40	35	35	35	35	35	35	30	30	25		
Dome, westward through spring switch, end double track.....	35	35	35	35	35	35	35	35	35	35	35	35	35	30	30	25		
MP 755.12-MP 762.88.....	50	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 762.88-MP 769.68 (Wellton).....	60	60	60	60	50	45	40	35	40	40	40	40	35	30	30	25		
Wellton, through interlocking limits, except.....	50	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
Over switches to Texas Co. and Shell Co. spurs.....	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25		
Through east crossovers.....	25	25	25	25	25	25	25	25	20	20	20	20	20	20	20	20		
MP 770.83-MP 771.01.....	50	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 776.36-MP 777.78.....	55	55	55	55	50	45	40	35	40	40	40	40	35	30	30	25		
MP 796.00-MP 809.21.....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 811.81-MP 817.00.....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 820.14-MP 845.70.....	65	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 845.70-MP 847.50.....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 847.50-MP 887.40.....	65	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 887.40-MP 887.65.....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 887.65-MP 890.52.....	65	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 890.52-MP 890.80.....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 890.80-MP 893.50.....	65	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 893.50-MP 894.50.....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 894.50-MP 898.00.....	65	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25		
MP 903.00-MP 904.77.....	40	40	40	40	40	40	40	35	25	25	25	25	25	25	25	25		
MP 904.77-MP 907.91 (end double track) except.....	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20		
Over spring switch, MP 905.49.....	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
Over spring switch, end double track, MP 907.45.....	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
Between Wellton and Gila, except.....	..	70	65	60	50	45	40	35	50	40	45	40	35	30	30	25		
MP 792.50-MP 794.03.....	..	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25		
MP 794.03-MP 795.00.....	..	50	50	50	50	45	40	35	35	35	35	35	35	30	30	25		
MP 795.00-MP 800.00.....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25		
MP 822.41-MP 823.61.....	..	50	50	50	50	45	40	35	35	35	35	35	35	30	30	25		
MP 823.61-MP 825.18.....	..	45	45	45	45	45	40	35	35	35	35	35	35	30	30	25		
MP 825.18-MP 854.97 (Gila).....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25		
MP 854.97-MP 856.80 (Gila).....	..	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25		

*Freight and mixed trains with an engine listed in columns 5, 6 or 7 must not exceed maximum speed permitted the same engine when handling passenger train.

(Note) RESTRICTED CARS: Twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed permitted with Certain Equipment"; scale test cars; and cars with arch-bar trucks.

When electro-pneumatic brakes are inoperative, maximum speed of 75 MPH shown in Column A, and permissible speed as indicated on round yellow SIGNAL speed boards, must be reduced by 5 MPH.

DES 1 to 7 and DES 100 to 107 may make maximum of 40 MPH in territory where 30 MPH is authorized in Column 14.

TERRITORY	PASSENGER	FREIGHT AND MIXED	LIGHT ENGINE RUNNING FORWARD	ENGINE BACKING WITH TRAIN OR LIGHT
Between Litchfield and Litchfield Park.....	20	20	20	15

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS	With Caution Not Exceeding MPH
Through sidings, yard and other side-tracks, crossovers, turnouts and slip-switches, except:.....	15
*Over, upon, or across any street crossing, Yuma	5
On Government tracks at Yuma airport.....	10
" (with engine backing)....	5
Through any crossover, turnout or slip-switch with engine backing.....	10

*Regulated by city ordinance.

SPECIAL INSTRUCTIONS—WELLTON SUBDIVISION

WELLTON SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Yuma to East Yard Pembroke to Mohawk Lava to Sentinel	East Yard to Pembroke Mohawk to Lava Sentinel to Gila Wellton to Saddle 2 M W Gillette to Phoenix Yard	Saddle to 2 M W Gillette	Gila to Kim, Mohawk to Blaisdell Fortuna to Yuma Phoenix Yard to 2 M W Crag 2 M W Gillette to Wellton	Blaisdell to Fortuna 2 M W Crag to 2 M W Gillette	Kim to Mohawk
DEP-4	6000 to 6004	5600	7500	3500	7500	6400	4350
DEF-1	6100 to 6119	15200	11200	9550	20000	14500	10350
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	.....	.....	.....	.....	.....	.....
DES-100 to 107	1300 to 1395	.....	.....	1600	.....	.....	.....
E-23	1500 and 1502	1950	2300	1400	3300	2300	1600
M-4	1617 to 1713	2550	2900	1900	4300	2900	2100
M-6, 8	1721 to 1803, 1823 to 1825	3050	3600	2250	5000	3600	2500
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	3250	3800	2400	5300	3800	2650
M-11	1832 to 1835	3350	3950	2500	5500	3950	2750
T-1	2242 to 2271	2250	2600	1650	3700	2600	1800
T-8, 9,	2161, 2174 and 2178	1600	1850	1150	2650	1850	1300
T-23	2301 to 2310	3200	3750	2350	5300	3750	2650
T-26	2283 to 2299	2800	3250	2050	4700	3250	2300
T-28, 31	2311 to 2362	3550	4150	2600	5850	4150	2900
T-32, 40	2363 to 2384	3600	4200	2650	5950	4200	2950
T-36	2103	2400	2750	1750	3950	2750	1950
T-37	2105 and 2106	3100	3700	2300	5200	3700	2550
T-57, 58	2385 and 2386	2900	3400	2150	4800	3400	2400
P-1, 3, 5	{2408, 2411 to 2413, 2416 to 2418, 2423, 2425 to 2435, 2437 to 2452, 2459 and 2460}	2800	3300	2000	4650	3300	2250
P-1	2400, 2403 to 2407 and 2415	3050	3500	2200	5050	3500	2450
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	3150	3700	2300	5250	3700	2600
P-6	2453, 2454 and 2458	3600	4150	2600	5950	4150	2950
P-7	2476 and 2477	3850	4450	2800	6350	4450	3150
P-8, 10	2461 to 2474, 2478 to 2483	3950	4600	2850	6600	4600	3200
P-8, 10	2475, 2484 to 2491	4200	4850	3050	6950	4850	3400
P-11	3100 to 3109	3100	3600	2250	5150	3600	2550
P-12	3120 to 3129	4000	4700	2900	6700	4700	3300
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	3900	4600	2900	6500	4600	3250
C-15, 32	2500, 2505 to 2507	2500	2900	1850	4150	2900	2050
C-17	2510 and 2511	3100	3600	2300	5050	3600	2550
C-18	3400 to 3409	3600	4200	2650	5900	4200	2950
C-19	3410 to 3426	3750	4350	2750	6150	4350	3100
TW-1	2900 to 2913	3000	3450	2200	4900	3450	2450
TW-2, 3	2932 to 2952	2400	2750	1750	3950	2750	1950
TW-4, 6	2926 to 2931 and 2957	2250	2650	1650	3750	2650	1850
TW-8	2914 to 2923	3300	3850	2450	5450	3850	2700
A-3	3029	2250	2650	1650	3800	2650	1850
A-3	3025, 3036, 3052 and 3057	2350	2750	1700	4000	2750	1900
A-6	3000 to 3003	2750	3250	2000	4650	3250	2250
Mk-2, 4	3201 to 3240	4500	5200	3300	7300	5200	3600
Mk-5, 6	3241 to 3277	5000	5750	3600	8100	5750	4000
Mk-7, 8, 9	3300 to 3324	5500	6350	4000	8900	6350	4500
Mk-10	3295	4200	4900	3100	6900	4900	3450
Mk-11	3297 and 3298	4050	4700	3000	6650	4700	3350
F-1	3600 to 3652	5700	6700	4200	9300	6700	4700
F-3	3653 to 3667	6500	7600	4800	10800	7600	5400
F-4, 5	3668 to 3769	6700	8000	5000	11500	8000	5600
AM-2	3900 to 3911	6550	7550	4800	10700	7550	5350
MM-3	3930 and 3931	7600	8800	5600	12500	8800	6200
AC-1, 2, 3	4000 to 4048	7900	9150	5850	12950	9150	6500
AC-4, 5	4100 to 4125	10300	11950	7650	14000	11950	8500
AC-6 to 12	3800 to 3811, 4126 to 4294	10500	12000	8000	14000	12000	8800
Mt-1, 3, 4, 5	4300 to 4376	5400	6400	3850	9000	6400	4350
Mt-2	4385 to 4390	5600	6600	4000	9300	6600	4500
GS-1, 2	4400 to 4415	5650	6600	4100	9450	6600	4600
GS-3, 4, 5, 6	4416 to 4469	6000	7000	4300	9700	7000	4800
SP-1, 2, 3	5000 to 5048	7600	8800	5600	12500	8800	6200
Allowance for Empty and Underloaded Cars	Less than 45 Ms.	6	6	6	6	6	6
	45 Ms to 55 Ms	3	3	3	3	3	3
	More than 55 Ms.	0	0	0	0	0	0

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULES 10 (G) and 10 (H). On No. 1 and No. 2 track between Park Ave., Tucson, and Polvo, signals will be placed on left of track in direction of movement.

RULE 10 (J). Speed board to left of track eastward at MP 974.8 reads 65-40.

RULE 14 (d). As specified below, — — — — o sounds of whistle will be indication that flagman may return from west as prescribed by Rule 99:

- Phoenix Yard—Kendall, Trains on Second Main Track.
- Normal Jct., Trains on Creamery Branch.
- Picacho Jct., Trains on Phoenix line.

RULE 14 (e). As specified below, — — — — — sounds of whistle will be indication that flagman may return from east as prescribed by Rule 99:

- Kendall—Phoenix Yard, Trains on Second Main Track.
- Tempe, Trains on Creamery Branch.
- Tempe Jct., Trains on Tempe Branch.
- McQueen, Trains on Christmas Branch.
- T&NRR Jct., Trains on Nogales Branch.

RULE 21 (C). At Phoenix, Gila and Tucson, incoming engines may display indicators until arrival at roundhouse.

RULE 82 (A). Unless otherwise instructed, crews arriving Phoenix on eastward first-class trains, will assume same schedule at Phoenix on Picacho Subdivision and obtain clearance at Phoenix Yard instead of Phoenix. This clearance must bear O.K. and initials of Chief Train Dispatcher.

RULE 83. Identification may be made on double track between Stockham and Tucson; Phoenix and Phoenix Yard; to be applied at end of double track; and on second main track between Phoenix Yard and Kendall, to be applied at Kendall. Reduce speed sufficiently to permit identification and Rule 14 (k) will apply.

RULE 83 (A). At the following stations, only trains indicated will register:

- Phoenix. First-class trains, except No. 370.

RULE 83 (B). At open train-order offices trains may register by ticket as follows:

- Phoenix Yard. First-class trains, except No. 370.

