

SOUTHERN PACIFIC COMPANY



TUCSON DIVISION TIMETABLE

117

EFFECTIVE SUNDAY, JUNE 2, 1946
AT 12:01 A. M.
MOUNTAIN STANDARD TIME

FOR THE GOVERNMENT AND INFORMATION
OF EMPLOYEES ONLY

TERMINAL SUPERINTENDENT

V. E. ANDERSON.....Phoenix

TRAINMASTERS

P. W. DORNFELD.....Yuma
B. B. KIMBALL.....Yuma
W. G. CURRIER.....Tucson
J. E. SCHWARTZ.....Tucson
A. G. McMANUS.....Phoenix
B. C. BRADFORD.....Bowie

ASSISTANT TRAINMASTERS

J. H. VERMILLION.....Gila
F. J. DEON.....Gila
W. F. CURRIER.....Gila
R. D. CHASTAIN.....Phoenix
J. E. BUTLER, JR.....Phoenix

ROAD FOREMEN OF ENGINES

C. A. BALL, SR.....Tucson
R. A. MILLER.....Tucson
F. R. BENTON.....Yuma

ENGINEMEN INSTRUCTOR

J. E. PFERSDORF.....Tucson

ASSISTANT TRAINMASTER— DIVISION EXAMINER

B. M. BRAGDON.....Tucson

CHIEF TRAIN DISPATCHER

H. W. CASSADY.....Tucson

J. C. SLADE

Assistant Superintendent, Tucson

J. W. CORBETT,
General Manager.

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

G. C. BAKER,
General Superintendent of Transportation.

C. H. GRANT,
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
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
Tempe	Dr. R. J. Stroud	District Physician and Surgeon
Tempe	Dr. M. W. Westervelt	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. A. Thomas	Assistant to Chief Surgeon
Tucson	Dr. N. K. Thomas	Division Physician and Surgeon
Tucson	Dr. R. F. Oyler	District Physician and Surgeon
Tucson	Dr. C. C. Whittle	Oculist and Aurist
Nogales	Dr. J. S. Gonzalez	District Physician and Surgeon
Nogales	Dr. C. S. Smith	Oculist and Aurist
Benson	Dr. J. M. Hesser	District Physician and Surgeon
Willecox	Dr. J. E. Wilson	District Physician and Surgeon
Willecox	Dr. B. E. Briscoe	District Physician and Surgeon
Willecox	Dr. R. A. Hicks	Asst. Dist. Physician and Surgeon
Bowie	Dr. F. W. Parrish	District Physician and Surgeon
Lordsburg	Dr. C. D. 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
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.

REARWARD

SECTION - FIRST CLASS

No.	Description of Work	Quantity	ESTIMATED COST					Total	Remarks
			Excavation	Foundation	Structure	Roofing	Finishing		
1	Excavation	100	100				100		
2	Foundation	200		200			200		
3	Structure	300			300		300		
4	Roofing	400				400	400		
5	Finishing	500					500		
6	Excavation	600	600				600		
7	Foundation	700		700			700		
8	Structure	800			800		800		
9	Roofing	900				900	900		
10	Finishing	1000					1000		
11	Excavation	1100	1100				1100		
12	Foundation	1200		1200			1200		
13	Structure	1300			1300		1300		
14	Roofing	1400				1400	1400		
15	Finishing	1500					1500		
16	Excavation	1600	1600				1600		
17	Foundation	1700		1700			1700		
18	Structure	1800			1800		1800		
19	Roofing	1900				1900	1900		
20	Finishing	2000					2000		
21	Excavation	2100	2100				2100		
22	Foundation	2200		2200			2200		
23	Structure	2300			2300		2300		
24	Roofing	2400				2400	2400		
25	Finishing	2500					2500		
26	Excavation	2600	2600				2600		
27	Foundation	2700		2700			2700		
28	Structure	2800			2800		2800		
29	Roofing	2900				2900	2900		
30	Finishing	3000					3000		
31	Excavation	3100	3100				3100		
32	Foundation	3200		3200			3200		
33	Structure	3300			3300		3300		
34	Roofing	3400				3400	3400		
35	Finishing	3500					3500		
36	Excavation	3600	3600				3600		
37	Foundation	3700		3700			3700		
38	Structure	3800			3800		3800		
39	Roofing	3900				3900	3900		
40	Finishing	4000					4000		
41	Excavation	4100	4100				4100		
42	Foundation	4200		4200			4200		
43	Structure	4300			4300		4300		
44	Roofing	4400				4400	4400		
45	Finishing	4500					4500		
46	Excavation	4600	4600				4600		
47	Foundation	4700		4700			4700		
48	Structure	4800			4800		4800		
49	Roofing	4900				4900	4900		
50	Finishing	5000					5000		
51	Excavation	5100	5100				5100		
52	Foundation	5200		5200			5200		
53	Structure	5300			5300		5300		
54	Roofing	5400				5400	5400		
55	Finishing	5500					5500		
56	Excavation	5600	5600				5600		
57	Foundation	5700		5700			5700		
58	Structure	5800			5800		5800		
59	Roofing	5900				5900	5900		
60	Finishing	6000					6000		
61	Excavation	6100	6100				6100		
62	Foundation	6200		6200			6200		
63	Structure	6300			6300		6300		
64	Roofing	6400				6400	6400		
65	Finishing	6500					6500		
66	Excavation	6600	6600				6600		
67	Foundation	6700		6700			6700		
68	Structure	6800			6800		6800		
69	Roofing	6900				6900	6900		
70	Finishing	7000					7000		
71	Excavation	7100	7100				7100		
72	Foundation	7200		7200			7200		
73	Structure	7300			7300		7300		
74	Roofing	7400				7400	7400		
75	Finishing	7500					7500		
76	Excavation	7600	7600				7600		
77	Foundation	7700		7700			7700		
78	Structure	7800			7800		7800		
79	Roofing	7900				7900	7900		
80	Finishing	8000					8000		
81	Excavation	8100	8100				8100		
82	Foundation	8200		8200			8200		
83	Structure	8300			8300		8300		
84	Roofing	8400				8400	8400		
85	Finishing	8500					8500		
86	Excavation	8600	8600				8600		
87	Foundation	8700		8700			8700		
88	Structure	8800			8800		8800		
89	Roofing	8900				8900	8900		
90	Finishing	9000					9000		
91	Excavation	9100	9100				9100		
92	Foundation	9200		9200			9200		
93	Structure	9300			9300		9300		
94	Roofing	9400				9400	9400		
95	Finishing	9500					9500		
96	Excavation	9600	9600				9600		
97	Foundation	9700		9700			9700		
98	Structure	9800			9800		9800		
99	Roofing	9900				9900	9900		
100	Finishing	10000					10000		

ESTIMATED COST OF WORK TO BE DONE BY CONTRACTOR FOR THE REARWARD SECTION - FIRST CLASS. THE COST OF THE WORK IS ESTIMATED ON THE BASIS OF THE QUANTITIES SHOWN IN THE ABOVE TABLE AND THE CURRENT MARKET PRICES FOR THE MATERIALS AND LABOR REQUIRED FOR THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR THE ACCURACY OF THE ESTIMATE.

THIS IS A SUMMARY OF THE ESTIMATE FOR THE REARWARD SECTION - FIRST CLASS. THE CONTRACTOR IS RESPONSIBLE FOR THE ACCURACY OF THE ESTIMATE. THE COST OF THE WORK IS ESTIMATED ON THE BASIS OF THE QUANTITIES SHOWN IN THE ABOVE TABLE AND THE CURRENT MARKET PRICES FOR THE MATERIALS AND LABOR REQUIRED FOR THE WORK.

WELLTON SUBDIVISION

EASTWARD

FIRST CLASS

Capacity of sidings in car lengths	FIRST CLASS								Mile Post Location	Timetable No. 117 June 2, 1946	Distance from Yuma		
		2	4	48	6	44	370						
		Sunset Limited	Golden State Limited	Mail and Express	Argonaut	Californian	A. O. N.						
	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily Ex. Sun., Mon		STATIONS				
Yuma yard	BKWOTYP	PM 7.45	PM 6.10	AM 5.30	AM 4.25	AM 4.00	AM 3.20	732.7	Automatic Block System	TO-R YUMA	} D. I. F.	0.0	
	P	7.55	6.20	5.40	4.36	4.11	3.31	737.4 737.5		TO-R EAST YARD		4.7	
	62	P	7.59	6.24	5.44	4.40	4.15	3.35		740.1	2.6 ARABY	7.3	
	70	P	8.03	6.28	5.48	4.44	4.19	3.39		743.7	3.6 FORTUNA	10.9	
	62	P	8.07	6.32	5.52	4.48	4.22	3.45		746.6	2.9 BLAISDELL	13.8	
	113	P	8.11	6.36	5.56	4.53	4.27	3.50		750.6	4.0 KINTER	17.8	
	M76	P	8.16	6.41	f 6.01	4.59	4.32	3.55		753.5	2.9 DOME	} D. I. F.	20.7
	68	WIP	8.35	7.00	f 6.20	f 5.18 AM	4.51	4.14		770.0	16.5 WELLTON		37.2
	72	P	8.43	7.08	6.28		4.59	4.22		775.7	5.7 MING	42.9	
	73	P	8.49	7.14	f 6.34		5.05	4.28		780.9	5.2 ROLL	48.1	
	73	P	9.02	7.27	6.48		5.19	4.42		793.2	12.3 GROWLER	60.4	
	76	P	9.13	7.38	6.59		5.29	4.52		802.5	9.3 KOFA	69.7	
	73	P	9.24	7.49	7.10		5.41	5.04		812.7	10.2 HORN	79.9	
	75	WOP	9.35	8.00	s 7.26		5.58	5.20		822.3	9.6 HYDER	89.5	
	73	P	9.46	8.11	7.38		6.10	5.32		831.1	8.8 MONTEZUMA	98.3	
	76	WP	9.57	8.22	7.50		6.22	5.44		841.1	10.0 SADDLE	108.3	
	72	P	10.13	8.38	8.08		6.40	6.02		851.0	9.9 GILLESPIE	118.2	
	76	P	10.24	8.49	8.20		6.53	6.14		861.3	10.3 ARLINGTON	128.5	
	72	P	10.31	8.56	8.25		6.58	6.19		865.7	4.4 DIXIE	132.9	
	72	P	10.38	9.03	8.32		7.05	6.26		871.5	5.8 CONGER	138.7	
76	WP	10.44	9.09	f 8.40		7.10	6.31	875.7	4.2 BUCKEYE	142.9			
72	P	10.51	9.16	8.48		7.17	6.38	881.7	6.0 LIBERTY	148.9			
74	YP	11.01	9.26	f 8.58		7.25	6.46	889.7	8.0 LITCHFIELD	156.9			
100	P	11.05	9.30	9.03		7.29	6.50	893.0	3.3 CASHION	160.2			
73	P	11.11	9.36	9.09		7.35	6.56	898.1	5.1 FOWLER	165.3			
Phoenix yard	75	P	11.17	9.42	9.15		7.41	7.02	904.0	5.9 23rd AVE. PHOENIX	171.2		
	BKWP	s 11.25 PM	s 9.50 PM	s 9.25 AM		s 7.50 AM		905.5	1.5 Crossing—AT&SF Wye	172.7			
	BKWOTYP						s 7.10 AM	906.0	0.5 PHOENIX	} D. I. F.	173.2		
							907.0	1.0 PHOENIX YARD	174.2				
		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily Ex. Sun., Mon		(174.2)				
		(3.40) 47.23	(3.40) 47.23	(3.55) 44.87	(0.53) 42.22	(3.50) 45.18	(3.50) 45.44		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.