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
900.96	Phoenix	908.79
914.23	Tempe	915.39
	(Creamery Br.)	915.55
920.45	Mesa	922.88
979.23	Picacho Jct.	938.16
936.11	(Gila Line)	
981.96	Tucson (No. 2 Track)	989.00
	(No. 1 Track—Rio Grande Div.)	988.09
	(Nogales Br.)	987.42
854.20	Gila	857.70
917.32	Casa Grande	920.05
986.84	Ray Jct.	988.72
998.80	Hayden Jct.	1004.90
1046.37	Nogales	1049.89

RULE 95. Sections of eastward schedules may be authorized by telegram from Chief Train Dispatcher, for movement from Phoenix to Phoenix Yard, where train-order authority will be received.

RULE 97. Extra trains must not run via Creamery Branch unless train order so specifies.

RULE D-97 (A). Will apply between Phoenix and Phoenix Yard.

RULE 99. First-class trains standing on passenger tracks at Phoenix, and passenger tracks 1, 2 and 3 at Tucson must comply with Rule 99 (A).

- RULE 99 (C).** Will apply as follows:
Christmas Branch between McQueen and Hayden Jct.

- RULE 103 (A).** A flagman must precede all movements over:
Tovrea, Washington St.
Tempe (Creamery Branch), Mill Ave. and 8th St.
Naviska, U. S. Highway 84.
Tucson, West Congress St.,
 " South 6th Ave.,
 " Simpson St.
Sahuarita, Nogales Highway.
Nogales, Court and Park Sts.

RULE 103 (B). Back-up hose must be used when making back-up movements with freight or passenger cars between North and South yards and/or P.F.E. yard, Tucson.

Back-up hose must be used on leading car when shoving cars on Government tracks at airports at Naviska and Higley, and on Eagle-Picher spur at Sahuarita.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

- Phoenix..... Switch in eastward main track, immediately west of First Avenue, Phoenix, from main track to eastward main track.
- Phoenix..... West end double track, for westward track.
- Kendall..... Second main track, for first main track.
- Picacho Jct.... Phoenix line, for Gila line. Operators will handle switches to and from Phoenix line, also for movements through crossovers, and west switches of north and south sidings.
- Magma..... Magma-Arizona RR main track, for back track.
- McQueen..... Christmas Br., for Phoenix line.
- Ray Jct..... KCCRR main track, for yard track.
- Hayden Jct.... Christmas line, for KCCRR line.
- Tucson..... Nogales Br., via Shop Yard, for Track No. 1.
- Tempe..... Creamery Br., for Phoenix line.
- Normal Jct.... Creamery Br., for Phoenix line.
- Tempe Jct.... Tempe Br., for Phoenix line.
- T&NRR Jct.... T&NRR wye track, for Track No. 1.

- Derails in main track:
Christmas, 250 feet east of west switch.
Nogales, 221 feet west of west switch, may be trailed through by eastward trains.

RULE 105. Following tracks are designated for use as sidings:

- Mesa..... Track south of main track.
- Picacho Jct.... Track north of main track is north siding.
 Track south of main track is south siding.
 Westward trains required to take siding will use south siding, unless otherwise directed by Letter type indicator on Signal 9385.
- Red Rock..... Track north of main track is eastward siding;
 Track south of main track is westward siding.
- Jaynes..... Track north of main track is westward siding;
 Track south of main track is eastward siding.

RULE 204. Trains of Wellton and Picacho Subdivisions with the same conductor operating through Phoenix may be issued train orders on one subdivision that affect their movement on either or both subdivisions, and these orders must be delivered by engineer to relieving engineer.

RULE 221. Wellton Subdivision trains originating at Phoenix must obtain clearance at Phoenix Yard instead of Phoenix.

Trains must obtain clearance before leaving Tempe on Creamery Branch.

Stockham is train-order office for westward trains only and is open continuously. Signal arm for eastward movement has been removed.

RULE D-251. Applies to the following tracks:

- Both tracks between Phoenix and Phoenix Yard.
- No. 1 Track from PFE yard to end of No. 1 Track, Tucson, and westward track from Sixth Ave. interlocking to Stockham. Extra trains and engines must receive proceed signal from yardman (white flag by day, green light by night) before leaving PFE yard, and before passing Park Ave., Signal 9843, and Sixth Ave.

RULE 505. AUTOMATIC BLOCK SYSTEM

Phoenix. Main track has no block signal protection between Signal 9061 and end of double track; and double track has no block signal protection from west end to Signal 9064.

Picacho Jct. Upper unit in Signal 9377 governs movement on main track; Middle unit for north siding; Lower unit for south siding. Signal 9374 will require a two-minute interval to clear after switch on north siding is lined for movement to main track if it is desired to make an eastward movement from north siding ahead of eastward train on main track or eastward train occupying approach circuit on south siding.

Tucson: Passenger tracks 1, 2 and 3 between end of double track at MP 983.66 and Signal 9838 on Track No. 2 have no block signal control.

Westward trains must not pass east crossover switch opposite Signal 9838, just east of Tucson yard office without proceed signal from yardman, (white flag by day, green light by night) unless this switch is lined for movement on Passenger track 1.

Trains and engines finding Signal 9843 indicating "stop" may proceed into passenger tracks 2 or 3 if switches are properly lined and proceed signal from yardman (white flag by day, green light by

night) is received. Such proceed signal from yardman will authorize trains or engines to pass Signal 9843 without stopping, but must move with caution, not exceeding 12 MPH.

Westward freight trains must receive proceed signal from yardman (white flag by day, green light by night) before passing Signal 9875, and at first crossover switch west of Signal 9851.

Eastward freight trains, after passing Sixth Ave. tower and before entering freight yard, must receive proceed signal from yardman (white flag by day, green light by night).

PUSH BUTTONS

Push button and light on side of relay case on Signals P-9112 at Kendall, P-9376 and P-9378 at Picacho Jct.; P-9776 and P-9778 at Jaynes; P-8741 at Estrella.

RULE 510. The following block signals equipped with triangular number plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
P- 9052	Spring switch, west end passenger lead, Phoenix . . .	P- 9075
	Spring switch, east end double track, Phoenix Yard . . .	
P- 9376 } P- 9378 }	Spring switch, east end south siding, Picacho Jct. . .	P- 9377
	Spring switch, east end siding, Ocatilla	P- 9411
	Spring switch, east end siding, Wymola	P- 9445
	Spring switch east end eastward siding, Red Rock . . .	P- 9521
	Spring switch, east end siding, Naviska	P- 9587
	Spring switch, east end siding, Rillito	P- 9673
	Spring switch, east end siding, Cortaro	P- 9725
P- 9776 } P- 9778 }	Spring switch, east end eastward siding, Jaynes . . .	P- 9777
P- 9810	Spring switch, end double track, Stockham	P- 9813
P- 8648	Spring switch, west end siding, Bosque	
P- 8740	Spring switch, west end siding, Estrella	{ P- 8739 P- 8741
P- 8828	Spring switch, west end siding, Mobile	
P- 9072	Spring switch, west end siding, Bon	
P- 9176	Spring switch, west end siding, Casa Grande	
	Spring switch, east end siding, Casa Grande	P- 9191
P- 9276	Spring switch, west end siding, Toltec	

RULE 516. Overlap posts:

McQueen	Middle of Siding	Westward trains.
Papago	Middle of Siding	Eastward trains.
Papago	Middle of Siding	Westward trains
Cortaro	Middle of Siding	Westward trains.

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while trailing through the switches:

Location	Normal Position
Picacho Jct.	East end south siding Main track
Ocatilla	East end siding Main track
Wymola	East end siding Main track
Red Rock	East end eastward siding Main track
Naviska	East end siding Main track
Rillito	East end siding Main track
Cortaro	East end siding Main track
Jaynes	East end eastward siding Main track
Stockham	End double track Eastward track
Bosque	West end siding Main track
Estrella	West end siding Main track
Mobile	West end siding Main track
Bon	West end siding Main track
Casa Grande	West end siding Main track
Casa Grande	East end siding Main track
Toltec	West end siding Main track

Spring switches not equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while passing over them in facing movement, or in trailing through them:

Location	Normal Position
Phoenix	Main track at passenger lead . . . Passenger lead
Phoenix Yard	East end double track Westward track

Spring switches are also located on engine leads at Tucson; and on stem of wye at Estrella, and in main track at Nogales 221 feet west of west switch.

RULE 605. INTERLOCKING

Picacho Jct. Limits extend from eastward SA signals 300 ft. west of station on Phoenix line and 730 ft. west of station on Gila line, to westward SA signals 400 ft. east of station on north siding, 700 ft. east of station on main track, and 560 ft. east of station on south siding. North and south sidings are in automatic block system.

An eastward train restricted at Picacho Jct. for an opposing train, may accept proceed indication in eastward interlocking signal as authority to move on main track to fouling point at east end north siding.

Tucson, Sixth Ave.: Limits extend from point opposite Signal 9835 on both main tracks, to end of double track, and on passenger track 1 to dwarf signal 7 feet west of west switch of passenger track 2, and on freight lead to dwarf signal 10 feet east of Sixth Ave. tower, and on middle track to dwarf signal 230 feet west of east switch, and on Independent Ice lead to dwarf signal 240 feet west of Sixth Ave. tower.

Signals prescribed by Rule 628 may be given from tower window.

Whistle signals:

Eastward passenger trains approaching tower o — o.

Eastward freight trains approaching tower — o —.

Independent Ice lead to westward track —.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

Illuminated Letter	On Signal	Approaching	Authorizes and requires movement as follows:
M	9316	Eloy	Proceed to east end siding.
S	9316	Eloy	Enter siding.
M	9349	Eloy	Proceed to west end siding.
S	9349	Eloy	Enter siding.
M	9385	Picacho Jct.	Proceed to train-order office.
SS	9385	Picacho Jct.	Enter south siding.
NS	9385	Picacho Jct.	Enter north siding.

Indicator on post 300 feet east of 22nd St., Nogales Branch, Tucson. When letter W is illuminated westward trains, except No. 379 and freight trains of 15 cars or less, must stop east of 22nd St. When yellow light is displayed train is authorized to proceed to Park Ave. yard office.

GENERAL REGULATIONS

RULE 824. Instructions for setting hand brakes:

Phoenix Yard: Freight trains	Two brakes on west end, Two brakes on east end.
Tucson: Passenger trains	Two brakes on west end, Two brakes on east end.
Freight trains	Fifteen brakes on west end, Ten brakes on east end.
Tucson, PFE Yard: Freight trains	Fifteen brakes on west end, Ten brakes on east end.

At Tucson hand brakes on passenger trains are to be set after engine is spotted for oil. If necessary to detach engine after these hand brakes have been released, employ before detaching engine must see that sufficient hand brakes have again been set.

Hand brakes must be securely set on all cars left at Eagle-Picher plant, Sahuarita. Cars must not be left west of derail.

RULE 827. TRAIN INSPECTION

Freight trains must be inspected at each water stop. When conditions are favorable, and in the judgment of conductor and engineer it is safe to do so, and when additional stops can thereby be avoided, freight trains may run between water stops without stopping for inspection, provided the distance is not over 60 miles, except freight trains and light engines may run between Tucson and Maricopa and trains handled by DEF class engines may run Gila to Casa Grande, for inspection. This does not relieve trainmen from making inspection when stops permit, or whenever it is necessary in the judgment of conductor or engineer. On branch lines distance of 40 miles must not be exceeded.

AIR BRAKE RULES

RULE 17. One retainer for each 120 Ms must be turned up from Eagle-Picher plant to Santa Cruz River bridge, on spur from Sahuarita.

FREIGHT TRAINS

RULE 22. Trainmen must not couple air hose on outgoing freight trains at Gila until train is made up and engine and caboose on train, unless train is made up by crew making air test and handling the train from Gila.

RULE 25. Freight trains may pass Estrella westward without stopping for purpose of rear end air test if proceed signal is given from rear by trainmen, after complying with Air Brake Rule 4, and air gage indicates required air brake pressure. Speed approaching summit must not exceed 15 MPH.

If proceed signal is not given or received, train must stop and rear end air test be made.

Air brakes must be used, and rear end test made on all movements on Eagle-Picher spur, Sahuarita.

PASSENGER TRAINS

RULE 39. Incoming passenger engines will leave automatic air brakes set on trains at Tucson and Phoenix after final stop has been made.

Outgoing engines will release brakes on signal from carmen, this signal to be given only after all switching has been done.

MISCELLANEOUS

1. Casa Grande, Florence, Mesa, Amado and Hayden Jct., water for engine purposes is treated and must not be taken for domestic use until treater has been shut off.

Maricopa, eastward and westward freight trains take water, and if necessary, fill water car.

Open sprinklers on engines so equipped while passing over following bridges:

Salt River	913.93
Second Gila River.....	959.12
Rillito Creek	975.95

5. Tovrea, entrance to Tovrea Packing Co. plant is protected by gates, which must be kept closed and locked when not in use. Look out for rubbish and material alongside tracks around plant.

Coolidge, gate at entrance to Indian Service spur must be kept closed and locked when not in use.

Tucson, PFE yard, look out for ice and rubbish alongside PFE tracks.

10. Engines must not use spur at Burns.

Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
Engines over 210,000 lbs. on drivers.....	Tempe Tempe Milling Co. spur; Phoenix Mill spur; Gravel pit spur; Tracks 2 and 3.
Engines over 210,000 lbs. on drivers.....	Mesa..... McKellips spur; Standard Oil spur; Texas Oil spur; Shell Oil spur; Independent Cotton and Oil spur; Mutual Cotton Oil spur; Union Oil spur; Mesa Milling Co.
Mk-Mt-GS-F-SP-AM-MM-AC.....	Kendall River track east of spur.
"	Magma..... Spur.
"	Creamery Br... All spurs.
"	Creamery... Track east of Creamery plant.
Engines over 210,000 lbs. on drivers.....	Tempe Br... All Sidings and spurs.
Mt-Mk-7-8-9-GS-F-SP-AM-MM-AC	Creamery Br... Main track.
"	Tempe Br... Main track.
All	Sahuarita ... Across Eagle-Picher ore bins.

Trains with engines too large to turn on wye at Nogales (larger than C class) must turn on wye at Calabasas on eastward trip.

Load limit (car and contents):

Phoenix-Tucson	240,000 pounds
Gila-Picacho Jct.	240,000 pounds
McQueen-Christmas	210,000 pounds
Tempe-Normal Jct. via Creamery	210,000 pounds
Tempe Jct.-West Chandler	210,000 pounds
Tucson-Nogales	210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description
PHOENIX - TUCSON		
914.0	Salt River bridge..... Side
959.3	Gila River bridge..... Side
983.9	Tucson.....	Car repair shed..... Side
984.4	Tucson	Base of Signal 9844..... Side
CHRISTMAS BRANCH		
963.96	Rock cut..... Side
964.1	Rock cut..... Side
965.56	Rock cut..... Side
971.30	to
971.77	Rock cuts..... Side
972.4	Tunnel No. 1..... Side and Overhead
972.5	Gila River bridge..... Side
973.0	Rock cut..... Side
973.04	Rock cut..... Side
973.07	Rock cut..... Side
976.0	to
977.0	Rock cuts..... Side
980.0	to
982.0	Rock cuts..... Side
983.5	Rock cut..... Side
985.3	Gila River bridge..... Side
985.5	Rock cut..... Side
987.8	Ray Jct.....	Water tank and spout..... Side
988.3	Rock cut..... Side
988.5	Tunnel No. 2..... Side and Overhead
990.0	Tunnel No. 3..... Side and Overhead
992.3	Rock cut..... Side
997.4	Rock cut..... Side
998.8	Hayden Jct.	Water column..... Side
1006.5	Rock cut..... Side
1009.2	Tunnel No. 4..... Side and Overhead
NOGALES BRANCH		
988.3	Tucson	Loading chute..... Side

LOCATIONS WHERE SPEED BOARD RESTRICTIONS APPLY TO ONE OR MORE CURVES, STRUCTURES, OR EXTENDED SECTION OF TRACK

For Eastward Trains			For Westward Trains		
Location of Speed Board MP	Beginning of Restriction MP	End of Restriction MP	Location of Speed Board MP	Beginning of Restriction MP	End of Restriction MP
904.02	904.77	907.91	906.26	905.51	905.49
904.74	905.49	905.51	908.20	907.45	907.43
906.68	907.43	907.45	908.66	907.91	904.77
911.99	912.74	913.77	909.54	908.79	907.91
913.02	913.77	915.31	916.06	915.31	913.77
919.70	920.45	921.10	916.54	915.79	915.31
920.35	921.10	922.07	922.82	922.07	921.10
927.82	928.57	929.57	923.98	923.23	922.07
944.74	945.49	946.80	930.32	929.57	928.57
978.57	979.32	979.75	947.55	946.80	945.49
			972.93	972.18	946.80
			937.57	936.82	979.32
			937.57	(Phoenix line) 936.82	936.55
				(Gila line)	
981.16	981.91	982.73	981.73	980.98	980.95
981.98	982.73	985.31			
854.22	854.97	856.80	857.55	856.80	854.97
866.23	866.98	867.85	870.87	870.12	867.85
867.10	867.85	870.12	875.23	874.48	870.12
885.61	886.36	898.00	898.75	898.00	886.36
917.65	918.40	919.24	919.99	919.24	918.40
935.80	936.55	936.82	937.57	936.82	936.55

SPEED RESTRICTIONS: Maximum speed of trains with engines of various classes is shown below. Trains with engines not listed must not exceed 35 MPH. Speed must be further restricted as required by speed boards, and may be exceeded only as authorized by special instructions herein, or by timetable bulletin.
 All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and **INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.**

TERRITORY	WITH TRAIN — ENGINE RUNNING FORWARD										LIGHT ENGINE RUNNING FORWARD			ENGINE BACKING WITH TRAIN OR LIGHT					
	PASSENGER										*FREIGHT AND MIXED		DEP DEF E P A Mt GS	DES 1 to 7 DES 100 to 107 T-26-32-37-40 Mk-5-6-7-8-9 F (if CCB) AC-4-5-6-7-8-9-10-11-12	M T-1-8-9-23-28-31-36-57-58 C-2-4-5-8-9-10-18-19-19-26-27-28-29 TW Mk-2-4-10-11 AC-1-2-3 AM MM	DES-200 C-15-17-32 TW Mk-2-4-10-11 AC-1-2-3 AM MM	DES DEF E T P C TW	A Mk F Mt GS SP B	M AC AM MM
	DEP with Stream-lined GOLDEN STATE	DEP P-7-8-10-12 A Mt GS	DEF P-1-3-4-5-6-11	T-26-32-37-40 AC-4-5-6-7-8-9-10-11-12	M T-1-8-9-23-28-31-36-57-58 Mk-5-6-7-8-9 F (if CCB) SP B (if CCB)	AM B (if not CCB)	DES 1 to 7 DES 100 to 107 C-2-4-5-8-9-10-18-19-26-27-28-29 TW Mk-2-4 F (if not CCB) AC-1-2-3	C-15-17-32 Mk-10-11 MM	With no Restricted Cars (see note)	With Restricted Cars (see note)									
	COLUMN:	A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Between Phoenix and Picacho Jct., except.....	75	70	65	60	50	45	40	35	50	40	45	40	35	30	30	25			
MP 904.77-MP 907.91 (end double track) except.....	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20			
Over spring switch, MP 905.49.....	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15			
Over spring switch, end double track, MP 907.45....	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15			
MP 907.91-MP 908.79 (yard limit).....	40	40	40	40	40	40	40	35	25	25	25	25	25	25	25	25			
MP 908.79-MP 912.74.....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25			
MP 912.74-MP 913.77 (Tempe).....	40	40	40	40	40	40	40	35	25	25	25	25	25	25	25	25			
*MP 913.77-MP 915.31 (Tempe city limits).....	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20			
MP 915.31-MP 915.79.....	40	40	40	40	40	40	40	35	25	25	25	25	25	25	25	25			
MP 915.79-MP 920.45 (Yard limit).....	60	50	50	50	50	40	40	35	35	35	35	35	35	30	30	25			
MP 920.45-MP 921.10 (west wye switch Mesa).....	40	40	40	40	40	40	40	35	25	25	25	25	25	25	25	25			
MP 921.10-MP 922.07 (east switch Mesa).....	25	25	25	25	25	25	25	25	20	20	20	20	20	20	20	20			
MP 922.07-MP 923.23.....	40	40	40	40	40	40	40	35	25	25	25	25	25	25	25	25			
MP 923.23-MP 928.57.....	60	50	50	50	50	45	40	35	35	35	35	35	35	30	30	25			
MP 928.57-MP 929.57 (Chandler city limits).....	40	40	40	40	40	40	40	35	35	35	35	35	35	30	30	25			
MP 929.57-MP 945.49.....	65	60	60	60	50	40	40	35	50	35	45	40	35	30	30	25			
MP 945.49-MP 946.80.....	60	55	55	55	50	40	40	35	45	35	45	40	35	30	30	25			
MP 950.74-MP 972.18.....	65	60	60	60	50	45	40	35	50	40	45	40	35	30	30	25			
MP 979.32-MP 979.75 (junction switch).....	25	25	25	25	25	25	25	25	20	20	20	20	20	20	20	20			
Between Picacho Jct. and Tucson, except.....	75	70	65	60	50	45	40	35	50	40	45	40	35	30	30	25			
MP 936.55-MP 936.82 (interlocking limits).....	25	25	25	25	25	25	25	25	20	20	20	20	20	20	20	20			
Stockham, westward through spring switch, end double track.....	35	35	35	35	35	35	35	35	35	35	35	35	35	30	30	25			
MP 981.91-MP 982.73.....	40	40	40	40	40	40	40	35	30	30	20	20	20	20	20	20			
MP 982.73-MP 985.31 (Tucson).....	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20			
Between Gila and Picacho Jct., except.....	..	70	65	60	50	45	40	35	50	40	45	40	35	30	30	25			
MP 854.97-MP 856.80 (Gila).....	..	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25			
MP 856.80-MP 866.98.....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25			
MP 866.98-MP 867.85.....	..	50	50	50	50	45	40	35	35	35	35	35	35	30	30	25			
MP 867.85-MP 870.12.....	..	30	30	30	30	30	30	30	30	30	30	30	30	30	30	25			
MP 870.12-MP 874.48 (Estrella).....	..	50	50	50	50	45	40	35	35	35	35	35	35	30	30	25			
MP 874.48-MP 886.36.....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25			
MP 886.36-MP 898.00.....	..	50	50	50	50	45	40	35	35	35	35	35	35	30	30	25			
MP 936.55-MP 936.82 (Picacho Jct.).....	..	25	25	25	25	25	25	25	20	20	20	20	20	20	20	20			
Between Phoenix Yard and Kendall on second main track, except.....	..	..	..	..	..	..	..	..	25	25	25	25	25	25	25	25
MP 911.01-MP 911.38.....	..	..	..	..	..	..	..	..	20	20	20	20	20	20	20	20