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2, 3 and 4.

ADDITIONAL FLAG STOPS TO RECEIVE OR DISCHARGE REVENUE PASSENGERS

Train	At	Receive To (or Beyond)	Discharge From (or Beyond)	Frequency
44	{Hyder..... Buckeye..... Litchfield.....}	Tucson.....	Yuma.....	Daily

WELLTON SUBDIVISION

Mile Post Location	Timetable No. 117 June 2, 1946	Distance from Phoenix Yard	WESTWARD														
			FIRST CLASS														
			1 Sunset Limited	3 Golden State Limited	47 Mail and Express	5 Argonaut	43 Callifornian										
STATIONS	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily												
732.7	TO-R YUMA 4.7	174.2	AM 4.10	PM 3.40	PM 7.15	PM 11.40	AM 12.50										
737.4 737.5	TO-R EAST YARD 2.6	169.5	3.58	3.29	7.05	11.29	12.39										
740.1	ARABY 3.6	166.9	3.53	3.24	6.59	11.24	12.33										
743.7	FORTUNA 2.9	163.3	3.49	3.20	6.55	11.20	12.29										
746.6	TO BLAISDELL 4.0	160.4	3.45	3.16	6.51	11.16	12.25										
750.6	KINTER 2.9	156.4	3.40	3.11	6.46	11.10	12.20										
753.5	TO DOME 16.5	153.5	3.36	3.07	f 6.41	11.05	12.16 AM										
770.0	TO WELLTON 5.7	137.0	3.17	2.48	s 6.20	f 10.45 PM	11.56 PM										
775.7	MING 5.2	131.3	3.10	2.41	6.10		11.49										
780.9	ROLL 12.3	126.1	3.04	2.35	f 6.03		f 11.43										
793.2	TO GROWLER 9.3	113.8	2.50	2.21	5.47		11.29										
802.5	KOFA 10.2	104.5	2.39	2.10	5.36		11.19										
812.7	HORN 9.6	94.3	2.27	1.58	5.24		11.07										
822.3	TO HYDER 8.8	84.7	2.15	1.46	s 5.12		f 10.55										
831.1	MONTEZUMA 10.0	75.9	2.02	1.36	4.56		10.40										
841.1	TO SADDLE 9.9	65.9	1.50	1.24	4.44		10.28										
851.0	GILLESPIE 10.3	56.0	1.38	1.12	4.32		10.13										
861.3	ARLINGTON 4.4	45.7	1.26	1.00	4.20		9.57										
865.7	DIXIE 5.8	41.3	1.21	12.55	4.15		9.45										
871.5	CONGER 4.2	35.5	1.14	12.48	4.08		9.37										
875.7	TO BUCKEYE 6.0	31.3	1.09	12.43	s 4.02		f 9.30										
881.7	LIBERTY 8.0	25.3	1.01	12.36	3.52		9.16										
889.7	TO LITCHFIELD 3.3	17.3	12.51	12.26	s 3.42		f 9.06										
893.0	CASHION 5.1	14.0	12.47	12.22	3.33		8.57										
898.1	FOWLER 5.9	8.9	12.41	12.16	3.27		8.51										
904.0	23rd AVE. PHOENIX 1.5	3.0	12.35	12.10	3.21		8.45										
905.5	Crossing—AT&SF Wye 0.5	1.5															
906.0	TO-R PHOENIX 1.0	1.0	12.30 AM	12.05 PM	3.15 PM		8.40 PM										
907.0	TO-R PHOENIX YARD	0.0															
	(174.2)		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily										
	Time over District.....		(3.40)	(3.35)	(4.00)	(0.55)	(4.10)										
	Average Speed per Hour.....		47.23	48.33	43.33	40.58	41.57										

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

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2, 3 and 4.

No. 43 stop at Wellton on Sunday to detrain M of W employees.

STATION	1	3	47	5	43
YUMA					
EAST YARD					
ARABY					
FORTUNA					
BLAISDELL					
KINTER					
DOME					
WELLTON					
MING					
ROLL					
GROWLER					
KOFA					
HORN					
HYDER					
MONTEZUMA					
SADDLE					
GILLESPIE					
ARLINGTON					
DIXIE					
CONGER					
BUCKEYE					
LIBERTY					
LITCHFIELD					
CASHION					
FOWLER					
23rd AVE. PHOENIX					
PHOENIX					
PHOENIX YARD					

WELLTON SUBDIVISION

EASTWARD

SECOND CLASS

Capacity of sidings in car lengths	Mile Post Location	SECOND CLASS				Timetable No. 117 June 2, 1946	Distance from Yuma
		846 Freight	902 Freight	844 Freight	842 Freight		
		Leave Daily	Leave Daily	Leave Daily	Leave Daily		
		PM 4.30	PM 2.00	AM 8.20	AM 1.10	732.7	
Yuma yd. { BKWOTYP		4.45	2.15	8.35	1.25	737.4 737.5	
P		4.50	2.20	8.40	1.30	740.1	
62 P		4.57	2.27	8.47	1.37	743.7	
70 P		5.02	2.32	8.52	1.42	746.6	
62 P		5.10	2.40	9.00	1.50	750.6	
113 P		5.16	2.46	9.06	1.56	753.5	
M 76 P		5.45 PM	3.15	9.35 AM	2.25 AM	770.0	
68 WIP			3.30			775.7	
72 P			3.40			780.9	
73 P			4.00			793.2	
73 P			4.18			802.5	
76 P			4.38			812.7	
75 WOP			5.12			822.3	
73 P			5.28			831.1	
76 WP			5.45			841.1	
72 P			6.20			851.0	
76 P			6.37			861.3	
72 P			6.45			865.7	
72 P			7.03			871.5	
76 WP			7.10			875.7	
72 P			7.22			881.7	
74 YP			7.40			889.7	
100 P			7.48			893.0	
73 P			7.56			898.1	
Phoenix yard { 75 P			8.06			904.0	
						905.5	
BKWP			8.15 PM			906.0	
BKWOTYP						907.0	
		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily		
		(1.15) 29.76	(6.15) 27.87	(1.15) 29.76	(1.15) 29.76		

STATIONS		Distance from Litchfield Park
TO-R	YUMA		0.0
TO-R	EAST YARD	4.7
	ARABY	7.3
	FORTUNA	10.9
TO	BLAISDELL	13.8
	KINTER	17.8
TO	DOME	20.7
TO	WELLTON	37.2
	MING	42.9
	ROLL	48.1
TO	GROWLER	60.4
	KOFA	69.7
	HORN	79.9
TO	HYDER	89.5
	MONTEZUMA	98.3
TO	SADDLE	108.3
	GILLESPIE	118.2
	ARLINGTON	128.5
	DIXIE	132.9
	CONGER	138.7
TO	BUCKEYE	142.9
	LIBERTY	148.9
TO	LITCHFIELD	156.9
	CASHION	160.2
	FOWLER	165.3
	23rd AVE. PHOENIX	171.2
	Crossing—AT&SF Wye	172.7
TO-R	PHOENIX	173.2
TO-R	PHOENIX YARD	174.2
(174.2)		
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.

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2, 3 and 4.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Granite Spur . . . (Spur)	755.2	19
Ligurta (Spur)	760.2	10
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	10
Norton	884.9	..
Tolleson	895.7	..
Campo	902.0	..

Capacity of sidings in car lengths	Mile Post Location	Timetable No. 117 June 2, 1946		Distance from Litchfield Park	
		Litchfield Branch			
		STATIONS			
74	YP	889.7	TO	LITCHFIELD	5.0
		894.7		LITCHFIELD PARK	0.0
		(5.0)			

WELLTON SUBDIVISION

		EASTWARD				Mile Post Location	Automatic Block System	WESTWARD	
		SECOND CLASS			FIRST CLASS			Distance from Gila	FIRST CLASS
Capacity of sidings in car lengths		846 Freight	844 Freight	842 Freight	6 Argonaut				5 Argonaut
		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Arrive Daily			
68	WIP	PM 5.45	AM 9.35	AM 2.25	f AM 5.18	770.0	TO WELLTON	85.7	f PM 10.45
69	P	5.52	9.42	2.32	5.24	773.1	3.1 ASHER	82.6	10.40
63	P	5.57	9.47	2.37	5.28	776.4	3.3 TACNA	79.3	10.35
69	P	6.03	9.53	2.43	f 5.36	780.1	3.7 GAEL	75.6	f 10.30
63	P	6.10	10.00	2.50	5.42	783.8	3.7 COLFRED	71.9	10.23
67	P	6.18	10.08	2.58	5.48	788.6	4.8 PEMBROKE	67.1	10.17
W 79 E 67	P	6.28	10.18	3.08	f 5.58	792.6	4.0 MOHAWK	63.1	f 10.11
63	P	6.36	10.26	3.16	6.05	795.9	3.3 KIM	59.8	10.02
64	P	6.43	10.33	3.23	6.10	800.5	4.6 STOVAL	55.2	9.56
94	P	6.52	10.42	3.32	f 6.18	806.2	5.7 DATELAND	49.5	f 9.49
W 127 E 63	WP	7.10	11.00	3.50	f 6.26	811.9	5.7 AZTEC	43.8	f 9.40
94	P	7.20	11.10	4.00	6.31	815.8	3.9 MUGGINS	39.9	9.34
63	P	7.28	11.18	4.08	6.36	819.7	3.9 STANWIX	36.0	9.29
W 100 E 72	WOP	7.40	11.30	4.20	s 6.48	826.1	6.4 SENTINEL	29.6	s 9.22
76	P	7.48	11.38	4.28	6.53	829.6	3.5 TRIGO	26.1	9.10
61	P	7.55	11.45	4.35	6.58	833.1	3.5 TARTRON	22.6	9.05
65	P	8.05	AM 11.55	4.45	7.06	839.9	6.8 PIEDRA	15.8	8.56
64	P	8.14	PM 12.04	4.54	7.12	845.5	5.6 THEBA	10.2	8.49
63	P	8.22	12.12	5.02	7.17	850.3	4.8 SMURR	5.4	8.43
Yard Limits BKWOTYP		8.35 PM	12.25 PM	5.15 AM	s 7.25 AM	855.7	5.4 GILA	0.0	8.35 PM
		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily		(85.7)		Leave Daily
		(2.50) 30.25	(2.50) 30.25	(2.50) 30.25	(2.07) 40.49		.....Time over District.....		(2.10)
							.....Average Speed per Hour.....		39.55

YUMA VALLEY RAILROAD

		EAST- WARD	Timetable No. 117		WEST- WARD
			June 2, 1946		
Capacity of sidings in car lengths	Mile Post Location		STATIONS		Distance from Gadsden
Yuma yard	P	0.0	TO-R	YUMA	21.0
20		1.0		1.0 U.S.R.S.	20.0
23		8.5		7.5 WILLETTS	12.5
25		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 15 MPH except must not exceed 8 MPH over trestle at U.S.R.S.

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).