SPECIAL INSTRUCTIONS — PICACHO SUBDIVISION

*Regulated by city ordinance.
 *Freight and mixed trains with an engine listed in columns 5, 6 or 7 must not exceed maximum speed permitted the same engine when handling passenger train.
 (Note) RESTRICTED CARS: Twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed permitted with Certain Equipment"; scale test cars; and cars with arch-bar trucks.
 When electro-pneumatic brakes are inoperative, maximum speed of 75 MPH shown in Column A, and permissible speed as indicated on round yellow SIGNAL speed boards, must be reduced by 5 MPH.
 DES 1 to 7 and DES 100 to 107 may make maximum of 40 MPH in territory where 30 MPH is authorized in Column 14.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS		With Caution Not Exceeding MPH
Through sidings, yard and other side-tracks, crossovers, turnouts and slip-switches, except:.....		15
On PFE yard tracks 1 to 7 inc., Tucson.....		6
On Government tracks at Naviska and Higley airports.....		10
(with engine backing).....		5
On sidings on Nogales Branch.....		8
On Calabasas wye.....		10
On Eagle-Picher spur, Sahuarita.....		10
(with engine backing).....		5
Through any crossover, turnout or slip-switch with engine backing.....		10

SPEED RESTRICTIONS: Maximum speed of trains is shown below. Speed must be further restricted as required by speed boards, and may be exceeded only as authorized by special instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	PASSENGER	FREIGHT AND MIXED	LIGHT ENGINE RUNNING FORWARD	ENGINE BACKING WITH TRAIN OR LIGHT
Between McQueen and Christmas, except.....	30	30	30	20
MP 923.89-MP 924.08.....	25	25	25	20
MP 955.93-MP 956.07.....	25	25	25	20
MP 964.28-MP 964.54.....	20	20	20	20
MP 968.79-MP 988.24.....	15	15	15	15
MP 938.24-MP 999.53.....	25	25	25	20
MP 999.53-MP 1000.64 (Hayden Jct.).....	15	15	15	15
MP 1000.64-Christmas.....	10	10	10	10
Between Tempe and Normal Jct. via Creamery.....	20	20	20	20
Between Tempe Jct. and West Chandler.....	20	20	20	20
Between Tucson and Nogales, except.....	35	25	20	20
MP 984.04-MP 985.81 (Tucson city limits).....	15	15	15	15
MP 985.81-MP 987.42 (Tucson yard limits).....	20	20	20	20
MP 987.42-MP 1039.80 with Mk or F-1 class engine..	20	20	20	20
MP 1039.80-MP 1046.37 with Mk or F-1 class engine.	25	25	25	20
*Within Nogales yard limits.....	20	20	20	20

*Regulated by city ordinance.

PICACHO SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Marcopa to Tucson Phoenix to Picacho Jct.	Gila to Estrella	Estrella to Marcopa Tucson to Marcopa Estrella to Gila Picacho Jct. to Phoenix	Marcopa to Estrella	McQueen to Christmas	Christmas to McQueen	Tucson to Calabasas	Calabasas to Nogales	Nogales to Tucson
DEP-4	6000 to 6004.....	6400	3500	7500	5600	....	....	....	....	....
DEF-1	6100 to 6119.....	18200	9550	20000	19000	....	....	....	....	....
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022.....	....	....	....	....	....	....	....	....	....
DES-100 to 107	1300 to 1395.....	....	1600	....	....	....	....	....	....	....
E-23	1500 and 1502.....	2300	1400	3300	2300	2450	2950	1550	1450	2550
M-4	1617 to 1713.....	2900	1900	4300	2900	3150	3750	2100	1950	3400
M-6, 8	1721 to 1803, 1823 to 1825.....	3600	2250	5000	3600	3800	4550	2500	2300	4000
M-9, 11	1804 to 1822, 1826 to 1831 and 1836.....	3800	2400	5300	3800	4100	4900	2650	2450	4200
M-11	1832 to 1835.....	3950	2500	5500	3950	4250	5100	2750	2550	4400
T-1	2242 to 2271.....	2600	1650	3700	2600	2750	3300	1800	1650	2900
T-8, 9	2161, 2174 and 2178.....	1850	1150	2650	1850	2000	2400	1250	1150	2050
T-23	2301 to 2310.....	3750	2350	5300	3750	4000	4750	2600	2400	4200
T-26	2283 to 2299.....	3250	2050	4700	3250	3500	4200	2250	2100	3650
T-28, 31	2311 to 2362.....	4150	2600	5850	4150	....	....	....	....	....
T-32, 40	2363 to 2384.....	4200	2650	5950	4200	....	....	....	....	....
T-36	2103.....	2750	1750	3950	2750	2950	3550	1950	1800	3100
T-37	2105 and 2106.....	3700	2300	5200	3700	3700	4400	3100	2350	3700
T-57, 58	2385 and 2386.....	3400	2150	4800	3400	....	....	....	....	....
P-1, 3, 5	{2408, 2411 to 2413, 2416 to 2418, 2423, 2425 to 2435, 2437 to 2452, 2459 and 2460}	3300	2000	4650	3300	....	....	....	....	....
P-1	2400, 2403 to 2407 and 2415.....	3500	2200	5050	3500	....	....	....	....	....
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	3700	2300	5250	3700	....	....	....	....	....
P-6	2453, 2454 and 2458.....	4150	2600	5950	4150	....	....	....	....	....
P-7	2476 and 2477.....	4450	2800	6350	4450	....	....	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483.....	4600	2850	6600	4600	....	....	....	....	....
P-8, 10	2475, 2484 to 2491.....	4850	3050	6950	4850	....	....	....	....	....
P-11	3100 to 3109.....	3600	2250	5150	3600	3850	4650	2500	2300	4050
P-12	3120 to 3129.....	4700	2900	6700	4700	....	....	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469.....	4600	2900	6500	4600	4700	5600	3750	3000	5100
C-15, 32	2500, 2505 to 2507.....	2900	1850	4150	2900	3100	3700	2050	1850	3250
C-17	2510 and 2511.....	3600	2300	5050	3600	3800	4550	2500	2300	4000
C-18	3400 to 3409.....	4200	2650	5900	4200	4450	5300	2950	2700	4650
C-19	3410 to 3426.....	4350	2750	6150	4350	4650	5550	3050	2800	4350
TW-1	2900 to 2913.....	3450	2200	4900	3450	3700	4400	2400	2250	3850
TW-2, 3	2932 to 2952.....	2750	1750	3950	2750	2950	3550	2300	2050	3150
TW-4, 6	2926 to 2931 and 2957.....	2650	1650	3750	2650	2800	3350	1800	1700	2950
TW-8	2914 to 2923.....	3850	2450	5450	3850	4050	4850	2650	2450	4300
A-3	3029.....	2650	1650	3800	2650	....	....	....	....	....
A-3	3025, 3036, 3052 and 3057.....	2750	1700	4000	2750	....	....	....	....	....
A-6	3000 to 3003.....	3250	2000	4650	3250	....	....	....	....	....
Mk-2, 4	3201 to 3240.....	5200	3300	7300	5200	*5650	*6750	4300	3300	5900
Mk-5, 6	3241 to 3277.....	5750	3600	8100	5750	*6100	*7300	4600	3700	6500
Mk-7, 8, 9	3300 to 3324.....	6350	4000	8900	6350	....	....	....	....	....
Mk-10	3295.....	4900	3100	6900	4900	....	....	....	....	....
Mk-11	3297 and 3298.....	4700	3000	6650	4700	....	....	....	....	....
F-1	3600 to 3652.....	6700	4200	9300	6700	....	....	4600	4250	7350
F-3	3653 to 3667.....	7600	4800	10800	7600	....	....	....	....	....
F-4, 5	3668 to 3769.....	8000	5000	11500	8000	....	....	....	....	....
AM-2	3900 to 3911.....	7550	4800	10700	7550	....	....	....	....	....
MM-3	3930 and 3931.....	8800	5600	12500	8800	....	....	....	....	....
AC-1, 2, 3	4000 to 4048.....	9150	5850	12950	9150	....	....	....	....	....
AC-4, 5	4100 to 4125.....	11950	7650	14000	11950	....	....	....	....	....
AC-6 to 12	3800 to 3811, 4126 to 4294.....	12000	8000	14000	12000	....	....	....	....	....
Mt-1, 3, 4, 5	4300 to 4376.....	6400	3850	9000	6400	....	....	....	....	....
Mt-2	4385 to 4390.....	6600	4000	9300	6600	....	....	....	....	....
GS-1, 2	4400 to 4415.....	6600	4100	9450	6600	....	....	....	....	....
GS-3, 4, 5, 6	4416 to 4469.....	7000	4300	9700	7000	....	....	....	....	....
SP-1, 2, 3	5000 to 5048.....	8800	5600	12500	8800	....	....	....	....	....
Allowance for Empty and Underloaded Cars	Less than 45 Ms.....	6	6	6	6	6	6	6	6	6
	45 Ms to 55 Ms.....	3	3	3	3	3	3	3	3	3
	More than 55 Ms.....	0	0	0	0	0	0	0	0	0

*Engines 3201 and 3224 only permitted to operate between Hayden Jct. and Christmas.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

RULES 10 (G) and 10 (H). On No. 1 and No. 2 track between Park Ave., Tucson, and Polvo, signals will be placed on left of track in direction of movement.

RULE 14 (e). As specified below, — — — — — sounds of whistle will be indication that flagman may return from east as prescribed by Rule 99:

- Mescal, Trains on Rio Grande Division.
- Bowie, Trains on Globe Branch.

RULE 83 (B). At open train-order offices trains may register by ticket as follows:

- Mescal.....All trains
- Bowie.....All trains except on Globe Branch

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points:

West MP		East MP
981.96	Tucson (No. 2 Track).....	989.00
	“ (No. 1 Track—Rio Grande Div.).....	988.09
	“ (Nogales Br.).....	987.42
1021.24	Mescal (Rio Grande Div.).....	1023.13
1022.89	“ (Tucson Div.).....	1024.13
1031.60	Benson.....	1034.01
1097.10	Bowie.....	1100.00
	“ (Globe Br.).....	1099.50
1136.65	Safford.....	1138.34
1218.70	Globe.....	1223.22
1229.82	Miami.....	1232.98
1147.19	Lordsburg.....	1151.38

Tucson. Trains moving against current of traffic on westward main track between end of double track, MP 984.12, Tucson and crossover between main tracks just east of Nogales Branch switch must stop before fouling outbound engine lead switch, and proceed only on signal from yardman (white flag by day, green light by night).

RULE 99. First-class trains standing on passenger tracks 1, 2 or 3 at Tucson must comply with Rule 99(A).

RULE 99 (C). Will apply as follows:
Globe Branch between Bowie and Globe.

RULE 103 (A). A flagman must precede all movements over: Globe, Hackney St. and eastward over Murphy St. Miami, Latham Blvd., Adonis Ave. and Miami Copper Co. high-way crossing.

RULE 103 (B). Back-up hose must be used when making back-up movements with cars, between North and South yards and/or PFE yard, Tucson.

Back-up hose must be used on leading car when shoving cars on Government tracks at Airport at Wilmot.

RULE 104. Normal position of rigid switches at the end of double track and at junctions, is as follows:

- Bowie.....Globe Br., for Eastward siding.
- T&NRR Jct.....T&NRR wye track, for Track No. 1.
- Benson.....Benson-Fairbank Br., for helper lead.

RULE 105. Following tracks are designated for use as sidings:

- San Carlos.....Track north of main track, opposite station.
- Benson.....Track north of main track is eastward siding;
Track south of main track is westward siding;
- Dragoon.....Track north of main track is westward siding;
Track south of main track is eastward siding.
- Bowie.....Track north of main track from west switch to main track switch just east of station building is eastward siding;
Track north of main track from east switch to main track switch just east of station building is westward siding.
- Steins.....First track north of main track is eastward siding;
Second track north of main track is westward siding, and connects with eastward siding at each end.

RULE D-151. Westward trains will use No. 1 Track, Rio Grande Division, Mescal to Tucson, and eastward trains will use No. 2 Track, Tucson Division, Tucson to Mescal, under double track rules.

RULE 221. Trains must obtain clearance before leaving Bowie and Miami.

Between Tucson and Lordsburg two copies of each order will be delivered to conductor and engineer of trains to which addressed, in order to have sufficient copies of orders when helper engines are cut in.

METHOD OF DISPATCHING TRAINS BETWEEN TUCSON AND MESCAL

No. 1 Track Mescal subdivision and No. 2 Track Bowie subdivision will be operated under double track rules, No. 1 Track westward track and No. 2 Track eastward track.

Limits of double track operation between Tucson and Mescal will be as follows:

- Eastward—via No. 2 Track to west interlocking limit at Mescal.
- Westward—via No. 1 Track from west interlocking limit at Mescal to Tucson.

RULE D-97 (A) will apply on No. 1 and No. 2 Tracks between Tucson and Mescal, except that extra trains must obtain clearance, or proper train-order signal, or permission from train dispatcher before using either track

Trains from Bowie Subdivision moving to Mescal Subdivision, and trains on Mescal Subdivision moving through Mescal, with the same conductor and engineer operating through Mescal, may be issued train orders on one subdivision that affect their movements on either, or both subdivisions. Any such train orders issued by one division to a train on the other division must be transmitted to the other division addressed to Dispatcher before complete is given to the order addressed to the train; and such orders must be shown on clearance issued by the division on which train originates.

RULE 82 (A). Regular trains and sections of schedules authorized on Bowie or Mescal Subdivisions are authorized to assume corresponding schedules or sections of schedules on Bowie or Mescal Subdivisions at Mescal without clearance.

Westward trains may leave Mescal without clearance provided train is properly cleared by train-order signal.

RULE 83 (B). When a regular train is checked on Bowie or Mescal Subdivision, it will not be necessary to check the register at Mescal against the same train.

RULE 505. AUTOMATIC BLOCK SYSTEM

Tucson: Passenger tracks 1, 2 and 3 between end of double track at MP 983.66 and Signal 9838 on Track No. 2 have no block signal control.

Westward trains must not pass east crossover switch opposite Signal 9838, just east of Tucson yard office without proceed signal from yardman (white flag by day, green light by night), unless this switch is lined for movement on Passenger Track 1.

Trains and engines finding Signal 9843 indicating “stop” may proceed into passenger tracks 2 or 3 if switches are properly lined and proceed signal from yardman (white flag by day, green light by night) is received, but must move with caution, not exceeding 12 MPH.

Westward freight trains must receive proceed signal from yardman (white flag by day, green light by night) before passing Signal 9875, and at first crossover switch west of Signal 9851.

Tucson-Mescal: Eastward trains on No. 2 Track finding a signal indicating “stop” will apply Rule 509 (i). Westward trains moving against current of traffic on No. 2 Track finding a signal indicating “stop” between Mescal and Esmond will apply Rule 509 (J); and will have no block signal protection between Esmond and Tucson. Between Park Ave., Tucson, and Polvo, automatic signals are on the left of the track in current of traffic direction.

PUSH BUTTONS

Push button and light on side of relay case on Signals P-11245 and P-11247 at Cavot.

RULE 510. The following block signals equipped with triangular number plate displaying the letter "P", have included in their control limits some special protective device:

Eastward Signals	Protection	Westward Signals
	Spring switch, east end siding, Chamiso.....	P-10287
	Spring switch, east end siding, Curvo.....	P-10389
P-10408	Spring switch, west end siding, Sibyl.....	
	Spring switch, east end siding, Sibyl.....	P-10415
P-10436	Spring switch, west end siding, Tully.....	
	Spring switch, east end siding, Tully.....	P-10453
P-11246	Spring switch, west end siding, Cavot.....	{ P-11245
	Spring switch, east end siding, Cavot.....	{ P-11247
P-11322	Spring switch, west end siding, Mondel.....	P-11255

RULE 535. SPRING SWITCHES

Spring switches equipped with facing point locks are located as follows, and speed indicated in Speed Restrictions table must not be exceeded while trailing through the switches:

Location	Normal Position
Chamiso.....	East end siding.....Main track
Curvo.....	East end siding.....Main track
Sibyl.....	West end siding.....Main track
Sibyl.....	East end siding.....Main track
Tully.....	West end siding.....Main track
Tully.....	East end siding.....Main track
Cabot.....	West end siding.....Main track
Cabot.....	East end siding.....Main track
Mondel.....	West end siding.....Main track

Spring switches are also located on engine leads at Tucson and on stem of wye at Dragoon, San Simon and Steins.

RULE 605. INTERLOCKING

Tucson, Sixth Ave.: Limits extend from point opposite Signal 9835 on both main tracks, to end of double track, and on passenger track 1 to dwarf signal 7 feet west of west switch of passenger track 2, and on freight lead to dwarf signal 10 feet east of Sixth Ave. tower, and on middle track to dwarf signal 230 feet west of east switch, and on Independent Ice lead to dwarf signal 240 feet west of Sixth Ave. tower.

Signals prescribed by Rule 628 may be given from tower window.

Mescal. Interlocking signals of Rio Grande Division may display indication in the upper quadrant. Signal arm extending upward parallel to signal mast indicates "proceed".

Limits are between home signals at east switch of east crossover and west switch of west crossover on Rio Grande Division, and home signals at east and west ends of north and south sidings on Tucson Division. Switches are under control of signal operator, except switches leading from north siding to outfit spur; from south siding to both legs of wye, and to west end of coal track. Switch and derail east end coal track are hand-thrown, but must not be used until permission is secured from signal operator. North and south sidings have no signal control between Interlocking Limit signs.

Where hand signals, as prescribed by Rule 628, cannot be seen, trains stopped will call the signal operator and secure permission to proceed; also to throw switches by hand in event the remote control appliance is inoperative.

Westward interlocking dwarf signal on east crossover from Rio Grande Division to Track No. 2 on Tucson Division at Mescal will display yellow aspect when serving as an approach indication for next home signal on Track No. 2; or as a caution signal for diverging route when switch is lined for south siding. When so displayed, movement must be made with caution until fouling point at east end of south siding has been passed.

Whistle signals:

- Eastward trains to Tucson Division o o — o o.
- Eastward trains to Rio Grande Division — o o o o.
- Eastward trains to south siding o — o.
- Eastward trains south siding to Tucson Division o o — o.
- Eastward trains south siding to Rio Grande Division o — o o.
- Westward trains north siding to No. 1 Track, — o o.
- Westward trains Tucson Division to No. 1 Track, o — —.
- Westward trains Tucson Division to north siding o o — —.
- Westward trains Rio Grande Division to No. 1 Track, — o —.
- Westward trains from Rio Grande Division through east crossover and Tucson Division to No. 1 Track, o — — o.

RULE 705. LETTER TYPE INDICATORS

Indicators located as follows:

ILLUMINATED ON LETTER	SIGNAL	APPROACHING	AUTHORIZES AND REQUIRES MOVEMENT AS FOLLOWS
M.....	10024.....	Vail.....	Proceed to Pantano.
M.....	10112.....	Pantano.....	Proceed to Mescal.
M.....	11470.....	Lordsburg...	Proceed to train-order office.
S.....	11470.....	Lordsburg...	Call yard office for instructions.

GENERAL REGULATIONS

RULE 824. Instructions for setting hand brakes:

Tucson: Passenger trains.....Two brakes on west end,

Two brakes on east end.

Freight trains.....Fifteen brakes on west end,

Ten brakes on east end.

Tucson, PFE Yard: Freight trains..Fifteen brakes on west end,

Ten brakes on east end.

At Tucson hand brakes on passenger trains are to be set after engine is spotted for oil. If necessary to detach engine after these hand brakes have been released, employe before detaching engine must see that sufficient hand brakes have again been set.