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

PICACHO SUBDIVISION

EASTWARD

FIRST CLASS

Capacity of sidings in car lengths		2	4	48	44	6	370	Mile Post Location	Distance from Phoenix
		Sunset Limited	Golden State Limited	Mail and Express	Callifornian	Argonaut	A. O. N.		
		Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily Ex. Sun., Mon	STATIONS	
Phoenix yard	BKWP	PM 11.40	PM 10.00	AM 9.40	AM 8.10			906.0	TO-R PHOENIX 1.0
	BKWOTYP	11.45	10.03	9.44	8.14		AM 7.30	907.0	TO-R PHOENIX YARD 4.1
	P	11.51	10.08	9.51	8.21		7.37	911.1	KENDALL 3.3
79	YP	PM 11.59	10.13	f 10.00	f 8.27		7.43	914.4	TO TEMPE 0.9
	P							915.3	TEMPE JCT. 1.8
	P							917.1	NORMAL JCT. 4.7
78	Yard Limits WYP	f AM 12.17	10.25	s 10.18	f 8.40		7.55	921.8	TO MESA 1.8
81	P	12.21	10.28	10.22	8.43		7.58	923.6	McQUEEN 5.7
80	P	12.30	10.36	f 10.35	f 8.51		8.06	929.3	TO CHANDLER 5.0
76	P	12.36	10.42	10.43	8.59		8.14	934.3	SERAPE 4.7
67	P	12.41	10.47	10.48	9.04		8.19	939.0	SANTAN 4.2
67	P	12.46	10.52	10.57	9.09		8.24	943.2	TO DOCK 10.0
72	P	12.56	11.03	11.08	9.21		8.36	953.2	BLACKWATER 5.0
118	P	1.02	11.09	11.14	9.27		8.42	958.2	POSTON 3.8
73	WP	1.13	11.13	f 11.30	f 9.40		s 8.55	962.0	TO COOLIDGE 4.4
32	P			f				966.4	RANDOLPH 5.0
67	P	1.23	11.23	11.40	9.50		9.06	971.4	TOPAZ 8.3
N 100 S 98	WOIYP	1.32	11.32	f 11.50	10.00	AM 9.43	9.15	979.7 936.7	TO PICACHO 4.0
72	P	1.36	11.36	11.54	10.11	9.47	9.19	940.7	OCATILLA 3.5
90	P	1.39	11.39	AM 11.57	10.14	9.50	9.22	944.2	TO WYMOLA 3.7
71	P							947.9	MONTROSE 3.5
W 84 E 87	WP	1.46	11.46	PM 12.04	10.21	10.01	9.29	951.4	TO RED ROCK 2.9
67	P							954.3	AVRA 4.1
174	YP	1.53	11.53	12.11	10.28	10.10	9.36	958.4	TO NAVISKA 3.8
69	P	1.57	PM 11.57	12.15	10.32	10.14	9.40	962.2	MARANA 2.4
94	P			12.18				964.6	PAPAGO 2.3
164	WP	2.01	AM 12.01	12.21	10.37	10.21	9.46	966.9	TO RILLITO 3.0
93	P							969.9	SABINO 2.2
83	P	2.06	12.06	12.26	10.42	10.26	9.51	972.1	CORTARO 2.6
93	P							974.7	KINO 2.7
W 83 E 88	P	2.11	12.11	12.31	10.47	10.31	9.56	977.4	JAYNES 3.8
	P	2.15	12.15	12.35	10.51	10.35	10.00	981.2	TO STOCKHAM 2.7
Tucson yard BKWCOITYP		s 2.25 AM	s 12.25 AM	s 12.45 PM	s 11.00 AM	s 10.45 AM	s 10.10 AM	983.9	TO-R TUCSON (120.9)
		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily Ex. Sun., Mon		
		(2.45) 43.95	(2.25) 50.03	(3.05) 39.21	(2.50) 42.67	(1.02) 44.90	(2.40) 44.90		Time over District.....
									Average Speed per Hour.....

Timetable No. 117
June 2, 1946

STATIONS		Distance from Phoenix
TO-R PHOENIX	1.0	0.0
TO-R PHOENIX YARD	4.1	1.0
KENDALL	3.3	5.1
TO TEMPE	0.9	8.4
TEMPE JCT.	1.8	9.3
NORMAL JCT.	4.7	11.1
TO MESA	1.8	15.8
McQUEEN	5.7	17.6
TO CHANDLER	5.0	23.3
SERAPE	4.7	28.3
SANTAN	4.2	33.0
TO DOCK	10.0	37.2
BLACKWATER	5.0	47.2
POSTON	3.8	52.2
TO COOLIDGE	4.4	56.0
RANDOLPH	5.0	60.4
TOPAZ	8.3	65.4
TO PICACHO	4.0	73.7
OCATILLA	3.5	77.7
TO WYMOLA	3.7	81.2
MONTROSE	3.5	84.9
TO RED ROCK	2.9	88.4
AVRA	4.1	91.3
TO NAVISKA	3.8	95.4
MARANA	2.4	99.2
PAPAGO	2.3	101.6
TO RILLITO	3.0	103.9
SABINO	2.2	106.9
CORTARO	2.6	109.1
KINO	2.7	111.7
JAYNES	3.8	114.4
TO STOCKHAM	2.7	118.2
TO-R TUCSON	(120.9)	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 east switch Kendall, may be used by freight trains at speed not to exceed 25 MPH when authorized by train order. Single track rules apply.

RULE S-72. Exceptions: Nos. 4 and 2 are superior to No. 5.

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2, 3 and 4.

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

PICACHO SUBDIVISION

Mile Post Location	Timetable No. 117 June 2, 1946	Distance from Tucson	WESTWARD									
			FIRST CLASS									
			3	47	43	5	1					
		Golden State Limited	Mail and Express	Californian	Argonaut	Sunset Limited						
STATIONS		Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily						
906.0	TO-R PHOENIX 1.0	120.9	AM 11.55	PM 2.50	PM 8.15		AM 12.15					
907.0	TO-R PHOENIX YARD 4.1	119.9	11.50	2.45	8.10		12.11					
911.1	KENDALL 3.3	115.8	11.45	2.38	8.03		12.05 AM					
914.4	TO TEMPE 0.9	112.5	11.40	f 2.33	f 7.57		11.59 PM					
915.3	TEMPE JCT. 1.8	111.6										
917.1	NORMAL JCT. 4.7	109.8										
921.8	TO MESA 1.8	105.1	11.27	s 2.15	f 7.40		f 11.44					
923.6	McQUEEN 5.7	103.3	11.24	2.03	7.30		11.40					
929.3	TO CHANDLER 5.0	97.6	11.15	s 1.55	f 7.20		11.32					
934.3	SERAPE 4.7	92.6	11.07	1.43	7.05		11.25					
939.0	SANTAN 4.2	87.9	11.02	1.38	7.00		11.20					
943.2	TO DOCK 10.0	83.7	10.57	1.33	6.55		11.15					
953.2	BLACKWATER 5.0	73.7	10.45	1.21	6.43		11.03					
958.2	POSTON 3.8	68.7	10.39	1.15	6.37		10.57					
962.0	TO COOLIDGE 4.4	64.9	10.34	s 1.10	s 6.30		10.53					
966.4	RANDOLPH 5.0	60.5		f								
971.4	TOPAZ 8.3	55.5	10.24	12.56	6.15		10.43					
979.7 936.7	TO PICACHO 4.0	47.2	10.15	f 12.47	6.05	PM 6.15	10.34					
940.7	OCATILLA 3.5	43.2	10.11	12.41	5.58	6.08	10.30					
944.2	TO WYMOLA 3.7	39.7	10.08	12.38	5.55	6.05	10.27					
947.9	MONTROSE 3.5	36.0										
951.4	TO RED ROCK 2.9	32.5	10.01	f 12.31	5.47	5.58	10.20					
954.3	AVRA 4.1	29.6										
958.4	TO NAVISKA 3.8	25.5	9.54	f 12.24	5.37	5.51	10.13					
962.2	MARANA 2.4	21.7	9.50		5.32	5.47	10.09					
964.6	PAPAGO 2.3	19.3		12.18								
966.9	TO RILLITO 3.0	17.0	9.46	12.11	5.27	5.42	10.05					
969.9	SABINO 2.2	14.0										
972.1	CORTARO 2.6	11.8	9.41	12.06	5.22	5.37	10.01					
974.7	KINO 2.7	9.2										
977.4	JAYNES 3.8	6.5	9.37	12.02 PM	5.17	5.32	9.57					
981.2	TO STOCKHAM 2.7	2.7	9.33	11.58 AM	5.13	5.28	9.53					
983.9	TO-R TUCSON	0.0	9.25 AM	11.50 AM	5.05 PM	5.20 PM	9.45 PM					
(120.9)			Leave Daily	Leave Daily	Leave Daily	Leave Daily	Leave Daily					
Time over District.....			(2.30)	(3.00)	(3.10)	(0.55)	(2.30)					
Average Speed per Hour.....			48.36	40.30	38.18	48.80	48.36					

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RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2, 3 and 4.

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

No. 5 stop on flag at Picacho for Gila line passengers only.

PICACHO SUBDIVISION

EASTWARD

SECOND CLASS

Capacity of sidings in car lengths					854	852	904	856	Mile Post Location
					Freight	Freight	Freight	Freight	
					Leave Daily	Leave Daily	Leave Daily	Leave Daily	
	Phoenix yard	BKWP							906.0
		BKWOTYP					AM 12.15		907.0
		P					12.25		911.1
79		YP					12.35		914.4
		P							915.3
		P							917.1
	Yard Limits	WYP					1.05		921.8
81		P					1.15		923.6
80		P					1.25		929.3
76		P					1.33		934.3
67		P					1.41		939.0
67		P					1.49		943.2
72		P					2.08		953.2
118		P					2.17		958.2
73		WP					2.40		962.0
32		P							966.4
67		P					3.18		971.4
N 100 S 98		WOIYP			PM 4.30	AM 9.20	3.40	AM 12.35	979.7 936.7
72		P			4.40	9.30	3.50	12.45	940.7
90		P			4.47	9.37	3.57	12.52	944.2
71		P			4.55	9.45	4.05	1.00	947.9
W 84 E 87		WP			5.02	10.01	4.12	1.07	951.4
67		P			5.08	10.10	4.18	1.13	954.3
174		YP			5.15	10.18	4.25	1.20	958.4
69		P			5.32	10.32	4.32	1.27	962.2
94		P			5.37	10.38	4.37	1.32	964.6
164		WP			5.42	10.43	4.42	1.37	966.9
93		P			5.48	10.48	4.47	1.42	969.9
83		P			5.53	10.53	4.52	1.47	972.1
93		P			5.58	10.58	4.57	1.52	974.7
W 83 E 88		P			6.03	11.03	5.02	1.57	977.4
		P			6.10	11.10	5.09	2.04	981.2
	Tucson yard	BKWCOITYP			6.30 PM	11.30 AM	5.25 AM	2.20 AM	983.9
					Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	
					(2.00) 23.20	(2.10) 21.41	(5.10) 23.21	(1.45) 26.52	

Timetable No. 117

June 2, 1946

Distance from
Phoenix

STATIONS

TO-R	PHOENIX	} D	0.0
	1.0		
TO-R	PHOENIX YARD		1.0
	4.1		
	KENDALL		5.1
	3.3		
TO	TEMPE		8.4
	0.9		
	TEMPE JCT.		9.3
	1.8		
	NORMAL JCT.		11.1
TO	4.7		
	MESA		15.8
	1.8		
	McQUEEN		17.6
TO	5.7		
	CHANDLER		23.3
	5.0		
	SERAPE		28.3
	4.7		
	SANTAN		33.0
TO	4.2		
	DOCK		37.2
	10.0		
	BLACKWATER		47.2
	5.0		
	POSTON		52.2
TO	3.8		
	COOLIDGE		56.0
	4.4		
	RANDOLPH		60.4
	5.0		
	TOPAZ		65.4
TO	8.3		
	PICACHO		73.7
	4.0		
	OCATILLA		77.7
TO	3.5		
	WYMOLA		81.2
	3.7		
	MONTROSE		84.9
TO	3.5		
	RED ROCK		88.4
	2.9		
	AVRA		91.3
TO	4.1		
	NAVISKA		95.4
	3.8		
	MARANA		99.2
	2.4		
	PAPAGO		101.6
TO	2.3		
	RILLITO		103.9
	3.0		
	SABINO		106.9
	2.2		
	CORTARO		109.1
	2.6		
	KINO		111.7
	2.7		
	JAYNES		114.4
TO	3.8	} D	
	STOCKHAM		118.2
TO-R	2.7		
	TUCSON		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 east switch Kendall, may be used by freight trains at speed not to exceed 25 MPH when authorized by train order. Single track rules apply.