RULE 825. Portable rail skids are hung on posts at lower end of sidings at:

Chamiso, Fenner, Curvo, Sibyl, Cavot.

When necessary to leave cars on any of these sidings permission must first be obtained from chief train dispatcher, after which rail skid must be placed on rail and leading wheel of first car in descending direction run onto the rail skid, and hand brakes set if brakes are operative, before engine is detached. Trains picking up cars from these sidings must remove rail skid and return it to proper post and lock it in place with switch lock.

RULE 827. TRAIN INSPECTION

Freight trains must be inspected at each water stop. When conditions are favorable, and in the judgment of conductor and engineer it is safe to do so, and when additional stops can thereby be avoided, freight trains may run between water stops without stopping for inspection, provided the distance is not over 60 miles except freight trains and light engines may run between Benson and Bowie, and trains handled by DEF class engines may run Lordsburg to Raso, for inspection. This does not relieve trainmen from making inspection when stops permit, or whenever it is necessary in the judgment of conductor or engineer. On branch lines distance of 40 miles must not be exceeded, and on descending grade must stop at Cutter.

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

AIR BRAKE RULES

RULE 17. Retainers will be used on grades of 1.4% to 1.5% on freight trains of less than 110 Ms per operative brake when necessary in the judgment of conductor and engineer.

On freight trains averaging 110 Ms and over on grades of 1.4% to 1.5% and on all freight trains on grades of 1.5% and over, retainers will be used as follows:

Mescal to Benson.....1.4%	grade,	One Retainer	for each	150 Ms
Steins to Mondel.....1.4%	"	"	"	150 Ms
Steins to Bawtry.....1.4%	"	"	"	150 Ms
Sibyl to Benson.....1.4%	"	"	"	150 Ms
Pinal to Globe.....2%	"	"	"	120 Ms
Globe to Burch.....2%	"	"	"	120 Ms
MP 1232.98 to Miami	3%	"	"	100 Ms
Miami to Burch.....1.4%	"	"	"	150 Ms
Pinal to Cutter.....2.2%	"	"	"	120 Ms

When retainers are used, stops will be made for inspection and to permit heat of wheels to equalize, as follows:

Eastward: Chamiso.
Westward: Fenner.
Vanar.

FREIGHT TRAINS

RULE 25. Freight trains may pass:

Mescal, Eastward;
Dragoon and Steins, Westward;
Pinal, Eastward and Westward

without stopping for purpose of rear end air test if proceed signal is given from rear by trainmen, after complying with Air Brake Rule 4, and air gage indicates required air brake pressure. Speed approaching summit must not exceed 15 MPH.

If proceed signal is not given or received, train must stop and rear end air test be made.

RULE 33. The tonnage per operative brake Pinal to Burch, and Pinal to Cutter, must not exceed 120 Ms.

MISCELLANEOUS

1. At San Simon, water for engine purposes is treated and must not be taken for domestic use until treater is shut off.

Westward freight trains may take full tank of water at Sibyl if it will avoid stopping at Benson. Other trains take only sufficient water at Sibyl to insure reaching next water station.

Eastward trains except No. 382 take full tank of water at San Carlos.

Open sprinklers on engines so equipped while passing over following bridges:

Cienega Creek1008.05
San Pedro River1033.65

5. Tucson, PFE yard, look out for ice and rubbish alongside PFE tracks.

Willcox, look out for bedding sand between tracks 2 and 3.

Load limit (car and contents):

Tucson-Lordsburg240,000 pounds
Bowie-Miami210,000 pounds

Unless authorized by Superintendent, heavier loads must not be handled.

11. Bowie, No. 5 track in west yard must be kept clear for through movement.

LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

Mile Post	Location	Description
983.9	Tucson.....	Car repair shed.....Side
984.4	Tucson.....	Base of Signal 9844.....Side
1008.1	.....	Cienega Creek bridge.....Side
1008.2	.....	Rock cut.....Side
1008.3	.....	Rock cut.....Side
1032.5	Benson.....	Water column.....Side
1032.5	Benson.....	San Pedro River bridge.....Side
1098.4	Bowie.....	Water column.....Side
1201.1	San Carlos.....	Water tank and spout....Side and Overhead

LOCATIONS WHERE SPEED BOARD RESTRICTIONS APPLY TO ONE OR MORE CURVES, STRUCTURES, OR EXTENDED SECTION OF TRACK

For Eastward Trains			For Westward Trains		
Location of Speed Board MP	Beginning of Restriction MP	End of Restriction MP	Location of Speed Board MP	Beginning of Restriction MP	End of Restriction MP
981.98	982.73	985.31	986.06	985.31	982.73
996.25	997.00	1003.88	991.75	991.00	985.31
1003.13	1003.88	1006.98	1009.14	1008.39	1006.98
1006.23	1006.98	1008.39	1011.11	1010.36	1008.39
1011.87	1012.62	1014.00	1014.75	1014.00	1012.62
1016.02	1016.77	1018.08	1018.83	1018.08	1016.77
1023.09	1023.84	1023.85	1023.74	1022.99	1022.98
(Through crossover)			(Through crossover)		
1027.85	1028.60	1030.86	1025.30	1024.55	1022.99
1030.11	1030.86	1032.17	1026.75	1026.00	1024.55
1031.42	1032.17	1033.48	1034.23	1033.48	1032.17
1036.21	1036.96	1040.78	1041.53	1040.78	1036.96
1046.22	1046.97	1052.36	1053.11	1052.36	1046.97
1073.52	1074.27	1075.28	1058.75	1058.00	1052.36
1079.25	1080.00	1083.14	1076.03	1075.28	1074.27
1086.37	1087.12	1087.14	1083.89	1083.14	1080.00
1090.01	1090.76	1090.78	1129.43	1128.68	1124.44
1095.25	1096.00	1099.63			
1098.88	1099.63	1121.00			
1120.25	1121.00	1124.44			
1123.69	1124.44	1128.68			

SPEED RESTRICTIONS: Maximum speed of trains with engines of various classes is shown below. Trains with engines not listed must not exceed 35 MPH. Speed must be further restricted as required by speed boards, and may be exceeded only as authorized by special instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.

TERRITORY	WITH TRAIN — ENGINE RUNNING FORWARD										LIGHT ENGINE RUNNING FORWARD			ENGINE BACKING WITH TRAIN OR LIGHT					
	PASSENGER										*FREIGHT AND MIXED		DEP DEF F A Mt GS	DES 1 to 7 DES 100 to 107 T-26-32-37-40 Mk-5-6-7-8-9 F (if CCB) AC-4-5-6-7-8-9-10-11-12	M T-1-8-9-23-28-31-36-57-58 C-2-4-5-8-9-10-18-19-26-27-28-29 F (if not CCB) SP B	DES-200 C-15-17-32 TW Mk-2-4-10-11 AC-1-2-3 AM MM	DES DEP DEF E T P C TW	A Mk F Mt GS SP B	M AC AM MM
	DEP with Stream-lined GOLDEN STATE	DEP P-7-8-10-12 A Mt GS	DEF E P-1-3-4-5-8-11	T-26-32-37-40 AC-4-5-6-7-8-9-10-11-12	M T-1-8-9-23-28-31-36-57-58 Mk-5-6-7-8-9 F (if CCB) SP B (if CCB)	AM B (if not CCB)	DES 1 to 7 DES 100 to 107 C-2-4-5-8-9-10-18-19-26-27-28-29 TW Mk-2-4 F (if not CCB) AC-1-2-3	C-15-17-32 Mk-10-11 MM	With no Restricted Cars (see note)	With Restricted Cars (see note)	DEP DEF F A Mt GS	DES 1 to 7 DES 100 to 107 T-26-32-37-40 Mk-5-6-7-8-9 F (if CCB) AC-4-5-6-7-8-9-10-11-12								M T-1-8-9-23-28-31-36-57-58 C-2-4-5-8-9-10-18-19-26-27-28-29 F (if not CCB) SP B	DES-200 C-15-17-32 TW Mk-2-4-10-11 AC-1-2-3 AM MM	DES DEP DEF E T P C TW	A Mk F Mt GS SP B	M AC AM MM
													COLUMN: A	1	2	3	4	5	6
Between Tucson and Lordsburg, except.....	75	70	65	60	50	45	40	35	50	40	45	40	35	30	30	25			
MP 982.73-MP 985.31.....	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20			
MP 985.31-MP 997.00.....	65	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25			
MP 997.00-MP 1003.88.....	65	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1003.88-MP 1006.98.....	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25	25			
MP 1006.98-MP 1008.39.....	30	25	25	25	25	25	25	25	20	20	20	20	20	20	20	20			
MP 1008.39-MP 1010.36.....	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25	25			
MP 1010.36-MP 1012.62.....	50	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1012.62-MP 1014.00.....	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25	25			
MP 1014.00-MP 1016.77.....	50	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1016.77-MP 1018.08.....	30	30	30	30	30	30	30	30	25	25	25	25	25	25	25	25			
MP 1018.08-MP 1024.55, except.....	45	40	40	40	40	40	40	35	30	30	30	30	30	30	25	25			
Mescal, through crossovers to R. G. Division.....	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25			
MP 1024.55-MP 1026.00.....	..	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1026.00-MP 1028.60.....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25			
MP 1028.60-MP 1030.86.....	..	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1030.86-MP 1032.17 (Benson).....	..	40	40	40	40	40	40	35	30	30	30	30	30	30	25	25			
MP 1032.17-MP 1033.48.....	..	30	30	30	30	30	30	30	30	30	30	30	30	30	25	25			
MP 1033.48-MP 1036.96.....	..	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1036.96-MP 1040.78.....	..	30	30	30	30	30	30	30	25	25	25	25	25	25	25	25			
MP 1040.78-MP 1046.97.....	..	45	45	45	45	45	40	35	30	30	30	30	30	30	25	25			
MP 1046.97-MP 1052.36.....	..	40	40	40	40	40	40	35	30	30	30	30	30	30	25	25			
MP 1052.36-MP 1058.00.....	..	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
*MP 1074.27-MP 1075.28 (Willecox city limits).....	..	30	30	30	30	30	30	30	30	30	30	30	30	30	25	25			
MP 1075.28-MP 1080.00.....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25			
MP 1080.00-MP 1083.14.....	..	60	60	60	50	45	40	35	40	40	40	40	35	30	30	25			
MP 1083.14-MP 1103.25, except.....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25			
Eastward, over west switches, Alrich and Luzena.....	..	60	60	60	50	45	40	35	40	40	40	40	35	30	30	25			
MP 1103.25-MP 1121.00.....	..	60	60	60	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1121.00-MP 1124.44.....	..	50	50	50	50	45	40	35	35	35	35	35	30	30	25	25			
MP 1124.44-MP 1128.68.....	..	30	30	30	30	30	30	30	25	25	25	25	25	25	25	25			
MP 1128.68-Lordsburg.....	..	65	65	60	50	45	40	35	40	40	40	40	35	30	30	25			

*Regulated by city ordinance.