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2, 3 and 4.

ADDITIONAL STATIONS

NAME	Mile Post	Capacity
Tovrea.....	911.8	..
Yeso..... (Spur)	912.9	5
Tremaine.....	925.4	22
Falfa.....	926.1	40
Pozo..... (Spur)	931.0	43
Olberg..... (Spur)	948.1	14
Peak.....	975.2	..

PICACHO SUBDIVISION

EASTWARD				Mile Post Location	Automatic Block System	Timetable No. 117 June 2, 1946	Distances from Picacho	WESTWARD					
SECOND CLASS			FIRST CLASS					FIRST CLASS					
Capacity of sidings in car lengths	856	854	852					6		5			
	Freight	Freight	Freight					Argonaut						Argonaut
	Leave Daily	Leave Daily	Leave Daily	Leave Daily		Arrive Daily							
Yard Limits BKWOTYP	PM 9.15	PM 1.10	AM 6.00	AM 7.35		855.7	81.0	s	PM 8.25				
62 P	9.25	1.20	6.10	7.42		859.1	77.6		8.19				
74 P	9.42	1.37	6.27	7.50		865.1	71.6		8.11				
62 P	9.49	1.44	6.34	7.55		869.1	67.6		8.05				
73 P	10.05	2.00	6.50	8.00		871.8	64.9		8.01				
72 YP	10.20	2.15	7.05	f 8.07		874.6	62.1	f	7.56				
64 P	10.30	2.25	7.15	8.12		879.4	57.3		7.50				
63 P	10.38	2.33	7.23	f 8.17		883.7	53.0	f	7.44				
62 P	10.45	2.40	7.30	8.23		888.4	48.3		7.36				
63 P	10.53	2.48	7.38	8.29		892.8	43.9		7.30				
N 110 S 146 WP	11.10	3.05	7.55	s 8.40		897.8	38.9	s	7.22				
61 P	11.25	3.20	8.10	8.47		902.9	33.8		7.10				
70 P	11.33	3.28	8.18	8.52		907.7	29.0		7.05				
63 P	11.41	3.36	8.26	8.57		912.5	24.2		7.00				
Yard Limits							17.9	s	6.50				
88 WP	11.51	3.46	8.36	s 9.10		918.8	13.0		6.38				
61 P	PM 11.58	3.53	8.43	9.16		923.7	8.3		6.32				
63 P	AM 12.05	4.00	8.50	9.21		928.4	3.6	s	6.25				
74 P	12.13	4.08	8.58	s 9.35		933.1	0.0		6.15				
N 100 S 98 WOIYP	AM 12.35	PM 4.30	AM 9.20	AM 9.43		936.7			PM				
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily					Leave Daily				
	(3.20) 24.30	(3.20) 24.30	(3.20) 24.30	(2.08) 37.96					(2.10) 37.38				

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Seco (Spur)	921.0	13

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

No. 5 stop on flag at Picacho for Gila line passengers only.

EMPLOYEE STATISTICS	
NAME	POSITION

PICACHO SUBDIVISION

		EAST-WARD		Timetable No. 117 June 2, 1946		WEST-WARD				EAST-WARD		Timetable No. 117 June 2, 1946		WEST-WARD	
Capacity of sidings in car lengths		Mile Post Location	Christmas Branch		Distance from Christmas			Capacity of sidings in car lengths		Mile Post Location	Creamery Branch		Distance from Normal Jct.		
			STATIONS								STATIONS				
81	P	923.6		McQUEEN	86.9			79	WYP	914.4	TO	TEMPE	2.1		
				3.4						915.4		1.0			
72	P	927.0	TO	GILBERT	83.5					916.5		CREAMERY	1.1		
		932.0		5.0								1.1			0.0
		935.6		GERMANN	74.9							NORMAL JCT.			
				3.6											
	P	938.1		RITTENHOUSE	72.4										
				2.5											
	P	941.6		QUEEN CREEK	68.9										
				3.5											
	P	949.8		MAGMA	60.7										
				8.2											
27	WP	959.0	TO	FLORENCE	51.5										
				9.2											
	P	969.0		PRICE	41.5										
				10.0											
	P	975.2		COCHRAN	35.3										
				6.2											
	P	983.1		ZELLWEGER	27.4										
				7.9											
Yard Limits	P	987.8	TO-R	RAY JCT.	22.7										
				4.7											
		994.9		BRANAMAN	15.6										
				7.1											
Yard Limits	Y	999.7		BURNS	10.8										
				4.8											
	BKWOYP	1000.2	TO-R	HAYDEN JCT.	10.3										
				0.5											
	P	1002.1	TO	HAYDEN	8.4										
				1.9											
		1010.5		CHRISTMAS	0.0										
				8.4											
				(86.9)											

		EAST-WARD		Timetable No. 117 June 2, 1946		WEST-WARD				EAST-WARD		Timetable No. 117 June 2, 1946		WEST-WARD	
Capacity of sidings in car lengths		Mile Post Location	Tempe Branch		Distance from West Chandler			Capacity of sidings in car lengths		Mile Post Location	STATIONS		Distance from West Chandler		
			STATIONS								STATIONS				
	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										
				8.4											
				(7.7)											

At Hayden Jct. when train-order office is open, signal governs movement of trains and engines between Christmas Branch junction switch (1584 feet east of Hayden Jct.) and Hayden Jct. train-order office. Movements between these points are authorized by signal being placed in proceed position after being called for by one long, one short and one long sound of whistle. When train-order office is closed, movements may be made between these points "With Caution" if intervening track is seen to be clear.

Normal position Christmas Branch junction switch is for Kennecott Copper Corporation Railroad. Westward trains and engines via Kennecott Copper Corporation Railroad and via Christmas Branch must stop to clear Christmas Branch junction switch before proceeding as authorized above.

Kennecott Copper Corp'n R. R. between Hayden Jct. and Hayden Mills is operated by the Tucson Division.

Speed of trains must not exceed 15 MPH.

Grade Hayden Mills to Hayden Jct. 2.2%.

Impaired overhead and side clearance at Hayden Mills Smelter.

Loaded cars not permitted on open deck of trestle beyond ore bins at Hayden Mills.

RULE 99 must be complied with between Christmas Branch junction switch and Ray Consolidated derail on Kennecott Copper Corporation Railroad.

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

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

PICACHO SUBDIVISION

EAST WARD				Mile Post Location	Timetable No. 117		Distance from Nogales	WESTWARD		
Capacity of sidings in car lengths	FIRST CLASS				June 2, 1946			FIRST CLASS		
	Tucson yard BKWCOITYP		378 Mexican Express Leave Daily Ex. Sunday		STATIONS			379 Mexican Express Arrive Daily Ex. Sunday		
				AM 11.40	983.9	TO-R TUCSON	TO-R TUCSON				65.9	s	PM 4.50
				Via SHOP YARD	T&NRR JCT.	65.1				
24			991.6	6.9 CONSAIR		58.2				
55	P		993.8	2.2 XAVIER		56.0		4.28		
62	P	f 12.17	1002.4	TO	8.6 SAHUARITA	47.4	f	4.13		
56	P		1016.3	13.9 CANOA		33.5		3.49		
57	WP	s 12.51	1021.1	TO	4.8 AMADO	28.7	s	3.40		
56	P		1025.6	4.5 CHAVEZ		24.2		3.31		
57	P	f 1.14	1034.2	8.6 OTERO		15.6	f	3.16		
	Nogales yard BKWOTP	s 1.45 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)		.....Time over District.....				(2.05)	
		31.44		.....Average Speed per Hour.....				31.44	

No. 378 and No. 379 stop daily at MP 1028.1, and stop on flag at Continental.
 Rule S-72 Exception, No. 378 is superior to No. 379.
 Passenger trains use shop yard route, Tucson yard.
 Freight trains use T&NRR Jct. route, Tucson yard.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Continental..... (Spur)	1010.4	12
Morales..... (Spur)	1012.1	18
Tube..... (Spur)	1029.7	2
Silva..... (Spur)	1037.3	..
Calabasas..... (Spur)	1039.8	55

Station	Time	Day	Time	Day	Station
Continental	11:40	AM	1:45	PM	Continental
Morales	11:40	AM	1:45	PM	Morales
Tube	11:40	AM	1:45	PM	Tube
Silva	11:40	AM	1:45	PM	Silva
Calabasas	11:40	AM	1:45	PM	Calabasas
Nogales	11:40	AM	1:45	PM	Nogales
Amado	11:40	AM	1:45	PM	Amado
Sahuarita	11:40	AM	1:45	PM	Sahuarita
Consa	11:40	AM	1:45	PM	Consa
Xavier	11:40	AM	1:45	PM	Xavier
Tucson	11:40	AM	1:45	PM	Tucson

When train will use No. 1 track, this station is...
 Division Tucson to Nogales...
 Second class train...
 First class train...
 Freight train...
 Passenger train...
 Mail train...
 Express train...
 Special train...
 Flag train...
 Flag stop...
 Flag station...
 Flag point...
 Flag line...
 Flag track...
 Flag yard...
 Flag house...
 Flag office...
 Flag shop...
 Flag engine...
 Flag car...
 Flag truck...
 Flag wagon...
 Flag horse...
 Flag mule...
 Flag cow...
 Flag pig...
 Flag sheep...
 Flag goat...
 Flag chicken...
 Flag turkey...
 Flag duck...
 Flag geese...
 Flag fish...
 Flag fruit...
 Flag vegetables...
 Flag other...
 Flag misc...