*Freight and mixed trains with an engine listed in columns 5, 6 or 7 must not exceed maximum speed permitted the same engine when handling passenger train.

(Note) RESTRICTED CARS: Twin or multiple loads; cars of excess height or width; loads of excess height, width or weight; any equipment listed under "Maximum Speed permitted with Certain Equipment"; scale test cars; and cars with arch-bar trucks.

When electro-pneumatic brakes are inoperative, maximum speed of 75 MPH shown in Column A, and permissible speed as indicated on round yellow SIGNAL speed boards, must be reduced by 5 MPH.

DES 1 to 7 and DES 100 to 107 may make maximum of 40 MPH in territory where 30 MPH is authorized in Column 14.

SPEED RESTRICTIONS FOR OTHER THAN MAIN TRACKS With Caution Not Exceeding MPH

Through sidings, yard and other side-tracks, crossovers, turnouts and slip-switches, except:.....	15
On PFE yard tracks 1 to 7 inc., Tucson.....	6
On Government tracks at Wilmot airport.....	10
“ (with engine backing)....	5
Through any crossover, turnout or slip-switch with engine backing.....	10

SPEED RESTRICTIONS: Maximum speed of trains with engines of various classes is shown below. Trains with engines not listed must not exceed 35 MPH. Speed must be further restricted as required by speed boards, and may be exceeded only as authorized by special instructions herein, or by timetable bulletin.

All trains must run carefully during and after heavy storms, particularly when the track is apt to be affected. When fog, storms or other conditions obscure track or signals, speed of trains must be so reduced as to permit strict observance of signals and **INSURE ABSOLUTE SAFETY, REGARDLESS OF TIME.**

TERRITORY	PASSENGER		FREIGHT AND MIXED	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT
	M-6 T-37	C-8-9-10		M T-37 C-8-9-10 Mk-5-6-7-8-9	Mk-2-4	
Between Bowie and Live Oak, except.....	35	30	30	30	30	20
Bowie, yard limits.....	15	15	15	15	15	15
Bowie, east yard limit-MP 1126.12.....	35	30	30	30	25	20
MP 1126.12-MP 1126.43.....	30	30	30	30	25	20
MP 1126.43-MP 1136.65.....	35	30	30	30	25	20
MP 1136.65-MP 1138.34 Safford yard limits..	15	15	15	15	15	15
MP 1138.34-MP 1145.33.....	35	30	30	30	25	20
*MP 1145.33-MP 1146.42 (Pima city limits)...	25	25	25	25	25	20
MP 1146.42-MP 1178.03.....	35	30	30	30	25	20
MP 1178.03-MP 1178.17.....	30	30	25	30	25	20
MP 1178.17-MP 1183.70.....	35	30	30	30	25	20
MP 1183.70-MP 1195.00.....	30	30	20	20	20	20
MP 1195.00-MP 1207.01.....	30	30	25	30	25	20
MP 1207.01-MP 1217.52.....	35	30	30	30	25	20
MP 1217.52-MP 1218.78.....	25	25	20	25	20	15
MP 1218.78-MP 1220.59.....	35	30	30	30	25	20
MP 1220.59-MP 1223.09 (Globe), except.....	15	15	15	15	15	15
Broad Street Crossing.....	6	6	6	6	6	6
MP 1223.09-MP 1229.82.....	20	20	20	20	20	15
Miami yard limits.....	15	15	15	15	15	15

*Regulated by city ordinance.

SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

BOWIE SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Tucson to Mescal (No. 2 Track)	Benson to Dragon San Simon to Steins	Mescal to Benson Dragon to Willcox Raso to San Simon Steins to Conrad Pyra to Lordsburg	Willcox to Raso Conrad to Pyra	Lordsburg to Pyra	Pyra to Mondel Steins to San Simon Raso to 2 M E Cochise Dragon to Benson Mescal to Tucson (No. 1 Track)	San Simon to Bowie	Bowie to Raso 2 M E Cochise to Dragon	Mondel to Steins Benson to Mescal
DEP-4	6000 to 6004	3500	2450	7500	3500	4350	7500	5600	3500	2450
DEF-1	6100 to 6119	9650	7100	20000	10450	10550	20000	11650	9600	*7350
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022	.....	.....	.....	.....	.....	.....	.....	.....	.....
DES-100 to 107	1300 to 1395	.....	.....	.....	.....	.....	.....	.....	.....	.....
E-23	1500 and 1502	1200	930	5000	1850	2050	5000	2300	1400	930
M-4	1617 to 1713	1600	1250	5000	2450	2750	5000	3100	1900	1250
M-6, 8	1721 to 1803, 1823 to 1825	1950	1500	6000	2900	3250	6000	3650	2250	1500
M-9, 11	1804 to 1822, 1826 to 1831 and 1836	2050	1600	6000	3100	3450	6000	3650	2350	1600
M-11	1832 to 1835	2150	1650	6000	3200	3550	6000	4000	2450	1650
T-1	2242 to 2271	1400	1050	5000	2100	2350	5000	2650	1600	1050
T-8, 9	2161, 2174 and 2178	990	760	5000	1500	1650	5000	1900	1150	760
T-23	2301 to 2310	2000	1550	6000	3050	3400	6000	3800	2300	1550
T-26	2283 to 2299	1750	1350	6000	2650	3000	6000	3350	2050	1350
T-28, 31	2311 to 2362	2250	1750	8000	3350	3750	8000	4200	2600	1750
T-32, 40	2363 to 2384	2300	1800	8000	3450	3800	8000	4300	2600	1800
T-36	2103	1500	1150	5000	2250	2500	5000	2800	1750	1150
T-37	2105 and 2106	2000	1550	6000	3000	3350	6000	3750	2300	1550
T-57, 58	2385 and 2386	1850	1400	6000	2750	3050	6000	3450	2100	1400
P-1, 3, 5	{2408, 2411 to 2413, 2416 to 2418, 2423, 2425 to 2435, 2437 to 2452, 2459 and 2460}	1800	1350	6000	2700	3050	6000	3400	2050	1350
P-1	2400, 2403 to 2407 and 2415	1850	1450	6000	2050	3200	6000	3600	2150	1450
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	1950	1500	6000	3000	3350	6000	3750	2250	1500
P-6	2453, 2454 and 2458	2250	1750	8000	3400	3800	8000	4250	2600	1750
P-7	2476 and 2477	2400	1850	8000	3600	4050	8000	4500	2750	1850
P-8, 10	2461 to 2474, 2478 to 2483	2450	1900	8000	3750	4150	8000	4700	2850	1900
P-8, 10	2475, 2484 to 2491	2600	2000	8000	3950	4400	8000	4950	3000	2000
P-11	3100 to 3109	1950	1500	8000	2950	3300	8000	3700	2250	1500
P-12	3120 to 3129	2600	2000	8000	3900	4350	8000	4900	3000	2000
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469	2500	1950	8000	3750	4150	8000	4650	2900	1950
C-15, 32	2500, 2505 to 2507	1600	1250	5000	2350	2650	5000	2950	1800	1250
C-17	2510 and 2511	1950	1550	6000	2950	3250	6000	3650	2250	1550
C-18	3400 to 3409	2300	1800	8000	3400	3800	8000	4250	2650	1800
C-19	3410 to 3426	2400	1850	8000	3550	3950	8000	4450	2750	1850
TW-1	2900 to 2913	1900	1450	7000	2850	3150	7000	3550	2150	1450
TW-2, 3	2932 to 2952	1500	1150	7000	2250	2500	7000	2850	1750	1150
TW-4, 6	2926 to 2931 and 2957	1400	1100	7000	2150	2400	7000	2650	1650	1100
TW-8	2914 to 2923	2100	1600	7000	3150	3500	7000	3900	2400	1600
A-3	3029	1350	1050	6000	2150	2400	6000	2700	1600	1050
A-3	3025, 3036, 3052 and 3057	1450	1100	6000	2250	2500	6000	2800	1700	1100
A-6	3000 to 3003	1700	1300	6000	2600	2950	6000	3300	2000	1300
Mk-2, 4	3201 to 3240	2800	2200	8000	4250	4750	8000	5300	3250	2200
Mk-5, 6	3241 to 3277	3150	2450	8000	4700	5250	8000	5850	3650	2450
Mk-7, 8, 9	3300 to 3324	3500	2750	8000	5200	5800	8000	6500	4000	2750
Mk-10	3295	2650	2100	8000	4000	4450	8000	5000	3050	2100
Mk-11	3297 and 3298	2550	2000	8000	3850	4250	8000	4750	2950	2000
F-1	3600 to 3652	3700	2900	10000	5500	6100	10000	6850	4250	2900
F-3	3653 to 3667	4200	3300	10000	6300	7000	10000	7800	4850	3300
F-4, 5	3668 to 3769	4750	3750	10000	7100	7850	10000	8800	5450	3750
AM-2	3900 to 3911	4150	3250	10000	6200	6850	10000	7700	4750	3250
MM-3	3930 and 3931	4900	3850	10000	7300	8100	10000	9000	5600	3850
AC-1, 2, 3	4000 to 4048	5050	3950	12000	7500	8350	12000	9300	5750	3950
AC-4, 5	4100 to 4125	6550	5150	14000	9800	10850	14000	12150	7550	5150
AC-6 to 12	3800 to 3811, 4126 to 4294	7400	5500	14000	10400	11500	14000	12900	8000	5500
Mt-1, 3, 4, 5	4300 to 4376	3800	2950	10000	5650	6300	10000	7050	4350	2950
Mt-2	4385 to 4390	3550	2800	10000	5350	5950	10000	6700	4100	2800
GS-1, 2	4400 to 4415	3850	2980	10000	5850	6500	10000	7300	4450	2980
GS-3, 4, 5, 6	4416 to 4469	3900	3000	10000	6000	6700	10000	7500	4550	3000
SP-1, 2, 3	5000 to 5048	5350	4350	10000	8000	8850	10000	10000	6150	4350
Allowance for Empty and Underloaded Cars	Less than 45 Ms	6	6	6	6	6	6	6	6	6
	45 Ms to 55 Ms	3	3	3	3	3	3	3	3	3
	More than 55 Ms	0	0	0	0	0	0	0	0	0

*Rating Mondel to Steins 9500.