BOWIE SUBDIVISION

EASTWARD

FIRST CLASS

Capacity of sidings in car lengths	FIRST CLASS					Mile Post Location	Timetable No. 117 June 2, 1946	Distance from Tucson
	48	44	6	2	4			
	Mall and Express Leave Daily	Californian Leave Daily	Argonaut Leave Daily	Sunset Limited Leave Daily	Golden State Limited Leave Daily			
Tucson yard BKWCOITYP	PM 1.05	AM 11.15	AM 11.05	AM 2.40	AM 12.35	983.9	TO-R TUCSON	0.0
63 P	1.20	11.32	11.24	2.56	12.50	993.8	9.9 RANKIN	9.9
63 P	f 1.34	AM 11.44	11.38	3.07	1.01	1003.3	9.5 VAIL	19.4
79 WP	f 1.55	PM 12.05	AM 11.58	3.24	1.18	1012.6	9.3 PANTANO	28.7
N 94 Yard Limits S 85 CIYP	f 2.15 PM	12.25 PM	PM 12.20	3.45	1.35 AM	1023.6	11.0 MESCAL	39.7
77 P			12.26	3.51		1028.2	4.6 CHAMISO	44.3
E118 Yard Limits W70 BKWOP			s 12.40	s 4.06		1032.5 1032.6	TO BENSON	48.6
62 P			12.48	4.13		1035.8	3.2 FENNER	51.8
83 P			12.55	4.20		1038.5	2.7 CURVO	54.5
75 WP			1.02	4.27		1040.8	TO SIBYL	56.8
100 P			1.08	4.32		1043.9 1044.5	3.1 TULLY	59.9
63 P			1.13	4.37		1047.3	2.8 OCHOA	62.7
65 P			1.21	4.44		1050.8	3.5 LANCHA	66.2
E65 W65 YP			s 1.30	4.51		1053.9	TO DRAGON	69.3
81 P			1.36	4.57		1058.3	4.4 MANZORO	73.7
90 P			f 1.44	5.02		1063.9	5.6 COCHISE	79.3
64 P			1.50	5.07		1069.6	5.7 HADD	85.0
68 WP			s 2.00	5.15		1074.7	TO WILLCOX	90.1
61 P			2.05	5.20		1079.4	4.7 DRURY	94.8
99 P			2.11	5.25		1082.6	3.2 RASO	98.0
64 P			2.16	5.30		1087.7	5.1 ALRICH	103.1
64 P			2.20	5.34		1091.0	3.3 LUZENA	106.4
63 P			2.25	5.39		1094.5	3.5 CHOLLA	109.9
E110 Yard Limits W113 BKWCOYP			s 2.40	s 5.50		1098.4	TO-R BOWIE	113.8
64 P			2.46	5.56		1102.6	4.2 HOLT	118.0
63 P			2.50	6.00		1106.6	4.0 OLGA	122.0
63 P			2.54	6.04		1110.2	3.6 KARRO	125.6
63 BKWCOYP			f 2.58	6.08		1114.2	TO SAN SIMON	129.6
64 P			3.06	6.13		1117.6	3.4 BAWTRY	133.0
74 P			3.14	6.20		1121.8	4.2 VANAR	137.2
70 P			3.21	6.26		1125.0	3.2 CAVOT	140.4
E66 W69 YP			f 3.31	6.34		1128.9	TO STEINS	144.3
62 P			3.37	6.39		1132.7	3.8 MONDEL	148.1
63 P			3.41	6.43		1136.5	3.8 CONRAD	151.9
62 P			3.48	6.47		1140.8	4.3 GARY	156.2
63 P			3.55	6.52		1143.9	3.1 PYRA	159.3
Yard Limits BKWCOYP			s 4.05 PM	s 7.00 AM		1148.3	TO-R LORDSBURG	163.7
			Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	(163.7)	
			(1.10) 34.00	(1.10) 34.00	(5.00) 32.74	(4.20) 37.76	(1.00) 36.66	.....Time over District..... .....Average Speed per Hour.....

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2 and 4.

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.

BOWIE SUBDIVISION

Timetable No. 117 June 2, 1946		Distance from Lordsburg		WESTWARD											
				FIRST CLASS											
				43	1										
STATIONS		No. 2 Track		Californian Arrive Daily	Sunset Limited Arrive Daily										
				983.9	TO-R	TUCSON 9.9									
993.8		RANKIN 9.5		Be Governed by Current Timetable and Bulletins of Rio Grande Division.											
1003.3		VAIL 9.3													
1012.6		PANTANO 11.0													
1023.6	TO-R	MESCAL 4.6	124.0												
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	3.11	8.04										
1038.5		CURVO 2.3	109.2	3.07	8.00										
1040.8	TO	SIBYL 3.1	106.9	3.02	7.55										
1043.9 1044.5		TULLY 2.8	103.8	2.57	7.50										
1047.3		OCHOA 3.5	101.0	2.53	7.46										
1050.8		LANCHA 3.1	97.5	2.48	7.41										
1053.9	TO	DRAGON 4.4	94.4	f 2.43	7.37										
1058.3		MANZORO 5.6	90.0	2.35	7.30										
1063.9	TO	COCHISE 5.7	84.4	f 2.28	7.24										
1069.6		HADO 5.1	78.7	2.20	7.18										
1074.7	TO	WILLCOX 4.7	73.6	s 2.13	7.12										
1079.4		DRURY 3.2	68.9	2.05	7.07										
1082.6		RASO 5.1	65.7	1.58	7.02										
1087.7		ALRICH 3.3	60.6	1.50	6.55										
1091.0		LUZENA 3.5	57.3	1.44	6.50										
1094.5		CHOLLA 3.9	53.8	1.40	6.46										
1098.4	TO-R	BOWIE 4.2	49.9	s 1.35	s 6.40										
1102.6		HOLT 4.0	45.7	1.21	6.30										
1106.6		OLGA 3.6	41.7	1.17	6.26										
1110.2		KARRO 4.0	38.1	1.13	6.22										
1114.2	TO	SAN SIMON 3.4	34.1	f 1.08	6.18										
1117.6		BAWTRY 4.2	30.7	1.01	6.14										
1121.8		VANAR 3.2	26.5	12.56	6.09										
1125.0		CAVOT 3.9	23.3	12.50	6.05										
1128.9	TO	STEINS 3.8	19.4	f 12.42	5.58										
1132.7		MONDEL 3.8	15.6	12.35	5.52										
1136.5		CONRAD 4.3	11.8	12.30	5.47										
1140.8		GARY 3.1	7.5	12.24	5.42										
1143.9		PYRA 4.4	4.4	12.17	5.38										
1148.3	TO-R	LORDSBURG	0.0	12.10 PM	5.32 PM										
		(124.0)		Leave Daily	Leave Daily										
		Time over District.....		(3.35)	(3.03)										
		Average Speed per Hour.....		34.14	40.66										

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

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2 and 4.

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BOWIE SUBDIVISION

EASTWARD

SECOND CLASS

Capacity of sidings in car lengths	SECOND CLASS						Mile Post Location	Timetable No. 117 June 2, 1946	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 6.00	PM 4.05	AM 11.30	AM 7.00	AM 3.00	AM 1.00	983.9		
63 P	6.28	4.40	AM 11.58	7.35	3.28	1.35	993.8		
63 P	6.50	5.05	PM 12.20	8.00	3.50	2.00	1003.3		
79 WP	7.12	5.35	12.42	8.30	4.12	2.30	1012.6		
N 94 Yard Limits S 85 CIYP	7.45	6.10 PM	1.15	9.05 AM	4.45	3.10 AM	1023.6		
77 P	7.55		1.25		4.55		1028.2		
E 118 Yard Limits W 70 BKWOP	8.15		1.45		5.15		1032.5 1032.6		
62 P	8.27		1.57		5.27		1035.8		
83 P	8.38		2.08		5.38		1038.5		
75 WP	8.48		2.18		5.48		1040.8		
100 P	8.58		2.28		5.58		1043.9 1044.5		
63 P	9.05		2.35		6.05		1047.3		
65 P	9.15		2.48		6.15		1050.8		
E 65 W 65 YP	9.25		3.00		6.25		1053.9		
81 P	9.34		3.09		6.34		1058.3		
90 P	9.43		3.18		6.43		1063.9		
64 P	9.52		3.27		6.52		1069.6		
68 WP	10.00		3.35		7.00		1074.7		
61 P	10.08		3.43		7.08		1079.4		
99 P	10.20		3.55		7.20		1082.6		
64 P	10.28		4.03		7.28		1087.7		
64 P	10.34		4.09		7.34		1091.0		
63 P	10.40		4.15		7.40		1094.5		
E 110 Yard Limits W 113 BKWCOYP	11.00		4.35		8.00		1098.4		
64 P	11.09		4.44		8.09		1102.6		
63 P	11.15		4.50		8.15		1106.6		
63 P	11.21		4.56		8.21		1110.2		
63 BKWCOYP	11.28		5.03		8.28		1114.2		
64 P	11.40		5.15		8.40		1117.6		
74 P	PM 11.51		5.26		8.51		1121.8		
70 P	AM 12.02		5.37		9.02		1125.0		
E 66 W 69 YP	12.20		5.58		9.20		1128.9		
62 P	12.28		6.05		9.28		1132.7		
63 P	12.33		6.10		9.33		1136.5		
62 P	12.40		6.17		9.40		1140.8		
63 P	12.46		6.23		9.46		1143.9		
Yard Limits BKWCOYP	1.00 AM		6.35 PM		10.00 AM		1148.3		
	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily	Arrive Daily			
	(7.00) 23.38	(2.05) 19.05	(7.05) 23.10	(2.05) 19.05	(7.00) 23.38	(2.10) 18.32			

STATIONS			No. 2 Track	Distance from Tucson
TO-R	STATION			
	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
TO	2.3 SIBYL			56.8
	3.1 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 LORDBURG			163.7
	(163.7)			

Automatic Block System

RULES 86 and 93. Second-class trains, extra trains and engines must be clear of main track and insulated joints at meeting and passing points for Nos. 1, 2 and 4.

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.

BOWIE SUBDIVISION

EASTWARD				Mile Post Location	WESTWARD				
Capacity of sidings in car lengths	SECOND CLASS	FIRST CLASS			Timetable No. 117				
	884				June 2, 1946				
	Freight				Globe Branch				
	Leave Daily Ex. Monday			STATIONS					
	884	382		Distance from Live Oak	FIRST CLASS				
	Freight	Passenger			381				
	Leave Daily Ex. Monday			Passenger					
	884	382		Arrive Daily					
	Freight	Passenger		Arrive Daily Ex. Sunday					
	Leave Daily Ex. Monday			883					
	884	382		Freight					
	Leave Daily Ex. Monday			Arrive Daily Ex. Sunday					
E 110 Yard Limits	AM		PM	1098.4	TO-R	BOWIE	136.1	PM	
W 113 BKWCOYP	8.00		3.00	1098.1		9.3		s 1.00	PM
50 P	8.25		3.17	1107.4		ESCALA	126.8	12.36	5.30
13 P	8.50		f 3.33	1117.8		10.4		f 12.17	4.40
42 P	9.05		3.44	1125.1		7.3		12.04	4.20
38 P	9.25		s 3.57	1132.6		7.5		s 11.52	3.57
52 Yard Limits	10.20		s 4.10	1137.5	TO	4.9		s 11.40	3.30
WP	10.20		s 4.20	1140.6		3.1		s 11.28	2.25
34 P	10.35		s 4.31	1145.6	TO	5.0		s 11.18	2.05
28 P	10.55		4.35	1146.7		1.1		11.14	1.50
62 P	11.14		f 4.46	1153.0		DUBLIN	87.5	f 11.04	1.25
59 P	AM 11.45		s 4.59	1159.3		6.3		s 10.53	1.03
59 P	PM 12.03		f 5.08	1164.2	TO	6.3		f 10.43	12.50
17 WP	12.18		f 5.19	1170.1		4.9		f 10.31	12.35
54 P	12.35		f 5.31	1176.8		5.9		f 10.19	12.20
52 P	12.57		5.59	1191.0		6.7		9.51	PM
52 P	1.40		s 6.20	1201.0	TO	14.2		s 9.30	11.40
52 WP	2.10		f 6.47	1213.5		10.0		f 9.06	AM
43 P	2.50		s 7.10	1221.5	TO	12.5		8.45	10.10
Yard Limits	3.20		PM	1226.2	TO-R	8.0		AM	AM
BKWOTP	PM			1226.2		4.7			
13 P				1231.9		RADIUM	8.0		
WYP				1231.9	TO-R	5.7			
27 Spur				1233.0		MIAMI	2.3		
14 Spur				1234.2		1.1			
				1234.2		INSPIRATION JCT.	1.2		
						1.2			
						LIVE OAK	0.0		
						(136.1)			
	Arrive Daily Ex. Monday		Arrive Daily					Leave Daily	Leave Daily Ex. Sunday
	(7.20) 16.87		(4.10) 29.69					(4.15) 29.11	(7.20) 16.34
						.....Time over District.....			
						.....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 landslides.
 All train and engine movements must be preceded by section crew from Inspiration Jct. to Live Oak.