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

BOWIE SUBDIVISION

RATING OF ENGINES—In Units of 1000 Lbs. (Ms)

NOMINAL CLASS	ENGINE NUMBERS	Bowie to San Carlos	San Carlos to Cutler	Cutler to Pinal	Pinal to Globe	Globe to Miami	Miami to Globe	Globe to Pinal	Pinal to San Carlos	San Carlos to Tanque	Tanque to Bowie
DES-1, 2, 3, 4, 5, 6, 7	1000 to 1022.....	....	....	....	....	....	....	....	....	....	....
DES-100 to 107	1300 to 1395.....	....	....	....	....	....	....	....	....	....	....
E-23	1500 and 1502.....	2450	1200	580	5000	970	880	580	5000	2050	1550
M-4	1617 to 1713.....	3250	1600	830	5000	1300	1200	830	5000	2750	2100
M-6, 8	1721 to 1803, 1823 to 1825.....	3800	1950	990	6000	1550	1450	990	6000	3250	2500
M-9, 11	1804 to 1822, 1826 to 1831 and 1836.....	4000	2050	1050	6000	1650	1550	1050	6000	3450	2650
M-11	1832 to 1835.....	4200	2150	1100	6000	1750	1600	1100	6000	3550	2750
T-1	2242 to 2271.....	2750	1400	710	5000	1100	1050	710	5000	2350	1800
T-3, 9	2161, 2174 and 2178.....	2000	990	480	5000	790	720	480	5000	1650	1250
T-23	2301 to 2310.....	....	....	....	....	....	....	....	....	....	....
T-26	2283 to 2299.....	....	....	....	....	....	....	....	....	....	....
T-28, 31	2311 to 2362.....	....	....	....	....	....	....	....	....	....	....
T-32, 40	2363 to 2384.....	4150	2500	1050	6700	1700	1200	1050	6700	3500	2650
T-36	2103.....	2950	1500	780	5000	1250	1100	780	5000	2500	1950
T-37	2105 and 2106.....	3700	2250	950	6000	1500	1050	950	6000	3150	2400
T-57, 58	2385 and 2386.....	....	....	....	....	....	....	....	....	....	....
P-1, 3, 5	{2408, 2411 to 2413, 2416 to 2418, 2423, 2425 to 2435, 2437 to 2452, 2459 and 2460}	3600	1800	880	6000	1450	1300	880	6000	3050	2300
P-1	2400, 2403 to 2407 and 2415.....	3750	1850	920	6000	1500	1350	920	6000	3200	2450
P-4	2401, 2402, 2409, 2410, 2414, 2419, 2420, 2422, 2424 and 2436	3900	1950	970	6000	1550	1450	970	6000	3350	2550
P-6	2453, 2454 and 2458.....	....	....	....	....	....	....	....	....	....	....
P-7	2476 and 2477.....	....	....	....	....	....	....	....	....	....	....
P-8, 10	2461 to 2474, 2478 to 2483.....	....	....	....	....	....	....	....	....	....	....
P-8, 10	2475, 2484 to 2491.....	....	....	....	....	....	....	....	....	....	....
P-11	3100 to 3109.....	3850	1950	970	8000	1550	1400	970	8000	3300	2500
P-12	3120 to 3129.....	....	....	....	....	....	....	....	....	....	....
C-5, 8, 9, 10, 26 to 29	2513 to 2599, 2624 to 2860, 3440 to 3469.....	4900	3000	1310	8000	2000	1800	1310	8000	4170	3220
C-15, 32	2500, 2505 to 2507.....	3100	1600	820	5000	1300	1200	820	5000	2650	2050
C-17	2510 and 2511.....	3800	1950	1050	6000	1600	1500	1050	6000	3250	2500
C-18	3400 to 3409.....	4450	2300	1200	8000	1850	1700	1200	8000	3800	2950
C-19	3410 to 3426.....	4650	2400	1250	8000	1950	1800	1250	8000	3950	3050
T W-1	2900 to 2913.....	3700	1900	980	7000	1550	1400	980	7000	3150	2400
TW-2, 3	2932 to 2952.....	3200	1950	850	7000	1300	900	850	7000	2700	2100
TW-4, 6	2926 to 2931 and 2957.....	2800	1400	720	7000	1150	1050	720	7000	2400	1800
TW-8	2914 to 2923.....	4050	2100	1050	7000	1700	1550	1050	7000	3500	2650
Allowance for Empty and Underloaded Cars	Less than 45 Ms.....	....	6	6	6	6	6	6	6	6	6
	45 Ms to 55 Ms.....	....	3	3	3	3	3	3	3	3	3
	More than 55 Ms.....	....	0	0	0	0	0	0	0	0	0

UNLESS AUTHORIZED BY SUPERINTENDENT, ENGINES WILL NOT BE PERMITTED TO OPERATE IN THOSE TERRITORIES WHERE NO RATING IS SHOWN IN ENGINE RATING TABLE.

DIVISION MILEAGE

Main Line

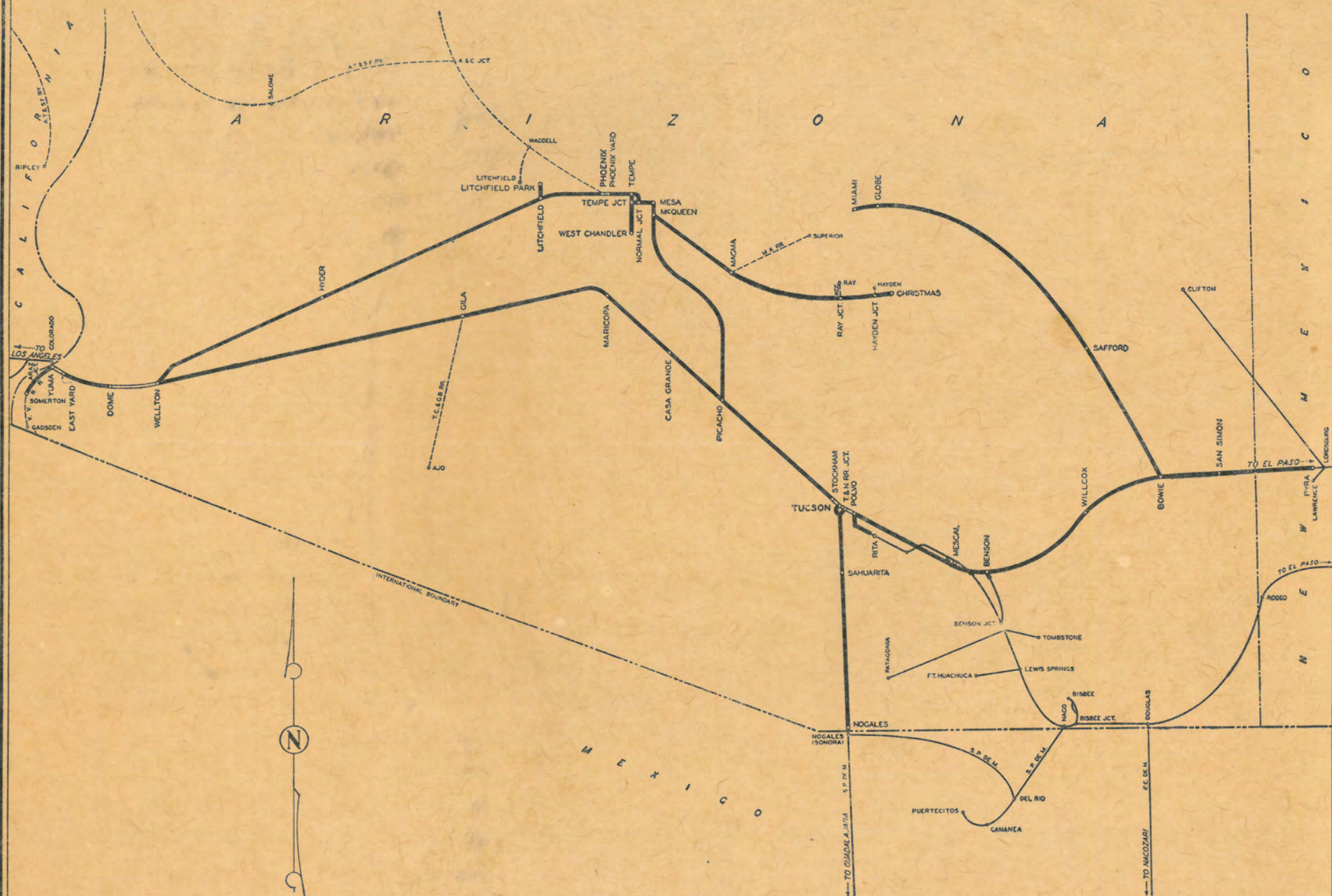
Yuma to Lordsburg.....	SPRR.....	412.09	
Wellton to Picacho, via Phoenix	{AERR.....	208.98	
	{SPRR.....	.03	209.01
Total Main Lines.....			621.10

Branches

Benson-Fairbank	{SPRR..... At Benson.....	.29	
	{EP&SWRR At Benson.....	.33	.62
Christmas.....	{AERR..... McQueen to Christmas.....	86.66	
	{KCC..... Hayden Jct. to Hayden.....	.32	86.98
Creamery.....	AERR..... Tempe to Normal Jct.....		2.19
Globe.....	AERR..... Bowie to Miami.....	134.92	
Litchfield.....	AERR..... Litchfield to Litchfield Park	4.92	
Nogales.....	SPRR..... Tucson to Nogales.....	65.79	
Tempe.....	AERR..... Tempe Jct. to West Chandler	7.88	
Yuma Valley.....	YVRR..... Yuma to Somerton.....	15.00	
Total Branches.....			318.30
Total Tucson Division.....			939.40

SPEED TABLE

TIME PER MILE	MILES PER HOUR
36"	100
37"	97.3
38"	94.7
39"	92.3
40"	90
41"	87.8
42"	85.7
43"	83.7
44"	81.8
45"	80
46"	78.3
47"	76.6
48"	75
49"	73.5
50"	72
51"	70.6
52"	69.2
53"	67.9
54"	66.7
55"	65.5
56"	64.3
57"	63.2
58"	62.1
59"	61
1'00"	60
1'01"	59
1'02"	58.1
1'03"	57.1
1'04"	56.2
1'05"	55.4
1'06"	54.5
1'07"	53.7
1'08"	52.9
1'09"	52.2
1'10"	51.4
1'11"	50.7
1'12"	50
1'13"	49.3
1'14"	48.6
1'15"	48
1'16"	47.4
1'17"	46.8
1'18"	46.2
1'19"	45.6
1'20"	45
1'25"	42.4
1'30"	40
1'35"	37.9
1'40"	36
1'45"	34.3
1'50"	32.7
1'55"	31.3
2'00"	30
2'15"	26.7
2'30"	24
2'45"	21.8
3'00"	20
3'30"	17.1
4'00"	15
5'00"	12
6'00"	10
7'00"	8.6
7'30"	8
8'00"	7.5
10'00"	6



TUCSON DIVISION