ADDITIONAL STATIONS		
NAME	Mile Post	Capacity
Lone Star..... (Spur)	1135.3	21
Glenbar.....	1148.9	..
Ashurst.....	1154.8	..
Peridot.....	1197.3	..
Reppy.....	1207.8	..
Pinal..... (Spur)	1219.3	12
Burch..... (Spur)	1227.3	3
Claypool..... (Spur)	1230.2	9

RULE 2. Watch Inspectors:

S. A. Pope, Manager of Time Service... 65 Market St., San Francisco
 Yuma..... J. H. Huber
 Phoenix..... H. H. Howard
 Tucson..... Grunewald & Adams
 Tucson..... R. W. Hemkin
 Nogales..... G. C. Jackson
 Lordsburg..... E. L. Preis
 Safford..... Adolph J. Cubitto
 Globe..... J. G. Cubitto
 Miami..... J. G. Cubitto, Jr.

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 (H). Where yellow signals are displayed within limits of a length of track over which a maximum speed is designated in train order or timetable bulletin and no maximum speed is otherwise specified for the particular section of track protected by these yellow signals, trains must not exceed fifteen miles per hour there-over.

RULE 10 (J). Certain slow boards have the word "SIGNAL" above the figures. Such slow 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 slow board, unless distant signal can plainly be seen to be displaying proceed indication; and such slow boards in approach to a home signal indicate the speed that must not be exceeded while approaching home signal three-fourths mile beyond the slow board, until indication of home signal can plainly be seen.

Slow boards for westward trains at MP 922.8 and MP 1041.5 also have lamp attached which displays yellow light at night. This light is to call attention to slow 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 15. Second paragraph is changed to read as follows: "The explosion of two torpedoes is a signal to proceed with caution for not less than one mile."

RULE 17. Mars Signal Light on engines shall be used when engine is moving at night, and in foggy or stormy weather. It must be dimmed or extinguished approaching passenger stations, and at other points as prescribed by rules.

RULE 26 is revised to read as follows:

"A blue signal or sign reading 'Men at Work' displayed on engineer's side of cab of an engine or at one or both ends of a car, cut of cars, or at the rear of a train, indicates that workmen are under or about same and the engine, car, cut of cars, or train must not be coupled to nor moved by any method, nor other equipment placed so as to obstruct the view of the blue signal or sign.

"Blue signal or sign must not be removed by any person except the one placing the signal or sign, or someone authorized by him to do so.

"On designated tracks (repair, cleaning, servicing, etc.) where employes work, a sign reading 'Stop—Men at Work' must be placed on the track and switches leading to such track locked; and from sunset to sunrise a blue light must be displayed. Employes placing such sign and locking switches, only are authorized to change same.

"When repair work is to be done under or about an engine or cars in a train, where movement of same would endanger employes engaged in such work, and a blue signal or sign is not available, the enginemmen of engine handling train must be notified by employe engaged in such work and a complete understanding had to prevent movement. After work is completed the same employe must notify enginemmen."

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 99. Third, fourth and sixth paragraphs of Rule 99 are changed to read as follows:

"If recalled from a point less than one-half mile from rear of his train, he must, if safety to train requires, leave lighted fusee at proper intervals and, if conditions warrant, also place two torpedoes on the rail three rail-lengths apart.

"If not recalled, one-half mile from rear of train he must place one torpedo on the rail; one mile from rear of train, or when recalled, if one-half mile or more from rear of train, he must place two torpedoes on the rail three rail-lengths apart. If conditions such as curves, foggy or stormy weather or descending grade require, he must continue back a greater distance, placing two additional torpedoes.

"When flagman has reached the required flagging distance and has placed torpedoes as required, he may then return to the single torpedo where he must remain until relieved by another flagman or recalled. When recalled, he may remove the single torpedo and return, leaving lighted fusee at such intervals as conditions warrant."

RULE 105. Abbreviations used for sidings: "E" for Eastward, "W" for Westward, "M" for Middle, "N" for North, "S" for South. Sidings designated as Middle, North or South, may be used by trains in either direction.

RULE 210 is modified to provide that when using revised train-order Form CS-2600, which has the words "Repeated and Complete" printed at bottom of the form, operator will write or typewrite the time and his or her last name in the space provided on the order, after it has been made complete by train dispatcher.

RULE 221. First sentence of third paragraph is amended as follows:

"When a train order is to be delivered to an approaching train, or orders are held for any other train in the same direction, except those originating, the operator must not clear the signal."

RULE 271 is revised to read as follows:

"Automatic block signals will bear number plates attached to signal masts. Automatic semaphore home signal arms will be painted red and will be distinguished by white stripe near end of semaphore arm. The number plate on a distant light signal will bear the prefix 'D'.

"Interlocking signals will not bear number plates.

"Absolute signals will not bear number plates, but will have plates bearing the letter 'A'.

"Interlocking and absolute semaphore home signal arms will be painted red.

"Aspects as illustrated or referred to in these rules are shown by the position of semaphore arms or color of lights, or both, as seen from an approaching train. Other combinations may be used."

RULE 295 is revised to read as follows:

"Interlocking or absolute signals may be made part of the automatic block system adjoining interlocking or centralized traffic control limits. When so arranged they will be designated 'semi-automatic' and distinguished by a plate bearing the letters 'SA'. Trains stopped by such signals must observe interlocking or centralized traffic control rules within the interlocking or centralized traffic control limits, and Rule 509, 509 (F) or 509 (J), as the case may be, within the automatic portion of the block beyond interlocking or centralized traffic control limits."

RULE 297. Following paragraph is added:

A train, if delayed in the block, must proceed with caution to the next signal.

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.

RULES 705 and 707 are revised to read as follows:

"LETTER TYPE INDICATORS"

"705. Within block system limits, at locations specified in timetable, letter type indicators may be used. These indicators will be attached to an automatic block signal, and will display indications by illuminated letters, which will supersede the superiority of trains within defined limits.

"S—Take siding (Fig. 1).

"M—Proceed on main track (Fig. 2).

"Other letters, or combinations of letters may be used.

"S-707. When the letter 'M' is displayed, train is thereby given superiority over all trains to the fouling point of the switch at which an opposing train may enter siding or receiving track, and will hold main track at the station, but must observe any restrictions that may be imposed by automatic block or other signals.

"D-707. When the letter 'M' is displayed approaching a siding or at the initial switch of a siding, train will hold main track; when displayed on a siding near the leaving end of siding, train will enter main track and in either case train is thereby given superiority over all following trains to the point designated in timetable but must observe any restriction that may be imposed by automatic block or other signals."

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 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 837. Fifth paragraph is revised to read as follows: Cars standing on grade must not be coupled onto, in descending direction, without knowing sufficient hand brakes are set to prevent uncontrolled movement of any such cars should coupling fail or cars not be securely coupled together.

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.

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.

MISCELLANEOUS

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, but not more than two engines will be used on head end of any freight train when tonnage exceeds more than 75% of rating for both engines. When additional helpers are required, they will be placed back in train and cut in ahead of any cars of wooden frame construction.

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.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

7. Capacity of sidings between clearance points is based on an average car length of 49 feet not including engines and cabooses.

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. Employees 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 employees 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.

SPEED RESTRICTIONS

*List of CCB (Cross counter-balanced) engines:

All P-8 class, except eng. 2470:
F-1 class: 3611, 3612, 3615, 3616, 3617, 3619, 3620, 3625, 3629, 3634, 3636, 3638, 3643, 3647, 3652;

F-3 class: 3653, 3654, 3655, 3656, 3657, 3658, 3660, 3661, 3662, 3663, 3664, 3665, 3666, 3667;

F-4 class: 3668, 3670, 3671, 3672, 3674, 3675, 3676, 3677, 3678, 3679, 3681, 3682, 3683, 3684, 3685, 3686, 3687, 3688, 3689, 3690, 3692, 3693, 3695, 3696, 3697, 3698, 3699, 3701, 3702, 3703, 3704, 3705, 3706, 3707, 3709, 3711, 3715, 3716, 3717;

F-5 class: 3718, 3720, 3721, 3722, 3723, 3727, 3728, 3732, 3734, 3737, 3742, 3752, 3753, 3755, 3760, 3762, 3763, 3764, 3765, 3766, 3767, 3768, 3769;

All T&NO F-1 to F-5 class.
AC-6 class: 4126, 4127, 4128, 4130, 4131, 4132, 4133, 4135, 4136, 4137, 4138, 4139, 4140, 4141, 4142, 4143, 4144, 4146, 4147, 4148, 4149, 4150.

MAXIMUM SPEED PERMITTED CERTAIN ENGINES, SUBJECT TO FURTHER RESTRICTIONS AS SHOWN IN SPEED RESTRICTIONS TABLE

Maximum speed for C-15-17-32, Mk-10-11 and MM-3 class engines 35 MPH when handling freight and mixed trains.

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

Maximum speed for gas-electric cars running light forward, 50 MPH, but must not exceed speed permitted when handling passenger trains.

Engines backing must not exceed 20 MPH on all curves, and when approaching road crossings at grade.

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.

Diesel electric switch engines running forward, with train or light, may make maximum speed as shown below, except must not exceed speed permitted freight and mixed trains. These engines when backing may make speed shown below, except must not exceed speed permitted E class engines backing where such permitted speed is less than 30 MPH:

Classification	Running Forward With Train Light	Running Backward With Train or Light
DES-200	30	30
DES-1 to 7, 100 to 107.....	40	40

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

MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT

- 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 slow boards in place 5 MPH less than shown on slow boards, except where speed indicated is 15 MPH or less be governed by slow 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 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 slow boards in place, 5 MPH less than shown on slow boards, except where speed indicated is 15 MPH or less be governed by slow boards.

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 cabooses with steel wheels, except that maximum speed of 60 MPH must not be exceeded.

Passenger trains handling steel wheel box cars in series 5810 to 5874, and foreign line steel wheel box cars equipped for movement in passenger trains, but 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 engine and caboose only restricted to freight train speed.

RULE 14 (e). As specified below, — — — — — sounds of whistle 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 83. Identification may be made on double track between Yuma and East Yard; Dome and Wellton; Phoenix and Phoenix Yard; to be applied at end of double track. Reduce speed sufficiently to permit identification and Rule 14 (k) will apply.

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

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

Operator, Phoenix, will report arrival and departure of all trains on the Wellton Subdivision, originating or terminating at Phoenix, to operator Phoenix Yard, who will enter on Wellton Subdivision register and verify by repeating registration.

Operator, Phoenix Yard, will report arrival and departure of No. 370 to operator, Phoenix, who will enter on register and verify by repeating registration.

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

East Yard...... Westward trains entering yard tracks.
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

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

RULE 99. First-class trains must move with caution on passenger tracks at Phoenix, and trains standing on these tracks need not protect against following first-class trains, but must comply with Rule 99 (A).

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

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.

DERAILS 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.
Mohawk..... First track north of main track, for eastward trains;

Second track north of main track, for westward trains, and connects with eastward siding at each end.

Aztec..... Track north of main track, for westward trains; Track south of main track, for eastward trains.
Sentinel..... Track north of main track, for eastward trains; Track south of main track, for westward trains.

RULE 221. Phoenix is train-order office for first-class trains except No. 370.

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 7328, 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&SF 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	Spring switch, end double track, East Yard....	P- 7375
P- 7374		
P- 7532	Spring switch, end double track, Dome.....	P- 7535
	Spring switch, east end siding, Pembroke....	P- 7889
P- 7956	Spring switch, west end siding, Kim	
P- 9052	Spring switch, west end pass'gr. lead, Phoenix	
	Spring switch, east end double track, Phoenix	
	Yard.....	P- 9075

RULE 516. Overlap posts:

23rd Ave. Phoenix..... Middle of Siding Eastward trains.
Middle of Siding Westward trains.

RULE 535. SPRING SWITCHES

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

Location	Normal Position	MPH
Yuma..... West end bridge, end double track....	Westward track..	6
Yuma..... East end bridge, end double track....	Eastward track..	6
East Yard..... End double track.....	Westward track..	25
Dome..... End double track.....	Eastward track..	35
Pembroke..... East end siding.....	Main track.....	25
Kim..... West end siding.....	Main track.....	25

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

Location	Normal Position	MPH
Phoenix..... Main track at passenger lead.....	Passenger lead..	15
Phoenix Yard..... East end double track.....	Westward track..	15

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 4,000 feet east of station building on Gila line and on Phoenix line, to eastward interlocking signals 400 feet west of station building on westward track and 1,000 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:

Indicator	Location	Authorization	Requirement
Wellton	Proceed to interlocking limit.	Authorized	Required
Wellton	Enter siding.	Authorized	Required

**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 825. Cars or engines must not be set out on siding at Horn.

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
PASSENGER TRAINS**

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

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.

11. Phoenix, Santa Fe and Southern Pacific 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
		YUMA - PHOENIX
778.0	Gila River bridge	Side
891.0	Aqua Fria River bridge	Side

**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.

WELLTON SUBDIVISION

RATING OF ENGINES—In Ms of 1000 lbs. Back of Tender.

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

ENGINES FOR WHICH NO RATING IS SHOWN IN THE RATING OF ENGINES TABLE WILL NOT BE PERMITTED TO OPERATE IN THAT TERRITORY UNLESS AUTHORIZED BY SUPERINTENDENT.

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 (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, 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 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.
Operator, Phoenix Yard, will report arrival and departure of No. 370 to operator, Phoenix, who will enter on register and verify by repeating registration.

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
920.45	Mesa	922.88
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
917.78	Casa Grande	920.05
986.84	Ray Jct.	988.72
998.80	Hayden Jct.	1004.90
1046.37	Nogales	1049.89

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 must move with caution on passenger tracks at Phoenix, and passenger tracks 1, 2 and 3 at Tucson, and trains standing on these tracks need not protect against following first-class trains, but 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 cars, between Hayden Jct. and Hayden Mills, and 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, or 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..... 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.
- Red Rock..... Track north of main track, for eastward trains;
Track south of main track, for westward trains.
- Jaynes..... Track north of main track, for westward trains;
Track south of main track, for eastward trains.

RULE 221. Phoenix is train-order office for first-class trains, except No. 370.

Trains must obtain clearance before leaving Tempe on Creamery Branch.

RULE D-251. Applies to the following tracks:

Both tracks between Phoenix and Phoenix Yard.
Track No. 1 and westward track from PFE yard Tucson, 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., but this does not authorize trains or engines to pass Signal 9853 indicating "stop."

RULE 505. AUTOMATIC BLOCK SYSTEM

Phoenix. Main track has no block signal protection between Signal 9060.1 and end of double track; and double track has no block signal protection from west end to Signal 9064.

Picacho: 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, 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-9376 and P-9378 at Picacho; P-9776 and P-9778 at Jaynes.

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.	
	Spring switch, east end double track, Phoenix Yard	P- 9075
P- 9376}	Spring switch, east end south siding, Picacho....	P- 9377
P- 9378}		
	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}	Spring switch, east end eastward siding, Jaynes..	P- 9777
P- 9778}		
P- 9810	Spring switch, end double track, Stockham.....	P- 9813

RULE 516. Overlap posts:

McQueen.....	Middle of Siding	Westward trains.
Papago.....	Middle of Siding	Eastward trains.
	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 must not be exceeded while trailing through the switches:

Location	Normal Position	MPH
Picacho.....	East end south siding.....	Main track..... 25
Ocatilla.....	East end siding.....	Main track..... 25
Wymola.....	East end siding.....	Main track..... 25
Red Rock.....	East end eastward siding.....	Main track..... 25
Naviska.....	East end siding.....	Main track..... 25
Rillito.....	East end siding.....	Main track..... 25
Cortaro.....	East end siding.....	Main track..... 25
Jaynes.....	East end eastward siding.....	Main track..... 25
Stockham.....	End double track.....	Eastward track. 35

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

Location	Normal Position	MPH
Phoenix.....	Main track at passenger lead.....	Passenger lead..... 15
Phoenix Yard..	East end double track.....	Westward track..... 15

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. 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.

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.....	Proceed to train-order office.
SS.....	9385.....	Picacho.....	Enter south siding.
NS.....	9385.....	Picacho.....	Enter north siding.

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 825. Cars or engines must not be set out on siding at Dock.

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 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 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 enginemen will leave automatic air brakes set on trains at Tucson and Phoenix 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. Casa Grande, Florence, Mesa, Amado and Hayden Jct., water for engine purposes is treated and must not be taken for domestic use until treaters has been shut off.

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

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.

Hayden, entrance to Kennecott Copper Corp'n plant is protected by gate, which must be closed and locked at night.

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. spur.
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.

Load limit (car and contents):

Christmas, Nogales, Creamery and Tempe Branches. . 200,000 pounds.

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
975.95	Rillito Creek bridge. Side
983.9	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

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 6 inc., Tucson.....	10
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

SPECIAL INSTRUCTIONS—PICACHO SUBDIVISION

SPEED RESTRICTIONS: Maximum speed of Passenger trains must not exceed 50 MPH and Freight and Mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or fixed signal. Maximum speed of any train with an engine not shown in Speed Restriction table, 35 MPH, and is further restricted to maximum speed shown for Freight and Mixed trains if less than 35 MPH.

Table with columns: Page No., TERRITORY, WITH TRAIN—ENGINE RUNNING FORWARD, PASSENGER, LIGHT ENGINE RUNNING FORWARD, ENGINE BACKING WITH TRAIN OR LIGHT. Rows include MP 904.77-MP 907.91, MP 907.91-East yard limit MP 908.79, MP 920.45-MP 921.10, etc.

*Regulated by city ordinance.

SPECIAL INSTRUCTIONS—PICACHO SUBDIVISION

SPEED RESTRICTIONS: Maximum speed of Passenger trains must not exceed 50 MPH and Freight and Mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or fixed signal.
 Maximum speed of any train with an engine not shown in Speed Restriction table, 35 MPH, and is further restricted to maximum speed shown for Freight and Mixed trains if less than 35 MPH.

Page No.	TERRITORY	Passenger Freight Maximum	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT	Page No.	TERRITORY	PASSENGER			Freight and Mixed Maximum	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT
			M T-37 C-8-9-10 MK-2-4	M T-37 C-8-9-10				Maximum	Gas-elec. M-4-6-9-11 T-37 C-8-9-10	Freight or Passenger MK F-1		M T-37 C-8-9-10	MK F-1	
10	Christmas Branch, except. MP 923.89-MP 924.08..... MP 924.08-MP 955.93..... MP 955.93-MP 956.07..... MP 956.07-MP 964.28..... MP 964.28-MP 964.54..... MP 964.54-MP 968.79..... MP 968.79-MP 988.24..... MP 988.24-MP 999.53..... Hayden Jct. yard, MP 999.53-MP 1000.64..... MP 1000.64-Christmas.....	30 25 30 25 30 20 30 15 25 15 10	25 30 25 30 20 30 15 25	25 30 25 30 20 30 15 25	20 20 20 20 20 15 20	11	Nogales Branch, except. MP 984.04-Tucson City limit, MP 985.81..... MP 985.81-MP 987.42 (East yard limit)..... MP 987.42-Calabasas..... Calabasas-MP 1046.37 (Nogales yard limit)..... *Nogales yard limits.....	35 15 20 35 35 20	15 20 35 35 20	25 15 20 25 25 20	15 20 20 20 20 15 20	15 20 20 20 20 15 20	15 20 20 20 20 15 20	

*Regulated by city ordinance.

TO OPERATE IN THAT TERRITORY UNLESS AUTHORIZED BY SUPERINTENDING ENGINEERS FOR WHICH NO RATING IS SHOWN IN THE RATING OF ENGINES—IN MP OF 1000 lbs. Weight of Leader.

Page No.	TERRITORY	Passenger Freight Maximum	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT	Page No.	TERRITORY	PASSENGER			Freight and Mixed Maximum	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT
			M T-37 C-8-9-10 MK-2-4	M T-37 C-8-9-10				Maximum	Gas-elec. M-4-6-9-11 T-37 C-8-9-10	Freight or Passenger MK F-1		M T-37 C-8-9-10	MK F-1	
10	Christmas Branch, except. MP 923.89-MP 924.08..... MP 924.08-MP 955.93..... MP 955.93-MP 956.07..... MP 956.07-MP 964.28..... MP 964.28-MP 964.54..... MP 964.54-MP 968.79..... MP 968.79-MP 988.24..... MP 988.24-MP 999.53..... Hayden Jct. yard, MP 999.53-MP 1000.64..... MP 1000.64-Christmas.....	30 25 30 25 30 20 30 15 25 15 10	25 30 25 30 20 30 15 25	25 30 25 30 20 30 15 25	20 20 20 20 20 15 20	11	Nogales Branch, except. MP 984.04-Tucson City limit, MP 985.81..... MP 985.81-MP 987.42 (East yard limit)..... MP 987.42-Calabasas..... Calabasas-MP 1046.37 (Nogales yard limit)..... *Nogales yard limits.....	35 15 20 35 35 20	15 20 35 35 20	25 15 20 25 25 20	15 20 20 20 20 15 20	15 20 20 20 20 15 20	15 20 20 20 20 15 20	

PICACHO SUBDIVISION

RATING OF ENGINES—In Ms of 1000 lbs. Back of Tender.

NOMINAL CLASS	ENGINE NUMBERS	Mariopoa to Tucson Phoenix to Picacho	Gila to Estrella	Estrella to Mariopoa Tucson to Mariopoa Estrella to Gila Picacho to Phoenix	Mariopoa to Estrella	McQueen to Christmas	Christmas to McQueen	Tucson to Calabasas	Calabasas to Nogales	Nogales to Tucson
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	4850
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.

ENGINES FOR WHICH NO RATING IS SHOWN IN THE RATING OF ENGINES TABLE WILL NOT BE PERMITTED TO OPERATE IN THAT TERRITORY UNLESS AUTHORIZED BY SUPERINTENDENT.

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 (R. G. 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.....	1234.20
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 inbound engine lead switch, and proceed only on signal from yardman (white flag by day, green light by night).

RULE 99. First-class trains must move with caution on passenger tracks 1, 2 and 3 at Tucson, and trains standing on these tracks need not protect against following first-class trains, but 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. highway 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, for eastward trains;
Track south of main track, for westward trains.

Dragoon.....Track north of main track, for westward trains;
Track south of main track, for eastward trains.
Bowie.....Track north of main track from west switch to main track switch just east of station building, for eastward trains;

Track north of main track from east switch to main track switch just east of station building, for westward trains.

Steins.....First track north of main track, for westward trains;

Second track north of main track, for eastward trains, and connects with westward siding at each end.

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

RULE D-251. Applies to the following tracks:

Track No. 1 and westward track from PFE yard Tucson, 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., but this does not authorize trains or engines to pass Signal 9853 indicating “stop”.

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-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 must not be exceeded while trailing through the switches:

Location	Normal Position	MPH
Chamiso.....	East end siding Main track.....	25
Curvo.....	East end siding Main track.....	15
Sibyl.....	West end siding Main track.....	25
Sibyl.....	East end siding Main track.....	25
Cavot.....	West end siding Main track.....	25
Cavot.....	East end siding Main track.....	25
Mondel.....	West end siding Main track.....	25

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 will 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 water and outfit spurs; 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.

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 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.....	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, employ 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.

Cars or engines must not be set out on sidings at Rankin, Vail, Pantano, Tully, Lancha, Manzoro, Cochise, Drury, Alrich, Luzena, Cholla, Bawtry, Gary and Pyra.

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. 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.

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
Live Oak 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; and Live Oak to Miami, 100 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.

Benson, when practicable, westward freight trains and light engines take water at columns at station, to avoid shortage in east tank.

Westward freight trains may take water at Sibyl if it will avoid stopping at Benson.

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):

Globe Branch.....200,000 pounds.

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
TUCSON - LORDSBURG		
983.9	.....	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
1114.2	San Simon	Water tank spout.....Side
GLOBE BRANCH		
1201.1	San Carlos	Water tank and spout... Side and Overhead
1213.5	Cutter	Water column.....Side

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 6 inc., Tucson.....	10
On Government tracks at Wilmot airport.....	10
“ (with engine backing)....	5
Through any crossover, turnout or slip-switch with engine backing.....	10

REVISIONS

APPROVED

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SPECIAL INSTRUCTIONS—BOWIE SUBDIVISION

SPEED RESTRICTIONS: Maximum speed of Passenger trains must not exceed 50 MPH and Freight and Mixed trains 35 MPH except as otherwise provided for herein, or by bulletin, train order or fixed signal. Maximum speed of any train with an engine not shown in Speed Restriction table, 35 MPH, and is further restricted to maximum speed shown for Freight and Mixed trains if less than 35 MPH.

Table with columns: TERRITORY, WITH TRAIN - ENGINE RUNNING FORWARD (PASSENGER), LIGHT ENGINE RUNNING FORWARD, ENGINE BACKING WITH TRAIN OR LIGHT. Rows include MP 982.73-MP 985.26, MP 985.26-MP 988.09, etc.

*Regulated by city ordinance.

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Page No.	TERRITORY	PASSENGER		FREIGHT	LIGHT ENGINE RUNNING FORWARD		ENGINE BACKING WITH TRAIN OR LIGHT
		M-3 T-37	C-9-9-10		M T-37 C-9-9-10 Mk-5-5-7-9-9	Mk-2-4	
15	Globe Branch, 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	30	20
	MP 1126.12-MP 1126.43.....	30	30	30	30	30	20
	MP 1126.43-MP 1136.65.....	35	30	30	30	30	20
	MP 1136.65-MP 1138.34 Safford yard limits.....	15	15	15	15	15	15
	MP 1138.34-Pima West City limit.....	35	30	30	30	30	20
	*MP 1145.33-MP 1146.42 (Pima city limits).....	25	25	25	25	25	20
	MP 1146.42-MP 1178.08.....	35	30	30	30	30	20
	MP 1178.08-MP 1178.17.....	30	30	30	30	30	20
	MP 1178.17-MP 1183.70.....	35	30	30	30	30	20
	MP 1183.70-MP 1195.00.....	30	30	30	30	30	20
	MP 1195.00-MP 1207.01.....	30	30	30	30	30	20
	MP 1207.01-MP 1217.52.....	35	30	30	30	30	20
	MP 1217.52-MP 1218.78.....	25	25	20	25	20	15
	MP 1218.78-MP 1220.59.....	35	30	30	30	30	20
	Globe yard limits MP 1220.59-MP 1223.09 except Broad Street Crossing.....	15	15	15	15	15	15
	MP 1223.09-MP 1231.18.....	6	6	6	6	6	6
	Miami yard limits.....	20	20	20	20	20	15
	Inspiration Jet.-Live Oak.....	15	15	15	15	15	15
		10	10	10	10	10	10

*Regulated by City ordinance.

BOWIE SUBDIVISION

RATING OF ENGINES—In Ms of 1000 lbs. Back of Tender.

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
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	7350	4450	2880
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

ENGINES FOR WHICH NO RATING IS SHOWN IN THE RATING OF ENGINES TABLE WILL NOT BE PERMITTED TO OPERATE IN THAT TERRITORY UNLESS AUTHORIZED BY SUPERINTENDENT.

BOWIE SUBDIVISION

RATING OF ENGINES—In Ms of 1000 lbs. Back of Tender.

NOMINAL CLASS	ENGINE NUMBERS	Bowie to San Carlos	San Carlos to Cutter	Cutter 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-8, 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	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
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	1400	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
TW-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

ENGINES FOR WHICH NO RATING IS SHOWN IN THE RATING OF ENGINES TABLE WILL NOT BE PERMITTED TO OPERATE IN THAT TERRITORY UNLESS AUTHORIZED BY SUPERINTENDENT.

POWER DIVISION

TABLE OF RATES - In Effect 1908 for West of Texas

Number of Miles	Rate per Mile	Total Rate	Minimum Charge		Maximum Charge		Notes
			Day	Night	Day	Night	
1	1.00	1.00	1.00	1.00	1.00	1.00	
2	2.00	2.00	2.00	2.00	2.00	2.00	
3	3.00	3.00	3.00	3.00	3.00	3.00	
4	4.00	4.00	4.00	4.00	4.00	4.00	
5	5.00	5.00	5.00	5.00	5.00	5.00	
6	6.00	6.00	6.00	6.00	6.00	6.00	
7	7.00	7.00	7.00	7.00	7.00	7.00	
8	8.00	8.00	8.00	8.00	8.00	8.00	
9	9.00	9.00	9.00	9.00	9.00	9.00	
10	10.00	10.00	10.00	10.00	10.00	10.00	
11	11.00	11.00	11.00	11.00	11.00	11.00	
12	12.00	12.00	12.00	12.00	12.00	12.00	
13	13.00	13.00	13.00	13.00	13.00	13.00	
14	14.00	14.00	14.00	14.00	14.00	14.00	
15	15.00	15.00	15.00	15.00	15.00	15.00	
16	16.00	16.00	16.00	16.00	16.00	16.00	
17	17.00	17.00	17.00	17.00	17.00	17.00	
18	18.00	18.00	18.00	18.00	18.00	18.00	
19	19.00	19.00	19.00	19.00	19.00	19.00	
20	20.00	20.00	20.00	20.00	20.00	20.00	
21	21.00	21.00	21.00	21.00	21.00	21.00	
22	22.00	22.00	22.00	22.00	22.00	22.00	
23	23.00	23.00	23.00	23.00	23.00	23.00	
24	24.00	24.00	24.00	24.00	24.00	24.00	
25	25.00	25.00	25.00	25.00	25.00	25.00	
26	26.00	26.00	26.00	26.00	26.00	26.00	
27	27.00	27.00	27.00	27.00	27.00	27.00	
28	28.00	28.00	28.00	28.00	28.00	28.00	
29	29.00	29.00	29.00	29.00	29.00	29.00	
30	30.00	30.00	30.00	30.00	30.00	30.00	
31	31.00	31.00	31.00	31.00	31.00	31.00	
32	32.00	32.00	32.00	32.00	32.00	32.00	
33	33.00	33.00	33.00	33.00	33.00	33.00	
34	34.00	34.00	34.00	34.00	34.00	34.00	
35	35.00	35.00	35.00	35.00	35.00	35.00	
36	36.00	36.00	36.00	36.00	36.00	36.00	
37	37.00	37.00	37.00	37.00	37.00	37.00	
38	38.00	38.00	38.00	38.00	38.00	38.00	
39	39.00	39.00	39.00	39.00	39.00	39.00	
40	40.00	40.00	40.00	40.00	40.00	40.00	
41	41.00	41.00	41.00	41.00	41.00	41.00	
42	42.00	42.00	42.00	42.00	42.00	42.00	
43	43.00	43.00	43.00	43.00	43.00	43.00	
44	44.00	44.00	44.00	44.00	44.00	44.00	
45	45.00	45.00	45.00	45.00	45.00	45.00	
46	46.00	46.00	46.00	46.00	46.00	46.00	
47	47.00	47.00	47.00	47.00	47.00	47.00	
48	48.00	48.00	48.00	48.00	48.00	48.00	
49	49.00	49.00	49.00	49.00	49.00	49.00	
50	50.00	50.00	50.00	50.00	50.00	50.00	

ENGINEER OR OTHER NO. RATING IS SHOWN IN THE TABLE OF RATES WILL NOT BE PERMITTED TO OPERATE IN THIS SERVICE UNLESS AUTHORIZED BY SUPERINTENDENT

Number of Miles	Rate per Mile	Total Rate	Notes
1	1.00	1.00	
2	2.00	2.00	
3	3.00	3.00	
4	4.00	4.00	
5	5.00	5.00	
6	6.00	6.00	
7	7.00	7.00	
8	8.00	8.00	
9	9.00	9.00	
10	10.00	10.00	
11	11.00	11.00	
12	12.00	12.00	
13	13.00	13.00	
14	14.00	14.00	
15	15.00	15.00	
16	16.00	16.00	
17	17.00	17.00	
18	18.00	18.00	
19	19.00	19.00	
20	20.00	20.00	
21	21.00	21.00	
22	22.00	22.00	
23	23.00	23.00	
24	24.00	24.00	
25	25.00	25.00	
26	26.00	26.00	
27	27.00	27.00	
28	28.00	28.00	
29	29.00	29.00	
30	30.00	30.00	
31	31.00	31.00	
32	32.00	32.00	
33	33.00	33.00	
34	34.00	34.00	
35	35.00	35.00	
36	36.00	36.00	
37	37.00	37.00	
38	38.00	38.00	
39	39.00	39.00	
40	40.00	40.00	
41	41.00	41.00	
42	42.00	42.00	
43	43.00	43.00	
44	44.00	44.00	
45	45.00	45.00	
46	46.00	46.00	
47	47.00	47.00	
48	48.00	48.00	
49	49.00	49.00	
50	50.00	50.00	

DIVISION MILEAGE

Main Line

Yuma to Lordsburg.....	SPRR.....		412.58
	AERR.....	195.88	
Wellton to Picacho, via Phoenix	SPPCo.....	13.10	
	SPRR.....	.03	209.01
Total Main Lines.....			621.59

Branches

Benson-Fairbank	SPRR..... At Benson.....	.29	
	EP&SWRR At Benson.....	.33	.62
Christmas.....	AERR... McQueen to Christmas.....	86.66	
	KCC..... Hayden Jet. to Hayden.....	.32	86.98
Creamery.....	AERR... Tempe to Normal Jet.....		2.19
Globe.....	AERR... Bowie to Live Oak.....		136.14
Litchfield.....	AERR... Litchfield to Litchfield Park.....		4.92
Nogales.....	SPRR... Tucson to Nogales.....		65.79
Tempe.....	AERR... Tempe Jet. to West Chandler.....		7.82
Yuma Valley.....	YVRR... Yuma to Somerton.....		15.00
Total Branches.....			319.46
Total Tucson Division.....			<u>941.05</u>

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"	66.6
55"	65.4
56"	64.2
57"	63.1
58"	62
59"	61
1'00"	60
1'01"	59
1'02"	58
1'03"	57.1
1'04"	56.2
1'05"	55.3
1'06"	54.5
1'07"	53.7
1'08"	52.9
1'09"	52.1
1'10"	51.4
1'11"	50.7
1'12"	50
1'13"	49.3
1'14"	48.6
1'15"	48
1'16"	47.3
1'17"	46.7
1'18"	46
1'19"	45.5
1'20"	45
1'25"	42.3
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"	26.6
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

